SYDNEY ☆ INTERNATIONAL ☆ EXHIBITION ☆ XIXXI ☆
ORTA RECENS QUAM PURA NITES
N.S.W. ☆ M.D.CCC.LXXIX

PRESENTED

BY THE

COMMISSIONERS

OF THE

SYDNEY INTERNATIONAL EXHIBITION

OF

1879.

THE GARDEN PALACE.

OFFICIAL RECORD

OF THE

SYDNEY

INTERNATIONAL EXHIBITION,

1879.

SYDNEY: THOMAS RICHARDS, GOVERNMENT PRINTER.

1881.

CORRIGENDA.

167, Fifth sentence (Note)—In 1877, U.S. and Japanese exhibits were shown by agents, these nations not participating as such; 171, for "Piloubet" (France), read "Poitevin"; 196, for "Bivor, T. H. J." (France), read "Bivort, H. J."; 203, "Holland & Green" (Great Britain), insert "Commended"; 223, for "Batson & Brewer" (N.S.W.) read "Balstone & Brewer"; for "Book & Collings" (N.S.W.) read "Booth & Collings"; 229, for Gorham Manufacturing Co.'s exhibit (U.S.), read "Silver plate" instead of "Silver-plated ware"; 245, Ashworth & Sons (Great Britain), read "First degree of Merit"; 279, Hollington Brothers (Great Britain), read "First degree of Merit"; 280, for "Simpson & Co., H." (Great Britain) read "Simpson & Co., L."; 283, for "Ragasaki" read "Nagasaki"; 285, for Professor "A. C." read "T. T." Gurney; 288, for "Aaran" (Switzerland) read "Aarau"; 303, Charles Goodall & Sons (Great Britain), Menu and Programme Cards, read "First degree of Merit *Special*"; 314, Stoddart & Co. "Junr." (United States), read "J. M."; 320, Moir, James G. (Tasmania), read "First degree of Merit"; last line of p. 364 and first of p. 365, for "11th" read "10th" of November; transfer exhibit of N.S.W. Government Astronomer from 386 to top of 399; 392, for "Messler" (Germany) read "Messter"; 636, *delete* "G. Puttman" (Great Britain); 639, insert "Putnam Machine Co., Fitchburg, Mass., U.S., Planing Machinery, Honourable Mention"; 803, for "Gowring & Kelly" (N.S.W.) read "Gowing & Kelly"; 806, for "A. B." Ord (Straits Settlements) read "A. R."; 847, for "B. B." read "R. B." Leefe (Fiji); 850, for "vernmicelli" read "vermicelli"; 853, for "Bunawang" read "Burrawang"; 867, line 8, for "Givolamo" read "Girolamo"; for "Ungaru" read "Ungarn"; 872, line 16, for Rheims ("Maine") read "Marne"; 892, for Ehrenfried "Bothers" read "Brothers."

PREFACE.

THE Sydney International Exhibition, which was opened on September 17th, 1879, by His Excellency Lord Augustus Loftus, Governor of the Colony, who was President of the Commission, was formally closed by His Excellency on the 20th of April of the following year, on which occasion the distribution of awards to those countries and colonies which had participated in the Exhibition was announced. The final record now presented to the public will be found to contain a carefully revised list of the awards and of the names of those exhibitors to whom they were granted, together with what will probably be found to be the most valuable and interesting result of the Exhibition—the reports of the Judges on the different exhibits submitted to them for examination. It will be evident, from a perusal of these reports and awards, that in the main the Philadelphian system has been followed, the leading characteristic of which was to record on a handsomely engraved diploma the decision of the Judges, this diploma being accompanied by a bronze medal. In the case of the Sydney Exhibition however, where a programme had in the first instance been issued by the N.S.W. Agricultural Society, announcing that gold and silver medals would in certain cases be allowed, it was found necessary to engraft the system of this society, so far as it was compatible, on the Philadelphian system. The diversity of opinion which naturally exists at all exhibitions, with regard to the excellence of the objects exhibited, has naturally led to the decisions of the Judges being criticised; but when it is remembered that the number of awards made by the Judges at the Sydney International Exhibition was over 7,500, and that the appeals against their judgments were relatively very few, it will be conceded that the labours of these gentlemen led to an eminently satisfactory result.

REPORT

OF THE

EXECUTIVE COMMISSIONER.

"ORTA RECENS QUAM PURA NITES"* was the motto chosen by the Commissioners of the Sydney International Exhibition for inscription on the medal to accompany the exhibitors' award diplomas; and it was in no boastful spirit that the attention of all nations was thus called to the extraordinary position held by the Colony of New South Wales, the marvellous rapidity of its development, and the soundness and solidity of the broad bases on which its prosperity rested. The International Exhibition undoubtedly emphasized a new era in the history of the Colony, and projected the value of Australia on the minds of the inhabitants of those older countries which scarcely knew even by name the distant lands in which communities of British birth were rapidly rising into national importance. Followed as it has been within a short six months by the Melbourne Exhibition, the prominence given to Australia by the holding of the Sydney International Exhibition has been not alone maintained but enhanced by these twin shows—not rivals, but friendly competitors, each emulous of displaying the great resources of Australia before the eyes of the world.

The great Exhibition of 1851 in London, which for the first time made the British public familiar with the vast importance of these international displays, and of the part which they were likely to play in the improvement of Manufactures,

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* This elegant motto was kindly composed for the occasion by Dr. Charles Badham senior Professor of the Sydney University.

and the spread of true principles of Art and a knowledge of the national wealth and resources of all the different countries of the world, was but the great precursor of all those Worlds' fairs which have since been held in France, in Austria, and in the United States and other countries. It was about this time that the gold discoveries attracted to the shores of Australia a large body of enterprising and energetic persons, who not alone contributed numerically to the increase of the population, but superadded an amount of vitality which gave a new and vigorous life and growth to the colonies of that day. There were many amongst these new arrivals who before leaving the shores of Great Britain had witnessed that marvellous erection, the Crystal Palace, and feasted their eyes on the unique collection of the treasures of art and industry of all nations therein displayed, and they could have little foreseen that in less than a generation the Colony of New South Wales should issue invitations to all nations of the earth to participate in an International Exhibition held in a building which for grace of proportion and fitness for the object has been universally admired, and erected in a position which may be said for natural beauty to be unequalled, and which nearly half a century before had been described by one of the most popular Governors of New South Wales as the finest site in the Southern Hemisphere. Not even the most farseeing could have had a prevision of the glories of the Garden Palace, and the most hopeful an adequate conception of the enormous strides in wealth and prosperity which the oldest and richest of the Australian colonies was destined to achieve. Great as has been its growth, and wonderful its success, and it is with pardonable pride that we speak of it, it is not unreasonable to predict that the prosperity of the colony will receive a fresh impetus which will lead to results surpassing even the anticipations of the

most sanguine. Although the Colonists of New South Wales had previously sent their contributions to Exhibitions in London and Paris, and also displayed their products in the neighbouring colony of Victoria at the Melbourne Exhibition of 1867, it was not till the year 1870 that any serious attempt was made on the part of the metropolis of the mother colony to challenge the competition of the younger offshoots ; but in that year the Agricultural Society of New South Wales—which included in its ranks many gentlemen identified with the advancement of the Colony and deeply interested not alone in its agricultural and industrial progress, but in promoting those arts and industries which would give fulness and variety to our national life, and lay broad and deep the foundations of material prosperity—undertook to hold an Intercolonial Exhibition. This Exhibition was held in the handsome building erected for the purpose in Prince Alfred Park, and was opened with great *éclat* by the Earl of Belmore, then Governor of the Colony. The Government of the day also contributed in every way to assist in promoting the success of the undertaking. The President of the Society, Sir William Macarthur, in the address which he made to the Governor on this occasion, after having stated that this Exhibition was held on the centennial year of the discovery of the Colony, said—"That the objects of the Exhibition have not been confined to those appertaining more particularly to the Agricultural Society, but have been extended to every description of Colonial production, in order to render the display more worthy of the occasion, and to show how vast has been the progress of civilization during the comparatively brief period of 82 years, which have elapsed since the foundation of the Australian Colonies." His Excellency, in the course of his address, in reply said—"If evidence were wanted of the vast progress the Colony has made,—it is the

grand scene which we now witness—we are assembled in a building of vast proportions, containing an Exhibition of the arts, sciences, manufactures, and other evidences of wealth and proofs of commercial advancement." This Exhibition which continued open for one month was conspicuous for its display of Live Stock and was visited by large crowds daily.

The annual Exhibitions subsequently held by the Agricultural Society maintained their attractiveness and interest and fostered generally a spirit of enterprise and emulation which led to the Government and people of the Colony taking measures to have a worthy representation of their products effected at the great Exhibition at Philadelphia held in 1876. The display made there by the Australian Colonies, and particularly by New South Wales, produced a marked effect on the visitors (particularly those from America) to that great and varied show, held as it was on a scale of unexampled magnitude, and to mark a century's record of progress in the annals of that great nation which already outnumbered the mother country, whose parentage they still are proud to claim. The Americans, who are noted for their quick wittedness, their ingenuity, and their shrewd and practical turn of mind, and who beheld at Philadelphia the varied representations of the great mineral wealth and the great staples which form so important factors in the prosperity of New South Wales—wool, wine, wheat, minerals, &c.—at once concluded that the country which possessed such resources, and which had already at a large pecuniary sacrifice subsidised a line of steamers to promote communication with the mother country by way of the United States, offered a large field for trading enterprise; and the result of our participation in the Philadelphia Exhibition was undoubtedly, as shown by the official memorandum prepared for the United States Consul in Sydney

four years afterwards, that the trade expanded from that time. It is to be regretted, however, that although the imports from the United States to the Colony show such an enormous and growing increase, still owing to the high Customs duties levied under the American tariff, those advantages which we had a right to expect from the growth of a direct export trade in wool have not been realised; for, although we admit the products of the United States free, the protective principles on which their tariff is framed prevent us from reaping the full benefit which ought to result from a commercial connection between two great communities of the same race, language, and sympathies.

In 1877 the intercolonial character of the Agricultural Society's Annual Exhibition was so far expanded as to include a large number of exhibits from New Zealand, Ceylon, and Fiji. The Dominion of Canada was also well represented, and had about 150 exhibits displayed in an annexe erected for the purpose. This was the first organised attempt to open up a trade between the two great British communities inhabiting Australia and the Canadian Dominion, and was the result of the visit of Mr. Augustus Morris, the New South Wales Executive Commissioner at Philadelphia, to Canada, and to his efforts to open up a trade mutually beneficial. Canada on this occasion sent one of its leading public men—the Honourable John Young, of Montreal—who was peculiarly qualified by his position and experience to form a just estimate of the value of the commercial connection. Mr. Young visited most of the Colonies, and expressed himself astonished at the infinite variety of our resources, and the enormous advantages of the climate as compared with the colder regions of the North American Continent, and predicted a great future for this country.

REPORT OF THE EXECUTIVE COMMISSIONER.

It was in this year that the project of an Exhibition to be held in 1879 was first mooted in the Agricultural Society. It was in this year also that the Society solicited the Government to place a sum of money on the Estimates in order that New South Wales might be fully represented at the Exposition Universelle to be held in Paris in 1878. The then Government, recognizing the importance of the occasion, issued a commission with the Chief Justice of the Colony as President, and having connected with it many influential gentlemen who took regular steps to cause our participation at that great gathering of the nations to be in all respects worthy of our rapidly increasing importance.

The Secretary of the Agricultural Society, Mr. Jules Joubert, was selected to accompany the Executive Commissioner, Mr. Edward Combes, to Paris, and it was then understood that the Government would lend its sanction to the Agricultural Society's proposed International Exhibition of 1879. Mr. Joubert was authorised to distribute papers, and to "take such other steps as might be considered necessary to bring the Exhibition under the notice of the various countries and collect exhibits." And in accordance with this authority the representatives of all the countries received notification from our representative in Paris that the holding of an International Exhibition in Sydney had been duly sanctioned and definitely decided upon.

Early in the following year the question, which had been previously urged upon the attention of the two preceding administrations, was brought before the Honourable Michael Fitzpatrick, then Colonial Secretary of the Colony, with a request that a decision might be arrived at as quickly as possible, as the Society was, as had been previously stated, in a

position without assistance to carry through an International Exhibition, which it would appear was rather intended as an enlargement of the Annual Shows, by procuring objects of interest from the great display at Paris, for which separate accommodation might probably have to be erected. The Government acceded to the proposition as placed before them, and on the 7th of February, 1878, a proclamation appeared in the *Government Gazette*, signed Michael Fitzpatrick, and stating—"That His Excellency the Governor, with the advice of the Executive Council, directs it to be notified, for general information, that it is intended, under the supervision of the Agricultural Society of New South Wales, to hold an International Exhibition in Sydney, in August, 1879, according to the annexed general programme." Then follow twenty-six columns of the *Government Gazette*, containing the regulations for the Exhibition, and specifying in detail the 743 classes in which exhibits would be received.

His Excellency Sir Hercules Robinson, then Governor of the Colony, was further respectfully invited by the Government to communicate with the Secretary of State for the Colonies "apprising him of the intention to hold this Exhibition under the sanction of the Colonial Government," and requesting "That Her Majesty's Government will so far lend it their countenance as to intimate the fact to the various Courts and States represented at the Paris Exhibition, or others, if any, not so represented, with which the Imperial Government may have diplomatic or consular intercourse, also India and all the British Colonies other than the Australian Colonies;" and further soliciting His Excellency to make a suitable communication to the Governors of Fiji and New Caledonia. The Government of the Colony undertook to communicate directly with the sister Colonies of the Australasian

Group. His Excellency, as it appeared from a speech subsequently delivered by him, in his capacity as President of the Agricultural Society, took immediate steps to carry the wishes of the Government into effect, and at once communicated with the Secretary of State for the Colonies in London. It would appear that at this time the Government of the Colony of Victoria had given some notification of their intention to hold an International Exhibition in Melbourne in 1879. And the Secretary of State telegraphed to the Governor on the 20th of April in the following words before distributing the programmes: "Must ascertain whether Melbourne Government contemplate Exhibition in 1879 before acting Sydney Exhibition." Some further telegraphic correspondence ensued, and on the 28th of July the Secretary of State sent the following message: "Programme Sydney Exhibition, 1879, distributed as requested, except India, whose participation under consideration."

While the Government of the Colony were thus taking active steps to carry out the proposals of the Agricultural Society and enlisting the potential influence of Her Majesty's Government in London, and publishing the Exhibition throughout the whole world, the Society itself, apparently for the first time, began to realise the magnitude of an undertaking into which it had plunged with so light a heart; and the important question of finance, which appears to have been overlooked in the sanguine anticipations of the original projectors, was now brought formally forward at a meeting of the members. In June, 1878, the Council resolved to consider the position of the Society in view of an estimate which had been prepared for general information, and it should be observed that the sum of £2,500, then standing to its credit, the fruit of the savings of many successful

years, seemed sufficient to inspire a hopeful spirit, and appeared to be regarded as a reasonable financial base for undertaking a work which was destined to grow into such magnitude. The financial estimate then prepared was as follows: Estimated cost, £25,000; estimated receipts: Subscriptions from 1,800 members, £1,800; subsidy from Government, £1,800; receipts from entrance fees and other sources, £10,650. The estimated cost was thus £25,000, and the estimated receipts £14,520. The deficiency amounted to £10,750. This estimate disclosed the serious fact that even on the moderate scale then proposed the Exhibition could not be made self-sustaining, and would require support from the public or the Government to make up the deficiency between the estimated receipts and expenditure of over £10,000. Finding themselves set face to face with this state of affairs many members of the Society desired to abandon the idea; and a special general meeting was held on the 10th of July, the Governor, as President, in the chair, at which the expediency of proceeding with the undertaking was warmly debated, and a resolution was carried by a majority—"That in the opinion of this meeting the International Exhibition of 1879 be proceeded with," and a deputation was appointed, consisting of the Vice-Presidents and the Executive Council of the Society "to wait upon the Government and solicit assistance in carrying out the object of the resolution." The Colonial Secretary was accordingly waited upon and asked to appoint and authorise Commissioners at home to act, and also to ascertain the probable cost of some of the annexes of the Paris Exhibition which could be added to the building in Prince Alfred Park. The deputation further requested that the Government should ask Parliament for a grant of £10,000. In reply to these solicitations the Government

reminded the Society that from the first they disavowed any pecuniary liability, inasmuch as it was unequivocally stated to Mr. Fitzpatrick in the first instance, that the Society needed no pecuniary assistance, and in the written communication of the preceding Minister, Sir John Robertson, the following intimation was made:—"It must be distinctly understood that this Government, in tendering the Agricultural Society of New South Wales its countenance and support, does not incur any pecuniary liability." The Colonial Secretary further intimated as the decision of the Government that they would not be justified in asking Parliament to make an unconditional grant to the Society of £10,000.

Further correspondence on the subject with the Government followed, and as the subject now began to assume so grave a character, public attention was naturally drawn to the extraordinary situation into which the country had been precipitated by the action taken, up to the present time, and it was evident that the sum of £10,000 asked for from the Government would be wholly insufficient. The Government informed the Society "that as the proposed Exhibition was assuming proportions quite beyond the original expectations of the Agricultural Society, and beyond their pecuniary powers, even if aided by Parliament to the extent of £10,000, it must absolutely decline to make any provision;" and on the 4th of September the Council of the Society passed a resolution to the effect "that the Colonial Secretary be informed that the Government having declined to grant any pecuniary assistance to the proposed International Exhibition the Council have decided to abandon the undertaking."

The question, however, was not to be thus finally dealt with, and a special general meeting was called for the 17th

of September to take the whole circumstances of the position into consideration. It was a fortunate thing for the Colony that His Excellency the Governor, Sir Hercules Robinson, who had during the time of his office in New South Wales acted as President of the Agricultural Society, was enabled at this juncture to lay before the public his opinion as to how far the honour of the Colony was pledged by the action taken by him at the request of the Government, and to give to the Society the valuable assistance of his advice and counsel in rescuing itself and the country from the difficult position in which they found themselves. At the meeting Sir Hercules detailed the steps taken by him in the matter, his correspondence with the British Government, and with the Governors of other Colonies, and pointed out that he considered the honour of the country involved in carrying out the undertaking. He stated that they "could not urge as an excuse that our country has been involved in war, or that we have suffered from pestilence, or famine, or any other calamity, since we first embarked in this project, and that the prospects of the Colony were in every respect brighter than they were in February, when he officially announced the intentions of the Government. Of course if he had to write, and withdraw, he would make out as good a case as he could; but the real reason will be, and it will of course be generally known, that we entered into this project without sufficient consideration, and when we found that it was likely to be such a success as to cost a few thousand pounds more than we anticipated, we become frightened and run away." His Excellency further pointed out, whether "if we abandoned this proposal the Colony will still hold its high position in the estimation of the outside world, as he was proud to think she then occupied?" He advised the Members of the Agricultural Society to cease their differences, and endeavour in the event

of the majority of the meeting coinciding with his view to deal practically with the subject, and pointed out that as this Society consisted of 1,200 members, representing in a considerable degree the wealth and intelligence of the country, there should be no difficulty in the members of the Society contributing an average sum of £5 each, which would give £6,000, besides obtaining contributions from the outside public. He had authority for stating that in such a case the Government would recommend the Parliament to grant pound for pound, which would make £12,000 of the £6,000 which he had suggested as coming from Members of the Society. This £12,000, added to the estimated receipts of £15,000, would give a fund of £27,000, which was believed to be amply sufficient to give us an interesting and creditable international show. The gentlemen who had up to this time opposed the holding of an International Exhibition by the Society unaided, felt compelled, under the clear expression of opinion on the part of his Excellency that the honour of the country was involved, to abstain from further opposition, and the financial proposition sketched forth by the Governor was accepted by the meeting, a large number of subscriptions were handed in, and before the meeting closed it was resolved that it be remitted to the Council to take steps, by soliciting subscriptions from the public, and corresponding subscriptions from Parliament, to obtain the necessary funds, and to arrange, by the appointment of a Special International Exhibition Committee and otherwise, for carrying out the resolutions of the general meeting.

Early in October, 1878, the action taken at the special meeting of the Agricultural Society, and the appointment of an International Exhibition Committee, was confirmed; and as it came to be generally understood throughout the

Colonies that there was now no doubt but that the Exhibition would be held, communications were received from the Melbourne International Exhibition Commission suggesting an "interchange of good offices, and offering to assist in rendering the Sydney International Exhibition a success." The Committee, of whom Sir John Hay was chairman, lost no time in waiting upon the Colonial Secretary, informing him that subscriptions were rapidly coming in, and on the first interview received a promise from Mr. Fitzpatrick that he would on the first opportunity recommend the Parliament to grant pound for pound subscribed by the public. He also spoke approvingly of the project, and tendered the assistance of the Government, and further stated that he would instruct the Executive Commissioner in Paris and Mr. Forster, the Agent-General in London, to do all they could to forward the Exhibition. The Committee further notified their willingness to co-operate with any gentlemen appointed by the Government as Commissioners to carry out the projects of the Exhibition. Public interest in the subject was now manifested in various ways, and the journals of the metropolis teemed with suggestions as to the best site, and various opinions of correspondents as to the most suitable style of building were freely given. It was commonly agreed that the Inner Domain site was by far the best, but that the limited sum available for building purposes caused it to be feared that it would be impossible to erect a new building at all worthy of this site. The estimate supplied to the Committee for a temporary structure about three times the area of the Prince Alfred Park building was £18,000. Towards the end of the month discussions took place in Parliament on a motion made by a private Member of the Assembly to grant £6,000 to be awarded as special prizes. The motion, however, was withdrawn, and the Government on

the 24th of October submitted a proposition recommending the grant of a sum not to exceed £10,000, equal to sums that may be advanced by the Society, either from its own resources, or from private contributions, to enable the Society to make adequate provision for a building. The Building Committee made frequent visits of inspection to the Inner Domain, and were still unanimous in considering it the best site, providing that sufficient money could be raised; and it was moreover understood that the site, which was the private park of the Governors of New South Wales, would be surrendered for the purpose. But in view of their financial position they announced that they were forced to admit that they considered it more prudent to adhere to Prince Alfred Park, and they therefore decided that the original building should be utilised as far as possible, and additional buildings erected for the purpose of an International Exhibition. While the Committee were thus endeavouring to provide as well as possible for the circumstances of the case, an active correspondence was going on between the Agent-General in London, our Commissioner in Paris, and many other supporters of the project in Europe and America. Applications for covered space to a much greater extent than the whole of what was proposed should be erected for Exhibition purposes, were received from Paris alone, and it was stated that £20,000 had been placed on the French estimates in connection with the dispatch of French exhibits, while from the adjoining colony of Victoria it became known that it was proposed to spend upwards of £70,000 on the Melbourne Exhibition.

Up to this time only a little over £6,000 had been raised by the public; and the conviction became more and more forced upon those who had experience, or who had examined carefully into the subject, that if Sydney were to hold an

Exhibition and provide the necessary building, and have it equipped and furnished in such a way as would be commensurate with the importance of the colony, that the means hitherto proposed would be altogether inadequate, and that in order to make the Exhibition at all successful it must be taken up by the Government and the country as a national undertaking, and that the country, being morally committed to the project, it was most desirable, if an Exhibition were to be carried out at all, it should be on a large and liberal scale, and conducted in a manner that would show forth the wealth and resources of the colony to the eyes of all the world.

On the 27th of November the Colonial Secretary stated in his place in Parliament that if the Agricultural Society found the proposed Exhibition assuming proportions beyond its powers the Government would be prepared to take the matter in hand, subject to the approval of Parliament; and a few days afterwards, at a meeting of the Exhibition Committee, presided over by the Governor, His Excellency advised them, in view of the statement made by the Colonial Secretary in the Assembly, that they should go to the Government and say that the proposed Exhibition had outgrown their expectations, or they should publish to the world the smallness of the space they had available for exhibits. A communication was immediately made with the Government requesting them, in view of the magnitude the undertaking was assuming, to take the whole matter into their hands while there was still time left to carry it out in a manner worthy of the parent colony of Australia. A fortnight afterwards at a meeting, the Committee were informed that the Government had agreed to undertake the carrying out of the proposed International Exhibition, and that they intended to invite the Parliament to devote £50,000 for the

purpose. A change of Government took place about this time, and the Assembly were invited by the outgoing Premier (Mr. Farnell), at the request of Sir Henry Parkes, who was then forming his Government, to advance £50,000 for the Exhibition. The money was not, however, voted, but it was understood that the new Government were willing to accept the responsibility of allowing the necessary preliminaries to go on without interruption, thus avoiding a loss of much valuable time. And it was understood that a Royal Commission, including the names of many of the most influential gentlemen of the Colony, would be issued to take charge and control of the whole question, under the authority of the Government. Accordingly, on the 31st day of December, 1878, a Commission, of which the following is a copy, was issued :—

VICTORIA, by the Grace of God, of the United Kingdom of Great Britain and Ireland, Defender of the Faith, and so forth.

To Our Trusty and Well-beloved—

Our Governor and Commander-in-Chief of our Colony of New South Wales and its Dependencies, or our Administrator of the Government of our said Colony for the time being ; the Honorable Sir JAMES MARTIN, Knight, Chief Justice ; The Honorable Sir ALFRED STEPHEN, C.B., K.C.M.G., M.L.C. ; The Honorable Sir JOHN HAY, K.C.M.G., President of the Legislative Council ; The Honorable Sir GEORGE WIGRAM ALLEN, Knight, Speaker of the Legislative Assembly ; PATRICK ALFRED JENNINGS, Esquire, J.P. ; The Honorable GEORGE HENRY COX, M.L.C. ; WILLIAM DAVIES, Esquire, M.P. ; The Honorable Sir EDWARD DEAS-THOMSON, C.B., K.C.M.G., M.L.C. ; ANDREW GARRAN, Esq., LL.D. ; EDWARD SMITH HILL, Esquire ; RICHARD LEWIS JENKINS, Esquire, J.P. ; SAMUEL ARON JOSEPH, Esquire, J.P. ; PHILLIP GIDLEY KING, Esquire, J.P. ; The Honorable Sir WILLIAM MACARTHUR, Knight, M.L.C. ; The Honorable WILLIAM MACLEAY, J.P., M.L.C. ; JAMES MERRIMAN, Esquire, J.P., M.P. ; HENRY MORT, Esquire ; JOHN RUSSELL, Esquire ; The Honorable SAUL SAMUEL, C.M.G., M.L.C. ; The Honorable JOHN SMITH, M.D., LL.D., C.M.G., M.L.C. ; WILLIAM HENRY SUTTOR, Esquire, M.P. ; The Honorable GEORGE THORNTON, M.L.C. ; PROSPER NICHOLAS TREBECK, Esquire, J.P. ; EDMUND WEBB, Esquire, J.P., M.P. ; and JOHN YOUNG, Esquire, J.P.

WHEREAS it is deemed advisable to hold an International Exhibition of Works of Industry and Art at Sydney, in the month of August, in the year of our Lord one thousand eight hundred and seventy-nine ; Know ye, that we,

relying on your loyalty, integrity, learning, and ability, have constituted and appointed, and by these presents do constitute and appoint, you to be Commissioners to take measures for the holding of such International Exhibition, in such suitable grounds and buildings as shall be provided for the purpose, and for appointing and regulating the charges for admission to such buildings, premises, or grounds, or the rent or hire of any part thereof, or otherwise, and the application of the proceeds towards the objects and expenses of the said Exhibition; and for appointing the purposes of public enjoyment and entertainment for which such buildings, premises, and grounds, or any part thereof may be used and applied; and for obtaining such Exhibits as may in your judgment be necessary to illustrate the progress of industry and art elsewhere; and for securing the most effective display of all articles sent for public exhibition, their safe custody, their due return to their owners, or their disposal otherwise as may be arranged; and for determining as to the nature, number, and value of the prizes to be awarded to the exhibitors, and the impartial distribution thereof; and generally to do and execute all other matters and things whatsoever deemed necessary by you for the full accomplishment of the duties entrusted to you by this Commission; and further we do hereby constitute and appoint you our said Governor and Commander-in-Chief, or our Administrator of the Government to be President, and you the said Sir James Martin, Sir Alfred Stephen, Sir John Hay, and Sir George Wigram Allen, to be Vice-Presidents; and you the said Patrick Alfred Jennings, Esquire, to be Executive Commissioner of this Commission; and lastly we do by these presents ordain that this Commission shall continue in full force and virtue until otherwise determined; and that you the said Commissioners, or any seven or more of you, shall and may from time to time and at any place or places proceed in the execution thereof and of every matter and thing therein contained although your proceedings may not be continued from time to time by adjournment.

In testimony whereof, we have caused these our letters to be made patent, and the Great Seal of our said Colony of New South Wales to be hereunto affixed.

Witness, our trusty and well-beloved Sir Hercules George Robert Robinson, Knight, Grand Cross of our Most Distinguished Order of Saint Michael and Saint George, our Governor and Commander-in-Chief of our Colony of New South Wales and its Dependencies, at Government House, Sydney, in our said Colony, this thirty-first day of December, in the forty-second year of our reign: And in the year of our Lord one thousand eight hundred and seventy-eight.

By His Excellency's Command, (L.S.) HERCULES ROBINSON.
HENRY PARKES.

Entered on record by me, in Register of Patents, No. 11, pages 34 and 35, this third day of January, one thousand eight hundred and seventy-nine.

MAXWELL ALLAN,
For the Colonial Secretary, and Registrar of Records.

The following gentlemen were afterwards added to the Commission :—John Alger, Esq., J.P., W. A. Brodribb, Esq., F.R.G.S., Edward Combes, Esq., C.M.G., M.P., John Davies, Esq., M.P., Edward Flood, Esq., J.P., Henry Halloran, Esq., C.M.G., Patrick Higgins, Esq., J.P., Richard Hill, Esq., J.P., Sir J. George Long Innes, M.L.C., William Palmer, Esq., J.P., William Richman Piddington, Esq., M.L.C., C. J. Roberts, Esq., J.P., Robert Burdett Smith, Esq., M.P., and Samuel Henry Terry, Esq., M.P.

The first meeting of the Commissioners took place on the 7th of January in the temporary offices at the Free Public Library, and was presided over by Sir John Hay, K.C.M.G., President of the Legislative Council, and also one of the Vice-Presidents of the Agricultural Society, who had always manifested an active interest in the Exhibition. At this meeting it was announced by the Executive Commissioner that the Government had approved of plans prepared by the Colonial Architect for the main building, showing a total floor space of about eight and a-half acres. A detailed account of the main building, afterwards to be known as the Garden Palace, has been supplied by the Colonial Architect (Mr. James Barnet), the original designer, and who acted during its construction as architect of the building. The Colonial Architect reports as follows :—

"On Tuesday, the 17th December, 1878, the Colonial Architect was instructed to prepare plans for a building suitable for an International Exhibition, proposed to be built in the Inner Domain, and on the following Friday a design for the building was submitted for approval. The design was specially adapted to suit the contour of the proposed site, taking advantage of the fall of the ground, to provide a basement story on the eastern or garden front, and presenting on that side a façade of two lofty stories, 800 feet in length. This increase of space, being rendered more necessary owing to the limited area of the ground available, towards the west, or Macquarie-street, and Governor Bourke's statue, the façade is only one story.

"The plan of the building is cruciform, with nave and transept, supplemented by extensive aisles, and is 800 feet in length from north to south, and 500 in

width from east to west. The nave and transept are 50 feet wide and 60 feet high, surrounded by galleries 25 feet wide, lighted from a clear-story, and at their intersection surmounted by a dome 100 feet in diameter, springing 90 feet from the floor, and terminating in a lantern whose finial is 210 feet above the ground, which last is 102 feet above high-water-mark. The dome is lighted by windows in the drum, and an eye 20 feet diameter in the apex under the lantern. The nave and transept terminate in four entrance towers, each 50 feet square, and varying in height from 120 to 150 feet, according to the fall of the ground. There are also ten minor towers, 25 feet square, varying from 75 to 100 feet in height, surmounted by open lanterns, placed at as many external angles of the building. The extensive aisles are covered with serrated or lean-to roofs, and lighted overhead with vertical windows facing south to avoid direct sunlight. The basement is lighted from lofty side windows.

"The design is based upon a unit of 25 feet square, 372 of which cover the ground floor, or area of land covered, or about $5\frac{1}{8}$ acres, to which is to be added the areas of the basement, galleries, and tower floors, equal to 216 squares of 25 feet each, making a total area of floor space of 367,500 feet superficial, or rather over $8\frac{1}{3}$ acres.

"A change of Ministry taking place after submitting the before described plan, caused some delay in its approval, but in the meantime the Colonial Architect proceeded, on the 2nd January, 1879, to mark out the building on the proposed site in the Inner Domain, which was finally decided to be the place for the International Exhibition, and on the 4th of January the design was formally approved. On Monday, the 6th, the erection of the necessary offices was commenced on the ground, and the building was begun on Monday, the 13th January. One month later, on the 13th of February, the foundation stone of the eastern pier of the dome was laid by the Honourable Lady Robinson, in the presence of His Excellency Sir Hercules Robinson, his family and suite, the Ministry, the Members of both Houses of Parliament, and a large number of visitors. The basement foundations having been completed, the Colonial Architect directed that before the superstructure was commenced the whole expanse of $5\frac{1}{8}$ acres of ground floor should be laid. The brick foundation walls, and the walls of the basement were then begun, and the hardwood pillars and the trussed girders of the basement were erected, on which the whole of the ground floor was laid.

"The four great entrance towers, each 50 feet square, also built of brickwork, with eight main staircases, being completed, and the floor being laid, the erection of the superstructure began with the aisles, which are supported on hollow columns of pine, 9 inches square, and 25 feet high, with down pipes enclosed, supporting a serrated roof of half principals, covered with corrugated galvanized iron, and lighted from the south with windows overhead of ordinary sashes, placed louvre-wise for ventilation. These windows are supported by laminated arches of wood; the nave and transept with gallery roofs and floor are supported on solid pine columns. The roofs of nave and

transept, which are 50 feet wide, have laminated arch-principals of pine 25 feet apart, with common rafters, supported by curved struts from the clear story window mullions. The gallery roofs have King truss principals, and the whole is covered with galvanized corrugated iron, lighted and ventilated through glazed sashes placed louvre-wise. The side walls of the ground floor are formed of pine framing, covered with corrugated galvanized iron, divided into panels by pilasters and arches of wood, and surmounted with cornice and parapet of galvanized iron.

The dome, which covers the space at the intersection of the nave and transept, rests on a drum 100 feet diameter, supported on four hollow piers of wood standing on brick foundations, in which are placed the stairs leading up to the galleries, and down to the refreshment room in the basement, from which piers spring four arches of wood, 50 feet openings, each spanning the nave and transept. On these arches and piers the drum is constructed, having 36 oval windows, 10 feet by 7 feet, admitting light to the space below. From this drum and 90 feet above the floor, springs the dome of wood covered with corrugated galvanized iron, having twelve large lattice ribs, and twenty-four smaller or intermediate ribs, bound together with strong purlins of wood strengthened with iron, with a well, or eye in the apex 20 feet diameter, glazed with stained glass, and surmounted by a lantern 58 feet high with gilded finial; within the lantern is a large ventilator.

The galleries extend all round the nave and transept at the height of 17 feet 6 inches above the floor, are 25 feet in width, and reached by twelve staircases; in the towers and dome there are also stairs from the galleries to the upper floors and roofs of the four great entrance towers.

The basement extending under the dome, eastern transept, and aisles is entered by the eastern tower, and at the northern and southern ends from the garden terrace is also reached from the main floor by eight staircases, four of which lead down from the space under the dome to the central refreshment room, which is 100 feet square with a fountain in the centre, rising through a balustrated opening 25 feet diameter in the floor above, and surmounted by a bronze statue of Her Most Gracious Majesty Queen Victoria standing under the centre of the dome.

Under the northern and southern towers and nave are spacious cellars.

On the eastern front ground floor there are two balconies, each 6 feet wide, and 125 feet long to the aisles, and two 50 feet by 25 feet each to the Eastern transept, overlooking the garden terrace; to these balconies there are eight doors of access.

Ventilation is provided by numerous inlets for fresh cool air through the floors and louvred glazed windows in a novel manner, while outlets for vitiated air are placed in the dome, the four great towers, the ten minor towers, and along the eaves and ridges of the nave and transept.

Provision has been made throughout the building on each floor and gallery for the extinction of fire by water mains being carried around the building outside and inside, with stand pipes fixed at proper distances apart, with hose attached and water supplied at high pressure from the Botany Water-works. Gas has also been laid on all over, within the building, and around it, and outside, to aid the watchmen.

Rainwater drainage has been provided by an extensive arrangement of earthenware underground piping, discharging into Port Jackson, at Farm Cove, the rainwater being conveyed from the roof by the numerous down pipes enclosed within the hollow pine columns of the aisles, and ornamental columns of nave and transept. Retiring rooms for ladies and gentlemen, with lavatories and water-closets, with the required sewerage, are provided at the northern and southern ends of the building.

The decorations are done in distemper colour, simply arranged; the galvanised corrugated roofs are tinted light blue, the woodwork in buff and pale green, heightened with red, in the nave and transept, ornamented along the ridge, and on the principals, the ornamental capitals of the columns being heightened with gold. The fronts of the galleries have on their panels the names of the various cities and towns from which exhibits have come, these being flanked with the Rose, Thistle, Shamrock, Waratah, Cornstalk, and Southern Cross, respectively. The result of the whole combination is cool and pleasing, and has been likened to the effect of a field of waving and ripening corn.

The dome, with its stained glass skylight, 20 feet diameter, and light blue ground, powdered with golden stars, has its ribs and purlins in buff, picked out with red and gold, standing as a cornice, forming a rich belt of colour, whose frieze bears an inscription in letters of gold "THE EARTH IS THE LORD'S AND THE FULNESS THEREOF, THE WORLD, AND THEY THAT DWELL THEREIN," Ps. xxiv, i.

Below the dome, and over the staircases, are four large paintings in oil, on gold grounds, being allegorical representations of Europe, Asia, Africa, and America, and beneath these are twelve paintings in lunettes over the entrances to the staircases, of trades, occupations, or industries, viz.: The Farmer, Miner, Shearer, Carpenter, Smith, Painter, Potter, Mason, Cooper, Jeweller, Printer, and Engineer.

In the centre of each of the four great arches under the dome is placed the badge of New South Wales—the Southern Cross and Lion, surrounded with the Waratah, and surmounted with the Crown radiant, with gold, and colour beneath, and around which on a blue ribbon in gold letters is the motto of the International Exhibition, "*Orta recens quam pura nites.*"

The aisles, towers, and basement are decorated similarly, although somewhat plainer, and the whole has given general satisfaction.

The building was commenced on 13th January, and was publicly opened by His Excellency the Governor, Lord Augustus Loftus, in the presence of their

Excellencies the Governors of Victoria, South Australia, and Tasmania, the Members of both Houses of Parliament, Naval and Military Officers, Foreign Consuls, &c., &c., including over twenty thousands of the general public, on 17th September, 1879, thus occupying eight months in erection and completion, at a total cost of £191,800, which amount includes many additional works, not contemplated in the original design, and estimate, the whole of the works being carried out under direction of, and from details, and working drawings, numbering 417, furnished by the Colonial Architect, the designer of the building.

The following are the quantities of some of the principal materials used in construction of the building, viz. :—4½ millions feet, super. of timber; 2½ millions of bricks ; 243 tons of corrugated galvanised iron,—the amounts paid for wages, being £94,236 ; for joinery, £7,900 ; and for decorations, £6,900.

It will be seen from the above report that the ideas of the promoters had grown, and with amazing rapidity since the inception of the scheme some few months before. The area of the Garden Palace is more than five times the size of the proposed building in Prince Alfred Park, and that, with the additional annexes which it even then seemed would be required, would in all cover a space of about 500,000 superficial feet, being about half the size of the first great International Exhibition held in London in 1851. The following description of the site is taken from the *Sydney Morning Herald* of January 21st, 1879 :—

"No site more generally accessible and combining so many charming surroundings could well have been selected even in Sydney, where more than in most cities picturesque water-views are numerous. The prospect westward is shut out by the handsome row of residences in Macquarie-street from the Free Public Library to the Treasury. Then comes into view a glimpse of Sydney Cove, lined with London ships, whose masters would probably disdain any comparison with the first fleet which anchored there ninety years ago. The heights of the North Shore, forming the immediate background, have been largely denuded of the stately growths which crowned them as late as a quarter of a century since, and have given place to many villa and other residences. Looking eastward from these clusters of houses, dotted here and there with church spires, the eye takes in the beautiful sweep of water which forms the way to the ocean, and we suppose that in another quarter of a century there will have been made great inroads upon the "forest," or rather, the scrub "primeval" which forms the dark background to the gleaming waters of the harbour which sleep in the bays and wind round the rock headlands. Watson's

Bay, and the neighbourhood of the South Head lighthouse look rather bare, in consequence of the measures which have had to be taken to fortify the harbour against the contingency of foreign aggression ; but the views of the southern shore from Vaucluse—where rest the remains of the Australian patriot, William Charles Wentworth—to Potts' Point, are full of interest and cultivated beauty. Immediately at the foot of the Exhibition Building are the Botanic Gardens, which display, in charming pictures, the vegetation of almost every clime, and which, for loveliness of situation, cannot well be surpassed. Continuing the view in a more southerly direction, the eye still rests upon pleasant prospects—the Outer Domain and the heights of Darlinghurst beyond. Then comes Hyde Park, scarcely a stone's throw away ; so that the Exhibition could not well be set in more charming surroundings."

Mr. Charles Moore, the Director of Public Gardens and Parks for the Colony, gave the Commissioners the benefit of all his skill and experience in laying out the Park, afterwards the Garden Palace grounds, with ornamental flower-beds and terraces, and in pointing out suitable sites for the numerous subsidiary buildings—restaurants, kiosks, &c.—which were soon to spring into existence in the neighbourhood of the Palace. Mr. Charles Moore thus speaks of the work carried out under his supervision :—

" On the 13th January, 1879, orders were given by the Colonial Secretary to lay out what are now called the " Garden Palace Grounds " for Exhibition purposes, and on the 17th September following, with the exception of a small portion near the principal entrance, they were then almost as complete in every way as they are at present.

The area now occupied by the Garden Palace and grounds adjoining was formerly a part of the Inner Domain, exclusively used by the Governor for grazing purposes, to which the public had then no access whatever. The portion on which the building stands was originally of a somewhat saddle-back shape, sloping slightly towards Macquarie-street, and on the eastern side falling off for some distance into a rather sharp declivity. Between this and adjoining the Botanic Gardens there were some two or three acres of low flat land, which was enclosed and used for growing green food for the Governor's stock ; and on the upper part of the eastern side a rocky elevation extended for about 200 yards towards the Outer Domain.

To remove the rock was a work of considerable labour ; and to construct the terrace in front of the building and to bring the ground at the base thereof into a gradual slope, as well as to fill up the low ground of the Governor's paddock referred to, about 16,000 loads of materials were used, principally

obtained from the excavations for the building, and from road scrapings and town refuse from the city. The work of forming and filling up the ground proceeded simultaneously with the erection of the building. To grass the area over and make a green sward at once, advantage was taken of the grassy surface of the lower part of the Outer Domain, and of that on which the Machinery Hall and Agricultural Hall were to be built, so that by the time the Garden Palace was finished the surface of the grounds was transformed into a permanent and beautiful lawn. Immense labour was expended in draining the grounds and in constructing a main drain to carry the rainfall from the building away to the bay in front of the Botanic Gardens, a portion of this latter work having to be cut through solid rock.

Immediately on receipt of orders to prepare and plant these grounds every possible effort was made to provide sufficient plants for ornamentation. The system adopted of ribbon borders and carpet-bedding required a vast number of plants. In about six months' time, however, at least 30,000 of these were ready for planting out, consisting chiefly of golden feverfew, alternanthera, centaurea, cineraria, coleus, geranium, iresine, ageratum, antirrhinum, begonia, verbena, heliotrope, lobelia, petunia, gazania. Before the opening of the Exhibition 28,000 of these and other plants were planted out and well established in the grounds.

The designs in the beds and the blending of colours by the various shades of foliage were at that time a perfect novelty to most colonists, and a most agreeable sensation was caused on beholding for the first time perfectly carried out, a system of flower-gardening prevailing in England for some years back. The carrying out of this system properly, is, however, most expensive in this climate, in consequence of the rapid growth of plants here, necessitating almost daily attention to all the beds to keep them in perfect condition. The work of this description, carried out in these grounds, although costly, has been amply repaid by the very general satisfaction which it has given to the public."

The execution of the works of the building were entrusted to Mr. John Young, the eminent contractor, in conjunction with Messrs. Hudson Brothers, of this city. Mr. Young, who had been appointed as a Commissioner, resigned his position, it being incompatible with his duties as a contractor, and threw all the energy by which he is specially characterised, into the work. Arrangements were made for procuring from London without delay apparatus for electric lights, so that work might be carried on day and night, and it was announced in all probability the building would be in

a sufficient state of preparation for the receiving of exhibits in July and August, and would be completed about the first week of September.

During the month of January such was the rapid progress made that it was announced the foundation-stone of the eastern pier of the central dome would be laid by the Hon. Lady Robinson on the 13th of February, 1879; and on that day, in the presence of a large and select assembly of ladies and gentlemen, all of whom were present by special invitation, the ceremony took place. Lady Robinson was conducted to the foundation-stone by Sir Henry Parkes, the Premier, who, in presenting to her the mallet and trowel, requested that she would perform the ceremony of laying the stone. This her ladyship did in the customary manner, and declared the stone to be well and truly laid. Cheers were then given for the "Queen" and for "Lady Robinson," and His Excellency the Governor, in returning thanks for Lady Robinson, remarked that "He had carefully examined the design, and he thought it most admirably suited to the object in view, and that the building, when completed, would be found to be one of the noblest structures of the kind which has ever been erected in the Southern Hemisphere." His Excellency, who was about to leave the Colony to undertake the Governorship of New Zealand, and who was identified so peculiarly with the Sydney International Exhibition, expressed a hope that he and Lady Robinson would be able to return to witness personally the complete success of the scheme in which they had both taken such a warm interest. He pointed out that the distinctive feature of this great show was, that whereas in all former Exhibitions the Colonies had as it were been brought into competition with each other, in this case the Australian Colonies as a whole would enter into

friendly rivalry in the Arts of Peace with the outside world. He hoped it would prove a happy augury for the future, and would serve to show the real identity of all Australian interests, and hasten the day when these Australian provinces would occupy a proud position before the world as a united Federal Dominion." [Although Sir Hercules was not able to fulfil his intention of visiting the Exhibition while it was open, and of thus seeing it at its best, he was afforded an opportunity of meeting the Commissioners at an entertainment in the Garden Palace given by them to himself and Lady Robinson and family, when he visited Sydney in September, 1880, on his way to assume the Government of Cape Colony, to which he had been appointed.]

During the month of February the Commissioners met weekly, and the different committees, having now got into proper working order, entered heartily into their duties, and held sittings in many cases daily.

The Government at this time appointed a Commission to act in London, composed as follows:—President, The Right Hon. the Earl of Belmore, K.C.M.G.; Vice-President, Sir Daniel Cooper, Bart.; Members, Mr. William Forster, Agent-General for New South Wales, the Hon. John Frazer, M.L.C., Mr. Edward Knox, the Right Hon. Robert Lowe, M.P. (now Lord Sherbrooke), Mr. Edward A. Levy, Mr. Jacob Montefiore, Mr. William Anderson Ogg, Sir Henry Watson Parker, K.C.M.G., Mr. P. N. Russell, Sir Francis Turville, K.C.M.G., Mr. Alexander Macarthur, M.P.; Secretary, Mr. Francis Fladgate; for Fine Arts, Mr. C. Deschamps.

The following countries were formally invited to participate in this, the first International Exhibition held upon

Australian soil:—The United Kingdom, France and her Colonies, the German Empire, Austro-Hungary, Italy, Russia, Spain and her Colonies, Portugal, the Netherlands and her Colonies, Norway and Sweden, Denmark, Turkey with Egypt and her other dependencies, Switzerland, Greece, the United States of America, Mexico, Brazil, and the other South American States, China, Japan, Persia, Canada, Victoria, South Australia, Queensland, New Zealand, Tasmania, Western Australia, Fiji, Mauritius, Cape of Good Hope, Ceylon, and Hongkong.

Mr. Roderick W. Cameron, of New York, who had long been identified with New South Wales, both as Commercial agent for the Government of the Colony, and as one of our Commissioners at the Philadelphia Exhibition of 1876, was appointed by the Colonial Secretary as Commissioner for the United States for the Sydney Exhibition, and Mr. H. W. Peabody, of Boston, was also appointed to assist Mr. Cameron. The first-named gentleman, who had done many good services for Australia before, undertook to place the project before the Federal Government and the people of the United States, and was thus of great service in enlisting their co-operation.

An Official Programme of the Exhibition, containing all information with regard to the Commissioners in Sydney, London, and America; the regulations and by-laws for the Exhibition; the system of classification, and all other requisite information was prepared, and 13,000 copies were distributed for the information and guidance of exhibitors in Great Britain, the European countries, United States, and British Possessions in America, and all other English speaking colonies and countries. The Government also circulated this Programme officially to all participating Countries and

Colonies, notifying to them at the same time that the Exhibition had been taken in hand by the Government, and was to be prosecuted on a scale of greater magnitude than had been at first proposed, and stating that it had been definitely recognised as a national undertaking by the Legislature of the Colony. Lithographed plans, showing the quantity, the area, and position of all floor and wall space were prepared for the use of the Commission by the Colonial Architect, and inquiries were actively set on foot to ascertain the probable amount of space that would be required.

During this same month the foundation-stone of the Melbourne International Exhibition was laid and invitations to be present at the ceremony were forwarded to the Sydney Commissioners. A general feeling of regret was expressed in Melbourne at the absence from the ceremony of any members of the Sydney Commission; but a telegram from their Executive Commissioner, which was read to the 500 guests assembled in the Melbourne Town Hall at the dinner held after the ceremony, fully explained matters, although the disappointment was much felt. This telegram was as follows:—"We offer the warmest congratulations and hope that the laying of the foundation-stone of your Exhibition may be the first act of a successful and prosperous undertaking worthy of your great Colony. Your generous co-operation in our Sydney Exhibition demands from us the fullest recognition, and enhances the pleasure of the reciprocal support which we propose to accord to yours in 1880. Our only regret is that circumstances do not permit New South Wales to be represented on such an auspicious occasion." Sir George Bowen, Governor of Victoria, after reading this telegram from the Executive Commissioner, proceeded to say:—"Now I am sure you will agree with me that this telegram

represents a most excellent feeling, such a feeling as ought always to prevail between these two great sister Colonies, and I think you will also agree with me in the hope that the Intercolonial gatherings at Sydney this year, and at Melbourne next year, will prove the foreshadowing of that Intercolonial Federation which is the aspiration and hope of every wise and patriotic Colonist."

By this time the work of the Building was proceeding in a satisfactory way, and about 800 men were employed daily. The applications for space began to pour in from the different colonies and countries, and Mr. H. W. Peabody, one of our American Commissioners, Mr. Gresley Lukin, Commissioner for Queensland, and the Hon. J. J. Casey, C.M.G., the Victorian Executive Commissioner, had presented themselves in person at the meetings of the Commission and arranged for obtaining space for the proper representation of the countries and colonies from which they were delegated.

The demands for space became so numerous and pressing that it was evident additional buildings would have to be provided, and a portion of the Outer Domain was asked for by the Commission to be thrown into the Exhibition grounds, thus giving an additional area of 23 acres, which would furnish suitable sites for the extra buildings to be erected. This proposition of the Commissioners elicited some opposition, as the Outer Domain was one of the most favourite of the public Parks of Sydney and included the well-known Domain cricket-ground, and the Fig-tree walk, one of the most frequented promenades of the city. Public feeling, however, was so much aroused in favour of the undertaking that the opposition to the proposal soon ceased, and the Commissioners were enabled to erect two large Machinery Halls,

one for machinery in motion, and the other for Agricultural Implements and Machinery, covering a space exceeding 100,000 feet; the Agricultural Hall, for exhibits of Cereals, Wool, and all other agricultural products, and it enabled the Commission to hold shows of Plants, Fruits, Flowers, &c., every month during the currency of the Exhibition; also pens for the periodical shows of Sheep, Horses, Cattle, &c., and the requisite accommodation for the Live Stock shows. In this outer portion of the Domain were also erected buildings for the display of machinery and other exhibits by private firms, restaurants, and the kiosks of the different nationalities represented at the Exhibition. The position of the whole grounds will be seen at a glance, by reference to the ground plan which accompanies this work.

During the month of May the Committees of the Sydney International Exhibition were called upon to meet almost from day to day, and the nature and character of the exhibits which the different countries proposed to contribute became gradually more apparent. In order to meet exceptional cases of countries like that of Japan, invited to co-operate, but from which no communications had been yet received, telegrams were dispatched inviting their official co-operation. Meanwhile satisfactory progress continued to be made with the erection of the building, and the electric-light was brought into operation in order to continue the work by night. It was computed at this time that there could not be fewer than 3,000 men directly and indirectly employed in connection with the Sydney International Exhibition building, and up to this period all matters in connection with the erection of the building had proceeded smoothly, when the unpleasant news was circulated that there was a strike of the carpenters employed, which, commencing with comparatively few men,

suddenly assumed a more serious character than was at first anticipated. No less than 400 out of the 650 carpenters who were at the time receiving 1s. 3d. per hour, went out on strike for an increased wage of 3d. per hour, on the ground that their work was more dangerous than ordinary carpenter's work. The determined attitude, however, taken by Mr. Young, in which he was firmly supported by the Government, and by the Commissioners, caused this unworthy attempt on the part of a few unprincipled agitators to end in a sudden collapse, and it was soon reported in the daily papers that the ill-advised strike of the carpenters at the Exhibition building was at an end, and that a large body of men, fully as many as were required, had returned to their work. The utter failure of the strike, seemed to be a sufficient security against any similar attempt while the erection of the Exhibition building was being proceeded with.

About this time numerous proposals for musical performances and entertainments in connection with the Exhibition came up for consideration, and were thus reported upon by the Executive Commissioner :—

"The question of musical entertainments has been made the subject of a report by me, and I have submitted it to the Committee on Art, the Committee for Interior Arrangements, and the Ceremonial Committee, which committees have expressed their approval of it, and I now beg to lay it before the Commission. It is as follows :—

"'The *resumé* of all the applications, proposals, and suggestions for musical performances at the opening and during the currency of the Exhibition has been prepared for the information of the Commission, in order to place before them in an easy and intelligible form all that has been written and advised by professional and amateur musicians, in response to the invitation which appeared by way of advertisement in the public journals, calling the especial attention of those interested to the subject in question.

"'It is, I think, not necessary to adduce arguments in favour of employing the art of music, as well as the arts of sculpture, painting, and drawing as valuable auxiliaries in rendering the Exhibition attractive as long as it remains open to the public. It must be remembered that with our limited population it will be highly desirable to encourage the public to visit the

building and grounds over and over again in order to produce a satisfactory financial result. and that nothing can be more legitimate and improving than the attractiveness that music of a well selected character affords, to enhance the success of this great national object which we have undertaken to guide and lead to a successful issue.

"'The proposals, as will be seen by a glance at the accompanying *resumé* consist of offers to introduce large orchestral bands from Europe, and also to organize bodies of performers in the colonies ; there are also suggestions for the production of original compositions for promenade concerts, orchestral and vocal, for open-air concerts, orchestral and vocal, for operatic concerts, organ recitals, performances of bands, and choral performances by children, and for competitive choral concerts ; also, applications for the appointment of musical director. I have carefully examined all the various proposals. That of the eminent musician, Herr Kretschmann, recommending the introduction of a well-organized orchestra, at a probable cost of £8,800, is, I am afraid, beyond our means ; and a somewhat similar proposition of another gentleman, Monsieur Meilhan, whose position as an artist and composer justly entitles his advice to consideration, must, I think, for similar reasons, be passed by, as the estimate in his case is little less than that of Herr Kretschmann, being between £7,000 and £8,000.

"'The other proposals I do not find it necessary to adduce severally, but will prefer to give the opinion I have formed, after much deliberation of all that has been brought before me on the subject.

"'I will premise, then, by saying that many opinions have been asserted that music of an Australian character, and composers or artists of Australian reputation, and whose productions are distinctly Australian in manner and school should be preferred ; and it is said that because Australians have asserted a pre-eminence over their British brethren in the physical pastimes of cricket and rowing, that there is no telling but what we may do so in performances on musical instruments and in the science and art of music. It is not for me to argue the question whether we have established a distinctly defined Australian School of Music, as distinguished from any of the well-defined schools that are usually acknowledged to exist, though it would be well to admit that if such were the case something had been done that none of the great States and colonies planted by Britain in any of the quarters of the globe had so far shown themselves capable of doing.

"'Music is not alone a universal language, but it expresses itself diversely, and may be said to be an expression of the character, the emotions, the feelings, and above all, the imagination of the nation or race which produces it, and is invariably marked by characteristics which stamp it on the ear of the untrained, and more so on the ear of those who are trained, as possessing radical and essential differences, and effects which it

is hard to account for by any analytic process. The different schools of music have each their special admirers, and there is no capital in the world where the productions of all the great schools of music is so impartially received as the capital city of our Empire, and there are no people who enjoy good music of all sorts more thoroughly than the British. I think, therefore, that it would be unwise to restrict the musical performances by which we hope to enhance the attractiveness and success of the Exhibition in any way, but that we should make them truly cosmopolitan, and, while amusing, seek to elevate, as much as is consistent with the wishes, the habits, and tastes of the great body of those who may come to visit the Exhibition, and at the same time listen to good music.

"'The Commission has already sanctioned the production of six grand oratorios, one each month, and I am sure that with a large chorus and good orchestra the performance of these magnificent works produced on a scale never before attempted in Sydney, will be as successful, "*si parva licet componere magnis*," as the splendid productions of oratorios at the Crystal Palace at Sydenham, and the musical festivals throughout Britain. I think these oratorios should be given on Saturday afternoons, in order to afford the masses of the people an opportunity of hearing these magnificent works well and effectively rendered.

"'The proposal of Mr. J. Churchill Fisher, for a series of Saturday concerts, about twelve in number, embracing concerts of Public school children on a very extensive scale, together with competitions of school choirs similar to those which have been given with such good results at the Crystal Palace at Sydenham and elsewhere, is one which I would strongly recommend the Commission to adopt, provided the details can be satisfactorily arranged. In addition to these I think there ought to be one or two promenade concerts each week, and an organ recital for an hour or two in the afternoon of the off days.

"'In addition to these offered performances, exhibitors of musical instruments might be allowed to permit artistes to perform at such times as would not conflict with the performances above recommended.

"'With regard to the applications for the musical directorship, I would recommend that Signor Giorza should be appointed to that position, as I feel bound to say his credentials and qualifications are of such a nature both as a conductor, composer, and artist, that I could not justly pass them over. I think that he should also be authorized to compose a march and cantata for the opening ceremony, and that no time should be lost in endeavouring to procure such a poem as a cantata for the opening as will be worthy of so important and novel an occasion. The sixteen weeks that intervene between now and the opening day are all too few to admit of any delay in this matter, and as Signor Giorza offers to give his exclusive services as composer and director, and performer on the organ, and to organize a competent orchestra

of local artists for promenade concerts and to conduct the same, and the representatives of the choir organized for the production of the grand oratorios have signified their intention to work harmoniously with Signor Giorza, it will, I think, viewing the urgency of the occasion, be wise to abstain from delaying in coming to a decision in the matter.

"'The proposition of Mr. Whitwam to give a series of evening promenade concerts in a rotunda or pavilion on the grounds, to be built for the occasion and lighted with gas, would not, I think, be possible for me to recommend; and the offer of Mr. Charles Packer to allow his original oratorio of the "Crown of Thorns," to be brought out on certain terms is, I think, worthy of consideration, and may be dealt with at a future time.

"'The performances of the Head-quarters Band and that of the Volunteers in the grounds at intervals should, I think, also be encouraged, and I would recommend the acceptance of the offer of the peal of hemispherical bells ordered for St. Stephen's, Newtown, which are manipulated by a keyboard, and I am able to state that a similar peal proved a great source of attraction at the Centennial Exhibition of 1876 in Philadelphia.'"

The recommendations contained in the above report were adopted.

The appointment of a Royal Commission in London by the Home Government gave great satisfaction, and the more so, because it was presided over by His Royal Highness the Prince of Wales; and it was intimated to the Commission by the Executive Commissioner that some of the articles of vertû from the South Kensington Museum were likely to be sent out. It was also announced that in addition to British, German, and Belgian paintings, we might expect a large and varied Fine Art display from France, Austria, and the Netherlands.

The following copy of a memorandum prepared by the Executive Commissioner, at the request of the United States Consul in Sydney, for the information of the United States Government, shows the progress made in Exhibition matters up to that time:—

"1. The whole of the Inner and a greater part of the Outer Domain, situated in the heart of the City of Sydney, and comprising an area of about 35 acres, have been reserved for the International Exhibition grounds.

2. The space on the floors of the main building, of which plans are herewith transmitted, is 338,000 superficial feet, and in the two towers there are 10,000 feet in addition.

3. The machinery-hall will cover an area of about 100,000 superficial feet, and the other temporary buildings for the display of live stock and horticultural and agricultural products, and for the monthly flower and fruit shows, will cover about 100,000 feet of the surface.

4. In the original approximate assignment of space 30,000 feet were reserved for the United States and Canada, on the floors of the main building, and a proportionate area in the exterior buildings for the display of implements and machinery.

5. The space required by the European nations, and allotted to them by our Commissioners in London, is as follows :—

MAIN BUILDING FLOORS.

Great Britain and Ireland, 110,000 feet; France, 64,000 feet; Germany, 45,000 feet; Austria and Hungary, 22,000 feet; Belgium, 12,000 feet; Italy, 10,000 feet; Switzerland, 5,000 feet; Holland, 5,000 feet. Superficial feet on floors for Europe, 273,000 feet.

Wall space in main building applied for to date in Europe amounts to 140,000 square feet, exclusive of the fine art collection now being made in Britain and the Continent of Europe. The space required in the machinery-hall and exterior buildings for Great Britain and Europe is 100,000 square feet.

6. The Colonies have applied in the following proportion for floor space in the main building :—

Victoria, 10,000 feet; Queensland, 10,000 feet; New Zealand, 6,000 feet; South Australia, 4,000 feet; Tasmania, 2,000 feet; Fiji, 2,500 feet; New Caledonia, 2,500 feet; and 20,000 feet are reserved for the parent Colony of New South Wales.

7. Applications for space have also been received from India, the Cape Colony, and some of the South Sea Islands. Advices from Japan state that an Imperial Commissioner will be sent. The amount of space originally reserved for that Empire is 5,000 feet in the main building.

8. In Great Britain and Ireland the Queen has issued a Royal Commission, with His Royal Highness the Prince of Wales as president, and a number of British noblemen as members. This Commission will be officially represented in Sydney.

9. A collection of artistic and scientific objects, articles of vertû, and some of the Prince of Wales' Indian presents, are also expected to be lent from the South Kensington Museum.

France has appointed Post-Captain Mathieu, and Germany, Professor Reuleaux, as Commissioners; Austria is sending her official representative in a man-of-war from Trieste; and the Archduke Charles Louis, who takes a warm interest in the Exhibition, has written a very complimentary letter to the Sydney Commission, congratulating them on the holding of this "festival of peace," and pointing out that the opening of the Suez Canal has placed Austria in a position to enter into close commercial relations with Australia. The Kingdom of Italy has not officially named delegates, but a telegram from London states that the Duke of Genoa is coming to the Exhibition, and advices have been received that Belgium, Switzerland, and Holland will be represented officially. Spain and Portugal have so far abstained from notifying their intention to participate, and the Empires of Russia and Turkey have been unable to take part.

10. In Victoria the Executive Committee of the Royal Commission, formed for the purpose of carrying out the Melbourne International of 1880, are acting as a Commission for the Sydney International Exhibition of 1879.

The Hon. J. J. Casey, C.M.G., has been appointed Executive Commissioner for that Colony, and has already visited Sydney to make the necessary arrangements for the placing of Victorian exhibits.

11. In Queensland the Government has authorized the National Association to act for that Colony, and have appointed Gresley Lukin, Esq., as Executive Commissioner. Mr. Lukin has also visited Sydney, and has organized a resident Commission here to provide for the requirements of Queensland.

12. In New Zealand His Excellency the Governor, Sir Hercules Robinson, G.C.M.G., who, during the term of his Governorship of New South Wales, took such an active part in initiating the Exhibition, is president of the Royal Commission formed there to provide for the representation of New Zealand at Sydney; and Dr. Hector, C.M.G., who represented New Zealand at the Philadelphia Centennial Exhibition, is Executive Commissioner.

13. In South Australia, His Excellency the Governor, Sir William Jervois, G.C.M.G., is president of the Commission, which includes all the leading men of that province, and is acting for both the Sydney Exhibition of 1879 and the Melbourne Exhibition of 1880.

14. In Tasmania, Fiji, and New Caledonia, Commissions have also been appointed, who are working effectively; and all over the Australasian Colonies and New Zealand local committees have been formed to assist in making the first International Exhibition ever held in Australasia worthy of the occasion.

15. It is said that it is not the intention of Canada to appear officially, though many exhibits are being sent from the Dominion. It is to be hoped that at the first gathering of nations on Australian soil that Canada, between which country and New South Wales such friendly feelings exist, may not be absent.

16. There is no relationship between the Sydney and the Melbourne Exhibition, but the people of Victoria are giving a most cordial and practical support, and contributing in various ways to the success of the Sydney Exhibition of 1879, and there is no doubt that the people of New South Wales will afford an equally cordial and practical support to the Melbourne Exhibition of 1880. Every facility will be given to exhibitors who desire to have their goods sent on to Melbourne, and as there is an interval of six months between the closing of the one and the opening of the other, there will be ample time for transhipment of exhibits. First-class steamers leave Sydney for Melbourne daily, and the freight and fares between the two Colonies are very low, owing to great competition between the different steam lines.

17. Messrs. R. W. Cameron, of New York, and H. W. Peabody, of Boston, have been commissioned to give all information to shippers in the east as to routes and agencies, and are despatching ships direct from those parts to Sydney. Goods can also be sent by the Pacific mail steamers *via* Panama to San Francisco, or by rail across the American Continent to that city, and thence by the steamers carrying Her Majesty's mails *via* New Zealand to Sydney. All exhibits, as will be seen by the accompanying rules, not consigned to any agents, will be received by the Commission and taken charge of in the buildings, but the Commission would prefer that the exhibitors should consign to agents as much as possible.

18. With regard to character and general extent of the markets to be affected, much valuable information may be gleaned from the report of the Sydney Chamber of Commerce and the Statistical Registers of the various Colonies, and also from the two interesting pamphlets which I have the honor to transmit for the information of the Acting-Secretary of State at Washington. I may, however, briefly say that the present population of Australasia and New Zealand is about two and a half millions, being somewhat the same in point of numbers as the United States were over a century ago, when they became independent of the British Crown, and the total area is much the same as that comprised in all the United States and territories.

In mineral wealth of every description, gold, silver, copper, tin, iron, and coal, in boundless capacity for the growth of every description of agricultural and horticultural products from the semi-tropical sugar-growing districts of the north, to the temperate corn and wine-growing districts of the south, in vast and valuable forests, and above all, in the immense flocks and herds of sheep, cattle, and horses, Australia may justly claim to be one of the richest countries in the world. The wool shorn from our sixty millions of sheep is an abiding source of wealth, and one capable of almost indefinite increase with the spread of settlement, and the extension of our railway system into the vast interior.

19. The combined imports and exports of all the Australasian Colonies amount to ninety millions (90,000,000) of pounds sterling, or four hundred

and fifty million dollars (450,000,000). The trade return of New South Wales, published in the Statistical Register, shows that in the year 1877 the imports from the United States to this Colony only, amounted to £481,565, and the exports to that country, £108,269, showing an excess of imports over exports of £373,292. For 1878 the imports from the United States to this Colony amounted to £622,261, being an increase of nearly 50 per cent. upon the imports of the previous year.

It has been frequently and justly argued that if the Customs duties levied on Australian wools in the United States were considerably reduced or removed altogether, a large and profitable trade would spring up between the two countries, which would be mutually advantageous, and would further conduce to strengthen those ties already existing, and bind more closely two great communities of the same race, language, and sympathies, who are destined to perpetuate the principles and traditions of liberty, enlightenment, and order, the characteristics of that great nation from which Americans and Australians are alike proud to claim descent."

While the work of the Commission was thus proceeding it was felt to be their duty to call the attention of the Government to the inadequate means that existed for bringing the large numbers of passengers that would arrive at the Redfern Railway Station, into the city. A scheme for the extension of the railway into the city had been talked of for some time, and had been discussed in Parliament; but it was evident that no extension of the railway could possibly be effected in time to meet the wants of the visitors to the Exhibition. The Government, however, recognising the difficulty of the position, passed a Bill through Parliament authorising the construction of a tramway, on which steam motors were to be employed, from the general terminus at Redfern to Hunter-street, at a point close to the main entrance to the Exhibition. This tramway was found to be so effectual that it was not alone continued in existence after the Exhibition was closed, but proving itself, as it did, a great public convenience, the line was doubled all the way, and extensions have since been made to nearly all the main suburbs of Sydney. It may therefore be claimed as one of the collateral benefits

resulting from the Exhibition, that our system of tramways, which appear likely to assume such large proportions, sprang out of the holding of the Exhibition in the first instance, and it is extremely improbable, owing to the difference of opinion that existed with regard to the expediency of constructing tramways, that they would have been laid in Sydney for many years, had it not been for the Exhibition.

During the month of June the erection of the Machinery Halls and the Agricultural Hall was commenced, and the works at the Garden Palace made considerable advance towards completion; and as the elegant outlines of the dome and towers became manifest, public interest was more strongly than ever displayed in this great work; and on the 4th of the following month the hoisting of the last of the twelve ribs of the dome was effected, without accident, in the presence of a large number of ladies and gentlemen, who had been invited by the Colonial Secretary to witness the operation.

The Commissioners appointed by the European Countries taking part in the Exhibition were placing themselves in communication with the Commission, and from the information afforded by them regarding the quantity and character of their exhibits, it became apparent that the whole building would be more than filled, and that the collection of exhibits would far surpass the expectations of the most sanguine promoters of the project.

The British exhibits alone promised to form a much greater and more important display than the whole exhibition was originally intended to accommodate, and in addition to the large contributions of France, Germany, and Belgium, the

Austro-Hungarian Monarchy intimated its intention of sending a ship of war with its Commissioners, and the Archduke Charles Louis, who took a deep interest in the object, foreseeing that by the opening of the Suez Canal a direct trade was likely to spring up between Trieste and the Australian Colonies, wrote a most friendly letter to the Commissioners expressing his satisfaction at being able to join in what he elegantly styled this "Festival of Peace." The Government of India, who up to the present time had not replied to the invitation sent to them, intimated that exhibits would be sent from Madras, which were soon to be followed by contributions from the other Presidencies, and at the end of the month Commissioners from Japan, the Netherlands, and Belgium, arrived in Sydney. His Excellency Sir Alfred Stephen, who had acted as Governor from the time of the departure of Sir Hercules Robinson, displayed the strongest possible interest in the success of the Exhibition, and attended regularly the meetings of the Commissioners, which were held frequently during these months. Before laying down his position as Governor, which he was shortly to do on the arrival of Lord Augustus Loftus, Sir Alfred gave a magnificent entertainment at Government House to the Foreign Commissioners who had then arrived in Sydney, and the members of the Sydney Commission, and other distinguished gentlemen.

A few days afterwards His Excellency Lord Augustus Loftus landed, and at the same time the French Commissioner-General, Post Captain Mathieu, of the war-ship "Le Rhin," who had been previously connected with Australia, and the German Commissioner, Professor Franz Reuleaux, Privy Councillor, who had represented the German Empire at the Philadelphia Centennial Exhibition, also arrived.

At the levée held after his Excellency's arrival the following address was presented to him by the Executive Commissioner on behalf of the Commission :—

To His Excellency the Right Honorable Lord Augustus William Frederick Spencer Loftus, P.C., G.C.B., Governor and Commander-in-Chief of New South Wales and Dependencies, President of the Sydney International Exhibition.

May it please your Excellency,—In welcoming your Excellency to the Colony which her Most Gracious Majesty the Queen has been pleased to appoint you to govern, we desire to express our feelings of thankfulness and gratitude that we are to receive the benefit of those eminent talents which have distinguished your Excellency in those lofty positions you have so often been called upon to fill in the principal Courts of Europe, and of your matured experience in public affairs, which will prove of invaluable assistance in the conduct of those duties devolving on your Excellency as Governor of this Colony.

As President of the first International Exhibition ever held in Australia we trust to have the benefit of your Excellency's advice and assistance in an object which has always possessed a deep interest for your distinguished predecessor, Sir Hercules Robinson, to whom its institution as a national undertaking was mainly due; as also to the Lieutenant-Governor, Sir Alfred Stephen, who has always accorded his valuable support, and evinced a deep and active interest in the success of the Exhibition. Under your Excellency's presidency we trust that this great work, which the colonists look forward to with much pride and pleasure, will be successfully opened; and that it will realise all those anticipations of usefulness which the Commissioners confidently expect will prove of lasting benefit to New South Wales.

His Excellency replied :—

Gentlemen,—It is with feelings of pride and satisfaction that I receive the address, couched in too flattering terms as regards myself, which you have done me the honour to present, and I beg you to accept my sincere thanks for the cordial welcome it expresses.

I beg to assure you, gentlemen, that I have deeply at heart the interest and success of the International Exhibition, initiated under the able administration of my predecessor, and which is destined to rank as a memorable and important epoch in the history of this Colony.

This great work, demonstrating to the world the wealth, the industry, and high position of this Colony, cannot fail to produce the happiest results.

It has enlisted the cordial support of Her Majesty the Queen and of His Royal Highness the Prince of Wales, who have taken a deep interest in it, and have largely aided in promoting its success.

I beg to assure you, gentlemen, that, with the valuable assistance of Sir Alfred Stephen, I shall do everything in my power to render this Exhibition worthy of the great object it has in view, and worthy of this great and wealthy Colony.

At the next meeting of the Commission, on the 9th of August, His Excellency attended, and a formal reception was accorded to him. On His Excellency's arrival he was received by the Executive Commissioner, and introduced by that gentleman to the members of the Commission and the Foreign Commissioners. After the reception the members of the Commission sat for the transaction of the ordinary business, His Excellency taking the chair as President, and it was finally decided at this meeting that the opening of the Exhibition should take place on Wednesday, the 17th of September.

For a month preceding the opening the various committees of the Commission worked incessantly to facilitate the operations of the exhibitors, and in this work they were assisted by honorary members of committees whom they had nominated to assist them. The different participating countries and Colonies were allotted those portions of the building respectively assigned for their use on the main floor, the basement, and the galleries, and a special committee was formed for the purpose of acting for the British exhibitors—consisting of the Executive Commissioner, with Mr. Edward Combes, M.P., Mr. John Davies, M.P., and the Hon. Patrick Higgins, M.L.C. These gentlemen rendered valuable assistance in arranging for the location of British space—and worked night and day in assigning places for the exhibits. Thousands of packages were being delivered at the Garden Palace, and in spite of the heavy and continuous rains, work was proceeded with most energetically, and was still continued

during the night by the aid of the electric light, and no efforts were spared in endeavouring to accomplish the great task the Commissioners had undertaken and keeping faith with the public and formally opening the Exhibition on the day appointed. When it is considered that the Commission had only been in existence from the beginning of the year, and that in that short time the erection of the Garden Palace and other Exhibition buildings, the collecting of exhibits from all parts of the globe, and the arrangements for their reception, had to be undertaken and accomplished, it is easy to understand that a large section of the public still remained incredulous that such a great result could be obtained in so limited a time. The Commissioners, however, persevered, and perfected regulations for the guidance of exhibitors, and arranged everything necessary for the opening ceremony, which it was suggested should be graced by an external demonstration, in order to mark so auspicious an event in the history of the Colony. One important addition was also determined upon, in conformity with the wishes of the Art Committee and the Foreign Commissioners. This was the erection of a separate building as an Art Gallery. It was originally intended that the galleries of the Garden Palace should be used for the display of pictures, statuary, and other works of art, but for two very obvious reasons these galleries could not be so made use of. In the first place the whole of the space in the galleries was required for other exhibits for which no room existed on the main floor; while in the second place the light was not so good as to do full justice to the noble collections of paintings which were to grace the Exhibition. Plans were prepared under the direction of Dr. Garran, Chairman of the Art Committee, Mr. Edward Combes, C.M.G., the Chairman of the Advisory Committee on Art, Professor Reuleaux, and some other

members of Foreign Commissions, and the Government of the day sanctioned the necessary expenditure for the erection of an Art Gallery, which proved one of the most attractive, instructive, and valuable adjuncts of the Exhibition.

On the 6th of September the Executive Commissioner was enabled to state in his usual weekly report that the allotment of space on the different floors of the Exhibition building to the various countries and colonies had been completed, and, during the week following all the exhibitors and employés worked night and day, with the utmost dispatch to prepare for the great event of the opening, in spite of the rain which still continued to fall almost unprecedentedly, and the effect of which was aggravated by the heavy easterly gales peculiar to that time of the year—this excessive rainfall, amounting to nearly 10 inches in the fortnight preceding the opening of the Exhibition, rendered it impossible to lay out the ornamental portions of the gardens surrounding the Palace, and the walks throughout the Park, and the grounds generally, while it almost wholly prevented the cartage and reception of heavy goods in the external buildings, and materially interfered with their completion.

On the invitation of the Ministry, the Foreign and Colonial Commissioners, and Members of both Houses of the Legislature, and the Sydney Commissioners, were entertained at a picnic on the Blue Mountains, and in spite of the rainy weather they passed a most enjoyable day and several interesting speeches were made on the occasion.

Public expectation, which for a long time had been aroused, was now on the "tip-toe," and the arrival of distinguished visitors from all parts of the colonies, including the Governors

of Victoria, South Australia, and Tasmania, the President of the Melbourne Exhibition Commission, and members of different Intercolonial Commissions. On the day preceding the opening the weather looked so unpromising that it was thought the public procession would have to be abandoned, and in the afternoon a *Gazette* Extraordinary was issued, notifying that the naval and military forces would not take part in it. In the afternoon, however, the weather began to improve and before 10 o'clock the sky was clear, the stars were shining brilliantly, and there was every prospect of fine weather for the opening day. The head of the Government having called for a Report from the Colonial Architect as to the effect of the recent tempestuous weather upon the Garden Palace was informed by that gentleman that the building had not suffered any material damage, and that no delay in opening need therefore occur.

The following description of the opening ceremony is extracted from the columns of the *Sydney Morning Herald* of the 18th of September, and gives a full and faithful pourtrayal of the scene there represented :—

"The opening of the Exhibition took place yesterday amidst general rejoicing. The day was full of pleasant surprises. Most people dreaded a continuance of the heavy rain which deluged the city and adjacent country on Tuesday ; but the westerly wind which sprang up during the night averted that calamity, and as the rain was followed by genial sunshine and pleasant spring weather, almost the whole population turned out to join or to see the procession, which had been arranged in honour of the occasion, but which it was feared would have had to be abandoned. Many thousands of residents in the suburbs and the country came to town, and the large crowds which wended their way along the streets gave the city a bustling appearance, notwithstanding that, being a public holiday, all the shops were closed. There were, however, but comparatively few flags exhibited in the streets, excepting in the neighbourhood of the Post-office ; but where they did occur they enlivened the bare blank walls with warm and cheerful colours.

While the greatest possible gratification was felt at the success of the opening day, and all who saw the beauty, not to say splendour, of the opening

ceremonial, must have shared in the gladness of the hour, still the Exhibition itself could hardly be expected to call forth anything like the popular enthusiasm which the great gatherings of Philadelphia or Paris evoked. They had a definite national aim, and made a direct appeal to the patriotism of the people; and it is perhaps to be regretted that our own "festival of peace" does not possess the *éclat* of such special significance. For some time after the inception of the proposal, those who had the matter in hand but very inadequately realized the magnitude of the undertaking upon which they had entered; and, therefore, it is more to the credit of the Government, to Mr. Jennings, and his fellow-Commissioners, that with the short time at their disposal they have, in the face of many unforeseen difficulties, achieved so decided a success. The generous manner in which England, France, Germany, the United States, Belgium, Holland, Japan, the Australian Colonies, and other communities, have responded to the invitations issued by our Government, must be flattering to our self-esteem; and we may hope that while the Exhibition will be of incalculable benefit to the progress of art and industry amongst us, it will at the same time be not less advantageous to the commercial and producing interests of the countries which have given us so many beautiful samples of the perfection to which their artizans have attained. The building was densely crowded throughout yesterday; and we hope that all classes of the community will embrace every opportunity of visiting the Exhibition and studying the many attractive collections which are exposed for their instruction. The whole of the objects are not yet in place, but the Exhibition is in a much more advanced state than could ever have been expected, and the Courts are as forward as were many similar Exhibitions on the opening day.

Entering by the western end of the transept, the visitor obtains a view which affords some idea of the extent of the area covered by the Palace, and of the general appearance of the interior. The light, open roof, with its brightly-tinted timbers, by its loftiness admits of a long view towards the centre of the Palace. In this arm of the transept trophies crowd upon the advancing spectator. The first, though not a large one, is an elegantly artistic display of ostrich and fancy feathers by Messrs. Lewinsohn, of Berlin. Next is an extensive and elegant crystal glass trophy, the centre of which is formed as a triumphal arch; this is from the firm of Webb and Sons, of Stourbridge, England. An assortment of chairs, raised on a dais, stands near. The visitor then comes under the noble dome. In the centre of the area it covers is the great fountain, surmounted by the colossal statue of Her Majesty the Queen. At this point there is a disposition to pause. Not only does the grand expanse of the dome and its lofty arches command admiration and excite a novel interest, there are also details at the angles of its base, the elegant columns, the arcaded opening to the stairs, and the panelled walls with symbolic pictures, all within the *coup d'œil*, and each striking attention just as the whole view is rendered impressive by its great extent and the multitude of attractive

objects. Passing the dome to the eastern arm of the transept we find a series of still finer trophies. First is the handsome one of the Colonial Sugar Refining Company, and the display of Messrs. Heyde, Todman, and Co., exhibiting Cameron's tobacco, and between these rises the Hawkesbury maize trophy, which, though simple in its construction, by its colour and form produces an agreeable variation in reference to its surroundings. An obelisk-formed gilt trophy towers above its neighbours, as the visitor proceeds; this indicates the aggregate gold export of New Zealand. Near it is the pyramidal tin trophy of Queensland. The noble structure which stands next in order, and in obelisk form, is representative of Queensland's gold export, and it very appropriately rests on a base of quartz. At this eastern end of the transept there are numbers of smaller trophies as interesting as they are ornate.

Passing from the eastern end of the nave towards the dome, a number of more pretentious and really noble trophies come into view. Immediately under the gallery, near the entrance, are a collection of large bronzes, classic figures, vases, and ornaments of exquisite design, and in the centre is a fine fountain. Another fountain, larger, but also in metal, stands next beyond; this, also, is classic in conception, a female standing figure pouring water from a vase into a flower-cup held by an infant that kneels at her feet; the basin is a double shell. A large glazed case of glittering platedware here strikes the eye; it is the collection of the celebrated firm of Messrs. De Christofle and Co., of Paris, and comprises a large number of admirable articles of beautiful design and clever workmanship. In its immediate neighbourhood is the trophy of the Oriental Tea Company (Melbourne); it is noticeable owing to its pagoda-shaped top, ornamented according to "Celestial" notions of art, and the whole of the carved framework has been constructed by Chinese workmen accustomed to make tea-chests for the company. Messrs. Swallow and Ariell, the well-known fancy biscuit makers, of Melbourne, here make a brilliant display in a large and artistically formed case, the four projecting bases of which are occupied by splendidly decorated bridecakes, while the rising panels of the superstructure exhibit an immense variety of biscuits. Next stands a very tastefully designed showcase of large dimensions, white body, with panels, pilasters, and capitals, picked out with gold; it contains the exhibits of the Victorian Red Cross Preserving Company, whose products consist chiefly of jams, fruits, and oilmen's stores. Another prominent biscuit trophy in this part of the nave is that of Messrs. Guest and Co., of Melbourne. An object of less elegant form, but still one which will call for attention, stands near. It is a trophy in the shape of an immense steel coil, from the Société Cockerill, Belgium. It is an exhibition of steel rails, formed as a coil to save space in length. The diameter is 11 feet. Some less pretentious trophies follow next in order, pyramids of copper, shale, and iron, and the intervening space between them and the dome is occupied by the large and very interesting cases which form the mineralogical collection of New

South Wales. Beyond the dome, and before reaching the body of the northern area of the nave, are three large bells from the foundry of Messrs. C. Voss and Sons, Stettin. The central avenue of the nave from the dome to to the northern end is left vacant for the ceremonial of the opening, and to facilitate the movements of visitors.

We have only passed through the nave and transepts, and indicated there a general appearance on the day of opening, but there were many objects of interest that impress the eye as it is cast towards the courts at each side. These must remain to be spoken of, as time for a more leisurely and complete survey is afforded. The exterior of the Garden Palace too, from which its site derives such great advantages in the way of picturesque surroundings and beautiful landscape scenery, is entitled to a more lengthy notice than can at present be given.

The interior of the Palace, with its lofty roof, its spacious nave and transepts, its architectural adornments, aided by the art of the decorator, and enlivened by the hanging banners and flags of all nations, and of all colours, presented a brilliant vista and a scene of magnificence long to be remembered.

On such an occasion as the present a procession seems to be an indispensable institution, and therefore the authorities wisely determined to make it a great feature in connection with the opening of the Exhibition. So thoroughly was the necessity for this recognised that at the first intimation there was a general response on the part of all the Friendly and other societies in Sydney, all of whom were anxious to do their best to make the affair a success. Unfortunately, however, some differences of opinion arose as to the position the several bodies ought to occupy in the procession. The ceremonial committee, acting upon the rule usually observed upon such occasions, ordered that precedence should be regulated according to the date of registration of each particular society. Some of these bodies, however, took umbrage at this, thinking that their numerical importance ought to have been made the standard, and, consequently, they refused to join in the procession. Some also were offended because the authorities declined to give a free admission to the building to all who walked in the procession; not understanding that the space available would not have accommodated one half the number of processionists, to say nothing of the public who were willing to assist by their subscriptions to recoup the country to some extent for the large amount of money spent upon the Exhibition. Very much regret was expressed by the general public that these societies should have chosen to absent themselves, and we have it on good authority that this regret was shared by His Excellency the Governor. But in spite of this defection there was nevertheless a good attendance, and the northern end of Hyde Park from an early hour in the morning presented an exceedingly lively appearance. The day was unmistakably a holiday, as evinced by the throngs of people streaming in,

dressed in their best and brightest apparel. Among the crowd were to be seen uniforms of scarlet and blue, indicating the presence of the Volunteers, both rifles and artillery, as well as the Naval Brigade. These bodies, although they fell-in on the ground, took no part in the procession, owing to a brigade order having appeared on the preceding day countermanding their attendance on account of the weather; but their presence on the ground showed that they were willing to do their part if they had been allowed. There were, however, plenty to join in the procession, and a splendid muster was made. Some time before 10 o'clock the various bodies began to take up the stations assigned to them, every man decorated with the insignia of his order, and each society headed by its band, and bearing its banners and other decorations. Of course with a large number of people there is of necessity some difficulty in getting every one into the proper place, but in this instance the difficulty was reduced to a minimum, owing to the admirable arrangements made by the ceremonial committee—Mr. R. B. Smith, M.P., and Mr. E. Fosbery, Inspector General of Police—arrangements which were carried out in the most effective manner by Mr. Sub-Inspector Anderson, and the police under his charge.

The procession was headed by an advanced guard of mounted police, immediately followed by a band; then came the Insurance Companies Fire Brigade, about thirty men in all, with three steam fire-engines and one manual. They were followed by the Woollahra Volunteer Fire Brigade, the Newtown Volunteer Fire Brigade, and the Paddington Volunteer Fire Brigade. Next were the Oddfellows, numbering above a hundred, and various lodges of Foresters, about equal in number to the Oddfellows. Then came a large body of the members of the Holy Catholic Guild, St. Mary and St. Joseph, fully 300 in all. About 120 members of the Ancient Order of Druids followed, in the full costume of the order—robes of black, white and blue, with long flowing beards, and armed with antique spears, forming, perhaps, the most picturesque portion of the proceedings. The Hibernian Australian Catholic Benefit Society, of whom there were over 100, came next. They were followed by the New South Wales Seamen's Union, of whom about 80 put in an appearance, and the Amalgamated Journeymen Tailors of New South Wales, to the number of about 120, closed the procession.

The route taken was from the Prince Albert Statue down Macquarie-street, to Government House, where the Governor and his distinguished guests joined in. First came an escort of mounted troopers, under the command of Mr. Superintendent Lydiard. His Excellency Lord Augustus Loftus, with Lord Normanby (Governor of Victoria), Sir William Jervois (Governor of South Australia), and Mr. Weld (Governor of Tasmania), occupied one carriage—a vehicle that attracted much attention from its complete appointments, from the hammer-cloth on the box to the footman hanging on behind. The aides-de-camp—Mr. Loftus and Lieutenant Nathan—followed

in another carriage, with the private secretary, Mr. R. Bloxsome, and Lieutenant Halkett. In the succeeding vehicles were Commodore Wilson, Colonel Roberts, the aides-de-camp and private secretaries of Lord Normanby, Sir William Jervois, and Governor Weld ; the members of the Ministry, including Sir John Robertson, Mr. James Watson, Mr. Lackey, Mr. Hoskins, Mr. Baker, and Mr. Suttor ; Mr. R. B. Smith, M.L.A., and Mr. John Davies, M.L.A., followed these, succeeded by the Mayor (Mr. C. J. Roberts) and the Town Clerk (Mr. Woolcott). Other carriages with ladies and gentlemen completed the cortege. The route taken from Government House was by way of Bridge-stret, to George-street, thence to Park-street, and so along College-street to Macquarie-street. Here the processionists formed in line on either side of the street, to allow the carriages with the vice-regal party to proceed between them until the entrance to the Garden Palace was reached. The societies then formed up again, and marched by way of Hunter and Phillip streets to Hyde Park, where they dispersed, and went their several ways.

Upon the arrival of his Excellency the Governor and his party within the Exhibition enclosure, the guard of honour, consisting of a detachment of the New South Wales Infantry, and a body of mounted troopers, presented arms, and His Excellency and party proceeded to the main entrance facing Macquarie-street, where they were received by Mr. P. A. Jennings, C.M.G. (the Executive Commissioner), and Mr. James Barnet (the Colonial Architect, who designed the building). His Excellency's party consisted of the Marquis of Normanby, G.C.M.G. (Governor of Victoria), Sir William Jervois, G.C.M.G. (Governor of South Australia), Lady Jervois, Mr. Weld, C.M.G. (the Governor of Tasmania), and their aides-de-camp and private secretaries ; the Hon. Sir John Robertson, K.C.M.G. (Vice-President of the Executive Council), the Hon. James Watson (Colonial Treasurer), the Hon. Robert Wisdom (Attorney-General), the Hon. Saul Samuel, C.M.G. (Postmaster-General) the Hon. John Lackey (Secretary for Public Works), the Hon. F. B. Suttor (Minister of Justice and Public Instruction), the Hon. Ezekiel Baker (Minister for Mines), the Mayor of Sydney (Mr. Roberts), Commodore Wilson, Colonel Richardson, Colonel Roberts, Colonel Hackett, Colonel Scratchley, and Mr. Inspector-General Fosbery. Mr. R. B. Smith, M.L.A., and Mr. John Davies, M.L.A., also accompanied the party in the procession to the building.

When the Vice-Regal party arrived at Mr. Wood's beautiful bronze statue of Her Majesty, which is placed under the centre of the dome, they were received by the four Vice-presidents of the Commission—the Hon Sir James Martin, Chief Justice, the Hon. Sir Alfred Stephen, K.C.M.G., the Hon. Sir John Hay, K.C.M.G. (President of the Legislative Council), and the Hon. Sir Wigram Allen (Speaker of the Legislative Assembly). At this point the band played the National Anthem. The undraping of the statue of the Queen was treated merely as an incident in the ceremonial. The Vice-presidents

and the Executive Commissioner then escorted their Excellencies the Governors of New South Wales, Victoria, South Australia and Tasmania to the dais, which had been prepared for their reception immediately in front of the orchestra in the north nave. The dais was covered with an elegant Wilton pile bordered carpet, on a black ground, with bronze and chintz, the pattern being formed of the figures of a palm leaf and cactus, with flowers and creepers. It was supplied by Messrs. D. Jones and Co., and was manufactured by the well-known firm of M. Whittall and Co., of Kidderminster, and designed specially as one of their exhibition carpets. At the back of the dais there was arranged, in the form of a semi-circle, a handsome collection of palms, musæ, and other plants of ornamental foliage, and there were also the Royal arms, with the arms of the colony on either side, each bannered with flags. From this point, sloping upwards to the organ and the side galleries, were the stands reserved for the orchestra and chorus, the ladies, attired in white with blue sashes, being in the foreground. His Excellency Lord Augustus Loftus occupied the central chair on the dais ; and there were seated on his right Lady and Sir William Jervois, and on his left the Marquis of Normanby and Governor Weld, their aides-de-camp and private secretaries, and the military men who escorted the party being placed immediately behind them. A well-executed bust of His Excellency Sir Hercules Robinson (who took such a warm interest in the Exhibition project) was conspicuously placed on the dais.

The platform to the right of the dais was allotted to the Foreign Commissioners and Consuls, the posts of honour being reserved for Captain A. T. Mathieu (Commissioner-General for France), Professor Dr. F. Reuleaux (Privy-Councillor and Commissioner for the German Empire), Consul Victor Schonberger (Executive Commissioner for Austria), Dr. C. C. Cox (Chief Executive Officer of the United States Commission), Mr. Albert Van Schelle (Commissioner for Belgium), Mr. Haruo Sakata (Imperial Japanese Commissioner), Mynheer J. de Groot Pzn (Commissioner for Holland), Signor Oscar Meyer (Commissioner for Italy). The other foreign and intercolonial representatives were :—Austria : Lieutenant Pinschof, Lieutenant Wilhelm, and Mr. H. L. Neumann, Commissioner ; Belgium : Monsieur Albert Van Schelle, Commissioner, Mr. John Lodwidge, secretary ; British Colonies : Ceylon—Dr. Bennett, Executive Commissioner ; Mr. Charles Moore, F.L.S., Commissioner. Fiji—Mr. E. Vickery, Executive Commissioner. New Zealand—Dr. Hector, C.M.G., Executive Commissioner ; Mr. Chas. Callis, secretary. Queensland : Mr. Gresley Lukin, Executive Commissioner ; Mr. Hamon Massie, Mr. E. L. Montefiore, Mr. Morris Simpson, M.P., Mr. Robert Geo. Massie, Hon. J. Lambert, M.L.C., and Mr. C. T. Gedye, Commissioners ; Mr. George E. Layton, secretary. South Australia : Mr. Samuel Davenport, Executive Commissioner ; Mr. R. E. N. Twopeny, secretary. Straits' Settlements : Major Clementi, Executive Commissioner ; Mr. Harry St. George Ord, secretary. Tasmania : Mr. P. A. Jennings, C.M.G., Executive

Commissioner. Victoria: Hon. J. J. Casey, C.M.G., M.P., Executive Commissioner; Mr. R. D. Bannister, secretary. France: MM. F. Bourdil, Soudry, De Savignon, and Ménard, Commissioners; Comte de Zamoïsky, Attaché of the Commission. New Caledonia: Mr. Jules Joubert, Executive Commissioner. Germany: Mr. J. W. Dehn, secretary. Italy: Signor Liserani, Representative Agent. Japan: Mr. Yoshin Murakami and Mr. J. Watanabe, secretaries. Switzerland: Mr. E. Eugster, Representative Agent. United States: Dr. E. C. Williams, Honorary Commissioner for the United States; Mr. Sydney Webster Bradford, secretary. The following Consuls were assigned a place on the platform: France: Mons. Ballieu; Belgium: Mr. O. L. Montefiore; German Empire: Mr. C. L. Sahl; Italy: Mr. Thomas Fitzgerald; United States: Mr. James H. Williams; Chili: Don Guillermo E. Eldred; Denmark: Mr. Anton Tangé; Netherlands: Mr. Francis Macnab; Spain: Mr. Henry Moore, Vice-Consul; Brazil: Mr. R. Peel Raymond, Vice-Consul; Sweden and Norway: Mr. William Wolfen, Consul—Mr. Alfred Hilder, Vice-Consul; Russia: Mr. C. M. Paul; Hawaiian Islands: Mr. A. S. Webster; Portugal: Mr. E. O. Smith, Vice-Consul; Peru: Mr. E. O. Smith, Consul; Austria and Hungary: Mr. Otto Meyer, Vice-Consul; Swiss Confederation: Mr. Auguste Parrot.

On the platform, to the left of the Governor, the following gentlemen occupied seats:—The Hon. Sir James Martin, the Hon. Sir Alfred Stephen, the Hon. Sir John Hay, the Hon. Sir G. Wigram Allen, the Hon. Sir John Robertson, the Hon. James Watson, the Hon. John Lackey, the Hon. Saul Samuel, the Hon. Ezekiel Baker, the Hon. R. Wisdom, the Hon. F. B. Suttor, Mr. Justice Hargrave, Mr. Justice Faucett, Mr. Justice Windeyer, the Bishop of Sydney, the Moderator of the Presbyterian Church, the President of the Wesleyan Conference, the Chairman of the Congregational Union, the Jewish Rabbi, the Bishop of Goulburn, the Bishop of Bathurst, the Mayor of Sydney, Mr. Christopher Rolleston, C.M.G., Mr. Charles Cowper (the Sheriff), and others.

The seats on the ground floor to the right of the Governor were occupied by —Mr. Patrick Alfred Jennings, Executive Commissioner. Members of Commission: The Hon. George H. Cox, M.L.C.; Mr. William Davies, M.L.A.; Mr. C. J. Roberts, J.P., Mayor of Sydney; Mr. Andrew Garran, LL.D.; Mr. Samuel A. Joseph; Mr. Philip Gidley King; the Hon. William Macleay, M.L.C.; Mr. James Merriman, M.L.A.; the Hon. Sir George Innes, M.L.C.; Mr. John Alger, Mr. W. R. Piddington; Mr. Henry Halloran, C.M.G.; Mr. Mr. S. H. Terry, M.L.A.; Mr. Henry Mort, Mr. John Davies, M.L.A.; the Hon. John Smith, M.D., LL.D., C.M.G., M.L.C.; Mr. William H. Suttor, M.L.A.; the Hon George Thornton, M.L.C.; Mr. Prosper Nicholas Trebeck, Mr. Edmund Webb, M.L.A.; Mr. Edward Flood, Mr. W. A. Brodribb, F.R.G.S.; Mr. R. B. Smith, M.L.A.; Mr. Richard Hill, J.P.; Mr. Edward Combes, C.M.G.; Dr. Palmer. Secretary: Mr. Augustus Morris. Honorary members of the

Commission :—Alderman Chapman ; Mr. W. M. Alderson ; Mr. R. Hunt ; Mr. H. Wood, Under Secretary for Mines ; Mr. Wilkinson, Geological Surveyor, Mining Department ; Mr. Mackenzie, Inspector of Coal Mines ; Mr. Machardy ; Mr. J. Starkey ; Mr. Alex. Bruce ; Mr. H. C. Russell, Government Astronomer ; Mr. P. F. Adams, Surveyor-General ; Mr. H. B. Bradley ; Mr. E. C. Cracknell, Superintendent Telegraphs ; Mr. W. Wilkins, Secretary Council of Education ; Mr. W. J. Stephens, M.A. ; Mr. Alfred Roberts, M.R.C.S. ; Mr. Thomas Richards, Government Printer ; Mr. Chas. Robinson ; Mr. S. M. Mowle ; Mr. J. Abbott. Commissioners for Victoria : Hon. W. J. Clarke, M.L.C. ; Hon. J. Munro, M.P. ; Hon. W. M. K. Vale ; Mr. J. Bosisto, M.P. ; Mr. A. K. Smith, M.P. ; Mr. John Banks, J.P. ; Mr. J. Zevenboom, J.P. ; Hon. W. Wilson, M.L.C. ; Hon. N. Fitzgerald, M.L.C. ; Hon. A. Mackay, M.P. ; Mr. David Syme ; Dr. John Foulsow, M.D. ; Mr. F. Hare, Superintendent Victorian Police. Commissioners for Queensland : Hon. Louis Hope, M.L.C. ; Hon. J. M. Thompson, M.L.C. ; Hon. James Byrnes, Captain Kennedy. Commissioners for Tasmania : Captain Swan, Captain Green, Captain Davis ; his Worship the Mayor of Hobart Town, Mr. Burges ; Mr. T. B. Smith, Mr. Smith, Mr. Macfarlan. Commissioner for South Australia : Mr. J. A. Holden.

The seats to the left of the dais were occupied by the following Members of the Legislative Council :—The Hon. John Blaxland, the Hon. William Busby, the Hon. William Byrnes, the Hon. Alexander Campbell, the Hon. Charles Campbell, the Hon. James Chisholm, the Hon. Edward King Cox, the Hon. Frederick Matthew Darley, Q.C. ; the Hon. Joseph Docker, the Hon. Samuel Deane Gordon, the Hon. William Grahame, the Hon. Thomas Holt, the Hon. George William Lord, the Hon. John Marks, the Hon. Henry Moore, the Hon. Edward David Stuart Ogilvie, the Hon. Bourn Russell, the Hon. John Brown Watt, the Hon. Elias Carpenter Weekes, the Hon. James White ; Mr. J. J. Calvert, Clerk of the Parliaments ; also the following Members of the Legislative Assembly :—Mr. Robert Barbour, the Murray ; Mr. Edmund Barton, the University of Sydney ; Mr. Alexander Bowman, the Hawkesbury ; Mr. Herbert Harrington Brown, the Patterson ; Mr. Stephen Campbell Brown, Newtown ; Mr. John Fitzgerald Burns, the Hunter ; Mr. Samuel Charles, Kiama ; Mr. Henry Clarke, Eden ; Mr. Henry Emanuel Cohen, West Maitland ; Mr. Walter Thomas Coonan, the Bogan ; Mr. Henry Copeland, Gold Fields North ; Mr. Richard Driver, Windsor ; Mr. Joseph Eckford, Wollombi ; Mr. James Squire Farnell, St. Leonards ; Mr. Michael Fitzpatrick, Yass Plains ; Mr. Thomas Garrett, Camden ; Mr. James Greenwood, East Sydney ; Mr. Edward Greville, Braidwood ; Mr. John Harris, West Sydney ; Mr. John Hurley, Hartley ; Mr. William Johnston, the Williams ; Mr. Joseph Leary, the Murrumbidgee ; Mr. William Alexander Long, Parramatta ; Mr. John Macintosh, East Sydney ; Mr. Andrew Hardie M'Culloch, jun., Central Cumberland ; Mr. Henry Moses, the Hawkesbury ; Mr. Daniel O'Connor, West Sydney ; Captain Arthur Onslow, R.N., Camden ;

Mr. John Roseby, Shoalhaven ; Mr. John Shepherd, Wellington ; Mr. Thomas Richard Smith, the Nepean ; Mr. Alexander Stuart, East Sydney ; Mr. John Sutherland, Paddington ; Mr. Hugh Taylor, Parramatta ; Mr. Stephen W. Jones, Clerk. Cards of invitation were sent to the Members of the different Intercolonial Legislatures, and some of these attended. There were also present the Mayor of Hobart Town, Captain de Hart, Mr. John Williams, Crown Solicitor ; Professor Liversidge, Professor Gurney, the Hon. Geoffrey Eagar, Under Secretary for Finance and Trade ; Mr. J. Whitton, Engineer-in-Chief for Railways ; Mr. W. A. Duncan, Collector of Customs ; Mr. A. C. Budge, Clerk, Executive Council ; Mr. G. H. Deffell, Commissioner in Insolvency ; Mr. Critchett Walker, Under Secretary, Colonial Secretary's Department ; Mr. W. W. Stephen, Under Secretary, Lands Department ; Mr. W. E. Plunkett, Under Secretary, Justice and Public Instruction ; Mr. S. H. Lambton, Secretary, Post Office ; Mr. Harold Maclean, Comptroller-General of Prisons ; Mr. F. N. Manning, Inspector of Insane Hospitals ; Mr. C. A. Goodchap, Commissioner for Railways ; his Honor Judge J. S. Dowling, his Honor W. H. Wilkinson, his Honor J. F. Josephson, his Honor Judge C. E. R. Murray ; Captain F. Hixson, R.N. ; Mr. F. W. Hill, Comptroller of Money Order Office ; Mr. T. Slattery, Prothonotary ; Mr. Richard Terry, Mr. J. H. Heaton. Messrs. Alex. Cumming, Chief Clerk to the Sydney International Exhibition Commission ; E. H. C. Bristowe, Accountant to Commission ; R. W. Halket, member of Exhibition staff. Mr. George F. Wise, Immigration Department ; Henry Hudson, Redfern ; Rev. Canon Allwood, B.A. ; Aldermen John Young, Charles Moore, Benjamin Palmer, John Taylor, William Kippax, R. Fowler, James Green G. L. Carter, Thomas Playfair, Michael Chapman, Robert Maze. Officers of H.I.M.S. Bismark : Captain Deinhard (Commander), Captain-Lieutenant Hoffman, Lieutenants Z. S. Fass, Von Poncet, Asher, Hartmann, Grolp, Muchall, Siebroock, Reinck, Staff-Surgeon Dr. Bugge, Dr. Kleffel, Paymaster Kelsch. Officers of F.R.S. "Rhin": Lieutenant M. P. Cave, Ensigns de Kernaffleu, de Kergos, Lefévre, Gush, Vergé, Dr. Gauvin, Dr. Chasseriaud, Mr. A. S. Aude. Officers of I.M.S. "Heligoland": Captain Pichler (commander), Captain-Lieutenant Baritz von Kapalva ; Lieutenants C. Rousseau Cher, D'Happoncourt, O. Buriau, J. Bayer, Th. Kunwald ; Messrs. J. Fuchs, E. Nappes, Sanchez de la Cerda, R. Keihnel, Freiherr von Weichs-Glon, P. Milic ; Dr. C. Pruss, Dr. M. Brillant, Paymaster Th. Fröhlich, Messrs. G. Susser, Th. Hinserbuhler.

As all the gentlemen present within the enclosure were in uniform or full dress, the assemblage had an exceedingly bright and pleasant appearance, and the ceremonial was the most picturesque, harmonious, and imposing spectacle of the kind which has yet been seen on these shores.

The musical portion of the ceremony fitly commemorated the inauguration of the Garden Palace. The cantata, whose words were composed by Mr. Henry Kendall, an Australian poet, and whose music was written here by Signor

Paolo Giorza, was performed by a body of 790 musicians, vocal and instrumental. The best available talent, amateurs and professional, of New South Wales was engaged, and the progress of the splendid cantata was directed by Signor Giorza himself. Mr. W. G. Broadhurst presided at the organ.

The words of the cantata are as follow :—

PART I.

CHORUS.

Songs of morning with your breath
Sing the darkness now to death—
Radiant river, beaming bay,
Fair as Summer shine to-day—
Flying torrent, falling slope,
Wear the face as bright as Hope—
Wind and Woodland, hill and sea,
Lift your voices—sing for glee !
Greet the guests your fame has won—
Put your brightest garments on.

RECITATIVE AND CHORUS.

Lo, they come—the lords unknown,
Sons of Peace, from every zone !
See above our waves unfurled
All the flags of all the world !
North and South and West and East
Gather in to grace our Feast.
Shining nations ! let them see
How like England we can be.
Mighty nations ! let them view
Sons of generous sires in you.

SOLO, TENOR.

By the days that sound afar,
Sound, and shine like star by star ;
By the grand old years aflame
With the fires of England's fame—
Heirs of those who fought for right
When the world's wronged face was white—
Meet these guests your fortune sends,
As your fathers met their friends ;
Let the beauty of your race
Glow like morning in your face.

PART II.

SOLO, BASS.

Where now a radiant city stands,
The dark oak used to wave,
The Elfin harp of lonely lands
Above the wild man's grave,
Through windless woods, one clear, sweet stream,
(Sing soft and very low)
Stole like the river of a dream
A hundred years ago.

SOLO, ALTO. Upon the hills that blaze to-day
With splendid dome and spire,
The naked hunter tracked his prey,
And slumbered by his fire.
Within the sound of shipless seas
The wild rose used to blow
About the feet of royal trees,
A hundred years ago.

SOLO, SOPRANO. Ah! haply on some mossy slope,
Against the shining springs,
In those old days the angel Hope
Sat down with folded wings;
Perhaps she touched in dreams sublime,
In glory and in glow,
The skirts of this resplendent time,
A hundred years ago.

PART III.

CHILDREN. A gracious morning on the hills of wet,
And wind, and mist, her glittering feet has set;
The life and heat of light have chased away
Australia's dark mysterious yesterday.
A great, glad glory now flows down and shines
On gold green lands where waved funereal pines.

SOLO, SOPRANO. And hence a fair dream goes before our gaze,
And lifts the skirts of the hereafter days;
And sees afar, as dreams alone can see,
The splendid marvel of the years to be.

PART IV.

BASSES AND CHORUS. Father, All Bountiful, humbly we bend to Thee;
Heads are uncovered in sight of Thy face.
Here, in the flow of the Psalms that ascend to Thee,
Teach us to live for the light of Thy grace.
Here, in the pause of the anthems of Praise to Thee,
Master and Maker—pre-eminent friend—
Teach us to look to Thee—give all our days to Thee,
Now and for evermore, world without end!

The music, composed by Signor Giorza, and dedicated by express permission to H. R. H. the Prince of Wales, is of majestic beauty. It is for soli, chorus, and full orchestra, and seems thoroughly expressive of the sentiment of progress contained in the ode. The principals were—Miss Marie St. Clair, Mrs. Wells, Miss Moon, Mr. Vernon Reid, and Mr. T. Rainford, and the chorus, numbering about 700, was composed of members of the Sacred Choral Association, and of the Civil Service Musical Society, and about 200 children picked from the different State schools by Mr. J. C. Fisher, head teacher of singing in these schools. Mr. Fisher led his pupils yesterday. In

the orchestra, Signor Ortori acted as leader, and a fair *corps* of pianistes were headed by Signora Giorza, formerly first pianiste at the Conservatoire, Milan. The other ladies playing were Miss Farrell, Miss Fitz-Stubbs, Miss Hyam, Miss Ickerson, Miss Laure, Miss Marks, and Miss Welton. Nearly fifty performers interpreted the orchestral music, and of it nothing but praise can be written. The pianofortes used were supplied by Messrs. Nicholson and Ascherberg, and are two full concert grands and one semi-grand, manufactured by Emil Ascherberg, of Dresden, and a semi-grand by J. P. Schiedmayer, of Stuttgardt. Programmes, giving the words to be sung, were distributed liberally, one class of those useful little pamphlets being a handsome publication, after the *Entr' acte* style, by Mr. J. Leveson. The north transept, when the vice-regal party and the invited guests were seated, presented an imposing sight—a sight such as may not be witnessed here again for many years. The floor was gay with the uniforms of distinguished guests, while the American gallery to the right (looking from under the dome), and the English gallery to the left were thronged with ladies, whose fresh toilettes seemed quite at home amongst this brilliant surrounding. From the dais, little above the main floor level, to the organ, built on the gallery floor, ascended tier upon tier of seats, then hidden by a sea of happy faces. The pianistes occupied the lower part, above was the orchestra, and then sat the soloists, and behind them the chorus of children. The central portion of the remaining space was occupied by the soprano and alto singers, (adults); to the right and left sat the tenors and basses, and above all towered the organ. High in front was a little stage for the *maestro;* and this, and the front of the platform, were elegantly decorated with flags, foliage, and shields. After a spirited prelude came the opening chorus, "Songs of Morning"—a grand expectant outburst, whose rythmic beauty assured the listener of the merit of the whole composition. Then Mrs. Wells declaimed the recitative "Lo, they come!" singing every note with an easy ring, and enunciating each word distinctly. The chorus took up the strain very crisply, and then Mr. Vernon Reid gave the solo, "By the days that sound afar." He sang well, but still there was lacking the earnest expression which oratorio and cantata demand; this is the more surprising, as Mr. Reid is usually a most sympathetic singer. Mr. Rainford sang, "Where now a radiant city stands," and in doing so displayed a tendency to sing sharp some of his upper notes. Still he gave the tender words with clear emphasis, and his grand voice gained him a round of warm applause. Then came the gems of the performance, Miss St. Clair's solo, "Upon the hills that blaze to-day," and Miss Moon's "Ah, haply on some mossy slope." Miss St. Clair sang with artistic ease, and the volume of her mellow voice filled even the immense space before her. Not a note of the delicious music scored for her was badly sung, and her clear enunciation gave her performance an additional charm. The brilliant flexibility of Miss Moon's voice has never been more apparent than it was yesterday, and she, like Miss St. Clair, was loudly cheered. The most successful number in the

cantata was the children's chorus, supported by the eight pianistes, already enumerated. The ladies, every one of whom possess unusual talent, while three at least are musicians of very high order, played the accompaniment perfectly, while Mr. Fisher's discrimination and his ability as a tutor, were shown by the beautiful precision with which the children sang their pretty music. The repetition of this number was imperatively demanded. The accompaniment was originally scored for harps, but as harps and harpists are scarce, pianofortes were substituted, and the effect was so good that the change is matter for congratulation. Miss Moon's solo was preluded by flute obligato and clarionet, and this prelude, of a pastoral character, is one of the most artistic bits of instrumentation in a splendid work. Mrs. Well's solo, "And hence a fair dream," has a florid beauty distinctively its own, and it was sung with charming ease. A prayer solo, for bass voices, "Father, all bountiful," leads into the grand finale, "Teach us to look to Thee," by principals, full chorus, children's chorus, and orchestra. In this the theme underlying the whole composition is beautifully treated, and brilliant, crisp vocalization and massive instrumentation blend and contrast until the last grand outburst. Cheer after cheer followed and Signor Giorza had to bow his thanks over and over again. He well deserved his success, for not only is the music written as only an artist could write it, but he sways the vast body of musicians under him as a clever General would his army, and develops every beauty in the composition. He is director of music to the Exhibition, and six grand oratorios will be produced, and a number of promenade and other concerts will be given on dates to be fixed. One concert will be given on Saturday. Mr. Fisher, too, is organising a series of Saturday afternoon concerts by State school choirs, and competitions by juvenile choirs, which cannot fail to be attractive. During yesterday afternoon Signor Giorza and Mr. Broadhurst played organ solos, and similar performances will take place every day.

The following address to his Excellency, from the New South Wales Commissioners, was read by Mr. P. A. Jennings, Executive Commissioner :—

To his Excellency the Right Honorable Lord Augustus William Spencer Frederick Loftus, G.C.B., &c., &c., Governor and Commander-in-Chief of New South Wales and its Dependencies, and President of the Sydney International Exhibition Commission of 1879.

"My Lord,—I have the honour, on behalf of the gentlemen commissioned by the Government of New South Wales, to ask your Excellency to declare the Sydney International Exhibition of 1879 open to the public in the name of Her Most Gracious Majesty Queen Victoria. The original commission, which I have the honour to lay before your Excellency, was issued on the 3rd day of January of this present year, and is signed by your lordship's distinguished predecessor, Sir Hercules Robinson. In virtue of its provisions the

REPORT OF THE EXECUTIVE COMMISSIONER.

Commissioners, who assemble here to greet your Excellency and your distinguished guests, undertook the duty of bringing to a practical issue the great project of an International Exhibition in Australia. Two hundred and fifty-seven days have elapsed since the issue of this commission, and during that time the members of the Commission and its officers have endeavoured, to the best of their ability, to carry out the high trust committed to their charge. Many circumstances have contributed to enhance the importance of this great project, which growing from small beginnings has attained a magnitude unforeseen by its most sanguine supporters. The generous response and active sympathy accorded by the great nations of Europe, by the United States of America, by the Empire of Japan, by the Indian Empire, and our own colonies, has largely contributed to add to the importance of the Exhibition; and it is our pleasing duty to-day to assist your Excellency in welcoming the distinguished representatives of the participating countries and colonies who honour us by their presence here on this important occasion. Since the Exhibition of 1851, in London, held under the presidency of the illustrious Prince Consort, whose memory is nowhere more deeply revered than in this colony, universal Expositions or World's Fairs have been held in Paris, in London, in Vienna, and in Philadelphia, and the beneficial consequences of these 'Festivals of Peace' become more apparent the more their effects are studied. It has remained for this city of Sydney, the metropolis of the parent colony of Australia, to sustain its position by inviting 'all the flags of all the world' to arrange themselves in peaceful concord here to-day, and we cannot but feel that we are largely indebted to his Royal Highness the Prince of Wales, not only for giving us the great prestige of his royal name, but also for the lively interest that his Royal Highness has manifested in this great undertaking. The liberality of the Legislature has permitted the structure which your lordship is about to throw open to the public to be erected in full accordance with the noble design of the Colonial Architect, and the generous surrender of the private park of the Governors of New South Wales has provided a site unequalled in beauty and convenience of position. The energy and skill of the contractor for the works of the Garden Palace and the valued assistance of the director of the public parks and gardens have further contributed to bring to successful issue the Exhibition which we are assembled to-day to inaugurate. It will be the duty of judges, hereafter to be appointed, to examine and report upon the exhibits submitted for competition, which will remain open for the inspection of the public for the next six months. The art collection, brought together on a scale heretofore unknown in Australasia, the Queen's and Prince of Wales's valuable paintings, and the South Kensington collection, will further give an opportunity to study specimens of all that is best in the arts and sciences of the old country, and tend to elevate and refine the tastes and educate the minds of our fellow-colonists. I have now the honour, on behalf of the Commissioners of the Sydney International Exhibition of 1879, to ask your Excellency to duly declare the Exhibition open to the public."

REPORT OF THE EXECUTIVE COMMISSIONER.

His Excellency the Governor said:

"Mr. Jennings and Gentlemen,—I receive your congratulations with deep gratification; and, on behalf of the Gracious Sovereign whom I represent, I congratulate the Colony of New South Wales on the success of her efforts to gather in her capital a fair representation of the art achievements and the industrial forces of the globe. The event which we assemble to celebrate is an era in Australian progress, the influence of which, like the dews of heaven, will hereafter gladden with its forms of beauty the hearts of thousands whose thoughts will never trace the delicate and subtle processes between cause and effect. The source of the teaching may not be recognized, but the lessons will not be less abiding and precious in their value. Here, in Australia, as in other parts of the world, wherever invention and skill apply the principles of Nature to the mechanical creations of man, it will be found that 'Emulation hath a thousand sons.' In this fair building, which has arisen within a few months, as by the wand of an enchanter, the most renowned and enlightened nations of Europe, the great English-speaking republic of America, and those countries of Asia which are the abodes of an immemorial civilization, unite in the radiant bonds of brotherhood in laying at our feet the rich and ever-varying stores of their conceptive genius and creative power. With them are associated the young and aspiring sister colonies of Australasia, each with upturned gaze fixed upon the sun, and forming a glorious purpose to achieve in the highest walks of civilization. In the name of New South Wales, the elder colony of the Australian group, the once despised and—may I not say?—the now honoured,—I welcome the representatives of the old heroic nations—I welcome the representatives of the bright daughter-lands of England—I welcome all of human brotherhood, to our newly raised Temple of Industry and Peace, in a new world. It is not my purpose to detain the brilliant company around me by any review of the progress of this colony. The occasion is too auspicious for references to its trials or its triumphs. The pride I feel, in common with all classes of people, in New South Wales being the seat of this international assemblage is a pride unmingled with any local or self-congratulatory feeling. And in contemplating the great work we are met to inaugurate, and the noble display of material treasures before us, I hope we shall be led in a spirit of thankfulness to discern the merciful hand of a Higher Power. It is to the Almighty Giver of all Goodness that the wonderful progress of human industry and art in our age is to be ascribed. To His illimitable power and all-searching wisdom, and only to the marvellous ingenuity of man as overruled by His beneficent attributes, is due the completion of the beautiful structure we have so successfully raised. With humble and thankful hearts let us on this solemn occasion reverently recognize the hand of our Maker, and while we invoke His all-powerful blessing, to Him alone give praise and thanksgiving in the holy words of the angels, 'Glory to God in the highest, and on earth peace and good-will toward men.' In the name of Her Majesty the Queen I declare the Sydney International Exhibition of 1879 opened to the public."

This announcement was followed by much cheering and—a signal having been run up on one of the towers—by the report of cannon from the forts and ships in the harbour.

Then rang out Handel's immortal "Hallelujah" chorus, and its majestic strains were accompanied by the occasional heavy boom of the salutes fired by the men-of-war in the harbour. Each fired 19 guns, and the sound effect was strangely pleasant. Giorza's "Australian March," whose words are by Mr. E. Cyril Haviland, and which was for the first time performed on April 26th last, at the Theatre Royal, followed; and the ceremony closed with the National Anthem.

Signor Giorza was presented to his Excellency Lord Augustus Loftus and the other Australian Governors who accompanied him, and the ceremonial was brought to a close by three hearty cheers for Lord Augustus Loftus and the Governors of the other colonies, given at the call of Sir James Martin.

Immediately upon the cadences of the National Anthem dying away, the party on the dais rose, and shortly afterwards his Excellency Lord Augustus Loftus proceeded to make a brief tour of inspection through the building. His Excellency was accompanied by Lord Normanby, Sir William Jervois, and Mr. Weld, and escorted by a brilliant suite of naval and military officers and members of the Ceremonial Committees. The various Commissioners of the respective courts were in attendance to receive their Excellencies and to respond to any inquiries made to them. After passing through the British Court, the vice-regal party visited the German Court, and thence proceeded to the Austrian Court, the Court allotted to Holland, the Swiss Court, the Italian Court, the French Court, the South Australian Court, the Tasmanian Court, the Victorian Court, the New South Wales Court (where their Excellencies were received by his Worship the Mayor of Sydney, Mr. C. J. Roberts; Mr. J. Davies, M.L.A., Mr. J. Merriman, M.L.A., and Mr. W. Davies, M.L.A.), the Queensland Court, the New Zealand Court, the Court allotted to the Straits Settlements and India, the Fijian Court, the American Court, the Japanese Court, and back to the entrance of the British Court.

On reaching the Queensland Court the Vice-regal party was received by the Executive Commissioner, Mr. Gresley Lukin, who introduced to his Excellency the honorary Commissioners present, viz.:—Messrs. Henry Mort, H. H. Massie, C. T. Gedye, E. L. Montefiore, G. Morris Simpson, M.P., G. Robert Massie, and Hon. F. W. Lambert, M.L.C., and the Secretary to the Commission, Mr. G. E. Layton. His Excellency, in a few well-chosen words, congratulated Mr. Lukin upon the very successful completion of his labours. In welcoming Lady Jervois to the court, the Executive Commissioner, on behalf of Queensland, presented her ladyship with a bouquet, a *chef d'œuvre* of Messrs. Searle and Sons.

On arriving at the New Zealand Court, Dr. Hector, C.M.G., Executive Commissioner for New Zealand, addressing Lord Augustus Loftus, said he

regretted that his Excellency Sir Hercules Robinson was not able to be present. Sir Hercules Robinson regretted his unavoidable absence from the opening ceremony very much, and nothing but the extreme importance of the meeting of the New Zealand Parliament would have prevented his Excellency's attending. Dr. Hector also said that it was scarcely necessary for him to refer to the interest taken by Sir Hercules Robinson in all matters concerning the Exhibition, because every person in Sydney was aware how deep it was, and he could assure them that his Excellency would receive with great satisfaction the news of the brilliant success achieved that day.

At the British Court, his Excellency Lord Augustus Loftus expressed to Mr. Wright, the superintendent of the Garden Palace, the pleasure he felt at the success which had attended that gentleman's efforts, and a hope that the success which had characterised the opening of the Exhibition would continue to its close.

The tour of inspection having been completed, their Excellencies left the building by the Macquarie-street entrance. Mr. P. A. Jennings and the members of the Ceremonial Committee accompanied them, and called for parting cheers as they left. The guard of honour, composed of men of the Permanent Artillery, formed into line again, the band played a martial strain as the men marched away, and the official opening of the International Exhibition of 1879 was brought to a termination."

A message announcing the successful opening of the Exhibition was immediately flashed along the electric wire from His Excellency the Governor to the Secretary of State for the Colonies for the information of Her Majesty the Queen, who had always displayed the liveliest interest in all matters connected with the Exhibition, and who had assisted it materially by the prestige of her Royal name, and had added to its attractions the valuable loan collection of private paintings from the Royal Palaces, which (with the picture lent by H.R.H. the Prince of Wales) formed so important and interesting an addition to the large collection of pictures shown in the British Court of the Art Gallery.

The attendance on the day of the opening numbered nearly 24,000.

As showing the friendly feeling and interest taken in the neighbouring colony of Victoria, which was shortly to hold an International display, in the opening in Sydney of our own grand collection of the world's industries, the following extract from the *Australasian* weekly newspaper may here be given :—

"The brilliant ceremonial which took place at Sydney on Wednesday is a noticeable event in the history of Australasia It denotes the stage that we have reached, and marks an era in our growth. For the first time an Australian colony has found itself in a position to invite the nations of the world to send exhibits of their productions to a great Show to be held in her capital. The vast building, erected with marvellous celerity to house the Exhibition, will compare in style and architectural effect with the great structures erected from time to time since 1851 for the various world's fairs that have been held from Vienna in the East, to Philadelphia in the West. The speciality in the case of the Sydney Show is that it is held in a city which has sprung up to its present stage of growth and civilization in a land which was only coasted along by its discoverers 100 years ago, and the very existence of which was possibly until recently unknown to many of the exhibitors. So that the visitors from distant countries will have much to observe besides the interesting products of art and industry submitted to their inspection. Far overshadowing these in interest and importance is the spectacle of these communities of the Anglo-Saxon race striking their roots deep, and carrying their growth and blossom high and luxuriant on the shores of a vast continent only reclaimed from desolation, solitude, and barbarism, within the memories of our fathers."

On the evening of the opening day His Excellency Lord Augustus Loftus entertained the Governors of the adjoining colonies, who were his guests, and the heads of the various Commissions, at an official dinner, and during the ensuing week also received at an Assembly the Commissioners and their families, and the principal personages in Sydney society. Mr. C. J. Roberts, the Mayor of the City, signalized his mayoralty by entertainments on a most lavish and liberal scale. A large number of balls and parties were also given by the leading residents of Sydney, and in return Captain Mathieu, Commissaire-Général for France, gave a

magnificent entertainment on board the warship "Rhin," which was followed by similar hospitalities on board the German man-of-war "Bismark," by Captain Deinhard, and on board the Austrian frigate "Heligoland," by Captain Pichler.

It had been considered by the Commissioners that as the Courts were not all completed on the opening day, it would be advisable to make the charge for admission half-a-crown, for a week following on the opening week, and the attendance accordingly for the first ten days was on this account less than it would have been had a shilling rate of admission prevailed.

On Saturday, the 27th, which was the first shilling day, the beautiful opening cantata was repeated, for the delectation of thousands who were unable to witness the ceremonial of the 17th.

The Exhibition was visited by a large concourse of people, the number of admissions officially recorded being over 16,000.

The first notable addition to the attractions of the general exhibition was the International Show of Sheep which was opened on the last day of the month, and which naturally attracted a large number of visitors from the country interested in the production of Australia's great staple. Owing to the time of the year being rather late to suit the convenience of exhibitors in the other colonies there was not a fair representation of the whole of Australasia, and the Colonies of Victoria and New Zealand were not represented by any exhibits. French sheep and English sheep were present, and the former especially being of the celebrated Rambouillet type naturally attracted much attention. In awarding the

prizes Tasmania was found to occupy the premier position in fine-combing wool sheep, and carried off a large number of prizes. Queensland also showed remarkably well in several sections with fine large-framed sheep covered with wool of good quality, grown in the celebrated Darling Downs. South Australia was strong in heavy-combing sheep, and the French sheep, which were about 18 in number, were described as well-grown and well-shaped animals, and it was agreed that they should receive a special prize. New South Wales, as usual maintained its supremacy in fine combing woolled sheep. The Sheep Show remained open for ten days, and at its close a very interesting sheep-shearing contest took place, which enabled the foreign visitors to have the opportunity of seeing the Australian methods of shearing. This show of live stock was succeeded by a Flower, Fruit and Poultry Show, and also by a Dog Show, opening on the 21st of October. These, like the other auxiliary shows, maintained a perpetually recurring interest in the Exhibition, and gave a freshness and zest which enlivened and gratified the daily increasing streams of visitors.

From the opening day orchestral concerts of high-class music (under the direction of the Musical Director Signor Giorza), had been given on the afternoons of two days a week, which afforded great pleasure to the music-loving portion of the community, and on the 18th of October Haydn's Oratorio of the "Creation" was performed by a chorus of about 400 singers, and attracted an audience of 14,000 persons. For the following months of November and December Handel's Oratorios of "Israel in Egypt," and the "Messiah," were selected, and these grand productions of a composer whose genius is so universally recognized throughout all English-speaking countries were listened to by admiring crowds, many of whom for the first time had thus an opportunity of hearing

them given in their entirety. Throughout the whole course of the Exhibition a great desire was manifested by the musical public also to take the opportunity of holding entertainments, and these musical entertainments became a peculiarly characteristic feature of the Exhibition. The exhibitors of pianofortes, organs, and other instruments vied with each other in endeavouring to impress the excellence of their respective exhibits on the public mind, and for this purpose eminent performers and vocalists were engaged, and concerts were held daily in the different courts, so that there was scarcely an hour during the afternoon of each day at which a vocal or instrumental concert might not be heard. This had the invariable effect of inducing an audience specially to assemble, and each concert was for the time being a centre of attraction not alone to those who attended for the sake of the music, but a pleasant recreation to those visitors who were fatigued with the viewing of the innumerable objects of interest which claimed their attention at every step. Such was the eagerness evinced by the promoters of these concerts that it became for the Commissioners an *embarras des richesses*, and it required a skilful adjustment of the claims of the musicians to permit each to have a fair opportunity of being heard. Although some purists raised objections to the continuous flow of harmony and melody which daily met their ears during the whole of the afternoon, it was practically found that it was a source of attraction to large numbers, and that it had the effect of visibly augmenting that large section of the public who desired to be amused as well as instructed.

During this month a considerable portion of the public pressed upon the Commissioners the desirability of opening the Exhibition at night, and on Sunday afternoons, alleging that this would give an opportunity to the masses of the working

people to visit the Exhibition at leisure, and enjoy the magnificent display of works of Art and Industry there exhibited. It was affirmed that the working men and their families had not sufficient time on the week-days to survey leisurely and with profit to themselves this great show; and that as the Museum and Public Library were open on Sunday afternoon there would be no incompatibility in permitting a great national undertaking to be also thrown open to the public on that day. The Commissioners after long and anxious discussion, and after consultation with the Foreign Commissioners, declined to open the building at night, and it was the unanimous desire of the exhibitors that there should be no night admissions. The question of opening on Sunday was not received with favour, particularly by the exhibitors, and it was determined to adhere to the plan adopted in the first instance, of keeping the Exhibition open only on week-days; but that in the longer days of the approaching summer the Garden Palace should be open from 9 in the morning till 7 o'clock in the evening, and it was thought that in a country like New South Wales, where the eight hours system of labour prevailed, and where Saturday was observed as a half holiday in nearly every trade and profession, it would be possible for all classes to have an opportunity of paying the Exhibition several visits. The Commissioners also held out inducements on all the public holidays that unusual facilities should be given for the admission of the working classes, schools, &c., and as it will be afterwards seen, all the necessary facilities for bringing the Exhibition within reach of all classes of the community in town and country, were abundantly availed of.

The Prince of Wales's Birthday is perhaps the most popular of all the public holidays in the Colony of New South

Wales, and nowhere is the Prince more popular. His Royal Highness moreover was the President of the Royal Commission in London for the Australian Exhibitions, and it was well known that the prestige of his name had been of the utmost value to the Exhibition throughout the different countries of Europe. The Commissioners had in their address to the Governor of the Colony formally alluded to this fact, and it was recognised on all hands that the assistance rendered by the Prince had been invaluable. Therefore, when it was proposed by the Friendly Societies that they should all unite to hold a grand *fête* in the Exhibition grounds on that day, in honour of the Prince of Wales, the Commissioners gave this proposition their warm approval, and took measures to add to the attractions of the day by hastening forward the completion of the Art Gallery, which had been looked forward to for some time very impatiently by the art-loving public. The site chosen for the Art Gallery adjoined the entrance to the Botanic Gardens, and was within the precincts of the inner Domain, and during its erection the original plan was so far improved upon as to make it of a more permanent character than was originally intended, for as it was pointed out at the time, although munificent provision had been made by the Legislature for public buildings of a handsome and substantial character, it would take many years to erect them, and that in the meantime this Art Gallery might be adopted as a place peculiarly well arranged for the display of the national collection of pictures and statuary and other works of art, which would be collected as the nucleus of our future National Gallery. This fortunately was agreed to, and the Art Gallery now remains with a fine collection of pictures, some of which were previously selected, and hung in the N.S.W. Academy of Art, and the greater number purchased at

the Sydney and Melbourne Exhibitions, and is a source of the highest and best form of intellectual recreation to the thousands who have visited it. And it may be pardonably alluded to as one and not the least of the collateral advantages gained by the Colony from the holding of the Exhibition. The interesting report on Art, written by the Chairman of the Advisory Committee, Mr. Edward Combes, C.M.G., forms a valuable contribution to the literature of the Exhibition, and it may be said that it was owing to the untiring energy of Mr. Combes who kindly undertook the executive management and control of the Fine Arts Department, and the untiring assiduity of his *confréres* of the Advisory Committee, Messrs. Montefiore and Du Faur, that the hanging of the pictures was completed in sufficient time to allow the Gallery to be opened on the Prince of Wales's Birthday.

His Excellency the Governor with his suite had attended during the morning for a private view of the pictures, and at noon the Art Gallery was formally opened by the Executive Commissioner, and was immediately thronged by the thousands who had been waiting admission.

The appearance of the grounds of the Garden Palace was one that could not fail to excite admiration, and when the procession of the Friendly Societies, arrayed in their picturesque emblems and insignias, marched through the Park, with bands playing and banners flying, and drew up in orderly array before the daïs erected for the Executive Commissioner and the members of the Reception Committee, the spectacle was truly magnificent, and the excitement and enthusiasm of the vast concourse of people, numbering nearly 27,000, was unbounded. When all the members of the various Friendly Societies were in the places assigned

to them, the Executive Commissioner from the front of the dais said that "on behalf of the gentlemen with whom he had the honour to be associated, he felt very great honour and pride in seeing such a vast assembly here. It was a most creditable demonstration for the Friendly Societies to have made in honour of the birthday of the Prince of Wales, the heir-apparent to the throne, and also to mark in some degree the real opening of the Exhibition, for in a few minutes he would have the pleasure of declaring open one of the finest collections of works of art ever exhibited in the southern hemisphere. The Commissioners had endeavoured to make the opening fall on the day that the Friendly Societies had done them the honour of visiting the Exhibition. Knowing they were anxious to separate to see the Exhibition, and feeling that he had no special claim to keep them there longer, he asked them to join in giving three hearty cheers for Her Most Gracious Majesty the Queen of Great Britain and Ireland and the Empress of India, queen in their hearts as well as over them." The cheers were heartily given, the bands playing the National Anthem. Mr. Combes, in calling for three cheers for the Prince of Wales, said he only wished that the Prince had been here to see this gathering, and that he was sure that His Royal Highness would some day come and visit Australia. Mr. Burdett Smith, M.P., and Mr. John Davies, M.P., also addressed the gathering; and the Chairman of the Demonstration Committee of the Friendly Societies, after making a suitable reply, in which he thanked the Commissioners for the assistance afforded to them in rendering the magnificent demonstration of the day such an unqualified success, and congratulated the colonists on their being able to witness such an unrivalled and heart-stirring event, he concluded by calling for three cheers for His Excellency the Governor,

President of the Commission, and for the Executive Commissioner, who had done everything to facilitate the arrangements.

The members of the various societies proceeded to Government House, where they presented a loyal address to the Governor, and afterwards spent a holiday on the grounds, their bright regalia serving a good purpose in setting off to great advantage the appearance of the crowd. The scarlet, purple, green, orange, and gold formed a pleasant contrast to the more sober colours worn by the other male visitors. The leading journal of the Colony stated on the following day that it was pleasing to be able to report, notwithstanding the enormous attendance, "that the behaviour of all present was admirable, and that there was not one person seen present the worse for liquor. This state of things reflected the greatest credit upon the people of the city and upon all present, and it appeared to be the unanimous opinion of the visitors at the close of the day that the Prince of Wales' Birthday at the Exhibition had been one of the most enjoyable days they had ever spent."

It should here be mentioned that the arrangements made for the maintenance of order and the protection of property by the Inspector-General of Police, Mr. Edmund Fosbery, were of the most complete and satisfactory character. From the beginning of the Exhibition the whole of the necessary arrangements had been entrusted to the hands of Mr. Fosbery, and a carefully selected body of men, possessing the qualifications requisite for the duty, had been drawn from the different districts of the Colony and were placed under the immediate direction of Inspectors Ryland and Wager. Although it may be said that the unvarying good conduct displayed by all classes of visitors during the whole currency

of the Exhibition, particularly on the great public holidays, made the task of the police a comparatively easy one, still it is due to the Inspector-General and the members of the force to testify to their well-disciplined, civil, and creditable bearing and conduct for the whole of the period of time they were engaged on Exhibition duties.

The interesting collection of native weapons, dresses, and utensils from Australasia and Polynesia, which had been skilfully arranged together under the supervision of Dr. Hector, C.M.G., and other members of the Ethnological Sub-committee, was also thrown open to the public on the Prince's Birthday, and was found to be a feature of great interest, including as it did objects which it had been extremely difficult to procure, and which perhaps could not be obtained for display at any other time or place.

Among the many interesting events which took place about this time was the presentation of a valuable collection of Japanese exhibits to the Colony by Mr. Haruo Sakata, the Imperial Japanese Commissioner. This extremely valuable collection consisted of samples of ceramic-ware of every description, from that in common use to the most rare and costly productions for which Japan is famed; richly carved and inlaid cabinets, &c.; also an interesting collection of seeds of Japanese economic plants. The Colonial Secretary (Sir Henry Parkes, K.C.M.G.) attended in person and accepted the present of this collection, and conveyed the thanks of the Government to the Japanese Commission for these rare and valuable gifts.

The French Government also gave practical expression of their good wishes for the Colony. Captain Mathieu, the

Commissaire-Général for France, shortly after the opening of the Exhibition, presented a magnificent Sèvres vase to the citizens of Sydney, and the Mayor, Mr. C. J. Roberts, at a grand entertainment on board "Le Rhin," accepted this gift, and publicly thanked Captain Mathieu and the French Government on behalf of the citizens of Sydney. Before the closing of the Art Gallery, Captain Mathieu supplemented his previous handsome gift by presenting two magnificent vases to the Trustees of the Art Gallery, and they now form part of our national art collection.

As the Art Gallery was the last of the buildings in connection with the Exhibition to be erected, its opening to the public may be said to have practically completed the opening of the Exhibition, and it was generally so regarded. Two months had now expired since the ceremony of the opening day, and many were the vaticinations indulged in as to the probable success of the undertaking, and how far it would prove itself acceptable to the people of the Colony. All doubt as to its success was now over, for the attendance of the first two months exceeded the most sanguine expectations, and the attractiveness of the beautiful Garden Palace, with its group of subsidiary buildings, and the natural charm of its position (which led to the main building being called, by instruction of the Colonial Secretary, the Garden Palace), joined with its convenience of access, made the Exhibition the daily resort of all those whose time could permit them to visit so magnificent a spectacle. It is true that some dissatisfaction was about this time expressed by many traders in the city at some of the exhibitors selling articles in the Exhibition, and thus breaking the bye-laws, which had been framed by the Commissioners to prevent the Garden Palace from being turned in a mere bazaar. It was of course

competent for exhibitors to dispose of any of the articles there displayed, provided that they were not removed until after the close of the Exhibition, and it was in nowise sought to curtail this liberty of action on the part of exhibitors. It was also felt that it would be beneath the dignity of such a national undertaking to allow it to be used as a sort of a mart or fair for the sale of promiscuous articles. The matter was, however, settled by the Commissioners permitting only such articles as might be fairly looked upon as souvenirs or mementos of the Exhibition being openly sold, and the irritation which had displayed itself soon ceased.

Meanwhile the Commissioners were busy in considering the appointment of judges, which is found to be a work of great difficulty at all International Exhibitions, and the task was the more difficult on this occasion, as the rather complex rules for the mode of appointment of judges at the Philadelphia Exhibition had been adopted. After considerable discussion, which lasted during the greater part of the following month, the appointment of the judges was formally ratified on the 20th of December.

Rather an awkward delay had occurred in the publication of a general official catalogue, owing to a misapprehension that had prevailed on the part of the London Commissioners with regard to the issue of a catalogue of the British section, and the difficulty of incorporating it as a part of the general official catalogue published in Sydney. This difficulty was finally got over by the catalogue being issued in separate parts for each colony and country, instead of being issued in the unwieldy form which large catalogues invariably assume. The catalogue of the British section like all the other parts was held to be included as an integral part of the general catalogue.

The grounds of the Exhibition which were now in a state of completeness were made use of almost each week, owing to their attractiveness and convenience, for many public spectacles, and on the 8th of December a specially brilliant assemblage collected to witness the presentation of the prize trophies won at the recent series of Intercolonial Rifle Matches. These trophies were presented by His Excellency the Governor, in the presence of about 7,000 spectators. In the course of his remarks on that interesting occasion, His Excellency congratulated the Commandant (Colonel Richardson), Colonel Roberts, and the Officers commanding on the admirable soldier-like bearing and appearance of the men. The Governor said, "I have seen most armies in Europe, too many of them, and I confess I have never seen a finer body of men than I have witnessed here on these grounds to-day." This remark emanating from one who had had opportunities of seeing most of the European armies during his long career in the service of the Crown, was, as might be expected, received with acclamation, and three lusty cheers were given for the Queen, the Governor, and Sir William Manning, the President of the New South Wales Rifle Association.

On Christmas Day the Garden Palace was closed in conformity with the desire of a great majority of the exhibitors; and on the following day, Boxing Day, a vast number of persons, exceeding 24,000, thronged the courts, and the lively interest they appeared to display showed that so far from the attractions of the Exhibition being on the wane they were daily increasing more and more in favour.

At this time the whole of the courts and annexes were in a state of completeness, and the Exhibition was to be seen at its best in all the various departments. On entering the Garden

Palace from the main entrance fronting Macquarie-street, the eye was struck with the fine proportions of the transept, crowned at its intersection with the naves by the Dome, which was the leading architectural feature of the Garden Palace, and was universally admired for its exquisitely light and symmetrical form and the grace and beauty of its proportion. Passing by the German bronzes and the rich Turkey carpets and tapestries, which were used to decorate the porch, the attention was drawn to the magnificent display of glassware and ceramics in the centre of the transept, the large collection of glass, China, and Etruscan ware, shown by Webb and Sons, of Stourbridge, forming a most conspicuous and striking feature, while further on there was a most effective arrangement of the Austrian china and Bohemian glassware. On the right hand might be seen the entrance to the German Court, which extended in a line parallel with the south nave to where it met the Belgian section; and above the three bays that fronted the transept, were the titles respectively, of the three principal German capitals, Berlin, München, and Dresden, with handsomely arranged decorations of the national flags and emblems. Space does not permit of any detailed account of the different courts, but the German Court contained a very large display of pianofortes and other musical instruments, textile fabrics, and also ecclesiastical art objects and furniture, both on the main floor and the galleries above.

Adjoining Germany, Austria next claimed the attention of the visitor, and was conspicuous for its handsome and useful furniture and hand-painted china and other artistic productions of the Empire, showing the distinctive peculiarities of different races of which it is composed, in their varying forms and designs. Austria, like Germany, had also a good display of woven goods, principally woollen.

On the left of the transept, the china of Worcester and Staffordshire presented a most attractive appearance, not alone from its intrinsic beauty and merit, but from the skill with which it was arranged, and it may be said that the selection of these attractive glass and china exhibits for so conspicuous a position, superadded to the general impression of brightness and beauty, which immediately impressed the eye of the beholder on first entering the building.

On reaching the dome visitors were at once struck with the *coup d'œil*, and the effect of the scene was certainly admirable. In the centre of a circular-railed space under the dome stood the noble statue of Her Majesty the Queen, a large bronze figure by Mr. Marshall Wood, forming a conspicuous central feature of the building.

To the right and left spread away the naves, terminating at one end with the southern tower, with its flight of steps leading to the outer group of Exhibition buildings situated in the Park. The northern nave terminated with the orchestra and organ, before which space had been reserved for the accommodation of those who attended the concerts. Looking from the dome to the eastward along the transept might be observed the tall obelisks and pyramids of the Australian Colonies typifying their production of gold and other metals; and in the eastern tower itself, surrounded by its stained-glass windows and opening on to balconies, which became the favourite resort of all visitors, was the Ladies' Court, the skilful arrangement and decoration of which were much admired, and reflected credit not alone on the good taste but the gallantry of Mr. John Alger, the member of the Commission who undertook this task as a labour of love.

From the pedestal which sprang from the basement-floor and upheld the statue of the Queen, flowed a fountain, the plashing waters of which conveyed a cooling sensation, and gave rise to a refreshing current of air on the warmest days of the year.

Around the large basin of the fountain, and on the basement-floor were situated the central refreshment-rooms, which proved to be of great public convenience, and were the daily resort of thousands. These refreshment-rooms were decorated with ferns and other graceful foliage plants, and the inspiriting music of a well-trained band assisted to render them more attractive.

Along the centre of the south nave the magnificent collection of the metals and minerals of New South Wales stretched half-way down; and the iron trophies of Belgium, the biscuit trophies of Victoria, and a magnificent display of silver plate from Paris, were also shown in this quarter of the nave. In the porch of the southern tower there was a large display of French bronze-wares of artistic forms.

Going from the dome along the nave the visitor would see on his right the neatly-decorated Court of the Netherlands' exhibitors, adjoining to which was a portion of the Austrian Court, while further on were the statuary, mosaics, jewellery, and other interesting exhibits of the Italian Court, which always succeeded in drawing a crowd of admiring spectators.

Adjoining the Italian Court one bay was allotted to Switzerland, where there was a creditable display of watches, wood-carvings, and laces.

Belgium, which was next to Germany and France, the largest exhibitor, made a most interesting display of the iron manufactures of Liège, the woollens of Verviers, and the wonderful sheets of glass from the manufactories of Charleroi and its vicinity, and gave evident proofs of the skill and intelligence for which the Belgians are famous.

The French Court extended from that of Belgium to the southern tower, and was one of the most popular resorts of the Exhibition. The numberless articles of *vertû* and artistic objects, for the production of which France has been so long celebrated. The groups of bronzes and attractive sets of ceramic ware were combined with the more sober but not less valuable displays of textile fabrics and clothing. The galleries and staircases were gay with the magnificent tapestries and hangings from the national manufactories of Gobelins and Beauvais, and of Sallendrouze Frères of Aubusson (Creuse) and Tresca of Paris. The celebrated silks of Lyons also attracted the attention of the fair sex, and in the gallery of the southern tower the magnificent Sèvres vases presented by Captain Mathieu, the French Commissaire-Général to the citizens of Sydney, was placed on a lofty pedestal where it might be seen by all observers, and excited general admiration.

The opposite side of the south nave to that occupied by the countries of Europe was taken up by the sister colonies of the Australian group. The display made by Victoria, South Australia, and Tasmania was most creditable, and proved that they had made great strides, not alone in the production of raw material but in manufactures and in the arts.

The New South Wales exhibitors were located near the corner and round one side of the eastern transept, and as

might be naturally expected, occupied the largest space of any of the colonies. This Court had a crowded appearance, and the effect was somewhat marred by many valuable exhibits not having sufficient space round them to permit of their being seen to advantage. One of the most notable exhibits was that shown by Major Richards, from the New South Wales Government Printing Department. Major Richards had spared no pains to bring before the public the great resources of the establishment over which he presides, and the specimens of bookbinding, letterpress and lithographic printing, stereotyping and processes of photography, were effectively displayed in handsome cases. It was not alone, however, in this highly creditable and admirable exhibit that the Government Printer assisted the Exhibition, but in the ready help and valuable advice and counsel which he was at all times found willing to give, and which the Commissioners found on many occasions to be most invaluable. There were also interesting exhibits of newspaper printing and stereotyping, illustrating the great progress of this branch of literature, from the offices of the *Sydney Morning Herald* and *Evening News*.

In the transept might be noticed the wager-skiff in which Trickett won the championship of the world, and adjoining it was an obelisk of maize cobs, erected with as much artistic effect as the nature of its component parts would admit of, and forming one of a series of trophies intended to illustrate the natural products of Australasia. The trophy of sugars, of New South Wales manufacture, was one of these, and fortunately was so erected as to be generally admired, while the tobacco trophy seemed to have found an abiding place in the handsome Italian ebony and ivory book-case of beautiful design and artistic proportion, which had been

imported from the Paris Exhibition and which Colonial ingenuity had turned into a purpose for which it was evidently not originally constructed.

Queensland displays some handsome trophies, notably those of pearl shell and sugar-cane, and was allowed to place a railway carriage, built of the native woods of the colony, in front of the Court.

Adjoining that of Queensland, the New Zealand Court claimed attention by its useful and interesting display of furniture, woollen goods, grain, and by a splendid collection of photographs and water-colours of New Zealand scenery.

Under the dome, near the corner turning into the northern nave, stood the beautiful collection of objects contributed by the authorities of the South Kensington Museum, being exact copies of certain portions of the Royal plate and of the regalia in the Tower. This locality was the favourite place for visitors to loiter, and ultimately the circle surrounding the fountain at the base of Her Majesty's statue, on the main floor, became the trysting-place where friends were wont to meet every afternoon, so that to "Meet me under the dome" became a common expression in Sydney, and when on the crowded days parties of visitors always succeeded in losing each other among the labyrinths of the passages of the various courts, it was always an injunction that they should before leaving the building meet under the dome.

Down the centre of the north nave were various handsome trophies erected by British exhibitors, and also the stands of the Waltham Watch Co. and of the celebrated stationery

firm of Marcus Ward & Co., of London and Belfast, also the interesting exhibition of the teas of India, and the carved furniture from the North-west Provinces of that Empire.

On the east side of the north nave were the courts allotted to the three British Crown colonies of Ceylon, the Straits Settlements, and Fiji, and in these varied and interesting collections of their several products were skilfully arranged.

The United States Court came next, and stretching along the eastern side of the nave was followed by Japan. In the American Court the exhibits as might be supposed were more conspicuous for their useful character, and for their novelty, as showing the inventive genius of the people than for beauty or external attractiveness. The excellence achieved by the Americans in the manufacture of electro-plated and silver ware was, however, sufficiently evident, and their magnificent pianos and cabinet organs were a source of surprise to many who up to the time of the Exhibition were not aware of the great eminence attained in the manufacture of these instruments by our American cousins.

Nothing more complete than the change in entering into the Japanese Court from that of the United States can well be imagined, nor could anything be more marked than the contrast presented between the specimens of Japanese art, industry, and their exquisitely and highly finished ornamental objects, and the exhibits of the United States. The Japanese contribution to our Great Show was certainly one of the most interesting and complete, and the arrangement of the exhibits was highly effective. In every conspicuous place there appeared by way of decoration the conventional treatment of the Chrysanthemum, which is the national

flower emblem of Japan. The rich embroidered silks, with their quaint stiff patterns; the large and handsome jars of porcelain and of bronze; and last, but not least, the fragrant cup of tea which was provided for the delectation of visitors to this court led to its being a favourite corner with Exhibition visitors. One peculiarity of the Japanese catalogue, as contrasted with those issued by the Commissions of other countries, was its containing as an appendix carefully prepared chemical analyses of the principal Japanese exhibits of food, &c., prepared at the imperial chemical laboratory at Tokio.

The opposite side of the northern nave and the whole north-western section of the main floor of the building was occupied by the courts of Great Britain and Ireland, every sort of manufacture for which Britain is justly famed was here shown, and in magnitude and beauty of arrangement and variety of exhibits the British Court was *facile princeps*. To give a detailed description of this wonderful collection would far outstrip the space at disposal in a rapid survey of the Exhibition like the present, and it was not alone in this *locale* of the Exhibition, but on the basement floor, and in the galleries, and outside, in the Machinery halls, in the display of agricultural implements, and in her magnificent contributions to the art section, that the Mother Country stood in the van of all the nations who had assembled at the invitation of New South Wales, to vie with each other in this peaceful contest.

Ascending from the main floor to the galleries which ran round the building, the extremely interesting collection of Musical Instruments of all sorts, of School Furniture, Maps, Books, &c., were displayed, and in the North Tower the

London School Board and the Council of Education for New South Wales had courts fitted up for educational exhibits. To the rooms in this tower access, apart from the less direct means of staircases, could be obtained by means of an American drawing-room elevator, worked by steam power, and which conveyed thousands of delighted visitors to the top of the tower, whence a panorama met the eye probably unsurpassed for beauty in the whole of the world.

Passing around the galleries allotted for British exhibits at the corner of the transept a space had been reserved for Canada, whose participation in the Exhibition being at the last moment was necessarily of a limited character. The large exhibit of the Ontario School Board arrived, however, in time to be shown, and was, after the close of the Exhibition, presented to the Government of the Colony.

The models of the great ocean-going steamers, and the interesting exhibit of the Electric Telegraph Department of New South Wales, skilfully arranged by Major Cracknell, the Superintendent of New South Wales Telegraphs, stood near the staircase leading from the main entrance; and in the west tower of the galleries adjoining, a choice collection of German furniture and toys were shown. The interesting exhibit of Germany included models and diagrams illustrative of the Kinder-Garten system of education, together with anatomical diagrams and all those manifold aids to technical education which have been so much perfected in that country.

The galleries allotted to the United States were remarkable for their fine collection of sewing-machines; and the Phillipine Islands, and the Cape of Good Hope, which were located between the American and Indian galleries, had

small but interesting exhibits. The collection of seeds of dye-stuffs from Madras and of medicinal plants, and the carpets and furniture from other parts of India, for which no space could be provided on the main floor, were here effectively displayed.

The Ethnological Collection, to which we have before alluded, with its wonderful variety of Native Weapons, Dresses, Utensils, and Ornaments, and everything that would go to illustrate the ethnology of Polynesia and Australia, stretched along the one side of the eastern transept; while the opposite gallery—the southern—was devoted to the display of Photographs, Water-colour Drawings, and others of those objects belonging to the art section, for which a place could not be found in the art gallery, but which nevertheless presented a very complete and gratifying appearance.

The display of the indigenous woods of the Colony, carefully arranged in the galleries over the New South Wales Court, showed at a glance that great care and pains had been taken in its collection and preparation. These specimens of timbers were shown in connection with the Department of Mines, and it was a matter of just pride to the Colony that the whole of the wonderful mineral display of the Mining Department excited the admiration of all visitors to the Exhibition. The Government had in this, as in many other instances, lent its powerful assistance to the Commissioners in rendering the collection of metals, minerals, and kindred objects as complete as possible; and the Minister for Mines (the Hon. Ezekiel A. Baker) had kindly permitted the Under-Secretary (Mr. Harrie Wood) and the Government Geologist (Mr. C. S. Wilkinson) to assist the Commission, not alone by acting on Committees, but by giving their advice and services

and personally supervising and arranging this great and varied collection of exhibits of our national mineral wealth.

The basement-floor of the Garden Palace, originally intended for machinery, was found to be extremely useful as a place for the reception of such articles as could not be conveniently placed on the main floor of the Garden Palace. Handsomely lighted and decorated as it was, it presented a bright and cheerful appearance, and was admirably adapted for the purpose it was made to serve.

Entering by the northern doors of the basement there might be seen on either side of the main avenue a fine display of carriages and vehicles of every description from different countries, the principal contributions in this section being from Great Britain, the United States, and the Colony of New South Wales. Iron wares, wire-netting, and weighing-machines and scales were shown on one side of the main avenue, and a variety of objects of Sheffield and Birmingham manufacture, tastefully arranged, occupied the other side of this avenue as far as the central refreshment-room under the dome.

In the central basement court, leading to the eastern entrance, opening towards the Botanic Gardens, were grouped very interesting collections of hollow-ware, cooking utensils of all sorts, and the large and valuable sanitary exhibit of George Jennings, of Lambeth, London. In the centre there was the notable trophy of John Brown & Co., of Sheffield, consisting of iron armour plates, &c. In the porch the beautifully-polished objects of Bessbrook and Aberdeen granite, and the Lithgow Valley (New South Wales) *terra-cotta* trophy were located. In addition to this varied collection

there were displayed glass, colours, and other products of Belgian industry, and great trophies of casks and bottles of beer and wines from Germany; while near the southern entrance were the cellars for the reception and storage of wines. Adjoining this, space was reserved for the exhibition of dairy products, which being of a perishable character were placed in this as the coolest position in the building, and were renewed and replaced from time to time.

Passing from the Garden Palace across the Fig-tree Avenue the most conspicuous objects which met the eye were the Machinery Halls. In front of these buildings a beautiful sward of velvet-like turf formed a pleasant promenade. This had been formerly used as a cricket ground, and the surface was guarded from injury with jealous care. The Machinery Halls covered a space exceeding 100,000 superficial feet. One hall was exclusively devoted to Agricultural Implements of every description and labour-saving machinery, and all the newest appliances in connection with the cultivation of the soil, and the harvesting of the produce of the land. Great Britain was, as in all other departments of the Exhibition, the largest exhibitor; and the United States and Canada and some of the European countries also made a very creditable display.

In the other hall, separated from that in which agricultural machinery was displayed, by a narrow passage was laid a railway-line, along which travelled a locomotive crane, and in this hall steam-engines of every description in motion were shown; also the magnificent display of the guns and artillery from the works of Sir William Armstrong & Co., of Newcastle-on-Tyne, power-looms in operation, and ice-making machinery, sawing and planing machines, and sugar-boiling

apparatus, &c., all at work. The interesting report on the machinery shown at the Exhibition, prepared by Mr. Norman Selfe, C.E., gives an exhaustive account of the varied exhibits, and will be found of great value to all those who take an interest in the wonderful developments which are daily taking place in the production of machinery.

A short distance from the Machinery Halls was the spacious and lofty Agricultural Hall, and in its near vicinity the pens and sheds for the reception of live stock of different kinds were placed.

On one side might be seen the annexes erected by Sydney firms for the display of the machinery of those exhibitors for whom they acted as agents, while on the other was the Agricultural Hall, just referred to, in which from time to time the auxiliary shows were held.

In the early part of December a show of pure-bred cattle was held in the stalls adjoining the Agricultural Hall, and a fine collection of Shorthorns, Herefords, Devons, and other breeds was here brought together, the majority of them being entered by breeders of this Colony, and of the rest Victoria, New Zealand, and Queensland contributed some high-class stock. The "parade-ring" was, as usual, a source of attraction to a great many visitors; but owing to the great depression in the price of pedigree cattle, the sales that followed the show were not successful. The First Prize fell to Dr. Jenkins, of Nepean Towers, for his celebrated "Victoria the Third Theodore," a noble specimen of the Shorthorn breed, and shown in perfect condition. Mr. Charles Fisher, of Victoria, was also successful in gaining the first place for his Shorthorn bulls and cows; while in

Hereford cattle the well-known breeders, Mr. George Loder, Mr. John Nowlan, and Mr. J. T. Junor carried away the principal prizes. Robertson Brothers and E. B. Woodhouse were also among the first-prize takers.

On the 17th of December a very interesting show was opened in the Agricultural Hall, being the second Horticultural Show held in connection with the Exhibition. This was especially noted for the fine display of plants, especially the large collection of tropical and semi-tropical plants, chiefly coming from the South Sea Islands, and contributed by Mr. John Baptist, their richly-coloured flowers, bright green leaves, and graceful foliage making a most favourable impression. At this show were also displayed probably the finest lot of ferns, 150 in number, ever shown in Australia, and exhibited by an amateur. A fine collection of the fruits which come to such perfection in the cooler districts of the colony, sent from Goulburn by Mr. Grunsell, and the cherries, gooseberries, currants, raspberries, almonds, walnuts, and filberts, conclusively proved that in the growth of these sorts of fruits we can compete with any part of the world.

A show of fat stock, held about Christmas time, gave an opportunity to the lovers of the "roast beef of Old England" to see specimens of the splendid cattle of the Colony as fattened on its natural grasses; and the display of fat sheep was also very good.

The most important of the shows in the Agricultural Hall was, however, the Wool Show, which was opened on the 23rd of December, and was open to all nations. The schedule comprised ten divisions, subdivided into about 40 classes, of which three-fourths were merino, the balance of the

classification being for any other wools than merino, the exhibits ranging from six fleeces up to bales of 200 and 300 lbs. This was undoubtedly the best display of wool ever made in the Colony, and comprised exhibits from all the colonies of the Australasian group, except Western Australia. France, Germany, and America were also represented. The competition, however, mainly rested with the wools of Australasia. The interest shown by the public was, as might naturally be expected from the importance of the production of fine wool as the leading staple of the Colony, very great, and it was decided to allow the wool show to remain open till the termination of the Exhibition, leaving about one-third of the hall to be made use of for the fruit, flower, and grain shows which followed in the first months of 1880. The gold medals which were awarded for the champion wool prizes were borne away by William Gibson & Sons, of Scone, Tasmania, and Mr. Thomas Cumming, of Victoria. Collective exhibits of wools were shown by Helmuth Swartze, & Co., of London, and W. H. Chard & Co., of Sydney.

During the month of January the Horse Show was held, and was the last of the series of animal shows held in connection with the International Exhibition. As might be expected it was also the most popular. The animals shown, however, were nearly all belonging to the Colony, and the blood horses and mares were generally admired. The champion prize in this class, as also in the heavy draught stock class, was gained by the celebrated breeder, Mr. Andrew Town, of Richmond, who became the recipient of the much coveted gold medal of the Exhibition. The Arab section was remarkably well filled with animals of first-class quality, principally exhibited by Messrs. Dangar Brothers, who have succeeded in breeding fine specimens of this celebrated race

in the Colony. There was only one ass shown, and it would appear that this much enduring animal finds no favour in these colonies, and that the hardy mules which in other countries are so much used, have not been able to supersede here that more favourite and more noble animal—the horse.

On the 2nd of March a very interesting Agricultural Show, which was intended by the Commissioners to be a general display of all and every product of the land, of all the colonies was opened. The Commissioners feeling it to be their duty to promote by every means the advancement of the agriculture of the country, had made strenuous efforts to bring together such a collection of the products of the soil as would show to our foreign visitors the wonderful variety of the resources of the great continent of Australia. Queensland and South Australia were conspicuous in this show, and the magnificent collection of economic plants contributed by the Acclimatization Society of Queensland, reflected much credit on that body. Mr. Bernays, the Vice-President of the Society, informed the Commissioners that the exhibit was intended to illustrate the work of plant acclimatization, which is the leading aim of the Society. It will be found on reference to the report which appears under its proper head, what a bewildering variety this exhibit presented of fruits, roots, spices, and gums and fibres. Mr. Affleck's exhibit of Australian raw silk from Albury, and the collection of indigenous grass and fibre plants from Neotsfield, near Singleton, were especially interesting. The display of maize, rye, oats, wheat, barley, and potatoes was very creditable; and a really magnificent show of plants was shown by Mr. Charles Moore, Director of the Sydney Botanic Gardens. The interesting exhibit of cereals, fruits, preserves, olive oil, and other vegetable products of South Australia, as arranged by Mr. Samuel

Davenport, the South Australian Executive Commissioner, formed the most attractive part of this show, and the public availed themselves with alacrity of the kind invitation of the hospitable Commissioner to obtain a practical knowledge of his excellent exhibits, by submitting them to the test of consumption on the spot.

Near the Agricultural Hall the spacious and handsome pavilion of Compagnoni & Co. was erected to provide for the refreshment of visitors, and in passing towards the main entrance gate, near the statue of Sir Richard Bourke, there might be observed on either side of the pedestal, Russian cannon, which were allowed to remain undisturbed, and were thus suggestive of curious trains of thought as to how far the holding of this great International Exhibition would be found effectual, as was prophesied with regard to the Exhibition of 1851, in assisting to maintain the peace of the world. Neither Russia nor Turkey had been able to spare time from the horrors of war to accept the kindly invitation of New South Wales to be among the nations when they gathered for the first time in Australia at this picturesque and lovely spot.

Not far from Sir Richard Bourke's statue might be seen grouped the pretty kiosk of the British and Foreign Bible Society, the official photographic gallery, and the pavilion of the American Novelty Co., and other and similar edifices.

Passing down the Fig-tree Avenue to the right, a row of tasteful buildings were ranged, which included the Japanese and Turkish Bazaars, the German and Austrian restaurants and depôts for the sale of iced-milk and ærated waters, which were especially grateful in the warm days of our Australian summer.

Further on, and opposite the Art Gallery, there were also some convenient cafés and restaurants; and on the left, near the roadway leading from the grounds of the Garden Palace to the Botanical Gardens, the large building known as Cripps' Restaurant was placed.

The Maori-house, exhibited by the New Zealand Government, was a notable addition to the picturesque appearance of the gardens in front of the Palace, and the quaint carvings with which the panels were covered brought vividly before the eye the peculiar forms and designs of Maori decorative art.

The whole area of the Park over which the Garden Palace and these various buildings were distributed was about 35 acres, and no more pleasant way of passing the time could be imagined than that which was afforded by a stroll through these interesting grounds.

The largest attendance recorded on any one day was on the 26th of January, the great holiday of the year in New South Wales, being the anniversary of the foundation of the Colony. The admissions recorded on that day exceeded 27,000. Advantage was taken of this holiday by the temperance societies of the Colony to hold a grand demonstration in the Garden Palace, and an enormous number of visitors from the country, for whom special facilities had been provided by excursion trains running from the several centres of population, also attended. A concert was held in the orchestra of the Garden Palace with a choir of 1,000 children, and appropriate addresses were delivered by the leading members of the temperance bodies. Although the *tout ensemble* was not quite so gay as that which presented itself to the spectator on the Prince of Wales' Birthday, still the charming effect produced by the

thousands of well-dressed children, clad in the simple white costumes, which so well suit the heat of the fervent sun of an Australian January day, and the healthy, happy, and hearty appearance of the ever-moving throng, was really a glorious sight, and one that left an impression, not easily to be forgotten. It is in no boastful spirit that we express the opinion, agreed in by all of our foreign visitors and numbers of unprejudiced observers, that in no other city in the world may be seen a more orderly, well-dressed, and contented population than in Sydney on a public holiday. The sense of enjoyment is so apparent, and the appreciation of holiday-making and fun is so keen, that a sympathetic feeling of joyousness pervades the social atmosphere, and calls forth most pleasurable emotions. To stroll among the crowd and see the happy *al fresco* groups seated on the grass enjoying in contentment and order their mid-day meal, was a source of satisfaction to all those who had laboured to make this great temperance festival a success. Of all the great days of the Exhibition none were more enjoyable or pleasing than Anniversary Day of 1880. The facilities afforded by the Railway Department in issuing excursion tickets at nominal rates gave opportunities to country residents and all the school children within reasonable distance of the Railway lines to attend, and it was the desire of this Commission that no person should be debarred from witnessing the Exhibition on the ground of cost. The Hon. John Lackey, Minister for Public Works, and Mr. Goodchap, Commissioner for Railways, and the officers of the Railway Department co-operated most cheerfully in carrying out this idea of the Commissioners, and through the instrumentality of the means provided by them many thousands were induced to visit the wonders and to feast their eyes on its countless treasures who otherwise would have had no opportunity of being able to come to Sydney.

When the Exhibition was opened on the 17th of September it was announced to remain open for six months, and as the appointed time for closing drew near, the public, who had learned to appreciate the Exhibition, and to whom the attractions of the place proved an irresistible loadstone, pleaded for a prolongation of its existence, and as the work of judging had not been brought to a termination it was after mature deliberation arranged that the final closing should not take place till the 20th of April.

Since their appointment the various groups of judges had been unflagging in their attendance from day to day, in endeavouring to fulfil the very difficult and arduous task imposed on them. Reference has before been made to the diffculties which met the Commissioners when appointing the judges. All these were happily past, and during the whole time the work of judging was going on the greatest harmony prevailed among the gentlemen who met together in the course of their work as judges. The department of judging and awards was under the control of a committee which was named the Committee "on Judging and Awards" and was presided over by the Executive Commissioner as chairman. This body was also constituted as a court of appeal to examine and decide in cases where appeals were made against the decisions of the judges.

Unlike many other Exhibitions the judges at this received no payment for their work; and it is a matter of congratulation to the colony that so many gentlemen of culture and position cheerfully gave their services for many consecutive weeks in this difficult work. It is confessedly a matter of impossibility to please everybody, and experience has shown that however carefully and conscientiously the work of

judging may be performed, a small *residuum* of disappointment and dissatisfaction will be shown by a few. The fact, however, that the number of appeals against the decisions of the judges being only 200, out of over 7,500 awards, is the most tangible proof that can be afforded of the thorough and careful way in which the judging was conducted.

According to the instructions laid down by the Committee on judging and awards, the judges classified all objects worthy of a prize as of first, second, third, or fourth degree of merit, and these degrees were expressed on the certificates of award as "first degree of merit," "highly commended," "commended," and "honourable mention." In addition to these degrees a few objects which were exceptionally meritorious were allowed to stand as "special first," and when as mentioned before the total number of awards was over 7,500, it will be seen that the judges must have had their time fully occupied in performing so much solid work in that period which intervened between the commencement of their operations and the closing of the Exhibition.

The ceremony of the distribution of awards took place on the 20th of April, after which day the Exhibition was closed to the public.

For the account of the closing ceremony, as for that of the opening, we are indebted to the careful report of the *Sydney Morning Herald*, which is hereto appended :—

"THE CLOSING CEREMONY.

THE official closing of the Sydney International Exhibition took place on Tuesday, April 20, in the Garden Palace.

The whole of the northern part of the nave was devoted to the reception of those admitted to take part in the ceremonies of the day. The orchestra, in front of the organ, was reserved for the accommodation of ladies, who attended in large numbers, but still not quite sufficiently numerous to fill up all the

seats. Below the orchestra a sloping platform was extended down to the southern boundary of the *Graphic* Court, and in the centre of this new platform there was a dais, covered with a splendid Axminster carpet, on which were arranged the seats for His Excellency the Governor, the Ministry, and other distinguished individuals. Below these, on either side, were the Foreign Commissioners and the Executive Commission of this Colony. On the floor of the building, and facing the dais and platform, were seats on the one side for the members of both Houses of Parliament, and on the other for the gentlemen who acted as Judges in connection with the Exhibition. The whole of the reserved space was neatly decorated with coloured hangings, vases, and ornamental plants, which, with the brilliant colours of the ladies' dresses, formed a *tout ensemble* of the most pleasing description. Beyond the barriers, and all round the courts under the gallery, the general public assembled in large numbers; in fact, the whole of the main building was well filled from the early morning, and there was a good assemblage in the grounds outside as well.

About 10 minutes after 11 o'clock the booming of the guns at Fort Macquarie announced that His Excellency Lord Augustus Loftus had left Government House on his way to the Exhibition, for the purpose of presiding over its closing rites. His Excellency and Lady Loftus occupied the back seats of the carriage, with Sir Henry Parkes and Mrs. Wilson in front. Inside the grounds of the Exhibition there was a guard of honour of the Permanent Force, consisting of 100 rank and file. Upon the arrival of His Excellency, a general salute was given, and the band struck up the National Anthem, the burden of which was taken up by Signor Giorza on the organ as Lord Augustus Loftus and his party entered the main building. On the dais to the right of the Governor were Lady Augustus Loftus, Sir Alfred Stephen, and the Bishop of Sydney; and on his left Mrs. Wilson, Sir Henry Parkes, Miss Frazer, and Mr. Justice Faucett. The other gentlemen on the dais were the Hon. John Robertson, Vice-President of the Executive Council; the Hon. J. Lackey, Minister for Works; the Hon. F. B. Suttor, Minister for Justice and Public Instruction; the Hon. R. Wisdom, Attorney-General; the Hon. Saul Samuel, Postmaster-General; the Hon. E. A. Baker, Minister for Mines; Sir John Hay, President of the Legislative Council; Sir G. W. Allen, Speaker of the Legislative Assembly; Colonel Richardson, Mr. Fowler (Mayor of Sydney), and others.

The ceremonies of the day were commenced by Mr. P. A. Jennings, Executive Commissioner, who, with a number of the other Commissioners, advanced to the foot of the dais, and read to his Excellency the following address:—

'My Lord,—We, the Commissioners appointed to manage and direct the Sydney International Exhibition of 1879, have the honour to lay before your

Excellency the awards made by the judges, and finally decreed and ratified by the Commission, and to request your Excellency to formally declare and announce them on this closing day of the Exhibition. Our system of classification and mode of appointing judges approximated closely to that at Philadelphia, with such variations as circumstances required, and with such improvements as experience directed.

One half of the total number of international judges were appointed by the Commission, and the other half by the foreign and colonial commissioners and representatives, according to the distribution and allotment to each. This method of appointment, although more difficult in practice than that usually adopted of forming juries in other exhibitions, was a guarantee to all the participating countries and colonies that the judging would be carried out in the most absolutely impartial manner, and it furthermore gave New South Wales and the mother-country, as represented by this Commission, their just moiety of influence in proportion to the number, value, and extent of their exhibits.

The gentlemen who acted as judges will be presented to your Excellency to-day, and the conscientious, intelligent, and assiduous manner in which they have performed their arduous duties entitles them to the thanks of the community. It should be also stated that their services have been given gratuitously, and that they have given up much valuable time to serve the interests of this great national work, in which such a profound interest has been displayed by all classes of the colonists.

There was much difficulty and delay in obtaining the services of competent gentlemen to act as judges, and the haste inseparable from the circumstances surrounding the initiation and opening of the Exhibition caused the judging not to be commenced as soon as it otherwise probably would have been.

Every effort has, however, been made to surmount these obstacles, and the judges have not allowed any of the exhibits to escape their patient and impartial investigation and scrutiny.

The total number of exhibits examined in the Garden Palace was nearly 14,000, irrespective of those in the auxiliary shows in the Agricultural Hall. The judges were requested to classify them in 1st, 2nd, 3rd, and 4th orders of merit. In some cases they have made some special recommendation of objects or of collective exhibits, and these will require special awards; and in other classes, where no degree of merit has been assigned, a diploma of commendation will mark the appreciation merited by the nature of the report.

The total number of the judges was 254, of whom some 80 were judges at the auxiliary shows of live stock, wool, &c., and shows illustrating the vegetable kingdom; and in this department a large number of exhibits were examined. Nearly 200 judges were engaged in the examination of the many exhibits stored within the Garden Palace.

REPORT OF THE EXECUTIVE COMMISSIONER.

The total number of awards sent in by the judges were—

Special 1st and 1st degree of Merit			2,957
2nd	,,	,,	2,247
3rd	,,	,,	1,371
4th	,,	,,	979
Total			7,554

The reports of the judges, which will form, perhaps, the most instructive and interesting feature of the Exhibition, remain yet to be compiled and published in the usual form of an official record ; and it is proposed to have this volume carefully edited, so that when given to the public it will be of especial value, and not alone perpetuate the lessons which such a great undertaking ought to teach, but will stand as a page in our history to be looked upon with just pride.

It is gratifying to note that the admissions have exceeded the most sanguine expectations, being about 1,022,000, not including this day's returns.

Considering the sparse population of this great colony, the wide area over which the people are dispersed, and the great distance from the other colonies, and from the whole world, the attendance is certainly unprecedented, and is by far the largest proportionately that has ever been recorded at any great International Exhibition held in any part of the world.

The amount received for admissions and concessions does not reach the original estimate of £50,000, the total sum to the 19th instant being about £45,000.

It is calculated that this amount will defray the ordinary working expenses of the Exhibition during its currency, and it is well to point out also that it is a larger sum according to our population than has ever been realized at any similar undertaking. The liberal expenditure made on the fine arts of painting, sculpture, and music, on scientific and ethnological collections, cannot fail to be of great educational value, and has, moreover, superadded the charm of attractions to the vast array of industrial exhibits in the departments of minerals, raw products, manufactures, and machinery.

The continuous and steady attendance of the public all throughout the course of the Exhibition forms the most telling testimony of the manner in which it was appreciated by all classes of visitors, and it is hoped that the rising generation will profit by the facilities afforded by the Government of the colony for visiting the Exhibition.

Your Commissioners may point with just pride to the orderly and intelligent conduct of the visitors, and the cheerful and obliging demeanour of all classes has rendered the task of maintaining order comparatively a light one. During the days of the most crowded attendance everything proceeded in a way that reflected credit on the people of the colony. It is also just to say

that the police arrangements were of an admirable and complete character, and the administration and organization of the force thoroughly and constantly maintained all through the time they have been in charge of the Exhibition.

The gold medal which I have now the honor, on behalf of the Government and the Commissioners, to present to your Excellency, and the accompanying advance proof of the certificate of award, which latter is in itself a highly artistic and finished production, will be found to bear favourable comparison with prizes of a similar character distributed by other countries, either in recognition of services or by way of award of merit.

Her Majesty the Queen and His Royal Highness the Prince of Wales have graciously accepted first proof of the medals; and it cannot but be gratifying to know that our Sovereign, in accepting the medal, has graciously expressed her pleasure at the success of the Exhibition. It is an additional satisfaction that His Royal Highness the Prince of Wales, who acts as President of the Royal Commission for the Exhibition in London, continues to display an active sympathy and interest in the progress of an undertaking with which his name will be gratefully and imperishably associated.

The labours of your Commissioners and the assistance afforded to them by the distinguished persons who have given their sympathy and help would not, however, suffice if it were not for the zealous and substantial co-operation of the exhibitors, to whose labours the substantial and practical success of all Exhibitions must always be mainly due.

The vast and varied contributions of the mother-country and her colonies were, as might have been naturally expected, the greatest in the Exhibition; and it has been the constant desire of the Commission to so act on behalf of the Colony and of the British exhibitors that they should stand on equal terms with those of the foreign participating countries and dependencies, the British colonies in Australasia, and elsewhere.

A special tribute is, nevertheless, due to the French Republic, which was the first foreign nation to enter into participation; to the German Empire, the Austro-Hungarian Empire and Monarchy, to the United States of America, the Kingdom of Belgium, and the Empire of Japan, also to the exhibitors of the Kingdoms of Italy, the Netherlands, and of the Helvetian Confederation, who ably and zealously assisted in maintaining the international character which ought to form a distinctive mark of such an undertaking.

In conclusion, we cannot but express the hope that the results of the Exhibition will prove of deep and lasting service, not alone to this the parent Colony but to the whole of the colonies of the Australasian group.

The name of New South Wales has resounded throughout the civilized world; and by means of the display of her unparalleled resources in minerals, in manufactures, machinery, and the arts and sciences, and in the highly

interesting auxiliary shows of live stock of all kinds, of her great staple of wool, and of her infinite variety of productions, of grains, fruits, and vegetable products, ample proof is given of the great resources which form so noble a heritage.

We have invited all the world to our land, where commerce is free and unfettered—which, for climate, for soil, and for natural wealth of all sort, is not exceeded on the face of the earth, and whose future justifies the highest and most sanguine hopes.

This great undertaking, the successful termination of which we have assembled to celebrate, marks, perhaps, the most important epoch that has occurred in our history. In holding this Exhibition we have entered into a new arena and a race of progress among the nations of the earth, and have placed ourselves in kindly competition with the most ancient States of the old and new world. It remains for us to prove by our energy and patriotism that we shall prove worthy of the exalted destiny which lies before us, and that foremost in the van of great Colonies planted by the Anglo-Saxon race over all the habitable globe will be found our Colony of New South Wales.

I have now the honor to ask your Excellency, on behalf of Her Majesty the Queen, to declare that the Exhibition will be closed to the public at the termination of this day's proceedings.'

His Excellency then read the following reply :—

'Mr. Jennings and Gentlemen,—

I meet you on this occasion with feelings of pride and gratification, not unmingled with some pangs of regret. I am proud, as we all must be proud, of the high public spirit and the just liberality which the Colony of New South Wales has displayed throughout the successive stages of this great undertaking; and I am deeply gratified by the generous response to her invitation which has come from the mother country and the sister Colonies, and from several of the most powerful of the nations of the earth. The interchange of friendly greeting and recognition which has resulted in the noble display of the world's offerings of art and industry in this beautiful building may be regarded as the first event of prime national significance in Australia. And in attending here to-day to take part in closing the Exhibition it is not possible to banish all feeling of regrets—regret that those who in such numbers have derived instruction and pleasure from the examination and study of the collected treasures will be able to gratify their tastes no longer; and still deeper regret that others scattered far and wide through our vast interior have found no opportunity at all to profit by the splendid achievements of art and the wonderful contrivances of mechanical skill which in many instances were brought from the ends of the earth for their teaching and gratification.

But the end of the most illustrious life is the repose of the grave, and we must submit to the dazzling and inspired groups of the Garden Palace becoming a glory of the past. It remains for us all to turn to good account the lessons derivable from what we have seen and heard, and which have been offered for our lasting benefit in so many and such diverse forms of beauty.

In turning to the matter-of-fact business of the occasion, I learn officially from you that the attendance has upon the whole been larger than could reasonably have been expected, and that the orderliness and propriety of conduct on the part of all classes, even when these walls could hardly contain the multitude of visitors, have been in the highest degree creditable to the Colony. Brief as my experience here has been, I have seen enough of the people to know how truly British they are in the love of order and respect for authority which are the distinguishing characteristics of our race. And I think I have seen enough to justify the prophecy that the Australian race of the future will not be wanting in moral nerve, generous impulse, quick discernment of duty, and unshaken fortitude, as well as in the healthful enjoyment of the true pleasures of existence, but that in these noble qualities they will emulate the finest types of the British stock. I was, therefore, fully prepared to recognize the gratifying fact that the people of the Colony have appreciated the privilege of the grander field for the works of human invention and genius which for a season they have had secured to them.

The gentlemen who have so meritoriously given up their time to perform the arduous duty of judges of the competing exhibits are deserving of the warmest thanks of all classes. It is scarcely possible that they can have given satisfaction in all their awards; but honesty of purpose, even though accompanied by some errors of judgment, will, I feel assured, be accepted by generous mind.

To the eminent men who have attended the Exhibition as the representatives of foreign nations, and on the part of the other British Colonies, much is deservedly due, and I cannot express my sense of their high qualifications for the duties imposed upon them in terms equal to their merits. We owe much to the courteous bearing, the discriminating knowledge, the tact and judgment of the Foreign and Colonial Commissioners. Their high qualities of character will live in the grateful recollection of all who have been brought into intercourse with them during their stay in the Colony.

It is my agreeable duty to express, and in doing so I speak in the name of the Colony, our grateful appreciation of the patriotic zeal and untiring devotion of the vice-presidents and members of the Commission in Sydney, in furthering the objects of this great international undertaking. Nor can I omit to express to you, Mr. Jennings, our thanks for the indefatigable exertions and the conscientious manner with which the onerous and difficult duties assigned to you have been carried out. I can only say, gentlemen, that the

valuable services rendered by all will be recorded in the page of history, and will illumine the recollections of the first Great International Exhibition held in the Southern Hemisphere.

While the people of New South Wales and our visitors from the neighbouring colonies have profited by the study of the treasures which have been poured out upon our shores from the hives of industry in Europe, Asia, and America, the representatives of distant countries, we may feel assured, will not fail to report of the marvellous natural wealth of our own land. Our varieties of woods, our grand collection of minerals, our gold, and, more valuable than gold, our coal, and iron, our fine clay and marble, together with the speaking evidences of our manufacturing capabilities, will not pass away unrecorded, but will make our name favourably known where it might have remained unknown for generations if this temple of peace and goodwill had never been erected.

Let not this gathering disperse without carrying into every home in the land some of its lessons. Let those who are engaged in husbandry and in the mechanical arts observe and, as occasion offers, adapt to their pursuits the improved appliances given to us by the discoveries of science. Let the laws of proportion and design be cultivated in our finer manufactures. Let the young aspirant in the higher walks of art cherish in his inmost soul the bright lessons of form and colour on which his eyes have feasted. By these means of assiduous attention and inspired effort a rich fruitage will be garnered from the seed which has been so abundantly sown.

It must be gratifying to the loyal people of New South Wales that Her Gracious Majesty the Queen has taken so lively an interest in this first Australian Exhibition, and in testimony of her deep interest has been pleased to accept copies of the medals to be awarded to the exhibitors.

For myself, I am much gratified in accepting the commemoration medal which you are pleased to present to me. In future years it will remind me of one of the brightest links in my connection with the colony.

In now declaring that after to-day this Exhibition will be closed to the public, I would express a fervent hope that our hearts may be raised in much thankfulness to the Giver of all Good for the protection and innumerable blessings He has vouchsafed to us."

Loud applause followed the termination of His Excellency's address.

The Sydney International Exhibition judges (220 in number) were then formally presented to His Excellency. The Governor then proceeded to declare and distribute the awards of the judges in the various departments of the Exhibition, handing to each representative Commissioner the official list of awards, and to the British and New South Wales exhibitors by their representatives. His Excellency then declared that the Exhibition would be closed

at the conclusion of the day's proceedings. The band played "God Save the Queen," and His Excellency left the building under a salute.

A complimentary banquet was given to Mr. P. A. Jennings, C.M.G., the Executive Commissioner of the International Exhibition, at the Sydney Exchange, on 20th April. There was a large attendance. The chair was occupied by Sir Alfred Stephen, and among those present there were most of the Members of the Government, and several members of both Houses of Parliament, with a large number of our leading citizens. The toast of the evening, "The health of the Executive Commissioner," was enthusiastically received, and appropriately responded to by Mr. Jennings. All the speakers spoke in highly eugolistic terms of the manner in which the Executive Commissioner had carried out his arduous duties. The banquet was in every way a success.'"

The Exhibition was now closed and the courts of the Garden Palace were speedily dismantled. It was agreed on all hands that as a display of the Arts, Industries and Products of the world it had been most successful. Still there were many who asked the question *cui bono?* What substantial good has been effected by the holding of the Exhibition? In what way has it advanced the prosperity of the country? In what manner or form are we likely to receive such benefits as we have a right to expect from the large expenditure on this work? It was no doubt an ambitious undertaking for a young country, with a population scarcely numbering three-quarters of a million of souls, to challenge the observation and criticism of all the older countries in the world. Yet it must be conceded that the verdict of the great majority of the country seemed to be, that it was a substantial gain, and a huge stride in the path of progress, and that the success of the experiment justified what was undoubtedly a bold step. Happily the financial position of the country at the time of the Exhibition, as for some years before it, was exceedingly good; and the cost of the Exhibition was defrayed from the large surplus of the revenue, so that no additional burden was imposed on the tax-payers of the country. And when we compare the total cost with our splendid revenue of some

£6,000,000 a year, it cannot be said to be at all relatively extravagant, or beyond the means of a richly dowered state, such as ours. New South Wales is the parent colony, and the oldest of the Australasian group; but owing to the sudden blaze of prosperity experienced in Victoria by the enormous yield of its gold fields, that Colony and its capital city, Melbourne, had come to be considered in the other countries of the world as representing Australia. The holding of an International Exhibition in Melbourne was one of those enterprising ideas which was no sooner mooted in Victoria than it was immediately acted upon, and it was a fortunate thing for Australia that a spirit of emulation was aroused which strengthened the hands of those who contended that there should be an International Exhibition here, the early struggles of which have been briefly adverted to in the opening paper of this Report. The Sydney Exhibition undoubtedly projected on the attention of the older countries of the world the magnitude and wealth of Australia, and its capabilities for sustaining in comfort untold millions of people. The Melbourne Exhibition, following as it did, maintained and heightened the interest which had thus been aroused, and it may truly be said of these twin Exhibitions, that the one was the complement of the other, and although the forces of the two Colonies acted separately, their combined operations strengthened and enhanced the good effects which have flowed from both undertakings. Sydney has vindicated her position as the old and chief metropolis, and has with grace and dignity, though perhaps with somewhat of a leisurely step, marched into that great place which is her natural position, and where side by side with the other Australian Colonies she will show herself capable of maintaining the honor, the credit, and the glory of Australia. If therefore the *prestige* of the Colony has

been ably sustained by this work, it is surely in itself a satisfactory result. There is no doubt whatever that with the increase of steam communication, not alone with our mother country, but also now with Germany, France, and Belgium, and with the opening up of new channels of trade and a choice of markets, a tangible measure of benefit has already accrued to the trade and consequent prosperity of this country. It is agreed on all hands that there is room here for any number of persons who are willing to found for themselves homes by honest labour, and that the avenues leading to success and prosperity are absolutely open to all, and not barred by those unhappy impediments which prevail in other lands. Whatever differences of opinion there may be as to the best mode to bring about immigration to this country (and on the political aspect of this question there is no desire to trench), persons of all shades of opinion will be found to admit that the knowledge disseminated throughout Europe and America of the wealth of the resources, products, and extent of the Australasian Colonies must produce a profound effect on the minds of those to whom Australasia has been heretofore a sealed book, and will undoubtedly eventually cause a continuous flow of population of a desirable class to our shores.

While thus maintaining our prestige and increasing our trade and population the Exhibition has done good educational service to the masses of the people by placing before them works of art of the highest character, and in this way propagating sound principles of taste and awakening a love for the beautiful. Wonderful and interesting as were the triumphs of manufacturing skill, and the ingenious specimens of the applied sciences which the industrial sections of the exhibition displayed, the quiet and silent teaching of the beautiful works of art there presented to the public eye did no

doubt leave an abiding impression, and sunk deeply into the minds of those who for the first time had an opportunity of enjoying the full measure of delight which the contemplation of works of art of a high order produce. This effect, though perhaps less tangible and not indeed to be measured by any money value at all, ought still to find a due place in estimating the beneficial consequences flowing from the International Exhibition.

Another important and substantial result of the Exhibition has been the establishment of a technological museum, at present housed in the Garden Palace, and formed in great part from gifts and purchases from exhibitors at the late Sydney International Exhibition. This consists of valuable specimens showing the manufactured results of industries of various kinds, explications of mechanical systems and appliances, while art industries are illustrated by excellent and suitable exhibits. There have thus been retained for permanent and profitable inspection many of the leading exhibits which went to form the attractive displays of the Garden Palace.

Seven years hence this colony will have attained its First Century of existence, and when we reflect on what has been achieved we are surely justified in forming the most sanguine expectations for the future. The United States of America at the time of their independence had scarcely more population than Australasia now has, and they have already far outstripped in numbers the mother-country. It is true that our distance from Europe is an obstacle to that free flow of the stream of immigration from the older countries of Europe which has brought about the enormous increase of population in the United States, now exceeding 50,000,000. Such a rapid influx of population may perhaps

scarcely be expected here, but no forecast of the future can predict in too brilliant colours the magnificent development to be attained within the coming century. It may be that the glories of the Garden Palace will be revived to mark our centennial jubilee, and if so it will be assuredly found that the accelerated rate of progress established by the holding of the first great International Exhibition in Australasia has been worthily maintained, and that, under the blessing of Divine Providence, New South Wales will show by her advancement and solid but peaceful progress that she is worthy of the high destiny which she has been called upon to fulfil, and will prove that those traditions of liberty, valour, and order which are our inheritance will ever be maintained inviolate. On that memorable February day in 1788, when Arthur Phillip, the first Captain-General and Governor-in-Chief of the new territory, established a regular form of government, it was surely in a prophetic strain that he expressed his conviction that the State of which he that day laid the foundation, would ere many generations passed away become the "centre of the southern hemisphere—the brightest gem of the southern ocean." That this enthusiastic prevision is being realized in a manner exceeding the most sanguine expectations of the brave band who assisted on that occasion, no one can gainsay, and we may well hope that the colony thus founded in Peace, cradled and nurtured in the Arts of Peace, will in future be able to show with triumph the glorious fruits of that career of Peace which have hitherto fallen to her happy lot, and point with pride to the motto borne from her infancy on her untarnished shield—"*Sic fortis Etruria crevit.*"

P. A. JENNINGS,

Executive Commissioner.

REPORT OF THE SECRETARY.

ORGANIZATION AND MANAGEMENT OF THE EXHIBITION.

THE work of preparing, organizing, and managing the Sydney International Exhibition devolved upon a Commission created by Letters Patent, under the Great Seal of the Colony, issued by the authority of His Excellency the Governor, Sir Hercules Robinson, on the 31st December, 1878; and by the same instrument, Mr. Jennings (now Sir Patrick Alfred Jennings, K.C.M.G.) was appointed Executive Commissioner. Some of the gentlemen first appointed retired without acting, and others were from time to time added. A full list of the Commissioners will be found in its appropriate place; the name of Mr. Edward S. Hill, whose death occurred during the holding of the Exhibition, being left on record, in remembrance of the zealous and useful services he rendered as a member of the Commission, and of six of its Committees, when the first measures were taken for rendering the enterprise successful. Lists also will be found of the London and United States Commissions which were appointed by the Government. The names of those gentlemen are recorded who in London co-operated as a Committee with the Agricultural Society of New South Wales, while it was endeavouring to organize the Exhibition, and who did so much

good service in preparing the way for the success which followed.

The better to insure a successful issue to both the Sydney and Melbourne Exhibitions, a Royal Commission was appointed in London, under the presidency of H.R.H. the Prince of Wales, which consisted of the noblemen and gentlemen whose names appear in due course.

To all the members of the Royal Commission, of the London and United States Commissions, and of the London Committee, as well as to the Foreign and Colonial Representative Commissions, the Commission of the Sydney International Exhibition awarded medals and diplomas in recognition of their services.

The Commissioners held their first meeting on the 7th January, 1879, and on the 16th of the same month Mr. Augustus Morris was appointed by the Government the Secretary to the Commission.

The first act of the Commission was to distribute the work to be done amongst various Committees of its members, with whom, on the suggestion of the Executive Commisioner, a number of gentlemen, outside the Commission, of high qualifications, were associated, and very valuable indeed were the services rendered by these Honorary Members of the Committees. The distribution of the Committees, and the names of the Commissioners and Honorary Members who served on them, are all recorded hereafter.

The Commission met at least once a week during the eight months which preceded the opening of the Exhibition, and

one or more of the Committees were in continual session, the Executive Commissioner being day and night in his office. Information regarding the Exhibition was disseminated throughout the Colony by means of circulars, in which also appeals were made to the patriotism and self-interest of the people. The co-operation of local bodies in the principal centres of population was invited, so that every industry in all parts of the country might be stimulated to the production of articles suitable for exhibition, and every effort was made to secure a full representation of the products of the Colony. The entire newspaper press of the Colony, when once the project of an International Exhibition had been finally determined upon, united in advocating its claims, and very much of its success was due to this most potent factor.

Auxiliary organizations were formed in the following districts :—Albury, Armidale, Bathurst, Bega, Bombala, Clarence River, Gosford, Goulburn, The Hawkesbury, Illawarra, Inverell, Kiama, Maitland, Mudgee, Parramatta, Spring Hill, Tamworth, Ulladulla, and Yass.

The Government Printer, and all in the establishment under his control, exerted themselves to the utmost to get out rapidly the thousands of circulars sent forth by the Committees. The Railway Department and the local Steamboat Navigation Companies carried, free of cost, all exhibits from the country districts.

The time given for collecting the objects for exhibition was so limited (barely seven months) that only by the hearty and efficient co-operation, and incessant labours of the Executive Commissioner and the Commission's Committees, could those

results which have shed so much lustre on the Colony have been attained.

The principal events and matters connected with the Exhibition are recorded in the Report of the Executive Commissioner, and this Report will therefore only be supplemental to his.

THE SYSTEM OF CLASSIFICATION.

It being necessary to issue without a moment's delay a system of classification, the Commission determine to adopt that of Philadelphia as far as practicable, and the full list and synopsis of the system which precede the reports of the Judges will show how closely the original was adhered to.

This classification, with a Programme and Regulations, was extensively circulated not only in the Australasian Colonies, but throughout the greater part of the world.

RECEPTION OF EXHIBITS.

The Garden Palace, in which alone were received exhibits subject to Customs duties, was declared a Bonded Store under the supervision of officers appointed by the Collector of Customs, and the greatest consideration was shown to those exhibitors whose goods came under their cognizance, these goods being almost exclusively confined to wines, spirits, and beers.

Messrs. Ford, Adams, & Co., the Custom-house agents to the Commission, facilitated by all means in their power

the passing of the entries and the landing of the goods, and that at the least expense to the exhibitors, and the foreign and colonial Commissions.

Messrs. John Woods & Co. conveyed the exhibits to the Exhibition at specially reduced charges, and saw that every article was delivered there in safety.

ADMISSIONS.

The Department of Admissions was under the superintendance of Mr. R. Espinasse, who conducted his duties with the greatest zeal, faithfulness, and anxiety for the interests of the Commission. There were three principal entrance gates, of which one was in Macquarie-street, one near St. Mary's Cathedral, and the third close to the Botanical Gardens. The gates were provided with self-registering turnstiles, and the admissions could readily be ascertained at any time. Sufficient exit gates were also provided which allowed visitors to pass out easily, but were so arranged as effectually to exclude their return, and to render unnecessary any supervision. Complimentary tickets were issued to the Ministers, the Members of the Parliaments, not only of New South Wales, but of all the Australasian Colonies, to the Commissioners and Honorary Members of Committees, to the Foreign and Colonial Commissioners, and to such other officials and persons as were deemed entitled to the honour. The members of the Press were provided with passes, issued by the Executive Commissioner. The passes issued to exhibitors and their attendants, and to employés connected with the

Commissions of the different Countries and Colonies, contained in most cases the photographs of the respective holders.

The price of admission to the Exhibition, which was opened on the 17th September, was varied. Holders of season tickets, for which they paid £3 3s., had access at all hours when the Exhibition was open. To each season ticket the photograph of the holder was attached. On the opening day the charge was 5s., and for nine days after the opening adults paid 2s. 6d. and children 1s. 3d., and these rates of payments were also in force for some time during two days in the week; but after the 3rd of November a uniform charge of one shilling for adults and sixpence for children prevailed to the close of the Exhibition, but no money was taken at the gates, all admission being by tickets.

A special arrangement was made whereby the pupils of the Public Schools, with their teachers, and the inmates of charitable and benovolent institutions were on reasonable notice admitted free.

The officers and sailors of H.M. ships of war, and those of the foreign ships of war, which visited Sydney during the holding of the Exhibition, were on stated occasions admitted without payment; as also were the members of the Permanent Force. The general hours of admission were, during the long days, from 9 a.m. to 6 p.m., and towards the close of the Exhibition from 10 a.m. to 5 p.m.; exhibitors and their employés being admitted earlier.

The following abstract will show the number of admissions under all heads for each month, as also the total attendance, of which nearly 24 per centum were free:—

SYDNEY INTERNATIONAL EXHIBITION.

Classified Return of Monthly Admissions.

Date.	Number of Days.	Holders of Season Tickets.	Adults.	Children.	Total Payers.	Exhibitors and Attendants.	Workmen.	Miscellaneous.	Total Free.	Monthly Totals.
1879.										
September	12	7,742	40,018	5,824	53,584	19,232	2,786	744	22,762	76,346
October	27	14,866	89,957	14,889	119,712	41,067	6,721	365	48,153	167,865
November	25	10,663	101,073	17,084	128,820	21,109	10,631	370	32,110	160,930
December	26	9,938	100,549	18,115	128,602	21,403	12,255	2,155	35,813	164,415
1880.										
January	27	10,407	117,800	22,481	150,688	21,739	12,420	1,177	35,336	186,024
February	24	8,150	65,332	10,373	83,855	15,964	9,970	1,709	27,643	111,498
March	27	9,074	92,614	17,273	118,961	17,370	10,933	1,763	30,066	149,027
April	17	5,438	54,560	6,260	66,258	10,495	5,442	19,236	35,173	101,431
TOTAL.....	185	76,278	661,903	112,299	850,480	168,459	71,158	27,519	267,056	.....
									Grand Total of Admissions	**1,117,536**

The money received from the sale of tickets of admission amounted to £40,432 9s. 6d., being the net balance after deducting commissions on sales.

The following are the numbers of the attendances at all the International Exhibitions which have been held; and, relatively to population and especially in regard to the area over which it is scattered, and to the facilities for locomotion, the attendance at the Sydney Exhibition comes out best:—

COMPARATIVE TABLE OF ATTENDANCE AT ALL INTERNATIONAL EXHIBITIONS.

Exhibition.	Year.	Total Attendance.
London	1851	6,170,000
Paris	1855	4,533,464
London	1862	6,211,103
Paris	1867	9,300,000
Vienna	1873	7,254,867
Philadelphia	1876	10,164,489
Paris	1878	16,032,725
Sydney	1879	1,117,536
Melbourne	1880	1,309,496

On the 17th September, the Opening day, the attendance at the Exhibition was 19,853, of which 17,485 paid for admission; on the 10th November, 26,569; on 26th December, 24,127; on 26th January, 27,500, of which number 25,728 paid for admission; on the 20th April, the Closing day, 18,631.

INSTALLATION.

DEPARTMENTS I, II, III, AND PART OF IV, OF THE CLASSIFICATION.

The Garden Palace, which embraced Departments I, II, III, and portion of IV, was at first under the superintendence of Mr. H. M. Wright, who received all the exhibits, and with his assistants distributed them to the various Courts. The general allotment of space to the Countries and Colonies which took part in the Exhibition was made by the Executive Commissioner, and he, with the assistance of Mr. Edward

Combes, C.M.G., Mr. John Davies, C.M.G., and the Hon. Patrick Higgins, three of the Commissioners, conducted the installation in detail of the exhibitors from Great Britain and New South Wales. The installation in detail of the foreign and colonial exhibitors was performed by their respective Commissioners. All the work was pushed forward with amazing energy, but it was impossible to have all the Foreign Courts ready by the 17th September, the opening day, on account of the late arrival of the exhibits from Europe and America, which had, however, been got together, and shipped for Sydney in a wonderfully short time on the briefest notice.

ART.

Department IV of the Classification.

The Fine Arts Gallery and its arrangements have been fully described in the Report of Mr. Edward Combes, the Chairman of the Advisory Committee on Art, and the value of the labours of that Committee are recognized in the Report of the Executive Commissioner. In the Art Gallery were placed the best and greater portion of the Works of Art, although the display in the Garden Palace of such Art objects as could not find room in the gallery was in many instances highly creditable.

MACHINERY.

Department V and part of VI of the classification.

The Machinery Halls, which occupied 110,000 square feet of space, were under the superintendence of Mr. J. N. Oxley. Besides the Machinery Halls, there was a building of fully 5,000 square feet erected by Messrs. Drysdale and Roberts, and filled with many kinds of machines, and a considerable space in the open air was occupied by windmills, rock-drills, hydraulic and dredging machines, and other important exhibits.

The general and detailed installation of the exhibitors from all Countries in Department V, and of the agricultural machinery and implements of Department VI, was committed by the Executive Commissioner to Mr. John Davies, one of the Commissioners, and Chairman of the Committee on Machinery and Implements. This gentleman, with the efficient aid and experience of Mr. Oxley, overcame every difficulty, and the exhibitors were all pleased with the positions allotted to them.

The reception of the heavy machinery in the halls set apart for it, and of the heavy cases containing the ironmongery shown in the basement of the Garden Palace, was rendered an easy matter by the construction of a tramway from the gate, south of the Agricultural Hall. This tramway passed across the lawn, preventing it from injury, through the covered way between the Machinery Halls, to the southern entrance of the basement of the Garden Palace.

The large and heavy exhibits referred to were lifted off the drays, placed on trucks, and again raised from the trucks and deposited right and left within their appropriate buildings by means of the combined locomotive and crane of Messrs. Dubs & Company, of Glasgow, who placed their exhibit, with engineer and attendant, at the disposal of the Commission, free of cost.

Steam power was furnished, free of cost, to those exhibitors who wished to display their machinery in motion. Including shafting, hire of engines, coal, and attendance, the expense to the Commission under the head of motive power exceeded £5,000. Mr. Oxley, the superintendent of the Machinery Department, after the close of the Exhibition, delivered to the exhibitors their goods in the machinery buildings, without the loss of a single article.

DEPARTMENT VI–VII OF THE CLASSIFICATION.

The Agricultural Hall and Live Stock Buildings.

In the Agricultural Hall, occupying 17,000 square feet, was held a succession of special shows, Agricultural, Pastoral, and Horticultural, and adjoining to it were erected extensive and convenient sheds for the Horse, Cattle, Dog and Poultry Shows. These last were superintended in a manner highly satisfactory to the Commission and the exhibitors, by Mr. Thomas Dawson, who afterwards had the superintendence of the Garden Palace, and are fully referred to in the General Report on the Department of Agriculture. The Sheep, Wool, Grain, and Horticultural shows, which are treated of in their appropriate place in the Judges' Reports, were under the careful and competent management of the late Mr. Gideon S. Lang.

The members of the Committees on Live Stock, Wool, and Vegetable Products, aided the Executive Commissioner and the officers in charge of the shows, and rendered them successful in every instance.

EMPTY CASE SHED.

The Commission stored the empty cases of exhibitors from all countries, free of cost, in the shed and enclosures erected within the Outer Domain, near to Cowper's wharf.

THE RESTAURANTS.

Exclusive of the extensive areas within the Garden Palace set apart as places where visitors could obtain refreshments, there were ten restaurants and places of refreshment in different parts of the grounds.

EXTENT OF SPACE OCCUPIED.

Independently of the Garden Palace and the other buildings, the positions of which are laid down in the plan attached to the Report of the Executive Commissioner, there were the extensive Sheds for the Live Stock Shows, the Maori House, and the Empty-case Shed. The aggregate superficial area of the whole of the buildings, including the restaurants, connected with the Sydney International Exhibition was 650,000 square feet, or rather more than 15 acres.

THE EXHIBITS OF THE DEPARTMENT OF MINES.

The magnificent exhibition of the Minerals and Coal of the Colony, including the Obelisk outside the Garden Palace, which was a charge on the funds appropriated to the Sydney Exhibition, was originated in the Committee on Mining and Metallurgy, and was organized by Mr. Harrie Wood, the Under Secretary to the Department of Mines, Mr. C. S. Wilkinson, the Government Geologist, and Mr. J. Mackenzie, the Inspector of Coal Mines, all honorary members of the Committee. The arrangement of the mineral exhibits and the care of them were committed to Mr. Henry Wilkinson, of the Department of Mines, from whom visitors at all times received the fullest information.

The General Report of the Judges in the Mineralogical Classes, which appears in its proper place, will be found a highly useful and interesting paper, and conspicuous for the ability and scientific knowledge displayed in its composition.

THE WOODS OF THE COLONY.

The extensive collection of the Woods of the Colony, which with other similar objects have been so admirably reported

on by the Judges, was for the most part gathered together by Mr. Charles Moore, the Director of the Botanical Gardens, under authority from the Minister of Mines, but at the expense of the funds voted for the Exhibition.

AWARDS.

The Commission having no time at its disposal to devise, had it been desirable, a new system of Awards, adopted, as explained in the Report of the Executive Commissioner, that of Philadelphia, so far as the pledges made by the Agricultural Society, with which the Exhibition originated, did not interfere with it. But for these engagements the Commission would doubtless have adhered to awards of a uniform medal, to be accompanied in each case by a report and diploma stating the nature of the merit for which the award was made. When, however, it became apparent that the whole of the gold and silver medals promised by the Agricultural Society would necessarily go to exhibitors from New South Wales and the other Colonies—as they alone could exhibit, in any great degree, in the Agricultural and Live Stock sections to which these medals were confined—the Commission accepted the recommendation of the Committee on Judging and Awards, and conferred a few gold and silver medals on certain British and Foreign exhibitors whose displays were somewhat representative or national. In thus conferring gold or silver medals, the Commission did not intend to detract from the value of the diploma, which alone declares the degree of merit to which the recipient of an award is entitled.

An exhibitor only received a single medal, notwithstanding the numerous diplomas he may have obtained.

REPORT OF THE SECRETARY.

The Committee of Judging and Awards, presided over by the Executive Commissioner, took the whole charge of this important subject, and dealt with the appointment of the Judges and with their Reports, subject to confirmation by the Commission.

The difficulty in securing a sufficient number of competent Judges out of the experts to be found in the Colonies, and the desire to be impartial in the selection of those to be appointed by the Commission, joined with the fact that all the Foreign Courts were not ready for inspection for nearly two months after the opening of the Exhibition, caused considerable delay in the organization of the Judges. Fortunately the Foreign and Colonial Commissioners, becoming satisfied that the Sydney Commission had no other aim than to obtain impartial and suitable reports on the objects exhibited, co-operated in the most cordial manner with the Committee on Judging and Awards in nominating the Judges, and the happy appointment of Mr. F. A. Franklin, C.E., as the Officer in charge of the Judging, completed the organization, which in its results gave almost universal satisfaction.

The Commission after very careful consideration of the subject, and to give greater importance to the Diplomas, instructed the Judges, through the Committee on Judging and Awards, to make their recommendations under the heads of First, Second, Third, and Fourth degrees of Merit, to which, on the principle of *primus inter pares*, the Judges added "First degree of Merit Special," which innovation was accepted by the Commission, and later on the nomenclature of the awards was changed to "First Degree of Merit Special," "First degree of Merit," "Highly Commended," "Commended," "Honourable Mention"; and this arrangement was

received with great approval by the Commissioners of the different Countries and Colonies, and by the exhibitors.

One of the effects not intended of this system was that the Judges, instead of making in all cases discriminating reports on the objects submitted to their inspection, contented themselves in many instances with merely recommending the Commission to decree this or that degree of merit. The strict fairness and impartiality of the Judges have, nevertheless, caused great confidence to be placed on their decisions.

That the Commission might give a Medal and Diploma worthy, from their design and execution, of the first International Exhibition to be held in the Southern Hemisphere, the Committee on Art caused advertisements to appear in the leading newspapers of Australia, inviting designs. There was considerable competition, and Mr. Samuel Begg's design for the obverse of the medal was accepted, although it was subsequently somewhat altered by Messrs. J. S. & A. B. Wyon, who prepared the dies.

The elegant figure of New South Wales, standing as becomes her youthfulness, has been much admired, as also the beautiful wreath of Australian flowers on the reverse of the medal, designed by Mr. James W. Sayers. The appropriate motto, "*Orta recens quam pura nites*," was composed by Dr. Badham for the occasion, and will, it may be hoped, be adopted for the Colony in place of "*Sic fortis Etruria crevit*," which was spoken of a prosperity at its highest, but long dead and passed away when the poet Virgil wrote. At the first competition none of the designs for the Diploma were accepted, and fresh ones were called for. Still none of the new designs were satisfactory, but it was determined to accept that of Mr. Harry C. Kent, in which the ideas were good, on the

understanding that the Committee could make any alterations it pleased. Many emendations were suggested, and the task of re-casting the design was given to Miss Annette Kent, who did her work well.

The arrangements for preparing the dies having been confided to the London Commission, it was thought right to entrust the engraving of the Diploma to the discretion of the Commissioners who represented this Colony in America—Messrs. R. W. Cameron and H. W. Peabody. These gentlemen placed the design in the hands of the American Bank Note Company of New York, which had engraved the much-admired Centennial Diploma. The work of engraving the Diploma was completed in six months by keeping six highly-skilled experts on it, who never lost an hour. The design and the execution of the Diploma have excited universal approval, and the Company showed its liberality by only charging the actual cost, which was several hundreds of pounds less than was paid for the Philadelphia Certificate of Award.

The principal figure represents New South Wales, with Britannia sitting by her side, and holding her hand as emblematic of the affectionate connection between the Colonies and the Mother Country. The six beautiful and youthful figures represent the six Australasian Colonies which took part in the Exhibition. Europe, Asia, Africa, and America appear bearing gifts. The Southern Cross is overhead, to indicate the hemisphere in which all nations have met. The Imperial Crown, with rays of soft light streaming from it, is an evidence of the gentle sway under which the Colonies are governed.

The remainder of the design requires no detailed description, but the whole picture is Australian in its features.

MONEY COST OF THE EXHIBITION.

The money cost of the great undertaking, which the Government so patriotically proposed and the Parliament so liberally voted, and which the people so unanimously acquiesed in, is but a small matter in comparison with the advantages that have flowed and will continue to flow from the holding of the first Australian International Exhibition in Sydney, but the subjoined statement of accounts, prepared on the debtor side by the Auditor General, will show that the unrepresented expenditure is not great—not greater than some individual tradesmen in Great Britain and America spend annually in advertising their wares.

No other International Exhibition ever held, except that of 1851, came out relatively so financially well as the Sydney Exhibition.

The Government, complying with the wish of the Colony awaiting her first Centennial so near at hand, has determined to let the Garden Palace stand, and remain a centre of high educational influence and practical usefulness. Australia has pleaded for her Palace of Art, and not in vain :

> "Yet pull not down my palace towers, that are
> So lightly, beautifully built:
> Perchance I may return with others there."

The Art Gallery, which has supplied a want long felt, could not now be erected for the sum at which it is estimated, nor could the Agricultural Hall be again put up for the money set against it, and its use will often be in requisition.

The value at which the Garden Palace with its grounds is estimated will be found to be low, in comparison with its intrinsic worth in view of the practical uses to which it has been put.

STATEMENT showing Total Cost of the SYDNEY INTERNATIONAL EXHIBITION, 1879, and Receipts from Admissions, Concessions, Sale of Machinery Hall, Buildings, Materials, &c., and taking credit for Approximated Value of Buildings and Materials now in use by the Government.

Dr. **Cr.**

Expenditure.	£ s. d.	*Receipts.*	£ s. d.
To cost of Garden Palace	201,943 12 8	By Sale of Tickets, Concessions, and Miscellaneous Receipts	45,228 18 5
,, ,, ,, Grounds	3,987 5 7	,, Sale of Machinery Hall and Materials	2,504 10 5
,, ,, ,, Machinery Hall	19,607 11 0	,, ,, ,, Galvanized Iron, &c.	1,988 12 5
,, ,, ,, Art Gallery	6,022 16 10	,, ,, ,, Fencing	20 0 0
,, ,, ,, Agricultural Hall and other buildings	6,469 14 0		49,742 1 3
,, ,, ,, Photographic Gallery	676 13 2		
,, ,, ,, Fencing	68 5 0		
,, ,, incurred by Mining Department	1,597 8 11	,, Approximate Value of Buildings, Material, &c., now in use by the Government :—	
,, ,, ,, ,, Railway Department	449 11 1	The Garden Palace and Grounds, as estimated by the Colonial Architect	150,000 0 0
,, ,, of Empty Case Shed	580 0 0	The Art Gallery 6,022 16 10	
,, total amount paid to Commission	52,346 3 10	*Less* 10 per cent. 602 5 9	
,, Unspecified and Miscellaneous	20,237 14 10		5,420 11 1
		Photographic Gallery 676 13 2	
		Furniture therein 111 5 5	
		787 18 7	
		Less 10 per cent. 78 16 0	
			709 2 7
		Agricultural Hall	3,000 0 0
		Mining Department	1,000 0 0
		Office Fixtures, Safes, Chairs, &c.	500 0 0
		Difference	103,615 2 0
£	313,986 16 11	£	313,986 16 11

RECAPITULATION.

		£ s. d.
Dr. Total cost of Buildings and Expenses of Exhibition		**313,986 16 11**
Cr. Receipts by Sales	**49 742 1 3**	
Approximated Value of Buildings	**160,629 13 8**	
		210,371 14 11
Difference		**£ 103,615 2 0**

None of the funds intrusted to the Commission were spent on luxuries, or in any way for their entertainment, and the Executive Commissioner performed his duties without remuneration directly or indirectly. Every account was most closely scrutinized by the Finance Committee, and no cheque was signed until the members of it were satisfied that the vouchers were properly prepared. The Chairman, the Hon. George Thornton, who attended every meeting, initialed all accounts which were approved.

The Commission in the United States conducted the business intrusted to it without charging for any expenses. Mr. R. W. Cameron, one of the Commissioners, carried on all the correspondence with the Sydney Commission, paid in advance for engraving the Diploma and printing 8,000 copies, and incurred many expenses but has never made the slightest claim against the Commission.

OFFICIAL RECORD.

In editing the Reports of the Judges, every document in connection with their proceedings has been consulted and the utmost care has been used to prevent errors. The words of the Judges have been adhered to as closely as possible, and only departed from where it became necessary to make their intention clear, or to avoid the appearance of advertising any exhibitor's goods. A few "corrigenda" will be found, but several of them will be seen to be of misprints.

It has not been possible to hasten the work more rapidly than has been done, because the greater part could only be performed by the Secretary and Chief Clerk, but under any circumstances the Commissioners cannot fairly be charged with delay in bringing their official existence to a close.

Fortunately a comparison can be made between the time occupied and the work done by this Commission and that of the Centennial, as the records of the latter are to hand.

REPORT OF THE SECRETARY.

The Centennial Commission took three years to prepare for the Philadelphia Exhibition, and two years and two months to wind up matters after the closing. A large staff was maintained to finish the work and to issue the awards.

The Department of Awards alone cost £21,000, independently of £40,000 paid to the Judges. This expense of £21,000 was incurred for the salaries of the staff required to assist the Judges, and to prepare their reports for publication, and for the cost of the Diplomas and Medals and all matters connected with their issue. The Diplomas and Medals issued represented 13,104 Awards, and it must be remembered that all the Medals were of bronze. It took over two years to complete the work of issuing alone.

The Sydney Commission has issued to exhibitors 7,554 Awards, and the cost of all matters, exactly similar in character to those for which the Centennial Commission paid £21,000, has not exceeded £7,000, or less than twenty shillings for every Award, the rate at Philadelphia being thirty shillings each.

No doubt this Commission will have finished its work in sixteen or seventeen months after the closing of the Exhibition, for its staff has not been idle. If the comparison made was more exact, and credit was taken for work done since the closing of the Exhibition, outside that connected with the Awards but charged to the £7,000, the economical aspect would relatively be much more favourable to this Commission.

The whole of the Certificates of Awards for the exhibitors from all countries, except New South Wales, which was served a little later, and nearly all the Complimentary Diplomas were issued before the opening of the Melbourne Exhibition, or within five months after the closing of the Sydney Exhibition. All their medals, gold, silver, and bronze were received at the same time with the diplomas by

the Australasian Colonies, Fiji, New Caledonia, India, Ceylon, the Straits Settlement, Italy, Japan, Canada, and California. The diplomas for Great Britain were received in London in October, 1880, and those for France, Germany. Austria, Belgium, the Netherlands, and the United States reached their destinations even earlier. The gold and silver medals for the countries just named were struck in the Colony and forwarded with the diplomas; and in the hope of avoiding any risk of delay from the fact that the Branch of the Royal Mint in Sydney had been supplied with only one set of dies, it was determined to have the bronze medals for their exhibitors struck in London from fresh dies.

The quickness with which the medals struck in the Colony were issued arose from an arrangement made with the Foreign and Colonial Commissioners, who represented their countries at the Exhibition, by which it was agreed that the names of the recipients should not be inscribed on them. This being a matter which the Commissioners preferred should be done by their respective Governments, or by the exhibitors themselves, rather than suffer the delay which the inscribing of the medals always occasions in the distribution of the awards.

The London Commission took a different view, and a long delay occurred in the issue of the bronze medals to the British and Foreign exhibitors. The London Commission was fully entitled to deal in this matter with the British exhibitors as it thought best, but it would have been better not to have disturbed the arrangements made with the Foreign Commissioners.

It is, however, understood that during May last all the medals struck in London have been distributed.

It is due to the Deputy Master of the Mint that the zeal and courtesy with which he has aided the Commission, in its

desire to supply the exhibitors with their medals at the earliest date possible, should be recognised; and his officers deserve every praise for the admirable manner in which they have done their work.

Much of the effective appearance of the diplomas as issued is due to the taste and care of the Government Printer and his officers. All printing has been done most beautifully, and the work was forwarded in every way. So too has every assistance been given in the preparation of the Official Record.

Public Banquet to the Foreign and Colonial Commissioners, Town Hall, 12th February, 1880.

During the holding of the Exhibition the Citizens of Sydney tendered a banquet to the foreign and colonial Commissioners who had done so much to insure the success of the Exhibition.

The Mayor, Mr. Robert Fowler, presided, and the banquet was attended by all the most influential and distinguished citizens. The guests in their addresses expressed themselves in appreciative terms of thankfulness for the hospitalities which had been everywhere extended to them. They also were pleased to acknowledge the aid and support at all times given to them by the Commission and its officers, and they said they should carry away only pleasant recollections of the Exhibition and the Colony.

Public Banquet to the Executive Commissioner. Sydney Exchange, 20th April, 1880.

A complimentary banquet was given to the Executive Commissioner by the leading citizens of Sydney on the evening of the day on which the Sydney Exhibition was closed. Sir Alfred Stephen, C.B., K.C.M.G., was in the chair, and the dinner was attended by all the Foreign and Colonial

Commissioners who had not taken their departure, by the whole of the Commissioners of the Sydney International Exhibition, and by a numerous company.

LUNCHEON TO SIR HERCULES ROBINSON, G.C.M.G., FROM THE COMMISSIONERS OF THE SYDNEY INTERNATIONAL EXHIBITION, GARDEN PALACE, 14TH SEPTEMBER, 1880.

The Commissioners that they might recognize the efforts of Sir Hercules Robinson in promoting the success of the late Sydney International Exhibition, resolved to invite him to meet them at the Garden Palace, long emptied, however, of its attractive displays, and, after inspecting the building, to take luncheon with them. The Commission would have preferred to have shown their appreciation of His Excellency's valuable services by a more public entertainment, but his arrangements during his brief visit to Sydney *en route* for England would not permit of it.

His Excellency Lord Augustus Loftus and suite, and the Members of the Ministry were invited to be present.

Sir Hercules and Lady Robinson with the members of their family were met by the Commissioners and escorted over the Garden Palace, and at the refection they were received by a distinguished company of ladies and gentlemen.

Sir Alfred Stephen, C.B., K.C.M.G., the Lieutenant-Governor, and one of the Vice-Presidents of the Commission, presided.

Before concluding I desire to express my personal thanks to the clerical staff under my immediate supervision, and to say that every call on their services, which for several months previously to the opening of the Exhibition had to be given from early morning to past midnight, was most cheerfully responded to. So highly were their services

appreciated that, on the recommendation of the Executive Commissioner and the Secretary, they, with the heads of the departments under the direction of the Executive Commissioner, had the honor of having given to them the Medal and Diploma of the Commission. The names of these gentlemen are duly recorded amongst the list of those on whom such distinctions were conferred.

But it is to Mr. Alexander Cumming, the Chief Clerk of the Commission, who was appointed in January, 1879, that I owe the greatest obligations in regard to the help he has given me. This gentleman, except on a short leave to visit the Melbourne Exhibition, has not been absent from his duties for an hour. No long hours of work have discouraged him—nothing that had to be done has been neglected, but has been performed in the office or at home. He has given the greatest assistance in editing the Reports of the Judges, and he has wholly compiled the exhaustive Index to the Official Record.

REFERENCE TO APPENDIX.

Appended to this Report will appear the names of the Commissioners of the Sydney International Exhibition, and of those who in cognate organizations co-operated with it. Exhibits will also be found as follows:—

1. Tables of the Allotment of the Diplomas and Medals.
2. The Synopsis and System of Classification of the Objects of Exhibition.
3. The Names of the Judges.
4. Analysis of Awards to Countries and Colonies.
5. Journal of Proceedings of Final Session of Commission.

AUGUSTUS MORRIS,
Secretary.

COMMISSION AND ITS COMMITTEES.

THE COMMISSION OF THE SYDNEY INTERNATIONAL EXHIBITION.

Offices: 123, Macquarie-street, Sydney.

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His Excellency The Right Honourable Lord Augustus W. F. S. Loftus, P.C., G.C.B.

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The Honourable Sir James Martin, Knight, Chief Justice.
The Honourable Sir Alfred Stephen, C.B., K.C.M.G., M.L.C., Lieutenant-Governor.
The Honourable Sir John Hay, K.C.M.G., President of the Legislative Council.
The Honourable Sir George Wigram Allen, Knight, Speaker of the Legislative Assembly.

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The President, Vice-Presidents, and the Executive Commissioner are, ex officio, Members of all Committees.

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W. A. Brodribb, Esq., F.R.G.S., M.P.	Hon. E. Flood, M.L.C.

Hon. Member—J. Abbott, Esq.

COMMISSION AND ITS COMMITTEES.

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Hon. Sir J. George L. Innes, M.L.C.
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Hon. W. H. Suttor, M.L.C.
Hon. S. Samuel, C.M.G., M.L.C.
Hon. E. Flood, M.L.C.
Hon. W. R. Piddington, M.L.C.
E. Webb, Esq., M.P.
E. Combes, Esq., C.M.G., M.P.
Hon. P. Higgins, M.L.C.
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Hon. Member—J. N. Oxley, Esq.

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Hon. P. G. King, M.L.C.
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S. H. Terry, Esq., M.P.

Hon. Members—Alexander Bruce, Esq. J. N. Oxley, Esq.

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Hon. Professor Smith, M.D., LL.D., C.M.G., M.L.C., Chairman.

Hon. W. Macleay, M.L.C.
Dr. Garran.
John Davies, Esq., C.M.G., M.P.
Hon. P. G. King, M.L.C.
E. Combes, Esq., C.M.G., M.P.
Hon. Sir J. George L. Innes, M.L.C.
J. Alger, Esq.
H. Halloran, Esq., C.M.G.

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E. C. Cracknell, Esq.
W. J. Stephens, Esq., M.A.
H. Burton Bradley, Esq.
W. Wilkins, Esq.
Dr. A. Roberts.

P. F. Adams, Esq.

Ethnological Sub-Committee.

Dr. Roberts. Dr. Hector, F.R.S., C.M.G. W. J. Stephens, Esq., M.A.
Professor Liversidge. Professor Reuleaux, P.C.

BRITISH ROYAL COMMISSION.

No. 14.—CATALOGUE AND PRINTING.

Hon. George Thornton, M.L.C., Chairman.

W. Davies, Esq., M.P.	Hon. Wm. Macleay, M.L.C.
J. Merriman, Esq., M.P.	Edward S. Hill, Esq.
R. Burdett Smith, Esq., M.P.	J. Alger, Esq.

Honorary Member—Thomas Richards, Esq.

No. 15.—CEREMONIAL COMMITTEE.

The President, the Vice-Presidents, the Executive Commissioner, and the Mayor.

No. 16.—JUDGING AND AWARDS.*

The Executive Commissioner, Chairman.

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John Davies, Esq., C.M.G., M.P.	E. Combes, Esq., C.M.G., M.P.
Hon. P. Higgins, M.L.C.	Dr. Garran.

Augustus Morris, Esq.

No. 17.—COMMITTEE to watch over the Interests of British Exhibitors.

The Executive Commissioner.

John Davies, Esq., C.M.G., M.P.	E. Combes, Esq., C.M.G., M.P.

COMMISSIONERS FOR THE UNITED STATES OF AMERICA.

Roderick W. Cameron, Esq., New York.
Henry W. Peabody, Esq., Boston.

BRITISH ROYAL COMMISSION.

(Gazetted April 4th, 1879.)

Offices: 109, Victoria-street, Westminster, London.

His Royal Highness The Prince of Wales, K.G., President.
The Duke of Richmond and Gordon, K.G., Lord President of the Council.
The Duke of Manchester, K.P.
The Marquis of Salisbury, K.G., Secretary of State for Foreign Affairs.
The Earl of Carnarvon.
The Earl Cadogan, Under Secretary of State for the Colonies.
The Earl of Belmore, K.C.M.G.
The Earl Granville, K.G.
The Earl of Kimberley.
The Right Honourable Sir Michael Hicks-Beach, Bart., M.P., Secretary of State for the Colonies.
The Right Honourable Hugh C. E. Childers, M.P.
Sir Daniel Cooper, Bart. K.C.M.G.
Sir John Rose, Bart., G.C.M.G.
Sir Joseph Dalton Hooker, K.C.S.I., C.B.
Sir Frederick Leighton, President of the Royal Academy.
Professor Owen, C.B., F.R.S.
Samuel Morley, Esq., M.P.
Warington W. Smyth, Esq., F.R.S.

T. R. Wright, Esq., Secretary.

* This Committee was, by resolution of meeting of Commission held 13th February, constituted a Committee on Appeals.

LONDON COMMISSION AND LONDON COMMITTEE.

LONDON COMMISSION.

(Gazetted at Sydney, January 24th, 1879.)

Offices: 5, Westminster Chambers, Victoria-street, Westminster, London.

PRESIDENT.

The Right Honourable The Earl of Belmore, K.C.M.G.

VICE-PRESIDENT.

Sir Daniel Cooper, Bart., K.C.M.G.

MEMBERS.

William Forster, Esq., Agent General for New South Wales.
The Hon. John Frazer, M.L.C.
Edward Knox, Esq.
The Right Hon. Robert Lowe, M.P. (now Lord Sherbrooke.)
Edward Abraham Levy, Esq.
Jacob Levi Montefiore, Esq.
William Anderson Ogg, Esq.
Sir Henry Watson Parker, K.C.M.G.
Peter Nicoll Russell, Esq.
Sir Francis Turville, K.C.M.G.
Alexander M'Arthur, Esq., M.P.

Fine Art: C. Deschamps, Esq.

Francis Fladgate, Esq., Secretary.

LONDON COMMITTEE.

(Constituted September 26th, 1878.)

Sir Daniel Cooper, Bart. (Chairman).

Sir Philip Cunliffe Owen, K.C.M.G., C.B.
Sir John B. Darvall, K.C.M.G.
A. M'Arthur, Esq., M.P.
A. W. Young, Esq., M.P.
Edward Combes, Esq., C.M.G.
Rear Admiral Stirling.
R. W. Cameron, Esq.
John Carfrae, Esq.
N. Chevalier, Esq.
Hyde Clarke, Esq., D.C.L.
John Frazer, Esq., M.L.C.
Robert Gray, Esq.
Edmund Johnson, Esq.
Edward Knox, Esq.
Donald Larnach, Esq.
Timothy Lark, Esq.
F. Lassetter, Esq.
Edward A. Levy, Esq.
J. L. Montefiore, Esq.
William Mort, Esq.
W. A. Ogg, Esq.
Julian E. Salamons, Esq.
Alexander Stuart, Esq.
John Todd, Esq.
John B. Watt, Esq.

Edmund Johnson, Esq., Honorary Secretary.

COMMISSIONS RESIDENT AT SYDNEY.

COMMISSIONERS OF FOREIGN COUNTRIES AND BRITISH COLONIES RESIDENT IN SYDNEY DURING EXHIBITION.

(Commissioners within the Countries represented are specified in the lists for services.)

AUSTRIA.

Consul VICTOR SCHÖNBERGER, Executive Commissioner.
Lieut. PINSCHOFF, Lieut. WILHELM, and H. L. NEUMANN, Esq., Commissioners.

BELGIUM.

ALBERT VAN SCHELLE, Esq., Executive Commissioner.
O. L. MONTEFIORE, Esq., E. L. MONTEFIORE, Esq., and S. A. JOSEPH, Esq., Commissioners.
T. HUYLEBROECK, Esq., Secretary to Local Commission.
T. LODWIDGE, Esq., Secretary to Executive Commissioner.

BRITISH COLONIES.

CANADA.

Hon. Sir JOHN HAY, K.C.M.G., and ROBERT L. TOOTH, Esq., Commissioners.

CEYLON.

GEO. BENNETT, Esq., M.D., F.R.C.S., F.L.S., F.Z.S., Executive Commissioner.
CHARLES MOORE, Esq., F.L.S., Commissioner.

FIJI.

E. VICKERY, Esq., Executive Commissioner.
G. J. WATERHOUSE, Esq., Secretary.

INDIA.

Major CLEMENTI, Executive Commissioner.

NEW ZEALAND.

Dr. JAMES HECTOR, C.M.G., F.R.S., Executive Commissioner.
A. S. WEBSTER, Acting Commissioner in absence of Dr. Hector.
CHARLES CALLIS, Esq., Secretary.

QUEENSLAND.

GRESLEY LUKIN, Esq., Executive Commissioner.
C. T. GEDYE, Esq., Hon. F. W. LAMBERT, M.L.C., HAMON MASSIE, Esq., ROBERT G. MASSIE, Esq., E. L. MONTEFIORE, Esq., HENRY MORT, Esq., H. G. MORRIS SIMPSON, Esq., Commissioners.
GEO. E. LAYTON, Esq., Secretary.

SOUTH AUSTRALIA.

SAMUEL DAVENPORT, Esq., Executive Commissioner.
J. A. HOLDEN, Esq., CHARLES BONNEY, Esq., and J. W. COLTON, Esq., Commissioners.
R. E. N. TWOPENY, Esq., Secretary.

STRAITS SETTLEMENTS.

MAJOR CLEMENTI, Esq., Executive Commissioner.

COMMISSIONS RESIDENT AT SYDNEY.

TASMANIA.

Sir P. A. JENNINGS, K.C.M.G., Executive Commissioner.

VICTORIA.

Hon. J. J. CASEY, C.M.G., Executive Commissioner.
R. D. BANNISTER, Esq., Secretary.

FRANCE.

Captain A. F. MATHIEU, Commissioner-General.
MM. F. BOURDIL, SOUDRY, DE SAVIGNON, and MENARD, Commissioners.
COMTE DE ZAMOÏSKY, Attaché of the Commission.

NEW CALEDONIA.

JULES JOUBERT, Esq., Executive Commissioner.

GERMANY.

Professor Dr. F. REULEAUX, Privy Councillor, Commissioner for the German Empire.
Dr. KRAUEL, Commissioner for German Empire (acting during absence of Professor Reuleaux).
J. W. DEHN, Esq., Secretary.

ITALY.

Signor OSCAR MEYER, Representative Agent.

JAPAN.

HARUO SAKATA, Esq., Imperial Japanese Commissioner.
YOSHIN MURAKAMI, Esq., and J. WATANABE, Esq., Secretaries.

NETHERLANDS.

J. DE GROOT PZN, Esq., Representative Agent.

SWITZERLAND.

E. EUGSTER, Esq., Representative Agent.

UNITED STATES.

O. M. SPENCER, Esq., President.
Dr. C. C. COX, (First) Chief Executive Officer.
Dr. E. H. WILLIAMS, AUGUSTUS MORRIS, Esq., S. P. LORD, Esq., Commissioners and Executive Officers.
GREGORY P. HARTE, Esq., and DONALD MANSON, Esq., Honorary Acting Commissioners and Executive Officers.
SYDNEY WEBSTER BRADFORD, Esq., (First) Secretary.
E. R. C. BROMLEY, Esq., Acting Secretary.

DIPLOMAS AND MEDALS, COMPLIMENTARY AND FOR SERVICES.

Every one mentioned in the following lists received an inscribed Diploma.

	Medals.			
	Gold.	Large Silver.	Small Silver.	Bronze.
Austria.				
His Imperial Highness Charles Lewis, Archduke of Austria ..	1	...	...	...
Commission at Sydney :—				
Schönberger, Victor, Königlich Hawaiischer Consul, Executive Commissioner	...	1	...	...
Neumann, Heinrich L.	...	...	1	...
Pinschof, Carl	...	...	1	...
Wilhelm, Eduard	...	...	1	...
Executive Committee at Vienna :—				
Wilhelm, Franz, Präsident des Oesterreichisch-Ungarischen Export-Vereins, President	...	1	...	...
Migerka, Dr. Franz, K. K. Ministerialrath und Präsident des Wiener Kaufmännischen Vereins, Vice-President	...	...	1	...
Matscheko, M., Präsident des Nieder-Oesterreichischen Gewerbe-Vereins, Vice-President	...	...	1	...
Falkbeer, Carl, K. K. Ministerial-secretär, Secretary ...	...	...	1	...
Gerhardus, Hermann	...	...	1	...
Göpfert, Eduard	...	...	1	...
Lindheim, Wilhelm von	...	...	1	...
Neumann, Heinrich L. (Fine Arts Collection)	...	1	...	...
Handels und Gewerbekammer (Chamber of Commerce), Brünn in Mähren	...	1	...	...
Belgium.				
His Majesty Leopold II, King of the Belgians	1	...	...	...
Le Ministère de l'Intérieur	...	1	...	...
Montefiore Levi, Georges, Royal General Commissioner at Brussels	...	1	...	...
Royal Commission at Sydney :—				
Schelle, Albert van, Executive Commissioner	...	1	...	...
Lodwidge, John, Secretary...	...	...	1	...
Commission at Sydney :—				
Montefiore, O., Consul for Belgium, President	...	1	...	...
Joseph, Samuel A.	...	...	1	...
Montefiore, E. L.	...	...	1	...
Huylebroeck, T., Secretary	...	...	1	...
Cercle Royal Artistique de Bruxelles	...	1	...	...
Cercle Commercial et Industriel de Gand	...	1	...	...
Chambre de Commerce de Gand	...	1	...	...
Chambre de Commerce de Verviers	...	1	...	...
Société Commerciale et Industrielle d'Anvers...	...	1	...	...
Union Syndicale de Bruxelles	...	1	...	...
Lamal, Prosper	...	...	...	1

DIPLOMAS AND MEDALS, Complimentary and for Services.

	Medals.			
	Gold.	Large Silver.	Small Silver.	Bronze.
Canada.				
The Government of Ontario	1	...	...	...
His Excellency the Marquis of Lorne, K.T., G.C.M.G., Governor-General of the Dominion of Canada ...	...	1	...	...
Hay, Sir John, K.C.M.G. (Sydney, N.S.W.), Hon. Commissioner	...	...	1	...
Tooth, Robert L. (Sydney, N.S.W.). Hon. Commissioner ...	...	...	1	...
Cameron, R. W., New York, U.S.A., Hon. Commissioner...	...	...	1	...
Department of Agriculture, Ottawa	...	...	...	1
Educational Department of Ontario	...	...	...	1
Ceylon.				
His Excellency Sir James Robert Longden, K.C.M.G., Governor	...	1	...	...
Bennett, George, M.D., F.R.C.S., F.L.S., F.Z.S. (Sydney, N.S.W.), Executive Commissioner	...	1	...	...
Moore, Charles, F.L.S. (Sydney, N.S.W.), Commissioner ...	...	...	1	...
Fiji.				
His Excellency George Wm. Des Vœux, C.M.G., Acting-Governor	...	1	...	...
Thurston, the Hon. John Bates, C.M.G., Colonial Secretary	...	...	1	...
Vickery, Ebenezer (Sydney, N.S.W.), Executive Commissioner	...	1	...	...
Waterhouse, G. J. (Sydney, N.S.W.), Secretary	...	...	1	...
France.				
Son Excellence M. le Président de la République Française...	1	...	...	...
Commission at Sydney :—				
Mathieu, Adolphe François, Capitaine de Vaisseau, Commandant le *Rhin*, Commissaire-Général ...	...	1	...	...
Bourdil, Fernand, Ingénieur des Arts et Manufactures, Commissaire délégué à l'installation de la Section Française...	...	...	1	...
Ménard, Arthur, Chef de Service au Comptoir d'Escompte de Paris (Agence de Londres), Secrétaire du Commissaire-Général, Commissaire délégué aux Etudes Financières	...	...	1	...
De Savignon, Fréderic, Répétiteur du Cours d'Agriculture à l'Institut National Agronomique, Commissaire délégué à l'Agriculture...	...	...	1	...
Soudry, Alphonse, Commissaire délégué aux Beaux-Arts	...	...	1	...
Committee at Paris :—				
Tirard, Ministre de l'Agriculture et du Commerce, Président	...	1	...	...
Girerd, Sous-Secrétaire d'État au Ministère de l'Agriculture et du Commerce	...	...	1	...
Turquet, Sous-Secrétaire d'État au Ministère des Beaux-Arts	...	...	1	...
Feray (d'Essone), Sénateur	...	...	1	...

DIPLOMAS AND MEDALS, Complimentary and for Services.

	Medals.			
	Gold.	Large Silver.	Small Silver.	Bronze.
Dauphinot, Sénateur	...	...	1	...
Comte d'Osmoy, Député	...	...	1	...
Richarme, Sénateur	...	...	1	...
Dietz-Monin, Directeur de la Section Française à l'Exposition de 1878	...	...	1	...
Berger, Directeur des Sections Etrangères á l'Exposition de 1878	...	...	1	...
Jaccoud, Membre de l'Académie de Médecine	...	...	1	...
Levasseur, Membre de l'Institut	...	...	1	...
Le Président de la Chambre de Commerce de Paris ...	...	...	1	...
Natalis Rondot, délégué de la Chambre de Commerce de Lyon	...	...	1	...
Roy, Membre du Comité Consultatif des Arts et Manufactures	...	...	1	...
Duplan, Manufacturier d'Aubusson	...	...	1	...
Martial Bernard, Joaillier	...	...	1	...
De Monicault, Membre de la Société des Agriculteurs de France	...	...	1	...
Damon, Fabricant de Meubles	...	...	1	...
Barbédienne, Fabricant de Bronzes d'Art	...	...	1	...
Blot, Fabricant de Bronzes d'Imitation	...	...	1	...
Hielard, Ancien Président des Chambres Syndicales ...	...	...	1	...
Peullier, Président de la Chambre Syndicale de Céramique	...	...	1	...
Le Secrétaire Général du Ministère de l'Agriculture et du Commerce	...	...	1	...
Le Directeur des Consulats et des Affaires Commerciales aux Affaires Etrangères	...	...	1	...
Sentis, Consul-Général	...	...	1	...
Tisserand, Directeur de l'Agriculture	...	...	1	...
Marie, Directeur du Commerce Extérieur	...	...	1	...
Girard, Sous-Directeur du Commerce Intérieur	...	...	1	...
Bureau d'État des Beaux-Arts	...	1	...	...
Manufacture Nationale des Gobelins	...	1	...	...
Manufacture Nationale de Beauvais	...	1	...	...
Chambre de Commerce de Reims	...	1	...	...
Germany.				
His Majesty William I, Emperor of Germany	1	...	...	...
Imperial Commission at Sydney:—				
Reuleaux, Professor Dr. Franz, Königlich Preussischer Geheimer Regierungsrath, Executive Commissioner	...	1	...	...
Krauel, Dr. Richard, Consul-General for the German Empire, Acting Executive Commissioner	...	1	...	...
Dehn, Johann Wilhelm, Secretary	...	...	1	...
Imperial Commission at Berlin:—				
Zedlitz, Freiherr von,—Landrath a.D. und Reichstagsabgeordneter, Acting Executive Commissioner ...	...	1	...	...
Schäde, F., Geheimer expedirender Secretär im Reichsammt des Innern, Secretary	...	...	1	...
Dobrogoisky, A. von, Geheimer Kanzlei Secretär im Ministerium für Handel und Gewerbe, Secretary ...	...	...	1	...
Gesammtvorstand der Deutschen Kunst-Genossenschaft (German Fine Arts Collection)	...	1	...	...
Steffeck, Professor C., Vorsitzender der Berliner Kunst-Genossenschaft (President, Berlin Fine Arts Society) ...	...	1	...	...

DIPLOMAS AND MEDALS, COMPLIMENTARY AND FOR SERVICES.

	Medals.			
	Gold.	Large Silver.	Small Silver.	Bronze.
Great Britain and Ireland.				
Her Majesty the Queen	1	...	...	...
Royal Commission:—				
His Royal Highness the Prince of Wales, K.G., President	1	...	...	...
His Grace the Duke of Richmond and Gordon, K.G. ...	...	1	...	...
His Grace the Duke of Manchester, K.P.	...	1	...	...
The Most Noble the Marquis of Salisbury, K.G. ...	...	1	...	...
The Right Hon. the Earl of Carnarvon	...	1	...	...
The Right Hon. the Earl of Cadogan	...	1	...	...
The Right Hon. the Earl of Belmore, K.C.M.G., *vide* London Commission	...	...	...	...
The Right Hon. the Earl of Granville, K.G.	...	1	...	...
The Right Hon. the Earl of Kimberley	...	1	...	...
The Right Hon. Sir Michael Hicks-Beach, Bart., M.P., Secretary of State for the Colonies	1	...	...	...
The Right Hon. Hugh C. E. Childers, M.P.	...	1	...	...
Sir Daniel Cooper, Bart., K.C.M.G., *vide* London Commission	...	...	...	...
Sir John Rose, G.C.M.G.	...	1	...	...
Sir Joseph Dalton Hooker, K.C.S.I., C.B.	...	1	...	...
Sir Frederick Leighton, P.R.A.	...	1	...	...
Owen, Professor C. B., F.R.S.	...	1	...	...
Morley, Samuel, M.P.	...	1	...	...
Smyth, Warington W., F.R.S.	...	1	...	...
Wright, T. A., Secretary	...	1	...	...
London Commission:—				
The Right Honourable the Earl of Belmore, K.C.M.G., President	1	...	...	...
Sir Daniel Cooper, Bart., K.G.M.G., Vice-President ...	1	...	...	...
Forster, William, Agent-General for New South Wales	...	1	...	...
Frazer, The Hon. John, M.L.C.	...	1	...	...
Knox, Edward	...	1	...	...
Levy, Edward Abraham	...	1	...	...
Macarthur, Alexander, M.P.	...	1	...	...
Montefiore, Jacob Levi	...	1	...	...
Ogg, William Anderson	...	1	...	...
Parker, Sir Henry Watson, K.C.M.G.	...	1	...	...
Russell, Peter Nicol	...	1	...	...
Sherbrooke, Right Hon. Lord	...	1	...	...
Turville, Sir Francis, K.C.M.G.	...	1	..	...
Fladgate, Francis, Secretary	...	...	1	...
London Committee:—				
Sir Daniel Cooper, Bart., K.C.M.G., Chairman, *vide* London Commission	...	...	...	...
The Right Hon. the Earl of Belmore, K.C.M.G., *vide* London Commission	...	...	...	...
Sir Philip Cunliffe Owen, K.C.M.G., C.B.	...	...	1	...
Sir John B. Darvall, K.C.M.G.	...	...	1	...
Cameron, R. W., *vide* New South Wales and Canadian Commissions	...	...	...	...
Carfrae, John	...	...	1	...
Chevalier, N.	...	...	1	...
Clarke, Hyde, D.C.L.	...	...	1	...
Combes, Edward, C.M.G., *vide* Sydney I. E. Commission	...	...	...	...

DIPLOMAS AND MEDALS, Complimentary and for Services.

	Medals.			
	Gold.	Large Silver.	Small Silver.	Bronze.
Frazer The Hon. John, M.L.C., *vide* London Commission	...	...	...	...
Gray, Robert	...	...	1	...
Johnson, Edmund	...	...	1	...
Knox, Edward, *vide* London Commission	...	...	...	...
Larnach, Donald	...	...	1	...
Lark, Timothy	...	...	1	...
Lassetter, F.	...	...	1	...
Levy, Edward A., *vide* London Commission	...	...	...	...
Montefiore, J. Levi, *vide* London Commission	...	...	...	...
Macarthur, A., M.P., *vide* London Commission... ...	...	...	...	...
Mort, William	...	...	1	...
Ogg, W. A., *vide* London Commission	...	...	...	...
Stirling, Rear Admiral	...	...	1	...
Salomons, Julian E.	...	...	1	...
Stuart, Alexander	...	...	1	...
Todd, John	...	...	1	...
Watt, John	...	...	1	...
Young, A. W., M.P.	...	...	1	...
For Miscellaneous Services:—				
His Grace the Duke of Manchester, K.P., Vice-President of the Royal Colonial Institute...	1	...	...	...
The Society for the Encouragement of Arts, Manufactures, and Commerce	1	...	...	...
Science and Art Department, South Kensington ...	...	1	...	...
The Lords Commissioners of the Admiralty	...	1	...	...
Chamber of Commerce, Huddersfield	...	1	...	...
Cheavin, George, Boston, Lincolnshire. (For loan of 100 Filters used in Garden Palace)	...	...	1	...
Cope, C. W., R.A. (For lending Works of Art) ...	...	...	...	1
Evans, George. (In charge of Art Collection)	...	...	...	1
Lucas, Albert Durer. (For lending Paintings on Ivory)	...	...	...	1
Nicholson, Lady. (For lending Works of Art)... ...	...	...	...	1
School Board for London. (Methods of Instruction) ...	...	...	...	1
Schwartze & Co., Helmuth, London. (Exhibiting Samples of Foreign Wool)	...	...	...	1
Wilson, Mrs. Maria Alice, London. (For lending Mr. Martin's paintings, "The Great Day of His Wrath," "The Last Judgment," and "The Plains of Heaven")	...	...	...	1
India.				
His Excellency the Right Honourable Lord Lytton, G.C.B., G.M.S.I., Viceroy and Governor-General	...	1	...	...
Clementi, Major, Bengal Staff Corps, Commissioner at Sydney	...	1	...	...
The Government of the North-west Provinces and Oudh ...	...	...	...	1
The Government, Bombay Presidency...	...	...	...	1
The Government, Madras Presidency	...	...	...	1
Italy.				
His Majesty the King of Italy	...	1	...	...
Ministero d'Agricoltura, d'Industria e del Commercio, Rome	...	1	...	...
Camera di Commercio, Florence	...	1	...	...
Meyer, Oscar, Representative Agent at Sydney	...	1	...	...

DIPLOMAS AND MEDALS, COMPLIMENTARY AND FOR SERVICES.

	Medals.			
	Gold.	Large Silver.	Small Silver.	Bronze.
Japan.				
His Majesty Mutsu Hito, Emperor of Japan	1	...	...	...
Imperial Commission at Sydney:—				
Haruo Sakata, Home Department, Executive Commissioner...	...	1	...	...
Yoshin Murakami, Home Department, Secretary ...	...	...	1	...
Junichiro Watanabe, Board of Agriculture, Secretary ...	...	...	1	...
Imperial Commission at Tokio:—				
His Excellency Masayoshi Matsukata, Vice-Minister Financial Department, President	...	1	...	...
Hisanari Machida, Home Department	...	...	1	...
Hideharu Kawase, Financial Department	...	...	1	...
Nobuakira Yamataka, Home Department	...	...	1	...
Masato Hashimoto, Home Department	...	...	1	...
Netherlands.				
De Groot Pzn, J., Representative Agent at Sydney	...	1	...	...
New Caledonia.				
M. le Président du Comité de l'Exposition Internationale ...	...	1	...	...
Joubert, Jules, Commissioner at Sydney	...	1	...	...
New South Wales.				
Sydney International Exhibition Commission:—				
His Excellency the Right Honourable Lord Augustus W. F. S. Loftus, P.C., G.C.B., Governor, &c., President	1	...	...	...
Stephen, The Hon. Sir Alfred, C.B., K.C.M.G., M.L.C., Lieutenant-Governor, Vice-President	1	...	...	...
Martin, The Hon. Sir James, Knight, &c., Vice-President	...	1	...	...
Hay, The Hon. Sir John, K.C.M.G., &c., Vice-President	...	1	...	...
Allen, The Hon. Sir George Wigram, Knight, &c., Vice-President...	...	1	...	...
Sir Patrick Alfred Jennings, K.C.M.G., Executive Commissioner...	1	...	...	...
Alger John	...	1	...	...
Brodribb, W. A., F.R.G.S., M.P.	...	1	...	...
Combes, Edward, C.M.G., M.P.	...	1	...	...
Cox, The Hon. George K., M.L.C.	...	1	...	...
Davies, John, C.M.G., M.P.	...	1	...	...
Davies, William, M.P.	...	1	...	...
Flood, The Hon. Edward, M.L.C....	...	1	...	...
Garran, Andrew, LL.D.	...	1	...	...
Halloran, Henry, C.M.G.	...	1	...	...
Higgins, The Hon. Patrick, M.L.C.	...	1	...	...
Hill, Edward Smith	...	1	...	...
Hill, The Hon. Richard, M.L.C.	...	1	...	...
Innes, The Hon. Sir Joseph George Long, M.L.C. ...	...	1	...	...
Jenkins, R. L., M.R.C.S.L.	...	1	...	...
Joseph, Samuel A.	...	1	...	...
King, The Hon. Philip Gidley, M.L.C.	...	1	...	...

DIPLOMAS AND MEDALS, Complimentary and for Services.

	Medals.			
	Gold.	Large Silver.	Small Silver.	Bronze.
Macleay, The Hon. William, M.L.C.	...	1	...	...
Merriman, James, M.P.	...	1	...	...
Mort, Henry	...	1	...	...
Palmer, W. H., M.D.	...	1	...	...
Piddington, The Hon. W. R., M.L.C.	...	1	...	...
Roberts, Charles J., Mayor of Sydney	...	1	...	...
Samuel, The Hon. Saul, C.M.G.	...	1	...	...
Smith, The Hon. John, M.D., LL.D., C.M.G., M.L.C.	...	1	...	...
Smith, Robert Burdett, M.P.	...	1	...	...
Suttor, The Hon. William H., M.L.C.	...	1	...	...
Terry, Samuel H., M.P.	...	1	...	...
Thornton, The Hon. George, M.L.C.	...	1	...	...
Trebeck, Prosper Nicholas	...	1	...	...
Webb, Edmund, M.P.	...	1	...	...
Morris, Augustus, Secretary to the Commission... ...	...	1	...	...
Representative Commissioners in the United States of America:—				
Cameron, Roderick William	...	1	...	...
Peabody, Henry W....	...	1	...	...
Commissioner in Charge of Ladies' Court:—				
Alger, John	...	...	...	1
Honorary Members of Committees of Commission:—				
Abbott, Joseph (Mort & Co.)	...	...	1	...
Adams, P. F., Surveyor General of N.S.W.	...	...	1	...
Alderson, W. M.	...	...	1	...
Barnet, James, Colonial Architect, N.S.W.	...	...	1	...
Bradley, H. Burton	...	...	1	...
Broomfield, John	...	...	1	...
Bruce, Alexander, Chief Inspector of Stock, N.S.W. ...	...	...	1	...
Calvert, J. J., Clerk of Parliaments, N.S.W.	...	...	1	...
Chapman, M.	...	...	1	...
Cracknell, E. C., Superintendent of Telegraphs, N.S.W.	...	...	1	...
Du Faur, E., F.R.G.S., Department of Lands, N.S.W.	...	...	1	...
Fairfax, James R.	...	...	1	...
Fosbery, E., Inspector General of Police	...	...	1	...
Hector, James, M.D., C.M.G., F.R.S., Executive Commissioner for New Zealand	...	...	1	...
Hunt, Robert, Deputy Master of Royal Mint	...	...	1	...
Liversidge, Archibald, Professor	...	...	1	...
Machardy, Malcolm C.	...	...	1	...
Mackenzie, John, F.G.S., Examiner of N.S.W. Coal Fields	...	...	1	...
Montefiore, E. L.	...	...	1	...
Moore, Charles, F.L.S., Director, Sydney Botanic Gardens	...	...	1	...
Mowle, S. M....	...	...	1	...
Oxley, J. N.	...	...	1	...
Reuleaux, Franz, Professor Dr., P.C., Imperial German Commissioner	...	...	1	...
Richards, Thomas, Government Printer	...	...	1	...
Roberts, Alfred, M.R.C.S., L.S.A.	...	...	1	...
Robinson, Charles	...	...	1	...
Russell, H. C., B.A., F.R.A.S., Government Astronomer	...	...	1	...
Sahl, Carl Ludwig, Consul for the German Empire ...	...	...	1	...
Starkey, John	...	...	1	...

DIPLOMAS AND MEDALS, Complimentary and for Services.

	Medals.			
	Gold.	Large Silver.	Small Silver.	Bronze.
Stephens, W. J., M.A.	...	...	1	...
Watt, Charles, Government Analyst	...	...	1	...
Wilkins, William, Under Secretary for Public Instruction	...	...	1	...
Wilkinson, C. S., Government Geologist...	...	...	1	...
Wood, Harrie, Under Secretary for Mines	...	...	1	...
Staff of the Commission :—				
Cumming, Alexander, Chief Clerk	...	...	1	...
Bristowe, Edward H. C., the Accountant and Cashier	...	...	...	1
Blachmann, Hermann J. B. F., Clerk to the Executive Commissioner	...	...	...	1
Grierson, Robert W., Assistant Accountant and Clerk	...	...	...	1
Ramsay, John Stuart, Phonographic-Corresponding Clerk	...	...	...	1
Weir, David, Catalogue Compiler and Clerk	...	...	...	1
Heads of Exhibition Departments :—				
Dawson, Thomas, Superintendent of Garden Palace ...	...	...	...	1
Oxley, J. N., Superintendent of Machinery Department	...	...	...	1
Lang, Gideon Scott, Superintendent of Agricultural Department	...	...	...	1
Espinasse, R., Superintendent of Admissions	...	...	...	1
Franklin, F. A., C.E., Officer in charge of Judging ...	...	...	1	...
For Official and Miscellaneous Services and Complimentary :—				
His Excellency Sir Hercules Robinson, G.C.M.G., &c., First President of the Sydney International Exhibition Commission	1	...	...	...
Parkes, The Honourable Sir Henry, K.C.M.G., Colonial Secretary and Premier and Minister in Charge of Exhibition	1	...	...	...
Fitzpatrick, Michael, M.P., Colonial Secretary inaugurating Exhibition	1	...	...	...
Robertson, The Honourable Sir John, K.C.M.G., Vice-President, Executive Council	...	1	...	...
Watson, The Honourable James, M.P., Colonial Treasurer and Secretary for Finance and Trade... ...	...	1	...	...
Wisdom, The Honourable Robert, M.P., Attorney-General	...	1	...	...
Suttor, The Honourable F. B., M.P., Minister of Justice	...	1	...	...
Hoskins, The Honourable James, M.P., Secretary for Lands	...	1	...	...
Lackey, The Honourable John, M.P., Secretary for Works	...	1	...	...
Baker, The Honourable E. A., M.P., Secretary for Mines	...	1	...	...
Samuel, The Honourable Saul, C.M.G., M.L.C., Postmaster-General	...	1	...	...
Wilson, John C., R.N., Commodore of H.M. Ships on the Australian Station...	...	1	...	...
Walker, Richard Cornelius Critchett, Principal Under Secretary	...	1	...	...
Fosbery, Edmund, Inspector General of Police... ...	...	1	...	...
Goodchap, Charles A., Commissioner for Railways ...	...	1	...	...
Eagar, The Hon. Geoffrey, Under Secretary for Finance and Trade	...	1	...	...

DIPLOMAS AND MEDALS, Complimentary and for Services.

	Medals.			
	Gold.	Large Silver.	Small Silver.	Bronze.
Agricultural Society of New South Wales, Originating scheme for International Exhibition...	...	1	...	...
Barnet, James, Architect of Garden Palace	...	1	...	...
Giorza, Cavaliere Paolo, Composer of Opening Cantata, Director of Music	...	1	...	...
Kendall, Henry, Author of words of Opening Cantata...	...	...	1	...
Thomson, James, Chief Inspector of Public Revenue Collectors' Accounts and Consulting Accountant ...	...	...	...	1
Kirkpatrick, Francis, Inspector of Public Revenue Collectors' Accounts	...	...	...	1
Potter, Charles, Superintendent of Government Printing Office...	...	...	...	1
Bown, Charles, Superintendent Insurance Fire Brigade, superintending Arrangements for Fire-extinction at Garden Palace	...	...	...	1
Begg, Samuel, Designer of Medal				
Sayer, James W., Designer of Obverse of Medal ...	...	...	...	1
Kent, Harry C., M.A., First Designer of Certificate of Award	...	...	...	1
Kent, Miss Annette, Re-casting Design of Certificate of	...	...	...	1
Award	...	...	...	1
Ford, Adams & Co., Sydney N.S.W., Custom House Agents to Sydney International Exhibition Commission	...	...	...	1
Woods & Co., John, Sydney, N.S.W., Carrying Agents to Sydney International Exhibition Commission ...	...	...	...	1
**For Services as Judges at Exhibitions :—*				
Abigail, Francis, Sydney, Classes 250–257	...	...	...	1
Adams, P. F., Surveyor General, N.S.W., Classes 307–312	...	...	...	1
Airey, Major H., Sydney, Horses, Class 645	...	...	...	1
Alexander, Wm., Sydney, Classes 217–227	...	...	...	1
Allen, Wm., Queensland, Sheep, &c.	...	...	...	1
Badgery, A. D., Sydney, Cattle (Class 646)	...	...	...	1
Badgery, John A., Sydney, Cattle (Class 646)	...	...	...	1
Badgery, F. D., Sydney, Horses (Class 645)	...	...	...	1
Bahse, Moritz F., Dresden, Germany, Classes 228–241, 284–290, and Ladies' Court	...	...	...	1
Ballieu, Théodore, French Consul, Sydney, Classes 400–409	...	...	...	1
Bannister, Mrs. I. C., Melbourne, Victoria, Ladies' Court	...	...	...	1
Bannister, R. D., Melbourne, Victoria, Classes 300–306, and Public School Exhibits, and Exhibits by Pupils of the N.S.W. Art Academy.	...	...	...	1
Barker, Geo. W., Sydney, Classes 623–627, 633 ...	...	...	...	1
Barker, Wm. C., Sydney, Classes 623–627	...	...	...	1
Barnet, James, Colonial Architect, Sydney, Classes 217–227, 284–290	...	...	...	1
Barnett, John, Sydney, Poultry, &c. (Class 650) ...	...	...	...	1
Bassett, W., Sydney, Classes 635, 637 and 638	...	...	...	1
Beckmann, E., Jeweller, Sydney, Classes 307–312 ...	...	...	...	1
Bedwell, C. R., Sydney, Steward, Poultry, &c. (Class 650), Horses (Class 645)	...	...	...	1
Bell, Henry, Sydney, Cattle (Class 646)	...	...	...	1
Bensusan, S. L., Mineralogist, Sydney, Classes 110–114	...	...	...	1

* Where the Judges were not engaged in the "General Exhibits" Classes, the section in which they adjudicated is particularised by name.

DIPLOMAS AND MEDALS, Complimentary and for Services.

	Medals.			
	Gold.	Large Silver.	Small Silver.	Bronze.
Bergan, James, Granville, near Parramatta, N.S.W., Classes 500–528...	...	...	...	1
Binsted, W. H., Surveyor, Sydney, Classes 120–122 ...	...	...	...	1
Blachmann, C. H. E., Architect, Sydney, Classes 217–227	...	...	...	1
Blacket, Owen, Engineer, Sydney, Classes 279–283 ...	...	...	...	1
Blacket, E. T., Architect, Sydney, Class 313	...	...	...	1
Blau, Adolph, Jeweller, Sydney, Classes 250–257 ...	...	...	...	1
Blunt, George, Sydney, Classes 206–216	...	...	...	1
Bound, P. E., Switzerland, Classes 307–312	...	...	...	1
Bourne, Miss, Sydney, Ladies' Court	...	...	...	1
Bradley, senr., Walter, Sydney, Poultry, &c. (Class 650)	...	...	...	1
Brewster, Wm. (Expert), Classes 265–270	...	...	...	1
Bristowe, E. H. C., Sydney, Dogs (Class 651)	..	...	...	1
Broomfield, Captain, Sydney, Judge, in Classes 284–290; Steward, Classes 621–622, 625, 626, 627, 700–724 (Horticulture)	...	...	...	1
Brown, Alexander, Sydney, Classes 110–114	...	...	...	1
Brownell, Wm., Sydney, Horticulture	...	...	...	1
Bruce, Alex., Chief Inspector of Stock, N.S.W., Steward, Classes 645, 646...	.	...	...	...
Bull, William, Sydney, Classes 291–294	...	...	...	1
Bush, Charles, Sydney, Classes 546–560	...	...	...	1
Butcher, Robert, Sydney, Class 636	...	...	...	1
Cadell, Thos., junr., Sydney, Poultry, &c. (Class 650) ...	...	...	...	1
Campbell, W. S., Sydney, Classes 621-622, 625–627, 663–666, 700–724 (Horticulture)	...	...	...	1
Carter, J. B., New York, U.S.A., Classes 250–257, 500–509, 529–537	...	...	...	1
Carter, Geo. Lord, Sydney, Classes 500-509	...	...	...	1
Chapman, John, Sydney, Classes 546–560	...	...	...	1
Chard, W. H., Wool-broker, Sydney, Wool (Classes 639–640)	...	...	...	1
Cock, James, Sydney, Classes 569-576, 623–627, 626, 629–634, 653–658, 659–662	...	...	...	1
Coombe, Thos. Loaring, Sydney, Classes 623–627 ...	...	...	...	1
Cooper, Pope A., Brisbane, Queensland, Classes 635, 637, 638	.	...	...	1
Cox, Hon. Geo. H., M.L.C., Mudgee, N.S.W., Classes 279–283; Cattle, (Class 646)	...	...	...	1
Cracknell, E. C., Superintendent of N.S.W. Telegraphs, Sydney, Classes 307–312	...	...	...	1
Craig, Wm., Sydney, Classes 265–270, 279–283... ...	...	..	...	1
Crane, T., Sydney, Poultry, &c. (Class 650)	...	...	...	1
Curran, J. J., Merchant, Sydney, Classes 200–205 ...	...	...	...	1
Curtis, Geo. S., Sydney, Classes 600–603...	...	...	...	1
D'Apicé, Le Chevalier, Professor of Music, Sydney, Class 313...	...	...	...	1
Dangar, W. J., Neotsfield, Singleton, N.S.W., Cattle, (Class 646)	...	...	...	1
Dangar, A. A., Baroona, Singleton, N.S.W., Sheep-shearing	...	...	...	1
Davies, John, C.M.G., M.P., Sydney	...	...	...	1
Davis, Wm., Ginninderra, N.S.W., Horses (Class 645)	...	...	...	1
De Piotrowski, Kennedy, New Zealand, Classes 242–249, 410–427	...	...	...	1
De Savignon, F., Paris, Classes 307–312 &c., Wool, Sheep, and Swine (Classes 639–640, 647, 649) ...	...	...	...	1

DIPLOMAS AND MEDALS, Complimentary and for Services.

	Medals:			
	Gold.	Large Silver.	Small Silver.	Bronze.
Devlin, M. H., Sydney, Cattle (Class 646)	...	...	...	1
Disher, Wm. John, New Zealand, Class 636	...	...	...	1
Dixon, W. A., F.C.S., Sydney, Classes 100–107 ...	...	...	...	1
Doublet, M., France, Classes 242–249	...	...	...	1
Douglas, Percy, United States, Classes 291–294... ...	...	...	...	1
Douglas, W. H., United States, Classes 291–294 ...	...	...	...	1
Dowling, Vincent, Sydney, Cattle and Horses (Classes 307–312)	...	...	...	1
Duboisé, A., France, Classes 623–627	...	...	...	1
Du Faur, Eccleston, F.R.G.S., Lands Department, N.S.W., Classes 400–409	...	...	...	1
Duff, John, Sydney Botanic Gardens, Classes 621–622, 623–627, 663–666, 700–724 (Horticulture)	...	...	...	1
Dunn, Thomas J., Sydney, Classes 604–610	...	...	...	1
Ebsworth, F., Woolbroker, Sydney, Wool (Classes 639–640)	...	...	...	1
Evans, George T., Redfern, Dogs (Class 651)	...	...	..	1
Ewing, Geo. C., junr., United States, Classes 217–227...	...	...	...	1
Farrell, E., Sydney, Classes 613–620	...	...	...	1
Fein, Otto, Sydney, Wool (Classes 639, 640)	...	...	...	1
Findlay, William S., South Australia, Sheep and Sheep-shearing (Class 647)	...	...	...	1
Fontana, Giovanni, London, Classes 206–216	...	...	...	1
Forde, Wm., N.S.W. Public Works Department, Classes 400–409	...	...	...	1
Forsyth, Archibald, Sydney, Classes 217–227, 639–644...	...	...	...	1
Fox, Capt. Henry T., Sydney, Classes 577–585	...	...	...	1
Frank, J. P., Sydney, Classes 500–509, 510–519 ...	...	...	...	1
Frank, W. J., Sydney, Poultry (Class 650)	...	...	...	1
Gannon, Frederick, Sydney, Classes 265–270, 279–283...	...	...	...	1
Gardiner, John A., Wellington, N.S.W., Cattle (Class 646)	...	...	...	1
Gell, Edward, Lithgow, N.S.W., Classes 217–227, 258–264	...	...	...	1
George, Hugh, *Sydney Morning Herald*, Classes 258–264, 538–545	...	...	...	1
Gilles, A. W., Sydney, Classes 250–257	...	...	...	1
Gordon, P. R., Brisbane, Queensland, Horses (Class 645)	...	...	...	1
Gould, John, Sydney, Classes 206–216	...	...	...	1
Graham, Joseph, Sydney, N.S.W., Classes 613–620 ...	...	...	...	1
Graves, H. Warden, United States, Classes 635, 636, 637, and 638	...	...	...	1
Gray, Henry, Sydney, Poultry (Class 650)	...	...	...	1
Groth, Hermann H., Sydney, Classes 258–264	...	...	...	1
Gurney, Professor T. T., Sydney University, Classes 300–306	...	...	...	1
Hacket, T. R., New Zealand, Classes 100–107	...	...	...	1
Haigh, Lewis, Sydney, Wool (Classes 639–640) ...	...	...	...	1
Halls, E., Sydney, Poultry, &c. (Class 650)	...	...	...	1
Hammond, Thos. W., Junee, N.S.W., Wool and Sheep (Classes 639–640 and 647)	...	...	...	1
Hanks, John G., Sydney, Classes 629–634	...	...	...	1
Harding, H., Sydney, Swine (Class 647)	...	...	...	1
Harnett, Laurence J., Sydney, Steward, Horses and Cattle (Classes 645, 646)	...	...	...	1
Harte, Gregory P., United States, Classes 307–312 ...	...	...	...	1
Hartung, Max Jos., Sydney, Expert, Classes 200–205...	...	...	...	1

DIPLOMAS AND MEDALS, Complimentary and for Services.

	Medals.			
	Gold.	Large Silver.	Small Silver.	Bronze.
Hautrive, Marçeau, France, Classes 228–241	...	...	...	1
Hawkins, Thos. J., Bathurst, N.S.W., Sheep (Class 647)	...	...	...	1
Hayes, Patrick, Sydney, Classes 200–205	...	...	...	1
Henry, Lucien, Sydney, Classes 410–427...	...	...	...	1
Higgins, R. G., Sydney, Sheep-shearing	...	...	...	1
Hixson, Capt. Francis, R.N,, Sydney, Classes 577–585...	...	...	...	1
Holborow, D., Ashfield, N.S.W., Steward, Dogs (Class 651)	...	...	...	1
Holle, John F., Sydney, Classes 228–241	...	...	...	1
Hooton, John, Sydney, Classes 639–644	...	...	...	1
Hudson, Henry, Sydney, Classes 510–519, 561–568 ...	...	...	...	1
Hustler, J. D., Sydney, Classes 623–637...	...	...	...	1
Hyam, G. H., Balmain, N.S.W., Poultry, &c. (Class 650)	...	...	...	1
Inglis, James, Sydney, Classes 623–627	...	...	...	1
Jackson, Chas. J., Sydney, Class 313	...	...	...	1
Jamieson, George, Sydney, Classes 228–241	...	...	...	1
Jaubert, Léon, Sydney, Classes 265–270	...	...	...	1
Jenkins, Capt. B., Sydney, Classes 577–585	...	...	...	1
Jones, J. Trevor, City Engineer, Sydney, Classes 279–283, 314–329, 561–568, 653–658, 659–662 ...	...	...	...	1
Joubert, Jules, Sydney, Classes 635, 637, 638	...	...	...	1
Kellick, James, Sydney, Poultry (Class 650)	...	...	...	1
Kirschbaum, A., Sydney, Classes 200–205	...	...	...	1
Kretschmann, Josef, Sydney, Class 313	...	...	...	1
Lamb, John de V., Sydney, Classes 279–283, and Sheep (Class 647)	...	...	...	1
Lane, Charles J., Sydney, Classes 546–560	...	...	...	1
Lark, F. B., Sydney, Classes 242–249	...	...	...	1
Lee Thomas, Bathurst, N.S.W., Swine (Class 649) ...	...	...	...	1
Lees, Joseph, Sydney, Wool (Classes 639–640)	...	...	...	1
Lethbridge, Geo. L., Singleton, N.S.W., Wool and Sheep (Classes 639–640, and 647)	...	...	...	1
Lewis, Charles, Sydney, Classes 520–528, 546–560 ...	...	...	...	1
Lix, Gustave, France, Classes 400–409	...	...	...	1
Lloyd, Charles M., Urana, N.S.W., Horses (Class 645)	...	...	...	1
Loder, George, Singleton, N.S.W., Cattle (Class 646) ...	...	...	...	1
Lord, G. Lee, Sydney, Steward, Poultry (Class 650) ...	...	...	...	1
Lord, Herbert, Sydney, Steward, Poultry (Class 650) ...	...	...	...	1
Lowe, Robert, Mudgee, Cattle (Class 646)	...	...	...	1
Machen, M. S., Sydney, Class 636	...	...	...	1
Mackenzie, D., Sydney, Classes 217–227...	...	...	...	1
Maguire, W. H., Electric Telegraph Department, N.S.W., Classes 307–312	...	...	...	1
Mair, George, Wagga Wagga, N.S.W., Cattle (Class 646)	...	...	...	1
Mann, Capt. Gother K., Sydney, Classes 265–270, 279–283	...	...	...	1
Manson, Donald, Boston, Mass, U.S., Classes 265–270, 279–283	...	...	...	1
Marklove, R., Sydney, Steward, Poultry (Class 650) ...	...	...	...	1
Marr, W. G., Sydney, Poultry (Class 650)	...	...	...	1
Massey, Chas. A., Gundaroo, Sheep (Class 647)... ...	...	...	...	1
M'Connell, Jas. H., Cressbrook, Queensland, Cattle (Class 646)	...	...	...	1
M'Coy, Richard, Sydney, Classes 250–257	...	...	...	1

DIPLOMAS AND MEDALS, Complimentary and for Services.

	Medals.			
	Gold.	Large Silver.	Small Silver.	Bronze.
Meyer, Otto L., Sydney, Classes 217–227	...	...	...	1
Merrett, Saml. H., Melbourne, Victoria, Classes 314–329	...	...	...	1
McElhone, John, M.P., Sydney, Cattle (Class 646) ...	...	...	...	1
M'Kellar, Alex., Goulburn, N.S.W., Horses (Class 645)	...	...	...	1
Minchen, Mrs. E. A., Sydney, Ladies' Court	...	...	...	1
Montefiore, E. L., Sydney, Classes 400–409	...	...	...	1
Montefiore, O. L., Consul for Belgium in N.S.W., Classes 110–114	...	...	...	1
Moonen, Léon, France, Classes 250–257, 314–329, 410–427; Exhibits by pupils of N.S.W. Art Academy; and Ladies' Court...	...	...	...	1
Moore, Charles, Director, Sydney Botanic Gardens, Classes 635, 637, 638	...	...	...	1
Morgan, Wm., junr., Dogs (Class 651)	...	...	...	1
Moriarty, E. O., Sydney, Classes 314–329, 546–560 ...	...	...	...	1
Morell, G. A., Sydney, Classes 561–568	...	...	...	1
Morris, Dr. William, Sydney, Classes 272–278, 311 ...	...	...	...	1
Morris, Augustus, Sydney	...	...	...	1
Morton, Thos. W., Sydney, Classes 621–622, 663–666, 700–724 (Horticulture)...	...	...	...	1
Mortimore, Geo., Sydney, Assistant Steward, Horticultural Shows	...	...	...	1
Newton, F. J., Watertown, New York, U.S., Classes 546–560...	...	...	...	1
Nicholson W., Sydney, Classes 629–634	...	...	...	1
Pachten, A., Victoria, Classes 635, 637, 638	...	...	...	1
Packer, Charles J., Sydney, Class 313	...	...	...	1
Page, Miss, Sydney, Ladies' Court	...	...	...	1
Palmer, Benj., Sydney, Class 636...	...	...	...	1
Palser, Henry P., Sydney, Classes 600–603, 629–634 ...	...	...	...	1
Parrot, A., Sydney, Classes 635, 637, 638	...	...	...	1
Patterson, R. C., South Australia, Classes 561–568 ...	...	...	...	1
Payne, Wm., Auckland, N.Z., Cattle (Class 646) ...	...	...	...	1
Peate, Thos., Sydney, Classes 600–603, 604–610 ...	...	...	...	1
Pemell, James E., General Agricultural Show, Classes 623–627, 629–634, Poultry (Class 650)	...	...	...	1
Penfold, E. T., Sydney, Classes 623–627...	...	...	...	1
Perry, J. Stephen, Sydney, Classes 228–241	...	...	...	1
Petrie, Adam, Sydney, Classes 250-257, 604–610 ...	...	...	...	1
Ponder, W. F., Sydney, Classes 613–620, 621–622, 623–627, 629–634, 663–666, 700–724...	...	...	...	1
Poolman, Frederick, Sydney, Classes 200–205, 206–216	...	...	...	1
Poolman, Saml., Sydney, Classes 500–509, 510–519, 569–576, 653–658, 659–662	...	...	...	1
Pope, John, Sydney, Classes 639–644	...	...	...	1
Ramsay, E. P., F.L.S., Curator, Australian Museum, Sydney, Classes 604–610	...	...	...	1
Ramsden, Richard J., Sydney, Classes 529–537... ...	...	...	...	1
Ratté, F., France, Classes 100–107	...	...	...	1
Raworth, W. H., Sydney, Classes 300-306 and Public School exhibits	...	...	...	1
Richards, Thos., Government Printer, N.S.W., Classes 258–264, 538-545	...	...	...	1
Richardson, George, Sydney, Classes 604–610	...	...	...	1
Ritchie, Robert A., Parramatta, N.S.W., Classes 546–560	...	...	...	1
Roberts, Col. C. F., R.A., Sydney, Classes 265–270, 279–283	...	...	...	1

DIPLOMAS AND MEDALS, COMPLIMENTARY AND FOR SERVICES.

	Medals.			
	Gold.	Large Silver.	Small Silver.	Bronze.
Roberts, P., Mudgee, N.S.W., Sheep (Class 647) ...	...	...	...	1
Rosenthal, C. M., Philadelphia, U.S., Classes 206–216, 410–427, 623, 627, 626, 635, 637, 638, 639–644 ...	...	...	...	1
Royce, Geo. H., Sydney, Classes 529–537, 653–658, 659–662	...	...	...	1
Russell, H. C., B.A., F.R.A.S., Government Astronomer, N.S.W., Classes 307–312	...	...	...	1
Sahl, Carl Ludwig, Consul for Germany, Classes 635, 637, and 638	...	...	...	1
Scott, W. R., Sydney, Wool (Classes 639–640)	..	...	...	1
See, John, Sydney, Classes 284–290, 623–627	...	...	...	1
Selfe, Norman, C.E., Sydney, Classes 217–227, 546–560, 569–576	...	...	...	1
Shaw, John, Wallerawang, N.S.W., Horses (Class 645)	...	...	...	1
Shaw, Jonathan, Victoria, Sheep (Class 647)	...	...	...	1
Shaw, Thomas, Victoria, Sheep (Class 647)	...	...	...	1
Shepherd, P. L. C., Sydney, Classes 613–620	...	...	...	1
Simonetti, Achille, Sydney, Classes 206–216, 410–427 ...	...	...	...	1
Simson, Colin W., M.P., Hay, N.S.W., Sheep (Class 647)	...	...	...	1
Skarratt, Charles C., Sydney, Classes 635, 637, and 638	...	...	...	1
Smale, Josiah, Macclesfield, England, Classes 242–249, 520–528, 639–644	...	...	...	1
Smith, Hon. John, M.L.C., Molong, N.S.W., Sheep (Class 647)	...	...	...	1
Smith, John M'Garvie, Sydney, Classes 250–257, 307–312, 569–576	...	...	...	1
Sparke, William E., Sydney, Class 636	...	...	...	1
Stephen, Ernest F., Sydney, Dogs (Class 651)	...	...	...	1
Stephens, Henry, Sydney, Classes 604–610	...	...	...	1
Stephens, W. J., M.A., Sydney, Classes 300–306, 400–409	...	...	...	1
Stopps, A. J., Sydney, Classes 314–329	...	...	...	1
Struth, John, Sydney, Classes 100–107, 510–519 ...	...	...	...	1
Sullivan, Thomas, Sydney, Cattle (Class 646)	...	...	...	1
Sutton, Peter, Sydney, Horses (Class 645)	...	...	...	1
Tait, John Sydney, Randwick, N.S.W., Horses (Class 645)	...	...	...	1
Tayler, Josiah, Surveyor-General's Department, N.S.W., Classes 120–122, 300–306, 314–329, and Public School exhibits, and 410–427	...	...	...	1
Thompson, T., Sydney, Poultry (Class 650)	...	...	...	1
Thorne, James, Sydney, Poultry (Class 650)	...	...	...	1
Thornton, Hon. Geo., M.L.C., Sydney, Class 313 ...	...	...	...	1
Thorpe, Thos., Goonoo Goonoo, near Tamworth, N.S.W., Wool (Classes 639–640)	...	...	...	1
Tuting, G. C., Sydney, Classes 228–241, and Ladies' Court	...	...	...	1
Vergé, M., France, Classes 569–576	...	...	...	1
Verhoustraeten, R., Belgium, Classes 100–107	...	...	...	1
Vicars, John, Tweed Manufacturer, Sydney, Wool (Classes 639–640)	...	...	...	1
Walker, J., Sydney, Classes 600–603	...	...	...	1
Wallace, D. J., Melbourne, Victoria, Sheep (Class 647)	...	...	...	1
Wallis, W., Sydney, Classes 400–409	...	...	...	1
Want, G. F., Sydney, Classes 279–283, 291–294 ...	...	...	...	1
Warner, W., Sydney, Classes 629–634	...	...	...	1
Watt, Charles, Analyst to the Government of N.S.W., Classes 200–205	...	...	...	1

DIPLOMAS AND MEDALS, Complimentary and for Services.

	Medals.			
	Gold.	Large Silver.	Small Silver.	Bronze.
Webb, Edmund, M.P., Bathurst, N.S.W., Classes 242–249	...	...	...	1
Weston, Frank J., South Creek, N.S.W., Horses (Class 645)	...	...	...	1
Whitfield, P. B., Sydney, Wool (Classes 639–640) ...	...	...	...	1
Wilkins, W., Under Secretary for Public Instruction, N.S.W., Classes 300–306	...	...	...	1
Wilton, Thos. T., Sydney, Classes 258–264, 538–545 ...	...	...	...	1
Wise, Henry, Sydney, Classes 400–409	...	...	...	1
Woodhouse, E. B., Campelltown, N.S.W., Cattle (Class 646)	...	...	...	1
Woods, John, Sydney, Horses (Class 645)	...	...	...	1
Woolcott, Chas. H., Sydney, Classes 400–409	...	...	...	1
Woolnough, Horace, Sydney, Classes 250–257	...	...	...	1
Wooster, J. F., Sydney, Classes 217–227	...	...	...	1
Wren, Joseph Enoch, Sydney, Classes 500–509	...	...	...	1
Wright, Dr. H. G. A., M.R.C.S.E., Sydney, Expert in Class 311...	...	...	...	1
Wright, John, Sydney, Poultry (Class 650)	...	...	...	1
Wyndham, R., Branxton, N.S.W., Cattle (Class 646)...	...	...	...	1
Yeo, Geo. S., Sydney, Sheep (Class 647)...	...	...	...	1
Younger, Montague, Sydney, Class 313	...	...	...	1
For Services in connection with Country Districts representation:—				
Biggar, John Gordon, Illawarra	...	...	...	1
Bradley, C. F., Albury	...	...	...	1
Broad, R. M., Bega	...	...	...	1
Browne, H. de Courcy, Mudgee	...	...	...	1
Chapman, W. J., Ulladulla	...	...	...	1
Charteris, Frederick M., Goulburn	...	...	...	1
Davies, George, Hawkesbury	...	...	...	1
Ducat, John, Kempsey	...	...	...	1
Franklin, F. A., Illawarra	...	...	...	1
Greville, W. C., Bathurst	...	...	...	1
Jamieson, T. B., Inverell	...	...	...	1
Jenkins, Charles, Yass	...	...	...	1
Jonas, Emanuel, Bombala	...	...	...	1
Kerrison, G. P., Bega	...	...	...	1
Marr, H. F., Illawarra	...	...	...	1
Page, Thomas, Clarence	...	...	...	1
Porter, Henry, Hartley	...	...	...	1
Reeve, Edward, P.M., Gosford	...	...	...	1
Richardson, Fredk. A., Spring Hill	...	...	...	1
Richardson, H. A., Parramatta	...	...	...	1
Schwartzkoff, H., Parramatta	...	...	...	1
Smith, C. F., Illawarra	...	...	...	1
Somerville, James, Kiama	...	...	...	1
Vindin, A., Maitland	...	...	...	1
Wilson, C., Armidale	...	...	...	1
For Services in connection with Poultry Exhibition:—				
Crane, junr., William	...	...	...	1
Committee in charge of N.S.W. Public Schools' Exhibits:—				
Beston, Edward	...	...	...	1
Buchanan, Thomas	...	...	...	1

DIPLOMAS AND MEDALS, Complimentary and for Services.

	Medals.			
	Gold.	Large Silver.	Small Silver.	Bronze.
Durie, Peter	...	...	...	1
Dwyer, William	...	...	...	1
Finigan, Luke Gregory	...	...	...	1
Johnson, Wm. Henry	...	...	...	1
M'Cormack, Jeremiah	...	...	...	1
M'Credie, John	...	...	...	1
Turner, George	...	...	...	1
M'Donnell, John, Attendant in charge of N.S.W. Public Schools' Exhibits	...	...	...	1
For Services in connection with Exhibition Lectures to Working Men at Sydney Mechanics' School of Arts:—				
Dowling, Edward	...	...	...	1
Officer in charge of N.S.W. Mineralogical Collection:—				
Wilkinson, Henry	...	...	...	1
For Loan of Works of Art:—				
Barker, Right Rev. Frederic, D.D.	...	...	...	1
Biddell, Mrs. M. A....	...	...	...	1
Blaxland, Miss	...	...	...	1
Fletcher, David	...	...	...	1
Frazer, The Hon. John, M.L.C.	...	...	...	1
Furse, W.	...	...	...	1
Henry, Lucien	...	...	...	1
Heron, Henry...	...	...	...	1
Jones, William Frederick	...	...	...	1
Lark, F. B.	...	...	...	1
Macome, Mrs.	...	...	...	1
Maguire, W. H.	...	...	...	1
Manning, Mrs. James	...	...	...	1
Mayhew, James	...	...	...	1
Moore, F. H....	...	...	...	1
Moore, Robert	...	...	...	1
Moring, Blanche	...	...	...	1
Morris, Mrs. Augustus	...	...	...	1
Raworth, W. H.	...	...	...	1
Simonetti, Achille	...	...	...	1
Stuart, C.	...	...	...	1
Waite, C.	...	...	...	1
Walker, F. B. Wheatley	...	...	...	1
**For Loan of Ethnological Exhibits:—*				
Australian Museum, The Trustees of	...	1	...	...
Black, A. T.	...	...	...	1
Broadmead, F. (H.M.S. Danæ)	...	...	...	1
Bundock, W. A.	...	...	...	1
Cope, H. B.	...	...	...	1
Cox, J. C., M.D.	...	...	...	1
Craig, Mrs.	...	...	...	1
Dowling, E. J. & N...	...	...	...	1
Duke, Dr. Herbert	...	...	...	1
Hardy, S. J.	...	...	...	1
Hebblewhite, S.	...	...	...	1
Henry, W. E...	...	...	...	1

* Note.—Other complimentary diplomas and medals for Ethnological Exhibits will be found noticed under the head of the respective Colonies from which the exhibits were sent.

DIPLOMAS AND MEDALS, Complimentary and for Services.

	Medals.			
	Gold.	Large Silver.	Small Silver.	Bronze.
Liversidge, Professor	...	...	...	1
London Missionary Society...	...	1	...	...
Macleay, The Hon. Wm., M.L.C...	...	...	...	1
Macdonald, A.	...	...	...	1
Mailer, A.	...	...	...	1
Moore, F. H....	...	...	...	1
Moss, Henry	...	...	...	1
Nixon, Mr. & Mrs.	...	...	...	1
Palmer, Edward G. W.	...	...	...	1
Parrott, T. S....	...	...	...	1
Pearse, Thomas S.	...	...	...	1
Reading, Edward	...	...	...	1
Roberts, Alfred, M.R.C.S.E., L.S.A.	...	...	...	1
Sloan, J. J. A. (H.M.S. Danæ)	...	...	...	1
Sunderland, Rev. J. P. (Agent London Missionary Society)	...	...	...	1
Swanston, Charles Lambert	...	...	...	1
Threlkeld, L. E.	...	...	...	1
Waterman, John	...	...	...	1
Williams, J.	...	...	...	1
For Loan of General Exhibits :—				
Chard & Co., W. H. (Collective exhibit of Sample Wools)	...	...	...	1
Cox, J. C., M.D. (Japanese Tapestry Picture) *ante* ...	...	...	..	...
Creed, Dr. (Antique Embroidery)	...	...	...	1
Durham, Sarah C. (Tapestry)	...	...	...	1
Hewlett, G. (Silk Pictures)...	...	...	...	1
Inglis, James (exhibiting Indian and other Tropical Plants grown in Sydney from imported seeds) ...	..	...	...	1
Lachaume, Jules Joseph (Mechanical Dentistry—non-competitive)	...	...	...	1
M'Donald, Alexander (exhibiting in grounds of Garden Palace tortoise "Rotumah," supposed to be over 200 years old)	...	...	...	1
Smith, R. Burdett, M.P. (exhibiting silver model of Woolner's Statue of Captain Cook—presented to exhibitor by Statue Committee)	...	...	...	1
Trethowan, Mrs. (Brocaded Silk Dress and Sampler of 1772)	...	...	...	1
Trickett, E. (exhibiting Wager-skiff)	...	...	...	1
Vicars & Co., John (exhibiting Power-loom in operation —non-competitive)	...	...	...	1
For Services in connection with Musical and other Entertainments :—				
Giorza, Cavaliere Paolo, Director of Music, *ante* ...	...	...	...	...
Broadhurst, Wm. G. (Assisting at Musical Performances)	...	...	...	1
Craven, Thomas W. (Honorary Organ Performances)...	...	...	...	1
Deinhard, Carl August, Commander H.I.M.S. "Bismark." (Loan of services of "Bismark" Band) ...	...	...	...	1
Dodds, T. H. (Secretary, Friendly Societies' Demonstrations)...	...	...	...	1
Fisher, J. C. (Trainer of Children's Choir for Opening Cantata)	...	...	...	1
Holdsworth, P. R. (Secretary, United Temperance Organization of New South Wales)	...	...	...	1

DIPLOMAS AND MEDALS, COMPLIMENTARY AND FOR SERVICES.

	Medals.			
	Gold.	Large Silver.	Small Silver.	Bronze.
Maclean, Hector R. (Conductor, Sacred Choral Association)	...	...	...	1
McCormick, Peter D. (Conductor, Temperance Societies' Demonstrations)	...	...	...	1
Packer, Charles, R.A.M. (Conductor, Sacred Choral Association)	...	...	...	1
Peirce, C. T. (Joint Secretary, Friendly Societies' Demonstrations)	...	...	...	1
Roberts, Colonel C. F. (Loan of services of Permanent Artillery Band)	...	...	...	1
Stanley, William. (Conductor, Sacred Choral Association)	...	...	...	1
Wareham, John V. (Secretary, Sacred Choral Association)	...	...	...	1
Younger, Montague. (Conductor, Sacred Choral Association)	...	...	...	1
For Literary and other Services:—				
Cook, Samuel, *Sydney Morning Herald* and *Echo* ...	...	...	...	1
Evening News and *Town and Country Journal*, The Proprietors of the	...	...	...	1
Fairfax & Sons, John, *S. M. Herald*, *Sydney Mail*, and *Echo*	...	...	...	1
Mackay, Angus, *Daily Telegraph*	...	...	...	1
Eastern and Australian Mail Steamship Company ...	...	...	...	1
Peninsular and Oriental Steam Navigation Company ...	...	...	...	1
Union Steamship Company of New Zealand	...	...	...	1
New Zealand.				
His Excellency Sir Hercules Robinson, G.C.M.G., Governor, President of the New Zealand Commission, and first President of the New South Wales Commission, ...	...	...	...	...
Commission at Sydney:—				
Hector, James, M.D., C.M.G., F.R.S., Executive Commissioner...	...	1	...	...
Webster, Alexander S., Acting Executive Commissioner	...	...	1	...
Callis, Charles, Secretary	...	...	1	...
Commission at Wellington:—				
Dransfield, Joe	...	...	1	...
Hutchison, Wm.	...	...	1	...
Krull, Frederick A....	...	...	1	...
Lemon, Dr. Charles	...	...	1	...
Levin, Wm. Hort	...	...	1	...
M'Intyre, Daniel	...	...	1	...
Thompson, J. S. M'Dewell...	...	...	1	...
For Loan of Work of Art:—				
Hislop, A. R., Wellington. (For Loan of Tapestry Picture executed by Mary, Queen of Scots) ...	...	...	...	1

DIPLOMAS AND MEDALS, COMPLIMENTARY AND FOR SERVICES.

	Medals.			
	Gold.	Large Silver.	Small Silver.	Bronze.
Queensland.				
His Excellency Sir Arthur E. Kennedy, K.C.M.G., C.B., Governor, President of the Queensland Commission ...	...	1	...	...
Palmer, The Hon. A. H., Colonial Secretary	...	...	1	...
Commission :—				
Lukin, Gresley, Executive Commissioner at Sydney ...	...	1	...	...
Amherst, F. F., M.P.	...	...	1	...
Davenport, G. H.	...	...	1	...
Feez, Albrecht, M.P.	...	...	1	...
Gedye, Charles T.	...	...	1	...
Hill, C. Lumley, M.P.	...	...	1	...
King, George	...	...	1	...
Lambert, The Hon. F. W., M.L.C.	...	...	1	...
Massie, H. H.	...	...	1	...
Massie, R. G.	...	...	1	...
Montefiore, E. L.	...	...	1	...
Morehead, B. D., M.P.	...	...	1	...
Mort, Henry	...	...	1	...
Norton, A., M.P.	...	...	1	...
Simpson, G. M.	...	...	1	...
Stevenson, John, M.P.	...	...	1	...
Walsh, John	...	...	1	...
Layton, George E., Secretary	...	...	1	...
Palmer, The Hon. A. H., Colonial Secretary. (For Ethnological Collection)	...	...	...	1
Queensland Government. (For Ethnological Collection) ...	...	...	...	1
South Australia.				
His Excellency Sir William Francis Jervois, G.C.M.G., C.B., Governor, &c., President of the South Australian Commission	...	1	...	...
Commission :—				
Davenport, Samuel, Executive Commissioner	...	1	...	...
Atkinson, Thomas, M.P.	...	...	1	...
Bonney, C.	...	...	1	...
Boothby, J., C.M.G.	...	...	1	...
Bright, H. E., M.P.	...	...	1	...
Cavenagh, W., M.P.	...	...	1	...
Coates, C. J.	...	...	1	...
Colton, J. W.	...	...	1	...
Conigrave, J. F.	...	...	1	...
Crompton, J.	...	...	1	...
Crozier, The Hon. John, M.L.C.	...	...	1	...
Everard, W.	...	...	1	...
Fraser, Hugh, M.P.	...	...	1	...
Goyder, G. W.	...	...	1	...

DIPLOMAS AND MEDALS, COMPLIMENTARY AND FOR SERVICES.

	Medals.			
	Gold.	Large Silver.	Small Silver.	Bronze.
Hackett, W.	...	...	1	...
Hartley, J. A.	...	...	1	...
Hickson, R. R. P.	...	...	1	...
Hogarth, The Hon. Thos., M.L.C.	...	...	1	...
Holden, J. A.	...	...	1	...
McEwin, George	...	...	1	...
Mais, H. C.	...	...	1	...
Mellor, J. F.	...	...	1	...
Morgan, The Hon. Wm., M.L.C.	...	...	1	...
Murray, A. B.	...	...	1	...
Peacock, Caleb, M.P.	...	...	1	...
Pitts, E. W.	...	...	1	...
Rees, Rowland, M.P.	...	...	1	...
Ross, R. D., M.P.	...	...	1	...
Sabine, C.	...	...	1	...
Sanderson, F. J.	...	...	1	...
Schomburgk, Dr.	...	...	1	...
Simms, W. K., M.P.	...	...	1	...
Smith, E. T., M.P.	...	...	1	...
Todd, Charles, C.M.G.	...	...	1	...
Townsend, W., M.P.	...	...	1	...
Waterhouse, F. G.	...	...	1	...
West-Erskine, W. A. E., M.P.	...	...	1	...
Twopeny, R. E. N., Secretary	...	...	1	...
The Government of South Australia. (For Ethnological Collection)	...	...	...	1
Straits Settlements.				
His Excellency Colonel A. E. Anson, R.A., C.M.G., Singapore (Administering the Government)	...	1	...	...
Smith, The Hon. Cecil Clementi, C.M.G., Colonial Secretary, Singapore	...	...	1	...
Clementi, Major, Bengal Staff Corps, Executive Commissioner	...	1	...	...
The Government of Straits Settlements, Singapore. (For Ethnological Collection)	...	...	...	1
Switzerland.				
His Excellency the President of the Swiss Confederation ...	...	1	...	...
Eugster, Ernst, Representative Agent at Sydney	...	1	...	...
Tasmania.				
His Excellency Sir Frederick A. Weld, K.C.M.G., Governor, &c., President of the Tasmanian Commission	...	1	...	...
Commission at Sydney :—				
Jennings, Sir Patrick Alfred, K.C.M.G., Honorary Executive Commissioner	...	1	...	...
Blachmann, Hermann J. B. F., Acting Secretary ...	...	...	...	...

DIPLOMAS AND MEDALS, Complimentary and for Services.

	Medals.			
	Gold.	Large Silver.	Small Silver.	Bronze.
Commissions at Hobart Town and Launceston:—				
Wilson, The Hon. Sir James M., K.C.M.G., Chairman	...	...	1	...
Addison, John Elliot	...	..	1	...
Agnew, The Hon. James Wilson, M.D., M.L.C. ...	...	...	1	...
Aikenhead, Wm.	...	...	1	...
Burgess, Wm. Henry	...	...	1	...
Coote, Audley, M.P...	...	...	1	...
Crisp, George...	...	...	1	...
Douglas, Adye, M.P...	...	...	1	...
Dowdell, Charles	...	...	1	...
Edgell, Henry	...	...	1	...
Gilmore, The Hon. George, M.E.C.	...	...	1	...
Green, Wm. Patrick...	...	...	1	...
Guesdon, Wm. Algernon	...	...	1	...
Harrap, Alfred	...	...	1	...
Hartnoll, junr., William	...	...	1	...
Just, Thomas Cook, M.P.	...	...	1	...
Lette, Henry Elwes, M.P.	...	...	1	...
Macfarlane, James	...	...	1	...
M'Gregor, Alexander	...	...	1	...
Perkins, John...	...	...	1	...
Ritchie, William	...	...	1	...
Sadler, Robert James	...	...	1	...
Scott, James, M.P.	...	...	1	...
Turner, William, Chairman of Launceston Branch ...	...	...	1	...
Hull, Hugh Munro, Secretary to the Commission ...	...	...	1	...
Rocher, C. W., Secretary to Launceston Branch ...	...	...	1	...
Tasmanian Commissioners (For Ethnological Collection)	...	...	...	1
Mechanics' Institute, Launceston (Loan Work of Art)	...	...	...	1
United States.				
The Government of the United States...	1	...	...	...
His Excellency Rutherford B. Hayes, President of the United States...	...	1	...	...
The Honourable William M. Evarts, Secretary of State ...	...	1	...	...
The Governor of the State of California	...	1	...	...
Commission at Sydney:—				
Spencer, O. M., Consul-General, President	...	1	...	...
Cox, Christopher C., M.D., Chief Executive Officer ...	...	1	...	...
Williams, Edward H., M.D., Commissioner and Executive Officer	...	...	1	...
Morris, Augustus, Commissioner and Executive Officer	...	...	1	...
Lord, Samuel P., Commissioner and Executive Officer...	...	...	1	...
Harte, Gregory P., Honorary Acting Commissioner and Executive Officer	...	...	1	...
Manson, Donald, Honorary Acting Commissioner and Executive Officer	...	...	1	...
Bromley, Edward R. C., Acting Secretary	...	...	...	1
Bleasdale, Rev. John J., D.D., San Francisco	...	...	1	...
Cameron & Co., R. W., New York	...	...	1	...
Jennings, John, San Francisco	...	...	1	...
McCormick, C. H. and L. J., Chicago, Ill. (For lending Agricultural Machinery)	...	...	...	1
Williams, Dimond, & Co., San Francisco. (For services as Agents for Pacific Steamship Co.)...	...	...	...	1

DIPLOMAS AND MEDALS, COMPLIMENTARY AND FOR SERVICES.

	Medals.			
	Gold.	Large Silver.	Small Silver.	Bronze.
Victoria.				
His Excellency the Most Hon. Marquis of Normanby, G.C.M.G., Governor, &c.	...	1	...	...
Commission at Sydney:—				
Casey, The Hon. J. J., C.M.G., M.P., Executive Commissioner...	...	1	...	...
Bannister, R. D., Secretary	...	...	1	...
Commission at Melbourne:—				
Clarke, The Hon. W. J., M.L.C., President	...	1	...	...
Munro, The Hon. James, M.P., Vice-President... ...	...	...	1	...
O'Loghlen, The Hon. Sir Bryan, Bart., Vice-President...	...	...	1	...
Verdon, The Hon. Sir George F., K.C.M.G., C.B., F.R.S., Vice-President...	...	...	1	...
Wilson, The Hon. Sir Samuel, M.L.C., Vice-President	...	...	1	...
Beckx, Gustav, Consul-General for Belgium	...	...	1	...
Bosisto, Joseph, M.P.	...	...	1	...
Loader, The Hon. Thomas	...	...	1	...
Panton, Joseph Anderson	...	...	1	...
Patterson, The Hon. J. B., M.P.	...	...	1	...
Pigdon, John	...	...	1	...
Smith, Alexander K., C.E., M.P....	...	...	1	...
Thomson, William Kerr	...	...	1	...
Vale, The Hon. W. M. K., M.P.	...	...	1	...
Were, J. B., Consul for Brazil, &c.	...	...	1	...
Wilson, The Hon. William, M.L.C.	...	...	1	...
Woods, The Hon. John, M.P.	...	...	1	...
Levey, George Collins, C.M.G., Secretary, Melbourne Exhibition, 1880	...	1	...	...
Hill, Thomas B., Assistant Secretary, Melbourne Exhibition, 1880	...	...	1	...
Tayler, Lloyd, F.R.I.B.A. (exhibiting Work of Art) ...	...	...	...	1
Western Australia.				
His Excellency the Governor	...	1	...	...
Goldsworthy, The Hon. Roger T., C.M.G., Colonial Secretary	...	...	1	...
The Government of Western Australia. (For Ethnological Collection)	...	...	1	...

SPECIAL MEDALS TO EXHIBITORS.

THE following list gives all medals, other than bronze, which were the General Exhibition Medals, presented to Exhibitors in various Countries and Colonies, having been allotted by the Committee on Judging and Awards and approved by the Commission, on account of the greater extent and importance of certain exhibits which assumed somewhat of a national or representative character—such as the Bohemian Glass-ware exhibit of Count Harrach, of Austria. These special medals given to general exhibitors occupy a kind of intermediate position between medals for services and those for exhibits, and some of them will also be found in the "services" lists. Thus, for instance, the Chamber of Commerce of Brünn, in Moravia, receive a medal in connection with their award for the collective exhibit of Moravian Woollen Goods, and yet this medal is in recognition of services in collecting the representative exhibit from amongst the woollen manufacturers of Brünn. One of the New South Wales exhibits, for which the owner received a gold medal, was that of Joseph Marshall for ale, but this case was exceptional; a gold medal had been specially offered for the best ale produced in the Colony and was thus allotted, although this competition was not international. The subjoined list does not give the gold and silver medals obtained by exhibitors in the Live Stock Section as these were allotted in accordance with definite rules, explained in the report preceding the Agricultural department and in a note prefixed to the awards in each Stock Section, by which certain degrees of award recommended by the Judges became entitled to medals of certain decided values. The Commission of the Exhibition in the award of medals in these sections connected with the exterior shows were in a great measure bound by the programme for an International Exhibition originally issued by the N.S.W. Agricultural Society. These circumstances are fully explained in the remarks prefatory to the general report on Agriculture.

Country.	Name.	Address.	Exhibit.	Gold.	Large Silver.	Small Silver.
Austria	Harrach's (Graf Von) Glas-fabrik.	Neuwelt - Tannwald, in Bohemia.	Glassware, &c.	1	...	...
	Handels und Gewerbe Kammer.	Brünn in Moravia	Woollen Manufactures	...	1	...
	Munthe, L.	Düsseldorf	Works of Art.	...	...	1
	Neumann, Heinrich L. ...	Vienna & Sydney	Collection of Works of Art.	...	1	...
	Rädler and Pilz	Vienna	China and Porcelain-ware.	...	...	1
	Schödl, Max	Vienna	Works of Art.	...	...	1
	Wagner, Franz	Meistersdorf, Ulrichstahl, Bohemia.	Bohemian Glassware.	...	...	1
Belgium	Agence Générale de Vente des Glaceries Belges.	Brussels	Glass and Glassware exhibits.	...	...	1
	Là Société Cockerill	Seraing, near Liège.	Iron Manufactures.	1	...	...
	Leopold II, His Majesty..	.....	Map of Africa.	...	1	...
	Robie, Jean	Brussels	Work of Art (Fruit Piece).	...	...	1
Canada	Government of Ontario ...	Toronto, Ontario	Educational Exhibits.	1	...	...
France	Bureau d'État des Beaux-Arts.	Paris	Works of Art (for services in showing).	...	1	...
	Bonnefoy, Henri.....	Paris	Work of Art..	...	...	1

SPECIAL MEDALS TO EXHIBITORS.

Country.	Name.	Address.	Exhibit.	Gold.	Large Silver.	Small Silver.
France ...	Cristofle et Cie.	Paris	Silversmiths' ware.	...	...	1
	Lefèbvre, Jules Joseph ...	Paris	Work of Art..	...	...	1
	Maire, Valentine.....	Paris	Paintings on Faïenceware.	...	...	1
	Manufacture Nationale des Gobelins	Paris	Tapestries (for services in showing).	...	1	...
	Manufacture Nationale de Beauvais	Beauvais	Tapestries (for services in showing).	...	1	...
	Thirion, Eugène	Paris	Work of Art..	...	...	1
	Vilmorin, Andrieux et Cie.	Paris	Seeds, &c.....	1	...	...
Great Britain	Armstrong & Co., Sir Wm.	Newcastle-on-Tyne.	Armaments, &c.	1	...	...
	Arrowsmith & Co., A. J..	London	Furniture	...	...	1
	Beavis, Richard	London	Work of Art..	...	...	1
	Brett, John	London	Work of Art..	...	...	1
	Brown & Co., J.	Sheffield	Iron Manufactures.	1	...	...
	Crossley & Sons, John ...	Halifax	Carpets, Rugs, &c.	...	...	1
	Fowler & Co., John	Leeds	Agricultural Implements.	1	...	...
	Hadfield Steel Foundry Co.....	Sheffield	Steel Manufactures.	...	...	1
	Halswelle, Keeley	London	Works of Art..	...	...	1
	Hardy Brothers	London	Jewellery	...	...	1
	Jennings, George	Lambeth	Sanitary Furniture.	...	...	1
	Jones & Sons, Wm.	Warrington, Lancashire.	Machinery ...	...	...	1
	Martin, Hall, & Co.	Sheffield	Silver Plate, Electro Plate, &c.	...	...	1
	Moore Brothers	Longton, Staffordshire.	Artistic Porcelain.	...	...	1
	Powell, Bishop, & Stonier	Hanley, Staffordshire.	China and Earthenware.	...	...	1
	Priestman Bros.	London & Hull..	Crane and other hoisting apparatus.	...	...	1
	Society for the Encouragement of Arts, &c.	London	Art and Industrial Exhibits	1	...	...
	South Kensington Museum	London	Art and Industrial Exhibits	1	...	...
	Tomkinson & Adam	Kidderminster...	Carpets	...	...	1
	Walker & Sons, Wm. ...	London	Furniture	...	...	1
	Ward & Co., Marcus.....	London and Belfast.	Stationery and Chromo-lithography.	...	...	1
	Waterlow & Sons	London	Stationery and Chromo-lithography.	...	...	1
	Webb & Sons, Thomas ...	Stourbridge	Ceamrics, &c...	1	...	...

SPECIAL MEDALS TO EXHIBITORS.

Country.	Name.	Address.	Exhibit.	Gold.	Large Silver.	Small Silver.
Germany ...	Eschke, Hermann	Berlin	Work of Art..	...	...	1
	Gesammtvorstand der Deutschen Kunstgenossenschaft.	Hamburg	Fine Arts Collection (for services in showing).	...	1	...
	Krupp, Friedrich	Essen a.d. Ruhr.	Armaments, &c.	1	...	...
	Ruths, J. G. V.	Hamburg	Work of Art..	...	...	1
	Schleicher, M. L.	Berlin	Marble Manufactures.	...	...	1
Japan	Collective Exhibit from Japan.	Tokio	Bronzes and Carvings in Wood, &c.	...	1	...
	Insatsu Kioku.....	Government Printing Office, Tokio.	Printing, &c...	...	...	1
	Miyagawa Kozan	Yokohama	Porcelain and Faïence Ware	...	...	1
Italy	Gajani Egisto	Florence	Furniture ...	...	...	1
	Manifattura Ginori.....	Florence	Porcelain ...	...	...	1
N.S. Wales...	Colonial Sugar Co.....	Sydney, N.S.W.	N.S.W. Sugars	1	...	...
	Department of Mines ...	Sydney, N.S.W.	Mineralogical Collection.	1	...	...
	Electric Telegraph Department.	Sydney, N.S.W.	Collection of Telegraphic Appliances.	...	1	...
	Thomas Richards, Government Printer.	Sydney, N.S.W.	General Exhibit of Bookbinding, Letterpress and Lithographic Printing, and Photography.	...	1	...
	Hern, Charles E.	Sydney, N.S.W.	Works of Art	...	...	1
	Lawson, John	Sydney, N.S.W.	Furniture ...	...	...	1
	Marshall, Joseph	Sydney, N.S.W.	N.S.W. Ales..	1	...	...
	Rowan, Mrs. Ellis	Sydney, N.S.W	Flower Paintings.	...	...	1
Horticultural Section.						
	Baptist, John	Sydney, N.S.W.	Plants, &c. ...	...	...	1
	Broomfield, John	Sydney, N.S.W.	Plants, &c. ...	...	...	1
	Catlett, W. H.	Sydney, N.S.W.	Plants, &c. ...	...	...	1
	Eales, John	Morpeth, N.S.W.	Plants, &c. ...	...	...	1
	Graham & Co.....	Sydney, N.S.W.	Plants, &c. ...	...	...	1
	Stieme, W.	Fairfield, N.S.W.	Fruits.....	...	...	1
United States	American Watch Co. ...	Waltham, Mass.	Watches	1	...	...
	Edgemoor Iron Works Co.	Wilmington, Del.	American Truss Bridge.	...	...	1
	Gorham Manufacturing Co.	Providence, Rhode Island.	Silverware ...	...	...	1
	Reed and Barton.....	Taunton, Mass...	Silverware ...	...	...	1
	Whittier Machine Co. ...	Boston, Mass. ...	Passenger Elevator.	...	1	...
	Winchester Repeating Arms Co.	Newhaven, Con.	Firearms	...	...	1
Victoria	Bosisto, Joseph	Melbourne, Victoria.	Eucalyptus Products.	1	...	...

SYNOPSIS OF THE CLASSIFICATION OF EXHIBITS.

DEPARTMENTS.	CLASSES.	GROUPS.
I. MINING...	100—107	Minerals, Ores, Stone, Mining Products.
	110—114	Metallurgical Products.
	120—122	Mining Engineering.
II. MANUFACTURES	200—205	Chemical Manufactures.
	206—216	Ceramics, Pottery, Porcelain, Glass, &c.
	217—227	Furniture, &c.
	228—234	Yarns and Woven Goods of Vegetable or Mineral Materials.
	235—241	Woven and Felted Goods of Wool, &c.
	242—249	Silk and Silk Fabrics.
	250—257	Clothing, Jewellery, &c.
	258—264	Paper, Blank Books, Stationery.
	265—270	Weapons, &c.
	272—278	Medicine, Surgery, Prothesis.
	279—283	Hardware, Edge Tools, Cutlery, and Metallic Products.
	284—290	Fabrics of Vegetable, Animal, or Mineral Materials.
	291—294	Carriages, Vehicles, and Accessories.
III. EDUCATION AND SCIENCE ...	300—306	Educational Systems, Methods, and Libraries.
	307—313	Scientific and Philosophical Instruments and Methods.
	314—319	Engineering, Architecture, Maps, &c.
	320—329	Physical, Social, and Moral Condition of Man.
IV. ART	400—405	Sculpture.
	406—409	Painting.
	410—414	Engraving and Lithography.
	415—418	Photography.
	419—422	Industrial and Agricultural Designs, &c.
	423—427	Ceramic Decorations, Mosaics, &c.

SYNOPSIS OF THE CLASSIFICATION OF EXHIBITS—*continued.*

DEPARTMENTS.	CLASSES.	GROUPS.
V. MACHINERY...	500—509	Machines, Tools, &c., of Mining, Chemistry, &c.
	510—519	Machines and Tools for working Metal, Wood, and Stone.
	520—528	Machines and Implements of Spinning, Weaving, &c.
	529—537	Machines, &c., used in sewing, making Clothing, &c.
	538—545	Machines for Printing, making Books, Paper-working, &c.
	546—551	Motors, Power Generators, &c.
	552—560	Hydraulic and Pneumatic Apparatus.
	561—568	Railway Plant, Rolling Stock, &c.
	569—576	Machinery used in preparing Agricultural Products.
	577—584	Aerial, Pneumatic, and Water Transportation.
	585	Machinery and Apparatus especially adapted to the requirements of the Exhibition.
VI. AGRICULTURE	600—603	Animal Products, Land and Marine (used as Food).
	604—610	Animal Products, Land and Marine (used as Materials).
	611—612	Fish Culture and Apparatus.
	613—620	Arboriculture and Forest Products.
	621—622	Pomology.
	623—627	Agricultural Products.
	629—634	Vegetable Products (used as Food or Materials).
	635—638	Wines—Spirituous, Fermented, and other Drinks.
	639—644	Textile Substances of Vegetable or Animal origin.
	645—652	Land Animals.
	653—658	Machines, Implements, and Processes of Manufacture.
	659—662	Agricultural Engineering and Administration.
	663—666	Tillage, and General Management.
VII. HORTICULTURE	700—709	Ornamental Trees, Shrubs, and Flowers.
	710—716	Hot Houses, Conservatories, Graperies.
	717—719	Garden Tools, Accessories of Gardening.
	720—724	Garden Designing, Construction, and Management.

CLASSIFICATION OF EXHIBITS.

DEPARTMENT I.

MINING, METALLURGY, AND THEIR PRODUCTS.

GROUP—Minerals, Ores, Building-stones, and Mining Products.

CLASS

100. Minerals, Ores, &c.—Samples of Reef, and Alluvial Gold, and Associated Minerals; Ores of Silver, Copper, Tin, Antimony, Lead, Nickel, Zinc, Cobalt, &c., with associated rocks; Collections of Minerals systematically arranged; Geological Collections; Gems and Precious Stones.

101. Mineral Combustibles.—Coal, Anthracite, Semi-bituminous and Bituminous samples of Coal, showing thickness of seams; Coal Waste and Pressed Coal, Coke, Albertite, Asphalt and Asphaltic Rocks, Bitumen, Mineral Tar, Crude Petroleum.

102. Building-stones.—Marbles, Slates, &c., rough, hewn, sawed, or polished, for buildings, bridges, walls, or other constructions, or interior decorations, or for furniture.
Marble.—White, black, or coloured, used in buildings, decorations, statuary, and monuments, or furniture, in blocks or slabs, not manufactured.

103. Lime, Cement, and Hydraulic Cement, raw and burned, accompanied by specimens of the crude rock or material used; also Artificial Stone, Concrete, Beton.
Specimens of Lime, Mortar, and Mixtures, with illustrations of the processes of mixing, &c., Hydraulic, and other Cement.
Beton mixtures and results, with illustrations of the processes.
Artificial Stone for building purposes, buildings, blocks, cornices, &c.
Artificial Stone Mixtures, for pavements, walls, or ceilings.
Plasters, Mastics, &c.

104. Clays, Kaolin, Silex, and other materials for the manufacture of porcelain, faïence, and of glass bricks, terra-cotta and tiles and fire-brick. Refractory Stones for lining furnaces, sandstone, steatite, &c., and refractory furnace materials.

105. Graphite, crude and refined, for polishing purposes, for lubricating, electro-typing, photography, pencils, &c.

106. Lithographic Stones, Hones, Whetstones, Grindstones, Grinding and Polishing Materials, Sand, Quartz, Garnet, crude Topaz, Diamond, Corundum, Emery in the rock and pulverized, and in assorted sizes and grades.

107. Mineral Waters, Artesian Well Water, Natural Brines, Saline and Alkaline Efflorescences and Solutions.
Mineral Fertilizing Substances, Gypsum, Phosphate of Lime, Marls, Shells, Coprolites, &c., not manufactured.

GROUP—Metallurgical Products.

110. Precious Metals.

111. Iron and Steel, in the pig, ingot, and bar, plates, and sheets, with specimens of slags, fluxes, residues, and products of working.

112. Tin and Copper, in ingots, bars, and rolled, with specimens illustrating its various stages of production.

113. Lead, Zinc, Antimony, and other Metals, the result of extractive processes.

114. Alloys used as materials, Brass, Nickel, Silver, Solder, &c.

GROUP—Mine Engineering, Models, Maps, and Sections.

120. Surface and underground surveying and plotting, projection of underground work, location of shafts, tunnels, &c., surveys for aqueducts and for drainage.
Boring and drilling rocks, shafts, and tunnels, &c.
Construction, sinking and lining, shafts by various methods, driving and timbering tunnels, and the general operations of opening, stoping, and breaking down ore, timbering, lagging, and masonry.

CLASS

Hoisting and delivering at the surface—rock, ore, or miners.
Pumping and draining, by engines, buckets, or by adits.
Ventilating and lighting.
Subaqueous mining, blasting, &c.
Hydraulic mining, and the various processes and methods of sluicing and washing auriferous gravel and other superficial deposits.
Quarrying.

121. Models of mines, of veins, &c.

122. Geological Maps, sections, and plans of gold-fields.

DEPARTMENT II.

MANUFACTURES.

GROUP—Chemicals.

200. Chemicals,—pharmaceutical preparations. Mineral Acids, and the methods of manufacture. Sulphuric, Nitric, and Hydrochloric Acids.
The common commercial Alkalies, Potash, Soda, and Ammonia, with their carbonates.
Salt and its production. Salt from deposits—native salt, salt by solar evaporation from sea-water. Salt by evaporation from water of saline springs or wells. Rock Salt ; Ground and Table Salt.
Bleaching Powders and Chloride of Lime.
Yeast Powders, Baking Powders.

201. Oils, Soaps, Candles, illuminating and other Gases.
Oils from mineral, animal, and vegetable sources. Refined Petroleum, Benzine, Naphtha, and other products of the manufacture.
Oils from various seeds, refined and of various degrees of purity—Olive Oil, Cotton-seed Oil, Palm Oil. Animal Oils, of various kinds in their refined state.
Oils prepared for special purposes besides lighting and for food. Lubricating Oils.
Soap and detergent preparations—Candles, Stearine, Glycerine, Paraffine, &c., Spermaceti.
Illuminating Gas and its manufacture, Oxygen Gas, and its application for heating, lighting, metallurgy, and as a remedial agent.
Chlorine and Carbonic Acid.

202. Paints, Pigments, Dyes, Colours, Turpentine, Varnishes, Printing Inks, Writing Inks, Blacking.

203. Flavouring Extracts, Essences, Perfumery, Pomades, Cosmetics.

204. Explosive and Fulminating Compounds; in small quantities only, and under special regulations, shown in the building only by empty cases and cartridges. Black Powder, of various grades and sizes. Nitro-glycerine, and the methods of using and exploding. Giant Powder—dynamite, dualin, tri-nitro-glycerine.

205. Pyrotechnics, for display, signalling, missiles.

GROUP—Ceramics, Pottery, Porcelain, &c.

206. Bricks, Drain Tiles, Terra Cotta, and Architectural Pottery.

207. Fire-clay Goods, Crucibles, Pots, Furnaces, Chemical Stoneware.

208. Tiles—plain, enamelled, encaustic; Geometric Tiles and Mosaics; Tiles for pavements and for roofing, &c.

209. Porcelain for purposes of construction ; Hardware Trimmings, &c.

210. Stone China, for chemists, druggists, &c. ; Earthenware, Stoneware, Faience, &c.

211. Majolica and Palissy ware.

212. Biscuitware, Parian, &c.

213. Porcelain for table and toilet use and for decoration.

CLASSIFICATION OF EXHIBITS.

GROUP—Glass and Glassware.

CLASS

214. Glass used in construction and for mirrors. Window-glass of various grades of quality and size. Plate-glass, rough, and ground or polished. Toughened glass.

215. Chemical and pharmaceutical glassware, vials, bottles.

216. Decorative glassware.

GROUP—Furniture and objects of general use in Construction and in Dwellings.

217. Heavy furniture—Chairs, tables, parlour and chamber suites, office and library furniture, vestibule furniture, church furniture and decoration.

218. Table furniture—Glass, china, silver, silver-plate, tea and coffee sets, urns, samovars epergnes.

219. Mirrors, stained and enamelled glass, cut and engraved window glass, and other decorative objects.

220. Gilt cornices, brackets, picture-frames, &c.

221. The Nursery and its accessories, Children's Chairs, Walking Chairs.

222. Apparatus and Fixtures for Heating and Cooking—Stoves, Ranges, Heaters, &c.

223. Apparatus for Lighting—Gas Fixtures, Lamps, &c.

224. Kitchen and Pantry Utensils, Tinware, and Apparatus used in Cooking—(exclusive of Cutlery).

225. Laundry Appliances—Washing Machines, Mangles, Clothes-wringers, Clothes-bars, Ironing-tables.

226. Bath-room and Water-closet, Shower-bath, Earth-closet.

227. Manufactured parts of buildings—Sash, Blinds, Mantels, Metal-work, &c.

GROUP—Yarns and Woven Goods of Vegetable or Mineral Materials.

228. Woven Fabrics of Mineral origin—Wire-cloth, Sieve-cloth, Wire Screens, Bolting Cloth.
Asbestos Fibre, spun and woven, with the clothing manufactured from it.
Glass Thread, Floss, and Fabrics.

229. Coarse Fibres, of Grass, Ratan, Cocoa-nut, and Bark.
Matting, Chinese, Japanese, Palm-leaf, Grass, and Rushes.
Floor-cloths of Ratan and Cocoa-nut Fibres, Aloe Fibre, &c.

230. Cotton Yarns and Fabrics, bleached and unbleached.
Cotton Sheeting and Shirting, plain and twilled.
Cotton Canvas and Duck Awnings, Tents.

231. Dyed Cotton Fabrics, exclusive of Prints and Calicoes.

232. Cotton Prints and Calicoes, including Handkerchiefs, Scarfs, &c.

233. Linen and other Vegetable Fabrics, uncoloured or dyed.

234. Floor Oil Cloths, and other Painted and Enamelled Tissues, and Imitation of Leather, with a Woven Base.

GROUP—Woven and Felted Goods of Wool and Mixture of Wool.

235. Card Wool Fabrics, Yarns, Broadcloth, Doeskins, and Fancy Cassimeres.
Felted Goods.

236. Flannels—Plain Flannels, Domets, opera and fancy.

237. Blankets, Robes, and Shawls.

238. Combined Wool Fabrics—Worsteds, Yarns, Dress Goods for Women's wear, Delaines, Serges, Poplins, Merinos.

CLASSIFICATION OF EXHIBITS.

CLASS

239. Carpets, Rugs, &c.—Brussels, Melton, Tapestry, Tapestry Brussels, Axminster, Venetian, Ingrain, Felted Carpetings, Druggets, Rugs, &c.

240. Hair, Alpaca, Goat's Hair, Camel's Hair, and other Fabrics, mixed or unmixed with wool.

241. Printed and Embossed Woollen Cloths, Table-covers, Patent Velvets.

GROUP—Silk and Silk Fabrics, and mixtures in which Silk is the predominating Material.

242. Cocoons and Raw Silk as reeled from the Cocoon, Thrown or Twisted Silks in the gum.

243. Thrown or Twisted Silks, boiled off or dyed, in hanks, skeins, or on spools.

244. Spun Silk Yarns and Fabrics, and the materials from which they are made.

245. Plain Woven Silks, Lustrings, Sarsnets, Satins, Serges, Foulards, Tissues for Hat and Millinery purposes, &c.

246. Figured Silk Piece Goods, Woven or Printed Upholstery Silks, &c.

247. Crapes, Velvets, Gauzes, Cravats, Handkerchiefs, Hosiery, Knit Goods, Laces, Scarfs, Ties, Veils, all descriptions of cut and made-up Silks.

248. Ribbons, Plain, Fancy, and Velvet.

249. Bindings, Braids, Cords, Galloons, Ladies' Dress Trimmings, Upholsterers', Tailors', Military, and Miscellaneous Trimmings.

GROUP—Clothing, Jewellery, and Ornaments—Travelling Equipments.

250. Ready-made Clothing, Knit Goods and Hosiery, Military Clothing, Church Vestments, Costumes, Waterproof Clothing, and Clothing for special objects.

251. Hats, Caps, Boots and Shoes, Gloves, Mittens, &c. ; Straw, Palm-leaf Hats, Bonnets and Millinery.

252. Laces, Embroideries, and Trimmings for Clothing, Furniture, and Carriages.

253. Jewellery and Ornaments worn upon the person.

254. Artificial Flowers, Coiffures, Buttons, Pins, Trimmings, Hooks and Eyes, Fans, Umbrellas, Sunshades, Walking-canes, Pipes, and small objects of dress or adornment, exclusive of jewellery. Toys and fancy articles.

255. Fancy Leather Work, Pocket Books, Toilet Cases, Travelling Equipments, Valises, and Trunks.

256. Furs.

257. Historical Collection of Costumes, National Costumes.

GROUP—Paper, Blank Books, and Stationery.

258. Stationery for the Desk, Stationers' Articles, Pens, Pencils, Inkstands, and other Apparatus of Writing and Drawing.

259. Writing Paper and Envelopes, Blank Book Paper, Bond Paper, Tracing Paper, Tracing Linen, Tissue Paper, &c., &c.

260. Printing Paper for Books, Newspapers, &c., Wrapping Paper of all grades, Cartridge and Manilla Paper, Paper Bags.

261. Blank Books—Sets of Account Books, Specimens of Ruling and Binding, including Blanks, Bill-heads, &c., Book Binding.

262. Cards—Playing Cards, Cardboard, Binders' Board, Pasteboard, Paper or Cardboard Boxes.

263. Building Paper, Pasteboard for Walls, Cane Fibre, Felt for Car Wheels, Ornaments, &c.

264. Wall Papers, Enamelled and Coloured Papers, Imitation of Leather, Wood, &c.

CLASSIFICATION OF EXHIBITS.

GROUP—Military and Naval Armaments, Ordnance, Firearms, and Hunting Apparatus.

CLASS

265. Military Small Arms, Muskets, Pistols, and Magazine Guns, with their ammunition.
266. Light Artillery, Compound Guns, Machine Guns, Mitrailleuses, &c.
267. Heavy Ordnance and its accessories.
268. Knives, Swords, Spears, and Dirks.
269. Firearms used for Sporting and Hunting, also other implements for the same purpose.
270. Traps for Game, Birds, Vermin, &c.

GROUP—Medicine, Surgery, Prothesis.

272. Medicines—Officinal (in any authoritative Pharmacopœia) articles of the Materia Medica, Preparations Unofficinal.
273. Dietetic Preparations, as Beef Extract and other articles intended specially for the Sick.
274. Pharmaceutical Apparatus.
275. Instruments for Physical Diagnosis, Clinical Thermometers, Stethoscopes, Ophthalmoscopes, &c. (except Clinical Microscopes, for which see Class 311).
276. Surgical Instruments and Appliances, with Dressings, Apparatus for Deformities, Prothesis, Obstetrical Instruments.
277. Dental Instruments and Appliances.
278. Vehicles and Appliances for the Transportation of the Sick and Wounded during Peace and War, on shore or at sea.

GROUP—Hardware, Edge Tools, Cutlery, and Metallic Products.

279. Hand Tools and Instruments used by Carpenters, Joiners, and for Wood and Stone in general. Miscellaneous Hand Tools used in industries such as Jewellers', Engravers', &c.
280. Cutlery—Knives, Penknives, Scissors, Razors, Razor Strops, and Implements sold by Cutlers.
281. Emery- and Sand-paper, Polishing Powders, Polishing and Burnishing Stones.
282. Metal Hollow Ware, Ornamental Castings.
283. Hardware used in construction, exclusive of Tools and Implements. Spikes, Nails, Screws, Tacks, Bolts, Locks, Latches, Hinges, Pulleys, Plumbers' and Gasfitters' Hardware, Furniture Fittings, Ships' Hardware, Saddlers' Hardware, and Harness Fittings and Trimmings.

GROUP—Fabrics of Vegetable, Animal, or Mineral Materials.

284. India-rubber Goods and Manufactures.
285. Brushes.
286. Ropes, Cordage.
287. Flags, Insignia, Emblems.
288. Wooden and Basket Ware, Papier Mâché.
289. Undertakers' Furnishing Goods, &c.
290. Galvanized Iron Work.

CLASSIFICATION OF EXHIBITS.

GROUP—Carriages, Vehicles, and Accessories.

(For Farm Articles and Railway Carriages, see Departments of Agriculture and Machinery.)

CLASS

291. Pleasure Carriages.

292. Travelling Carriages, Coaches, Stages, Omnibuses, Hearses, Bath Chairs, Velocipedes, Baby Coaches.

293. Vehicles for Movement of Goods and heavy articles, Carts, Waggons, Trucks.

294. Carriage and Horse Furniture, Harness and Saddlery, Whips, Spurs, Horse Blankets, Carriage Robes, Rugs, &c.

DEPARTMENT III.

EDUCATION AND SCIENCE.

GROUP—Educational Systems, Methods, and Libraries.

300. Elementary Instruction—Infant Schools and Kindergarten—arrangements, furniture, appliances, and modes of training.
Elementary Schools.—Buildings and Grounds, Equipments, Courses of Study, Methods of Instruction, Text Books, Apparatus, including Maps, Charts, Globes, &c. ; Pupils' work, including Drawing and Penmanship ; provisions for Physical Training.

301. Higher Education.—Grammar and High Schools.
Colleges and Universities. Buildings and Grounds, Libraries, Museums of Zoology, Botany, Mineralogy, Art and Archæology ; Apparatus for illustration and research, Mathematical, Physical, Chemical, and Astronomical Courses of Study ; Text Books, Catalogues, Libraries, and Gymnasiums.

302. Professional and Technical Schools.—Buildings, Text Books, Libraries, Apparatus, Methods, and other accessories.

303. Institutions for Instruction of the Blind, Deaf, and Dumb, and the Feeble-minded.

304. Education Reports and Statistics.

305. Libraries, History, Reports, Statistics, and Catalogues.

306. School and Text Books, Dictionaries, Encyclopædias, Gazetteers, Directories, Index Volumes, Bibliographies, Catalogues, Almanacs, Special Treatises, General and Miscellaneous Literature, Newspapers, Technical and Special Newspapers and Journals, Illustrated Papers, Periodical Literature.

GROUP—Scientific and Philosophical Instruments and Methods.

307. Instruments of Precision and Apparatus of Physical Research, Experiment, and Illustration.
Astronomical Instruments, and accessories, used in Observatories.
Transits, Mural Circles, Equatorials, Collimators.
Geodetic and Surveying Instruments.—Transits, Theodolites, Needle Compasses, Instruments for Surveying underground in Mines, Tunnels, and Excavations.
Nautical Astronomical Instruments.—Sextants, Quadrants, Repeating Circles, Dip-sectors.
Levelling Instruments and Apparatus.—Carpenters' and Builders' Levels, Hand Levels, Water Levels, Engineers' Levels.
Instruments for Deep-sea Sounding and Hydrographic Surveying.
Meteorological Instruments and Apparatus.
Thermometers, Pyrometers, Barometers.
Hygrometers and Rain Gauges, Maps, Bulletins.
Blanks for Reports, Methods of Recording, Reducing, and Reporting Observations.

CLASSIFICATION OF EXHIBITS.

CLASS

308. Indicating and Registering Apparatus other than Meteorological, Mechanical Calculation.
Viameters, Pedometers, Perambulators, Gas-meters.
Water-meters, Current-meters, Ships' Patent Logs, Electrical Logs.
Tide Registers.
Apparatus for Printing Consecutive Numbers.
Counting Machines, Calculating Engines, Arithmometers.

309. Weights, Measures, Weighing and Meteorological Apparatus.
Measures of Length.—Graduated Scales on Wood, Metal, Ivory, Tape or Ribbon; Steel Tapes, Chains, Rods, Verniers, and Graduated Scales for Measuring Lumber, Goods in Packages, Casks, &c.; Gaugers' Tools and Methods.
Measures of capacity for Solids and Liquids.
Weights.—Scales and Graduated Beams for Weighing; Assay Balances, Chemical Balances; Ordinary Scales for Heavy Weights, Weighing Locomotives and Trains of Cars; Postal Balances; Hydrometers, Alcohometers, Lactometers, &c.; Gravimeters (*see Class* 310).

310. Chronometric Apparatus.
Chronometers, Astronomical Clocks, Church and Metropolitan Clocks, Ordinary Commercial Clocks, Pendulum and Spring Clocks, Marine Clocks, Watches, Clepsydras, Hour Glasses, Sun Dials, Chronographs, Electrical Clocks, Metronomes.

311. Optical and Thermotic Instruments and Apparatus.
Mirrors, Plane and Spherical.
Lenses and Prisms.
Spectacles and Eye-glasses, Field and Opera Glasses, Graphoscopes and Stereoscopes.
Cameras and Photographic Apparatus.
Microscopes.
Telescopes.
Apparatus for Artificial Illumination, including Electric, Oxyhydrogen, and Magnesium Light.
Stereopticons.
Photometric Apparatus.
Spectroscopes and Accessories for Spectrum Analysis.
Polariscopes, &c.
Thermotic Apparatus.

312. Telegraphic Instruments and Methods.
Batteries and Forms of Apparatus used in Generating the Electrical Currents for Telegraphic Purposes.
Conductors and Insulators and Methods of Support, Marine Telegraph Cables.
Apparatus of Transmission, Keys, Office Accessories and Apparatus.
Receiving Instruments, Relay Magnets, Local Circuits.
Semaphoric and Recording Instruments.
Codes, Signs, or Signals.
Printing Telegraphs for special uses.
Electrographs.
Dial or Cadran Systems.
Apparatus for Automatic Transmission.
Telephone, Microphone, &c.

313. Musical Instruments and Acoustic Apparatus.
Percussion Instruments, Drums, Tambourines, Cymbals, Triangles.
Pianos.
Stringed Instruments, other than Pianos.
Automatic Musical Instruments, Music Boxes.
Wind Instruments of metal and of wood.
Harmoniums.
Church Organs and similar instruments.
Speaking Machines.
Vocal Music.
Phonographs.

CLASSIFICATION OF EXHIBITS.

GROUP—Engineering, Architecture, Charts, Maps, and Graphic Representations.

(*For Agricultural Engineering, see Class* 655 ; *for Mining Engineering, see Class* 120.)

CLASS

314. Civil Engineering, Land Surveying, Public Lands, &c.
River, Harbour, and Coast Surveying.
Construction and Maintenance of Roads, Streets, Pavements, &c.
Surveys and Location of Towns and Cities, with systems of Water Supply and Drainage.
Arched Bridges of metal, stone, brick or beton.
Trussed Girder Bridges.
Suspension Bridges.
Canals, Aqueducts, Reservoirs, Construction of Dams.
Hydraulic Engineering and means of Arresting and Controlling the Flow of Water.
Submarine Constructions, Foundations, Piers, Docks, &c.

315. Dynamic and Industrial Engineering, Construction and Working of Machines, Examples of Planning and Construction of Manufacturing and Metallurgical Establishments.

316. Railway Engineering.
Location of Railways, and the Construction and Management of Railways.

317. Military Engineering.

318. Naval Engineering.

319. Topographical Maps.
Marine and Coast Charts.
Geological Maps and Sections.
Botanical, Agronomical and other Maps, showing the extent and distribution of Men, Animals, and Terrestrial Products.
Physical Maps.
Meteorological Maps and Bulletins.
Telegraphic Routes and Stations.
Railway and Route Maps.
Terrestrial and Celestial Globes.
Relief Maps and Models of portions of the Earth's surface.
Profiles of Ocean beds and Routes of Submarine Cables.

GROUP—Physical and Moral Condition of Man.

320. Physical development and condition.
The Nursery and its accessories.
Gymnasiums, Games, Manly Sports, and Physical Training.

321. Alimentation.
Markets, Preparation and Distribution of Food.

322. The Dwelling.
Sanitary conditions, appliances and regulations.
Domestic Architecture.
Dwellings characterized by cheapness, combined with the conditions essential to health and comfort.
Fireproof Structures.
Hotels, Club-houses, &c.
Public Baths.

323. Commercial Systems and Appliances.
Mercantile Forms and Methods, Counting Houses and Offices.
Banks and Banking.
Savings and Trust Institutions.
Insurance, Fire, Marine, Life, &c.

CLASSIFICATION OF EXHIBITS.

CLASS

Commercial Organizations, Boards of Trade, Produce and Stock Exchanges.
Corporations for Commercial and Manufacturing Purposes.
Railway and other Transportation Companies.
Building and Loan Associations.

324. Money.
Mints and Coining.
Collection of Current Coins.
Historical Collections.
Tokens, &c.
Bank Notes, and other paper circulating mediums.
Commercial Paper, Bills of Exchange, &c.
Securities for payment of money, Stocks, Bonds, Mortages, Ground-rents, Quit-rents, &c.
Precautions against counterfeiting and misappropriation of money.

325. Government and Law.
Various Systems of Government Codes.
Municipal Government.
Protection of Property in Inventions.
Postal System and Appliances.
Punishment of Crime.
Prisons and Prison Management and Discipline; Police Stations ; Houses of Correction ; Reform Schools.

326. Benevolence.
General Hospitals.
Special Hospitals for the Eye and Ear, for Women, &c.
Hospitals for Contagious and Infectious Diseases.
Hospitals for the Insane—under State Control, and Private Asylums.
Quarantine Systems and Organizations.
Sanitary Regulations of Cities.
Dispensaries.
Inebriate Ayslums.
Lying-in Asylums.
Magdalen Asylums.
Asylums for Infants and Children.
Foundling and Orphan Asylums—Children's Aid Societies.
Homes for the Aged and Infirm ; Homes for Aged Men and Women ; Homes for the Maimed and Deformed, Sailors' Homes.
Treatment of Paupers.
Almshouses, Feeding the Poor, Lodging-houses.
Emigrant Aid Societies.
Treatment of Aborigines.
Prevention of Cruelty to Animals.

327. Co-operative Associations.
Military Organizations and Orders.
Trade Unions and Associations.
Industrial Organizations.

328. Religious Organizations and Systems, Statistical, Historical, and other Facts.
Bible Societies, Tract Societies, Colportage.
Systems and Methods of Religious Instruction and Training for the Young.
Sunday Schools, Furniture, and Apparatus.
Associations for Religious or Moral Improvement.
Dispensing Charities, Church Guilds.

329. Art and Industrial Exhibitions.
Agricultural Fairs.
Juvenile Exhibitions.
National Exhibitions.

DEPARTMENT IV.

ART.

GROUP—Sculpture.

CLASS

400. Figures and Groups in stone, metal, clay, or plaster.
401. Bas-reliefs, in stone or metal; Electrotype Copies.
402. Medals, pressed and engraved; Electrotypes of Medals.
403. Hammered and Wrought Work; *Repoussé* and *Rehaussé* Work; Embossed and Engraved Relief Work.
404. Cameos, Intaglios, Engraved Stones, Dies, Scales, &c.
405. Carvings in Wood. Ivory, and Metal.

GROUP—Painting.

406. Paintings in Oil, on canvas, panels, &c.
407. Water-colour Pictures—Aquarelles, Miniatures, &c.
408. Frescoes, Cartoons for Frescoes, &c.
409. Painting with vitrifiable colours; Pictures on Porcelain, Enamel, and Metal.

GROUP—Engraving and Lithography.

410. Drawings with Pen, Pencil, or Crayons.
411. Line Engravings from Steel, Copper, or Stone.
412. Wood Engravings.
413. Lithographs, Zincographs, &c.
414. Chromo-Lithographs, &c.

GROUP—Photography.

415. Photographs on Paper, Metal, Glass, Wood, Fabrics, or Enamel Surfaces.
416. Prints from Photo-relief Plates, Carbon Prints, &c.
417. Photo-lithographs, &c.
418. Photographic Apparatus and Supplies.

GROUP—Industrial and Architectural Designs, Models, and Decorations.

419. Industrial Designs.
420. Architectural Designs—Studies and Fragments, Representations and projects of Edifices; Restorations from Ruins, and from Documents.
421. Decorations of Interiors of Buildings.
422. Artistic Hardware and Trimmings, Artistic Castings, Forged Metal Work for Decoration, &c.

GROUP—Decorations with Ceramic and Vitreous Materials, Mosaic and Inlaid Work.

423. Mosaic and Inlaid Work in stone.
424. Mosaic and Inlaid Work in tiles, tessaræ, glass, &c.
425. Inlaid Work in wood and metal, parqueterie, tables, &c.
426. Stained Glass.

DEPARTMENT V.

MACHINERY.

GROUP—Machines, Tools, and Apparatus of Mining, Metallurgy, Chemistry, and the Extractive Arts.

CLASS

500. Rock-drilling.

501. Well and Shaft Boring.

502. Machines, Apparatus, and Implements for Coal-cutting.

503. Hoisting Machinery and accessories.

504. Pumping, Draining, and Ventilating.

505. Crushing, Grinding, Sorting, and Dressing, Breakers, Stamps, Mills, Pans, Screens, Sieves, Jigs, Concentrators.

506. Furnaces, Smelting Apparatus, and accessories.

507. Machinery used in Bessemer Process.

508. Chemical Manufacturing Machinery; Electro-plating; Paint and Powder Mills; Blacking and Soap-making Machinery.

509. Gas Machinery and Apparatus.

GROUP—Machines and Tools for Working Metal, Wood, and Stone.

510. Planing, Sawing, Veneering, Grooving, Mortising, Tonguing, Cutting, Moulding, Stamping, Carving, and Cask-making Machines, &c.; Cork-cutting Machines.

511. Direct-acting Steam Sawing Machines, with Gang Saws; Bark Mills.

512. Rolling Mills, Bloom-squeezers, Blowing Fans; Rivet, Nail, Bolt, and Tack-making Machinery.

513. Furnaces and Apparatus for casting Metals, with Specimens of Work.

514. Steam, Hip, and other Hammers, with Specimens of work; Anvils, Forges, Bellows.

515. Planing, Drilling, Slotting, Turning, Shaping, Punching, Stamping, Cutting, and Coining Machines; Wheel-cutting, and Dividing Machines; Emery Wheels, Drills, Taps, Gauges, Dies, &c.; Grindstones.

516. Stone-sawing and Planing Machines; Dressing, Shaping, and Polishing Sand Blasts; Tilghman's Machines, Glass-grinding Machines, &c.

517. Brick, Pottery, and Tile Machines; Machines for making Artificial Stone.

518. Furnaces, Moulds, Blow-pipes, &c., for making Glass and Glassware.

519. Tools, Implements, &c., for working Metal, Wood, and Stone.

GROUP—Machines and Implements of Spinning, Weaving, Felting, and Paper-making.

520. Machines for the manufacture of Silk Goods.

521. Machines for the manufacture of Cotton Goods.

522. Machines for the manufacture of Woollen Goods, Carpets, and Tapestry.

523. Machines for the manufacture of Linen Goods.

524. Machines for the manufacture of Rope and Twine, Miscellaneous Fibrous Materials.

525. Machines for the manufacture of Paper and Felting.

526. Machines for the manufacture of India-rubber Goods.

527. Machines for the manufacture of Mixed Fabrics.

528. Machines for the manufacture of Wire-cloth.

CLASSIFICATION OF EXHIBITS.

GROUP—Machines, Apparatus, and Implements used in sewing and making Clothing, and Ornamental Objects.

CLASS

529. Machines used in the manufacture of Lace, Floorcloths, Fancy Embroidery, Hair, Ribbons, &c.
530. Sewing and Knitting Machines, Clothes, Corset, Hat and Bonnet-making Machines.
531. Machines for preparing and working Leather.
532. Machines for making Boots and Shoes.
533. Machines for Ironing, Drying, Scouring, and Cleaning.
534. Machines for making Clocks and Watches.
535. Machines for making Jewellery.
536. Machines for making Buttons, Pins, Needles, &c.
537. Machines for making Pipes and their products.

GROUP—Machinery and Apparatus for Type-setting, Printing, Stamping, Embossing, and for making Books, and Paper-working.

538. Printing, Stamping, Embossing, and Lithographic Presses.
539. Type-casting Machines, Apparatus for Stereotyping.
540. Types and Type-setting Machines, Type-writing Machines.
541. Printers' Furniture.
542. Book-binding Machines.
543. Paper-folding Machines.
544. Paper- and Card-cutting Machines, Paper Box Machines.
545. Envelope Machines.

GROUP—Motors and Apparatus for the Generation and Transmission of Power.

546. Boilers, and all Steam or Gas Generating Apparatus for motive purposes.
547. Water-wheels, Water-engines, Hydraulic Rams, Windmills.
548. Steam, Air, or Gas Engines, Electro-Magnetic Engines.
549. Apparatus for the Transmission of Power, Shafting, Belting, Cables, Transmission of Power by compressed Air, &c., Gearing, Cables.
550. Screw Propellers, Wheels for the propulsion of Vessels, and other Motors.
551. Implements and Apparatus used in connection with Motors, Steam Gauges, Manometers, &c., Anti-friction Metals.

GROUP—Hydraulic and Pneumatic Apparatus, Pumping, Hoisting, and Lifting.

552. Pumps and Apparatus for lifting and moving Liquids.
553. Pumps and Apparatus for moving and compressing Air or Gas.
554. Pumps and Blowing Engines, Blowers and Ventilating Apparatus.
555. Hydraulic Jacks, Presses, Elevators, Lifts, Meters, Cranes.
556. Fire-engines, Hand, Steam, or Chemical and Fire-extinguishing Apparatus, Hose, Ladders, and Fire Escapes, &c.
557. Beer-engines, Soda Water Machines, Bottling Apparatus, Corking-machines.
558. Stop-valves, Cocks, Pipes, &c.
559. Diving Apparatus and Machinery.
560. Ice-machines.

CLASSIFICATION OF EXHIBITS.

GROUP—Railway Plant, Rolling Stock, and Apparatus.

CLASS
561. Locomotives, Models, Drawings, Plans, &c.
562. Carriages, Waggons, Trucks, Cars, &c.
563. Brakes, Buffers, Couplings.
564. Wheels, Tires, Axles, Bearings, Springs, &c.
565. Permanent Ways, Ties, Chairs, Switches, &c.
566. Station Arrangements, Signals, Water Cranes, Turn-tables.
567. Miscellaneous Locomotive Attachments.
568. Street Railways and Cars.

GROUP—Machines used in preparing Agricultural Products.

569. Flour Mills.
570. Sugar-refining Machines.
571. Confectioners' Machinery.
572. Oil-making Machinery.
573. Tobacco-manufacturing Machines.
574. Mills for Spices, Coffee, &c.
575. Machines for preparing Fancy Goods.
576. Machines for preparing Malt and Spirituous Liquors.

GROUP—Aerial, Pneumatic, and Water Transportation.

577. Suspended Cable Railways.
578. Transporting Cables.
579. Balloons, Flying-machines, &c.
580. Pneumatic Railways, Pneumatic Dispatch.
581. Boats and Sailing-vessels.
Sailing-vessels used in Commerce.
Sailing-vessels used in War.
Yachts and Pleasure-boats.
Rowing Boats of all kinds.
Life-boats and Salvage Apparatus, with Life Rafts, Belts, &c.
Submarine Armour, Diving Bells, &c.
Models and Drawings.
582. Steam-ships, Steam-boats, and all Vessels propelled by Steam.
583. Vessels for carrying Telegraphic Cables and Railway Trains, also Coal Barges, Water Boats, Dredging Machines, Screw and Floating Docks, and for other special purposes.
584. Steam Capstans, Windlass, Deck Winches, Steering Apparatus, Fans.

GROUP—Machinery and Apparatus especially adapted to the requirements of the Exhibition.

585. Boilers, Engines, Cranes, Pumps, &c.

DEPARTMENT VI.

AGRICULTURE.

GROUP—Animal Products, Land and Marine (used as Food).

CLASS

600. Fish, Flesh, Fowl, Game, Eggs, &c., tinned, salted, dried, or otherwise preserved; Animal Extracts.

601. Dairy Produce; Milk, Cream, Butter, Cheese, &c.

602. Oysters, Molluscs, Clams, Crustaceans, Echinoderms, Bêche de mer, &c.

603. Honey and other Animal Products used for Food, such as Gelatine, Isinglass, &c.

GROUP—Animal Products, Land and Marine (used as Materials).

604. Skins, Hides, Leather of all kinds, tanned, curried and dressed, Morocco, basils, shagreen, hogskin, chamois, and prepared for gloves and parchment.

605. Furs, Feathers, Down, and Felting.

606. Whalebone, Bones, Horns, Hoofs, Animal and Fish Glue, and Glue Pieces, Ivory, Tortoise-shell, &c.

607. Tallow, Stearine, Butterine, Glycerine, Candles, Lard, Animal (Land and Marine) Oils.

608. Animal Perfumes; as Musk, Civet, Ambergris.

609. Shells, Coral, Pearls, Sponges, Sea-weeds, and other Marine growths used in the Arts.

610. Beeswax, Shellac, Cochineal, and other Insect Secretions.

GROUP—Fish Culture and Apparatus.

611. Instruments and Apparatus of Fishing, Nets, Baskets, Hooks, and other Apparatus used in catching Fish.

612. Fish Culture, Aquaria, Hatching Pools, Vessels for transporting Ova and Spawn, and other Apparatus used in Fish Breeding, Culture, or Preservation.

GROUP—Arboriculture and Forest Products.

613. Timber and Trunks of Trees, entire, or in transverse or truncated sections, with Specimens of Barks, Leaves, Flowers, Seed-vessels, and Seeds; Masts, Spars, Knees, longitudinal sections of Trees, Railway Ties, Ship Timber, Lumber roughly sawn, as Planks.
Shingles, Laths, and Staves, split or sawn.
Timber and Lumber prepared in various ways to resist Decay and Combustion, as by Injection of Salts of Copper and Zinc.

614. Ornamental Woods used in Decorating and for Furniture, as Veneers of Mahogany, Rosewood, Ebony, Walnut, Maple, and Madrona.

615. Dyewoods, Barks, and Galls, for Colouring and Tanning.

616. Gums, Resins, Caoutchouc, Gutta-percha, Vegetable Wax.

617. Lichens, Mosses, Fungi, Pulu, Ferns.

618. Seeds, Nuts, &c., for Food and Ornamental Purposes.

619. Forestry—Illustrations of the Art of Planting, Managing, and Protecting Forests; Statistics.

620. Fruit and Shrubs.

CLASSIFICATION OF EXHIBITS.

GROUP—Pomology.

CLASS

621. Fruits of temperate and semi-tropical regions—as Apples, Pears, Quinces, Peaches, Nectarines, Oranges, Apricots, Plums, Grapes, Cherries, Strawberries, and Melons.

622. Tropical Fruits and Nuts—Oranges, Bananas, Plantains, Lemons, Pine-apples, Pomegranates, Figs, Cocoa-nuts.

GROUP—Agricultural Products.

623. Wheat, Oats, Barley, Maize, and other Cereals.

624. Leguminous Plants and Esculent Vegetables.

625. Roots and Tubers.

626. Tobacco, Hops, Tea, Coffee, Spices, Herbs, and Condiments.

627. Seeds and Seed Vessels.

GROUP—Vegetable Products, used as food or materials.

629. Flour; crushed and ground Cereals; decorticated Grains.

630. Preserved Vegetables and Fruits, dried or in cans or jars.

631. Starch, Arrowroot, and similar products.

632. Sugar and Syrups.

633. Bread, Biscuits, Cakes, Confectionery, Cocoa, Chocolate, &c.

634. Vegetable Oils, Oil Cake.

GROUP—Wines, Spirituous, Fermented and other Drinks.

635. Wines of all kinds.

636. Ale, Porter, and other Beverages made from Cereals.

637. Cider, Perry, and other Fermented Drinks.

638. Brandy and other Alcohols, Spirits, Rum, Whisky, Gin, &c.

GROUP—Textile Substances of Vegetable or Animal Origin.

639. Wool of Sheep in Fleece, carded and baled.

640. Fleeces in Alpaca, Llama, Angora Goat, &c.

641. Cotton in the Stem, in the Boll, ginned and baled.

642. Hemp, Flax, Jute, Ramie, &c., in primitive forms and in all stages of preparation for spinning.

643. Silk in the Cocoon and Reeled.

644. Hair Bristles.

GROUP—Land Animals.

645. Horses, Asses, Mules.

646. Horned Cattle.

647. Sheep.

648. Goats, Alpaca, Llama, Camel.

649. Swine.

650. Poultry and other Birds.

651. Dogs, Cats, Ferrets, &c.

652. Wild Animals.

CLASSIFICATION OF EXHIBITS.

GROUP—Machines, Implements, and Processes of Manufacture.

CLASS

653. Tillage.—Manual Implements—Spades, Hoes, Rakes; Animal Power Machinery—Ploughs, Cultivators, Horse-hoes, Clod-crushers, Rollers, Harrows; Steam-power Machinery—Breakers, Harrows, Cultivators.

654. Planting.—Manual Implements—Corn Planters, and Hand Drills; Animal Power Machinery—Corn and Cotton Planters; Steam Power Machinery—Grain and Manure Drills.

655. Harvesting.—Manual Implements—Grain Cradles, Sickles, Reaping-hooks; Animal Power Machinery—Reapers and Headers, Mowers, Tedders, Rakes, Hay Elevators and Hay Loaders, Reapers and Binders, Potato Diggers.

656. Preparatory to Marketing.—Thrashers, Clover-hullers, Corn-shellers, Winnowers; Apparatus for Hay, Cotton, Flax, Jute, Ramie, Oil, and Sugar-making, Cleaners and Smutters, Horse Powers.

657. Applicable to Farm Economy.—Portable and Stationary Engines, Chaffers, Hay and Fodder Cutters, Slicers, Pulpers, Corn Mills, Farm Boilers and Steamers, Incubators, Edged Tools, Mills, Meat-choppers.

658. Dairy Fittings and Appliances.—Churns, for hand and power; Butter-workers, Cans and Pails, Cheese Presses, Vats, Ice Cream Freezers, &c.

GROUP—Agricultural Engineering and Administration.

659. Laying-out and Improving Farms.—Clearing (Stump Extractors), Construction of Roads, Draining, Irrigating, Models of Fences, Gates, Drains, Out-falls, Dams, Embankments, Irrigating Machinery, Stack Building and Thatching.

660. Commercial Fertilizers.—Phosphatic, Ammoniacal, Calcareous, &c.

661. Transportation.—Waggons, Carts, Sheds, Harness, Yokes, Traction Engines and Apparatus for Road-making, and Excavating Tanks.

662. Farm Buildings.—Models and Drawings of Farm Houses and Tenements, Barns, Stables and Stable-fittings, Hop-houses, Fruit-driers, Ice-houses, Windmills, Granaries, Barracks, Apiaries, Cocooneries, Aviaries, Abattoirs, and Dairies.

GROUP—Tillage and General Management.

663. System of Planting and Cultivation.

664. Systems of Draining, and Application of Manures.

665. Systems of Breeding, and Stock Feeding, Training.

666. Veterinary Surgery and Appliances.

DEPARTMENT VII.

HORTICULTURE.

GROUP—Ornamental Trees, Shrubs, and Flowers.

CLASS

700. Ornamental Trees and Shrubs, Evergreens.

701. Herbaceous Perennial Plants.

702. Bulbous and Tuberous-rooted Plants.

703. Decorative and Ornamental Foliage Plants.

704. Annuals and other soft-wooded Plants, to be exhibited in successive periods during the season.

CLASS

705. Roses.

706. Cactacea.

707. Ferns, their Management in the Open Air and in Ferneries, Wardian Cases, &c.

708. New Plants, with Statement of their Origin.

709. Floral Designs, &c.—Cut Flowers, Bouquets, Preserved Flowers, Leaves, Sea-weeds.

Illustrations of Plants and Flowers.

Materials for Floral Designs.

Bouquet Materials, Bouquet Holders, Bouquet Papers, Models of Fruits, Vegetables, and Flowers.

GROUP—Hothouses, Conservatories, Graperies, and their Management.

710. Hothouse and Conservatory Plants.

711. Fruit Trees under glass.

712. Orchids and Parasitic Plants.

713. Forcing and Propagation of Plants.

714. Aquatic Plants under glass, or in aquaria, &c.

715. Horticultural Buildings—Propagating Houses, Hotbeds, &c.; and modes of Heating them. Structures for Propagating and Forcing Small Fruits.

716. Portable or Movable Orchard Houses and Graperies, without artificial heat; Frames, Beds.

GROUP—Garden Tools, Accessories of Gardening.

717. Tools and Implements, Machines for the transplanting of Trees, Shrubs, &c.; Portable Forcing Pumps for Watering Plants in Greenhouses, and Methods of Watering the Garden and Lawn.

718. Receptacles for Plants.—Flower Pots, Plant Boxes, Tubs, Fern Cases, Jardinières, &c. Window Gardening, Plant and Flower Stands, Ornate Designs in Iron, Wood, and Wire.

719. Ornamental Wire-work, viz.:—Fences, Gates, Trellis, Bordering of Flower Beds, Porches, Park Seats, Chairs, Garden Statuary, Vases, Fountains, &c.; Designations, Labels, Numbers.

GROUP—Garden Designing, Construction, and Management.

720. Laying out Gardens.—Designs for the Laying out of Gardens and the Improvement of Private Residences; Designs for Commercial Gardens, Nurseries, Graperies; Designs for the Parterre; Books on Gardening.

721. Treatment of Water for Ornamental Purposes, Cascades, Fountains, Reservoirs, Lakes.

722. Formation and After-treatment of Lawns.

723. Garden Constructions, Buildings, &c.—Rock-work, Grottoes, Rustic Construction and Adornments, for Private Gardens and Public Grounds.

724. Planting, Fertilizing, and Cultivating.

REGULATIONS FOR THE GUIDANCE OF JUDGES.

Regulations for the guidance of Judges.

1. Awards shall be based upon written reports attested by the signatures of their authors.

2. Reports and awards shall be based upon inherent and comparative merit. The elements of merit shall be held to include considerations relating to originality, invention, discovery, utility, quality, skill, workmanship, fitness for the purposes intended, adaptation to public wants, economy, and cost.

3. To each group of classes a competent number of Judges have been assigned by the Commission of the Sydney International Exhibition.

4. The Judges assigned to each group of classes may choose from among themselves a Chairman, and it is desirable they should keep records of their proceedings. Reports recommending awards shall be made, stating the ground of the proposed award, and such reports when adopted by a majority of the Judges in such group shall be signed by the Chairman in confirmation thereof.

5. The Judges shall determine among themselves their mode of procedure. It is hoped that the Judges will set forth the characteristics of exhibits, the elements of their merits, and, as far as practicable, the degree of merit. This precision is desired in order that the report may not only fully furnish the justification of the award, but be its most valuable part. Should it so happen that a majority of the Judges in any group cannot agree on a common report, that fact must be reported to the Committee of Judging and Awards.

6. The reports of the Judges recommending awards must be returned to the Committee on Judging and Awards, to be transmitted by it to the Sydney International Exhibition Commission.

7. Awards will be finally decreed by the Sydney International Exhibition Commission.

8. Vacancies in the corps of Judges will be filled by the authority which made the appointment.

9. Neither an exhibitor nor his agent can be a Judge in the class of his exhibits or in a cognate class.

10. The Commission will decree awards to Governments, Corporations, &c., and will appoint Judges of Collective Exhibits.

11. The Commission will appoint a Committee of Appeals to entertain all protests, appeals, and communications from exhibitors claiming that injustice has been done them in any matter relating to the examination of their products, and reports of Judges for awards.

12. The forms, notices, &c., required by these Regulations, will be supplied by the Sydney International Exhibition Commission.

Additional Regulations for the Judges, approved of by the Sydney International Exhibition Commission, 9th Jan., 1880.

That the Judges be requested to classify all exhibits distinctly worthy of commendation into four classes.

1st class.—To contain all exhibits of the first degree of merit of its kind.

2nd class.—To contain all exhibits of the second degree of merit of its kind.

3rd class.—To contain all exhibits of the third degree of merit of its kind.

4th class.—To contain all exhibits of the fourth degree of merit of its kind.

That exhibits having no especial merit are not to be classified at all.

P. A. JENNINGS,
Executive Commissioner.

Augustus Morris,
Secretary.

Note.—The Committee on Judging and Awards formulated the following equivalents, approved by the Commission, for the various degrees of merit recommended by the Judges on General Exhibits:—Their special first degrees of merit were termed "First degrees of Merit Special"; the first degree was styled "First degree of Merit"; the second "Highly Commended"; the third "Commended"; while those recommendations which were of the fourth degree were denominated as having received "Honourable Mention." For exterior shows, such as those of Live Stock and Horticultural Exhibits, separate modes of nomenclature were it will be seen adopted, and which are fully explained hereafter.

JUDGES OF GENERAL EXHIBITS.

DEPARTMENT I.—MINING.

Classes 100–107.

Dixon, W. A., F.C.S. (Chairman)
Hacket, T. R.
Ratté, F.
Verhoustraeten, R.

Classes 110–114.

Bensusan, S. L.
Brown, Alexander
Montefiore, O. L. (Chairman)
Struth, John

Classes 120–122.

Binsted, W. H.
Tayler, Josiah

DEPARTMENT II.—MANUFACTURES.

Classes 200–205.

Curran, J. J.
Hayes, Patrick
Kirschbaum, A.
Poolman, Frederick
Watt, Charles (Chairman)
Hartung, Max Jos. (Expert)

Classes 206–216.

Blunt, George
Fontana, Giovanni
Gould, John
Poolman, Frederick (Chairman)
Rosenthal, C. M.
Simonetti, Achille

Classes 217–227.

Alexander, William
Barnet, James
Blachmann, C. H. E.
Ewing, Geo. C., jun.
Forsyth, Archibald
Gell, Edward
Mackenzie, D.
Meyer, Otto L.
Selfe, Norman (Chairman)
Wooster, J. F.

Classes 228–241.

Bahse, Moritz F.
Hautrive, Marceau
Holle, John Frederick
Jamieson, George
Perry, J. Stephen (Chairman)
Tuting, G. C.

Classes 242–244.

Smale, Josiah

JUDGES OF GENERAL EXHIBITS.

Classes 242–249.

De Piotrowski, Kennedy
Doublet, M.
Lark, F. B.
Smale, Josiah (Chairman)
Webb, Edmund

Classes 250–257.

Abigail, F.
Blau, Adolph
Carter, J. B.
Gilles, A. W.
McCoy, Richard
Moonen, Léon (Chairman)
Petrie, Adam
Smith, John McGarvie
Woolnough, Horace

Classes 258–264.

Gell, Edward
George, Hugh
Groth, Hermann H.
Richards, Thomas
Wilton, Thomas T. (Chairman)

Classes 265–270.

Craig, William
Gannon, Frederick
Jaubert, Léon
Mann, Captain Gother K.
Manson, Donald
Roberts, Col. C. F., R.A. (Chairman)
Brewster, William (expert).

Classes 272–278.

Morris, Dr. William.

Classes 279–283.

Blacket, Owen
Cox, Hon. G. H.
Craig, William
Gannon, Frederick
Jones, J. Trevor, C.E.
Lamb, J. De V.
Mann, Capt. Gother K. (Chairman)
Manson, Donald
Roberts, Col. C. F., R.A.
Want, G. F.

Classes 284–290.

Bahse, Moritz F. (Chairman)
Barnet, James
Broomfield, Capt. John
See, John

Classes 291-294.

Bull, William
Douglas, Percy
Douglas, W. H.
Want, G. F. (Chairman)

DEPARTMENT III.—EDUCATION AND SCIENCE.

Classes 300–306.

Bannister, R. D.
Gurney, Prof. T. T.
Raworth, W. H.
Stephens, W. J., M.A.
Tayler, Josiah
Wilkins, W.

Educational Systems, &c., for Public Schools, and Public School Exhibits.

Bannister, R. D. | Raworth, W. H. | Tayler, Josiah.

JUDGES OF GENERAL EXHIBITS.

Classes 307–312.

Adams, Francis J.
Beckmann, E.
Bound, Paul Edward
Cracknell, E. C.
De Savignon, F.
Harte, Gregory P.
Maguire, W. H.
Russell, H. C., B.A.
Smith, John M'Garvie

Microscopes (Class 311).

Morris, Wm., M.D.
Wright, H. G. A., M.R.C.S.E. (Expert)

Class 310.

Beckmann, E.
Bound, P. E.
Harte, G. P.
Russell, H. C., B.A.
Smith, J. M'Garvie.

Class 313.

Blacket, E. T.
D'Apicé, Chevalier
Jackson, Charles J.
Kretschmann, Josef
Packer, Charles
Thornton, Hon. George, M.L.C. (Chairman)
Younger, Montague

Classes 314–329.

Jones, J. Trevor, C.E.
Merrett, Saml. H.
Moonen, Léon
Moriarty, Edward Orpen
Stopps, A. J.
Tayler, Josiah

DEPARTMENT IV.—ART.

Classes 400–409.

Ballieu, Theodore (French Consul)
Du Faur, Eccleston, F.R.G.S.
Forde, W.
Lix, Gustave
Montefiore, Edward Levi
Stephens, W. J., M.A.
Wallis, W.
Wise, Henry
Woolcott, Charles H.

Classes 410–427.

De Piotrowski, Kennedy
Henry, Lucien
Moonen, Léon
Rosenthal, C. M.
Simonetti, Achille
Tayler, Josiah

Special Sub-class for New South Wales Academy of Art Pupils.

Bannister, R. D.
Moonen, Léon

LADIES COURT.

Bahse, Moritz F.
Moonen, Léon (Chairman)
Tuting, G. C.
Bannister, Mrs. I. C.
Bourne, Miss
Minchen, Mrs. E. A.
Page, Miss

JUDGES OF GENERAL EXHIBITS.

DEPARTMENT V.—MACHINERY.

Classes 500–509.

Carter, Geo. Lord
Carter, J. B.
Frank, J. P. (Chairman)
Poolman, Samuel
Wren, Joseph Enoch

Classes 510–519.

Frank, J. P.
Hudson, Henry (Chairman)
Poolman, Samuel
Struth, John

Classes 520–528.

Bergan, James | Lewis, Charles (Chairman) | Smale, Josiah

Classes 529–537.

Carter, J. B. | Ramsden, Richard J. | Royce, Geo. H. (Chairman)

Classes 538–545.

George, Hugh | Richards, Thomas | Wilton, Thomas T.

Classes 546–560.

Bush, Charles
Chapman, J.
Lane, C. J.
Lewis, Charles
Moriarty, Edward Orpen
Newton, F. J.
Ritchie, Robert A.
Selfe, Norman (Chairman)

Classes 561–568.

Hudson, Henry (Chairman)
Jones, J. Trevor, C.E.
Morell, G. A., C.E.
Patterson, R.C.

Classes 569–576.

Cocks, James (Chairman)
Poolman, Samuel
Selfe, Norman
Vergé, M.

Classes 577–585.

Fox, Captain Henry T. | Hixson, Captain Francis, R.N. (Chairman)
Jenkins, Captain B.

DEPARTMENT VI.—AGRICULTURE.

Classes 600–603.

Curtis, G. S.
Palser, Henry P.
Peate, Thomas (Chairman)
Walker, J.

Classes 604–610.

Dunn, Thomas J.
Peate, Thomas
Petrie, Adam
Ramsay, Edward P.
Richardson, George
Stephens, Henry

JUDGES OF GENERAL EXHIBITS.

Classes 613–620.

Farrell, E.
Graham, Joseph
Ponder, W. F. (Chairman)
Shepherd, P. L. C.

Class 621–622.

Campbell, Walter S.
Duff, John
Morton, Thos. W.
Ponder, W. F.

Classes 623–627.

Barker, Geo. W.
Barker, Wm. C.
Cock, James
Coombe, Thos. Loaring
Duboisé, A.
Hustler, J. D.
Inglis, James
Penfold, E. T.
Ponder, W. F.
Rosenthal, C. M.
See, John

Classes 629–634.

Cock, James (Chairman)
Hanks, John G.
Nicholson, W.
Palser, Henry P.
Warner, W.

(Class 633.—Being subdivision of Group 629–634.)

Barker, Geo. W.
Pemell, J. E.

Classes 635, 637, and 638.

Bassett, W.
Cooper, Pope A.
Graves, H. Warden
Joubert, Jules
Moore, Charles, F.G.S., F.L.S. (Chairman)
Pachten, A.
Parrot, A.
Rosenthal, C. M.
Sahl, Carl Ludwig
Skarratt, Charles C.

Class 636.

Butcher, Robert
Disher, William John
Graves, H. Warden
Machen, Montagu Samuel
Palmer, Benjamin
Sparke, William E. (Chairman)

Classes 639–644.

Forsyth, Archibald
Hooton, John
Pope John
Rosenthal, C. M.
Smale, Josiah (Chairman)

Classes 653–658, and 659–662.

Cock, James (Chairman)
Jones, Trevor, C.E.
Poolman, Samuel
Royce, Geo. H.

Classes 663–666.

Campbell, W. S.
Duff, John
Morton, Thos. W.
Ponder, W. F.

Classes 700–724.

Campbell. W. S.
Duff, John
Morton, Thos. W.
Ponder, W. F.

JUDGES OF EXHIBITS IN OUTSIDE SHOWS.

JUDGES IN AGRICULTURAL, HORTICULTURAL, AND LIVE STOCK ANNEXES.

WOOL.

Chard, W. H.
De Savignon, F.
Ebsworth, F.
Fein, Otto
Haigh, Lewis
Hammond, Thos. W.
Lees, Joseph
Lethbridge, Geo. L.
Scott, W. R.
Thorpe, Thos.
Vicars, John
Whitfield, P. B.

HORSES.

Airey, H.
Badgery, F. D.
Davis. W.
Dowling, Vincent
Gordon, P. R.
Lloyd, Charles M.
M'Kellar, Alex.
Shaw, John
Sutton, Peter
Tait, John
Weston, Frank J.
Woods, John

Stewards :—Draught Horses—Bedwell, C. R. ; Coaching and Miscellanous Horses—Bruce, Alexander ; Blood Horses—Harnett, Laurence Joseph.

Attending Member of Commission :—Cox, Honourable G. H., M.L.C.

SHEEP, ANGORA GOATS, AND ALPACAS.

Allen, William
De Savignon, F.
Findlay, William S.
Hammond, Thos. W.
Hawkins, Thos. J.
Lamb, John De V.
Lethbridge, Geo. L.
Massey, Charles A.
Roberts, P.
Shaw, Jonathan
Shaw, Thomas
Simson, Colin W., M.P.
Smith, Hon. John, M.L.C.
Wallace, D. J.
Yeo, George S.

Attending Members of Commission :—Cox, Hon. Geo. H., M.L.C. ; Trebeck, Prosper N.

SHEEP-SHEARING.

Dangar, A. A. | Findlay, W. S. | Higgins, R. G.

SWINE.

De Savignon, F. | Harding, H. | Lee, Thomas

STUD CATTLE, AND FAT CATTLE AND SHEEP.

Badgery, A. D.
Badgery, John A.
Bell, Henry
Cox, Hon. Geo. H., M.L.C.
Dangar, W. J.
Devlin, M. H.
Dowling, Vincent
Gardiner, John A.
Loder, George
Lowe, Robert
Mair, George
M'Connell, James H.
M'Elhone, John
Payne, William
Sullivan, Thomas
Woodhouse, E. B.

Wyndham, R.

Stewards :—Bruce, Alexander ; Harnett, Laurence Joseph.

JUDGES OF EXHIBITS IN OUTSIDE SHOWS.

POULTRY AND PIGEONS, &c., &c.

Barnett, J.	Hyam, S. H.
Bradley, Walter, sen.	Kellick, James
Cadell, T., jun.	Marr, W. G.
Crane, T.	Pemell, J. E.
Frank, W. J.	Thompson, T.
Gray, H.	Thorne, James
Halls, E.	Wright, John

Stewards:—Bedwell, C. R.; Lord, G. Lee; Lord, Herbert; Marklove, R.

DOGS.

Bristowe, E. H. C.	Morgan, Wm., jun.
Evans, Geo. T.	Stephen, Ernest F.

Steward:—Holborow, D.

HORTICULTURAL SHOWS IN AGRICULTURAL HALL.

Classes 700-724.—Ornamental Trees, Shrubs, Flowers, &c.

Judges:—

Brownell, William	Duff, John
Campbell, Walter S.	Morton, Thos. W.

Stewards:—Broomfield, Capt. John; Hill, The Hon. Richard, M.L.C.

Assisting Steward:—Mortimore, George.

GENERAL AGRICULTURAL SHOW.—AGRICULTURAL HALL.

Classes 621, 622.—Pomology.

Judges:—

Campbell, Walter S.	Morton, Thos. W.
Duff, John	Ponder, W. F. (Chairman)

GENERAL AGRICULTURAL SHOW.—AGRICULTURAL HALL.

Classes 623-627.—Agricultural Products.

Classes 629-634.—Vegetable Products.

Judges:—

Pemell, James	Ponder, W. F. (Chairman)

ANALYSES OF AWARDS.

ANALYSIS OF AWARDS of all degrees to Countries and Colonies specified as under.

Countries and Colonies.	First Special.	First Degree of Merit.	Highly Commended.	Commended.	Hon. Mention.	Total.
Austria	15	76	58	38	26	213
Belgium	17	92	73	31	13	226
Canada	3	10	6	3	.....	22
Cape Colony	.....	.....	1	.....	.....	1
Ceylon	.....	7	4	3	9	23
Denmark	.....	1	.....	.....	.....	1
Fiji	2	18	21	19	9	69
France	34	190	127	51	49	451
Germany	59	182	173	127	58	599
Great Britain	155	536	372	165	80	1,308
India	.....	25	16	20	10	71
Italy	3	15	20	11	9	58
Japan	10	32	32	21	28	123
Manilla	.....	.....	.....	.....	2	2
Netherlands	5	14	17	11	5	52
New Caledonia	.....	6	3	2	2	13
New South Wales—General Exhibitors (including Fine Arts)	68	313	386	221	162	1,150
Public School do.	2	46	125	174	215	562
Live Stock* do.	11	271	215	53	29	579
Horticultural* do.	6	95	32	22	1	156
Agricultural* do.	2	13	22	19	7	63
New Zealand	7	109	107	109	67	399
Queensland	10	57	79	60	37	243
South Australia	6	75	78	53	32	244
Straits Settlements	.....	8	15	7	12	42
Switzerland	1	6	7	7	2	23
Tasmania	5	48	34	31	42	160
United States	36	107	81	36	32	292
Victoria	9	139	143	77	41	409
	466	2,491	2,247	1,371	979	7,554

* The awards in these Departments are tabulated in the general exhibits nomenclature.

ANALYSIS OF AWARDS to New South Wales, made at outside Shows approximately given in the nomenclature of General Exhibits. The totals of awards to other Countries and Colonies include all awards.

Classes.	First Special.	First Degree of Merit.	Highly Commended.	Commended.	Hon. Mention.	Total.
*645. Horses, Asses, and Mules...	3	34	32	21	16	106
646. Horned Cattle	5	29	27	13	8	82
647. Sheep	1	14	11	18	5	49
648. Goats, Alpacas, Llamas, &c.	...	4	1	...	...	5
649. Swine	...	10	7	1	...	18
650. Poultry and other Birds ...	2	128	100	...	...	230
651. Dogs, Cats, Ferrets, &c. ...	...	52	37	...	...	89
Horticultural Shows	6	95	32	22	1	156
General Agricultural Show	2	13	22	19	7	63
	19	379	269	94	37	798

* The Wool Awards, Class 639, are included among the general awards to N.S.W and other exhibiting Colonies.

NUMBER OF EXHIBITORS.

*Number of Exhibitors (inclusive of the Art Section and Exterior Shows.)

Countries and Colonies.	Totals.
Austria	250
Belgium	260
Canada	20
Cape Colony	1
Ceylon	60
Denmark	1
Fiji	55
France	375
Germany	720
Great Britain	1,250
India	45
Italy	85
Japan	90
Manilla	2
Netherlands	35
New Caledonia	16
New South Wales—	
General Exhibitors, 1,123	4,169
Public School Exhibits, 1,000 (about)	
Live Stock Shows, 1,723	
Horticultural Shows, 156	
General Agricultural Show, 167	
New Zealand	485
Queensland	325
South Australia	185
Straits Settlements	35
Switzerland	16
Tasmania	205
United States	310
Victoria	350
Grand Total	9,345

* The totals of the several Countries and Colonies are in many cases only approximate, as several exhibitors names were not catalogued in the official lists issued by the Commissions of the respective Countries; this is therefore only an approximate estimate of the numbers of exhibitors; the total of their exhibits it would be impossible to estimate—many exhibits consisting of hundreds of distinct objects.

Details of the Number of N.S.W. Exhibitors at Shows held outside the Garden Palace.

Classes, &c.	Totals.
645. Horses, Asses, and Mules	252
646. Horned Cattle	236
647. Sheep	259
648. Goats, Alpacas, &c.	6
649. Swine	42
650. Poultry and other Birds	659
651. Dogs, Cats, &c.	269
Horticultural and Agricultural Shows	323
Grand Total	2,046

DIPLOMAS, COMPLIMENTARY AND FOR SERVICES.

TOTALS of DIPLOMAS issued for Official and Special Services, and for General Services, such as the sending to the Exhibition large collective exhibits, lending valuable objects, &c., &c., which will be found detailed in each individual case under the heading of the respective Countries, for which *vide* pp. cxlii to clxiii.

Countries and Colonies.	Totals.
Austria	14
Belgium	16
Canada	7
Ceylon	3
Fiji	4
France	38
Germany	9
Great Britain and Ireland	74
India	5
Italy	4
Japan	9
Netherlands	1
New Caledonia	2
New South Wales*	240
,, ,, Diplomas to Judges for Services at Exhibition	254
New Zealand	12
Queensland	22
South Australia	40
Straits Settlements	5
Switzerland	2
Tasmania	31
United States	17
Victoria	23
Western Australia	3
Grand Total	835

* The seeming relative largeness of this total is explained by the fact that it includes diplomas issued to such as had lent valuable exhibits, and to those (apart from Judges) who had rendered services in connection with the Exhibition; the nature of these services are fully detailed in the lists "for services," under the heading of New South Wales.

JOURNAL

OF

FINAL SESSION OF COMMISSION.

THE Commission held its Final Session on the 8th of August, 1881, at the Offices, 156, Phillip-street, when the following members were present:—Sir Alfred Stephen, C.B., K.C.M.G., M.L.C., Lieutenant-Governor, and Vice-President, in the chair; Sir John Hay, K.C.M.G., President of the Legislative Council and Vice-President; Sir Patrick Alfred Jennings, K.C.M.G., M.P., Executive Commissioner; John Alger, Esq.; W. A. Brodribb, Esq., F.R.G.S., M.P.; Edward Combes, Esq., C.M.G., M.P.; John Davies, Esq., C.M.G., M.P.; William Davies, Esq.; Hon. Patrick Higgins, M.L.C.; Hon. Richard Hill, M.L.C.; S. A. Joseph, Esq.; Hon. William Macleay, F.L.S., M.L.C.; James Merriman, Esq.; Henry Mort, Esq.; William H. Palmer, Esq.; C. J. Roberts, Esq. (Ex-Mayor of Sydney); Hon. Professor John Smith, M.D., LL.D., C.M.G., M.L.C.; R. Burdett Smith, Esq., M.P.; S. H. Terry, Esq., M.P.; P. N. Trebeck, Esq. Sir James Martin, C.J., one of the Vice-Presidents, The Hon. Geo. Thornton, M.L.C., and Henry Halloran, Esq., C.M.G., sent letters of apology for non-attendance.

MINUTES.

The Minutes of the previous meeting of the Commission were read, confirmed, and signed by the Chairman.

THE ASSISTANCE RENDERED TO THE EXHIBITION BY HER MAJESTY THE QUEEN AND H.R.H. THE PRINCE OF WALES, AND BY THE COMMISSIONERS IN THE UNITED STATES.

At the previous meeting of the Commission, held 1st March, the following resolutions were unanimously carried:—

Moved by Sir ALFRED STEPHEN, C.B., K.C.M.G., M.L.C., seconded by JOHN DAVIES, Esq., C.M.G., M.P.,—

"That His Excellency the President of the Commission be respectfully requested to convey the warm thanks of the Commissioners of the Sydney International Exhibition to Her Most Gracious Majesty the Queen for the valuable and interesting collection of paintings lent by Her Majesty, which formed so attractive a feature in the Exhibition, and for the kindly interest displayed by Her Majesty in all matters calculated to promote the success of the Exhibition."

Moved by Sir JOHN HAY, K.C.M.G., M.L.C., seconded by EDMUND WEBB, Esq.,—

"That the thanks of the Commission be conveyed to His Royal Highness the Prince of Wales, President of the Royal Commission for the Australian Exhibitions, for the invaluable assistance rendered by him in all matters calculated to promote the success of the Exhibition, and also for the valuable pictures and objects lent to the Commissioners here."

Moved by Sir PATRICK JENNINGS, K.C.M.G., seconded by S. A. JOSEPH, Esq., and carried unanimously,—

"That the thanks of the Sydney Commission are due, and are hereby rendered, to the Commissioners in the United States, Mr. Roderick W. Cameron, of New York, and Mr. Henry W. Peabody, of Boston, for their exertions on behalf of the Sydney International Exhibition."

Mr. Cameron, who was present at the meeting by invitation, expressed for himself and Mr. Peabody great satisfaction for the recognition of their services by the Commissioners, and said that the success of the Sydney International Exhibition was a source of much gratification in the United States and Canada, where the prosperity of Australia was intelligently appreciated and cordially rejoiced in.

JOURNAL OF FINAL SESSION OF COMMISSION.

At the present meeting the Secretary read letters of acknowledgment of the two first resolutions, as follow:—

"Downing-street, 27th May, 1881.

"My Lord,

"I have the honor to acknowledge the receipt of your Lordship's despatch (No. 41) of the 21st of March, forwarding a copy of a resolution passed at a special meeting of the Sydney International Exhibition Commission, in which the thanks of the Commission were expressed to the Queen for the interest displayed by Her Majesty in the success of the Exhibition.

"You will be good enough to inform the Members of the Commission that their resolution has been laid before the Queen.

"I have, &c.,

"(Signed) KIMBERLEY.

"Governor the Right Honorable Lord Augustus W. F. S. Loftus, G.C.B."

"109, Victoria-street, London, S.W., 3 June, 1881.

"Sir,

"I am directed by His Royal Highness the Prince of Wales, President of the Royal Commission, to acknowledge the receipt of your letter of the 6th April, transmitting a copy of the resolution of the Commissioners of the Sydney International Exhibition, expressing their thanks for the assistance rendered to that undertaking by His Royal Highness, and to convey to you and to the other Commissioners His Royal Highness's acknowledgments for the resolution which has been passed by them on the subject of his connection with the Sydney Exhibition.

"His Royal Highness was much gratified at the remarkable success which attended the Sydney International Exhibition, the number of exhibitors from all parts of the world, and the importance of their contributions, far surpassing the most sanguine anticipations of those best able to form an opinion as to the response that might be expected to the invitation to take part in the Exhibition.

"Such conclusive testimony to the rapidly increasing importance of the Colony of New South Wales has been a source of much satisfaction to the President of the Royal Commission; and His Royal Highness has much pleasure in expressing his sense of the value of the services rendered to their country by the Commissioners for the Sydney International Exhibition, and of the lasting benefits likely to result therefrom to the colony of New South Wales, in which His Royal Highness and the Commissioners are alike so deeply interested.

"I have the honor to be, Sir, your obedient servant,

"T. A. WRIGHT, Secretary.

"Sir Patrick A. Jennings, K.C.M.G., Sydney, New South Wales."

Resolved, on the motion of the Hon. PATRICK HIGGINS, M.L.C., seconded by W. H. PALMER, Esq.,—

"That the letters acknowledging the Votes of Thanks to Her Majesty the Queen, and to His Royal Highness the Prince of Wales, be placed on the records."

THE FINAL RECORD.

The Executive Commissioner submitted to the meeting advance copies of the Final Record, containing his own report and that of the Secretary to the Commission, together with the Reports of the Judges and a List of Awards. The Record would be found to contain a large amount of valuable information. It had been printed at the Government Printing Office, a department which, with Major Richards as its head, had from the beginning materially assisted himself and the Commission.

S. A. JOSEPH, Esq., moved,—

"That the Report of the Executive Commissioner and of the Secretary, with the Reports of the Judges, and the List of Awards submitted to and adopted by the Commissioners, be laid before His Excellency the Governor by the Vice-Presidents."

Mr. Joseph spoke, in moving the resolution, of the energy and zeal displayed at all times by the Executive Commissioner. He had to express his own warm acknowledgments to that gentleman for the very valuable services he had rendered the Commission.

JOHN DAVIES, Esq., C.M.G., seconded the resolution, and in so doing also spoke of the ability and energy which had been displayed by the Executive Commissioner in the affairs of the Exhibition. There was a vast amount of information contained in the report which had just been submitted to the Commission, and it was creditable to the Executive Commissioner, the Secretary, and the Officers of the Commission.

The resolution was unanimously carried.

The Hon. Professor Smith, C.M.G., M.L.C., moved,—

"That copies of the Official Record of the Sydney International Exhibition be presented to the Premier and his Colleagues in the Ministry, and the Members of both Houses of Parliament."

The mover referred to the assistance which had been given at all times to the Commission by the Premier and his colleagues; they had obtained from Parliament the necessary funds for carrying out the Exhibition, and although the expenditure had been large it had been fully justified by the success which had attended the Exhibition.

Charles J. Roberts, Esq., seconded the resolution, which was carried unanimously.

Thanks to the Minister in charge of the Exhibition.

John Davies, Esq., C.M.G., M.P., moved,—

"That the cordial thanks of the Commissioners be presented to the Premier, Sir Henry Parkes, K.C.M.G., the Minister in charge of the Exhibition, for the great interest manifested by him in its progress and success, and for the support which he has at all times given to the Commission and its Officers."

The mover, in submitting the resolution, testified to the valuable assistance which had been rendered at all times to the Commission by the Premier and his colleagues.

R. Burdett Smith, Esq., M.P., cordially supported the resolution, which was carried unanimously.

Thanks to the Executive Commissioner.

Edward Combes, Esq., C.M.G., M.P., moved,—

"That the most cordial acknowledgments and thanks of the Commission be tendered to Sir Patrick Jennings, K.C.M.G., the Executive Commissioner, for the untiring energy, zeal, and great ability with which he has discharged the important duties confided to him."

In moving the resolution, Mr. Combes said that he was sure that the Exhibition would not have been anything like so successful but for the untiring energy, zeal, and great ability of Sir Patrick Jennings. Those only who had been connected with the Commission could have any adequate idea of the amount of hard work which the Executive Commissioner for the Sydney International Exhibition had gone through. From his own experience as Executive Commissioner for the Colony at the Paris Exposition Universelle of 1878, he could appreciate the amount of labour incidental to such a position in connection with our own Exhibition.

The Hon. PATRICK HIGGINS, Esq., M.L.C., cordially seconded the resolution.

Sir ALFRED STEPHEN (the Chairman), before putting the motion to the meeting, said, that but for his being in the chair he should like to have been the mover. There could not have been found in the Colony a gentleman more thoroughly suited than Sir Patrick Jennings to discharge the duties of Executive Commissioner, or one who would have acted with greater zeal or ability. With regard to the Exhibition Building itself he looked upon it as such an ornament to the city, and especially as viewed from the harbour, that he hoped it would be allowed to remain until dissolved by time and the elements.

The resolution was carried unanimously and with acclamation.

THANKS TO THE SECRETARY TO THE COMMISSION.

JOHN ALGER, Esq., moved,—

> "That the thanks of the Commission be given to the Secretary, Augustus Morris, Esq., for his unwearied industry, great ability, and zeal, in the performance of his important duties."

Mr. Alger bore testimony to the ability which Mr. Morris had brought to bear on the duties of his official position.

R. BURDETT SMITH, Esq., M.P., who said that he could testify to the great and invariable courtesy displayed by Mr. Morris in his intercourse not only with the Commissioners, but also with the exhibitors and the public, seconded the resolution, which was cordially and unanimously carried.

THE SERVICES OF THE OFFICIAL STAFF OF THE COMMISSION.

JOHN ALGER, Esq., moved,—

"That this Commission desires to place upon record the sense entertained of the ability and assiduity displayed by Mr. Alexander Cumming, the Chief Clerk to the Commission, and generally by the various officials."

The resolution was seconded by JOHN DAVIES, Esq., C.M.G., supported by R. BURDETT SMITH, Esq., M.P., and unanimously adopted.

THE REMAINING BUSINESS OF THE COMMISSION.

JOHN DAVIES, Esq., C.M.G., M.P., moved, S. A. JOSEPH, Esq., seconded, and it was agreed to,—

"That the remaining business of the Commission be disposed of by the Vice-Presidents, the Executive Commissioner, the Finance Committee, and the Secretary to the Commission."

THANKS TO SIR HERCULES ROBINSON, G.C.M.G., the first President, to His Excellency the Lieutenant-Governor, and other business.

Sir JOHN HAY, K.C.M.G., said that the Commission had now only one thing more to do, and that was to adjourn *sine die*, although if necessary they might be called upon again to

act, which, however, was not very likely. They might, therefore, look upon this as their last meeting. In concluding their labours they had every reason to congratulate themselves upon the great success of the business upon which they had been engaged. He thought most of them would recollect that there were considerable misgivings at first about the probable success of this great undertaking. But having been taken in hand they felt that they ought to go through it bravely. He would not say anything with regard to the part played by any of those gentlemen present, but he would refer to the efforts of one gentleman who was no longer among them, and whom it could not therefore be said it was the interest of anyone to praise. He was sure they would agree with him in giving to that gentleman the utmost credit for the manly way in which he had come forward and endeavoured to clear the Colony from the aspersions which were likely to have been cast upon it if the undertaking had not been carried through. He alluded to their late Governor, Sir Hercules Robinson, and he thought the present occasion should not be allowed to pass without the Commission making some particular reference to his valuable efforts. If he visited this Colony again it would give him pleasure to see the fine building erected for the purposes of the late Exhibition which would greet his view as he entered the harbour; and he only hoped that if that building were removed it would be in order to replace it by one of a more permanent character. He had much pleasure in moving,—

> "That the members of the Commission place on record their thanks to His Excellency, Sir Hercules Robinson, G.C.M.G., for the able and patriotic service rendered by him to the Colony in connection with the first stages of the Sydney International Exhibition, under the many difficulties which the undertaking had then to encounter." (Applause.)

He trusted that Sir Hercules Robinson would hear of the enthusiasm with which his name had been received in connection with this matter.

Sir PATRICK JENNINGS, K.C.M.G., said that he had very great pleasure in seconding the motion, and thought the reference to Sir Hercules by the last speaker was a very graceful and proper one, and one which he was sure touched a chord in the bosom of every one present. (Hear, Hear.) They all knew the great exertions put forth by Sir Hercules Robinson to retrieve the colonists from the great mistake they were making in proposing to abandon the scheme which they had published to the world. He was sure it would be gratifying to Sir Hercules to hear of this expression of their good feeling and sympathy. And before sitting down, he (Sir Patrick Jennings) wished to give expression to his thanks, not only for their cordial vote in his own name, but for the unvarying kindness and assistance he had at all times received from members of the Commission. If in the hurry of business he had erred in judgment they had forgiven him, and had confirmed his action where he had acted on his own responsibility. They would credit him with the virtue of always having acted for the best. He had always received the most valuable assistance from the chairman and vice-presidents, and Sir John Hay from the very first had rendered him especial assistance.

The resolution of thanks to Sir Hercules Robinson was supported by several members of the Commission, put to the meeting and carried with enthusiasm.

It was further resolved that this meeting at its rising do adjourn *sine die*.

Sir PATRICK JENNINGS, in proposing a vote of thanks to the Chairman (Sir Alfred Stephen), said that that gentleman deserved all the thanks which this Commission could give for the very valuable services in connection with the Exhibition, which he had rendered from the first.

The resolution was carried by acclamation.

The Secretary to the Commission acknowledged the resolutions which had been passed recording his own services and those of the officials on the staff of the Commission, and said that he owed much to Mr. Alexander Cumming, the head of the staff, whose valuable forethought, energy, and ability had contributed much to the success of their efforts.

The Commission adjourned *sine die*.

AUGUSTUS MORRIS,

Secretary.

DEPARTMENT I.

MINING, METALLURGY, AND THEIR PRODUCTS.

AWARDS NOMENCLATURE.

The Awards in Department I.—Mining, Metallurgy, and their Products, are thus described in their relative orders of merit:—"First degree of Merit Special"; "First degree of Merit"; "Highly Commended"; "Commended"; "Honourable Mention."

CLASSES 100–107.

Minerals, Ores, Building Stones, and Mining Products.

JUDGES.

DIXON, W. A., F.C.S., F.I.C., Lecturer on Chemistry, Sydney Mechanics' School of Arts, Chairman.

HACKET, T. R., Mining Engineer, formerly of the Geological Surveys of Queensland and New Zealand.

RATTÉ, F., Civil Mining Engineer, F.R.S.

VERHOUSTRAETEN, R., C.E., Engineer of the Cockerill Iron and Steel Works, Seraing, Belgium.

GENERAL REPORT.

CLASSES 100–107.—Minerals, Ores, Building-stones, &c.

The Judges report that the exhibits in this class have been both numerous and varied. The minerals from the old Countries have hardly been well represented, but on the other hand, the Australian Colonies, New Zealand, New Caledonia, and the Straits Settlements have sent a very great number of special exhibits, as well as very large, varied, and highly creditable collections, both of useful and other minerals, the whole giving a vast amount of practical and scientific information to any one devoting time to this especial department, and showing the immense mineral resources of each Colony.

The exhibits of Minerals received from the public an amount of attention proportionate to their merit. There appears to be a natural desire amongst educated people, and particularly amongst colonists, to inquire into the value and utility of the surface and sub-surface of the land on which we live.

Knowing as we all do that England is rich in a great many minerals, and that the development of her ores of tin, copper and lead, but particularly of her iron and coal, has done much to establish her national greatness, it is not to be wondered at that her colonists should minutely inquire into the possibility of their yet equalling the Mother Country in mineral productions.

The number of special exhibits of rocks and minerals examined by us is 50 from Europe, and 420 from the various Colonies. These include the large collections mostly from the Colonies, containing many thousands of smaller specimens similar to those exhibited by the owners of mines, which, being all displayed side by side, and the different localities being indicated, give an opportunity for interesting comparison. The Judges regret that no information is afforded regarding a great many of the exhibits, which has prevented that attention being given them which they might possibly have deserved. Where exhibitors have furnished information with regard to the mode of occurrence, composition, &c., of their exhibits, we have availed ourselves of it in drawing out our reports.

In all cases in which awards have been made, the best exhibit of the kind has been taken first, the second best second, and so on, but those exhibits to which awards have not been given are placed in no definite order, as the doing so would have entailed a great sacrifice of time.

We feel compelled to acknowledge the invariable courtesy of the gentlemen in charge of the various Courts, who did all in their power to afford us information, and thus lightened our labour considerably.

Class 100.—Gold and other Ores.

In connection with the Gold-mining industry which has done so much to attract population and attention to the Australian Colonies, trophies have been erected by Queensland and New Zealand representing the bulk of gold raised by each, and the same has been done by various District Committees for their local Gold-fields.

CLASSES 100–107.—*Minerals, Ores, Building-stones, &c.*

To represent the bulk of all the gold obtained in the Australasian Colonies, the Colonial Architect erected a lofty and beautiful Obelisk on the grounds of the Garden Palace, which stands on a base showing sections of the principal coal-seams worked in New South Wales. The yield of the gold of the different Colonies is indicated by sections of the obelisk divided from one another by black bands, each having the weight marked in plain figures.

The other trophies are placed in the various Courts, that of Queensland most appropriately rising from a base of gold-bearing quartz, the principal source of the precious metal in the Northern Colony.

To persons unused to handle gold or any of the heavier metals, this mode of representation conveys an inadequate idea of the immense weights intended to be shown; for accustomed to associate a ton weight with the bulk shown by substances of low specific gravity, as wood, coal, &c., they cannot realize that a ton of gold occupies a space of less than two cubic feet.

The general yield of the Colonies represented on the exterior of the Obelisk is—

	Tons	cwt.	qrs.	lbs.
Queensland	99	6	2	10
New South Wales	278	10	2	27
New Zealand	283	5	0	13
Victoria...	1,492	15	0	10
	2,153	17	2	4

representing a value of about £281,000,000 sterling.

Many excellent specimens of rich quartz are shown, but we did not deem it advisable to make any awards. Perhaps the best were from Queensland, where the miner has been accustomed to obtain exceptionally high yields from the 1,453 known auriferous quartz veins of that Colony, so much so that in the year 1878, notwithstanding the drought and that the number of rich finds was low, the average per ton was 1 oz. 10 dwts., 3 grs. for 109,996 tons. The earnings, calculated on the number of men employed, were £201 9s. 9d. per man, which is an average return far ahead of the other Colonies.

Tailings from a number of reefs in various Colonies have been sent, in the expectation that there would be some machine exhibited for their treatment, but the Judges did not think it necessary to examine them, as their gold contents could only be determined by assay and not by inspection.

It seems somewhat surprising that no such machine was on trial, considering the great importance of the gold-mining industry, and that so much attention has been devoted to saving appliances.

Several private collections of alluvial gold are shown, and it would have been interesting had assays been made, or even the Mint values of the samples from different localities been given, as was the case with those of the Mining Department of New South Wales. We might thus arrive at some classification of the gold from different districts and formations, leading perhaps a step towards the solution of the vexed question as to how the metal was deposited in the reefs and alluvium. Models of many of the principal nuggets obtained are shown in the Victorian and New South Wales collections, and also a fragment of the original Kerr nugget, whilst in the general collections of minerals systematically arranged are some beautiful specimens of crystallized gold, and the metals associated with an infinite variety of minerals.

The ores of silver exhibited are not numerous, but are well worthy of the attention of those engaged in mining pursuits. Being unattractive in appearance, and often showing no outward indication of their riches, it is more than

probable that they have often been passed over by prospectors as unworthy of notice. Indeed, it has happened to one of us that on a miner presenting a piece of ore for examination, he suggested the advisability of knocking off the "clay" from the specimen, and the supposed clay proved to be chloride of silver.

As was naturally to be expected, copper ores are well represented in the Courts of South Australia, Queensland, and New South Wales. The South Australian Mines of Burra, Wallaroo, and Moonta, are world-renowned for their immense yield and the fine quality of the metal produced. The last-named mine, during the eighteen years it has been worked, has yielded 328,123 tons of ore, and has returned £1,024,000 in dividends to the shareholders. Copper has been to some extent to South Australia what gold has been to Victoria, and indeed has formed almost its only mineral export. The export of copper, copper ore, and regulus from that Colony up to the end of 1878 was £15,754,680 and of all other minerals, only £293,185. The copper mines of the other Colonies, though less known, are of great importance, but are in many instances heavily handicapped by the cost of inland carriage, and will only come to the front as the means of communication are improved. The low price of copper has kept down the production, but in 1878, the exports of the metal were—from

South Australia	3594 tons
New South Wales	4983 ,,
Queensland	490 ,,

The returns for New South Wales are high, owing to the fact that copper ores from South Australia, New Caledonia, and Queensland, are largely smelted at Newcastle; but that the production of the Colony itself is considerable is evidenced by there being 534 miners employed in copper mines in 1878, and that now the Cobar Copper Mine is putting out about 2,000 tons per annum of fine metal. Besides the export of refined metal, large quantities of ore and regulus have been shipped, but these appear to be decreasing. Some of the exhibits of malachite and azurite shown are of exceptional beauty, whilst others, not so attractive to the eye, give evidence of the size and richness of the lodes yielding them, and are in many cases shown with the copper derived from them. Besides the ores mentioned, nearly every known metal and the ore containing it, are shown in one or other of the general collections of Minerals, and often by very excellent specimens.

Tin ores are largely shown in the Courts of New South Wales, Queensland, Straits Settlement, and Tasmania, and there is a small specimen in the Victorian General Collection. Tin ore, like silver ore, is not attractive, and stream tin, to the inexperienced eye, looks so much like titaniferous and magnetic iron sand, that it is scarcely to be wondered at that it was long in being recognized. The following description of its discovery in Queensland agrees well with experience elsewhere :—"The story of the discovery of tin ore in Queensland belongs to the romance of mining. There is a heavy black metallic sand found in the beds of many creeks well known to diggers, and often a great nuisance to the alluvial gold miner, because from its specific gravity it interferes with the operation of washing. This sand, though metallic, was known to contain only iron and other metals, which were of little commercial value. But there was a certain creek in the southern part of the Colony, near the New South Wales Border, where a peculiar looking black sand was noticeable, and where the ordinary dray-tracks crossed its bed. For

years the track was used, and of all the wayfarers that crossed the creek, not one thought of taking up a handful of the sand to look at it more closely, or to see whether it differed in any respect from that which was to be found in a hundred creek-beds in the Colony. It was not till 1871, that a man more observant, or more curious than usual, examined the sand, noticed the peculiarity of its appearance, and inquired what it contained. And then it transpired that another valuable metal had been added to the list of available Queensland products." The export of tin from New South Wales from 1872 (the year of its discovery) to 1878 inclusive amounted to 29,881 tons, and of ore, 12,107 tons, of a total value of £2,771,888. In the last year mentioned, 6,085 tons of ingots were exported, and from Queensland in 1878 (the last year for which records are available) 2,345 tons of ore and 209 tons of smelted tin were exported.

Iron ores are chiefly represented by rich dense magnetites, many of them being so dense as to indicate that they would be difficult of treatment in the blast furnace. It appears to be generally considered that an ore rich in iron must necessarily be of greater value than a poorer ore, which however is not a matter of course. Much of the value of an ore depends in the first place on the facility with which it is permeable to the gases of the blast furnace by which the reduction to metal is effected. The iron wealth of Great Britain is built up not on rich magnetites, but on the comparatively poor clay band and black band ironstones of the coal measures. Secondly, the value depends on freedom from sulphur and phosphorus, and therefore the value of an ore cannot be arrived at without a knowledge of the amount of these substances present. This may be arrived at by analysis, or by the older but somewhat more costly process of smelting and refining some of the ore and examining the quality of the iron produced. Without some such information, represented by an analysis of a chemist of known reputation, it is impossible to judge of the value of the exhibits and to class them.

We write the above with a view to the production of iron in the Colonies. There is no doubt that iron of the finest quality is produced from magnetic ores in Sweden and elsewhere, but the metal from this source is necessarily and invariably expensive, and is only used for high-class work, steel-making, &c. For this description of iron, from its high price, there is only a limited demand in the Colonies, and the establishment of the iron industry here will be more likely of accomplishment if ores free from injurious ingredients, but of easy reduction, such as those of Lithgow, formed its basis.

Ores of antimony, lead, nickel, and chromium, are represented by good samples, whilst, included in the general collections of Minerals, ores of all the useful metals find a place.

Class 100.—Silver Ores.

Specimens of silver ores from the Boorook Silver Mines, near Tenterfield, collected by the International Exhibition Committee at Boorook.

An interesting and important collection from Boorook. The Boorook Silver Mines are situated on the eastern fall of the Main Dividing Range, in very mountainous country, about twenty miles north-east of Tenterfield. The lodes occur in belts of felspar porphyry, associated with beds of altered and fossiliferous shales of Upper Devonian age, and specimens of lepidodendron have been found in the shafts. These ores have a most unpromising appearance, but

contain silver in the form of chloride, antimonide, and sulphide, and yield from 8 to over 500 ozs. per ton and up to 16 ozs. gold. The average from the reefs now being worked is about 60 ozs. A large number of reefs have been discovered, but only in a few have any real explorations been made.

The Golden Age Prospect Claim (Horton, Funnel, and Donovan), is a block of two acres, worked by two shafts to a depth of 70 feet each, and a level the whole length of the block at this depth. The specimens were taken from 10 feet, 20 feet, 30 feet, 40 feet, 50 feet, 60 feet, 70 feet.

Golden Age No. 1 North, on the same line of reef, is a 4-acre block where Messrs. Westhoven and party have sunk a shaft 74 feet. The lode is 3 to 4 feet in width, and about 50 tons of ore have been brought to the surface.

Golden Age No. 1 South (Carmichael & Co.), is a lease of 4 acres adjoining the southern boundary of Horton, Funnel & Co.'s, on which a shaft 35 feet deep has been sunk; the lode is from 5 to 6 feet wide. The country is slate, and the ore easily crushed.

Curran's Reef Prospect Claim. A 6-acre lease held by the Boorook Gold and Silver Mining Company, on which one shaft has been sunk 45 feet. This reef is distant about one mile west of the Golden Age, and traverses fossiliferous slate. The course of the reef is north and south underlying to the east. The surface vein was about 2 feet wide, but diminished to the 45-feet level, where it split up into a number of small veins all silver-bearing.

Leviathan Reef Prospect Claim, a 6-acre lease held by the same Company, is to the west of and parallel with Curran's Reef. A shaft has been sunk on it to the depth of 24 feet, where the lode is 4 feet wide.

Golden Crown Reef is also held by the Boorook Gold and Silver Mining Company, and on this lease containing 4 acres a shaft has been sunk to 75 feet, the deepest on Boorook. The reef runs north and south, and dips to the west. The bounding rock is porphyritic diorite. An assay from this reef gave 459 ozs. of silver and 5 ozs. of gold per ton. The reef varies in width from eighteen inches to two and a half feet.

John Moffat Reef Prospect Claim of the Boorook Gold and Silver Mining Company, is about half a mile distant in a southerly direction from the Golden Crown Reef. A shaft has been sunk to a depth of 60 feet, the reef is about $2\frac{1}{2}$ feet wide, showing a hard white and red quartz, of which several assays have been made.

No 1 North John Moffat Reef is a 4-acre lease held by Anthony Tinedale and others. A shaft has been sunk to 47 feet. The reef is 3 feet wide, and similar to that of the prospect claim.

The Grand Junction Reef Prospect Claim is the next in the same belt of country as the Golden Crown and John Moffat Reefs. The course of this reef is east and west, with a slight dip to the south. A shaft has been sunk 30 feet, and the width of the lode is about 18 inches.

Grand Junction No. 1 East, adjoining the eastern boundary of Ferguson, Yates & Co. is held under lease by Brown, Murray, & Co. A shaft has been sunk, and the lode is found to vary in width from 10 inches to a foot.

Mysterious Reef Prospect Claim is a lease held by Messrs. Yates & Co. in the vicinity of the Leviathan line of reef, and is a series of reefs or leaders 20 feet wide. No work has been done with the exception of surface excavations.

Addison Reef Prospect Claim is a 4-acre lease held by Horton, Funnel, & Co. This reef runs north and south, and is supposed to be a continuation of

the Golden Age. A shaft has been sunk to 50 feet. The lode is 3 feet wide, composed of a hard bluish quartz, thickly impregnated with pyrites.

Addison Reef No. 1 North is a lease held by Flannery, Donovan, & Co., adjoining the northern boundary of the prospect claim. A shaft has been sunk 50 feet, where the reef is 10 feet wide.

Addison Reef No. 2 North is a lease held by Horton, Funnel, & Co. adjoining the northern boundary of No. 1 Addison Reef, and a shaft has been sunk to 15 feet. The reef is 6 feet wide.

Cornstalk Reef Prospect Claim is a lease of 4 acres held by John Johnson & Sons. A shaft has been sunk to 30 feet. This reef runs north and south, and dips east. A private assay from this reef yielded 46 ozs. per ton. The width of reef varies from 2 to 3 feet.

Mariners' Reef or No. 2 North Golden Age is a lease of 4 acres held by Brown and Murray. A shaft has been sunk to 60 feet, and the reef is 6 feet.

East Golden Age is a 4-acre lease held by Messrs. Hansen, Davis, & Co., in which there are three distinct reefs running N.N.E. On one of them a shaft has been sunk 20 feet; the reef is 20 inches wide. A small crushing from this reef yielded $1\frac{1}{2}$ oz. of metal to the ton, value 30s. per oz.

Tenterfield Reef is in a lease of 4 acres held by the Boorook Gold and Silver Mining Company. This reef is situated west of the Golden Crown and parallel with it. A shaft has been sunk to 20 feet, showing a lode of 2 feet wide of blue and white rubbly quartz thickly impregnated with pyrites.

Respecting the undermentioned lodes very little has been done with the exception of surface excavations.

Alderman Reef Prospect Claim, $2\frac{1}{2}$ miles north of the Leviathan and Curran's Reefs.

The Woolshed Reef Prospect Claim is in close proximity to the Alderman's line. The surface has been opened, exposing a reef 18 inches wide.

Murray's Reef Prospect Claim is situated east of the John Moffat. This reefs runs east and west, and on the surface shows a vein 18 inches wide containing gold and silver.

Lord Loftus Reef Prospect Claim is distant $\frac{1}{2}$ a mile south of Murray's Reef, runs north and south; the vein is 12 inches wide, and contains gold and silver.

Clifton Reef Prospect Claim. This reef on the surface is 3 feet.

Oriental Reef is a lease held by S. Hawkins and others.

The great extent of country covered by these reefs indicates a prospect of a new feature in colonial mining being developed. None of the ores show any signs of silver until they are heated in the fire, when the metal is seen in minute threads running through the richer specimens, showing that the metal is present as sulphide. One of the reefs was opened up as a gold mine some years ago, but the prospects not being sufficiently rich it was abandoned and was only found to be rich in silver a couple of years since. From the description of the various claims it will be seen that the surface only, so to speak, has been touched, but we understand that from some of the claims satisfactory returns have been obtained, and that with imperfect appliances involving a great loss of silver.

The following assays made for the Department of Mines by Mr. W. A. Dixon show the silver contents of some specimens and samples from the various reefs:—

1. Addison Reef, dark grey quartz with disseminated pyrites:—
   Gold, 18 oz. 6 dwts. 10 grs. per ton; silver, 522 oz. 2 dwts.
2. Gold, 5 grs. per ton; silver, 1 oz. 4 dwts. 9 grs.

3. Quartz much stained with oxide of iron :—
   Gold, 18 dwts. 10 grs. per ton ; silver, 20 oz. 8 dwts.
4. Stone from 30-feet level, rather dense bluish quartz, with finely disseminated pyrites :—
   Gold, 10 dwts. 19 grs. per ton ; silver 42 oz. 10 dwts.
5. Copenhagen Reef, quartz with galena, giving 13·4% of lead :—
   Gold, 10 grs. per ton ; silver 5 oz. 16 dwt. 4 grs.
6. Golden Age Reef, soft friable reddish-colour quartz :—
   Gold, 9 dwts. 14 grs. per ton ; silver, 80 oz. 1 dwt. 5 grs.
7. Pyrites saved from this stone after crushing :—
   Gold, 3 oz. 15 dwts. 5 grs. ; silver, 248 oz. 13 dwts. 14 grs.
8. Bluish quartz showing iron pyrites, numerous small thread-like veins of sulphides of silver and lead, and small drusy cavities, with antimonide of silver, from 50 feet level :—
   Gold, 1 oz. 4 dwts. ; silver, 98 oz. 16 dwts. 19 grs.
9. Same stone as coming from the stamper boxes :—
   Gold, 1 oz. ; silver, 83 ozs. 12 dwts. 19 grs.
10. Alderman Reef, surface stone :—
    Gold 9 dwts. 5 grs. ; silver, 37 ozs. 15 dwts. 14 grs.
11. Golden Crown Prospectors' Shaft, quartz with bright red oxide of iron, sulphides, and chloride of silver :—
    Gold, 4 ozs. 5 dwts. 14 grs. ; silver, 284 ozs. 13 dwts. 14 grs.
12. Grand Junction Reef, Yates's lease, quartz with oxide of iron, iron pyrites, and chloride of silver :—
    Gold, 1 dwt. 15 grs. ; silver, 124 ozs. 12 dwts. 19 grs.

Assays from a number of other reefs of less importance were also made.

Class 100.—Reef and Alluvial Gold.

NEW SOUTH WALES.

BEYERS, H. L., Sydney.

Specimens of gold quartz, from Hill End.—Gold in micaceous rock, four samples, being rich specimens from Beyer and Holterman's claim, extracted during 1873.

CURRAN, J. P., Boorook.

Silver ore.—Only of importance in connection with the general exhibit of Boorook, and it is displayed with them, though entered separately in the N.S.W. catalogue.

GILL, W. H., Copeland, Barrington.

Specimens of gold quartz from reefs, Copeland Gold-field.—Rich and interesting specimens of gold, as coming from a new field.

GUY, J., Bateman's Bay.

Silver ores.—Arsenical pyrites, blende, and galena, perhaps the same as the silver ore obtained at Moruya. The Moruya ore is rich in both silver and gold, and has the same general appearance as this exhibit.

HEINZ, JOHN.

Specimens of gold quartz.—Rich specimens of quartz from Krohmann's Reef.

CLASSES 100-107.—*Minerals, Ores, Building-stones, &c.*

IRONCLAD GOLD-MINING Co., Sydney.

Collection of gold specimens.—A collection of pyritous ores. No analysis given, which in this case is necessary.

IRWIN, JAMES, Copeland, Barrington.

Specimens of gold-bearing quartz from the Copeland Gold-field.—A good exhibit of gold quartz. These exhibits come from the newest gold-field in New South Wales, and one which gives every promise of rich and permanent yields, the chief drawback to it heretofore being a deficient water supply, and the rugged nature of the country, which renders communication difficult. This gold-field is situated 10 miles west of the town of Gloucester, and comprises a strip of country about 3 miles wide, extending from the Barrington to the Bowman River. The principal workings are at Back Creek, which rises amongst steep ranges, attaining a height of 800 to 1,500 feet above the Barrington River. The amount of alluvial gold found has been small, and the wash-dirt has been payable, but no more. The chief yield has been from the reefs, of which 20 distinct lines, all gold-bearing, have been proved. They occur in indurated shale, sandstone, and conglomerate of the Devonian age. The Mountain Maid Reef varies from 4 to 26 inches in thickness, with an average of about 14 inches, and the results of large crushings have given an average of 15 ozs. of gold per ton.

JOHNSON, W. H., Araluen.

1 lb. weight of alluvial gold from Araluen.—Only remarkable as coming from a granite country, and for its fine flaky character.

MACKENZIE, CAPT. W. D., N.S.W.A., Sydney.

Specimens of gold quartz from Forbes.—Very rich specimens of gold quartz.

NEWMAN, H. W., Reform Gold-mining Co., Lucknow.

Auriferous pyritous quartz. Arsenical pyrites, showing the gold on the surface sweated out by the application of heat; the ore occurs in a vein of calcite sometimes replaced by asbestos, and has yielded by assay from 4 oz. to 1,840 oz. per ton, whilst the returns obtained from parcels shipped to England have varied from 14 to 168 ozs. of gold per ton. This is an interesting exhibit, as in the original pyrites no gold can possibly be seen. It was from an examination of this ore that Professor Liversidge discovered the formation of moss gold, an account of which was published in the Journal of the Royal Society of New South Wales.

OX MINE, Wattle Flat.

Specimen of quartz and mispickel.—The accompanying diorite being rich in gold makes this exhibit of exceptional interest.

RUTHERFORD, J., Bathurst.

Collection of gold specimens and samples of gold-bearing quartz. Only a few specimens are exhibited, the greater part of this exhibit having been lost in transit. Some of the samples of quartz shown consist chiefly of opaline quartz, containing asurite, jasper and chalcedony, and connected with serpentine.

SPENCER, DR., Bathurst.

Alluvial gold. Specimen of alluvial gold from a pliocene drift covered by basalt, from the claim of the Ophir Drift Co., at the depth of 100 feet. The lead in the claim is 250 feet wide. The gold is coarse and nuggety. This exhibit is of great importance as showing the gold from one of the few deep drift workings under basalt in New South Wales. It is known that there are numbers of such drifts in various localities, but want of capital has prevented the individual miner from working them. The sinking is often deep and hard, and there is much water to contend with; but experience in Victoria shows that it is in the working of such drifts that the caps of rich quartz reefs are often laid bare, the working of which yield profitable returns after the drift is worked out.

SUTTOR, MRS. C. A. A., Alloway Bank, Bathurst.

Gold in quartz; being part of the "Kerr Hundredweight" piece of gold, found in 1851 by an aboriginal shepherd; interesting historical nugget. Also crystals of gold from Burrandong.

NEW ZEALAND.

BANK OF NEW ZEALAND.

Specimens from the New Zealand Gold-fields. 1–3, Auriferous quartz from the Thames Gold-fields; 11–54, samples of alluvial gold from Otago Gold-fields. 1 to 3 are badly shown, the specimens being varnished, which although it shows the gold obliterates the character of the stone. 11 to 54: A capital and valuable collection of the different varieties of gold found in New Zealand, the exhibit being displayed in a most attractive form and well arranged.

CHAPMAN, JOHN ALWENT, Dunedin.

Quartz specimens from Thames, Auckland, and Macetown, Otago.

DOUGLAS, GEORGE BROWN, Macetown, Arrow, Lake County, Otago.

Quartz reef specimens from Macetown, Arrow River, Otago.—Rich specimens, but varnished, which spoils the exhibit, as the stone cannot be seen, and this is often of as much importance as to see the gold.

EDWARDS, E. R., Thames.

Specimens of gold-bearing quartz, from Thames.—Very ordinary specimens.

JACKSON, H. D., Nelson.

Specimens of ores and regulus, copper brick, silver (pure 19 oz.) from Richmond Hill Mine. These ores said to have yielded 600 oz. of silver to the ton. This is a new ore called Richmondite, containing—

Sulphide of antimony	... ...	22·20
,, bismuth	... ...	traces.
,, copper	... ...	19·31
,, iron ...	... ...	13·89
,, lead	... ...	36·20
,, oxide of manganese	... ...	0·52
,, silver	... ...	2·09
,, zinc ...	... ...	5·87

A species of grey copper ore, allied to tetrahedrite, not worked at present. The analysis is from Dr. Hector's report, and it seems curious that an ore of such value should be neglected.

QUEENSLAND.

Aurelia Gold-mining Co., Gympie.

Gold in quartz and calcspar, with diorite and copper and iron pyrites and rich gold bearing quartz.—The specimens of gold-bearing quartz are exceedingly rich and interesting, as showing the width of the vein from whence they are derived.

Doctor's Reef, Proprietors, Gympie.

Specimens of mundic stone.

Glanmire, North, Gold Mining Co., Gympie.

Ten tons of rich auriferous quartz.—Very large exhibit of gold-bearing quartz. Very interesting, as showing the ordinary occurrence of the precious metal to the general public.

Hodgkinson, W. O., Warden, George Town, Etheridge River.

Geological collection. Geological suite, from the Etheridge River, Tropical Queensland, showing the formation, &c., of the gold-bearing reefs of that district. 75 lbs. average stone, Papa Prospect Claim, Etheridge River; taken from 38 tons, which yielded 2 ozs. 16 dwts. of gold per ton; reef, 1 to 3 feet wide; ½ mile from George Town. 85 lbs. average mundic stone, Spero Meliora Claim; taken from 10 tons, yielding 4 ozs. gold to the ton; reef, 1 to 2 feet wide; ½ mile from George Town. 79 lbs. average raw stone; from 38 tons, yielding 2 ozs. 11 dwts. gold to the ton; City of Glasgow Prospect Claim; reef, 1 to 2 feet wide; 8 miles from George Town. 79 lbs. tailings, Papa Reef; 94 lbs. ditto, Spero Meliora; 95 lbs. ditto, City of Glasgow; 86 lbs. ditto, "Burdans Pan," City of Glasgow; 90 lbs. blanketings, Spero Meliora. 144 lbs. average stone, Better Luck Prospect Claim; 85 feet level; former crushings, 2½ up to 7 ozs. gold per ton; width of reef, from 4 to 20 inches; ½ mile from George Town. 135 lbs. average mundic stone from Lord Byron Reef Prospect Claim, at 130 feet level; crushings varying from 18 dwts. up to 5 ozs. gold per ton; reef from 10 inches to 5 feet wide. 108 lbs. average stone, Cumberland Reef Prospect Claim; latest crushing was 1,921 ozs. gold from 760 tons of this stone; reef, from 2 to 5 feet wide; 16 miles from George Town. 78 lbs. blanketings from Cumberland Reef, as above. An interesting collection, with valuable information in catalogue, which would have been increased had some mention been made of the country rocks.

Jones, D.M., Maytown.

Gold specimens, from the Palmer River.—Very rich specimens of gold quartz.

Lady Mary, South, No. 5, Gold-mining Co., Gympie.

Ten tons of rich auriferous quartz.—Moderate stone. The bulk of the exhibit was crushed at the Sydney Mint, and yielded 33 ozs. 4 dwts. of gold.

LONDON EXTENDED CLAIM PROPRIETORS, Two-mile, Gympie.

Specimens of rich gold-bearing quartz, containing 35 ozs. gold.

MORGAN BROTHERS, Charters Towers.

Gold specimens, containing 70 ozs. 10 dwts. gold; Caroline prospect claim.—Very rich specimens. The best specimen of gold-bearing quartz shown.

NICHOLLS LEASEHOLD PROPRIETORS, Gympie.

Gold in quartz.—Rich specimens of gold quartz.

PEARIN, JACOB, Brisbane.

Rich gold specimens, from Nos. 7 and 8 Monkland Reef, Gympie.

SOUTH AUSTRALIA.

COMMISSION, Adelaide.

Specimens of auriferous quartz, from Port Darwin Gold-fields. Specimens of copper ores from the Burra Burra and North Yelta Mines. Specimens of iron ore—viz., micaceous, specular, brown, titaniferous, magnetite, red hæmatite, and crystal red hæmatite (99 per cent. peroxide of iron). Specimens of bismuth ores.—Collection of auriferous quartz, not of much importance. One specimen of crystallized red hæmatite ore was the only noticeable object in the collection, this specimen being a very good one.

KNIGHT, J. G., F.R.I.B.A., A.I.C.E, Chief Warden of Gold Fields.

Specimens of auriferous quartz. 1. Large block of surface quartz from J. B. Knotts' claim, Lady Alice Reef. 2. Four specimens of quartz from Union Prospectors' Claim. 3. Twelve pieces of quartz from Tennant & Ping Ine's Claims, Union Reef. 4. A collection of specimens of quartz from a "leader" on the claim of J. S. Westcott, Union. 5. A collection of specimens of quartz from Dugald M'Lean's claim, Union Reef. 6. Three specimens of quartz from Extended Union. 7. Specimens of gold in ironstone (rare) from Pine Creek. 8. Three pieces of quartz from Pine Creek. 9. Three specimens of quartz from Yam Creek Reefs. 10. Specimen of auriferous quartz ; ditto, decomposed slate ; ditto, iron pyrites with gold ; from Messrs. Beetson's Claim, Howley Reefs. 11. Specimens of auriferous quartz from John Bull Reefs, Howley. 12. Two pieces of auriferous quartz from Stapleton Reefs. 13. Specimen of quartz, with organic traces in fracture, from Mr. Tripp, Lady Alice Reef. 14. Specimen of slate, with organic traces, from Yam Creek alluvial diggings. 15. Two specimens of igneous rock, with organic traces; this rock is usually in the neighbourhood of alluvial gold workings. 16. Specimen of slate, with organic traces. 17. Specimen of copper from surface of a large field six miles from Pine Creek. 18. Three specimens of surface copper from the Howley. 19. Indications of opal from Yam Creek. 20. Tin sand from which gold has been washed, from M'Kinlay River. 21. Agates from near the Katherine Telegraph Station. 22. Ironstone and limestone from Powell's Creek Inland Telegraph Station. 23. Specimen showing thickness of a vein of auriferous quartz. 24. Granite, very abundant; the rock usually overlaid by beds of

ironstone conglomerate, surmounted by layers of a loamy kind of yellow sandstone, and sometimes by a hard, vitreous, red sandstone. This collection from Port Darwin, though small, is of considerable interest as showing some of the resources of the Northern Territory of South Australia.

TASMANIA.

Commissioners for Launceston.

Tasmanian alluvial gold. 25 specimens of alluvial gold from various parts of Tasmania. The want of assays detracts from the interest of this exhibit, which otherwise is of value as showing the presence and distribution of gold in the island.

VICTORIA.

De Murska Gold-mining Co., Reserve Lead, Kingston (Manager, E. W. Stephens, Ballarat).

Sample of alluvial wash obtained at a depth of 200 feet.—The only thing noticeable about this exhibit is the depth from which it comes.

Magdala Co., Pleasant Creek.

Two pieces quartz. The specimen with gold visible was taken from 2,002 feet below the surface, or 1,159 feet below the sea-level. The other specimen was taken from 2,183 feet below the surface, or 1,340 feet below the sea-level. This exhibit is interesting on account of the great depth from which it is taken, perhaps the deepest gold-mine in the world—showing conclusively that gold does not disappear at such great depths. [Mr. Marshall, the Manager, writing in April, 1881, states that the "total depth of Magdala shaft is 2,410 feet from surface; the lowest level which has been worked with quartz in it is 2,048 feet; there is another level with quartz and gold in it at 2,000 feet; another at 1,662 feet, with large reef and a little gold; there are several shallower drives, viz., at 1,200 feet, 782 feet, 725 feet, from surface; the diamond drill is now boring in the bottom of the shaft, and is now down 368 feet 11 inches, and it is intended to put the bore down 121 feet further; the bottom of the bore will then be 2,910 feet from the surface."]

Mines Department.

Fac-similes of gold nuggets found in Victoria:—

(1.) The "Precious" nugget weighed 1,621 oz. 2 dwts., and was found on 5th January, 1871, in Catto's Paddock, Berlin, at a depth of 12 feet. The gold was 23¾ carats fine.

(2.) The "Viscount Canterbury" nugget weighed 1,105 ozs., and was found on 31st May, 1870, in John's Paddock, Berlin, at a depth of 15 feet. The gold was 23·3 carats fine.

(3.) The "Viscountess Canterbury" nugget weighed 884 ozs. 10 dwts., and was found on 3rd October, 1870, at Berlin, at a depth of 6 feet 6 inches. The gold was 23·2⅝ carats fine.

(4.) The "Kum-Ton" nugget weighed 718 ozs. 5 dwts., and was found by a party of Chinamen on 17th April, 1871, in Catto's Paddock, Berlin, at a depth of 12 feet 6 inches. The gold was 23·3 carats fine.

(5.) The "Schlemm" nugget was found on 11th July, 1872, at Dunolly, at a depth of 3 feet. It weighed 538 ozs., and was estimated to contain 60 ozs. of quartz.

The case also contains a most interesting exhibit of twenty samples of wash-dirt from various claims, with the gold obtained from each sample shown in a specimen tube. The whole is a very good collection, showing the richness of the alluvial deposits in Victoria. For further particulars see the *résumé* of the collection of minerals exhibited by the Victorian Department of Mines.

NEW NORTH CLUNES QUARTZ-MINING CO. (Limited), Clunes.

Specimens of auriferous quartz from the Company's mine.—Very good stone, some of the quartz on the exterior being apparently a cast after arsenic or arsenical pyrites. The specimens came from various depths up to 1,005 feet.

QUEEN'S BIRTHDAY CO., Dunolly.

Specimens of auriferous quartz from the Company's mine.—Very rich specimens.

Class 100.—Antimony.

NEW CALEDONIA.

ROSSITER, GEORGE, Nouméa.

Antimony ore. Very fair and well crystallized. This ore comes from a contact zone between serpentine and country rock.

NEW SOUTH WALES.

MUDGEE COMMITTEE, Mudgee.

Antimony ores.—The antimony ore is a good large block; the other ores are not noticeable. No analysis is given, and it has not been classified, as it forms only one specimen amongst a collection of various minerals by the same Committee, who state that it is procurable in practically unlimited quantity.

THOMAS, JOHN, Upper Macleay.

Antimony ore. Being fine large pieces of apparently good ore, showing a width of vein of about 8 inches. The crystallization was large and bright.

QUEENSLAND.

CRITCHLEY, R., Gympie.

Antimony ore. Not particularly well crystallized, being rather too fine, and the mass not lustrous.

STRAITS SETTLEMENTS.

BORNEO COMPANY (LIMITED).

Specimens from Sarawak. Stibnite, or sulphide of antimony: Specimens of best boulder ore. Ditto, high-class liquidating ore, with calcite gangue. Ditto, in acicular crystals. Ditto, high-class vein ore. Ditto, second-class vein ore. Stibnite and cervantite in quartz gangue: low-class liquidating

ore. Cervantite, or antimony ochre: ordinary quality of boulder ore; probably entirely pseudomorphous. Cervantite, or antimony ochre: pure: pseudomorphous after stibnite. Native antimony: best boulder ore. Native arsenic, mixed with antimony and realgar. 9 pieces of cinnabar ore from the Cinnabar Mines, Tegora. Sulphide of antimony: 2 beautifully crystallized specimens. Specimens from Perak:—Tin from Assam Kumbang, weight 7 lbs. and 4 lbs. Specimens from Salak:—6 specimens of tin—A very excellent collection of local ores of antimony. The specimens of cinnabar are of exceptional richness, some of them being large and water-worn. Nodules apparently almost pure. It is to be regretted that no information as to the occurrence of these ores accompanied them. Three lots of tin ore—one concretionary tin of considerable value; the other two lots contain wolfram, and are not particularly noticeable.

Class 100.—Tin.

NEW SOUTH WALES.

GULF TIN LODE MINING Co., Sydney.

Lode tin ore from depth of 90 feet. This property is situated in the parish of Land's End, New England, and consists of 500 acres, partly freehold, partly under mineral lease. Tin was discovered on the property in June, 1872, and has been worked since for alluvial tin in the Gulf Creek, whilst during the last four years a shaft has been sunk to 100 feet on a lode whence the exhibits have been taken. Pieces of lode tin of over a ton weight have been obtained from a depth of 80 feet, and the ore has assayed from 72 to 75 per cent. The specimens shown form an excellent exhibit of lode tin, easily crushed, and apparently would yield 50 per cent. of cassiterite. The blocks are large and the exhibit is of much importance, showing that something remains to the tin mines of New South Wales after the stream tin is worked out.

HENDERSON, W. B., Sydney.

Lode tin ore, from "Silent Grove," New England. Alluvial tin ore. Three specimens. One of these specimens is very good, and the whole exhibit shows evidence of being of considerable importance.

HETHERINGTON, R. A., Bonshaw, New England.

2 tons tin ore—Stream and lode tin ore, from Beardy Falls Mine, Maidenhead Run, New England. An excellent exhibit of large pieces of concretionary tin ore, most of them weighing several pounds.

MACKENZIE, JOHN, F.G.S., Newcastle.

Samples of tin ores, from the principal workings in the New England District, collected by Mr. Alfred Cadell, C.E.—This collection shows 120 samples of tin ore from the same number of claims in the northern district of New South Wales, and is interesting as showing the various ores from a district from which, since 1872, immense quantities of tin have been exported. It includes also an exhibit of lode tin.

QUEENSLAND.

BEARDMORE, F. J. W., Cooktown.

Tin ores, from Granite Creek, Palmer River.

CLARKE, DODD S., Cairns.

Samples of tin ore, from the Palmer District, Cape York Peninsular.—Very fair ore, and interesting as coming from so far north, indicating the immense extent of county over which the ore extends in Australia.

GUTHRIE, JOHN, Brisbane.

Tin ores of Queensland, in all varieties.—A collection of thirty samples of tin ore.

TYREL, J. DE POIX, M.L.A.

Stream and lode tin ore.

STRAITS SETTLEMENTS.

CHINA, CAPTAIN, Selangor.

Fine tin and sand from alluvial washings, 5 to 18 feet under surface. Coarse tin and quartz from alluvial washings, 5 to 18 feet under surface. Coarse tin.—Tin ore, not particularly noticeable.

GOVERNMENT, State of Perak.

Specimens of strata and tin sand from the tin land of Kongsee Ong Seng, in Kamunting; of Kongsee Kong Lim, Hamuting; of Kongsee Wan Seng, in Tupai; of Kongsee Chan Ho, in Assam Kumbang; and of Kongsee Ho Thye, in Assam Kumbang. Sungei trap, 9 specimens of, taken from distances of half-mile to 5 miles from the river Kinta. 19 specimens from the tin mines in Larut. 3 specimens of tin smelted for export. Samples of tin ore not very well dressed, otherwise the ore looks good, and the exhibits are of interest as shewing the alluvium in which the ore occurs.

LIM TECK HEE, Malacca.

Specimens of tin ore.—These contain wolfram, and are diminished in value on this account. Compared with some of the specimens of lode tin shown in the New South Wales and Tasmanian Courts this is of no value whatever.

TYE SIN, F., Penang.

Specimens of tin ore.—Stream tin, fair, but rather dirty; indeed none of the ores exhibited in this Court would be considered satisfactory by a Sydney tin smelter.

TASMANIA.

HAWSON, EDWARD, Hobart Town.

A block of tin ore from Mount Heemskirk.

THORPE, FREDERICK, Montagu Company.

A block of tin ore from 25 feet below surface, at Mount Heemskirk.

These two exhibits appear to be very fair tin ore, but are not of sufficient importance to be classed, and were not so marked as to enable us to distinguish the one from the other.

Class 100.—Cinnabar.

QUEENSLAND.

ELDRED, Captain W. H., Sydney.

Collection of cinnabar in granite, sandstone, quartz, and calcspar, from his mines, Kilkivan, Wide Bay district, Queensland; also cinnabar, with carbonates of copper in quartz, from his Kilkivan mines. A large and extremely interesting collection of cinnabar, in some cases associated with azurite, also accompanied by an excellent sample of mercury, weight about 40 lbs., from Kilkivan. There is easy access to the port of Maryborough, distant about 80 miles. Eight lodes have been opened on the property, but they are not now being worked. From the appearance of this exhibit we should say that it ought to be a profitable industry, as from the high price of the metal and its easy extraction a very small percentage yields profitable results. Rich specimens of cinnabar are exhibited also in the collection of the Borneo Company, which see under antimony.

Class 100.—Copper.

NEW CALEDONIA.

MORGAN, J., Balade.

Copper ore.—Chalco-pyrites; contains on an average of the whole production 16 to 18 per cent. and more of copper after crushing and concentration. This is the largest block of copper ore in the Exhibition, and evidently comes from a lode of large size; indeed large quantities of ore from this mine have been smelted by the E. & A. Copper Co. at Newcastle, New South Wales, so that between 1874 and now about 30,000 tons of ore have been disposed of.

NEW SOUTH WALES.

BARTON, R., Cobar.

Copper ores, &c., from Cobar.—A very pretty collection of copper ores, chiefly small specimens of malachite, azurite, and moss copper in regulus, &c., being picked specimens from the mine to which the highest class has been awarded.

DEER BROS., Frogmore Copper Mine.

Collection of copper ores. A very practical collection of copper ore, but small, most of the collection being made up of metallurgic products. The Frogmore Copper Mine of Messrs. Deer Bros. is about 15 miles north-east of

Burrowa, and 35 miles from Binalong Railway Station. Copper was discovered here twenty years ago, but the ground was only taken up in 1872. Little work was done until it came into the hands of Messrs. Deer Bros., who have worked it on a small scale for five years. Only one of the various lodes has been tested to any extent; this has a width of from 2 to 14 feet, and yield various ores ranging from 6% to 35% of copper. Four shafts (in all 130 fathoms) have been sunk on this lode, which is conveniently situated for working, the deepest being 45 fathoms. There is now a good lode of yellow ore in the bottom and end of the 43-fathom level. The mine is worked with a 20-horse power engine with winding, crushing, and jigging machinery, and the smelting works on the ground contain two smelting furnaces and a refining furnace, from which 500 tons of copper have been sent during the last three and a half years, and shipped at Sydney at a cost of about £50 per ton.

GREAT COBAR MINING CO., Sydney.

Copper ores from the Great Cobar Copper Mine. Most interesting collection from the largest copper mine in New South Wales, showing malachite, azurite, sub-oxide of copper, glance, and chalco-pyrites in large masses, and evidently of great industrial importance; also a show-case of specimens of of the more beautiful varieties of copper ore.

M'CALLUM, A., Good Hope, Woolgarlo.

Copper ore and galena.—This is an interesting exhibit, but was not sent to the Exhibition building until the Judge's awards had been sent in. The ores consist, first, of blue and green carbonate of copper; secondly, of galena, which is minutely crystallized and has the appearance of having considerable silver contents. These two exhibits are remarkable from the gangue, being almost entirely composed of fluor-spar, which would render them of great value for working along with ores of a refractory nature. In the galena ore that mineral is very uniformly distributed through the stone, so that some pieces which show little of it on the surface show it abundantly when broken.

MILBURN CREEK COPPER-MINING CO.

Shows very good copper ore, also tools encrusted with copper from the mine water. 2nd class.—The water draining from this mine contains 4·098 lbs. of copper in each 100 gallons. The ores are rich, the sulphide contains 45·9 per cent. chalco-pyrites, 16·75 per cent., and malachite 27·9 per cent of copper.

ROTHERY, H. W., Cliefden, Carcoar.

Samples of copper and iron ores.—Excellent specimens of blue, and green carbonates, red oxide and native copper. These ores are not being worked at present, but show sufficient evidence of value to give encouragement to exploration.

RUSSELL, J. C., Burraga.

Large specimens of copper ore comprising green carbonate, chalco-pyrites, and grey copper ore, showing also a plan and section of the mine. This exhibit is evidently of importance, but is not particularly attractive. In a case are shown native copper and a few small specimens of other ores.

NEW ZEALAND.

ANISEED VALLEY CO.

Copper ore.—Oxides and carbonates, occurring in serpentines.

D'URVILLE ISLAND COPPER-MINING CO. (Limited).

Specimens of copper ore, from D'Urville Island.—This is a very excellent copper ore, including native copper and copper glance. This copper lode occurs in serpentine, and is now being worked, the lode having been sunk on to a depth of 100 feet, the ore obtained yielding sometimes as much as 45 per cent. of copper.

GARDINER, WALTER, Moke Creek, Wakatipu.

Three specimens of copper ore.—Copper pyrites from a well-known lode in Moke Creek, near Lake Wakatipu, which has been reported on by the Mining Department, but it is an inaccessible position. The lode occurs in mica-schist, and contains also carbonates and native copper, and the ore ranges from 11 to 55% of copper.

GARDINER, WILLIAM, Moke Creek, near Queenstown.

Copper ore specimens from Moke Creek.—This is a very small sample of copper.

JOHNSTON BROS. & Co., Aniseed Valley, Nelson.

Copper stratum specimens, chrome ore specimens. Non-competitive.—A very interesting exhibit of native copper in granitic-serpentine, which would be easily treated by crushing and washing.

Description of the Copper Stratum in Aniseed Valley, Nelson.

The copper stratum in Aniseed Valley was discovered in 1878 by Messrs. Johnston, and is hence called "Johnston's Copper Stratum." It was first found in the centre of the belt of serpentine rock, known as the Mineral Belt of Nelson, in the immediate vicinity of a former chrome ore working. The copper-bearing stratum runs in the same direction as the surrounding serpentine rock, of which it is only a portion, but in its northerly course it is interrupted by a mass of volcanic breccia, from which possibly its contents of copper may have originated. The copper occurs in a native state, almost equally interspersed through the whole mass to a thickness of about 8 feet. The stratum has been traced, copper-bearing, for a length of 250 feet, the average contents being 5 to 6 per cent. of copper, disseminated through the mass in minute irregular grains. In the natural cleavages of the rock constituting this stratum the copper is not visible, and it can only be seen in a fracture made across the grain, which makes it difficult to trace on the surface, and which will probably account for this deposit not having been previously observed. The great practical value of the stratum consists in the facility with which the copper can be extricated, inasmuch as nearly the whole of the grains of metal can be panned off from the pounded mass as easily as gold can be panned from crushed quartz, and it can consequently be saved by a crushing machine similarly to gold, or rather similarly to tin or lead ore as treated in Europe. At present the proprietors are endeavouring to open up the stratum in its southern continuation, and are also making a cart road to it, with a view to its eventual working on a large scale.

WARREN, WILLIAM, J.P., Queenstown.

Specimen of copper ore, found between Lake Wakatipu and West Coast.—A surface specimen of copper, not of much value.

QUEENSLAND.

BENNETT, CAPTAIN, Mt. Perry.

Red oxide of copper, copper regulus, chalco-pyrites, and collection of copper ores from Mount Perry.—This is a very good collection of copper ores in which peacock ore and chalco-pyrites are particularly noticeable and appear very rich. We regret that there is no information as to the mode of occurrence of the ore.

GUNN, DONALD, Pikedale.

Collection of peacock copper ore, and of silver ore.

HAYS, W., Townsville.

Copper ores from the Star River, fifty miles from Townsville.—Hand specimens of azurite and sub-oxide, very ordinary as specimens.

SOUTH AUSTRALIA.

BRANDIS, GEO., Enfield.

Specimens of silver-grey copper ore, from the Great Gladstone Mine.—Comes from a large lode, but has not yet been properly opened out, and appears of no great importance.

COOK, E., English and Australian Company.

Copper ore, including azurite, phosphate, red oxide.—All very good ores, but shown only in small quantity along with a large exhibit of copper.

CRABB, R. S., Adelaide.

Large specimen of malachite, from the Burra Burra Mine.—A splendid specimen of malachite encrusted with azurite. This specimen gained a silver medal in Paris, and would form an ornament to any collection. The azurite is not, however, so well crystallized as that of a specimen of nearly equal size from the Cobar Mine, New South Wales, owned by Mr. W. H. M'Kenzie, and shown in the collection of the Mining Department of New South Wales.

TASMANIA.

AIKENHEAD, WILLIAM, Tasmanian Copper Company, Launceston.

A block of copper ore from the outcrop at Badger Head, near Port Sorell.

Class 100.—Lead and Zinc Ores.

NEW SOUTH WALES.

BARBER, R. A., Yass.

Galena.—Looks well, but no assay given.

FALLON, P., Yass.

Lead and silver ores.—The veins from which these come are evidently small and not rich in silver from the appearance of the ore. No analysis given.

NEW ZEALAND.

JOHNSTON BROS. & Co., Nelson.

Galena and silver lead ore, Collingwood, zinc blende ; Collingwood.—A minutely crystalline galena, looks pure and should be rich in silver, but no analysis is given ; the blende is good, nearly colourless, and some of it transparent. This ore deserves attention, as there is a considerable local demand for zinc in the Colonies.

WILLIAMS, CORNWELL JOSEPH, Thames.

Specimen of silver lead ore, from Tareru Creek.—Not particularly noticeable.

QUEENSLAND.

HILL, W. R. O., Warden, Ravenswood.

Collection of galena and silver lead ore.—The galena looks well, but the result of silver given, 120 ozs. in specimen shown, appears questionable from the large crystallization of the galena. It seems probable that the specimens were selected so as to form a more attractive exhibit than ore rich in silver would be. This ore should be easily smelted, and would doubtless give profitable returns for lead if found in sufficient quantity.

SOUTH AUSTRALIA.

HARDY, ARTHUR, M.P., Mount Lofty.

Collection of silver lead ores, taken from the lead lodes exposed in working the Glen Osmond quarries (4 miles from Adelaide). From these quarries, which are the property of Mr. Hardy, a large portion of the stone used for building in the city of Adelaide is supplied. These quarries yield a first quality clay-slate building stone, and are advantageously situated, the main S.E. Road passing the quarries and having a gentle uniform descent to Adelaide. Throughout the quarries and in the adjoining lands there are numerous lodes of silver lead ore. The general yield of the sulphides is 76 per cent. lead and 16 ounces of silver to the ton of ore. The lead ores from Glen Osmond are so free from jack, antimony, and other intractable substances that Mr. Hardy informs us they have been in demand as a flux for smelting silver-lead ores raised at the Talisker and Wheal Ellen mines in South Australia, and for the same purpose have sold at the Liverpool ticketings at a higher price per ton than Talisker ores containing upwards of 40 ounces of silver to the ton of ore, for use as fluxes for intractable ores.

Class 100.—Chromium.

NEW CALEDONIA.

ROSSITER, GEORGE, Nouméa.

Chrome ore. This chrome ore yields from 30 to 64 per cent. of oxide of chromium, an important exhibit, as coming from a new country, and from being found in an easily accessible position.

NEW ZEALAND.

JOHNSTON BROS. & Co., Aniseed Valley, Nelson.

Chrome ore. Non-competitive.—This ore was first discovered by Mr. T. R. Hackett on the Dun Mountain, and about 1,000 tons of the ore were forwarded to England by the Dun Mountain Company in 1858–60. The ore realized in London £10 10s. per ton, the percentage being 50 per cent. of chromium. Afterwards the price gradually fell, in consequence of the decreased consumption of bi-chromate of potash, and the mine was abandoned. Mr. Hackett received a medal at the Exhibition at Dunedin in 1865, as being the first discoverer of chrome in New Zealand. The ores of chromium should now be of some importance, as the price of bi-chromate of potash, the principal substance produced from them, which for some years has been about 4½d. per lb., has now risen to 7d.

Class 100.—Iron Ores.

FIJI.

HENDERSON, A. P.

Iron ore found in Viti Levu.—Appears a rich ore, but not of much importance unless it could be shipped at a very cheap rate, as there is abundance of iron to be obtained nearer to coal supply in the Colonies. If analysis showed it to be of good quality, it might be shipped as ballast to England when the Fijians enter upon direct communication.

NEW SOUTH WALES.

ATKINSON, J. J. O., Oldbury, Berrima.

Block of iron ore.—Looks good workable ore. No analysis.

AUSTRALIAN AGRICULTURAL Co., Newcastle.

Block of iron ore.—Ferruginous sandstone. Cannot be called an ore of iron.

BLISS J., Yass.

Collection of magnetic iron ores.—Collection of small specimens, rich and too dense for satisfactory working. No analysis.

ESKBANK IRON Co., Lithgow.

Collection of iron ores.—Very good iron ores, chiefly interesting in connection with the iron exhibited.

FOUNTAIN J., Brisbane Water.

Iron ore.—This exhibit is an iron ochre, which looks well and might be of value for painting rough work. No analysis.

HUME, A. H., Yass.

Iron ore.—Too dense for profitable working, although it looks a rich ore. No analysis.

KEARNS, P., Springfield.

Iron ore.—Too dense for profitable working. No analysis.

LAHIFF P., Wollongong.

Iron ore from Mount Pleasant Coal Mine.—Carbonate of iron. One piece appears good, others not of much value. No analysis given.

NEW ZEALAND.

HÆMATITE PAINT COMPANY, Nelson, New Zealand.

Specimens of raw hæmatite ore. Ditto, calcined ore. Ditto, paint from ore. Ditto, crystalline limestone, from Para Para, Collingwood, Nelson. A moderately fine hæmatite ore. The ore is roasted, ground into a paint, and is extensively used in New Zealand for painting woodwork and shingles as a preventive against fire; it would also make a hard setting putty. The award is given, not as an iron ore, but as a source of paint, for which it is now used. There being no analysis, we could not judge of it as a source of the metal.

LOW, WILLIAM, Maori Point, Shotover, Queenstown.

Specimen of specular ironstone, from Maori Point, Shotover, Queenstown. The sample is water-worn as found on the terraces. Lode, from 3 feet 4 inches thick.—This is not specular iron ore, but waterworn jasperoid nodules containing veins lined with it, along which fracture takes place, so that the broken stone might easily be thought to consist of it. A specimen tried by one of us gave only a very small percentage soluble in boiling hydrochloric acid.

STANSELL, JOHN B., Christchurch.

Specimens of iron ore and small ingot, from Para Para, Nelson.—Similar ore to the Hæmatite Co.

VIVIAN, JAMES MITCHELL, New Plymouth, Taranaki.

Specimens of iron-sand from Taranaki Beach. Ditto, soil used as flux. Ditto, brick prepared for smelting.—The district of Taranaki, on the west coast of the North Island, is geologically a tufa cone, of which Mount Egmont is a symmetrical peak of trachyte rising 8,270 feet, is the centre. This cone is composed of tufaceous clay, often intermixed with trachytic breccia, and overlies the maritime tertiary or cretaceous formation, through which apparently it has been erupted. It extends from north to south-west about 65 miles, and to an unknown distance in the unexplored district to the eastward. The tufa is the trachyte of the district in a disintegrated and decomposed state, and the following analysis conveys an idea of its components:—Silica, 31; alumina, 18; magnesia, 4; peroxide of iron, 13; manganese, 3; potash, 7;

soda, 2·5 ; olivine, 2·5 ; hornblende, 12 ; lime, 2 ; water, 1 ; sulphuric oxide, 1 ; titanic oxide, 1—100·0. The titanic iron-sand occurs disseminated in this rock, and by the erosion of the streams in the mountain which flow in deeply indented channels, it is set free from its matrices and conveyed to the coast in alluvium ; here the waves effect a mechanical separation, and the iron-sand is left on the beach. This black sparkling sand early attracted attention, and many attempts have been made to utilize it. One of the first was by Mr. Weeks, Colonial Surgeon, New Plymouth, who in 1841 reported to Captain Liardet, the N. Z. Co.'s agent, that he had melted some of the sand and obtained a beautiful specimen of iron. The following is the most recent analysis of the sand : Magnetite, 71·0 ; titanite, 8·0 ; quartz and olivine, 21·0. The earlier attempts were made in crucibles, but when the sand was tried in a blast furnace difficulties apparently insurmountable presented themselves. First, it was driven by the blast out of the top of the furnace ; second, what was not blown away filtered through the fire and formed a cake on the hearth. At length the idea occurred of forming it into bricks with clay, and the brick exhibited is a specimen composed of one part tufa and three parts sand burned in a clamp suitable for use in the furnace. Mr. E. M. Smith, Taranaki, has made cakes of iron-sand 1 ton 10 cwt., clay 1 ton, charcoal 1 cwt., lime 2½ cwt., mixed with sea-water, and machine-moulded. These solidify without burning, the admixture of carbon aids reduction and the lime acts as a flux. 2¼ tons of such in cakes are required to produce 1 ton of metal. The *Engineer*, of the 15th June, 1877, contains the following statement respecting the testing of a portion of the iron produced at Te Henui furnace on the 23rd September, 1876 :—"The New Zealand Titanic Steel and Iron Company have sent over some of their pig-iron made from the metallic sands which lie along the shores of New Plymouth, in Taranaki. The Company have a furnace there, and cast their pigs 78lbs. each. The iron which came consigned to a merchant firm in Wolverhampton was tested for puddling purposes at the Shelton Bar-Iron Company's Works, Stoke-upon-Trent. It was found that the waste was as much as 20 per cent., since it required 1 ton 3 cwt. 3 qrs. 14 lbs. of pig to produce a ton of puddled bars. The quality, however, was declared to be excellent in both a cold and hot state, whilst the iron bore a tensile test of 1 to 1½ above the 22 tons per square inch Admiralty test for best bar-iron. At Taranaki the price of the pigs is about £3 per ton. At that quotation it ought to secure for itself a market in Australia, where just now a better business is being done in English pig-iron than for many months past." The following is an extract from a report on the Taranaki iron-sand by Mr. Stenson, proprietor of the Northampton Iron Works, Northampton, England :—"I have already satisfied myself by a repeated series of experiments, not only of the fitness but the excellence of the iron-sand for the purpose of converting into steel. The iron I have made from the iron-sand bears a close resemblance to that imported from the North of Europe of the best brands, for the manufacture of steel, and the Sheffield and other steel-makers would be glad to avail themselves of an abundant supply of such iron. The best British ores for yielding steel iron (chiefly those from Yorkshire) fall in quality infinitely below the New Zealand iron, even after the most careful selection of small from very large quantities. The New Zealand iron is of excellent quality for all the purposes to which iron is applicable, and I need scarcely add that a ready market would be found in India, Australia, and other parts remote from England, or other iron-making

countries north of the Equator. I have by me some of the iron-sand found on the coast near Tribond, and some of which has been worked about ten miles from Constantinople. On comparing this and other rich ores with that of New Zealand, I find the value of the latter fully borne out by the comparison; it is also superior to the noted Wootz ore of India, samples of which I have by me in various stages of its manufacture, from the crude iron to the finished bar, made under the hammer by a British Company at Porto Novo. The latter, though a good sample, does not possess the fine close texture or the rich silvery beauty of the New Zealand iron. It is needless at the present moment to mention other details at this early stage of a project which, if but carried out, is certain to succeed." The following are the kind and proportions of fuel required to produce a ton of metal :—55 tons of best black charcoal, 55 tons of brown charcoal or kiln-dried wood, 1 cwt. of soft spongy coke; or, including the ground charcoal in the compound, 1 ton 2 cwt. and 4 lbs. of fuel. The process described above practically reduces the ore to the value of a clay band or earthy hematite. Could not the ore be further dressed to get rid of the quartz and olivine, reduced with carbon on the bed of a reverberatory furnace and ballast direct?

WORTHINGTON, JOHN S., Queenstown.

Specimens of iron-sand. Occurs in large quantities at Queenstown.—Same as Taranaki iserine or titanic iron sand, but coarser.

SOUTH AUSTRALIA.

CLARKE, A. S., Adelaide.

Specimens of iron ore.—Very good specimens of specular iron ore (micaceous).

GOYDER, G. W., Adelaide.

Specimens of iron ore from Mount Jagged; also specimens of lead ore found near Adelaide.

MCEWIN, GEORGE, Glen Ewin.

Two blocks of ironstone from Chain of Ponds, near Glen Ewin. Either variety can be obtained from and close to the surface over an immense extent of country, and can be delivered at Port Adelaide at 14s. a ton of 20 cwt.—Large block of specular iron ore (micaceous), apparently a good iron ore, but no analysis given. The price stated is too high for practical use, as ores in New South Wales can be delivered into the furnaces at 8s. per ton.

VICTORIA.

LAL-LAL IRON CO., Ballarat.

Iron ore.—Brown iron ore. From the appearance of the pig exhibited with it, the ore seems to contain phosphorus. No analysis is given.

Class 100.—Sulphur.

JAPAN.

KUWAI-TAKUSHI.

Native sulphur, said to be obtained in large quantities, and very convenient for shipment on the island of Yesso. The loose sulphur is apparently equal to

about Sicilian seconds, which however, is a manufactured article. The article exhibited could be used for the manufacture of roll or flower sulphur, by one distillation.

NEW ZEALAND.

WHITE ISLAND SULPHUR COMPANY, Auckland.

Specimens of crude ore and flowers of sulphur, manufactured by the Company.—This exhibit was not sent, but Dr. Hector in his exhibit shows two specimens from the same place, which appear very good. This occurrence of sulphur (if developed) might lead to an important industry, as sulphur of the quality exhibited would command a price of £6 10s. per ton in Europe, and we find many substances (*e.g.* guano) yielding profitable returns, with a smaller gross price.

Class 100.—Asbestos.

NEW SOUTH WALES.

AUSTRALIAN ASBESTOS CO., Gundagai and Melbourne.

Asbestos, associated rocks, gold in serpentine and asbestos. This is a very excellent exhibit of asbestos. The vein is shown to be about 19 inches thick, and the asbestos fibre is particularly long and strong. The occurrence of gold in this formation is interesting, as also the general exhibit of associated rocks, the exhibition of which in connection with the ores shown, though asked for by the Commissioners, has been generally neglected by exhibitors.

Class 100.—Gems and Precious Stones.

CEYLON.

GOMES, B. P., Ceylon.

Specimens of Precious Stones.

Three rubies
Three sapphires
Four topazes
Three cats-eyes
Three star stones
Four amethysts
One aquamarine
Five matura diamonds
Four moonstones
Four cinnamon stones
Four white sapphires
Ceylon coins : One gold, twenty-one silver coins.

Very good variety of rough and polished stones.

GOVERNMENT OF CEYLON.

Specimens of Precious Stones.

Two topazes
Two white sapphires
Two ruby star stones
One sapphire stone
Five sapphires
Eleven garnets
Ten cut garnets
Five green sapphires
Nineteen moonstones
Three cairngorms
Two amethysts
Five aquamarines
Eleven cinnamon stones
Seven white topazes.

A very excellent collection of stones.

CLASSES 100–107.—*Minerals, Ores, Building-stones, &c.*

NEW SOUTH WALES.

BUCHANAN, JAMES, P.M., Armidale.

Topazes cut and set.—An exceedingly beautiful exhibit of topazes, both in the rough and cut and set. The exhibit should have been shown rather under the head of jewelry than in this class. No information is given of whence the stones come.

COMMISSIONERS, PARIS EXHIBITION OF 1878.

Gems and precious stones found in New South Wales.—The Diamonds (46 in number) look very good. One cut emerald is a very fair stone but rather light coloured; there is also an Oriental emerald of good size and colour. The sapphires and amethysts are also good stones.

SAMUEL, HON. SAUL, C.M.G., Sydney.

Vesicular basalt, containing opal, from Rocky Bridge Creek, Abercrombie. —A curious exhibit, but of no particular importance, as the opals are not precious, but the common milk opal.

THURLOW, J. G., Fort Bourke.

Precious opal.—Precious opal from Queensland, fairly brilliant, but they appear too thin for cutting.

SOUTH AUSTRALIA.

HEUZENROEDER, HY., Adelaide.

Diamonds, two uncut, true octahedrons, found at Echunga, weighing respectively $1\frac{1}{2}$ and 1 carat; two uncut octahedral diamonds, and well crystallized.

TASMANIA.

HORTIN, F. J., Hobart Town.

Zircons, sapphires, emerald, and topazes, from Thomas's Plains.—None of these are of particular value.

HULL, ARTHUR F. B., Hobart Town.

Beryls, from Flinders Island; zircons, from tin mines; topazes and amethysts from Lake Sorell.

LEWALD, DAGOBERT, Government Analyst.

A jar of zircons from the tin mines.

VICTORIA.

CASEY, THE HON. J. J., C.M.G., M.P., St. Kilda, Melbourne.

Collection of precious stones.—One of the amethysts is a very fair stone, also one of the topazes, but the others are of neither interest nor value.

CUTTEN, WALTER C., Railway Station, Riddell's Creek.

Stones taken from bluestone ballast used on the Victorian Railways.—This exhibit is spherosiderite, a carbonate of iron and manganese, very beautifully marked. The specimens are cut into the forms of ornamental jewelry, but from the softness of the material it would be much more suitable for inlaid work, as in ornamental clock-cases, &c., where it would not be subjected to the same wear and tear as in personal ornaments.

Class 100.—Mineralogical and Geological Collections.

AUSTRIA.

BLEIBERG MINE UNION.

Thirty specimens lead ore, strontianite, fluorspar, blende gozzan, anhydrite, calcite, and quartz crystals, &c.—A good local collection, showing the various ores and minerals found in the mine.

GERMANY.

Mineralogical Collection.

KRANTZ, Dr. A., Bonn.

Minerals and petrifactions.—A very excellent general collection of 54 illustrative rock species, for educational purposes, showing typical examples of the respective rocks—the specimens being carefully broken and all good. 163 large mineral specimens, and 192 smaller specimens, ores, comprising minerals of great variety and rarity, all of them showing in a striking manner the crystallization of the species. Amongst so many specimens, all of such excellence, we cannot well single out any for special praise, but may mention that there are three specimens of meteoric iron—one of them cut, polished, and etched, showing the characteristic markings very well. There is also a crystal of the very rare mineral enclosed.

There is also a collection of trias and other fossils, amongst which are original of *Teleosaurus* and a cast of the head of *Mastodon giganteus* from the original in the exhibitor's possession.

GREAT BRITAIN.

FOSTER, C. LE NEVE, D.Sc., H.M. Inspector of Mines, for Cornwall, Devonshire, Dorsetshire, and part of Somersetshire.

Collection of geological and mineralogical specimens. The main object of this collection is to afford a general idea of the Cornish tin lodes and some of their enclosing rocks ; it contains in addition a few specimens of copper ore and sundry metallic and non-metallic minerals. No. 1 is stream tin ore from St. Agnes. No alluvial deposits of tin ore are being worked in Cornwall at the present time. Nos. 2 to 28 are specimens of tin lodes from various mines, viz., Nos. 2 and 3, Penstruthal ; Nos. 4 and 5, Wheal Grenville ; Nos. 6 and 7, Dolcoath ; Nos. 8 and 9, Carn Brea ; No. 10, Wheal Kitty ; No. 11, Wheal Agar ; No. 12, East Pool; No. 13, Balmynheer; No. 14, Combellack; No. 15, South Wendron ; No. 16, Wheal Comford ; No. 17, Wheal Uny ; No. 18, South

Wheal Frances; No. 19, West Basset; No. 20, Botallack; No. 21, Tincroft; No. 22, Penhalls; No. 23, Wheal Vor; No. 24, Mulberry; No. 25, Carrigan Rocks; No. 26, Budnick; No. 27, Parbola; No. 28, Castle-an-Dinas.

The annual output of these mines, excluding Nos. 23, 25, 27; and 28, which are no longer at work, is about 5,000 tons of dressed tin ore (black tin), or more than one-third of the total output of Cornwall.

The specimens illustrate the occurrence of tin ore in slate (killas), granite and elvan.

Specimen No. 24 is from a mine, or rather an open quarry, where some of the poorest tinstuff in Cornwall is worked. The rock that is stamped contains only $\frac{1}{3}$ per cent. clean tin ore (black tin).—(*See Quarterly Journal, Geological Society, London*, Vol. XXXIV, p. 656).

Specimen No. 6 is from the bottom of Dolcoath mine, 352 fathoms from the adit level, or 380 fathoms from the surface. Dolcoath is the largest and deepest mine in Cornwall; it employs about 400 hands underground, and 600 at the surface, mainly engaged in dressing operations, and it produced in 1878 no less than 1,524 tons of black tin.

This mine affords ample proof that tin lodes do not necessarily become impoverished in depth.

Specimens 4, 5, 17, 18, and 19 represent the general character of the Great Flat Lode, South of Camborne and Redruth,—*Ibidem* p. 640,—which, though not largely worked until recently, is yielding enormous quantities of tin ore. The importance of this one lode, which is worked on for a distance of more than two miles along the strike, is shown by the fact that 3,000 tons of clean tin ore (black tin) were obtained from it last year.

There are reasons for supposing that the bluish-grey rock which constitutes not only the bulk of the Great Flat Lode but also that of many other Cornish tin lodes is an altered granite—*Ibidem* p. 647.

The elvan from Parbola, with innumerable fine strings of tin ore, is remarkable.—(*See Trans. R. Geol. Soc. Cornwall*, Vol. IX.)

Nos. 29 to 35 are copper ores and sundry minerals.

No. 29, cuprite, malachite, and native copper from South Caradon.

No. 30, bornite, from New Cook's Kitchen. No. 31, copper pyrites from Mark Valley Mine. No. 32, tin pyrites, Wheal Agar. No. 33, wolfram, East Pool. No. 34, lithomarge, Cook's Kitchen Mine. No. 35, mispickel, Wheal Friendship.

Nos. 36 to 50 are principally specimens of rocks, and especially of schorlaceous rocks, which are so abundant in Cornwall. No. 36, killas, Bedford United Mines. No. 37, schorlaceous granite, with a little apatite, Carn Brea. No. 38, granite, the Lovell Mine. Nos. 39 and 40, schorl, St. Just. No. 41, typical schorl rock, Roche. No. 42, tourmaline schist, Breage. No. 43, tourmaline schist, Castle-an-Dinas. No. 43A, schorl rock, Ding Dong. No. 44, one side of a tin-string showing schorl with gilbertite passing into china clay rock, Carclaze. No. 45, passage rock, between granite and schorl rock, showing pseudomorphs of gilbertite after felspar, Goonbarrow China Clay Works. No. 46, schorl rock, with peseudomorphs of quartz after felspar, Redruth. No. 47, schorl rock, with orthoclase, St. Just. No. 48, rock

consisting of gilbertite, quartz, schorl, and apatite, Stenna Gwyn. No. 49, passage of granite into schorl rock, South Crofty Mine. No. 50, greisen, Gunnislapke.

Nos. 51 and 52 are specimens of gossan, the former from a copper lode near St. Day; the latter, from West Phœnix Mine, contains the rare mineral chalkosiderite.

No. 53, breccia of fragment of killas cemented by chlorite, New Rosewarne Mine.

Nos. 54 to 63 are specimens of sundry minerals; No. 54, orthoclase, Roche; No. 55, isopyre, St. Just; No. 56, uncleavable fluor-spar, East Pool; No. 57, soapstone, The Lizard; No. 58, axinite, St. Just; No. 59, pyrophyllite, Buckfastleigh; No. 60, copper glance, St. Ives; No. 61, henwoodite, West Phœnix Mine; No. 62, Liskeardite, Mark Valley Mine; No. 63, chalcolite, Redruth.

This is a local collection, but of much importance as representing the occurrence of the tin-producing minerals of Cornwall, and therefore well worthy of the attention of those interested or engaged in tin-mining here. Although the collection is small we have awarded it a first class as a local collection, as it is complete as far as it goes and is well arranged.

GREGORY, JAMES R., Fitzroy Square, London.

Mineral collections, rock collections, fossils, and special collections illustrating Professor Geikie's Primer and Professor Bormey's Manual of Geology. Should rather have been judged as an educational collection, and is well arranged for that purpose. The exhibit includes models of the most celebrated diamonds, and a number of precious stones cut.

NEW CALEDONIA.

F. RATTÉ, Nouméa. (Non-competitive.)

Collection of minerals showing the mode of occurrence in New Caledonia, of new and rare rocks and ores. An excellent collection for a new country. The nickel ore exhibited is specially noticeable, and deserves a 1st Class award. The following gives the particulars of this collection :—

Rocks, Minerals, and Ores.

The collection exhibited is a duplicate, somewhat modified, of that sent to France in 1878, and which, delayed by accident, was not exhibited at the Paris Exhibition. A catalogue of this first collection, with explanatory notes, published at Nouméa, in February, 1878, can be found at the Royal Society's library, Sydney. The interest offered by the rocks and metalliferous deposits from a practical point of view induces us to give a full description of the collection, and because numerous new facts in mining have been discovered in New Caledonia during the years 1878-1879. The mining works have been very active from 1873 to 1878, and allowed investigations in depth, affording interesting scientific results, facilitating the study of the eruptive and metalliferous formations. Nevertheless, the collections gathered until 1874—first by M. Jules

Garnier, and afterwards by M. E. Heurteau—contain numerous specimens of the sedimentary formations, and we will refer our readers to the "Annales des Mines," years 1867 and 1876, where have been published the works of those two mining engineers on the geological features and mineral resources of the Colony of New Caledonia, and to the pamphlet mentioned above. We will also refer our readers to the notices published in the "Transactions and Proceedings of the Royal Society of New South Wales" in 1874, by Professor Liversidge, on the nickel ores of New Caledonia, and by the late Dr. Clarke, in 1875, on M. Garnier's work. In the catalogue it will be remarked that the relations between the minerals, the ore deposits, and the casing and country rocks, are briefly explained and shown by the adopted classification. About 400 specimens (non-competitive).

I. Ancient schistose formations (mica-schists, talcose schists, limestones, slates of the Azoic, Silurian, and Devonian (?) systems), bearing copper and other ores. Main regions :—Grand Diàhot River and north-eastern side of the island.

COPPER.

Native copper. Red oxide of copper. Blue and green carbonates. Yellow sulphide of copper, the main ore averaging 16 to 18 per cent. after being crushed and concentrated. Black copper ore—sulphide impregnated with copper glance from the decomposition of surface ores—is found in depth below the gossan. Gossan (a term used by the Cornish miners), from decomposition of surface ore, leaving cellular or spongy oxide of iron, nearly free from sulphur and copper. Form of deposits.—Pipe-veins or shoot-veins, fissure-veins, and seams in mica-schists and talcose schists. Localities.—Ouegoa village, two miles from the Diàhot, Balade mine, and others. Right and left hand sides of the Diàhot.

GOLD, &C.

Crystallized and dendritic native gold, from Galarino, near Cape Colnett, along small quartz veins in decomposed mica schists. Gold in quartz and associated pyrites. In quartz seams and vein shoot. In talcose schists—Fernhill mine, at Manghine, Diàhot River. Crystallized titaniferous iron (nigrine). In quartz and in mica schists—at Galarino, near Cape Colnett. Rutile (titanic acid) in glaucophane rocks in small fissures, Ouegoa. Magnetite in chlorite, Ouegoa. Chloritic and amphibolitic rocks, glaucophane rocks, amphibole, talc, mica, chromiferous mica, magnetite, siderite, garnets, epidote, &c. The following associations are the most frequent in these rocks : Rocks of glaucophane with dodecahedron garnets, white mica, green mica ; chloritic rocks with amphibole, garnets, magnetite ; steatite rocks with mica, amphibole, siderite. Observation.—Glaucophane is a mineral related to amphibole, crystallized in microscopic blue prisms. Before being found in the copper region of New Caledonia it was only known in the Isle of Syra, in Greece. Large masses of rocks formed of glaucophane and garnets occur in the mica-schist formation, in the dividing range, between the Diàhot and the east coast. They are cut in different directions by regular fissures, sometimes filled with quartz and rutile. The other rocks which have been spoken of are found in the same region—the copper region—Ouegoa and its vicinity.

II.—Mesozoic formations (triassic, characterized by *Monotis Richmondiana*, &c.; and liassic, characterized by *Nucula Hammeri, Ammonites margaritatus*, &c.), bearing gypsum, anthracite, coal. Main regions.—South-western side of the island, from the foot of Mont d'Or to Moindou up to Ouraïl.

GYPSUM.

Crystallized gypsum, from the vicinity of Bouraïl, west coast. anthracitous coal from Païta and Dombéa, near Nouméa. Clayey schists, with vegetable impresions, in contact with the coal deposits of Moindou. Nodules of limestone, with fossil impressions, Nouméa, Baie de l'Orphelinat.

III.—Porphyritic eruptive rocks.—A—Porphyry. B—Serpentine. C—Contact zone of serpentines.

A.—PORPHYRY.

Main regions.—Centre and middle, western side of the island. Quartziferous porphyritic rocks, near the source of Negropou River, central region. Decomposed porphyritic rocks, bearing copper pyrites, from the same locality. Quartz, with copper pyrites, in veins in the same formation. Chloritic rock, near the casing rock; porphyry, with white crystals of orthoclase felspar, from Koé and Tonghoue, near Nouméa. Melaphyric rock with copper, from Isle Ducos.

B.—SERPENTINE.

Main regions.—The serpentine formation is the most important of New Caledonia; it forms two main ranges on the eastern and western sides, parallel to the axis of the island, and extends north-westerly in the Isles of Néba, Yandé, Belep, and south-easterly in the Isle of Pines.

a. Serpentine with diallage, chrome iron, serpentines of second eruption, decomposed serpentines, and associated rocks.

Different specimens of serpentines, with or without diallage, chrome iron, &c. Form high ranges of mountains, and is the country rock of the nickel veins. Fibrous serpentine (chrysotil), seams and veins. Different hydrosilicates of magnesia in small seams and veins in serpentine. Nickeliferous serpentine. Amianthus, in serpentine, Porro, east coast. Diallagic rock, in serpentine, Porro, east coast. Jade and different kinds of rock worked into axes by the natives.

b. Breccia-veins of magnesian and nickeliferous hydrosilicates. Nickel ores—later eruptive silica.

Garnierite—hydrated silicate of magnesia and nickel. It is the mineral which forms the nickel ore of New Caledonia. Hard garnierite, rare form, which can be easily carved—Houaïlou, Bel-Air Mine. Compressed garnierite Houaïlou, Tchio. Passages from the white silicate of magnesia to the green and rich garnierite—Houaïlou. Friable garnierite—possesses the property of falling into pieces in water by absorption of the same—presents different shades, from the pale bluish green or pale green, bearing 9, 10, 11 per cent. of nickel, to a much richer deep green, from different nickel districts, namely, between Houaïlou and Kanala, and in the district of Tchio. Mammillated garnierite,

from Kanala, Boakaine Mine.—the pure matter, which is very deeply green and transparent, contains 29 per cent. of nickel oxide—forms stalactites in the fissures on the sides of the lode. Fibrous garnierite, or nickeliferous chrysotil. It is the crystalline form of the garnierite. Samples of "slickensides" in the veins of garnierite. Garnierite and nickel ore, covered or penetrated with later eruptive silica, from Koé, Kanala, Kouâ, &c. The ore, hand-picked, concentrated by common process, averages scarceley 10 per cent., but by new process, which has never been used in New Caledonia, it should be easy to concentrate the ore between 10 and 15 per cent. Form of deposits—Veins, or breccia-veins, in serpentine. Main nickeliferous districts—Houaïlou, Porro, Kouâ, Kouaoua, Kanala, Nakety, Tchio, Brendy, Ny, on the east coast; Poum, Gomen, Gatope, Dombéa, Mont d'Or, on the west coast, &c.

c. Iron ore and chrome iron ore.

Main regions.—North, Mont Tiebaghi; south, South Bay, and others of the south-western coast. Pisolitic oxide of iron, eruptive in serpentines. Cellular oxide of iron, same formation. Chrome iron ore, deposits in serpentine formation. Pisolitic iron ore, enveloped with silica, showing that this product is posterior to the eruptive iron.

d. Feldspathic and amphibolitic rocks associated with serpentines. Kaolin, cobalt ore.

Feldspathic rock, Baie des Pirogues, Leia River. Diorite, Dombéa, Baie des Pirogues. Baie Lebris, &c., veins in serpentines. Cobalt ore (wad or asbolite, mixed oxides of cobalt, manganese, iron, &c.), Baie de Pirogues, Baie du Sud. Cobalt and manganese salts, obtained in one operation from the ore, leaving the most part of the iron in the mother water as residue.

e. Copper in rocks, associated with the serpentinous formation, Baie de Kanala.

Green carbonate of copper in a kind of magnesian vein rock. Crystalline rock, bearing white magnesian minerals (magnesian peridot) (?) with serpentine. The rock bearing grains of anhydrous silicate of magnesia seems to be the same as the dunite from New Zealand; it contains also small grains of chromic iron. This rock is remarkable by its composition, which is the same as the chassignite, a very rare kind of meteorite. Country rock, serpentine.

C.—Contact Zone of Serpentines.

On the foot of the serpentinous ranges.

f. Rocks and breccias of contact.

Serpentine with excess of silica. Hydrosilicates of magnesia. Mammillated silica. Common opal. Green opal, Baie de Plum, South. Common jasper. Serpentinous breccias with calcite. Spilite with calcite. Tremolite. White silicate of magnesia. Felspathic and amphibolitic rocks. Diorite, &c. (Nearly all these rocks from the plains of the Gomen tribe.)

g. Cupriferous contact veins, antimony in the same zone.

Yellow copper ore at the depth of 5 fathoms. Native copper in casing clay, contact vein of Koumac, Bouenoumala mine. Stibine (antimony ore), from quartz veins, Nakety.

CLASSES 100–107.—*Minerals, Ores, Building-stones, &c.*

NEW SOUTH WALES.

Bensusan, S. L., Sydney.

Collection of minerals.—Very good industrial collection of ores and minerals of commercial value. This collection contains ores of gold, silver, lead, copper, bismuth, antimony, mercury, cadmium, tin, iron, &c., also some limestone steatites, asbestos, kaolines, &c., chiefly the production of New South Wales. In the collection gold is shown in most of its known associations, as in arsenical and ordinary pyrites and pyrrhotine, jasper-cement, titanniferous iron, &c. Copper is shown in most of the forms in which it occurs in Australia, native copper, various malachites, azurite, chrysicolla, chalcopyrites, peacock ore, copper glance, and remolinite being most noticeable. Some excellent specimens of native bismuth and angelsite are also shown, and also cassiterite, in various forms, with its accompanying rocks.

Biggar, John, Wollongong.

Mineral and fossil exhibits.—Chiefly lower coal measure fossils. The most curious thing in the exhibit is some quartz crystals from the coal at Wollongong.

Copeland, H., Newtown.

Quartz crystals from Peel River.—Very pretty specimens, but not clear enough to be of any value for cutting, for which they are also rather small in the individual crystals.

Department of Mines, Sydney.

Silver ores, Wellingrove Silver Mine, New England. Fifty samples of alluvial gold from the Gold-fields of New South Wales. Specimens of auriferous quartz from the Gold-fields of New South Wales. Specimens of silver ores from various localities in New South Wales. Specimens of silver ores from the Boorook Silver Mines, near Tenterfield, collected by the International Exhibition Committee at Boorook. Specimens of copper ores from various localities in New South Wales. Specimens of lode tin from various localities in New South Wales. Specimens of stream tin from various localities in New South Wales. Specimens of lode tin ore from Bolitho Mine, Cope's Creek, New England. Specimens of ores of antimony, lead, zinc., &c., from New South Wales. Specimens of various rocks and minerals of New South Wales.—Classes 45 to 55B comprise the collection of samples of gold from the Gold-fields, together with the metalliferous ores, rocks, and minerals of New South Wales. The different varieties of alluvial gold are shown in fifty samples, of which the assays and values determined at the Sydney Branch of the Royal Mint are attached. Amongst the samples of auriferous quartz are some rich specimens showing free gold, and many are of a very pyritous character, especially those from the Braidwood, Cargo, and Adelong Gold-fields. It is important that attention should be drawn to the pyritous reefs of the Colony, for it is believed that they offer much inducement for the introduction of more efficient methods than have hitherto been employed for the treatment of auriferous pyrites. Silver ores are exhibited from various localities. Those from Moruya are found to contain from 1 dwt. 5 grs. to 11 ozs. 10 dwts. 10 grs. of gold. The principal collection is from Boorook, and was collected by the International Exhibition Committee at Boorook. It consists principally of chlorides and sulphides of silver, yielding in some cases as high as 500 ozs. of silver per ton. The copper ores form a large collection, and

comprise every variety of ore from the various cupriferous districts of the Colony. Tin ore is shown in great variety, that from the stanniferous districts of New England being most conspicuous and abundant in samples; while the Southern and Western districts have also contributed valuable specimens. The samples from the Bolitho Mine, Cope's Creek, are remarkable for their finely developed crystals of cassiterite. The ores of antimony and lead consist principally of sulphides of high percentage. Amongst the collection of marbles are varieties which would be highly useful for ornamental building purposes. The exhibits of asbestos from Gundagai, and Sewell's Creek, near Rockley, are of good quality. Specimens of various rocks of New South Wales are interesting, as showing the variety of the sedimentary and igneous rocks, especially of the hornblendic granites and diorites which are usually associated with the occurrence of gold in New South Wales. A collection of coal contains samples from every colliery in the Colony, and from many seams of coal not yet worked, and is very complete. Iron ores are well represented, and show good specimens of magnetite, hæmatite, limonite, &c., of which there are known to be large deposits.

This collection, arranged by Mr. C. S. Wilkinson, Government Geologist, is by far the finest general collection in the Exhibition; and it is difficult to class it sufficiently high on account of its great superiority. In fact, it forms a class above 1st Class, and we would recommend a special award being made. We have treated the collection *in globo*, but if we had taken it under the eleven heads under which it is arranged it would almost have been necessary in fairness to have given a 1st Class award to each section.

Alluvial Gold.

No.	Locality.	Value per oz.	Assay Report, Sydney Mint.		No.	Locality.	Value per oz.	Assay Report, Sydney Mint.	
			Gold.	Silver.				Gold.	Silver.
		£ s. d.					£ s. d.		
1	Bathurst	3 17 1	9285	·065	49	Sofala	3 16 2	9205	·070
2	Carcoar	3 16 11	9285	·060	50	Hargraves	3 19 6	9510	·040
3	Orange	3 18 5	9280	·010	26	Braidwood	3 19 11	9585	·035
4	,,	3 17 5	9400	·050	27	,,	3 18 7	9380	·055
5	,,	3 17 6	9415	·050	28	,,	3 18 9	9390	·055
6	,,	3 16 0	9005	·090	29	Araluen	3 18 0	9295	·065
7	Hill End	3 19 0	9440	·050	30	,,	3 17 0	9190	·075
8	,,	3 18 5	9415	·050	31	,,	4 0 0	9585	·035
9	,,	3 18 10	9415	·050	32	,,	3 18 0	9290	·065
10	Sofala	3 17 5	9255	·065	33	Adelong	3 18 0	9345	·055
11	,,	3 17 2	9200	·070	34	,,	3 18 11	9540	·040
12	Stony Creek	3 18 0	9390	·050	35	,,	3 18 10	9405	·055
13	Mudgee	3 13 5	8870	·105	36	,,	3 18 11	9410	·050
14	Gulgong	3 19 1	9490	·045	37	Nerrigundah	4 1 5	9725	·015
15	,,	3 17 6	9255	·065	38	Tumberumbah	3 18 3	9455	·055
16	Hargraves	3 15 11	9195	·070	39	Monaro	4 0 7	9720	·020
17	,,	3 19 6	9460	·045	40	Tuena	3 18 2	9370	·055
18	Wellington	3 11 5	8550	·135	47	Urana	4 0 0	9745	·020
19	,,	3 18 6	9465	·045	48	Cooma	3 17 3	9345	·055
20	Parkes	3 16 7	9260	·065	41	Grafton	3 16 4	9185	·075
21	,,	3 16 11	9255	·070	42	Richmond River	3 19 1	9525	·040
22	,,	3 16 0	9210	·070	43	,,	3 19 4	9470	·045
23	Tambaroora	3 19 3	9485	·045	44	Nundle	3 15 1	8985	·075
24	,,	3 19 3	9475	·045	45	Bingera	3 15 3	9085	·080
25	Pyramul	3 19 6	9470	·045	46	Uralla	3 19 0	9450	·050

CLASSES 100–107.—*Minerals, Ores, Building-stones, &c.*

Specimens of auriferous quartz from the Gold-fields of New South Wales :—

1. Auriferous quartz. Annett's Mine, Adelong ; yield, 6 ozs. per ton.
2. Do. Adelong.
3. Do. Great Victoria Mine, Adelong ; depth, 800 feet.
4. Do. Adelong United Mine.
5. Do. Great Victoria Gold-mining Company, Adelong.
6. Do. Snob's Reef, Major's Creek, Braidwood.
7. Do. with iron pyrites. Quong Tait's Claim, Lady Belmore Line of Reef, Braidwood ; yield, 8 ozs. per ton.
8. Model of nugget.
9. Auriferous quartz, with blende and cubical pyrites. Currajong Reef, Adelong ; yield, 17 ozs. per ton.
10. Auriferous quartz. William the First Reef, Nerrimunga.
11. Do. with iron pyrites. Laird and Bacon's Lease, Solferino.
12. Do. Snob's Reef, Big Hill, Major's Creek.
13. Quartz, containing copper and iron pyrites and galena. Snob's Reef, Major's Creek.
14. Auriferous quartz. Lewis Johnson's Reef, Crudine Creek.
15. Pyritous quartz. Between Grafton and New England.
16. Do. do. do. do.
17. Auriferous quartz. Victoria Reef, Adelong ; depth, 600 feet.
18. Do. Major's Creek, near Braidwood.
19. Do. and calcite. Garibaldi Reef, Solferino.
20. Auriferous cement (Carboniferous age). Clough's Valley, Tallewang.
21. Auriferous quartz. Edward's Reef, Mookerawa.
22. Quartz in porphyrite. Homeward Bound Reef, Grenfell.
23. Auriferous quartz. Eddington Line, Trunkey.
24. Auriferous pyrites. Home Rule.
25. Auriferous quartz. Lac-ma-lac, near Tumut.
26. Do. Major's Creek, near Braidwood.
27. Do. Prospector's Claim, Golden Star Reef, Walcha District, New England.
28. Auriferous quartz. Do. do. do.
29. Do. Do. do. do.
30. Auriferous pyritous quartz. Dargue's Reef, Spring Creek.
31. Auriferous quartz. Nerrimunga.
32. Do. Eureka Claim, Nerrimunga.
33. Do. North Williams Reef, Adelong.
34. Do. Spring Creek, near Braidwood.
35. Do. No. 1, North Lion Reef, Solferino ; depth, 80 feet.
36. Do. Prospector's Claim, Manton's Reef, Nerrimunga.
37. Micaceous granite, containing gold. Araluen ; yield, about 2 dwts. per ton.
38. Auriferous quartz. Kangaroo Reef, Nerrimunga.
39. Do. Adelong.
40. Auriferous pyritous quartz. Snob's Reef, Major's Creek.
41. Auriferous quartz. Bonnie Dundee, Parkes.
42. Gold in calcite. Crow Mountains, Barraba.
43. Auriferous quartz. Prospector's Claim, Golden Star Reef, Walcha District, New England.
44. Iron pyrites. Ironclad Reef, Cargo.
45. Auriferous quartz. Prospector's Claim, Golden Star Reef, Walcha District, New England.
46. Auriferous quartz. Pride of Clarence Reef ; depth, 20 feet.
47. Do. Near Forbes.
48. Do. Lac-ma-lac, near Tumut.
49. Do. with zinc and galena. Consols Reef, Grenfell.
50. Do. Fitty's Reef, Wellington.
51. Iron pyrites. Gulgong.
52. Auriferous pyritous quartz. Ironclad Reef, Cargo.
53. Auriferous quartz. Trunkey Creek Quartz-mining Co., Trunkey
54. Do. Pembroke Reef, near Trunkey.
55. Auriferous cement (Pliocene drift). Gulgong.

56. Quartz, containing copper and iron pyrites, galena, &c. Snob's Reef, Major's Creek.
57. Auriferous quartz in greenstone. 1 mile east, 30 degrees north of Grenfell.
58. Auriferous pyritous quartz. Spring Creek, near Braidwood.
59. Auriferous quartz. Lousiana Reef, depth 40 feet, vein 1 foot.
60. Do. with iron pyrites. Victoria Reef, Adelong, yield 5 ozs. per ton.
61. Do. Arthur's Line of Reef, Trunkey, depth 70 feet.
62. Quartz containing copper and iron pyrites, galena and blende. Snob's Reef, Big Hill, Major's Creek.
63. Auriferous quartz. Gilmandyke, 12 miles from Trunkey, yield 1 oz. per ton, depth 50 feet.
64. Auriferous quartz. Trunkey Creek Quartz-mining Co., Trunkey.
65. Pyritous quartz. Old Hill Reef, Adelong.
66. Auriferous quartz. Old Hill Reef, Adelong.
67. Iron pyrites and calcspar. Merimbula.
68. Auriferous quartz. Lewis Johnson's lease, Crudine Creek, depth 30 feet.
69. Pyritous quartz. Bungonia.
70. Auriferous quartz. Easter Gift Reef, Crow Mountains, Barraba.
71. Pseudomorph of limonite after pyrites. Golden Gully, Hill End.
72. Auriferous quartz. Barmedman, Forbes District.
73. Auriferous pyritous quartz. Dargue's Reef, Spring Creek.
74. Auriferous quartz. Eurongilly.
75. Do. Trunkey, depth 500 feet.
76. Do. Fagan Beatach's Reef, Oberon.
77. Do. Trunkey Creek.
78. Auriferous brown oxide of iron. Alfred Town, near Wagga Wagga.
79. Auriferous quartz with galena. Sebastopol Reef, Junee.
80. Auriferous sandstone reef. Cowarbee, Murrumbidgee District.
81. Auriferous quartz. Fagan Beatach's Reef, Oberon.
82. Do. Eddington Line, Trunkey.
83. Pyritous quartz. East Currajong Reef, Adelong.
84. Auriferous sandstone reef. Cowarbee, Murrumbidgee District.
85. Auriferous quartz. Gulgong.
86. Do. Paravaccini Reef, Wood's Flat.
87. Gold in copper ore. Kaiser Reef, Mitchell's Creek.
88. Auriferous quartz. Pride of Clarence Reef, Solferino.
89. Do. Easter Gift Reef, Crow Mountains, Barraba.
90. Do. Old Hill Reef, Adelong.
91. Do. Bowling Alley Point, Peel River.
92. Do. Ada Reef, Barmedman.
93. Do. Trunkey.
94. Do. Strickland's Reef, Forbes District.
95. Do. Mac's Reef, Gundaroo, 50 feet.
96. Wolfram. New England.
97. Quartz with sulphides of iron and zinc. Snob's Claim, Big Hill, Major's Creek.
98. Auriferous quartz. Fletcher's Reef, Victoria Extended, depth 240 ft., yield 2 ozs. per ton.
99. Model of first large nugget found in New South Wales.
100. Quartz (showing peacock ore). Adelong.
101. Auriferous quartz. Victoria Reef, Adelong, yield 4 ozs. per ton.
102. Auriferous pyritous quartz. Adelong United Mine.
103. Auriferous quartz. Reardon's Claim, Little River.
104. Do. Golden Point, Trunkey.
105. Do. Adelong United Mine.
106. Auriferous pyritous quartz. Pioneer Line of Reef, Trunkey, depth 240 ft.
107. Do. Mitchell's Creek Co., Lincoln.
108. Auriferous quartz. Wilson's Line, King of the West Co., Trunkey.
109. Do. Prospecting Claim, Manton's Reef, Nerrimunga.
110. Burnt quartz. Lady Belmore Reef, near Braidwood, yield 12 ozs. per ton.
111. Auriferous quartz. North Garibaldi Reef, Solferino.
112. Do. Lambert and Davies' Claim, Oberon.
113. Auriferous pyritous quartz. Pioneer Line, Trunkey.
114. Gold in cleavage planes of clay slate. Cowarbee, Murrumbidgee District.
115. Auriferous quartz. Hansen and party's Reef, near Oberon.

CLASSES 100–107.—*Minerals, Ores, Building-stones, &c.*

116. Auriferous pyrites. Cargo.
117. Auriferous quartz. Mitchell's Creek, near Wellington.
118. Auriferous pyritous quartz. North Williams Claim, Adelong, depth 240 feet, yield 4 ozs. per ton.
119. Auriferous quartz. Major's Creek, neer Braidwood.
120. Do. Southern Cross Reef, Solferino, depth 50 feet.
121. Do. Spar Reef, Nerrimunga.
122. Do. Do. Reef, Nerrimunga.
123. Auriferous mundic and galena. Field's Claim, Major's Creek.
124. Auriferous wash dirt. Crown Sluicing Co.'s Claim, Araluen.
125. Auriferous quartz. Strickland's Reef, near Forbes, yield 4 ozs. 6 dwts. 6 grs. per ton.
126. Auriferous porphyry dyke. Near Forbes.
127. Auriferous quartz. Strickland's Reef, near Forbes.
128. Do. Consol's Reef, Grenfell.
129. Do. containing zinc and galena. Grenfell.
130. Do. Victoria Extended, depth 240 ft., vein 2 ft.; yield 3 ozs. per ton.
131. Auriferous ferruginous quartz drift, wash-dirt with coarse gold visible. Wapping Butcher Lead, near Forbes.
132. Auriferous quartz. Prospector's Claim, Mountain Maid Reef, Back Creek, Barrington.
133. Auriferous quartz. Fletcher's Reef, Adelong.
134. Do. with iron pyrites. Lombardy Reef, Solferino.
135. Do. do. Mitchell's Reef, Wellington, depth 100 ft.
136. Auriferous quartz. Prospectors, Band of Hope, Solferino.
137. Do. with sulphurets of iron, lead, and zinc. Snob's Claim, Major's Creek.
138. Auriferous quartz. Prospector's Claim, Garibaldi Reef.
139. Iron pyrites. Old Reef, Adelong, depth 38 feet, vein 1 foot, yield 2 ozs. per ton.
140. Auriferous quartz (surface). Lombardy Reef, Solferino.
141. Do. United Miners, Snob's Reef, near Braidwood.
142. Do. Hill End.
143. Auriferous wash dirt, averaging 12 grs. to the square yard. The Plains, Araluen.
144. Auriferous quartz. Dayspring Gold-mining Company's Reef, Lachlan District, yield 11 dwts. 12 grs. per ton.
145. Iron pyrites. Old Reef, Adelong.
146. Quartz containing iron pyrites, galena, &c. Snob's Reef, Major's Creek.
147. Auriferous pyritous quartz. Strickland's Reef, Forbes District.
148. Auriferous quartz. Quong Tait's Claim, Lady Belmore Line of Reef, Braidwood, yield 19 ozs. per ton.
149. Auriferous quartz. Lloyd' Block, Back Creek, Trunkey.
150. Do. with iron pyrites. Star Reef, Solferino
151. Quartz with iron pyrites. Snob's Reef, Braidwood.
152. Auriferous quartz. Junee Reef.
153. Auriferous pyritous granite. Moir's Creek.
154. Auriferous quartz. Dayspring, Major's Creek.
155. Do. Gulgong.
156. Do. Blackman's Paddock, near Gulgong.
157. Pyritous quartz and zinc. Field's Claim, Major's Creek.
158. Granite. Dargue's Reef, Major's Creek.
159. Pyritous quartz with copper. Major's Creek.
160. Pyrites. Dargue's Reef, Major's Creek.
161. Auriferous pyrites. Major's Creek.
162. Auriferous quartz. Ironclad Reef, Cargo.
163. Do. Grenfell.
164. Do. Victory Reef, Grenfell.
165. Do. Mountain Maid Reef, Back Creek.
166. Do. Cargo.
167. Do. Prince William Reef, Golden Gully, Stony Creek.
168. Auriferous quartz with arsenical pyrites and galena. Strickland's Reef, near Forbes, gold per ton 1 oz. 10 dwts., silver 1oz. 19 dwts. 4 grs.
169. Iron pyrites. Enterprise Reef, Major's Creek.

170. Auriferous quartz. Old Gulgong Reef.
171. Do. Near Bungonia.
172. Do. Lac-ma-lac, Tumut, yield 18 ozs. per ton.
173. Do. Court's Lease, Hawkin's Hill.
174. Do. with blende and galena. Consol's Reef, Grenfell.
175. Iron pyrites. Solferino.
176. Auriferous quartz. Wilson's Claim, Pine Ridge, Trunkey.
177. Do. Blackman's Reef, Oberon.
178. Do. Welcome Reef, near Gulgong.
179. Do. Easter Gift Reef, Crow Mountains, Barraba.
180. Quartz with copper and iron pyrites, galena and blende. Big Hill, Major's Creek.
181. Auriferous quartz. Old Hill Reef, Adelong.
182. Do. Pride of Clarence Reef, Solferino.
183. Do. Maitland Reef, Wood's Flat.
184. Do. Parramatta Reef, Gulgong.
185. Do. North Williams Claim, Adelong.
186. Do. Arthur's Line of Reef, Trunkey.
187. Do. Crow Mountains, Barraba.
188. Do. in greenstone. Near Grenfell.
189. Do. Hell's Hole, Trunkey.
190. Pyrites. Field's Claim, Major's Creek.
191. Auriferous quartz. Back Creek, Elrington.
192. Do. Manima Reefs, near Murrumbateman.

Specimens of lode and stream tin from various localities of New South Wales.

194. Stanniferous cement from centre of rich deposit. Vegetable Creek.
195. Do. do. do. do.
196. Petrified wood with tin cement. O'Daly's mine, Vegetable Creek.
197. Lode tin. Walleroo Ranges, near Cowra.
198. Do. Cope's Creek.
199. Do. Mole Table-land.
200. Lode tin with beryl. Craigend, The Gulf.
201. Stanniferous granite containing beryl and chalcedonic quartz. The Gulf.
202. Lode tin. Gulf Tin-mining Co.
203. Do. Gulf Tin Lode, Craigend.
204. Do. Mole Table-land, near Tenterfield.
205. Do. Dividing Range, Mann and Timbarra Rivers.
206. Do. Craigend, The Gulf.
207. Do. Bolitho Tin Mine, Cope's Creek.
208. Nodule of tin. Butchart's Mine, Cope's Creek.
209. Lode tin. Moonbah Range, Snowy River.
210. Washdirt cement. Rothschild's Mine, Vegetable Creek.
211. Stanniferous wash tailings. Great Britain Tin Mine, Vegetable Creek.
212. Tin cement. Vegetable Creek.
213. Lode tin. Cope's Creek.
214. Do. Butchart's Mine, Cope's Creek.
215. Cassiterite. Simon's Claim, Cope's Creek.
216. Lode tin. Mole Table-land.
217. Do. Bolitho Mine, Cope's Creek.
218. Surface cement. Vegetable Creek.
219. Lode tin. Flagstone Creek, Mole Table-land.
220. Do. Vegetable Creek.
221. Do. 25 miles east of Mole Table-land.
222. Do. Mole Table-land.
223. Do. Planet Tin Mine, Mole Table-land.
224. Do. Mole Table-land.
225. Do. do.
226. Stanniferous cement. Vegetable Creek.
227. Lode tin. Cope's Creek.
228. Do. Dutchman's Reef, Mole Table-land.
229. Do. Elsmore Mine, New England.

230. Lode tin. Sutherland's Water, Cope's Creek.
231. Do. Mole Table-land.
232. Do. Do.
233. Tin cement. Vegetable Creek.
234. Lode tin. Elsmore Mine, New England.
235. Do. Bismark Mine, near Cope's Creek.
236. Do. Butchart's Mine, Cope's Creek.
237. Do. Mole Table-land.
238. Stanniferous cement. Rothschild's Mine, Vegetable Creek.
239. Lode tin. Myall Creek, near Bingera.
240. Do. Sutherland's Water, Cope's Creek.
241. Cassiterite in clay slate. Tenterfield.
242. Lode tin. O'Daly's, Vegetable Creek.
243. Do. Glen Creek.
244. Do. Tenterfield.
245. Do. Planet Mine, Mole Table-land.
246. Do. near Tenterfield.
247. Do. Bolitho Mine, Cope's Creek.
248. Do. Planet Tin Mine, Mole Table-land.
249. Do. Bingera.
250. Do. with fluor-spar in quartz. Boundary Mine, Cope's Creek.
251. Do. Gulf Tin-mining Company.
252. Do. in granite. Mole Table-land.
253. Do. Cope's Creek, near Inverell.
254. Do. Mole Table-land.
255. Do. Glen Creek.
256. Do. Mowamba, Manaro.
257. Do. Mole Table-land.
258. Do. Glen Creek.
259. Do. Cope's Creek.
260. Stanniferous cement. Yaraula, Inverell.
261. Lode tin. Mole Table-land.
262. Do. Pine Ridge Mine, Cope's Creek.
263. Do. Graveyard Creek, Vegetable Creek.
264. Do. The Gulf.
265. Tin in quartz crystal. Albion Tin Mine, Cope's Creek.
266. Lode tin. The Gulf.
267. Do. Cope's Creek.
268. Do. M'Donald's, The Glen.
269. Do. Gulf Creek, Craigend.
270. Do. Cope's Creek.
271. Do. do.
272. Do. Mole Table-land.
273. Do. Cope's Creek.
274. Do. Craigend, The Gulf.
275. Stream tin (toad's-eye tin). Two-mile Lead, Grenfell.
276. Do. Rain's Gully, The Gulf.
277. Lode tin. Cope's Creek.
278. Stream tin. Y Water-holes.
279. Stanniferous cement. Vegetable Creek.
280. Lode tin. Cope's Creek.
281. Stanniferous cement. O'Daly's Mine, Vegetable Creek.
282. Stream tin. Tent Hill, near Vegetable Creek.
283. Do. Grampian Hills, near Vegetable Creek.
284. Do. Great Britain Tin-mining Co., Vegetable Creek.
285. Do. Y Water-holes.
286. Do. The Gulf, New England.
287. Do. Rain's Gully, Gulf Creek.
288. Do. Karoola, near Inverell.
289. Do. Dividing Range, Mann and Timbarra Rivers.
290. Do. Little Britain Tin Mine, Cope's Creek.
291. Do. Baal Gammon Tin Mine, Vegetable Creek.
292. Do. Below Grampians, Vegetable Creek.
293. Stanniferous cement. Arden's Mine, Tent Hill.

294. Stream tin. The Springs, near Vegetable Creek.
295. Do. O'Daly's Mine, Vegetable Creek Tin-mining Co.
296. Stanniferous cement. Vegetable Creek.
297. Stream tin. Deepsinker's Mine, Vegetable Creek.
298. Burnt from cement. Vegetable Creek Tin-mining Company.
299. Stream tin. Tumbarumba.
300. Do. Rothchild's Mine, Vegetable Creek.
301. Do. Spear and Moore's, Vegetable Creek.
302. Do. Gordon's Mine, Vegetable Creek.
303. Do. Billin's Claim, Cope's Creek.
304. Do. Wetherdin's Claim, Severn River.
305. Do. Nine-mile Creek, Mole Table-land.
306. Do. Y Water-holes, Vegetable Creek.
307. Do. Silent Grove Creek, Mole Table-land.
308. Do. Spear and Moore's Mine, Vegetable Creek.
309. Do. Mann and Timbarra Rivers.
310. Toad's-eye tin. Native Dog Creek, 8 miles from Grenfell.
311. Stream tin. Little Wonder Tin Mine, Vegetable Creek.
312. Do. Wearne's Mine, Cope's Creek.
313. Do. Nine-mile Creek, Mole Table-land.
314. Do. Tent Hill, Vegetable Creek.
315. Do. Little Britain Tin Mine, Vegetable Creek.
316. Toad's-eye tin. Grenfell.
317. Stream tin. The Gulf.
318. Do. Pine Ridge, near Inverell.
319. Do. Britannia Tin Mine, near Inverell.
320. Do. Tent Hill, near Vegetable Creek.
321. Do. Mole Table-land.
322. Stanniferous cement. Tent Hill, near Vegetable Creek.
323. Stream tin. Pine Ridge Mine, Cope's Creek.
324. Do. Flagstone Creek, Mole Table-land.
325. Do. O'Daly's Mine, Vegetable Creek.
326. Do. Herding Yard Creek, Tenterfield.
327. Do. Wylie Creek, New England.
328. Do. Great Dividing Range, Boundary Creek.
329. Do. Ancient Briton Tin Mine, Vegetable Creek.
330. Do. from bank of creek. Baal Gammon Tin Mine.
331. Do. Graveyard Creek, Vegetable Creek.
332. Do. Hall Bros., and Co., Vegetable Creek.
333. Do. Victoria Tin Mine, Cope's Creek.
334. Do. Lady Emily Tin Mine, Cope's Creek.
335. Do. Kangaroo Flat, near Vegetable Creek.
336. Do. Highland Home, N. S. Wales.
337. Do. Cameron's Lode, Mole Table-land.
338. Do. Glen Creek.
339. Do. Burra Burra, Parkes District.
340. Do. Near Maryland, Queensland Border.
341. Do. Head of Pond's Creek, near Inverell.
342. Do. Lady Emily Tin Mine, Vegetable Creek.
343. Do. Burra Burra, Parkes District.
344. Do. Oban.
345. Do. Wyndham's Claim, Cow Swamp, Mole Table-land.
346. Do. Clark's Chest, near Bundarra, New England.
347. Do. Long Gully, Cope's Creek.
348. Do. Elsmore Tin Mine, New England.
349. Do. Pride of the Ranges, near Inverell.
350. Do. Mole Table-land.
351. Do. Burra Burra, Parkes District.
352. Do. Glen Creek Tin-mining Co., near Vegetable Creek.
353. Do. containing gold. Tumbarumba.
354. Do. O'Daly's Mine, near Vegetable Creek.
355. Do. Britannia Mine, Cope's Creek.
356. Do. Little Wonder Tin Mine, Vegetable Creek.
357. Do. Deep Lead, Strathbogie, near Vegetable Creek.

Specimens of copper ore from various localities of New South Wales.

COPPER ORES.

358. Sulphide of copper. Snowball Mine, Gundagai.
359. Do. Clarence River.
360. Do. Charlton, near Rockley.
361. Do. Dundee, New England.
362. Do. Goodrich Mine.
363. Do. Frog's Hole, parish of Bala.
364. Do. Cootalantra Copper Mine, Manaro.
365. Carbonate. Armstrong Mine.
366. Sulphide. Gordon Brook, Clarence River.
367. Slate of South Shaft. Milburn Creek.
368. Native copper. Peelwood.
369. Sulphide of copper. Cobar.
370. Do. Cow Flat.
371. Sulphide and black oxide. Apsley, assay 18·72 per cent.
372. Do. and native copper. Cobar.
373. Do. do Manaro.
374. Do. do Wellingrove.
375. Black oxide. Bobby Whitlow's Mine, Bingera.
376. Sulphide of copper. Middle Shaft, Milburn Creek.
377. Do. Jones's Mount, Tuena.
378. Do. Jacqua Mine, Nerrimunga.
379. Do. Wiseman's Creek, assay 11·30 per cent.
380. Do. Milburn Creek.
381. Do. and galena. Goodrich Mine.
382. Do. Ophir.
383. Yellow sulphide. Goodrich Mine.
384. Sulphide of copper. Between Condobolin and Parkes.
385. Do. Yarrangobilly, near Kiandra.
386. Do. Peelwood.
387. Do. Cow Flat.
388. Yellow sulphide. Goodrich Mine.
389. Sulphide of copper. Wellbank, near Wellington.
390. Do. Ironclad Reef, Cargo, assay 23·16 per cent.
391. Do. Wellbank, assay 13·39 per cent.
392. Do. Oberon.
393. Do. and black oxide. South Wiseman's Creek.
394. Do. Wellbank, assay 13·39 per cent.
395. Do. Between Condobolin and Parkes.
396. Do. From Winze South Shaft, Milburn Creek.
397. Do. Solferino.
398. Do. and galena. Belmore Mine, Manaro.
399. Do. Armstrong Mine; assay 32·7 per cent.
400. Carbonate of copper. Goodrich Mine.
401. Do. Belara.
402. Gossan. Belmore Mine, Manaro.
403. Do. Lady Belmore Mine, Wood's Flat.
404. Do. Junction of Cotta and Queanbeyan Rivers.
405. Do. Peelwood.
406. Carbonate of copper (auriferous). Mitchell's Creek; gold 4 ozs. 10 dwts. 9 grs. per ton.
407. Carbonate of copper (auriferous.) Lucknow.
408. Do. Cobar.
409. Do. Mitchell's Creek; assay 9·40 per cent.
410. Do. Three-mile Flat, near Wellington.
411. Do. Snowball Mine, Gundagai.
412. Do. Cow Flat.
413. Do. Near Wellington.
414. Do. Belara.
415. Do. Gordon Brook, Clarence River.
416. Do. Cobar.

417. Carbonate of copper. Mitchell's Creek.
418. Do. Cobar.
419. Do. Peelwood.
420. Do. Frog's Hole, parish of Bala.
421. Do. Peelwood.
422. Red oxide and carbonate of copper. Cow Flat, near Bathurst.
423. Green carbonate of copper. Peelwood.
424. Do. Wiseman's Creek.
425. Carbonate of copper. Copabella, Southern District.
426. Do. Wellbang, near Wellington.
427. Do. Cobar.
428. Do. Junction of Cotta and Queanbeyan Rivers.
429. Do. do. do. do. do.
430. Do. Armstrong Mine; assay 28·7 per cent.
431. Do. and galena. Wellingrove.
432. Do. Mitchell's Creek, County of Lincoln.
433. Do. Courntoundra Range, 60 miles north-west of Wilcannia.
434. Do. and sulphide. Bobby Whitlow's Mine, Bingera.
435. Do. Near Oberon.
436. Do. Cobar.
437. Do. Wiseman's Creek; assay 16·72 per cent.
438. Do. Upper Bingera.
439. Do. Goodrich Mine.
440. Do. Wiseman's Creek.
441. Do. Milburn Creek.
442. Do. Cobar.
443. Do. Wellingrove.
444. Do. Belara.
445. Do. (auriferous). Three-quarter mile east of Wellington.
446. Do. do Wiseman's Creek, Oberon.
447. Do. Junction of Cotta and Queanbeyan Rivers.
448. Do. Between Condobolin and Parkes.
449. Sulphide and black oxide of copper. Junction of Cotta and Queanbeyan Rivers.
450. Red oxide and carbonate do. Mount Hope, Lower Lachlan.
451. Do. Peelwood.
452. Do. and carbonate. Peelwood.
453. Do. do Bobby Whitlow's, Bingera.
454. Black oxide of copper. Belara Mine.
455. Red oxide do. Courntoundra Range, north-west of Wilcannia.
456. Do. and carbonate. Wiseman's Creek.
457. Carbonate of copper. Peelwood.
458. Sulphate do. Milburn Creek.
459. Carbonate do. Mitchell's Creek.
460. Sulphide do. Oberon.
460a. Native Copper. Milburn Creek.
461. Do. Peelwood.
462. Silicate of copper. Combing, near Carcoar.
463. Sulphide of copper. Cobar.
464. Red oxide do. (auriferous). Fitty's Reef, Mitchell's Creek.
465. Black oxide do. and iron pyrites. Belara.
466. Red oxide do. Bobby Whitlow's, Bingera.
467. Do. do. Peelwood.
468. Do. and carbonate of copper. Armstrong Mine, assay 33 per cent.
469. Do. do. do. Apsley, assay 18.12 per cent.
470. Do. do. do. Peelwood.
471. Black oxide and sulphide of copper. Junction of Cotta and Queanbeyan Rivers.
472. Do. do. do. Peelwood.
473. Do. do. do. Belara Mine, assay 40 per cent.
474. Do. do. do. Belara.
475. Red oxide and carbonate do. Wellington.
476. Sulphide of copper. Near Bingera.
477. Black oxide and grey sulphide of copper. Milburn Creek, assay 25 per cent.
478. Sulphide of copper. Narragal, County Gordon.
479. Copper ore. Apsley.

480. Copper Ore. Combing Copper Lode.
481. Gossan. Essington Mine, near Rockley.
482. Black oxide of copper. Belara.
483. Do. do. Milburn Creek.
484. Red oxide of copper. Peelwood.
485. Do. and carbonate. Hurley and Wearne's Mine, near Wellington.
486. Do. do. Peelwood.
487. Do. do. Cobar.
488. Do. do. Courntoundra Range.
489. Black oxide and sulphide of copper. South Wiseman's Creek.
490. Do. do. Belara Mine; assay 39 per cent.
491. Gossan. Essington Mine, near Rockley.
492. Black oxide of copper. Gordon Brook, Clarence River.
493. Red oxide of copper. Peelwood.
494. Do. and carbonate. Frog's Hole, Parish of Bala.
495. Sulphide of copper. Peelwood.
496. Do. Molong.
497. Auriferous Copper ore. Fitty's Reef, Wellington.
498. Sulphide of copper. Hurley and Wearnes, Wellington District.
499. Do. Cow Flat.
500. Native copper. Hurley and Wearne's, Wellington District.
501. Sulphide of copper. Solferino.
502. Red oxide of copper. Cow Flat.
503. Black oxide of copper. Apsley Mine, near Bathurst.
504. Do. Junction of Cotta and Queanbeyan Rivers.
505. Do. Courntoundra Range.
506. Red oxide of copper. Cobar.
507. Do. Cow Flat.
508. Black oxide of copper. Gordon Brook, Clarence River.
509. Do. do.
510. Red oxide of copper. Milburn Creek.
511. Do. Peelwood.
512. Do. Thompson's Creek Mine.
513. Gossan. Belara Mine.
514. Do. Mitchell's Creek.
515. Red oxide of copper. Milburn Creek.
516. Black oxide and sulphide of copper. South Wiseman's Creek.
517. Native copper. Peelwood.
518. Do. do.
519. Do. do.
520. Do. Between Coolac and Hillston.
521. Do. Deposited on old drill, Dunolly Mine, Cowra.
522. Do. Peabody Mine, County Ashburnham.
523. Do. Peelwood.
524. Red oxide and carbonate of copper. Wiseman's Creek; assay 27·07 per cent.
525. Carbonate of copper. Belara.
526. Do. do.
527. Peacock ore. Milburn Creek (from bottom of winze).
528. Native copper. Wellington.

Specimens of iron ores from various localities in New South Wales.

529. Stalactitic iron. Lithgow.
530. Brown hæmatite. Mount Keira, Southern District.
531. Clayband iron ore. Jamberoo.
532. Ironstone concretion. Wollombi Road, near West Maitland.
533. Clayband iron ore. Upper Coal Measures, Wallerawang.
534. Magnetite. Burra Burra, Parkes District.
535. Garnet rock iron ore. Near Wallerawang.
536. Magnetic oxide of iron. Devonian Beds, Mount Lambie.
537. Brown hæmatite. Berrima.
538. Brown hæmatite. Near Wallerawang.
539. Clayband iron ore. Winter's Mine, Wallerawang.
540. Hæmatite. Back Creek, near Blayney.

541. Limonite. Lachlan River, 50 miles west of Forbes.
542. Brown hæmatite. Wallerawang.
543. Specular iron ore. Between Mylora and Bookham, Yass District.
544. Brown hæmatite. Jamberoo.
545. Columnar clay ironstone. Myrtle Creek.
546. Specular iron ore. New England.
547. Ironstone nodule in coal seam, Wallerawang.
548. Magnetite. Wallerawang.
549. Do. 10 miles from Cowra, Grenfell Road.
550. Do. Solferino.
551. Specular and magnetic iron ore. Near Mount Lambie.
552. Brown hæmatite. Wallerawang.
553. Magnetic oxide of iron. Wallerawang.
554. Magnetite. Solferino.
555. Magnetic oxide of iron. Wallerawang. (Assay, 37·84 to 51·2 per cent. of iron.)
556. Clayband iron ore. Lithgow. (See under coal exhibits, class 101.)
557. Do. Lithgow Valley Iron Company.
558. Magnetite. Grass-tree Creek.
559. Brown hæmatite. Burra Burra, Parkes District.
560. Hæmatite. Cooyal, Mudgee District.
561. Do. Burra Burra, Parkes District.
562. Ferruginous garnet rock. New England.
563. Chrome iron. Upper Bingera.
564. Hæmatite. Narrandera.
565. Micaceous and magnetic iron ore. Warrawang, near Mount Lambie.
566. Brown oxide of iron. Near Wiseman's Creek.
567. Hæmatite. Gulgong District.
568. Magnetic iron. Mitchell's Creek, Wellington.
569. Ironstone vein in Hawkesbury Rock, Parramatta River.
570. Magnetite. Winter's Mine, Wallerawang. (Assay, 40·89 per cent.)
571. Brown hæmatite. Wallerawang. (Assay, 38·84 to 51·2 per cent. iron).
572. Brown iron ore. Coal Creek, Wallerawang.
573. Clayband ironstone. Wallerawang.
574. Magnetite. Band of Hope Reef, Solferino.
575. Ironstone concretion.
576. Ironstone. Below Hawkesbury Rock, Broughton Vale.
577. Brown hæmatite, coalband iron ore. Coal Measures, Lithgow Valley (Assay, 46 per cent.)
578. [Unspecified exhibit.]
579. Specular iron ore. O'Connell Plains.
580. Ironstone. Scone.
581. Ironstone. Narrallen Creek, County Monteagle.
582. Specular and brown oxide of iron. Parish of Ponsonby, near Bathurst
583. Specular iron ore. Boro.
584. Magnetite. 5 miles west of Binalong.
585. Limonite. Edgeroi Run, Namoi River.
586. Brown hæmatite. 8 miles from Jarvis Bay.
587. Hæmatite. Near Hay.
588. Magnetite. Binalong.
589. Magnetic iron. Rocky River.
590. Titanic iron. Do.
591. Magnetite. Near Binalong.
592. Specular iron ore. New England.
593. [Unspecified exhibit.]
594. Hæmatite. Cooyal, Mudgee District.
595. Specular iron ore. Southern District.
596. Magnetite. Wellington.
597. Magnetic iron. Mitchell's Creek, Wellington.
598. Limonite. Gulgong.
599. Hæmatite. Near Cooyal, Mudgee District.
600. Ferruginous sandstone. Near Booral.
601. Brown iron ore. Croaker's Coal Seam, Wallerawang.
602. Red hæmatite. Golden Gully.
603. Limonite concretion.

CLASSES 100-107.—*Minerals, Ores, Building-stones, &c.*

Collection of specimens of coal from the various collieries, and from seams of coal not yet worked, in the Colony of New South Wales. Further particulars of many of these samples are given under Class 101.

604. Petroleum oil cannel coal (kerosene shale.) Joadja Creek, Berrima.
605. Do. do. do. American Creek, Wollongong.
606. Do. do. do. Hartley Vale.
607. Bituminous coal and petroleum oil cannel coal. Berrima.
608. Kerosene shale. Sugar-loaf, Mount Victoria.
609. Petroleum oil cannel coal (kerosene shale) and splint coal. Anvil Creek.
610. Do. do. do. do. Mount Kembla.
611. Kerosene shale. Hartley Vale.
612. Do. Mount Kembla.
613. Coal. Greta.
614. Kerosene shale. Mount Kembla.
615. Petroleum oil cannel coal (kerosene shale). Hartley. Yield, 18,000 cubic feet of gas per ton, or 160 gallons crude oil.
616. Splint coal. Greta. Average seam, 26 feet.
617. Anthracite coal. Gibraltar Creek, Mittagong.
618. Coal. Near Berrima.
619. Semi-bituminous coal. Bulli.
620. Coal. Mount Sugar-loaf Mine, Newcastle. Seam, 18 feet.
621. Coal. Minmi Colliery. Seam, 5 feet 8 inches.
622. Splint coal. Bowenfels Coal-mining Company, Lithgow.
623. Bituminous coal. Buttai Colliery, near East Maitland. Average seam, 7 feet.
624. Do. Dudley Colliery, Redhead, near Newcastle.
625. Anthracite coal. Fitzroy Iron Company's Mine. Seam, 10 feet.
626. Shale. This shale is somewhat flexible, in thin plates, contains numerous leaf impressions, and has been worked for kerosene. It has been specially named Wollongongite. American Creek, Illawarra.
627. Splint coal. Vale of Clwydd, Lithgow Valley. Seam, 10 feet 6 inches.
628. Bituminous coal. Lambton Colliery, Newcastle. Seam, 10 feet.
629. Kerosene shale. Joadja Creek, Berrima.
630. Bituminous coal. Co-operative Colliery, near Newcastle.
631. Do. Shark Creek, Clarence River. Seam, 1 foot 6 inches.
632. Bituminous coal. Woodford Colliery. Seam, 6 feet.
633. Petroleum oil cannel coal (kerosene shale.) Joadja Creek. Seam 1 foot 6 inches. (See Class 101.)
634. Petroleum oil cannel coal (kerosene shale.) Greta.
635. Charred coal (from a dyke near basalt.) Mount Pleasant Colliery, Wollongong.
636. Bituminous coal. A. A. Company's Colliery. Average seam, 10 feet.
637. Petroleum oil cannel coal. Burragorang.
638. Bituminous coal. Woodford Colliery, near Newcastle. Seam, 8 feet.
639. Semi-bituminous coal. Piper's Flat, Wallerawang.
640. Splint coal. Eskbank Colliery, Lithgow Valley. Seam, 10 feet.
641. Bituminous coal. Jamberoo.
642. Splint coal. New Wallsend Colliery, Catherine Hill Bay. Seam, 14 feet.
643. Petroleum oil cannel coal. Hartley. Yield, 150 gallons crude oil, or 18,000 cubic feet gas per ton.
644. Bituminous coal. Newcastle Wallsend Colliery. Seam, 9 feet.
645. Splint coal. Greta. Average seam, 26 feet.
646. Do. Lithgow Valley Colliery. Seam, 10 feet.
647. Petroleum oil cannel coal. Newcastle Shale Company's Mine, Murrurundi. Yield, 17,500 cubic feet gas per ton.
648. Semi-bituminous coal. Osborne-Wallsend, Wollongong.. Seam, 7 to 9 feet.
649. Bituminous coal. New Lambton Colliery. Average seam, 9 feet.
650. Do. Mount Kembla, Wollongong.
651. Do. Waratah Colliery. Average seam, 10 feet.
652. Splint coal. Buckley's Coal Mine, Wallerawang. Seam, 7 feet.
653. Bituminous coal. Fitzroy, near Jellore. Seam, 20 feet.
654. Anthracite coal. Redhead, Clarence River. Seam, 6 feet.
655. Petroleum oil cannel coal (kerosene shale). Mount Megalow, County Cook.
656. Splint coal. Nash's Mine, Mount Victoria.

657. Petroleum oil cannel coal (kerosene shale). Lake Macquarie.
658. Do. do. do. Megalow, Pulpit Hill.
659. Bituminous coal. A. A. Company's Property, Stroud. Seam, 30 feet.
660. Do. Cajola Creek, near Ulladulla.
661. Do. Duckenfield Colliery, near Newcastle.
662. Splint coal. Brown and Lamb's Mine, Lake Macquarie. Seam, 4 feet.
663. Coke. Waratah.
664. Semi-bituminous coal. Bulli.
665. Splint coal. Macquarie Mine, Wingen.
666. Petroleum oil cannel coal. Sugar-loaf, near Hartley.
667. Splint coal. Bowenfells Coal-mining Company, Lithgow Valley. Seam, 1 foot 6 inches.
668. Petroleum oil cannel coal. Blackheath (from the outcrop).
669. Do. do. Bathgate, Wallerawang. Yield, 17,500 cubic feet gas per ton.
670. Petroleum oil cannel coal. Joadja Creek. Seam, 1 foot 5 inches.
671. Bituminous coal. A. A. Company's property, Lake Macquarie. Seam, 27 feet.
672. Semi-bituminous coal. Mount Pleasant, Wollongong. Seam, 7 to 9 feet.
673. Coal. Berrima. Seam, 14 feet.
674. Semi-bituminous coal. Mount Pleasant, Wollongong. Seam, 7 to 9 feet.
675. } Charred coal and basalt dyke. Lambton Colliery, near Newcastle.
676. }

No. 55.—Specimens of various rocks and minerals of New South Wales.

677. Felspar. Cooyal.
678. Herschellite in basalt. Inverell.
679. Basalt containing zeolites. Pipe-clay Creek, near Mudgee.
680. Zeolites in basalt. Three miles west of Gulgong.
681. Porphyry, intruding carboniferous beds. Kiama.
682. Do. Murrumbateman.
683. Porphyritic strata, in which quartz reefs occur. Muttama, county Harden.
684. Felspar porphyry. Bellubula Caves.
685. Diorite. Greystanes, Prospect.
686. Serpentine. Irene, Campbell's River.
687. Greenstone. Gobang, near Parkes.
688. Calcite and quartz, in altered slate. Bushman's, Parkes.
689. Greenstone. Brownlow's, Campbell's River.
690. Do. Lawson's Quarry, Prospect.
691. Diorite, with iron pyrites. Four-mile Creek, Home Rule.
692. Do. Burrandong Hill.
693. [Exhibit unspecified.]
694. Decomposed diorite. Peel River.
695. Diorite. Young.
696. Do. Two-mile Flat, near Gulgong.
697. Do. Dunn's Plains.
698. Greenstone. Pine Ridge.
699. Black calcite in greenstone. Dayspring, Parkes.
700. Sepentine. Nundle.
701. Porphyry. Grenfell.
702. Do. Mount Etty.
703. Porphyritic trap. Burra Burra, Parkes District.
704. Porphyry. Cowra and Grenfell Road.
705. Greenstone trap. Briar Park, Campbell's River.
706. Black calcite in trap. Wollongong.
707. Basalt. Between Sofala and Hill End.
708. Do. Government Quarries, Prospect.
709. Do. Overlying Caledonian Lead, Gulgong.
710. Decomposed basalt.
711. Crystals of quartz, embedded in felspar. Home Rule.
712. Hornblendic felspar. Carcoar.
713. Decomposed basalt. Pyrmont Quarries.
714. Basalt with zeolites. Pipe-clay Creek, near Mudgee.
715. Basalt dyke. Young.

716. Augitic basalt, containing glassy felspar. Mount Wilson.
717. Amygdaloidal trap. Jamberoo.
718. Trap. Jamberoo.
719. Altered porphyritic rock. Cargo Reefs.
720. Porphyry. Homeward Bound Reef, Grenfell.
721. Do. Wellington.
722. Do. Near Rydal.
723. Serpentine. Parish of Ponsonby, county of Bathurst.
724. Greenstone trap. Sewell's Creek, near Rockley.
725. Greenstone with serpentine. Sewell's Creek, near Rockley.
726. Dyke running through greenstone. Fitty's Reef, Wellington.
727. Diorite. Consols Reef, Grenfell.
728. Do. Mount Lawson.
729. Auriferous diorite. Wattle Flat, Sofala Road.
730. Diorite. Burrandong Hill.
731. Do. Rat's Castle, Biragambil.
732. Greenstone. Near Carcoar.
733. Do. Bald Hill, Gulgong.
734. Conglomerate, containing traces of greenstone. Gobang, near Parkes.
735. Greenstone. Between Jugiong and Coolac.
736. Porphyritic greenstone. Wood's Flat.
737. Diorite. Adelong.
738. Do. Dunn's Plains.
739. Concretionary greenstone. Near Dungog.
740. Greenstone. Red Hill, Gulgong.
741. Do. Campbell's River.
742. Do. Bushman, Parkes.
743. Porphyry diorite. Peel River.
744. Felspar porphyry. Bellubula Caves.
745. Porphyry trap. Near Saddleback.
746. Porphyry dyke. Mount Lambie.
747. Porphyry. Cargo.
748. Trap dyke in conglomerate. Kiama.
749. Basalt dyke in slate. Wiseman's Creek.
750. Basalt, containing olivine. Oberon.
751. Do. do. Orange.
752. Weathered basalt. Pipe-clay Creek, near Mudgee.
753. Decomposed basalt. Bondi.
754. Felspar. Home Rule.
755. Porphyrite. Grenfell.
756. Corundum in basalt. Bald Hill, Hill End.
757. Olivine in basalt. Bald Hill, Hill End.
758. Basalt. Wellbang, Wellington.
759. Older basalt, containing crystals of chabasite. Hill End.
760. Trap. Kiama Docks.
761. Porphyritic trap. Broughton Vale.
762. Porphyry. Mount Lambie.
763. Do. Wellington.
764. Porphyritic greenstone. Wood's Flat.
765. Serpentine. Gundagai.
766. Greenstone. Between Jugiong and Coolac.
767. Do. Brownlow's, Campbell's River.
768. Do. Katella.
769. Greenstone dyke. Burrangong Creek, near Young.
770. Diorite. Pipe-clay Creek, near Mudgee.
771. Do. Gulgong.
772. Do. Bowling Alley Point, Peel River.
773. Do. Coombing Park, near Carcoar.
774. Do. Burra Burra.
775. Hornblendic crystal greenstone. Dayspring, Parkes.
776. Greenstone. Mitchell's Reef.
777. Serpentine. Near Barraba.
778. Greenstone. Greystanes, Prospect.
779. Porphyritic trap. Wattle Flat.

780. Greenstone. Briar Park.
781. Porphyritic trap. Dayspring, Parkes.
782. Trap rock. Do.
783. Ironstone band. Parramatta Junction.
784. Grit and conglomerate. (Hawkesbury series.) Bondi.
785. Sandstone. Hawkesbury series.
786. Slickenslide. Coombing, near Carcoar.
787. Chert. Broughton Vale.
788. Altered conglomerate. Monkey Hill, between Sofala and Hill End.
789. Conglomerate. Two-mile Flat, Cudgegong River.
790. Silurian schist. Brown Snake Lead, Gulgong.
791. Schist, with garnets. Washpool Creek, Solferino.
792. Altered schist. (Hornblendic.) Cow Flat.
793. Granite containing chlorite. Yass.
794. Do. Cunningham Plains, Murrumburrah.
795. Micaceous granite. Goat Island.
796. Granite. Young.
797. Porphyritic granite. Black Lead, Gulgong.
798. Granite. Uralla.
799. Do. Cowra.
800. Do. Cunningham Plains, Murrumburrah.
801. Fireclay. Esk Bank.
802. Altered Devonian rock (with iron pyrites.) Oberon.
803. Metamorphic sandstone. Near Murrumbateman.
804. Cement. Gulgong.
805. Chert. Do.
806. Clay slate. Gully Swamp.
807. Carboniferous conglomerate on porphyry. Kiama.
808. Silurian schist. Grenfell.
809. Altered schist. Home Rule.
810. Mica schist. Cootamundra.
811. Auriferous granite diorite. Caledonian Lead, Gulgong.
812. Granite. Tumbarumba.
813. Do. Junction of Cumbarmurrah River and Jugiong Creek.
814. Metamorphic granite. Adelong.
815. Granite. Between Monteagle and Harden.
816. Hornblendic granite. Oberon.
817. Do. Gully Swamp.
818. Euritic granite. Harden.
819. Granite. Near Grenfell.
820. Do. Near Hartley.
821. Pyroxine. Lucknow.
822. Altered Devonian beds. Mount Lambie.
823. Ferruginous sandstone. (Hawkesbury series.) Bondi.
824. Pliocene tertiary cement. Bald Hill, near Bathurst.
825. Chert. 3 miles from Gulgong.
826. Silurian slate. Dayspring, near Parkes.
827. Conglomerate. Railway Cutting, Bethungra.
828. Mica schist. Wagga.
829. Altered schist. Sidmouth Valley.
830. Chlorite and quartz.
831. Granite. Walleroo Diggings.
832. Do. Mann's Creek, Tumbarumba.
833. Do. Murrumburrah.
834. Do. Wiseman's Creek.
835. Do. Reedy Creek, Gulgong.
836. Schorl in granite. Wambat, near Young.
837. Hornblendic granite. Young.
838. Auriferous granite. Consol's Reef, Grenfell.
839. Granite. Grenfell.
840. Granite dyke. Forbes.
841. Spherosiderite. Newstead.
842. Trachyte. Mittagong.
843. Carboniferous sandstone. Tallawang.

844. Tourmaline. Oura, Wagga.
845. Epidote. Goree, near Mudgee.
846. Slate. O'Connell.
847. Altered conglomerate. Hill End.
848. Altered schist. Mudgee.
849. Silurian schist. Forbes.
850. Altered schist. Wiseman's Creek.
851. Granite. Forbes.
852. Do. Dog Reef, Grenfell.
853. Plumose schist in granite. Wood's Flat.
854. Tourmaline in granite. Young.
855. Graphic granite containing schorl. Young.
856. Granite veins intruding devonian beds. Mount Lambie.
857. Granite. Home Rule.
858. Do. North Williams Claim, Adelong.
859. Do. Near Bowenfells.
860. Do. Murrumburrah.
861. Shale. Upper Coal Measures, Nattai.
862. Pebble, showing weathering. Fish River.
863. Metamorphic silurian sandstone. Blenheim Parish.
864. Altered rock. Barrington Diggings.
865. Epidote in garnet rock. Duckmaloi.
866. Yellow silurian slate. Forbes.
867. Carboniferous conglomerate. Kiama.
868. Talcose schist. Wiseman's Creek.
869. Garnetiferous schist. Washpool Creek, Solferino.
870. Upper Silurian hornstone metamorphic rock. Parkes.
871. Decomposed granite. Near Bathurst.
872. Granite. Wagga.
873. Do. containing schorl. Oura, Wagga.
874. Granite detritus. Solferino.
875. Granite containing amethyst. Grenfell.
876. Do. do. copper and galena. Hartley.
877. Do. Grenfell.
878. Do. Bethungra.
879. Porphyritic granite. Binalong.
880. Tourmaline in granite. Young.
881. Stalactite. Bellubula Caves.
882. Asbestos. Sewell's Creek, near Rockley.
883. Fossil wood. Happey Valley, Gulgong.
884. Calcite. Fish River Caves.
885. Do. Broomby, near Mudgee.
886. Red ochreous clay. Bondi, Gulgong.
887. Talc. Trunkey.
888. Fireclay. Lithgow Valley.
889. Stalactite. Bellubula Caves.
890. Fossil wood. Two-mile Flat, Cudgegong River.
891. Root encrusted with lime and sand.
892. Calcite. Fish River Caves.
893. Stalactite. Bellubula Caves.
894. Fossil wood. Home Rule.
895. Silicified wood. Two-mile Flat, Cudgegong River.
896. Pseudomorphic quartz. Lunatic.
897. Opal in decomposed basalt. Near Trunkey.
898. Decomposed shale stained with iron. Cobar.
899. Root encrusted with lime and sand. Middle Harbour.
900. Fluorspar in Devonian beds. Mount Lambie.
901. Obsidian volcanic bombs. Reedy Flat, near Adelong.
902. Cinnabar. Cudgegong.
903. Sulphuret of antimony. Near Nundle.
904. Cinnabar. Cudgegong.
905. Arseniate of lead. Gulgong.
906. Mispickel. Lunatic.
907. Arsenical pyrites. Lunatic.

908. Molybdenite. Goodrich Mine.
909. Cerussite. Peelwood Copper Mine.
910. Do. Do.
911. Asbestos. Carrangera.
912. Do. Gundagai.
913. Wood opal. Near Wellington.
914. Do. Home Rule.
915. Opal. Near Cowra.
916. Silicified wood. Gulgong.
917. Wood opal. Home Rule.
918. Opal. O'Connell, near Bathurst.
919. Agate. Duguid's property.
920. Do. Near Singleton.
921. Do. Two-mile Flat, near Gulgong.
922. Do.
923. Do. Namoi River.
924. Do. Parkes District.
925. Topaz. Near Gulgong.
926. Calcite. Pipeclay Creek, near Mudgee.
927. Cerussite. Peelwood Copper Mine.
928. Galena. Near Bathurst.
929. Do. Mylora, near Yass.
930. Do. Ravenswood.
931. Arsenic. Lunatic.
932. Arsenical pyrites and galena. Strickland's Reef, Forbes. Assay per ton gold, 1 oz. 10 dwts. 1 gr.; assay per ton silver, 1 oz. 19 dwts. 4 grs.
933. Cerussite. Peelwood Copper Mine.
934. Asbestos. Briar Park, near Rockley.
935. Do. Wiseman's Creek.
936. Garnet rock. Duckmaloi.
937. Garnets. Sidmouth Valley.
938. Do. in Woolastonite. Duckmaloi.
939. Waterstone. Home Rule.
940. Amethystine quartz. Near Bathurst.
941. Quartz crystal. Wellbang, near Wellington.
942. Smoky quartz. Havilah, near Mudgee.
943. Calcite.
944. Do.
945. Rock crystal. Cooyal.
946. Calcite crystals. From vault in Wallsend Coal Mine.
947. Quartz crystal. Sidmouth Valley.
948. Selenite. Near Grey Range, N.-W. of the Colony.
949. Mica.
950. Galena. Mitchell's Reef, Wellington.
951. Quartz with zinc blende. Near Gulgong.
952. Galena in quartz. Burragorang.
953. Do. do. Major's Creek.
954. Do. Penguin Creek.
955. Arsenical pyrites. Reilly's Creek, Wattle Flat.
956. Gypsum. Near Cooma. [Specimens 957 to 966 unspecified.]
967. Schorl from tin-bearing granite. Cope's Creek.
968. Gypsum. Near Cooma.
969. Quartz crystal in felspar. Cooyal.
970. Calcite. Williams and Barrington district.
971. Magnesite (in leads). Gulgong.
972. Bismuth. New England.
973. Galena. Mylora, near Yass.
974. Do. Merrimbula.
975. Do. Eurrongilly, Murrumbidgee District.
976. Do. in quartz. Mitchell's Reef.
977. Do. Murrumburrah. Assayed silver per ton, 6 ozs., 18 dwts. 2 grs.; lead, 71·84%.
978. Galena in quartz. Sebastopol Reef, Junee.
979. Do. Garibaldi Reef, between Wombat and Young.

980. Galena in quartz. Glen Innes.
981. Cerussite. Peelwood.
982. Asbestos. Near Trunkey.
983. Do. Gundagai.
984. Do. Bathurst District.
985. Sulphuret of antimony. Nundle.
986. Do. do. Do.
987. Galena, taken from surface. Moruya.
988. Antimony. Gara, near Armidale.
989. Sulphuret of antimony. Dangar's Falls, near Armidale.
990. Galena in quartz. Major's Creek, near Braidwood.
991. Sulphuret of antimony. Cargula, Macleay River.
992. Galena. Winterton Mine, Mitchell's Creek.
993. Mispickel. Near Marulan.
994. Sulphuret of antimony. Lunatic.
995. Galena. Peelwood.
996. Sulphuret of antimony. Lunatic.
997. Antimony. Washpool Creek, Solferino.
998. Do. Do.
999. Sulphuret of antimony. Near Wallerawang.
1000. Antimony. Sharpening Stone Creek, Yass.
1001. Sulphuret of antimony. Near Gundagai.
1002. Do. Lunatic.
1003. Do. Grafton and New England.
1004. Do. Solferino.
1005. Do. Washpool Creek, Solferino.
1006. Do. Gara, near Armidale.
1007. Asbestos. Gundagai.
1008. Fossil wood. Solferino.
1009. Aragonite. Liverpool Plains.
1010. Limestone polished by wallabies. Fish River Caves.
1011. Alum and magnesian salts. Wallerawang Caves.
1012. Binoxide of manganese. Mitchell's Creek.
1013. Marble. Near Wellington.
1014. Do. Marulan.
1015. Do. Wallerawang.
1016. Do. Do.
1017. Do. Belubula.
1018. Do. Marulan.
1019. Do. Do.
1020. Do. Do.
1021. Do. Tarrago Creek.
1022. Do. Cow Flat.
1023. Do. Near Rockley.
1024. Do. Near Wallerawang.
1025. Do. Murrumbateman.
1026. Do. Wallerawang.
1027. Do. Abercrombie Caves.
1028. Do. Near Bookham, County Harden.
1029. Do. Tarrabandra, near Tumut.
1030. Do. Wallerawang.
1031. Do. Near Wellington.
1032. Do. Port Stephens.
1033. Do. Tarrago Creek.
1034. Do. Railway Cutting, near Yass.
1035. Do. Marsden, County Harden.
1036. Do. Near Wellington.
1037. Do. Parish of Carawabbitty, County Ashburnham.
1038. Do. Near Bookham, County Harden.
1039. Do. Do.
1040. Do. Tarabandra, near Tumut.
1041. Do. Wallerawang.
1042. Do. Yass Plains.
1043. Do. Near Bathurst.

1044.	Marble.	Near Wallerawang.
1045.	Do.	Silverdale, near Bowning.
1046.	Do.	Havilah, near Mudgee.
1047.	Do.	Near Forbes.
1048.	Do.	Manning River.
1049.	Do.	Murrumbateman.

DEPARTMENT OF MINES, Sydney, New South Wales.

Collection of the characteristic fossils illustrative of the principal sedimentary formations of New South Wales, selected chiefly from the collection of the late Rev. W. B. Clarke, M.A., F.R.S., F.G.S., arranged by C. S. Wilkinson, L.S., F.G.S., Geological Surveyor in charge.

This extensive collection (numbering upwards of 600 fossils) is important and instructive as illustrating the palæontology of New South Wales.

It is chiefly composed of fossils selected from the collection of the late Rev. W. B. Clarke, M.A., F.R.S. Many of the fossils are the original specimens which have been figured and described by Professor de Koninck, of Liège, whose published work thereon—"*Recherches sur les Fossils Paléozoïques de la Nouvelle-Galles du Sud*"—is also exhibited. This collection is therefore of special scientific value. The fossils have been grouped by Mr. C. S. Wilkinson according to the principal sedimentary formations found in New South Wales, as follows:—

- Post tertiary
  - Recent.
  - Post pliocene.
- Tertiary or cainozoic
  - Pliocene.
  - Miocene.
- Mesozoic
  - Jurassic—Clarence series.
  - Triassic—
    - Wianamatta series.
    - Hawkesbury series.
- Palæozoic.
  - Permian—Upper coal measures.
  - Carboniferous
    - Lower coal measures.
    - Lower carboniferous.
  - Devonian.
  - Silurian.

From the Recent alluvial and cave deposits are stone hatchets, and bones of existing animals, and from the Post Pliocene are bones of extinct marsupials, including those of the gigantic *Diprotodon Australis*, &c.

The Pliocene fossils comprise numerous specimens of the fossil fruits, together with remains of the *Diprotodon* from the auriferous deep leads. The upper Miocene is represented by mollusca from the marine beds of the Murray district, and the Lower Miocene by splendid impressions of plants from the leaf beds of Dalton.

From the Clarence series are several specimens of *Tœnioptris Daintreei*.

Amongst the Wianamatta and Hawkesbury fossils are some fine impressions of fishes—*Palœoniscus*, etc.; also of the fern *Thinnfeldia odontopteroides* and stems of *Phyllotheca*.

The Permian or Upper Coal measures fossils consist of plants—the principal of which are *Glossopteris Browniana*, *Vertebraria Australis*, *Phyllotheca*, *Brachyphyllum*, and *Sphenopteris*.

The Lower Coal measures are divided into Upper Marine series and Lower Marine series separated by plant beds containing *Glossopteris*. From the marine beds are the Carboniferous forms *Productus brachytherus*, *Spirifer bisulcatus*, *S. glaber*, *S. convolutus*, *S. vespertilio*, *Conularia inornata*, *Orthoceras striatum*, *Pachydomus*, *Euomphalus*, etc.

The Lower Carboniferous fossils include *Productus cora*, *Strophomena*, *Spirifer*, and many others, together with *Lepidodendron Veltheimianum*, *Rhacopteris*, *Calamites varians*, and *Bornia radiata*.

In the Devonian series are *Lepidodendron nothum*, and *Spirifer disjunctus*, *Orthoceras subdimidiatum*, *Amplexus Clarkei*, *Orthis interlineatus*, *Murchisonia turris*, *Chonetes favosites*, *Atrypa*, *Cyathophyllum*, *Rhynconella pleurodon*, &c.

Amongst the Silurian fossils are—*Atrypa reticularis*, *Receptaculites*, *Halysites*, *Favosites Gothlandica*, *Spirifer crispus*, *Encrinurus Barrandei*, *Cromus Murchisoni*, *Orthoceras ibex*, *Bronteus goniopeltis*, &c.

The following is the list of the fossils :—

PALÆOZOIC.

SILURIAN.

1. Atrypa hemispherica and others. Yarralumla.
2. Orthoceras. Yarralumla.
3. Alveolites septosa. Limestone Creek.
4. Orthoceras ibex. Rock Flat Creek.
5. Favosites fibrosa. Broombie.
6. Atrypa reticularis. Duntroon.
7. Cromus Murchisoni. Do.
8. Favosites Gothlandica. Yass.
9. Halysites. Near Forbes.
10. Petraia. Rock Flat Creek.
11. Euomphalus. Yass.
12. Staurocephalus Clarkei. Rock Flat Creek.
13. Encrinite stems. Quedong.
14. Spirifer crispus. Dangelong.
15. Stromatopora striatella. Near Bathurst.
16. Receptaculites. Yarradong.
17. Heliolites. Broombie.
18. Monticulipora Bowerbanki. Rock Flat Creek.
19. Bronteus goniopeltis. Do.
20. Spirophyton cauda phasiana. Duntroon.
21. Atrypa reticularis. Yarralumla.
22. Strombodes diffluens. Berudba River.
23. Atrypa hemispherica and others. Dangelong.
24. Chonetes striatella. Quedong.
25. Meristella tumida. Slaughter-house Creek.
26. Encrinurus Barrandei. Yarralumla.
27. Staurocephalus Clarkei and others. Rock Flat Creek.
28. Calymene Blumenbachii and others. Near Bowning.
29. Striatopora Australis. Yarralumla.
30. Ptchophyllum patellatum. Dangelong.
31. Favosites fibrosa. Yarralumla.
32. Strophomena pecten. Dangelong.
33. Cheirurus insignis. Yarralumla.
34. Alveolites. Yarradong.
35. Heliolites interstincta. Burragood.
36. Cyathophyllum helionthoides. Yass Plains.
37. Receptaculites Clarkei. Yarradong.
38. Strophomena pecten. Dangelong.
39. Rhetzia, orthis, and others. Yarralumla.
40. Strophomena pecten. Dangelong.
41. } Illœnus Wahlenbergi. Boree Cavern.
42. }
43. Aulopora fasiculata and others. Bell River.
44. Favosites multipora and others.
45. Heliolites. Silverdale.
46. Phacops. Yass.
47. Heliolites Murchisoni. Burrawang.

48. Favosites cristata. Burrawang.
49. Encrinurus Barrandei. Yarralumla.
50. Heliolites interstincta. Burragood.
51. Cromus Bohemicus. Rock Flat Creek.
52. Heliolites megastoma. Burradong.
53. Cromus Murchisoni. Duntroon.
54. Entomis pelagica. Yarralumla.
55. Cromus Murchisoni. Quedong.
56. Favosites fibrosa. Yarralumla.
57. Favosites Gothlandica. Calamine.
58. Retzia Salteri. Yarralumla.
59. Rhyzophyllum (?) interpunctatum. Rock Flat Creek.
60. Euomphalus Clarkei. Yass.
61. Euomphalus pleurophorus. Limestone Creek.
62. Bellerophon Jukesii. Rock Flat Creek.
63. Strophomenes Rhomboidalis. Do.
64. Proteus Stokesii. Yarralumla.
65. Cromus Bohemicus. Do.
66. Pentamerus Knightii. Calamine.
67. Spirifer crispus. Dangelong.
68. Strophomena funiculata. Bell River.
69. Favosites. Boree.
70. Favosites fibrosa. Broombie.
71. Strophomena pecten. Dangelong.
72. Cyathophyllum articulatum. Burrawang.
73. Encrinurus punctatus. Duntroon.
74. Alveolites rapa. Burrawang.
75. Encrinurus Barrandei. Yarralumla.
76. Encrinurus Barrandei. Do.
77. Heliolites megastoma. Burrawang.
78. Phacops. Yass.
79. Star fish. Bombala River.
80. Bronteus Partschi. Boree Cavern.
81. Euomphalus solarioïdes. Rock Flat Creek.
82. Phacops. Yass.
83. Cyathophyllum siluriense. Yass.
84. Petraia. Rock Flat Creek.
85. Omphyma Murchisoni. Burrawang.

DEVONIAN.

86. Lepidodendron. Canoona Gold-field.
87. Lepidodendron.
88. Favosites. Yass.
89. Rhynconella pleurodon. Near Rydal.
90. Favosites reticulata. Near Yass.
91. Syringopora. Yass.
92. Cyathophyllum. Yarradong.
93. Alveolites. Yarradong.
94. Heliolites. Yass.
95. Leptæna interstrialis and others.
96. Palæopora. Murrumbidgee.
97. Cyathophyllum. Yarradong.
98. Spirifer Yassensis. Do.
99. Chœtetes lycoperdon. Do.
100. Syringopora. Yarradong.
101. Cyathophyllum obtortum. Quedong.
102. Orthoceras subdimidiatum. Yarradong.
103. Palæopora. Yarradong.
104. Orthoceras voisins. Do.
105. Archæocyathus Clarkei. Do.
106. Discina Alleghania and others. Yarradong.
107. Leptæna interstrialis. Allyn River.
108. Cyathophyllum flexuosum. Quedong.
109. Amplexus Selwyni. Quedong.

110. Atrypa desquamata. Yarradong.
111. Favosites Basaltica. Near Broombie.
112. Syringopora. Mowara.
113. Billingsia alveolaris. Yarradong.
114. Syringopora cospitosa. Yass.
115. Othoceras. Yarradong.
116. Cyathophyllum vosin. Yarradong.
117. Strophomena nobilis. Do.
118. Pleurotomaria subconica. Do.
119. Cyathophyllum vermiculare. Yarralumla.
120. Cœnites expansus. Yarradong.
121. Favosites Basaltica. Calamine.
122. Conophyllum. Limestone Creek.
123. Favosites Goldfussi. Yarradong.
124. Loxonema anglicum. Do.
125. Cyathophyllum helianthoides. Quedong.
126. Favosites recticulata. Mowara.
127. Cyathophyllum helianthoides. Yass.
128. Spirifer nudus. Yarradong.
129. Euomphalus Bigsbyi. Do.
130. Cyathophyllum Damnoniense. Yarralumla.
131. Favosites fibrosa. Quedong.
132. Spirifer latisinuatus. Yass.
133. Dentalium antiquum. Yarradong.
134. Orthis interlineatus and others. Yarradong.
135. Cyathophyllum. Mowara.
136. Natica cirriformis. Murrumbidgee.
137. Goniatites Woodsia. Yarralumla.
138. Niso Darwinii. Yarradong.
139. Cyrtoceras textile. Do.
140. Phillipsastrea. Cope's Gully.
141. Strophomena nobilis. Yarradong.
142. Murchisonia. Yarradong.
143. Strophomenes subaquicostata. Yarradong.
144. Pentamerus pumilus. Yarradong.
145. Pseudoxyclas elliptica. Do.
146. Concardium Sowerbyi. Do.
147. Tellinomya Clarkei. Do.
148. Dentalium tenuisimum. Do.
149. Murchisonia turris. Do.
150. Favosites alveolites. Calamine.
151. Atrypa reticularis. Yarradong.
152. Chonetes Hardrensis and others. Yarradong.
153. Cyathophyllum ceratites. Murrumbidgee.
154. Othoceras subdimidiatum. Yass.
155. Pterinea laminosa. Yarradong.
156. Amplexus Clarkei. Do.
157. Loxonema deperditum. Near Yass.
158. Spirifer cabedanus. Yarradong.
159. Loxonema antiquum. Do.
160. Spirifer multiplicatus. Do.
161. Chonetes coronata. Kempsey.
162. Favosites reticulata. Mowara.
163. Orthis striatula. Allyn River.
164. Atrypa plicatella. Yarradong.
165. Euomphalus nodulosus. Do.
166. Cyathophyllum vermiculare. Near Yass.
167. Alveolites obscurus. Yarradong.
168. Spirifer disjunctus. Colo Colo.
169. Spirifer disjunctus. Bungonia.

CARBONIFEROUS.

170. Orthis Michelini. Buchan.
171. Orthis resupinata. Burragood.

172. Spirifer bisulcatus. Glenwilliam.
173. Rhynchonella pleurodon. Burragood.
174. Sanguinolites Mitchelli. Ællalong.
175. Orthis resupinata. Colo Colo.
176. Polypora papillata. Buchan.
177. Spirifer Tasmaniensis. Wingen.
178. Spirifer duodecimcostatus. Stroud.
179. Loxonema elongata and others. Ichthyodorulite Range.
180. Conularia tenuistriata and others. Muree.
181. Strophomena analoga. Colo Colo.
182. Spirifer convolutus. Ællalong.
183. Atrypa planosulcata and others. Burragood.
184. Spirifer glaber. Ællalong.
185. Euomphalus sacculus and others. Branxton.
186. Zaphrentes Phillipsia. Colo Colo.
187. Platycrinus lævis. Glenwilliam.
188. Syringopora reticulata. Muree.
189. Pachydomus gigas. Mount Vincent.
190. Actinocrinus. Burragood.
191. Aviculopecten tessellatus. Burragood.
192. Amplexus arundinaceus and others. Colo Colo.
193. Lithostrotion basaltiforma. 54 miles from Newcastle.
194. Nautilus subsulcatus. Ichthyodorulite Range.
195. Rhynchonella pleurodon. Burragood.
196. Spirifer oviformis. Fifty-four miles west of Newcastle.
197. Platyceras tenella. Colo Colo.
198. Zaphrentes Gregoryana. Between Maitland and Stony Creek.
199. Fenestella Morrissii. Burragood.
200. Productus oculeatus. Do.
201. Syringopora ramulosa. Do.
202. Spirifer bisulcatus. Between Karua and Dungog.
203. Productus Flemingi. Harpur's Hill.
204. Spirifer exsuperans. Glenwilliam.
205. Cardiomorpha striatella. Ichthyodorulite Range.
206. Orthis resupinata. Burragood.
207. Macrocheilus filosus. Ichthyodorulite Range.
208. Orthotetes crenistria. Between Karua and Dungog.
209. Poteriocrinus. Burragood.
210. Orthis resupinata. Colo Colo.
211. Platyceras trilobum. Burragood.
212. Dendrppora Hardyi. Do.
213. Athyris ambigua. Do.
214. Atrypa planosulcata. Do.
215. Strophomenes analoga. Do.
216. Productus Clarkei. Do.
217. Spirifer bilsulcatus. Glenwilliam.
218. Productus semireticulatus. Do.
219. Chonetes Laguessiana. Burragood.
220. Edmondia intermedia. Between Muree and Morpeth.
221. Palæarca costellata. Burragood.
222. Entonis Jonesii and others. Pumby Creek.
223. Pachydomus globosus. Lochinvar.
224. Sanguinolites Etheridgei. Mt. Vincent.
225. Spirifer lineatus and others. Colo Colo.
226. Edmondia nobilissima. Between Muree and Morpeth.
227. Terebratula sacculus. Raymond Terrace.
228. Aviculopecton granosus. Burragood.
229. Goniatites micromphalus. Between Muree and Morpeth.
230. Favosites ovata and others. Burragood.
231. Terebratula sacculus. Jarvis Bay.
232. Spirifer bisulcatus. Colo Colo.
233. Spirifer duodecimcostatus. Ællalong.
234. Spiriferina cristata. Colo Colo.
235. Productus fragilis. Burragood.

236. Loxonema rugifera. Burragood.
237. Spirifer bisulcatus. Quedong.
238. Productus Flemingi. Colo Colo.
239. Spirifer convolutus. Ællalong.
240. Cyathophyllum inversum. Colo Colo.
241. Productus semireticulatus. Wollongong.
242. Productus brachytherus. Ællalong.
243. Spirifer glaber. Ællalong.
244. Platyceras altum. Pallal, Gwydir River.
245. Euomphalus minimus. Burragood.
246. Avicula sublunulata. Muree.
247. Productus Flemingii. Glenwilliam.
248. Loxonema difficilis. Ichthyodorulite Range.
249. Zaphrentes cainodon. Burragood.
250. Productus fimbriatus. Near Tilleyghary.
251. Pterinea macroptera. Mount Wingen.
252. Aviculopecten cingendus. Between Karua and Dungog.
253. Terebratula sacculus. Burragood.
254. Spirifer lineatus. Between Karua and Dungog.
255. Spirifer pinquis. Glenwilliam.
256. Terebratula sacculus. Lochinvar.
257. Productus punctatus. Buchan, Gloucester River.
258. Poteriocrinus. Burragood.
259. Conularia quadrisulcata. Buchan, Gloucester River.
260. Spirifer glaber. Glenwilliam.
261. Platyceras angustum. Burragood.
262. Aviculopecten ptychates. Do.
263. Orthis Michellini. Buchan, Gloucester River.
264. Zaphrentes robusta. Burragood.
265. Scaldia depressa. Gloucester River.
266. Productus Clarkei. Branxton.
267. Orthis Michellini. Colo Colo.
268. Lophophyllum corniculum. Colo Colo.
269. Aviculopecten Hardyei. Burragood.
270. Rhynchonella inversa. Ællalong.
271. Spirifer oviformis. Do.
272. Productus brachythærus. Between Muree and Morpeth.
273. Pachydomus. Wollongong.
274. Do. Do.
275. Spirifer and others. Ulladulla.
276. Spirifer glaber. Nowra.
277. Rhacopteris. Stroud.
278. Sphenopteris. Do.
279. Rhacopteris. Do.
280. Rhacopteris and lepidodendron. Port Stephens.
281. Do. do. Do.
282. Cyathocrinus Koninckı. Shoalhaven River.
283. Sanguinolites Mitchelli.
284. Productus scabiculus. Williams River.
285. Pachydomus pusillus. Wollongong.
286. Terebratula sacculus. Jarvis Bay.
287. Do. Do.
288. Do. Do.
289. Do. Do.
290. Pleurotomaria.
291. Lithostrotion basaltiforma. Limestone Creek.
292. Spirifer convolutus. Ulladulla.
293. Hemitrypa and others. Williams River.
294. Mæonia Koninckı. Calamine.
295. Phillipsia. Burragood.
296. Cameroceras Phillipsia. Wollongong.
297. Polypora papilata. Gloucester River.
298. Chonetes papilionacea. Wollongong.
299. Modiola crassissima. Muree.

300. Productus fimbriatus. Wollongong.
301. Heterphyllia Duncani. Pallal.
302. Aviculopecten. Twenty-mile Cutting.
303. Productus fimbriatus and others. Wollongong.
304. Lepidodendron Veltheimianum. Burragood.
305. Productus cora. North-west of Tilleyghary Hill.
306. Palæaster Clarkei. Burragood.
307. Productus fimbriatus. Williams River.
308. Lepidodendron. Goonoo Goonoo.
309. Productus. Jarvis Bay.
310. Spirifer convolutus. Ællalong.
311. Bornia radiata. Williams River.
312. Spirifer bisulcatus. Do.
313. Sanguinolites curvatus. Gimbela Mountains.
314. Stems of poteriocrinus. Black Head.
315. Productus fimbriatus. Williams River.
316. Pleurotomaria Morrissiana. Black Head.
317. Productus semireticulatus. Williams River.
318. Pachydomus Danai. Jarvis Bay.
319. Productus fimbriatus. Williams River.
320. Edmondia nobilissima. Muree.
321. Cyathocrinus Koninckı. Black Head.
322. Spirifer latus. Colo Colo.
323. Pachydomus Danai. Jarvis Bay.
324. Athyris antigua. Colo Colo.
325. Cladochonus tenuicollis. Burragood.
326. Lithostrotion irregulare. Wollongong.
327. Productus cora. Between Karua and Dungog.
328. Spirifer Strzelecki. Twenty-mile Cutting.
329. Lophophyllum corniculum. Colo Colo.
330. Spirifer crebristria. Burragood.
331. Pleurophorus biplex. Wollongong.
332. Spirifer pinguis and others. Burragood.
333. Spirifer subradiatus. Stony Creek.
334. Calamites varians. Burragood.
335. Pachydomus pucillus. Wollongong.
336. Cardinia exilis. Do.
337. Spirifer oviformis. Do.
338. Sanguinolites undulatus. Burragood.
339. Orthoceras striatum. Wollongong.
340. Axophyllum Thomsoni. Jarvis Bay.
341. Rhynchonella pregnis. Bungonia.
342. Macrocheilus acutus. Burragood.
343. Orthis resupinata. Do.
344. Pachydomus cyprynia. Wollongong.

Lower Marine Series.

345. Avicula intumescens and others. Harpur's Hill.
346. Do. do. Do.
347. Platyceras. Do.
348. Cardinia exiles. Do.
349. Pleurotomaria. Do.
350. Chetetes radians. Wollongong.
351. Pleurotomaria. Harpur's Hill.
352. Conularia lævigata. Do.
353. Spirifer vespertilio. Stony Creek.
354. Spirifer glaber. Railway Cutting, Stony Creek.
355. Spirifer subradiatus. Harpur's Hill.
356. Mœonia. Do.
357. Do. (cast). Ællalong.
358. Aviculopecten. Ravensfield.
359. Aviculopecten profundus. Near Harpur's Hill.
360. Pleurotomaria. Do.

361. Aviculopecten lineaformis. Wollongong.
362. Goniatites micromphalus. Ravensfield.
363. Pleurotomaria. Harpur's Hill.
365. Pachydomus. Stony Creek.
364. Pachydomus lævis. Lochinvar.
366. Do. Harpur's Hill.
367. Glossopteris primævis. Greta Pit.
368. Do. Do.
369. Do. Do.

Upper Marine Series.

370. Spirifer convolutus. Between Greta and Branxton.
371. Do. s.p. Do.
372. Pleurotomaria. Do.
373. Spirifer convolutus. Do.
374. Do. do. Do.
375. Do. Tasmaniensis. Do.
376. Do. Strzelecki. Branxton.
377. Do. Tasmaniensis. Between Greta and Branxton.
378. Pterinea macroptera. Between Maitland and Stony Creek.
379. Spirifer oviformis. Between Greta and Branxton.
380. Do. Darwini. Do.
381. Do. do. Do.
382. Do. Strzelecki. Do.
383. Do. s.p. Do.
384. Do. do. Do.
385. Do. Tasmaniensis. Do.
386. Do. s.p. Do.
387. Do. Darwini. Between Maitland and Muree.
388. Aphania Mitchelli. Branxton.
389. Spirifer vespertilio. Between Greta and Branxton.
390. Do. bisulcatus. Near Branxton.
391. Do. Strzelecki. Between Greta and Branxton.
392. Productus brachytherus. Stony Creek.
393. Do. do. Do.
394. Do. do. Between Greta and Branxton.
395. Spirifer vespertilio. Do.
396. Do. bisulcatus. Do.
397. Do. Darwini. Twenty-mile Cutting, Stony Creek.
398. Conularia inornata. Near Maitland.
399. Aviculopecten Illawarrensis. Between Greta and Branxton.
400. Do. do. Do.
401. Do. subquinquelineatus. Maitland.
402. Spirifer glaber. Between Maitland and Stony Creek.
403. Do. Darwini. Do.
404. Do. Strzelecki. Thirty-four miles west of Maitland.
405. Do. glaber. Stony Creek.
406. Do. Darwini. West of Stony Creek.
407. Do. Strzelecki. Between Maitland and Stony Creek.
408. Do. Darwini. Do.
409. Aviculopecten granosus and others. Duguid's Hill.
410. Cardiomorpha gryphoides. Stony Creek.
411. Spirifer Darwini. Do.
412. Do. do. Between Maitland and Stony Creek.
413. Do. convolutus. Anvil Creek.
414. Do. glaber. Near Branxton.
415. Do. do. Stony Creek.
416. Protoretepora ampla and others. Stony Creek.
417. Pachydomous globosus and others. Do.
418. Euomphalus oculus and others. Branxton.
419. Spirifer subradiatus. Stony Creek.
420. Palæaster Clarkei. Do.
421. Aphania gigantea. Branxton.

PERMIAN.

Upper Coal Measures.

422. Vertebraria. Bowenfells.
423. Do. Pulpit Hill.
424. Brachyphyllum. Bowenfells.
425. Do. Do.
426. Phyllotheca. Newcastle.
427. Phyllotheca Hookeri. Newcastle.
428. Sphenopteris Do.
429. Do. Do.
430. Caulopteris Adamsi. Do.
431. Vertebraria. Crown Ridge.
432. Glossopteris. Newcastle.
433. Vertebraria. Bowenfells.
434.
435. Sphenopteris. Newcastle.
436. Phyllotheca Hookeri. Newcastle.
437. Do. Do.
438. Brachyphyllum. Bowenfells.
439. Vertebraria Australis. Newcastle.
440. Do. do. Do.
441. Glossopteris. Do.
442. Do. Do.
443. Do. Do.
444. Do. Wallerawang.
445. Sphenopteris. Newcastle.
446. Glossopteris. Do.
447. Do. Do.
448. Do. Crown Ridge, near Wallerawang.
449. Do. Newcastle.

MESOZOIC—TRIASSIC.

Hawkesbury Series.

A 1. Ichthyolite. Balmain.
A 2. Do. do.
A 3. Coal in Hawkesbury sandstones.
A 4.
A 5. Shale with plant impressions. Sydney.
A 6. Do. do. do. Do.
A 7. Do. do. do. Do.
A 8. Do. do. do. Do.
A 9. Do. do. do. Do.
A10. Do. do. do. Do.
A11. Do. do. do. Do.
A12. Do. do. do. Do.
A13. Do. do. do. Do.
A14. Do. do. do. Do.
A15. Do. do. do. Do.
A16. Thinnfeldia odontopteroides. Mount Piddington.
A17. Tæniopteris (?) Mount Victoria.

TRIASSIC.

Wianamatta Series.

450. }
451. }
452. } Macrotæniopteris Wianamattæ, and Phyllotheca.
453. }

454. 455. 456. 457. 458. 459. 460. 461. Palæoniscus, with phyllotheca, &c. Nattai and Parramatta.
462. Cleithrolepis granulatus. Campbelltown.
463. Macrotæniopteris Wianamattæ. Parramatta.
464. Ripple marks in sandstone. Do.
465. Phyllotheca, &c. Cecil Hills.
466. Plant stems.
467. Phyllotheca. Gibb Tunnel.
468. Plant impressions. Breakfast Creek.

JURASSIC.

Clarence Series.

469 Tæniopteris Daintreei. Near Grafton.
470. Do. Do.
471. Pecopteris. Do.
472. Tæniopteris Daintreei. Do.
473 Do. Do.

TERTIARY OR CAINOZOIC.

Miocene.

477. to 510. Leaf impressions. Dalton.
511. Nautilus, &c. Lower Murray River.
512. Cypræa. Do.

Pliocene.

513. Spondylostrobus Smythei. Home Rule.
514. Do. do. Do.
515. Eisothecaryon semiseptatum. Gulgong.
516. Rhytidocaryon Wilkinsoni. Do.
517. Unio. Home Rule.
518. Leaf impressions. Cudgegong.
519. Fragments of bone. Mudgee.
520. Leaf impressions.
521. Plesiocapparis leptocellyphis. Gulgong.
522. Do. do. Do.
523. Penteune Clarkei. Lucknow.
524. Do. do. Gulgong.
525. Do. do. Do.
526. Phymatocaryon angulare. Gulgong.
527. Do. Mackayi. Do.
528. Do. do. Do.
529. Do. Bivalve. Do.
530. Do. do. Do.
531. Leaf impressions. Namoi River.
532. Diprotodon Australis. Canadian Lead, Gulgong.

POST TERTIARY.

Post Pliocene and Recent.

533. to 536. Phascolomys. Castlereagh River.
537. Diprotodon. Northern District.

538. 539. 540. Molars of diprotodon. Castlereagh River.
541. 542. Diprotodon. Northern District.
543. Bones encrusted with stalagmite. Belubula Caves.
544. Fragments of femur of diprotodon. Castlereagh River.
545. Diprotodon. Northern District.
546. Diprotodon (?) Cudgegong.
547. 548. Diprotodon. Castlereagh River.
549. Diprotodon (?)
550. 551. Bones encrusted with stalagmite. Belubula Caves.
552. Diprotodon.
553. Portion of ulna of diprotodon. Scrubby Range Station, Lachlan River
554. 555. 556. Portion of femur of diprotodon. Do. do.
557. 558. Portion of lower jaw, do. Do. do.
559. 560. Portion of humerus, do. Do. do.
561. Anterior portion of upper jaw, showing remains of upper incisors.
562. 563. Portion of scapula of diprotodon. Lachlan River.
564. 565. Portion of upper front incisor of diprotodon, do.
567. Molar of diprotodon. Six miles from Glen Innes.
568. 569. 570. 571. 572. 573. 574. 575. Bones of marsupials. Fish River Caves.
576. to 585. Stone hatchets.

We consider this a most excellent geological collection, especially illustrating the result of the discussion respecting the age of the coal in New South Wales, and of great importance to the study of the geology of this Colony.

CAMPBELL, R. J., Sydney.

Collection of minerals and fossils.

DOBBIE, J., Hilton Park, Mount Lambie.

Collection of minerals and fossils.

GALLAGHER, A., Winterbourne, New England.

Collection of minerals. Antimony from Gara; gold quartz from Rock Vale; tailings and gold quartz from Cameron's Creek; copper quartz from Winterbourne.

HOWARD, J., Bathurst.

Minerals from the Bathurst District.—These minerals have been collected within 5 miles of Crudine Creek near Bathurst. A specimen of stibnite, said to contain 76 per cent. of antimony, appears to be of good quality.

HUME, J. K., Yass.

Collection of Tertiary and Siluro-Devonian fossils.—Mostly specimens of leaves and Silurian shells.

ISAACSOHN, M., Bowling-Alley Point, Tamworth.

Samples of gold in quartz, other minerals and fossils. A very good collection of gold in quartz, showing gold in orthoclase, gold in quartz crystals, and crystallized gold—this specimen being the best crystallized gold in the Exhibition; also, auriferous quartz from the reef at Bowling Alley Point, Nundle, and the Peel River, amongst which are particularly noticeable two small specimens of beautifully crystallized gold from Nundle; also, crystallized gold on crystallized quartz. There are numerous specimens of tin, copper, iron, and other ores; also, green topaz, zircons, spinels, agates, quartz crystals, &c., making on the whole a valuable and attractive exhibit, chiefly obtained from one locality.

LOWE, C. B., Mudgee.

Minerals and fossils from the Mudgee District. Silicified wood, having a natural polish caused by the deposition of silica on the exterior. It is remarkable that diamonds are always found in the drift from which specimens are obtained. In this collection are exhibited the largest rough topazes in the Exhibition.

LUCAS, J., Camperdown.

Stalactites from Binda or Fish River Caves.

MACKENZIE, JOHN, F.G.S., Newcastle.

Samples of tin ores from the principal workings in the New England District. Collected by Mr. A. Cadell.

MUDGEE COMMITTEE, Mudgee.

Copper and antimony ores, and other minerals. Antimony ore looks well, also copper ores; the iron being too dense for convenient working. Large deposits of this copper ore are stated to exist in many cases accompanied by gold in payable quantities, and the antimony in it is said to abound in practically unlimited quantities. The antimony ore in this exhibit is about the best in the Exhibition.

NEW ZEALAND.

EDGAR, JOHN, Queenstown.

Specimens of fossilized fern roots and leaves, from Lake Wakatipu, Queenstown. An interesting collection, but of no practical importance.

HECTOR, DR., C.M.G., Government Geologist.

Mineral collection.—The most remarkable minerals are New Zealand greenstone, obsidian, dunite; native sulphur of exceptional purity; specimens

of various manganese ores including pyrolusite, which is certainly the only first-class manganese ore in the Exhibition. There are also some good samples of marbles, but in small pieces. The palæological collection contains over 1,100 specimens exhibited, so as to show the systematic succession of the rocks of New Zealand. The most remarkable exhibits are a vertebra and paddles of Manisaurus, from the Amicri formation of the south island of New Zealand. There is also a model of the volcanic system of Riva Pehu and Tongariro in the north island and relief-map of New Zealand, the scales of height being in ten-fold proportions. There are also exhibited skeletons of the moa and other remains from recent deposits. The Judges regret that the collection is so deficient in lithological specimens, which form a strong point in the exhibits of New South Wales and Victoria. Those that are shown, however, are very interesting and rare, as timazite, dunite, &c.

McCaffrey, Edward, Sculptor, Queenstown.

Specimens.

2. Marble, from the head of Lake Wakatipu.
3. Freestone, fossil leaf, from Fews Creek.
4. ,, light yellow, ,,
5. ,, different grain, ,,
6. ,, green, ,,

All the pieces are so small that it is impossible to judge of their importance.

QUEENSLAND.

Bartley, N., Brisbane.

Manganese ore, from Queensland and New Caledonia; cobalt ore, from New Caledonia; nickel ore (silicate), from New Caledonia; alluvial bismuth, from Queensland, showing free gold; zinc blende, from New South Wales and Queensland—the former showing free gold; wolfram, from Victoria and Queensland—the latter auriferous; iron ores, from the Island of Elba, Tuscany, Cornwall, Tasmania, New South Wales, New Caledonia, and Queensland—some of the New South Wales and Queensland ores showing free gold; marmatite, from Italy; carbonate of lead (very fine crystals, pure and white), from Peelwood, New South Wales; reef gold in every form of occurrence, in thread and in leaves, and in combination with tourmaline, agate, chrysocolla, Iceland spar, Silurian shale, calcite, zinc, limestone, antimony, malachite, azurite, bismuth, mimetene with oxides, sulphides and carbonates of copper, galena, wolfram, pumice-stone, &c., &c.; and from the various gold-fields of New Caledonia, New Zealand, Tasmania, Victoria, and New South Wales; and from the following rivers in Tropical Queensland, viz., the Barron, the Normanby, the Palmer, the Hodgkinson, the Etheridge, the Gilbert, the Burdekin, the Cape, the Broughton, the Fitzroy; from Gympie, Talgai, Canning Downs, Port Denison, the Calliope, the Boyne, Morinish, Ridgelands, and other gold-fields in Queensland; pink topaz, from Liberia; emeralds, from Brazil and Ireland; amber, from Prussia; red granite of the Gilbert, and green granite of Ravenswood gold-fields; idocrase,

from Piedmont, Italy; epidote, from ditto; garnets and diopside, Southern Alps; noble opal in matrix rock, in massive blocks, from Barcoo River, Western Queensland; also, from the Bulloo River and Cooper's Creek, and from New South Wales; noble hyalite or "dewdrop" opal (a new gem), Springsure; matrix of the noble hyalite, Springsure; red chrysolite (a new gem), from Nanango; green and brown ditto; aquamarine topaz, from Madagascar; ditto, gigantic variety; aquamarines, from Queensland; white topaz, Queensland; ditto, Flinders' Island, Bass' Straits; cairngorms, from Madagascar, Aberdeenshire, Victoria, and Queensland; amethysts, from Germany, Victoria, New South Wales, and Queensland; yellow topaz, from Brazil; beryl, from Stanthorpe; rubies, from New Caledonia; sapphires, from New South Wales; diorite greenstone (or lowleude), Twenty-mile Creek, Gilbert Gold District; antimony ore, from New Caledonia, New Zealand, Victoria, New South Wales, and Queensland—that from Victoria and New South Wales showing free gold; cinnabar or sulphuret of mercury, in granite, calcspar, and sandstone, from New South Wales and Queensland; galena, from Western Australia, Italy, South Australia, New South Wales, and Queensland—the latter showing free gold; molybdenum ore, from Ipswich, Queensland; chrome ore, from New Caledonia; agates, jaspers, carnelians, onyx, chalcedony, and sardonyx, from the Victoria River (of Stokes) in North-western Australia, the rivers of Northern and Western Queensland, New South Wales, Victoria, Tasmania, Isle of Man, Bohemia, &c.; alabaster (a satin spar), Italy; green tourmaline, in white dolomite, from Mount St. Gotthard; stone axe (extinct aborigines of Darling Downs); oxides, silicates, sulphides, carbonates, and chloride of copper and native metal, from various parts of England, Europe, New Caledonia, New Zealand, all parts of Queensland, New South Wales, South Australia, Victoria, and Western Australia—many of the oxides, silicates, and carbonates from Queensland and New South Wales showing free gold; also, malachite, with gold and without it, from Queensland and New South Wales; fossil, from carboniferous sandstone, quarried near Brisbane; bone fossil (encrusted with lime crystals), from the Bone Caves, Mount Gambier, South Australia; lode tin in various forms, from Bohemia, Cornwall, Tasmania, New South Wales, Victoria, and Queensland; spirifer, Gympie; actinocrinite, Dawson River, and corals, Broken River; fossils (supposed to be the roots of a reed), Logan River; oriental agates of the ribbon, moss, fortification, banded, and other varieties; onyx and sardonyx, bloodstone, and carnelian, from the Burnett and Gilbert Rivers; matrix of the Burnett River agate; quartz pebbles, from Stanthorpe, and rock crystal from New Caledonia; yellow sapphire, Burmah; onyx, black and white; Queensland sardonyx; red and white, ditto, ditto; gold in calcspar and diorite, Gympie; auriferous pyrites, from Gympie, Charters Towers, Morinish, &c.; statuary marble, Carrara, Italy; polished statuary marble, Ravenswood; polished black fossil marble, from the Broken River, Tropical Queensland; steatite, Kilkivan; china clay (kaolin), New South Wales.—An interesting collection of minerals from all sources—European, Australian, and American. The most remarkable objects in this collection are—first, the large number of modes of occurrence of gold in Australia, viz., gold in wolfram, limestone, dioptase, greenstone, limonite, tourmaline, and about fifty other specimens; second, specimens of noble hyalite, and some displaying a beautiful play of colour; Queensland agates of good red colour and well marked.

CLASSES 100–107.—*Minerals, Ores, Building-stones, &c.*

HODGKINSON, W. O., Warden, George Town, Etheridge River.

Geological collection.

Geological suite, from the Etheridge River, Tropical Queensland, showing the formation, &c., of the gold-bearing reefs of that district.

75 lbs. average stone, Papa Prospect claim, Etheridge River, taken from 38 tons, which yielded 2 ozs. 16 dwts. of gold per ton. Reef, 1 to 3 feet wide; ½ mile from George Town.

85 lbs. average mundic stone, Spero Meliora Claim; taken from 10 tons, yielding 4 ozs. gold to the ton. Reef, 1 to 2 feet wide; ½ mile from George Town.

79 lbs. average raw stone; from 38 tons, yielding 2 ozs. 11 dwts. gold to the ton; City of Glasgow Prospect claim. Reef, 1 to 2 feet wide; 8 miles from George Town.

79 lbs. tailings, Papa Reef; 94 lbs. ditto, Spero Meliora; 95 lbs. ditto, City of Glasgow; 86 lbs. ditto, "Burdan's Pan," City of Glasgow; 90 lbs. blanketings, Spero Meliora.

144 lbs. average stone, Better Luck Prospect claim; 85 feet level; former crushings, 2½ up to 7 ozs. gold per ton. Width of reef, from 4 to 20 inches; ½ mile from George Town.

135 lbs. average mundic stone from Lord Byron Reef Prospect claim, at 130 feet level, crushings varying from 18 dwts. up to 5 ozs. gold per ton. Reef from 10 inches to 5 feet wide.

JACK, R. L., Townsville.

Collection of fossils, Tropical Queensland, viz.—Devonian and Carboniferous fossils from Star River, Canoona, Broken River, Bowen River Coal-field, the latter equivalent to the "lower marine beds," "lower coal measures," and "upper marine beds" of N.S.W. Coal-field. Also, from the upper or tertiary series of the Bowen River Coal-field, equivalent to the "upper coal measures" of Newcastle, Wollongong, and Bowenfels, of New South Wales.

This collection is badly arranged.

MILLER, H. C., Etheridge.

Massive specimens from the prospect claim, Lord Byron Reef, Etheridge District, 6,000 tons of which yielded 12,000 ozs. of gold. Agates from Cave Creek, Gilbert River. Collection of gold-bearing ores of copper, lead, iron, including galena, cerussite, malachite, mundic, &c., from the various reefs of the Edwards River. Rock specimens of granite, &c., from the various reefs in the Etheridge District.—Rather an ordinary collection.

QUEENSLAND GOVERNMENT.

Auriferous specimens, containing ores of copper, iron, lead, and zinc, from Tropical Queensland; from the Fanny Fern, Australia Felix, Cross Course, Napoleon, Melnaner, Politician, Sunset, Bristol, Lone Star, Light-house, Papa, Overland Telegraph, St. George, Connaught, General Grant, Carpentaria, Golden Crown, Spero, Durham, Mary, and other reefs at the Etheridge, Ravenswood, and other gold-fields.

CLASSES 100–107.—*Minerals, Ores, Building-stones, &c.*

Gold in various forms of occurrence, and gold in quartz, in decomposed mundic, limonite, and thread gold; gold in calcspar and galena from Gympie Ravenswood, the Gilbert and Cape Rivers. Also, gold in granite, from Ravenswood.

Gold and zinc, Black Jack Reef, Ravenswood; polished sections of gold and quartz; polished sections of limonite, quartz, and gold; rich gold "leader" in quartz, Tropical Queensland. Granites—red, grey, and green, polished and crude—from the gold-fields of the Gilbert (red), Ravenswood, (green), and the Etheridge (grey), in Tropical Queensland. Polished sections of ores, containing gold, sulphide of copper, &c. Alluvial and reef casing gold from the following places in Tropical Queensland, viz.—Upper Cape River; 20-mile Rush, Gilbert River; Marengo, Port Denison; Percy River; Talbot Creek, Gilbert River; Paddy's Gully; Evening Star Reef; Australian Reef, Upper Cape River; Buchanan's Creek, Ravenswood; Stephens' Lead, Cape River District; Union Lead; Cape River; Dee River, Westwood; Western Creek, Gilbert District; Specimen Gully, Cape River District: Kroombit Creek; Overlander Reef, Ravenswood; Nigger Creek; Herbert Creek, Rockhampton; massive block of antimony, from the Neardie Mine, Burnett District; massive block of galena, 122 ozs. silver to the ton, and slightly auriferous, from the Yarrol Mine, Dawes' Range; polished block of cinnabar and calcite; carboniferous sandstone, from Ipswich Coal Measures red oxide and copper ores, also native copper from the Cloncurry River; copper sulphide with zinc blende (two massive specimens), from the Kennedy District; polished section, chalcopyrites; malachite and chalcopyrites, Mount Perry; black oxide and green carbonate of copper, Mount Perry; antimony ore from "Hungry Hill;" dendritic oxide of manganese, Star River; silicate of iron, from Eskdale, Burnett District; gold in quartz, from Gympie Reefs, viz.: Alma, Caledonian, New Zealand, &c.; Malachite, Peak Downs; copper ore, of Rawbelle District; copper ore, Lynd River, Gulf of Carpentaria; auriferous pyrites, Charters Towers; trappean rock, Tropical Queensland; basalt and serpentine rock, Broken River, Tropical Queensland; potter's lead (non-argentiferous), Ravenswood; Galena, Etheridge District; coal and other fossils; oxide of tin, mica, calcite, and quartz, from the Cape York Peninsula; agates in the matrix rock, Gilbert River District; some specimens polished in sections and some crude; large rough agate.

An interesting collection of the different ores from Queensland, particularly noticeable are malachite and galena. A great drawback to this as a collection is the unsystematic way in which it is arranged, and indeed all the Queensland collections of ores, &c., seem to have been laid out more with an eye to artistic effect than with regard to mineral classification.

Queensland Museum Trustees.

Two diamonds, Stanthorpe; two blood-red garnets, one polished opal, one crystal of topaz; diorites and serpentines, of Queensland; native copper, from Cloncurry and Keelbottom mines, in Tropical Queensland; stone axe (aboriginal), from Kangaroo Point, Brisbane; and one unfinished ditto, from Port Denison; five Palæozoic coal fossils; one lepidodendron, Clarke River; section of fossil tree; ammonites, from Walsh River, Cape York Peninsula; hyalite, from Darling Downs; crystal of calcite; chrome iron ore, hæmatite,

tin specimens, copper pyrites, eight pieces of malachite, three of azurite, two of ruby copper; bismuth from the Cloncurry River; matrix rock of bismuth, Stanthorpe; opal, from the Bulloo River; semi-opal, from Springsure; amethyst, from Logan River; garnets in chlorite slate, Cloncurry River; fossil wood (polished), Tropical Queensland; collection of copper ores, some gold-bearing; malachite, with red tile ore; chrysocolla, dioptase, &c., from Rockhampton, Peak Downs, Mount Perry, and other parts of Queensland; amethyst, from Logan River; garnets and chiastolite, Cape York Peninsula; gold in oxide of bismuth, Cloncurry River; hæmatite (magnetic iron), molybdenite, and other ores; Palæzoic fossils as under:—Favosites (specimen two), Talgai; fenestella fossula, Rockhampton; productus cora, Gympie; spirifera bisulcata, Gympie; euomphalus (specimen two), Mount Wyatt; euomphalus, Clarke River; actinocrinites (specimen two), Dawson River (three specimens); productus cora, Bowen River; productus Clarkii, Bowen River; lepidodendron nothum, Clarke River; lepidodendron nothum, Clarke River East; stigmaria ficoides, Clarke River; glossopteris browniana, Dawson River; glossopteris browniana, Bowen River (two specimens); glossopteris browniana and sphenopteris alata, Dawson River. Metallic copper, Cloncurry River; felspar, Stanthorpe; green carbonate, Leichhardt River; copper ore, Mount Esk, Brisbane River; crude antimony, St. John's Creek, Burnett District; serpentine rock, near chrome deposits, Ipswich. Fossils from the cretaceous formation, as under:—Rib bone of an ichthyosaurus, Walsh River; crioceras, specimen two (small specimen), Walsh River; hamites (specimen two), Walsh River; hamites (specimen two), Flinders River; ammonites clypeiformia, Walsh River; belemnites (specimen two), Walsh River; crustacea (name unknown), Walsh River; cyprina expansa, Maryborough; cyprina expansa (young specimen), Maryborough; cucullea robusta, Maryborough; panopæa plicata, Pelican Creek, North Queensland; inoceramus multiplicatus, Marathon, North Queensland; two specimens, teredo, Walsh River; cyprina, Walsh River; byssoarca, Walsh River; hinnites, Walsh River; avicula hughendenensis, Flinders River.

Alluvial Fossils.

Fresh-water shells, melinia, physa, &c. These shells are found with our extinct animals, such as the Diprotodon, &c., Queensland. Fresh-water shells of the present day, representing the same genera, if not species, of the above-mentioned fossil shells, Queensland. Rock specimens as under:—Two melaphyris, with amygdaloid siliceous deposits in the hollows. This mineral forms principally the black soil of the Darling Downs and other districts. One slate (surface specimen), North Pine River; one porphyry, Gilbert Ranges; one serpentine, near Rockhampton; one porphyritic rock (greenstone), London Reef; one decomposed porphyry (claystone porphyry), from Brisbane; one stone axe, found near Brisbane; two stone axes, found near Bowen (half finished); fossil wood, large trunk, from Springsure; leophites, from Walsh River, Cape York Peninsula; crioceras, from Walsh River, Cape York Peninsula; metallic copper, Cloncurry River; copper ores, from Mount Perry, Peak Downs, and Toromeo; galena, from Ravenswood, Queensland; oxide manganese, from Gladstone; antimony, from Neardie, Wide Bay District; garnets, in glasses; gold specimens from the Cape River, Gilbert River, Ravenswood, &c.; clay iron ore (with iron smelted therefrom with

Ipswich coke), from Goodna, near Ipswich ; specimens of coal. Coal fossils as under :—Pecopteris odontopteroides, Tivoli ; pecopteris Australis, Fassifern ; decopteris odontopteroides (end of a leaf) ; decopteris sphenopteris elongata ; pecopteris (two specimens), Ipswich ; sphenopteris elongata, Ipswich ; sphenopteris elongata (two specimens), Ipswich ; two fossil plants (name not known) ; tæniopteris Daintreei, Collinton, Queensland ; one specimen containing tæniopteris (two specimens) ; sphenopteris elongata, and pecopteris odontopteroides ; four specimens polished marbles ; specimens of rose, white, black, yellow, and other marbles, from Calliope River, Gladstone ; specimens of black and white statuary marbles from Warwick ; steatite, Brisbane ; china clay (kaolin), Stanthorpe ; garnet sand, Cape York Peninsula ; impalpable siliceous powder (a substitute for emery), Brisbane ; two diamonds, from Stanthorpe ; two red chrysolites, from Nanango ; basaltic matrix of Gilbert River agates ; three specimens of topaz, from Stanthorpe ; native salt, Herbert River, Tropical Queensland ; calcspar, from Gympie and Kilkivan ; common salt, from Mulligan River, Cape York Peninsula, Queensland (95 per cent. pure chloride of sodium) ; native soda, from Warrego River, Western Queensland (containing 56 per cent. carbonate of soda) ; gypsum, from the Warrego, Western Queensland ; calcspar from Kilkivan.—A large and interesting collection of Queensland geological specimens, particularly noticeable amongst which are the collection of Queensland marbles, which, although shown in small specimens, exhibit evidence of great importance. No. 172, including four small specimens of rose-coloured, black, and two grey marbles, are of very fair quality. No. 174, a good white marble, but not sufficiently saccharoid to be considered a statuary marble. The plumbago exhibited is of very small importance as it is very earthy. There are some very beautiful specimens of malachite, and also a splendid specimen of crystallized carbonate of iron exhibited by Mr. Parr. Part of the collection is badly arranged.

SELLHEIM, P. F., Maytown.

Stream and load tin from the Etheridge District. Miscellaneous specimens of ores and rocks—comprising lode tin from Cannibal Creek ; gold quartz from Try Again Prospect Claim ; tailings and blanketings from the British Lion, Ida, Queen of the North Prospect Claims ; stream tin from Chow Lee's workings, Lower Granite Creek ; slate from the Palmer River gold reef ; intrusive rocks from same locality ; horizontal sandstones, topping the slate in places from Hell's Gates, Jacob's Ladder, Lone Star, &c. ; gold in quartz from Palmer River, viz. :—

1. Queen of the North, 50 lbs.
2. Ida, lease 14, 10 lbs.
3. Do. do. 5 lbs.
4. Do. do. 10 lbs.
5. Queen of the North, No. 1 South, 39 lbs. (lease 20).
6. Do. do. 8 lbs. do.
7. Owners of the North, P.C., lease 4, 8 lbs.
8. Do. do. do. 8 lbs.
9. Do. do., do. 17 lbs.
10. Smithfield, No. 1, 2 lbs.
11. Caledonia, P.C., 22 lbs.
12. Smithfield, P.C., 7 lbs.
13. Victoria, P.C., 3 lbs.
14. Lady Hamilton, 1 lb.

Collection of rich golden quartz specimens, showing gold of high assay, from the Palmer River reefs, Cape York Peninsula.

Miscellaneous collection of rocks, &c.—a very interesting local collection.

SUTTON, J. W., Brisbane.

Collection of Queensland and foreign mineral ores, including gold, silver, lead, copper, tin, antimony, bismuth, nickel, cobalt, platinum, magnesium, palladium, uranium, mercury, sodium, arsenic, iron, &c. A good ordinary collection of Queensland and foreign minerals. No one specimen particularly noticeable.

SOUTH AUSTRALIA.

BLINMAN MINE.

Situated about 115 miles north-east of Port Augusta, at the head of Spencer's Gulf, contributes :—Massive red oxide of copper with a little hydrous oxychloride of copper ; malachite ; malachite with blue carbonate of copper on copper pyrites and oxide of iron ; ore composed chiefly of copper pyrites, oxide of copper, and brown hæmatite, coated with azurite and a little malachite ; bornite (purple copper ore) with a little copper pyrites. The lode from which this specimen was taken was 8 feet wide, and showing the ore solid throughout. [This exhibit, and those following subsequently, as far as the exhibit of the South Australian Government, is shown by the Commission, having been collected by Mr. T. C. Cloud, A.R.S.M., F.C.S., F.I.C.]

BURRA BURRA MINE.

Copper ores from the Burra Burra Mine, situated about 100 miles north of Adelaide. The ores obtained from this mine consist almost entirely of malachite (green carbonate of copper), containing, when pure, 57·4 per cent. copper, and azurite (blue carbonate of copper), containing when pure 55·2 per cent. copper ; cuprite (ruby ore, or red oxide of copper) with native copper ; and chrysocolla (hydrous silicate of copper) were also found, but not in large quantities. 11. Cuprite (red oxide of copper) with native copper. 12. Cuprite, two specimens, massive, slightly encrusted with green carbonate of copper. 13. Cuprite, massive, with native copper slightly encrusted with green carbonate of copper. 14. Green carbonate of copper with red oxide, blue carbonate of copper, and intermingled quartz. 10. Green and blue carbonate of copper with red oxide of copper. 1. Twenty specimens of malachite (green carbonate of copper), including malachite with polished surface ; malachite very light colour ; malachite exhibiting a fibrous structure with mamilated surface ; malachite exhibiting a natural fracture, which has been re-cemented by blue carbonate of copper ; and malachite with blue carbonate of copper. Azurite (blue carbonate of copper). 30. Specimens including azurite on malachite ; azurite with green carbonate ; azurite with chrysocolla (hydrous silicate of copper) ; radiated nodule, enclosing green carbonate ; massive, botryoidal ; chrysocolla (hydrous silicate of copper).

DALY MINE, near the Yudanamutana Mine.

Specimen of ore from this mine is composed chiefly of atacamite, a little red oxide and quartz.

KAPUNDA MINE, situated about 50 miles north of Adelaide.

Azurite, and azurite with a little green carbonate of copper, in soft sandstone rock.

KURILLA MINE

Is situated about 1 mile south of the Wallaroo Mines. Three lodes are worked, and each is represnted in the following series of specimens. Specimens of the soil, concretionary limestone, and the compact limestone, have been omitted, as they are fully represented in the series from the Wallaroo Mines. The remarks in reference to the change in the character of the country and lodes at the Wallaroo apply also to this mine. 1. Clay from over cap of the lode, showing stains of green copper ore. Atacamite (hydrous oxychloride of copper) in small nodular shaped masses, found under the red clay, in a deposit of white clay and quartz. Rock from a depth of 6 feet, 8 feet, 10 feet, and 5 fathoms. Ore from a depth of 6 fathoms, Kurilla lode, composed chiefly of massive red oxide of copper, oxide of iron, and quartz ; contains about 35 per cent. copper. Massive actacamite with red oxide of copper ; about 45 per cent. Grey sulphide with native copper ; about 30 per cent. Rock, from 7 fathoms. Ore, from a depth of 10 fathoms, North Branch lode ; consists of ferruginous red oxide, partly converted into hydrous oxychloride ; contains about 45 per cent. Ore from a depth of 12 fathoms, Kurilla lode ; yellow copper ore, partially decomposed ; about 27 per cent. Ore from a depth of 14 fathoms, Morphett's lode, composed chiefly of copper pyrites, iron pyrites, talc, hornblende, and quartz ; contains about 15 per cent. of copper. Granular limestone ; occurs in the Kurilla lode only, at a depth of from 15 to 55 fathoms. Rock and ore, from a depth of 20 fathoms, Morphett's lode ; copper pyrites with quartz and black talc ; contains about 20 per cent. Black covelline (black sulphide of copper, resulting from the decomposition of other copper ores) from a depth of 20 fathoms, North Branch lode ; contains about 30 per cent. of copper. Ore from a depth of 35 fathoms, Kurilla lode ; about 27 per cent. Ore from 45 fathoms, Kurilla lode ; contains about 27 per cent. Rock from a depth of 55 fathoms. Ore from a depth of 55 fathoms (the deepest point) ; contains about 22 per cent. of copper. The above described specimens are contributed by Captain Thomas Anthony, on behalf of the proprietors of the Kurilla Mine.

MOONTA MINES.

Situated about 12 miles south of the Wallaroo Mines. The characters of the ore deposits at this mine are very similar to those at the Wallaroo. The chief points of difference are that the country is here a very hard and compact silicious feldspathic rock, and the ores are richer, and the grey sulphide and purple ore occur in larger quantities. At the Wallaroo Mines the copper pyrites are always intimately combined with iron pyrites, but at Moonta they are pure. The specimens are arranged in the same manner as those of Wallaroo. 1. Soil, average thickness about 8 inches. 2. Concretionary limestone, average thickness about 2–3 feet. 3. Compact limestone, average thickness about 2 feet. 4. Concretionary limestone (2nd bed), average thickness about 18 inches. 5. Red clay, average thickness about 3 feet. 6. Compact limestone, locally named conglomerate, average thickness about 9 inches. 7. Bed rock. 8. Gossan—orey matter very much decomposed, from top of the lode. 9. Ore from a depth of 5

fathoms, composed of massive hydrous oxychloride of copper with a little red oxide, about 45 per cent. 10. Grey sulphide of copper, with native copper, from a depth of 10 fathoms ; about 80 per cent. Native copper, contains about 90 per cent. Native copper, coated with cuprite. Cuprite in modified octohedrons. 11. Rock from a depth of 15 fathoms. 12. Native copper attached to fragments of rock, from a depth of 18 fathoms ; contains about 80 per cent. copper. 13. Copper glance, from a depth of 15 fathoms ; contains about 70 per cent. 14. Rock from a depth of 55 fathoms. 15. Bornite (purple copper ore) from 55 fathoms ; contains about 50 per cent. copper. 16. Vein-stuff, 55 fathoms. 17. Rock from a depth of 75 fathoms. 18. Ore from 75 fathoms ; copper pyrites with a little bornite ; contains about 34 per cent. copper. 19. Vein-stuff quartz with a little ore from a depth of 75 fathoms. 20. Rock from a depth of 75 fathoms. 21. Ore from 75 fathoms ; copper pyrites with a little bornite ; contains about 30 per cent. copper. 22. Vein-stuff quartz, with a little ore, 75 fathoms. 23. Rock from a depth of 145 fathoms. 24. Ore from 145 fathoms ; copper pyrites with a little bornite ; contains about 28 per cent. copper. 25. Vein-stuff from 145 fathoms ; chiefly quartz with a little ore. Molybdenite is found occasionally at this mine. This mine is now worked to a depth of 170 fathoms, but there is no material change in the lode from the 145 fathom level. The above described specimens are, with a few exceptions, contributed by the manager, H. R. Hancock, J.P., on behalf of the Moonta Mining Company.

NORTHERN MINES, VARIOUS, *i.e.*, mines in the country to the north and north-east of Port Augusta.

Contributed eighteen specimens, amongst which were noticeable massive ferruginous red oxide of copper, containing native copper, Spring Creek Mine. Cuprite in cubical crystals. Chrysocolla on black sulphide of copper, a variety of covelline, Nuccaleena Mine. 91. Massive cuprite with green carbonate of copper, chrysocolla, and quartz. Ore, composed chiefly of bornite (purple copper ore), Mount Lyndhurst Mine. Red oxide. Green carbonate of copper, with red oxide, coated with carbonate of lime, Kanyaka Mine. Crystallized green carbonate of copper on heavy spar (sulphate of baryta), Great Gladstone Mine, near Mount Brown. Native copper, Sliding Rock Mine.

WALLAROO MINES, Yorke's Peninsula.

The specimens from these mines illustrate the mode of occurrence of the various ores in depth, and at the same time indicate the geological character of the "country," or bed-rock, in which the lodes occur. After passing through recent limestone and clay beds, the "bed-rock," a talcose schist, is met with, and in this formation the copper lodes occur. The specimens show that the character of this rock gradually changes from a loose talcose schist to a compact silicious rock of considerable hardness. The ores near the surface are generally of the oxidized class, and pass gradually into copper pyrites at greater depths. The specimens are arranged in three series—on the one side the bed rock, on the other the vein-stuff, and in the centre the specimens of ore. They comprise :—1. Soil, average thickness about 1 foot. 2. Concretionary limestone, average thickness about 18 inches. 3. Red clay, average thickness about 4 feet. 4. Compact limestone, average thickness about 18 inches. 5. Top of "bed rock," talcose schist in a very friable condition. 6.

"Cap of lode." The "caps" of the lodes in the district generally stand out from the bed-rock, and penetrate into the calcareous beds above, and in rare cases even into the soil, but in no case has the cap been found projecting above ground. 7. Rock, from a depth of 10 fathoms. 8. Ore from a depth of 10 fathoms; consists chiefly of hydrous oxychloride of copper partially converted into green carbonate, with a little red oxide. Contains about 45 per cent. of copper. Atacamite (hydrous oxychloride of copper). 9. Vein-stuff, from a depth of 10 fathoms. 10. Rock, from a depth of 10 fathoms. 11. Ore, from a depth of 10 fathoms. This specimen is chiefly composed of ferruginous red oxide of copper, with some finely intermixed silica; it contains about 30 per cent. of copper. Chiefly grey sulphide of copper; contains about 30 per cent. of copper. 12. Vein-stuff from a depth of 10 fathoms. 13. Ore from a depth of 16 fathoms, composed of grey sulphide of copper; about 75 per cent. copper. Native copper; about 88 per cent. pure copper. Red oxide with intermingled native copper; about 60 per cent. copper. 14. Rock, from a depth of 20 fathoms. 15. Ore, from a depth of 20 fathoms, copper glance (grey sulphide of copper); about 77 per cent. copper; copper pyrites; about 20 per cent. copper. At the Wallaroo Mines this class of ore always contains iron pyrites in combination with the copper pyrites. 16. Vein-stuff from a depth of 20 fathoms. 17. Rock from a depth of 30 fathoms. 18. Ore from 30 fathoms; contains about 20 per cent. copper. 19. Vein-stuff from 30 fathoms. 20. Rock from 40 fathoms. 21. Ore from 40 fathoms; contains about 16 per cent. copper. 22. Ore from a depth of 40 fathoms, yellow copper ore with quartz; contains about 14 per cent. copper. 23. Vein-stuff from 40 fathoms. 24. Rock from 50 fathoms. 25. Ore from 50 fathoms; contains about 15 per cent. copper. 27. Vein-stuff from a depth of 50 fathoms. 28. Rock from 60 fathoms. 29. Ore from 60 fathoms; contains about 22 per cent. copper. 31. Vein-stuff from a depth of 60 fathoms. 32. Rock from a depth of 70 fathoms. 33. Ore from 70 fathoms, yellow copper ore with quartz; contains about 16 per cent. copper. 34. Vein-stuff from 70 fathoms. 35. Rock from a depth of 80 fathoms. 36. Ore from 80 fathoms; contains about 15 per cent. copper. 37. Ore from 80 fathoms; contains about 17 per cent. 38. Vein-stuff from 80 fathoms. 39. Rock from a depth of 90 fathoms. 40. Ore from 90 fathoms; contains about 14 per cent. 41. Vein-stuff from 90 fathoms. 42. Rock from a depth of 100 fathoms. 43. Ore from 100 fathoms; contains about 17 to 24 per cent. copper. 44. Vein-stuff from 100 fathoms. 45. Rock from a depth of 110 fathoms. 46. Ore from 110 fathoms; contains about 18 per cent. copper. 47. Vein-stuff from 110 fathoms. 48. Rock from a depth of 120 fathoms. 49. Ore from 120 fathoms, yellow copper ore with quartz; contains about 10 to 15 per cent. copper. 50. Vein-stuff from 120 fathoms. 51. Zinc blende with yellow copper ore and calcite from a depth of 125 fathoms; zinc blende is of a very rare occurrence at this mine. 52. Rock from a depth of 130 fathoms. 53. Ore from 130 fathoms; contains about 12 per cent. 54. Vein-stuff 130 fathoms. 55. Rock from a depth of 140 fathoms. 56. Ore; contains about 17 per cent. 57. Vein-stuff. 58. Rock from a depth of 150 fathoms. 59. Ore; contains about 12 per cent. 60. Yellow copper ore with intermixed black talc; contains about 10 per cent. 61. Vein-stuff. Iron pyrites (mundic) found in various parts of the mines. Partially decomposed iron pyrites from upper part of a lode. Galena (sulphide of lead). Galena with a little yellow copper ore; a small vein of this mineral runs parallel with one of the copper lodes; this mine is now down to 160

fathoms, but the character of the ore, country, &c., does not differ materially from that exhibited at 150 fathoms. With a few exceptions, the above-mentioned specimens are contributed by the manager, H. R. Hancock, J.P., on behalf of the proprietors of the Wallaroo Mines.

Yudanamutana Mine.

From this mine, situated about 192 miles north-east of Port Augusta, at the head of Spencer's Gulf, are shown :—Radiating crystals of green carbonate of copper in red jasper; radiating crystalline carbonate of copper with a little red oxide partially coated with quartz; blue and green carbonates of copper with earthy red oxide; red oxide of copper encrusted with green carbonate of copper; three malachites; ferruginous red oxide of copper with a little green carbonate, silicate of copper, and copper pyrites; green carbonate of copper with intermixed atacamite (hydrous oxychloride of copper).

Antimony Ores.

Stibnite (sulphide of antimony) containing 224 ounces of silver to the ton, Aclare Mine; three specimens.

Bismuth Ores.

The ores of bismuth have only been worked on a large scale at the Balhannah Mine, situated about 12 miles S.-E. of Adelaide. Near the surface bismuthite occurred, but this gave way to bismuthinite as greater depths were attained. Copper pyrites and gold to the extent of from 20-30 ounces to the ton of metallic bismuth were associated with the bismuth ore. The exhibits were—bismuthite (carbonate of bismuth), bismuthinite (sulphide of bismuth), bismuthinite with copper pyrites, and bismuthinite in calcite.

Iron Ores.

2 specimens of red hæmatite, Barossa Ranges, contain about 68 per cent. of iron. One beautiful piece, the so-called kidney iron ore. Micaceous hæmatite, Angaston, contains about 65 per cent. iron. Massive red hæmatite, Angaston. Micaceous hæmatite, Yudanamutana Copper Mine. Micaceous hæmatite, with imbedded crystals; pseudomorphs after magnetite, Cary's Gully. Fibrous brown hæmatite, Loc, about one mile north of the Blinman Copper Mine. Brown hæmatite, Hindmarsh Valley, contains 53·7 per cent. iron, 1·20 per cent. phosphoric acid, and 0·42 per cent. sulphuric acid. Stalactitic brown hæmatite, 2 specimens, contains about 58 per cent. iron, from about one mile north of Blinman Copper Mine. Magnetite, Mount Lofty, contains 66·34 per cent. iron, 0·05 phosphoric acid, and 0·20 sulphur.

A very excellent collection of the South Australian copper ores, amongst which are particularly noticeable a very fine specimen of crystallized cuprite, as also asurite and malachite. A specimen of hematite iron is also of particular interest from its extreme purity. We noticed, however, that several of the specimens were improperly labelled. The most interesting part of the exhibit was undoubtedly the systematically arranged series of ores, with gangue and country rock from the principal mines of the Colony. These specimens number about 150, and deserve the attention of those interested in copper-mining.

Lead Ores from Talisker Mine.

From this mine, which is situated about 3 miles E. of Cape Jervis, 7 specimens of galena (sulphide of lead) are shown. From near Normanville 2 specimens. Galena, Loc, north of the Yudanamutana Copper Mine, also occurring in veins at the Glen Osmond Stone Quarries, the average yield of the ore from which is 76 per cent. lead, and 16 ozs. of silver per ton of ore.

South Australian Government.

Two diamonds found in the Echunga Gold-fields, and cut in London; collection of gold ores; gold in quartzose conglomerate; five specimens. Barossa; auriferous quartz, German Reef; filamentous gold on soft ferruginous sandstone, Gumeracha; gold in ferruginous quartz, Murray Flats; gold in brecciated quartzose rock, Echunga; rolled quartz pebble with native gold Onkaparinga; surface stone consisting of cemented particles of quartz with gold, thoroughly disseminated through the mass, Scotts Mine Blumberg, with a similar stone, broken to show the thorough dissemination of the gold; quartz cemented with brown iron ore, and containing native gold; quartz cemented with brown iron ore and containing gold; gold in talco-quartz conglomerate; gold on quartz crystals, Stirling Reef, Echunga; gold in soft brown iron ore, four specimens; gold in silicious brown iron ore, Victoria Mine; auriferous quartz, surface stone, Mount Pleasant; auriferous quartzose rock from a depth of 300 feet; auriferous brown iron ore, four specimens, Waukeringa Balhannah Mine:—Auriferous bismuthinite; native gold in bismuthinite, ten specimens; gold with bismuthinite and ferro-calcite; gold in silicious brown iron ore, with azurite and a little green carbonate; gold in brown iron ore, with green carbonate of copper; gold in brown iron ore, two specimens; gold in ferruginous quartz; gold in ferro-calcite; auriferous quartz. Lady Alice Mine:—Gold on bornite (purple copper ore), eight specimens; bornite coated with gold on crystals of opaque white quartz; quartz with a projecting flat filament of gold, enclosing a core of bornite; same but with the filament broken off short; gold in quartz, with bornite—the quartz in this specimen is in two separate masses, connected together by the gold; auriferous quartz, four specimens. Northern Territory:—Auriferous quartz, Royal Reef, Union Reef; three specimens, Westscott's Reef, three specimens, and Sandy Creek; decomposing greenstone with quartz, containing gold; Bismarck Reef; gold in greenstone and quartz, Bismarck Reef; auriferous quartz, Royal Standard Reef; ferruginous quartz, containing gold, Princess Louise Reef; auriferous quartz, Cosmopolitan Reef, John Bull Reef, Northern Territory Reef; gold in greenstone and quartz, Fountain Reef, with thirteen other specimens of auriferous quartz, and gold in quartz with white clay; gold in ferruginous sandstone. A very interesting collection of ores found in South Australia, including two diamonds (hardly of the first water), but good stones. Most of the collection is made up of gold in the various forms in which it has been found in South Australia, notable amongst which is that with bismuthinite. The specimens from the Northern Territory show signs of the reefs there being of some importance.

TASMANIA.

Commissioners for Tasmania.

Minerals known to exist in the Island, with assays and analyses. Arranged by Messrs. Dagobert Lewald and Alfred J. Taylor.—Consists of 88 specimens of various ores, comprising gold, argentiferous galena, tin, copper, brown clay iron, ore, &c. Although the collection is complete, the samples generally are inferior.

Section I.—Tin Ores.

1. Lode tin, from Cumberland Co., West Coast. Assay 41·3 per cent. of metal.
2. Stratas of chlorite, porphyry, and tourmaline in small lode, Cumberland Co., ditto.
3. Crystallized tin ore and quartz, ditto, ditto.
4. Fine crystals of cassiterite in chlorite, ditto, ditto.
5. Tin from lodge 12 feet in width, taken from 7 feet below surface, ditto, ditto. Assay the same as No. 1.
6. Amorphous and crystallized tin ore from lode, ditto, ditto.
7. Nugget of black crystallized tin ore found in alluvial ground, ditto ditto. Assay 71·8 of metal.
8. Lode tin ore, from Mount Heemskirk Tin-mining Co., ditto, ditto. Assay 69·7 of metal.

8A. Large black crystals, from lode of Mount Heemskirk Co.

9. Lode tin ore, from Mount Heemskirk Tin-mining Co., ditto, ditto. Assay 64·2 of metal.

9A. Ditto, large crystals, from Macquarie Harbour Co., Mount Heemskirk.

10. Rock ore from red face Mount Bischoff Co. Assay 69·3 of metal.
11. Lode tin from North Bischoff Valley Co. Assay 17·8 of metal.
12. Ditto from ditto (Reynolds' Section). Assay 23·1 of metal.
13. Ditto (Thomas's Section). Assay 17·4 of metal.
14. Tin nuggets from North Bischoff Valley Co. Assay 61·5 of metal.

14A. Lode tin from West Bischoff Co. Assay 52·4 of metal.

14B. Ditto ditto. Assay 50·8 of metal.

15. Fine crystallized block tin ore in chlorite from lode 25 feet below surface, Montagu Co., near Mount Heemskirk. Assay 55·5 of metal.
16. Lode tin in porphyry from Belmont Co., near Mount Cameron, North-east Coast. Assay 51·8 of metal.
17. Lode tin imbedded in iron clay from Laffer and Norwegian Co., ditto. Assay 66·5 of metal.
18. Lode tin in iron clay and porphyry from Marie Louise Co., ditto. Assay 67·3 of metal.
19. Lode tin in granite from claim on Cascade River, Upper Ringarooma. Assay 39·2 of metal.
20. Lode tin from North Mount Cameron (black crystals in decomposed granite). Assay 64·2 of metal.
21. Lode tin from Fly by Night Co., North Mount Cameron (black crystals in decomposed granite). Assay 42·1 of metal.
22. Stream tin from Weal Tasman Co., Gould's Country. Assay 74·5 of metal.
23. Ditto Waverley Co., Thomas's Plains. Assay 73·5 of metal.
24. Ditto Atlas Co., ditto. Assay 74·5 of metal.
25. Ditto Rising Sun Co., George's Bay. Assay 72·5 of metal.
26. Ditto Emu Co., George's Bay. Assay 76·4 of metal.
27. Ditto Little May Co. Assay 75·5 of metal.
28. Ditto Eve Co., ditto. Assay 74·1 of metal.
29. Ditto Union Co., ditto. Assay 74· of metal.
30. Ditto containing zircons from Blue Tier Co., Gould's Country. Assay 73·2 of metal.
31. Ditto from Rocket Co., George's Bay. Assay 75· of metal.
32. Ditto from Laffer and Norwegian Co., near Mount Cameron. Assay 74·2 of metal.
33. Ditto from Rux Co., George's Bay. Assay 72·1 of metal.
34. Ditto (in black crystals) from Waratah Co., Thomas's Plains, East Coast. Assay 75·5 of metal.
35. Stream tin in amorphous grey nuggets, from Mount Heemskirk Co. Assay 68·5 of metal.

CLASSES 100–107.—*Minerals, Ores, Building-stones, &c.*

36. Collection of zircons out of stream tin collected at East and North-east Coast mines. (Exhibited by Mr. D. Lewald.)

SECTION II.—COALS.

37. Coal from Sandfly Ranges, near North West Bay (taken from upper seam).

Analysis : Fixed carbon	62·2
Volatile matter (bitumen)	23·3
Mineral matter	8·7
Moisture	5·0
Impurities (including sulphur)	·8
	100·0

38. Ditto, ditto, from middle seam.

Analysis : Fixed carbon	63·5
Volatile matter (bitumen)	15·7
Mineral matter	14·7
Moisture	5·3
Impurities	·8
	100·0

39. Ditto, ditto, from lower seam.

Analysis : Fixed carbon	67·0
Volatile matter (bitumen)	12·7
Mineral matter	14·3
Moisture	5·4
Impurities	·6
	100·0

40. Ditto from Gardener's Bay Coal-mining Association.

Analysis : Fixed carbon	63·5
Volatile matter (bitumen)	15·7
Mineral matter	17·9
Moisture	2·9
	100·0

41. Ditto from Enterprise Mine, New Town. (Exhibitor, Mr. R. P. Brooks.)

Analysis : Fixed carbon	53·1
Volatile matter (bitumen)	13·9
Mineral matter	29·3
Moisture	3·7
	100·0

42. Ditto from Adventure Bay, Bruni Island. (Exhibitor, Mr. J. E. Risby, M.H.A.)

Analysis : Fixed carbon	69·9
Volatile matter (bitumen)	14·2
Mineral matter	12·9
Moisture	3·0
	100·0

42A. Coal, Black Diamond, from York Plains.

Analysis : Fixed carbon	58·4
Volatile matter (bitumen)	16·4
Mineral matter	21·1
Moisture	4·1
	100·0

42B. Coal from Jerusalem.

Analysis : Fixed carbon	56·8
Volatile matter (bitumen)	12·5
Mineral matter	27·9
Moisture	2·8
	100·0

42c. Coal from Green Point, Port Cygnet.

Analysis : Fixed carbon	64·8
Volatile matter	19·9
Mineral matter	14·1
Moisture	1·2
	100·0

SECTION III.—MISCELLANEOUS.

43. Asbolite (earthy cobalt and manganese) imbedded in clayey iron ore, from Port Cygnet, Huon. Contains :—

Oxide of cobalt	12·5 per cent.
Peroxide of manganese	54·5 ,,

the rest being oxide of iron, clay, and silica.

44. Asbolite, from Castle Forbes Bay, Huon, contains :—

Oxide of cobalt	16·7
Peroxide of manganese	51·3

the rest being oxide of iron, clay, and silica.

45. Bismuth ore in tourmaline from Mount Ramsay, containing 13·2 of metallic bismuth. Exhibitor, Mr. A. Butler.

46. Copper ore, from Dalley's claim, Beaconsfield.

Assay—Pyrites	26·0
Corresponding to copper	7·8
Gangue	74·0

46A. Copper ore from Badger Head. Contains 15·4 per cent. of metallic copper.

47. Copper ore, showing green and blue carbonate and red oxide of copper, from Mount Meredith Ranges, N.-W. coast. Contains 7·3 of metallic copper.

48. Copper ore from Mount Morris. Contains 2·6 of metallic copper.

49. Tetrahedrite (?) from West Bischoff Co. Contains :—

Antimony	28·3
Zinc	5·4

and of silver 18 ozs. 11 dwts. per ton. Also arsenic, copper, and sulphur.

50. Antimony ore from Mount Bischoff. Exhibitor, The Hon. J. S. Dodds, M.H.A. Contains :—

Antimony	54·0
Zinc	5·4

and 13 ozs. 5 dwts. of silver to ton. Also arsenic, copper, and sulphur.

51. Tungsten and tin ore in quartz. Exhibitor, Mr. H. J. Hull.

SECTION IV.—GOLD.

52. From Quartz Reef, George's Bay :—
Assay—Gold, 1 oz. 12 dwts. 11 grs. per ton.
Silver, 6 dwts. 3 grs. ditto.

53. From Alpine Co.'s Reef, Fingal :—
Assay—Gold, 6 ozs. 11 dwts. per ton.

54. From Black Boy, Fingal.

55. From Ben Lomond, ditto.

56. From Circular Head, N. coast.

57. From Denison Diggings.

58. From Waterhouse Reefs.

59. From Waterhouse Reefs.

60. From New Specimen Hill G. M. Co., Nine-mile Springs.

61. From Golden Cross Reef, ditto.

62. From New Chum Reef, ditto.

63. From City of Launceston Co.'s Reef, ditto.

64. From Native Youth Reef, ditto.

64A. Ditto, ditto.

65. From New Morning Star Co.'s Reef, Nine-mile Springs.

66. From Golconda Reef, Nine-mile Springs.

67. From Florence Nightingale Reef, Beaconsfield.

67A. From Florence Nightingale Reef, ditto.

68. From Beaconsfield.

69. Ditto.

70A. From Tasmanian Reef, ditto.
70B. From Tasmanian Reef, Beaconsfield.
71. From Dalley's United Co.'s Reef, ditto.
72. From Golden Gate Co.'s Reef, Beaconsfield.
73. From Little Wonder Reef, ditto.
74. From Southern Cross Reef, Beaconsfield.
74A. Pyritical quartz, from Mussel Roe River; contains gold 13 ozs 1 dwt. to ton.
74B. Ditto, ditto; contains gold 4 ozs. 8 dwts. to ton.
75. Specimen of top cement.
75A. Ditto, ditto.

SECTION V.—IRON, &c.

76. Nodular iron ore, from Ilfracombe, West Tamar.
77. Red hæmatite, from West Tamar.
78. Clay iron ore, from East Coast.
79. Nodular iron ore, from Sorell District.
80. Iron ore, from Bruni Island.
81. Manganese in quartz, from Western Creek.
82. Silver and copper ore, from Penguin Creek.
82A. Galena, from Tea-tree Point, near Frenchman's Cap.
82B. Galena, from Mount Bischoff.
83. Fossiliferous limestone, from near New Norfolk.
84. Fossiliferous limestone (fresh-water limestone), from Geilstown Bay, near Risdon. Exhibited by Mr. A. J. Taylor.
84A. Limestone, carrying galena, from River Tamar. Exhibited by Mr. Commissioner Shaw.
84B. Arragonite (white marble limestone), from West Tamar. Ditto.
84C. Grey marble, ditto. Ditto.
85. Tasmanian marble (polished).
86. Slate, from Piper's River.
87. Tasmanite, bituminous shale from river Mersey, containing 85·3 bitumen.
88. Fire-clay, from Seymour.
*Sapphires and Zircons from E. Coast Tin Mines.

APPENDIX.

A.

The mineralogical cabinet shows, by specimens exhibited, the mineral wealth and resources of Tasmania.

The principal features in the cabinet are the gold and tin specimens. Coal and iron form prominent groups; and specimens of bismuth and cobalt show that the Colony is not destitute of the rarer metals used in manufactures and arts.

SECTION I.

Starting from Mount Heemskirk on the W. Coast of Tasmania, specimens of lode tin, gathered from a tract of country extending to North Bischoff, are exhibited with assays marked Nos. 1 to 15.

The north-east coast and east coast of Tasmania are represented by six specimens of lode tin collected from the Ringarooma and Gould's Country Districts, extending from Mount Cameron to George's Bay (Nos. 16 to 21); the same extent of country also being represented by 14 specimens of stream tin of varying character (Nos. 22 to 35).

The samples of zircons (36), and sapphires (*), have been collected from the stream tin.

SECTION II.

Comprises coal. The Sandfly coal is shown by the analysis to be good quality. There are three seams; the upper seam being 18 inches, and the middle seam 28 inches thick. The third seam is reported to be 4 feet thick, but unfortunately contains most ash. The seams crop out at the side of the mountain. This coal is not at present being worked. Next in value come in order coal from Green Point, Port Cygnet, Gardner's Bay, York Plains, Jerusalem, and New Town.

It would appear that there is a coal basin covering an extent of country stretching from the sources of the Huon River across D'Entrecasteaux Channel, and cropping out at Adventure Bay, Bruni Island.

SECTION III.

Contains two very interesting specimens of earthy cobalt and manganese (Nos. 43 and 44); also of bismuth and copper ores, as well as antimony ores containing silver.

No. 49 is perhaps a new species, so it is marked with a note of interrogation.

SECTION IV.

The specimens of gold in quartz represent George's Bay, Fingal District, Denison Diggings, Waterhouse, Nine-mile Springs, and the great discoveries at Beaconsfield on the river Tamar. Gold has been discovered in many localities not represented. Such localities are marked with a yellow cross on the map which accompanies the cabinet.

SECTION V

Consists chiefly of iron ores, limestones (inclusive of travertin), slate, and the important specimen of tasmanite.

All the iron ores at the present time found in Tasmania contain chromium, which renders it difficult to obtain iron of commercial value from them.

No. 87, tasmanite, is a most interesting specimen, having only been found in Tasmania.

KAYSER, FER. W., Waratah.

A collection of mineral and rock specimens.—A very ordinary collection, and not well arranged.

STEPHENS, THOMAS, F.G.S., Hobart Town.

A collection of geological specimens.—A very good collection of Tasmanian geology, exhibited by Mr. Stephens, of Hobart Town, being collections of rocks and minerals and of organic remains illustrative of the geology of Tasmania. The former consists of typical specimens of granite, eurite, trachyte, greenstone, basalt, and other plutonic and volcanic rocks, with some associated minerals. They are roughly classified, in accordance with the contemporaneous sedimentary formations, as belonging to the azoic, palæozoic, and neozoic periods. The collection of fossils or organic remains represents three distinct geological periods: first, the lower palæozoic, in which we observe a number of specimens from the Gordon limestone, Western Tasmania (1.R.S. to 11.R.S.); a crinoid (1B.) from the silurian limestone, West Tamar, from which formation no other fossil has as yet been obtained; and (1C.) a specimen from the conglomerate, Table Cape. The rest of the lower palæozoic fossils are from silurian rocks in the neighbourhood of the river Mersey, north coast of Tasmania. None of these have as yet been described, and many among them are probably new to science. The carboniferous period is exemplified in the specimens which occupy the second tray of fossils. No. 1A. to 4A. being from beds which immediately *overlie* the coal seam long worked in the Mersey district. No. 1B. is a unique specimen from Port Cygnet, which probably cannot be identified. The rest are from rocks which *underlie* all the coal measures in other parts of Tasmania, and are possibly conformable to them. With respect to this point of conformity the evidence at present obtained is inconclusive. Most of these forms are probably well known as fossils of New South Wales, and many have been figured. The tertiary beds of Tasmania are represented by the following

species from Table Cape (Miocene or Oligocene), amounting to thirty-five in number, and arranged in the third tray of organic remains as follows :—

A. *Fossils from the marine beds of Table Cape (Miocene or Oligocenes).*

1 to 35.

1. Triton Abbotti (Tenison-Woods).
2. Fusus pagaides.
3. Ancillaria mucronata.
4. Voluta.
5. Do.
6. Do. antiscalaris (McCoy).
7. Do. Weldii (Tenison-Woods).
8. Mitra.
9. Cypræa eximia (Morris).
9A. Do. do. (?)
10. Natica ovata (?) (Hutton).
11. (?)
12. Cerithium.
13. Turritella.
14. Trochus.
15. Trochita calyptræformis (Rowe).
16. Dentalium Dicksii (Nyst) (?).
17. Do. lacteum (Deshayes).
18. Waldheimia.
19. Pecten.
20. Do.
21. Cucullæa concamerata.
22. Do. cainozoica (?) (Tenison-Woods).*
23. Pectunculus laticostatus.
24. Lyonsia Agnewi (?) (Tenison-Woods).
25. Trigonia semiundulata (McCoy).
26. Chama.
27. Cardium tenuicostatum (Lamarck).
28. Cardita (?).
29. (?).
30. Crassatella.
31. Corbula sulcata (Lamarck).
32. Micraster brevistella (Laube).
33. Hemipatagus Forbesii.
34. Plachotrochus (Tenison-Woods and Duncan).
35. (?).

* This evidently approaches, and may be, pectunculus.

B.—1A. *to* 5A. *from travertin, Geilston Bay, River Derwent.*

1A. Bulimus Gunnii (Morris).
2A. Helix Tasmaniensis (Morris).

C.—1B to 5B., from lacustrine beds of Tamar and South Esk basins.

VICTORIA.

Mines Department of Victoria.

Geological specimens.—This collection of geological specimens contains representatives of the principal igneous and sedimentary rock-formations in Victoria. In the mineral collection are many good specimens of gold in quartz, metalliferous ores—the majority of minerals common in Victoria —and small specimens of coal, lignite, &c. In the economic collection are characteristic specimens of auriferous quartz from the principal mining districts ; copper ores, including a suite of specimens illustrative of the various stages the ore passes through during reduction, and a number of samples of other metallic ores, coal, lignite, &c., which are now being or likely at no distant date to be worked with remunerative results.

Very excellent collection of geological specimens from all parts of Victoria, of which the following are the most noteworthy :—

Older Igneous Rocks, Granite, Porphyries, &c.

No. 1 to 56 comprise specimens of granites and a few specimens of syenitic granite from various localities. No. 25, from Mount Alexander, between Castlemaine and Sandhurst, is the same as the beautiful porphyroid granite worked by Mr. James Taylor, from Sandhurst, and exhibited under Nos. 17, 18, 19.

Dyke Stones associated with or traversed by Auriferous Quartz Reefs.

No. 57 to 72. All the specimens belong to Gippsland and North Gippsland.

The dykes whence the above specimens (Nos. 57 to 72 inclusive) were taken vary from a few, to several hundred feet in thickness, and are all accompanied or traversed by auriferous quartz veins or lodes. They are generally known as diorite dykes. With one known exception (Donnelly's Creek), such dykes are associated with or in close proximity to all auriferous quartz veins yet opened in upper silurian rocks, to which they appear in this Colony to be confined.

The auriferous quartz veins accompany them in every imaginable way, longitudinally, along the walls, or through the body of the dyke, transversely, either vertically or horizontally from wall to wall, or in bunches, strings, or irregular veins.

As regards the mineral composition of these diorite dyke stones, a digest of remarks by Professor Ulrich, in his catalogue of the specimens in the Industrial and Technological Museum, Melbourne, is to the effect that they are essentially compounds of oligoclase and hornblende, occasionally associated with quartz and mica, and are also known under the general term "greenstone," "hornblendic greenstone," in contradistinction to the augitic greenstone "dialase," not yet observed in Victoria. That the mineral composition and structure vary greatly in different parts of the same dyke, as in the case of Cohen's Reef, Walhalla, from granitic texture with trichinic felspar and hornblende, painly perceptible, to micro-crystalline granular felstone-like, with neither hornblende nor felspar recognisable, or the dyke at the Thompson River Copper Mine, which varies from a coarse granular highly hornblendic diorite, nearly pure hornblende rock in places, through fine granular to a very dense highly felspathic aptanite.

Dyke Stones not yet found to be traversed by auriferous quartz veins.

Nos. 73 to 81.—Felstone, felstone-porphyry, felsite, felsite-porphyry, and greenstone from various localities.

Igneous Rocks representing Palæozoic lava flows.

Nos. 82 to 85.—Felsite porphyry and porphyritic melophyre, from Avon River, Gippsland.

The foregoing rocks (Nos. 82 to 85 inclusive) are interstratified with sedimentary rocks of upper devonian age, and represent the lava flows of that period, highly altered by subsequent natural chemical action.

No. 86.—Serpentine rock, apparently a transformed greenstone. Red Hill, Heathcote.

NEWER IGNEOUS OR VOLCANIC ROCKS.

Older Basalt.

Nos. 87 to 95.—Principally from North Melbourne and Gippsland.

Newer Basalt.

Nos. 96 to 125.—Basalt and volcanic production, principally from Sandhurst, Stawell, Ballarat, Clunes, Learmonth, Daylesford. No. 107, dark grey basalt, finely porous, portion vesicular, with spherosiderite in vesicules. Ballarat East is the same as No. 2 exhibit. Out of the common minerals

ordinarily found in basalt, we could point out the phacolite or analcite in the basalt of Clunes (Nos. 112, 113). No. 119 deserves a special mention, being a black basalt, very compact, hard and brittle, with conchoidal fracture resembling lydian stone, rendered porphyritic by small grains of olivine. Formerly used by the natives for cutting-implements.

An analysis by Mr. J. Cosmo Newbery gave the following results, 5 per cent. soluble in hydrochloric acid—

	Soluble portion.	Insoluble portion.
Silica	34·80	63·39
Alumina...	38·58	16·11
Manganese protoxide	trace	1·01
Iron sequioxide...	18·07	10·03
Lime	7·12	5·26
Magnesia	trace	3·41
Potash	...	2·21
Soda	...	...
Titanic acid	1·43	0·63
Water	...	...
Oxide of copper	...	trace
	100·00	102·05

Aqueous Rocks.

Lower Palæozoic, Lower Silurian.

Including rocks of this age metamorphosed by contact with granite and other igneous rocks.

Nos. 126 to 133 are the following rocks :—Metamorphic, conglomerate, showing a granitoid character; quartzite, with felspathic laminations; gneissose; schist gneiss; granitoid schist; mica-schist,—being examples of the "passage rocks" from unaltered schists to metamorphic granite, from various localities.

Nos. 134 to 200.—Metamorphic schist, quartzite, mudstone, sandstone, slate, &c., comprising schists and mudstone, which are often silicified schists, slate shale frequently impregnated with iron pyrites. Sandstone often cemented by silica and passing into quartzite. Lower Silurian fossils (graptolites) of which a good example from Bacchus Marsh is shown (No. 199, slate-blue, fine-grained and somewhat earthy, irregular cleavage, contains numerous fossil markings (graptolites) characteristic of the lower Silurian rocks of Bacchus Marsh), accompanying the slates and shales at Daylesford, Gisborne, Sunbury, Bacchus Marsh, Chewton.

Upper Silurian.

Nos. 201 to 230.—Silicious breccia, silicious conglomerate, sandstone, quartzite, arenaceous schists, mudstone, silicious rocks, limestone (marble), from various localities. Fossiliferous sandstone and grits occur at Botanical Gardens, Melbourne, at Mount Ida, Heathcote, &c. No. 230, basanite, black and siliceous, from Heathcote, belongs to the class of basalts.

Upper Palæozoic.

Nos. 231 to 244.—Conglomerates, sandstone, limestone, mudstone, from various localities, especially Gippsland. We will only mention the following specimens as being of considerable economic value: limestone (encrinital marble) from Thompson River, Gippsland, and from Mansfield; building sandstone from Gippsland. The foregoing Nos. 231 to 244 have been shown on tolerably clear palæontological evidence to be of Devonian age, from lower to upper Devonian.

Nos. 245 to 250.—Sandstones and building freestones whose precise geological position, whether upper palæozic or lower mesozoic, is undetermined.

Nos. 251 to 261.—Mesozoic (carbonaceous) sandstone, shale, mudstone. Fossil plants are found in this formation, namely, sphænopteris, in mudstone, from Port Bunbury, Apollo Bay. No. 261 is a light grey clay, forming the floor of a coal seam, and stated to be valuable for the manufacture of earthenware, from Gippsland.

No. 262.—Coal, bituminous and somewhat friable, deteriorated by infiltration of surface water. From a seam at the mine referred to in foregoing, an analysis by Mr. J. C. Newbery gave—

Fixed carbon	61·54
Ash	2·88
Volatile matter	32·48
Moisture	3·10
	100·00

No. 263.—Coal. Bituminous, deteriorated by atmospheric influences. An analysis by Mr. Newbery gave—

Fixed carbon	63·10
Volatile matter	20·85
Water	10·15
Ash	5·90
	100·00

Hazlewood, Gippsland.

Nos. 264 to 267.—Bituminous coals from Cape Patterson, Gippsland, Kilcunda, generally bright fine specimens which do not stain the fingers.

No. 268.—Bituminous shale. Of a sample of this J. C. Newbery's analysis gave—

Water	2·05
Fixed carbon	27·55
Volatile matter	21·00
Ash	49·40
	100·00

Upon distillation it yields a good illuminating oil. Rintoul's Creek, near Traralgar, Gippsland.

Tertiary (*Miocene*).

Nos. 270 to 289.—Limestone, sandstone conglomerate fossils, cypræa in limestone from Gippsland, leaves in sandy ironstone from Lovel's Creek, Bacchus Marsh. No. 274, limestone (marble), variegated, cream-coloured, and brown, fine, dense, and compact, contains small veins of calcite. Takes a good polish, and would be useful for ornamental purposes. Geelong.

Upper Tertiary (*Pliocene*).

Nos. 290 to 304.—Breccia cemented by ferruginous silica and magniferous infiltration, conglomerate sandstones, shale and clay. Fossil shells occur in sandstone at Brighton Beach, and leaf impressions in grey clay at Daylesford.

Mineral Collection.

Nos. 305 to 343.—Gold in quartz from many different mines, from Blackwood, Talbot, Daylesford, Stawell, Walhalla, Aberfeldy River, Goldsborough, Beechworth, &c.

CLASSES 100–107.—*Minerals, Ores, Building-stones, &c.*

No. 305.—Gold in quartz from a reef in "bed rock" below volcanic and alluvial deposits. Band of Hope and Albion Consols, Sebastopol.

No. 306.—Gold in quartz associated with blende and galena, from reef in "bed rock" below volcanic and alluvial deposit. Band of Hope and Albion Consols, Sebastopol.

No. 307 and 309.—Gold associated in quartz with pyrites and galena, from Sandhurst.

Nos. 314 and 315.—Gold in quartz associated with decomposed pyrites and scorodite, from Clunes.

No. 323.—Gold associated with blende in white translucent quartz. Bristol Hill, Maryborough.

No. 324.—Gold associated with green carbonate of copper in ferruginous quartz. Middlesex Mine.

No. 326.—Gold in quartz associated with felspar. Jersey Reef, Inglewood.

Nos. 331 and 332.—Gold in milky quartz, from 1,150 feet level. Flat Reef, Pleasant Creek, Cross Reef Co., Stawell.

No. 334.—Gold finely disseminated in blue and white quartz, and associated with a pholeritic mineral. Cohen's Creek, Walhalla.

No. 341.—Gold in quartz vein, traversing highly felspathic granite, associated with galena, from a dyke, the so-called Pioneer Reef, in gneiss. Sandy Creek, Beechworth.

No. 342.—Gold in fine silicious quartzite of tertiary age. Edward's Claim, Inglewood.

No. 343.—Gold in ferruginous cement, attached to portion of the bed rock. Tarilta.

No. 344.—Osmiridium, imperfectly crystalline grains. Found associated with alluvial gold. Turton's Creek, Gippsland.

No. 345.—Argentiferous pyrites in auriferous quartz, 206 feet. St. Arnaud Silver Mines Association.

No. 346.—Argentiferous ore, mixed with sulphide of iron, lead, and zinc, with traces of copper. From the Lord Raglan and St. Arnaud Creek, St. Arnaud.

Nos. 347 to 359.—Cassiterite (stream tin) from various localities, namely :—

No. 347.—Cassiterite (stream tin), in fine grains, associated with titaniferous iron, corundum, and other fine sand. El Dorado, Beechworth.

No. 360.—Breccia, from tin lode, Beechworth.

Nos. 361 to 400.—Copper ores, from various localities, namely :—St. Arnaud, Survey River, Beechworth, Bethunga ; consisting of native copper, green and blue carbonates, copper pyrites, chrysocola (silicate of copper), grey copper (tetrahedrite).

No. 401.—Native lead, from gravel beneath volcanic rock, Haddon deep lead, near Smythesdale. A very curious occurrence ; the piece exhibited is a small nugget of rather hard lead.

Nos. 402 to 407, and 409 to 416.—Galena ; namely, galena with argentiferous pyrites. From river Nowa, Gippsland.

No. 408.—Antimonial lead ore, with silver. Dargo River, Gippsland.

Nos. 417 to 431.—Stibnite, valentinite (oxide of antimony), molybdenite, zinc blende.

Nos. 432 to 452.—Iron pyrites and arsenical pyrites.

No. 453.—Micaceous iron ore, from Nowa Nowa, Gippsland.

Nos. 454 to 471.—Brown iron ore, from various localities.

Nos. 472 to 481.—Pyrolusite, cobaltiferous manganese ore. Earth manganese ore, from various localities.

Nos. 490 to 526.—Specimens of quartz crystals, some specimens forming a breccia with quartz, and all rather dense. Chalcedony, jasper, common opal, silicified wood, &c.

No. 507.—Quartz (prase) coloured green by hydrous chronicacid. Heathcote.

No. 527.—Obsidian. Hamilton.

Nos. 528 to 530.—Gem sand containing topaz, black corundum, pleonaste, zircon, sapphires, &c., from various places, viz., Wombat Ranges, near Mansfield, Blackwood, Daylesford.

Nos. 531 to 573.—Consisting of the following minerals :—Felspar, fibrolite, tourmaline, mica, analcite, phacolite, phillipsite, herschelite (the last four being zeolites from basalts), barites, gypsum, calcite, arragonite, ferro-calcite, spherosiderites, talc-kaolin (ferro-siderite, arragonite, and spherosiderite occur in basalt), brown spar, impure graphite. We may call the attention of mineralogists to a species found at Mount Ida, Heathcote, which has been dedicated to Mr. Alfred Selwyn, Government Geologist. It is a green mineral hydrous silicate of magnesia and chromium sesquioxide, earthy, not crystallized, and is perhaps a mixture.

Nos. 574 to 580.—Coal and lignite ; the first from Cape Patterson, Kilamda, Colac, Moé (Gippsland), the second from Gippsland.

Economic Collection.

Auriferous Quartz.

Nos. 581 and 582.—The Band of Hope and Albion Consols Company, Sebastopol, having a depth of 280, and a thickness of 40 feet ; the average yield of gold being 1 ounce per ton.

Nos. 583 and 584.—The Band of Hope and Albion Consols Company, Sebastopol, having a depth of 250 feet and a thickness of 40 feet ; average yield of gold per ton 1 ounce.

No. 585.—The Parkers United Company, Gordon, having a depth of 630 feet and a thickness of 8 feet ; the average yield of gold per ton 8 dwts.

Nos. 586 and 587. The Staffordshire Reef, near Ballarat, having a depth of 130 feet and a thickness of 7 feet ; the average yield of gold being 6 dwts. per ton.

No. 588.—William's Fancy Company, Staffordshire Reef, near Ballarat, having a depth of 140 feet and a thickness of 14 feet; the average yield of gold being 3 dwts. per ton.

Nos. 589 to 592.—The New Kangaroo Company, Staffordshire Reef, near Ballarat, having a depth of 218 feet and a thickness of 7 feet ; the average yield of gold per ton being 4 dwts.

Nos. 596 and 604.—The Victoria Company, Blackwood, having a depth of 75 feet and a thickness of 2 feet ; the average yield being 15 dwts. per ton.

Nos. 604 and 605.—The North Star Company, Blackwood, having a depth of 60 feet and a thickness of 1 foot ; the average yield being 10 dwts. per ton.

Nos. 606 to 610.—The North Star Company, Blackwood, having a depth of 70 feet and a thickness of 1 foot 2 inches ; the average yield of gold being 4 ounces per ton.

Nos. 611 to 613.—The North Star Company, Blackwood, having a depth of 110 feet and a thickness of 1 foot 2 inches ; the average yield of gold being 4 ounces per ton.

No. 615.—Port Phillip Gold-mining Company, Clunes, having a depth of 940 feet and a thickness of 12 feet; the average yield of gold being 13 dwts. per ton.

Nos. 616 and 617.—The New North Clunes Quartz-mining Company, Clunes, having a depth of 240 feet and a thickness of 2 to 7 feet; the average yield of gold being 11 dwt. 2½ grs. to the ton.

No. 618.—New North Clunes Quartz-mining Company, Clunes, having a depth of 690 feet and a thickness of 2 to 7 feet. Average yield of gold per ton 12 dwts.

Nos. 619 and 620.—The North Clunes Quartz-mining Company, Clunes, having a depth of 900 feet and a thickness of 2 to 7 feet; the average yield of gold being 11 dwts. 21·50 grs. per ton.

No. 621.—The North Clunes Quartz-mining Company, Clunes, having a dept of 394 feet and a thickness of 8 to 20 feet; the average yield of gold being 7 dwts. 12 grs. per ton.

No. 622.—The South Clunes Quartz Gold-mining Company, Clunes, having a depth of 480 feet and a thickness of 5 to 6 feet; the average yield of gold being 7 dwts. 12 grs. per ton.

No. 623.—The South Clunes Quartz Gold-mining Company, having a depth of 405 feet and a thickness of 6 feet; the average yield of gold being 7 dwts. 12 grs. per ton.

No. 624.—The South Clunes Quartz Gold-mining Company, Clunes, having a depth of 394 feet and a thickness of 6 feet; the average yield of gold being 7 dwts. 12 grs. per ton.

No. 628.—The Good Luck Company, Rushworth, having a depth of 200 feet and a thickness of 2 feet; average yield of gold, 16 dwts. per ton.

No. 629.—The Forlorn Hope Reef, Rushworth, having a depth of 50 feet and a thickness of 2 to 3 inches; the average yield of gold being 6 ozs. per ton.

No. 630.—The Whistlers Reef Company's Diggings, having a depth of 170 feet and a thickness of 3 to 14 inches; average yield of gold per ton being 5 ozs.

Nos. 631 and 632.—The Little Robert Reef Company's Diggings, having a depth of 100 feet and a thickness of 2 to 3 inches; the average yield of gold being 2 ozs. 4 dwts. per ton.

No. 633.—The White Elephant Reef Company's Diggings, having a depth of 140 feet and a thickness of 3 to 10 inches; the average yield of gold being 3½ ozs. per ton.

No. 634.—Rich and Randolph's Claim, Rushworth, having a depth of 180 feet, and yielding 16 dwts. of gold per ton.

Nos. 635 and 636.—The Hope of Denmark Reef, Rushworth, having a depth of 80 feet and a thickness of 4 to 6 inches; the average yield of gold being 1 oz. 4 dwts. per ton.

No. 644.—Ferron's Reef, Fryerstone, having a depth of 300 feet, and yielding 5 dwts. per ton.

No. 651.—The Boomer's Reef, Panton Hill, having a depth of 100 feet and a thickness of 1 foot 6 inches; the average yield of gold being 1 oz. 10 dwts. per ton.

No. 652.—The Pig-tail Reef, Warrandyte, having a depth of 98 feet and a thickness of 10 inches; the average yield of gold being 2 ozs. 5 dwts. per ton.

Nos. 653 to 655.—The Orams Reef, Kingstown, having a depth of 320 feet and a thickness of 3 inches; the average yield of gold being 5 ozs. per ton.

No. 656.—The Cooper Reef, Rutherglen, having a depth of 70 feet and a thickness of 12 to 14 inches; the average yield being 1 oz. per ton.

No. 657.—The Great Eastern Reef, Rutherglen, having a depth of 110 feet and a thickness of 20 to 25 inches; the average yield of gold being 1 oz. 10 dwts. per ton.

No. 658.—The Champion Reef, Rutherglen, having a depth of 95 feet and thickness of 6 to 12 inches; the average yield of gold being 1 oz. 10 dwts. per ton.

No. 659.—Campbell's Reef, Rutherglen, having a depth of 60 feet and a thickness of 6 to 10 inches; the average yield of gold being 1 oz. 10 dwts. per ton.

No. 660.—The Gift Reef, Chiltern, having a depth of 97 feet and a thickness of 10 inches; average yield of gold being 1 oz. per ton.

No. 661.—The Caledonian Reef, Chiltern, having a depth of 170 feet and a thickness of 24 inches; the average yield of gold being 2 ozs. per ton.

Nos. 662 to 666.—The Pass-by Reef, Chiltern, having a depth of 140 feet and a thickness of 3 to 20 inches; the average yield of gold being 16 ozs. per ton.

No. 667.—The Oriental Reef, Morse's Creek, having a depth of 250 feet and a thickness of 1 foot 6 inches; the average yield of gold being 1 oz. per ton.

No. 668.—The Home Reef, Growler's Creek, having a depth of 300 feet and a thickness of 3 feet; the average yield being 8 dwts. to 1 oz.

No. 669.—The Try-again Eastern Reef, Growler's Creek, having a depth of 300 feet and a thickness of 2 feet 6 inches; the average yield of gold being 1 oz. 5 dwts. per ton.

No. 670.—The Try-again Western Reef, Growler's Creek, having a depth of 300 feet and a thickness of 2 feet 6 inches; the average yield of gold being 1 oz. 5 dwts. per ton.

No. 672.—The Native Industry Reef, Growler's Creek, having a depth of 70 feet and a thickness of reef of 1 foot 6 inches; the average yield of gold being 7 ozs. per ton.

No. 673.—The Constitution Reef, Growler's Creek, having a depth of 12 feet and a thickness of 8 inches; the average yield of gold being 4 ozs. per ton.

No. 675.—The Windermere Reef, Clear Creek, Buckland River, having a depth of 50 feet and a thickness of 20 feet; the average yield of gold being 1 oz. per ton.

Nos. 687 and 688.—The New Scotchman's Flat Reef, Stawell, having a depth of 1,150 feet and a thickness of 2 feet; the average yield of gold being 7 ozs. per ton.

Nos. 689 and 690.—The New Scotchman's Flat Reef, Stawell, having a depth of 1,100 feet and a thickness of reef 5 to 10 feet; the average yield of gold being 3 ozs. 3 dwts. per ton.

Nos. 394 to 396.—The White Horse Reef, Briseis, having a depth of 260 feet and a thickness of reef 4 to 6 feet; the average yield of gold being 6 dwts. per ton.

No. 697.—The Patrick Tormey, Moonambil, having a depth of 50 feet and a thickness of 2 feet; the average yield of gold being 4 ozs. per ton.

Nos. 698 and 699.—The Jersey Reef, Inglewood, having a depth of 245 feet and a thickness of 5 feet; the average yield of gold being 18 dwts. per ton.

No. 701.—The Union Gold-mining Company, Amherst, having a depth of 250 feet and a thickness of 8 feet; the average yield of gold being 10 dwts. per ton.

Nos. 702 to 706.—The Western or Passmore Reef, Bristol Hill, having a depth of 400 feet and a thickness of reef of 3 feet; the average yield of gold being 10 dwts 3·95 grs. per ton.

Nos. 707 to 709.—The Church Hill Reef, Mt. Greenock, having a depth of 200 feet and a thickness of reef 1 foot 6 inches; the average yield of gold being 1 oz. per ton.

Nos. 710 to 713.—The Bealiba Reef, Goldsborough, having a depth of 300 to 465 feet and a thickness of reef 8 to 12 feet; the average yield of gold being 1 oz. 10 dwts. per ton.

Nos. 714 and 715.—The Bealiba Reef, Goldsborough, having a depth of 300 feet and a thickness of reef 4 feet; the average yield of gold being 10 dwts. per ton.

Nos. 716 and 717.—The She-oak Reef, Moliagul, having a depth of 50 feet and a thickness of reef 12 feet; the average yield of gold being 10 dwts. per ton.

No. 718.—The Sydenham Reef, South Dunolly, having a depth of 200 feet and a thickness of reef 2 feet 6 inches; the average yield of gold being 1 oz. per ton.

No. 719.—The Queen's Reef, Moliagul, having a depth of 180 feet and a thickness of 5 feet; the average yield of gold being 3 dwts. per ton.

Nos. 720 to 722.—The Long Tunnel Gold-mining Company, Walhalla, having a depth of 230, 500, and 600 feet, and a thickness of 2 to 20 feet; the average yield of gold being 1 oz. 11 dwts. 10 grs. per ton.

Nos. 723 to 727.—The Walhalla Gold-mining Company, Walhalla, having a depth of 100 to 500 feet and a thickness of reef 2 feet 6 inches; the average yield of gold being 18 dwts. per ton.

No. 728.—The Harbinger Reef, Dry Creek, having a depth of 330 feet and a thickness of 4 feet; the average yield of gold being 15 dwts. per ton.

No. 732.—Hard silicious quartzite, a sedimentary deposit of fine quartz sand, apparently cemented by infiltrations of silicious water. One edge contains rounded fragments of quartz, and water-worn gold is visible embedded in the cement. From a depth of 25 feet, the thickness of the layer being 1 to 5 feet; the average yield of gold being 18 dwts. per ton. Edwards & Co., Daly Lead, Inglewood.

Auriferous Washdirt.

No. 733.—Gribble and Co., Morse's Creek, having a depth of 56 feet and a thickness of washdirt 5 feet; the average yield of gold being 2 dwts. per ton.

No. 734.—The Chiltern Valley Mine Co., Chiltern, having a depth of 250 feet, thickness of washdirt 2 feet; the average yield of gold being 15 dwts. per ton.

No. 735.—The Reform G.-m. Co., Haddon, having a depth of 170 feet, thickness of washdirt 3 feet; the average yield being 4 ozs. 5 dwts.

No. 736.—The New Victoria G.-m. Co., Waterloo Flat, having a depth of 160 feet, thickness of washdirt 1 to 5 feet; the average yield of gold being 1 to 5 dwts. per ton.

No. 737.—The Union G.-m. Co., Mount Greenock, having a depth of 340 feet, thickness of washdirt 4 feet; average yield of gold per ton 2 dwts.

No. 738.—Ah Kow & Co., Jericho, Gippsland, having a depth of 35 feet, thickness of washdirt 1 foot ; the average yield of gold being 6 dwts. per ton.

No. 739.—J. R. Elliott, Big Hill, Blackwood, having a depth of 30 feet, thickness of washdirt 3 feet ; the average yield of gold being 2 dwts. per ton.

No. 740.—The Warrandyte Freehold Co., Warrandyte, having a depth of 40 feet, thickness of washdirt 6 to 7 feet 6 inches ; average yield of gold, 1 dwt. 12 grs. per ton.

No. 741.—Turner and party, Kangaroo Lead, having a depth of 35 feet, thickness of washdirt 2 feet 6 inches ; average yield of gold, 2 ozs. 10 dwts. per ton.

No. 742.—The A1 Deep Lead Co., Stawell, having a depth of 110 feet, thickness of washdirt 2 feet ; average yield of gold, 6 dwts. per ton.

No. 743.—May and Co., Woolshed, near Beechworth, having a depth of 8 feet, thickness of washdirt 2 feet ; average yield of gold, 1 dwt. per ton.

No. 744.—The United El Dorado Gold and Tin Mining Co., El Dorado, having a depth of 90 feet, and thickness of washdirt 3 feet ; average yield of gold, 15 grains per ton.

No. 745.—The Seaham, Alma, having a depth of 110 feet, thickness of washdirt 2 to 10 feet ; average yield of gold, 5 dwts. per ton.

No. 746.—The Gladstone Co., Alma, having a depth of 110 feet, and a thickness of washdirt 2 to 10 feet ; average yield of gold, 2 dwts. per ton.

No. 749.—The Argus Co., Chinaman's Flat, having a depth of 130 feet, thickness of washdirt 3 feet ; average yield of gold, 4 dwts. per ton.

No. 750.—Alexander Lamond and party, Gippsland, having a depth of 140 feet, basaltic layer 110 feet ; clay-drift, sand, gravel, and cement, 30 feet ; average yield of gold, 3 dwts. to 2 ozs. per load.

No. 752.—J. M'Diamond, Nicholson River, having a depth of 3 feet, thickness of washdirt 1 foot 6 inches ; average yield, 2 grains per dish.

No. 753.—Prince Extended Co., Daylesford, having a depth of 450 feet, thickness of washdirt 3 feet ; average yield of gold, 2 dwts. per ton.

No. 754.—W. Wenban, Tarilta ; average yield of gold, 1 oz. 10 dwts. per load.

No. 755.—The Golden Point Lead, Ballarat, having a depth of 280 feet, thickness of washdirt 6 feet ; average yield of gold, 6 dwts. per ton.

No. 760.—The Working Miners G.-m. Co., Homebush, having a depth of 180 feet, thickness of washdirt 5 feet ; average yield of gold, 10 dwts. per ton.

Assays of Pyrites.

Nos. 761 to 763.—Raw pyrites ; average yield of gold per ton, 2 ozs. 10 dwts. Long Tunnel G.-m. Co., Walhalla.

No. 764.—Ground concentrated pyrites, after two and a half hours' grinding previous to amalgamation, by which an average of 2 ozs. per ton of standard gold is obtained, besides an allowance of 1s. 6d. per oz. for fine silver. Walhalla G.-m. Co., Walhalla.

Tin Ores.

Nos. 665 to 771, 773 to 776.—Some of the specimens gave an assay of 40, 60, and 70 per cent. of tin. Gippsland.

No. 772.—Stream tin, 15 feet from the surface, said to yield 75 per cent. of tin and an average of 90 ozs. of gold per ton. A cubic yard of washdirt is stated to yield 2 to 2½ ozs. of gold and ½-cwt. of tin ore. Gitt's Claim, Napoleon Flat, Beechworth.

Copper Ores, Antimony and Lead Ores.

Nos. 777 to 787 and 789 to 803.—Some specimens showing marketable form of rich concentrated ores or regulus.

No. 788.—Sulphide of antimony, from Whroo. Depth at which obtained, 220 feet; thickness of reef, 2 feet. Yield of gold, 1 oz. 2 dwts. per ton. The Black Cloud Gold-m. Co. and Antimony-mining Co., Whroo.

Nos. 804 to 808.—Specimens of iron ore from the following localities:—Head of Lake Tyers (Gippsland), Dookie, and Lal Lal.

Limestone.

No. 822.—From quarries near the Walhalla Copper Mine, Thompson River, Gippsland.

No. 823.—Limestone occurring in large nodules in tertiary deposits. March Flat, Bet Bet Creek.

Coal.

Nos. 809 and 810. Specimens of coal from a seam 1 foot 6 inches thick, six miles south from Colac.

Nos. 811 and 812. Two specimens of coal from a seam 2 feet thick. An analysis gave—

Water	6·59
Volatile hydro-carbons	32·25
Fixed carbon	56·38
Ash	4·78
	100·00

Not affording a good coke, is more suited for steam purposes than for gas, of which it yields from 7,000 to 8,000 feet per ton. Kilcunda, 7 miles from Western Port.

No. 813 to 818. Specimens of coal from the following localities: Strzelecki Ranges, Moé, (Gippsland). The Gippsland Coal-mining Co.

Nos. 819 to 821. Lignite from Latrobe River, and Lal-Lal.

No. 820. Black lignite from a large seam 10 feet in thickness, McKinley's Creek, a tributary of the Latrobe River, Gippsland. An analysis gave—

Water	32·6
Volatile hydro-carbons	38·3
Fixed carbons	26·2
Ash	12·9
	100·00

The yield of gas is estimated at 6,000 feet per ton.

Class 101.—Coal, Coke, Kerosene Shale, &c.

The number of specimens of coal, coke, and shale, exhibited as such, were ninety-one, of which one was from England, all the others being the produce of the Colonies, viz.:—Tasmania, 3; Victoria, 1; Queensland, 10; New Zealand, 11; and New South Wales, 65.

New South Wales, Queensland, and New Zealand are fortunate in possessing immense supplies of this most valuable mineral, which enables them to turn their other ore deposits to better account than they could had they to ship them in bulk. Particularly in the case of New South Wales, it has not

only done this, but has attracted immense quantities of the ores of copper and tin from elsewhere for treatment, and brought fleets of ships and steamers for cargoes, &c.

In New South Wales there are twenty-eight colleries in the Northern, six in the Southern, and six in the Western District, as well as three kerosene shale mines, which furnish employment to 5,000 men as miners, besides a large number employed in haulage and shipment, and as clerks, &c. Coal-mining was begun in this Colony in 1829, when 780 tons were raised, and has steadily progressed until, in 1878, the output amounted to 1,575,497 tons, of a value of £920,936, the total produce to that date being over 19,000,000 tons. Shale-mining was begun in 1865, when 570 tons were raised; whilst in 1878 above 24,000 tons, of a value of £57,000, were obtained; and now a considerable export trade to England is being opened up, as the gas companies find that the addition of 7 per cent. of it to their charge increases the illuminating power of the gas by eight candles.

The most important coal-field hitherto has been that of the Hunter River, Newcastle District, as it not only produces excellent bituminous coal, which bears favourable comparison with those of its English prototype, from seams of a good workable thickness, and at no great depth, but has had the advantage of a good port close at hand, which has given great facilities for shipment. In the Southern coal-fields the absence of shelter for vessels has been a great drawback; but the seams being workable by adits in the mountain side, and lying very flat, have to some extent compensated for this. That great enterprise has been shown in developing the trade is evident by the fact that the greater part of the coal is shipped into steam colliers from jetties erected in the open ocean.

The Western District has as yet attained only a small development, but a great future seems to lie before it, not so much in the matter of shipment as for local use. At Wallerawang, for example, are found not only coal but ironstone and limestone of excellent quality, in close proximity, pointing to it as the centre of the future iron industry of New South Wales. The railway passing through the district, and entering in a short distance on other districts rich in copper and other ores, clearly indicate that the smelting of them, already begun, will in the immediate future support a large population.

In Queensland, coal is produced in considerable quantities at Ipswich, within 20 miles of Brisbane, whence the local supplies are drawn, and valuable seams have been found in other parts of the colony.

New Zealand has only lately begun the development of her coal seams, some of which are remarkable for their great thickness. A section of the 18-feet seam at Greymouth, and a half-section of the 30-feet seam at West Port, were exhibited. Most work has been done at the Bay of Islands, where coal of good quality is found, whilst a splendid harbour offers great facilities for its shipment, and leads to the belief that a great trade will be done before long. The output in the Greymouth District, especially from the Brunner mine, is also very considerable. The development of coal-mining in New Zealand within the past few years is so considerable, that, whereas all the coal used was imported ten years ago, now, about half that consumed is of native production.

GREAT BRITAIN.

HINGLEY & SONS, Netherton Iron Works, Dudley.

Coal. Coal from 13-yard seam.—An excellent, bright, stratified coal.

NEW CALEDONIA.

NEW CALEDONIAN GOVERNMENT, NOUMÉA.

Coal and anthracite.—Good-looking coal.

NEW SOUTH WALES.

Sections of the seams worked were exhibited by seventeen of the collieries, fifteen of which were shown in the base of the mineral trophy outside the building. For the purpose of classification analyses of all these coals were made by the Chairman of the Judges, the samples being taken from the entire thickness of the seam under his superintendence, the bands which some of the seams contain, and which are thrown aside in working, being rejected. It is necessary to note that, at the time these samples were taken, the coals had been exposed to atmospheric action, and to some extent to the weather, during six months of an Australian summer; and the resistance to deterioration under such influences, especially in the coals from the Northern and Southern Districts, is quite wonderful.

The best coals are undoubtedly those of the Northern District, which are all strongly coking bituminous coals. The second class comprise chiefly the Southern coals, which are sometimes called semi-bituminous, but are more properly moderately-coking bituminous. They contain a less percentage of volatile hydro-carbons and more ash than those from the north. The third class contains the coals of the Western District, which contain about the same quantity of ash as those of the Southern, but do not coke after exposure to the weather, although they give a larger yield of volatile matter. This indicates that they contain an excess of oxygen, which is evolved during heating as carbon monoxide, and reduces the heating power. Such coals may often be coked when fresh from the pit, but they soon lose this property, and in none of them was a true coke obtained with the samples examined.

81. Vertical section of the coal seam worked at the Ferndale Colliery, Tighe's Hill, near Newcastle, county Northumberland. Lies very regular; dips about 1 in 30 S. A good bright laminated coal, very firm and strong, in which characters it agrees with all the coals exhibited from the Newcastle District.

Specific gravity	1·296	
Analysis by Mr. Dixon :—		
Water	2·10	
Volatile hydrocarbons	36·22	
Fixed carbon	57·24	Coke, 61·08
Ash	3·84	
Sulphur	·60	
	100·00	

Coke, swollen and fairly bright; ash, buff-coloured.

83. Vertical section of coal seam worked at the Newcastle Wallsend Colliery, county Northumberland. Lies very regular; dips about 1 in 40 S.

Specific gravity	1·347	
Analysis by Mr. Dixon :—		
Water	2·29	
Volatile hydrocarbons	34·21	
Fixed carbon	58·60	Coke, 62·88
Ash	4·28	
Sulphur	·62	
	100·00	

Coke, bright, lustrous, and much swollen; ash, reddish-coloured.

79. Vertical section of coal seam worked at the Australian Agricultural Company's Collieries, near Newcastle, county Northumberland. Lies very regular; dips about 1 in 30 S.E.

Specific gravity	1·286	
Analysis by Mr. Dixon :—		
Water	1·65	
Volatile hydrocarbons	35·45	
Fixed carbon	57·84	Coke, 63·28
Ash	4·44	
Sulphur	·62	
	100·00	

Coke, bright and lustrous; ash, reddish-coloured.

80. Vertical section of coal seam worked at the Co-operative Colliery, Plattsburg, near Newcastle. Dips about 1 in 30 S.

Specific gravity	1·310	
Analysis by Mr. Dixon :—		
Water	2·45	
Volatile hydrocarbons	34·38	
Fixed carbon	58·24	Coke, 62·44
Ash	4·20	
Sulphur	·73	
	100·00	

Coke, bright and much swollen; ash, reddish-coloured.

85. Vertical section of coal seam worked at the Waratah Company's Colliery, near Newcastle. Dips about 1 in 30 S. This is, we are informed, from the Company's old tunnel at Waratah, not from their new pit at Raspberry Gully.

Specific gravity	1·293	
Analysis by Mr. Dixon :—		
Water	2·45	
Volatile hydrocarbons	38·16	
Fixed carbon	54·12	Coke, 58·76
Ash	4·64	
Sulphur	·63	
	100·00	

Coke, moderately bright; ash, buff-coloured.

84. Vertical section of coal seam worked at the Newcastle Coal-mining Company's Colliery, Glebe, near Newcastle, county Northumberland. Dips about 1 in 30 S.E.

Specific gravity	1·283	
Analysis by Mr. Dixon :—		
Water	2·14	
Volatile hydrocarbons	33·36	
Fixed carbon	59·16	Coke, 63·92
Ash	4·76	
Sulphur	·58	
	100·00	

Coke, swollen and lustrous; ash, buff-coloured.

82. Vertical section of coal seam worked at the new Lambton Colliery, near Newcastle, county Northumberland. Dips about 1 in 30 S.

Specific gravity	1·291	
Analysis by Mr. Dixon :—		
Water	2·61	
Volatile hydrocarbons	30·62	
Fixed carbon	59·56	Coke, 66·28
Ash	6·72	
Sulphur	0·49	
	100·00	

Coke, bright and much swollen ; ash, reddish-coloured.

86. Vertical section showing about 8 feet of the lower part of the 12-feet coal seam sunk through on the Redhead Coal Company's 4,000 acres at Redhead, county Northumberland.

Specific gravity	1·325	
Analysis by Mr. Dixon :—		
Water	2·09	
Volatile hydrocarbons	33·48	
Fixed carbon	57·04	Coke, 63·88
Ash	6·84	
Sulphur	·55	
	100·00	

Coke, fairly bright; ash, grey-coloured.

88. Vertical section of coal seam worked at the Illawarra Coal Company's Colliery, near Wollongong, county Camden. Excellent rock, roof, and floor; dips about 1 in 30 W. and N.W. This, and all the coals from county Camden, are rather dull-coloured.

Specific gravity	1·354	
Analysis by Mr. Dixon :—		
Water	0·70	
Volatile hydrocarbons	22·04	
Fixed carbon	68·08	Coke, 76·84
Ash	8·76	
Sulphur	0·42	
	100·00	

Coke, swollen and moderately bright; ash, grey-coloured.

90. Vertical section of coal seam owned by J. J. O. Atkinson, near Berrima, county Camden ; slight dip S. and S.E.

Specific gravity	1·408	
Analysis by Mr. Dixon :—		
Water	1·26	
Volatile hydrocarbons	26·61	
Fixed carbon	62·28	Coke, 71·68
Ash	9·40	
Sulphur	·45	
	100·00	

Coke, swollen and fairly bright; ash, greyish-white in colour.

95. Vertical section of coal seam worked at the Coal Cliff Coal-mining Company's Colliery at Coal Cliff, county Camden. Excellent rock, floor, and roof. Dips about 1 in 30 N. and N.W.

Specific gravity	1·378	
Analysis by Mr. Dixon :—		
Water	0·86	
Volatile hydrocarbons	18·22	
Fixed carbon	69·84	Coke, 80·64
Ash	10·80	
Sulphur	·28	
	100·00	

Coke, not good, black-coloured and not swollen; ash, greyish-coloured.

87. Vertical section of coal seam worked at the Osborne Wallsend Colliery, near Wollongong, county Camden. Excellent rock, roof, and floor. Dips about 1 in 30 W. and N.W.

Specific gravity	1·404	
Analysis by Mr. Dixon :—		
Water	1·19	
Volatile hydrocarbons	21·07	
Fixed carbon	66·92	Coke, 77·12
Ash	10·20	
Sulphur	·62	
	100·00	

Coke, fairly bright; ash, grey.

133B. Stewart Taylor & Co., Rylstone, Mudgee. Sample of coal from a seam 21 feet 4 inches think, adjoining proposed line of railway to Mudgee. This coal has a rather dull exterior, but the fracture is bright. The sample is stated to be taken from the outcrop of the seam, but is not yet worked for want of a market, but will doubtless prove of value when the railway from Wallerawang to Mudgee is constructed. Other seams varying in thickness from 3 to 16 feet are found in the neighbourhood. This coal is strongly caking.

Specific gravity	1·300	
Analysis by Mr. Dixon :—		
Water	1·70	
Volatile hydrocarbons	36·42	
Fixed carbon	51·48	Coke, 61·24
Ash	9·76	
Sulphur	0·64	
	100·00	

Coke, fairly bright; ash, greyish-white and bulky.

76B. Green, W. H., Wollongong. Coal from Mount Keira. Analysis by Professor Liversidge of coal from the same colliery, from the Mining Department Report, 1877 :—

Specific gravity	1·379	
Analysis :—		
Water	1·15	
Volatile hydrocarbons	23·51	
Fixed carbon	64·65	Coke, 75·35
Ash	9·70	
Sulphur	·99	
	100·00	

Coke, hard and fairly lustrous; ash, white.

89. Vertical section of coal seam worked at the Bulli Colliery, Bulli, county Camden. Excellent rock, roof, and floor. Dips about 1 in 30 N.W.

Specific gravity	1·369	
Analysis by Mr. Dixon :—		
Water	0·65	
Volatile hydrocarbons	21·65	
Fixed carbon	65·68	Coke, 76·96
Ash	11·28	
Sulphur	0·74	
	100·00	

Coke, fairly bright; ash, grey-coloured.

91. Vertical section of coal seam worked at the Lithgow Valley Coal Company's Colliery, Lithgow, county Cook. Dips about 1 in 20 E.

A compact fairly bright coal.

Specific gravity	1·350
Analysis by Mr. Dixon :—	
Water	2·24
Volatile hydrocarbons	28·48
Fixed carbon	58·80
Ash	9·68
Sulphur	·80
	100·00

This coal did not coke, but left a soft, dull, black, slightly coherent mass, smaller in bulk than the original coal.

Ash, greyish white in colour.

92. Vertical section of coal seam worked at Eskbank Colliery, Lithgow Valley, county Cook. Dips about 1 in 20 E.

Similar in appearance and properties to the last.

Specific gravity	1·329
Analysis by Mr. Dixon :—	
Water	2·70
Volatile hydrocarbons	28·78
Fixed carbon	57·88
Ash	9·88
Sulphur	·76
	100·00

No true coke; ash, grey.

93. Vertical section of coal seam belonging to the Katoomba Coal Company, near Great Western Railway, 66 miles from Sydney.

A very dull-coloured hard coal, having an almost anthracitic appearance, stained with oxide of iron.

Specific gravity	1·400
Analysis by Mr. Dixon :—	
Water	2·25
Volatile hydrocarbons	26·28
Fixed carbon	60·84
Ash	10·04
Sulphur	·59
	100·00

No coke—a scarcely coherent shrunken mass being left.

Ash, greyish-white.

The mine is now only partially opened by an adit driven in the cliffs, which rise about 550 feet above the coal and are open for nearly a mile, so that no shafts will be required. The seam is about a mile from the railway.

92A. Section of coal seam worked at the Vale of Clwydd Colliery. A compact rather dull-coloured coal.

Specific gravity	1·328
Analysis by Mr. Dixon :—	
Water	2·15
Volatile hydrocarbons	35·02
Fixed carbon	52·36
Ash	9·72
Sulphur	·75
	100·00

Did not coke, but left a shrunken cindery mass, which was moderately bright. Ash, grey.

JOHN MACKENZIE, F.G.S.

78 to 129. Collection of the coals of New South Wales, arranged, with maps of seams in each district.—This collection, besides the coals classed above, most of which are exhibited by him for the colliery proprietors, contains specimens of all the most important coals of the Colony of New South Wales, with smaller specimens of the coals represented in the sections. Analyses of some of these coals from the reports of the Mining Department show their value, others have not been analysed.

106. Splint and bituminous coal (18 inches square) from the Anvil Creek Colliery, situated about 32 miles by rail from Newcastle. The following is an analysis in 100 parts by Professor Liversidge :—

Water	1·74
Volatile hydrocarbon	41·10
Fixed carbon	47·90
Ash	7·80
Sulphur	1·46

Specific gravity, 1·323. Coke, 55·70.

Compact hard coal, yielding a firm, bright, lustrous coke, and a white ash.

105. Splint and bituminous coal (18 inches square) from the Greta Coal and Shale Company's Mine, about 32 miles by rail from Newcastle.—Firm, bright, compact coal, yielding a fair and lustrous coke and a buff-coloured ash. From the analysis this coal seems particularly adapted for gas-making. Analysis by Professor Liversidge :—

Water	2·25
Volatile hydrocarbon	39·21
Fixed carbon	54·41
Ash	2·72
Sulphur	1·41

Specific gravity, 1·287. Coke, 57·13.

107. Bituminous coal (18 inches square) from the Singleton Coal Company's Mine, near Singleton.—Rix Creek coal. A good, bright, but rather tender coal, slightly coking. Analysis, taken from one by Mr. Latta, and put in the same as the others for comparison :—

Water	2·8
Volatile hydrocarbon	37·0
Fixed carbon	54·0
Ash	5·60
Sulphur	0·515

Specific gravity. Coke, 59·6

113. Semi-bituminous and bituminous coal (18 inches square) from Mr. Lahiff's and others' coal land at Mount Kembla, near Wollongong.—Four blocks from different seams, ordinary-looking coal.

114. Semi-bituminous coal (18 inches square) from Messrs. Osborne's land at Bellambi.—Bright, good-looking coal.

115. Bituminous coal from Sir Henry Parkes' land near Kiama and Jamberoo.—Very ordinary-looking coal.

116. Bituminous coal (18 inches square) from Messrs. Parbury, Lamb, and others' land at Lake Macquarie. Rather dull-looking coal.

No. 116A. Tarratts, Lake Macquarie.

Coal, 9 feet seam.—Very dull-coloured, hard-looking coal.

103A. Coal from Lake Macquarie.—Good, hard-looking coal, moderately bright.

112. Semi-bituminous coal from Mr. Percy Evans' mine, at Brokersnose, near Wollongong.—Dull-coloured coal, similar in appearance to Osborne Wallsend.

122. Splint coal (18 inches square) from the Coerwull Mine, belonging to Mr. Andrew Brown, near Lithgow.

123. Bituminous coal (18 inches square) from the Nattai Coal Company's Mine, near Nattai.

124. Bituminous coal (18 inches square) from Dr. W. F. Mackenzie and Mr. Charles Kelso Moore's land, at Middle River, near Wallerawang.

125. Splint coal (18 inches square) from Dr. W. F. Mackenzie and Mr. Charles Kelso Moore's land, at Kerosene Vale, Wallerawang.—Ordinary-looking coal.

126. Boghead or petroleum oil cannel coal, from Dr. W. F. Mackenzie and Mr. Charles Kelso Moore's land, at Mount Victoria, near Hartley.

127. Boghead or petroleum oil cannel coal, from Dr. W. F. Mackenzie and Mr. Charles Kelso Moore's land, at Bathgate, near Wallerawang.—Very common and ordinary-looking shale—appears of very little value.

ARMSTRONG, A., Wollongong.

Kembla kerosene shale.—Of some geological interest, and may be of value for gas-making, but there is no analysis to show its value.

AUSTRALIAN KEROSENE OIL AND MINERAL CO., Sydney.

Boghead minerals.—The analysis by Mr. Dixon.

Water	·41	
Volatile hydrocarbon	77·17	
Fixed carbon	12·03	Coke, 22·3
Ash...	10·27	
Sulphur	0·12	
Specific gravity, 1·098		

It yields about 19,000 feet of gas per ton, having an illuminating power of from 40 to 42 candles, and also yields excellent kerosene oil by slow distillation, the yield being large. Traces only of sulphur being present in this material should render the gas or oil procured from it easy of purification. This and the following exhibit of boghead minerals shown are unsurpassed in richness by any similar material known and worked in the world.

BIGGAR, JOHN, Wollongong.

Coal from West Dapto. A dull-coloured small-grained coal. Has a fair appearance.

CO-OPERATIVE COLLIERY, Plattsburgh.

Coke, from the Co-operative Colliery, Platsburgh, county Northumberland. —Very good silvery-looking coke, but does not appear equal to No. 76. No analysis given, as with that exhibit.

HALE P., Clifton.

Coal from Coal Cliff.—Moderately bright and hard coal. The same coal as is already classed.

ILLAWARRA DISTRICT COMMITTEE, Wollongong.

Kerosene shale, Mount Kembla.—A soft shale, easily cut, but the streak formed is too black.

N. S. W. SHALE AND OIL COMPANY, 3, Hunter-street.

Petroleum oil cannel coal, and crude petroleum.

PURIFIED COAL AND COKE CO., Sydney.

Coke purified, and slack.—An excellent exhibit, containing—

Carbon	91·6
Ashes	8·4

Specific gravity, 1·5

This exhibit shows signs of capital manufacture, being in large prismatic pieces having a beautiful silvery lustre. This coke is made from washed slack, samples of which are also exhibited.

WALLERAWANG IRON AND COAL COMPANY, SYDNEY.

Coal and Iron.

The following analysis of coal is by Professor Liversidge :—

Water	1·51
Volatile hydrocarbon	33·24
Fixed carbon	55·74
Ash	9·50

Specific gravity, 1·333. Coke, 62·24

A good bituminous coal ; it is hard and compact, and would therefore be well adapted for use in the blast furnace ; it is also very free from sulphur. The coal measures in this district contain several valuable and thick beds. The lowest seam has a thickness of 17 feet 6 inches ; the next seam 6 feet 6 inches, and No. 3 is 4 feet 6 inches. There are other seams, but they are much thinner. With this coal are also shown ironstone and limestone from the same district, all of which are found within a few miles. Wallerawang is situated 105 miles from Sydney, on the South-western railway, and the deposits of ironstone are six miles from the station ; they occur near the junction of the coal measures with Upper Silurian or Devonian beds, and consist of magnetite and brown hæmatite, as well as "clay band ores," which are interstratified with the coal measures. These are not true clay bands (carbonates of iron), but rather limonite.

The magnetite runs approximately north-east and south-west, and the magnetic effect is so powerful as to render the compass useless in the neighbourhood of the lode. The vein is 13 feet wide, and the ore is very compact, and is accompanied by silicious gangue. It yields about 41 per cent. of iron, and is very free from phosphorus and sulphur.

The brown hæmatite vein has nearly the same direction as the above, and along the line of its outcrop great blocks of ore are scattered for a width of from 12 to 50 feet, and for a length of nearly a mile. At a depth of 40 feet the vein is 18 to 20 feet thick, and the ore is composed of mammillated fibrous nodules, with massive and friable brown hæmatite, and a little pipeclay. The following analysis by Mr. Liversidge is from an average sample :—

Water, hygroscopic	2·74
,, combined	9·70
Insoluble matter	25·33
Sesquioxide of iron	54·23=37·84 per cent. iron.
Phosphorus	·27
Sulphur	·12
Undetermined	7·61

The nodules are much richer and purer than the ore in bulk.

There are four seams of clay band, which lie nearly horizontally, and crop out on both the east and west sides of the Dividing Range. The lowest is rather impure, but the others are good ores, containing from 49 per cent. to 56 per cent. of metal, and very little sulphur and phosphorus. The seams average from 10 to 12 inches thick. Limestone is found cropping out between the deposits of hæmatite and the coal seams ; it is of a bluish-grey colour, veined with calcite, which shows rhomboidal cleavage, whilst the bluish-grey parts are slightly crystalline. This limestone abuts against Devonian or Upper Silurian slates, and at the junction is much brecciated, and includes fragments of slate. Both the limestone and slate stand at a high angle, and can be traced north for a great distance.

The classification is given for the coals and ironstones together.

NEW ZEALAND.

Bay of Islands Coal Company, Kawa Kawa Colliery, Bay of Islands.

Specimens of coal from Bay of Islands.—Glance coal, showing every stage from brown coal to anthracite. A bright fine coal, of which the following is an analysis by Mr. Skey :—

Water	4·60
Volatile hydrocarbon	36·00
Fixed carbon	57·20
Ash	2·20

The coal is worked at the Bay of Islands, within 6 miles of deep water, and 3 miles from the nearest water, to which a railway is laid, and which is now being continued to the deep water.

Brunner Coal Company, Brunnerton, Grey River.

Specimen of coal, two blocks, from Brunner Mine, Grey River. Specimen of coke—half-ton—manufactured from screenings of the above. From 10 miles above Greymouth. This is a good-looking, bright coal, with a fine fracture. The Company have a considerable quantity at the mines, but labour under the disadvantage of having a bad harbour. The coke exhibited is dense and sonorous, hard and lustrous, and has every appearance of being a most excellent article.

COAL-PIT HEATH COAL-MINING COMPANY (Limited), Greymouth.

Section of 18-ft. coal-seam, from the Company's mine.—12s. per ton delivered on board ship at Greymouth.

The section of coal from the 18-ft. seam shows great uniformity throughout the thickness of the seam. A fairly bright bituminous coal. Analysis by Mr. Skey :—

Water	1·05
Volatile hydrocarbon	34·48
Fixed carbon	61·75
Ash	4·09

COLLINGWOOD COAL COMPANY.

Coal from No. 3 seam.—A good-looking, bright anthracite coal, but appears almost too hard for ordinary use.

GARDNER, JAMES, Birchwood, Southland.

Specimen of coal from Birchwood Estate, Southland.—This is stated to be tertiary coal with bright minutely conchoidal fracture and rather tender; it shows minute specks of pyrites disseminated through it, which is very disadvantageous.

GREEN ISLAND COAL COMPANY (Limited), Dunedin.

Specimens of brown coal from the Green Island Mines.—Not of much importance—only fit for local use.

HOOPER & DODSON, Nelson.

Coke.—This coke is made from Greymouth coal, and is a good firm sample; bright, sonorous, and hard.

KAITANGITA COAL COMPANY, Otago.

The following is an analysis by Mr. Skey :—

Water	15·41
Volatile hydrocarbon	38·22
Fixed carbon	44·18
Ash	2·19
Sulphur	—

This coal, which is said to be of a tertiary age, is rather dull-coloured, and very tender. The large percentage of water shows an approach to brown coal, and must considerably reduce its evaporative power.

MURRAY, DALGLEISH, & COMPANY, Nightcaps, Southland.

Specimen of coal from Nightcaps, Southland.

SHAG POINT COAL COMPANY (Limited), Dunedin.

Specimen of coal.—Specimen of brown coal fairly represented, but only of local value.

WALTON PARK COAL COMPANY (Limited), Dunedin.

Samples of brown coal from the Company's pits, Green Island, near Dunedin.—Similar to Shag Point coal.

WESTPORT COLLIERY COMPANY, Westport.

Specimen of coal and pillar, showing one half the thickness of the 30-ft. seam, Mount Rochfort Mine.

This is a good, bright, firm coal, which is just being opened out, and is within 12 miles of a good harbour, but the country between is very rugged. The following is an analysis by Mr. Skey :—

Water	2·53
Hydrocarbon	34·20
Fixed carbon	61·73
Ash	1·54

WEST WANGANUI COAL CO.

A bright firm anthracite coal, showing a good conchoidal fracture, but there is no analysis.

WILLIAMS, CAPT. W. R., Wellington.

Specimens of coal (soft smithy) from Wellington Mine. Specimens of coke from Wellington, Westport.—Coal bright, but very tender. Coke soft.

WILSON, W., Malvern, Christchurch.

Specimens of coal (bituminous) seam 6 ft. 6 in. Specimens of coal (anthracite), seam 2 ft. 10 in., from Malvern Hills, Canterbury.—A rather dull looking coal.

QUEENSLAND.

BOWEN MUNICIPAL COUNCIL.

Block of coal from the Daintree seam, Bowen River, Leichhardt District, with plan of seam attached.

GREGORY, A. C., C.M.G., Brisbane.

Collection of specimens of coal from various districts of Queensland, as under.

Burrum Mine, Maryborough.—Analysis :

Volatile in coking	31·5
Fixed carbon	64·0
Ash	4·5
Total	100·00

Thomas' Mine, Bundamba, near Ipswich.—Analysis :

Volatile in coking	29·8
Fixed carbon	59·2
Ash	11·0
Total	100·00

Jones' Mine, Bundamba, near Ipswich.—Analysis :

Volatile in coking	28·9
Fixed carbon	61·5
Ash	9·6
Total	100·00

Waterstown Mine, Ipswich.—Analysis :

Volatile in coking	25·2
Fixed carbon	62·0
Ash	12·8
Total	100·00

Comet River, Rockhampton.—Analysis :

Volatile in coking	25·0
Fixed carbon	65·3
Ash	9·7
Total	100·00

Tivoli Mine, Ipswich.—Analysis :

Volatile in coking	26·7
Fixed carbon	66·4
Ash	6·9
Total	100·00

Walloon, West Moreton.—Analysis :

Volatile in coking	41·0
Fixed carbon	42·0
Ash	17·0
Total	100·00

A collection of coals consisting of small specimens only,—the exhibit from Burrum Mine, Maryborough, and Tivoli Mine, Ipswich, being the best.

WHITLEY W., Maryborough.

Section of coal representing seam from Burrum Coal-fields.—Has 64 per cent. of fixed carbon ; 4½ per cent. of ash. A bright coal, rather tender and soft.

SOUTH AUSTRALIA.

BINNEY, CHAS., Adelaide.

Specimen of coorongite or elaterite.—This substance, called also mineral caoutchouc, is shown in sheets about a quarter inch thick, as found near Adelaide. In mass it is black, but in thin pieces translucent. It is somewhat elastic, but seems to dry up on the surface into a horny mass. Heated in a tube a dark red oil distills off having an odour somewhat similar to the so-called " oil of brick" obtained by the destructive destillation of fixed oils, and leaves a carbonaceous residue.

TASMANIA.

LORD, Honorable J., Hobartville.

A block of anthracite coal from York Plains.—No analysis given. Appearances not much in its favour.

RANSOM, T. Killymoon.

A block of bituminous coal from Mount Nicholas.

RISBY, J., M.H.A.

A block of anthracite coal from Bruni Island.

SPENCER, F., Hobart Town.

A block of anthracite coal from Jerusalem.

VICTORIA.

HUNTER, ARCHIBALD D., Lal-Lal, Ballarat.

Specimens of lignite.—Does not look of much value as fuel. Altered peat and wood—is not a true lignite.

Class 102.—Marbles.

Marbles were well represented in the Belgian, Italian, and all the Colonial Courts. In the case of the exhibitors in the Colonial Courts it is to be regretted that many sent only small hand specimens, from which little or no idea could be formed of the value of the exhibit. From any marble quarry or rock small specimens of great beauty may be obtained, but the demand is not for such specimens, but for large blocks free from flaws. The object of exhibiting is to display the resources of the exhibitor, and unless he is prepared to do it in the manner indicated it might as well be left undone, so far as any personal advantage is concerned. In some of the general collections of minerals beautiful specimens were shown, amongst which may be mentioned a white pink and dove coloured marble in that of the Mining Department of New South Wales, and some dark green syenite in the Queensland collection. White saccharoid marble from the Colonies was only represented by a small specimen from New Zealand. This was evidently a surface specimen, had a slightly bluish-grey tinge, and was in texture as well as colour somewhat similar to the white Grecian marble. The value of such stone, though not a first-rate statuary marble, is considerable ; thus, blocks of five or six cubic feet, *i.e.* large enough for a bust, is worth about 10s. per cubic foot, whilst blocks from which a full-sized figure could be cut would be worth 20s. per foot. Coloured marbles, unless of rare pattern, are not so valuable, but if blocks of sufficient size could be obtained of some of those exhibited in the Colonial Courts they would doubtless bring a considerable price in Europe, and lead to a profitable industry if the inland carriage were not too expensive.

Of building stones the exhibits were very varied, some being of most excellent quality and some giving cause for astonishment that they were exhibited at all. Naturally the Colonies were the chief exhibitors in this class, and amongst them New Zealand takes a high place, showing stones of every variety and texture. It would have been of great interest to have determined the resistance to crushing of some of these, as well as their porosity, resistance to weather, &c., but neither the time nor appliances for making such tests were at command. The flagstones and slates do not call for more particular notice than is given with the particular exhibits.

BELGIUM.

BOUCNÉAU, LÉON, Sculptor, Marble-cutter, and Dealer in Marble, Rue Verte, Brussels.

Several mantel-pieces worked out of marble, two of which are Belgian, being black- and red-coloured, both of them being very excellent quality.

BRAGARD, EUGÈNE, Marble-cutter, Rue Bara Cureghem, Brussels.

Marble mantel-pieces and pavement. Grey and black marbles, rather common, but also cheap.

DE JAIFFVE, DE VROYE, du Mazy,—Branch House, Boulevard Richard le Noir, Paris.

Samples of marble and slabs for pavement and flooring. Appear very good pavement slabs, the material being hard, so that it ought to wear well, and, like all the Belgian exhibits in this class, the prices f.o.b. at Antwerp are very low.

LEFÈVRE, GUSTAVE, Quarry-owner, Yvoir, near Dinand.

Veined black marble, blue Belgian, and marble slabs for pavements. A large block of black marble veined with white, taking a uniform surface and a good polish, this block being the only large one exhibited in the Court. Some tiles are also exhibited in a rough semi-polished and polished state; they are of black marble, and are all of good quality.

MAUDOUX, A., Quarry-owner and Dealer in Marble, Walcourt.

Assorted marble, for flooring and pavements. The white, dark grey, and black marbles are of excellent quality, and very cheap.

PUISSANT FRÈRES, Marble Merchants and Quarry-owners, Merbes le Château.

Marble mantel-pieces and slabs. An exhibit of 17 foreign and 14 Belgian, all very high class marbles, the principal colours being white, grey, red and white, black. The whole an excellent exhibit of marbles, and well polished.

TAINSY, T. (late A. J. LE CLERCQ), Rue Cornet de Grez, Brussels.

Slabs of Belgian marbles. Red, black veined with white, also specimens of blue and petit granite, all of which are very good.

VERBIST-LAMAL, RÉNÉ, Quarry-owner, Brussels.

Marble chimney-pieces, clocks, and slabs. Exhibit of 5 Belgian and 19 foreign marbles, showing Belgian black marble in all its stages from rough to polished. Remarkable as being a pure black, and unspotted.

GREAT BRITAIN.

WEILLER, J., & Co., London and Italy.

Marble and marble works.—Forty-six varieties of marbles and serpentines exhibited, the whole being a very fair collection; but the samples shown were too small to judge of their value, whilst the statuettes, &c., belonged to another class.

ITALY.

ALBIANI, TOMEI, Florence.

Polished marbles for parqueterie. Grey, white, white spotted, and dove-coloured, from Carrara and Como; a very good exhibit of marbles, and also very cheap.

MARIOTTI AND FANTONI, Florence.

A collection of different sorts of stones used in Florentine mosaic. There are 300 specimens exhibited, consisting of marbles, jaspers, calcedony, agate, onyx, also lapis lazuli, &c., used in the manufacture of inlaid work, the whole being a very pretty collection; but the pieces are all small, and only suited for the said work.

NEW CALEDONIA.

HOFF C., Nouméa.

Marbles, 5 specimens.

ROSSITER, G., Nouméa.

Marbles; various specimens.—Small specimens of serpentine. Not well polished, but nicely veined, and if obtainable in large blocks would be of considerable value.

NEW SOUTH WALES.

MUDGEE COMMITTEE, Mudgee.

Polished marble and sandstone (dressed).—This exhibit includes a grey marble containing encrinites, which is of excellent colour and texture, and takes a beautiful polish. A pinkish marble is also shown, but is not of much value, being too rough—the hard veins running through it standing above the general surface. The marble deposits in the district are very varied, numerous varieties being obtainable, from pure white to verd-antique.

PEEL RIVER COMPANY, Tamworth.

Marble.—A small specimen of red marble of excellent quality, takes a good polish, but it is rather difficult to judge from such a small specimen as to its value for constructive purposes.

RUDDER, E. W., Macleay River.

Specimens of marble.—A very pretty specimen of brecciated red marble is shown. This piece is very small, but if such marble could be got in large blocks it would be of considerable value.

NEW ZEALAND.

CANTERBURY MARBLE COMPANY, Christchurch.

Marble, red and grey specimens, from Canterbury Marble Quarry Company. —This marble is good for ornamental building purposes, but not very suitable for chimney-pieces.

JOHNSTON BROS. & Co., Aniseed Valley, Nelson.

Specimen of marble.—Non-competitive. Small specimen of somewhat saccharoid white marble exhibited, takes a very good face. [See introductory notice to this class.]

McCaffrey, Edward, Sculptor, Queenstown.

Specimens. 2. Marble, from the head of Lake Wakatipu. 3. Freestone, fossil leaf, from Fews Creek. 4. Freestone, light yellow, from Fews Creek. 5. Freestone, different grain, from Fews Creek. 6. Freestone, green, from Fews Creek.—Only a small piece of marble exhibited, of very good colour and grain; appears to take a good polish, and if found in large blocks would be of considerable value.

Munro, G., Dunedin.

Specimens of New Zealand Marble (polished and rough).

Specimens of Kakanui stone, viz. :—
Clock case, made from Kakanui stone
Pieces of white marble, cut and polished, from Caswell Sound
Pieces of dove-coloured marble, from Caswell Sound
Samples of K.K. best quality Kakanui stone
Sample of K. second ,, ,, ,,

These are excellent marbles, especially the white ones; they take a very good surface and polish, but have not the saccharoid grain of the finest white marbles. Also along with this exhibit are shown 6 specimens of Kakanui stone, one of which is worked into a clock, it being hardly suitable for such purposes. The Oamaru stone is also very good, and the whole exhibit is a first-class one, and so shown as to display the characteristic excellence of each specimen.

Stansell, John B., Christchurch.

Specimen of marble.

QUEENSLAND.

Gladstone Presbyterian Church Committee.

Marble font of varieties of marble found in the vicinity of Gladstone.—All very good marbles, and take a good polish. The red marble seems the best, and is well suited for the decoration of buildings.

Hunter, Captain R. M., Rockhampton.

Specimens of varieties of marbles from his quarry, Northumberland Group.—Large pieces of pink and black marbles, cut and polished, are very good, as is also grey marble.

Rockhampton Committee.

Six specimens marble, from Percy and other islands on the Queensland coast.—Similar description of marble to Captain Hunter's, but not quite so well polished.

SOUTH AUSTRALIA.

Commission, Adelaide.

Dolomite and marbles from Rapid Bay.—Two dolomites, red and white, an exhibit of building stones, &c., including 1 block steatite, 1 block light pink and grey marble, all of which are very excellent, and take a good polish. The most noticeable piece is a pinkish-grey or dove-coloured marble, and next to that a red dolomite which, although it has a few small holes in it, takes an excellent polish, has a quiet uniform colour, and could be used most effectively as a decorative building material for columns, wainscot, or flooring.

Specimens of ornamental and hard stones, marbles, freestones, limestones, red and white dolomite, soapstone, stone flagging, slate flagging, slate for billiard-tables, roofing slates.—All very excellent and take a good polish. We have already mentioned this exhibit, which was taken by the judges along with the marble shown.

TASMANIA.

GOULD, R., Longford.

Granite from N. E. coast, polished on one side.—A rather ordinary granite, and too porous for fine work.

Class 102.—Granites.

GREAT BRITAIN.

BESSBROOKE GRANITE COMPANY, Bessbrooke, Ireland.

Irish granites, dressed and polished for monumental and architectural work. —Both the red and grey granite are remarkable for uniformity of colour, both being close-grained granites and taking a good polish.

GRANT & WATT, Granite works, Aberdeen.

Square obelisk monument of red polished granite; grey and red polished granite vases.—The grey granite is not particularly good. The red granite is excellent, and is better than the red Bessbrooke granite, and forms the principal part of the exhibit.

HUNTER, JAMES, Aberdeen.

Polished granite.—The red granite is of superior quality—is better than Bessbrooke red.

VICTORIA.

TAYLOR, JAMES, Sandhurst.

Polished granite fountain; polished granite bust pedestals; collection of polished columns.—Harcourt grey granite, consisting of quartz, black mica, and a grey and white felspar, is an excellent large-grained granite of extremely uniform appearance, taking an excellent surface and polish. The best and most ornamental grey granite in the Exhibition. The red granite exhibited is not quite so good, and is rather dull-coloured.

Class 102.—Building Stones.

NEW SOUTH WALES.

BROWN, JNO., Dapto.

Rubble stone and road metal.—Of ordinary quality; this stone is too crystalline, causing a want of regularity of fracture, the specimen shown not being in cubodial pieces from this cause.

BROWN, T., Maitland.

Sandstone (dressed).—A very excellent building stone of a uniform yellowish colour, fine in grain and taking a good surface ; also, a bluish stone which appears almost too fine in grain, approaching in this respect to a mud-stone.

HALL, G., Lithgow Valley.

Sandstone (dressed).—Very fair building stone, rather porous on the surface, perpendicular to the bedding planes, therefore not so suitable for polished work.

HARNETT, R., Sydney.

Block of white freestone.—A trophy of blocks of building stone. A very excellent white rough freestone, apparently having a kaolin cement. This stone does not take a very good face, the grain being too coarse. Like most of the Hawkesbury sandstones, it is dotted over with minute grains or specks of graphite.

PATTERSON, HENRY, Rylstone.

Building stone (3 blocks).—This stone, which had been included under No. 146 (Mudgee Committee) in the Catalogue, is a beautiful white, fine-grained sandstone of uniform colour. Its cementing material appears to be argillaceous. The stone takes good sharp edges, and from its fine uniform grain takes lettering well, whilst from the sharpness of grain we think it would make grindstones for fine work almost equal to the Sheffield Bilston.

PETERS, T., Parramatta North.

Building stone.—A rather ordinary and coarse-grained and streaky building stone. The pillar exhibited shows the stone applied to a purpose to which it is extremely unsuitable, the bedding being placed perpendicularly.

PRITCHARD, JAMES, Maitland.

Building stone.—Two blocks of building stone, of which one is coarse-grained yellow, and of very ordinary quality, the other fine-grained bluish stone, of local importance only.

TERVIE, A., Albury.

Block of stone.—A soft talcose stone, not of much value.

NEW ZEALAND.

DANIEL, W., Dipton, Oreti, Southland.

Specimens of stone from quarry at Dipton, Southland.—Limestone, a good hard building stone, taking a fair face and good angles. Appears particularly suitable for basement and heavy work.

EDWARDS, E. R., Thames.

Specimen of building stone.

ENYS, J. D., Trellisic, Canterbury.

Specimen of building stone from Castle Hill, West Coast Road.—Is a soft limestone easily worked, but not strong ; similar to Oamaru stone.

CLASSES 100–107.—*Minerals, Ores, Building-stones, &c.*

HAAST, PROFESSOR JULIUS VON., Ph.D., F.R.S., Director of Canterbury Museum.

Building stones of Canterbury.

I. Trachyte, from a vertical dyke 16 feet broad. Cap Peak, Banks' Peninsula; Butterfield's Quarry.
II. Trachyte, from a dyke 26 feet broad. Heathcote Valley, Banks' Peninsula; Thompson's Quarry.
III. Trachyte, from a dyke 20 feet broad. Heathcote Valley, Banks' Peninsula; Thompson's Quarry.
IV. Porphyritic dolerite, from a dyke 18 feet broad. Banks' Peninsula; Teape's Quarry.
V. Porphyritic dolerite lava. Northern spur of Banks' Peninsula (Hillock's Gully), Banks' Peninsula.
VI. Porphyritic dolerite lava. Northern spur of Banks' Peninsula; Tait's Quarry.
VII. Anamesite, from a lava stream (submarine), 26 feet thick. Timaru; Kirby's Quarry.
VIII. Quartziferous porphyry. Governor's Bay, Banks' Peninsula; Hodgson's Quarry.
IX. Calcareous sandstone (Oamaru formation). Mt. Somers; Cox's Quarry.
X. Calcareous sandstone (Waipara formation). Mt. Brown; Sheath's Quarry.
XI. Calcareous limestone (Oamaru formation). Kakahu; Sheath's Quarry.
XII. Calcareous limestone (Oamaru formation). White Rock (near Ashley); Nelson's Quarry.
XIII. Calcareous limestone (Oamaru formation). Coal Creek (near Timaru); Pavitt's Quarry.
XIV. Calcareous limestone (Waipara formation). Castle Hill, West Coast Road; Enys' Quarry.
XV. Doleritic tufa. Latter's Spur, Banks' Peninsula; Latter's Quarry.
XVI. Trachyte sandstone. Governor's Bay, Banks' Peninsula; Pott's Quarry.
XVII. Carved specimen of Castle Hill stone; Enys' Quarry.

Seventeen various building stones shown rough, partly dressed, and finished. A very good collection.

The building stones of Canterbury are principally derived from two sources, of which the first, furnishing freestones of excellent quality and of considerable hardness, is of volcanic origin. These are mostly obtained from Banks' Peninsula, and are probably of middle tertiary age. They are derived either from basaltic lava streams, and are used for rubble and dressed ashlar work, or from trachytic dykes. These dyke rocks are very useful, and form in many instances beautiful building stones of rich colour and fine texture. The others, mostly calcareous, are derived from the upper portion of two well-defined sedimentary deposits, named the Waipara and Oamaru formations, the first being of cretaceo-tertiary, and the latter of upper Eocene or lower Miocene age. The calcareous sandstones, usually called limestones, vary from brownish-grey to creamy white, and can all be cut with a saw when taken from the quarry, but they gradually harden when exposed to the air. An almost unlimited supply can be obtained.

MCCAFFREY, EDWARD, Sculptor, Queenstown.

Specimens of stones described as under :—

2. Marble, from the head of Lake Wakatipu.
3. Freestone, fossil leaf, from Few's Creek.
4. ,, light yellow, ,,
5. ,, different grain, ,,
6. ,, green, ,,
7. Gypsum, from head of Lake Wakatipu.
8. ,, ,,
9. Freestone, fine green.
10. ,, cream or light green

11. Freestone, with coal specimens.
12. ,, crest of quarry, with fossil wood.
13. Limestone.
14. Mineral, gold found under it.
15. Stone with broken shell.
16. Limestone, with large shell.
17. Freestone, dressed.
18. ,, partly dressed, fine grain.

The freestone can be turned out from 1 ft. to 20 ft. for pillars any thickness and size, required for building. Price at quarry, 2s. 6d. per cubic foot, free on board lake steamer. Freight to Kingston Railway Station, 10s. per ton. The light grey stone is a good hard stone, taking a smooth surface. It takes lettering very well, and would be very suitable for monumental work.

NELSON MUSEUM TRUSTEES.

Paving stone.—This stone would be more suitable for flooring purposes than for paving, properly so called.

NEW ZEALAND AGRICULTURAL Co., Southland.

Specimen of building stone.—A soft yellow building stone.

OAMARU STONE COMPANY (Limited), Oamaru.

Stone column with capitals, cornice and balusters; specimens of stone undressed.—This is a white granular limestone which occupies a large tract in the north part of Otago, and is worked in extensive quarries in the Oamaru District, whence its name. The following is an analysis by the Government Analyst of N. Zealand :—

Carbonate of lime	90·15
Alumina	1·55
Oxide of iron	·55
Soluble silica	·45
Insoluble matter	7·15
Loss	·15
	100·00

In composition therefore it resembles the oolites of England and the Caen stone of France. It is specially characterized by its low specific gravity, which is 1·68 as taken wet from the quarry, and 1·472 when perfectly dry, which are equivalent to 105 and 92 lbs. per cubic foot respectively. As quarried it is very soft and may be readily worked with carpenter's tools in the lathe, or with the American plane, but is said to become indurated by exposure. It appears to be a good building stone, and large blocks of it are shown, and it is extensively used in New Zealand, the principal buildings in Dunedin being built of it, as is also the new Bank of Australasia in Melbourne. Its porosity, however, would render it a disadvantageous material for underground work or for use in damp situations.

PORT CHALMERS BUILDING STONE Co., Dunedin.

Sample of base course bluestone.

,, ,, kerbing stone.—Very excellent stones, both for kerbing and base work.

WILSON, J., Malvern, Christchurch.

Specimen of building stone, from White Rock Quarry, Canterbury.—A small stone similar to Oamaru stone.

SOUTH AUSTRALIA.

KELSH, JNO., Manoora.

Plain and carved freestone from the Manoora Quarries.—Very ordinary freestone.

TASMANIA.

SHIELD, R. Hobart Town.

Freestone from Tea-tree Quarry; 2. Freestone from Lindisfern; 3. Freestone from Tea-tree; 4. Freestone from Knocklofty. Four specimens of building stones, two white, a red, and a brown. One specimen of flagging stone; the red-coloured stone is a good hard stone; the brown stone is rather porous; the white stone appears to be the best; the flagging stone does not appear to be of any special value.

VICTORIA.

HOLDSWORTH, B., Victoria Quarries, Waurn Ponds, Geelong.

Waurn Ponds freestone.—Small block of what appears to be a good building stone, but the specimen is too small to judge well of its quality.

Class 102.—Slates.

GREAT BRITAIN.

PREVITE & GREIG, Leadenhall-street, London.

Roofing slates.—Blue, grey, and red slates. Rough, and not so good as Roberts and Hunter's. The slates comprising the exhibit were so fastened to the stand as to prevent a proper inspection of them.

ROBERTS & HUNTER, Old Broad-street, London.

Roofing slates.—Purple, blue, and grey slates. A first-class exhibit.

NEW SOUTH WALES.

KERRAWARRY SLATE COMPANY, Sydney.

Slates, and articles made therefrom.—The flagging slabs shown are a fair rough-grained slate. The school slates exhibited show that the material is of good quality for writing slates, being deep-coloured, and having an excellent surface. The roofing slates shown are rough and irregular in grain.

NEW ZEALAND.

OTAGO SLATE COMPANY (LIMITED), Otepopo, Otago.

Samples of slates, quarried from the Company's quarries, viz.:—(1) Slab, 3 ft. 9 in. × 1 ft. 8½ in.; (2) 12 slates, 20 × 10 (Countess); (3) 5 pieces of slate, split thin to show cleavage.—Roofing slates are fair and thin, but rather rough. One slate seemed to have taken a polish well, but had been broken.

SOUTH AUSTRALIA.

ALLEN, JOHN, slate merchant, Willunga.

Slates from Delabola Slate Quarries, Willunga.—Good slate, but rather coarse-grained, and not very thinly split.

MARTIN, J., Willunga.

Slate from Willunga Quarries.—A good slate, but rather coarse-grained; not very thinly split, but having great uniformity and straightness of grain.

TASMANIA.

AUSTRALIAN SLATE COMPANY, HENRY EDGELL, Agent.

Roofing slate from Back Creek.—Thin but rough, and not very straight in the grain.

All the other slates exhibited formed parts of general collections.

UNITED STATES.

PRATT, D. C., New York City.

Roofing, school, pocket-book, and memo. slates.—The roofing slates, which are blue, purple, grey, and red-coloured, are thick, coarse, and rough.

Class 102.—Flagstones.

GERMANY.

HAARMANN & REIMER, Holzminden a/d Weser.

Polished specimens of Weser sandstone.—A reddish-coloured paving-stone containing mica. A soft sandstone.

NEW SOUTH WALES.

COOKBUNDOON FLAG COMPANY, Sydney.

Flags, tiles, and grindstones.—This stone takes a good surface and has a uniform purplish colour, but is too soft for flagging purposes where there is much traffic. It would be more suitable for inside work. The grind-stones are somewhat like the Sheffield bluestone, and might be of use for similar purposes, viz., whetting or putting a face on metals.

GIBBS, W. R., Buckinbong, near Narrandera.

Flagstones.—Very good, large-sized, hard, strong, and apparently would be durable.

O'NEILL, D. J., Eureka Quarry, Burrowa.

Flagstones.—A hard sandstone flagging, exhibited in large slabs. It would apparently stand wear tolerably well, but is too fissile, the bed-joints being

from 1½ inch to 1 inch apart, and would be apt to flake off when worn to the next bed.

SOUTH AUSTRALIA.

THOMPSON & PRIEST, Mintaro.

Flagstones.—Without exception the finest flagstone in the Exhibition. Very excellent in grain, very large sizes, and having a wonderfully smooth surface to be direct from the quarry. The slabs exhibited are 6 ft. × 6 ft., 8 ft. × 6 ft., and such slabs would be extremely useful in tank-building and verandah floors, for which latter purpose the exhibitor prepares the stone of large sizes in 1 in., 1¼ in., 1½ in., and 2 in. thicknesses at prices which appear moderate.

Class 103.—Cements, &c.

We have devoted much time and attention to a proper examination of the various cements exhibited, with the exception of three of which we could not obtain samples. This was entirely owing to the remissness of the agents of the Exhibitors.

We had the use of a first-rate testing machine and moulds, through the courtesy of the agent of Messrs. White, Bros., & Co., as well as their cement cottage near the machinery shed in which the experiments were carried on. These trials extended over twenty-four days, giving results which we expect will be considered of great practical value, seeing the immense quantities of the material used in public and other works in the Colonies. The neat cements were cast in briquettes having a square inch breaking section in brass moulds on wood, and after setting in air for twenty-four hours, were immersed in water and left for seven days, then taken out and tested at once in the machine. The mixtures of two parts sand and one part cement were made by pressing the slightly damp mixture into the mould with a small trowel. After three hours the briquettes were moistened with water twice, and after twenty-four hours they were put into water and broken on the eighth day after making. The sand, which was clean, but rather too fine for the purpose, was that usually employed in Sydney, and both it and the cement were taken by measure. The method of pressing, although it does not give such favourable results as by casting, was employed to save time, as there were only two moulds at our disposal, but all the samples being treated alike, all were on an equal footing. All the exhibitors showed excellent samples of concrete of various descriptions, but we prefer to judge by the actual tests of the cements from which they are made rather than by a mere examination of the mixtures, there being no machine by which they could be tested. Below are given the breaking weight of the samples tried, and the weight per bushel calculated from the weight of a small measure of known water capacity. The weighing being made on a large chemical balance weighing to 1-100th grain. Of the other materials in this class, the artificial pavement exhibited by Mr. O'Neill, the concrete cottage of Messrs. White Bros., and a sample of plaster of Paris from South Australia were the most noticeable, indeed all the others were without particular interest.

BELGIUM.

JOSSON, N. ET DELANGLE, Portland Cement Maker, Antwerp.

Portland Cement.—The breaking strains are :—

Neat cement.		2 parts sand and 1 part cement.	
No. 1	315 lbs. to the sq. inch.	No. 1	162 lbs. to the sq. inch.
,, 2	444 ,, ,,	,, 2	152 ,, ,,
,, 3	420 ,, ,,	,, 3	168 ,, ,,
,, 4	412 ,, ,,	,, 4	178 ,, ,,
,, 5	392 ,, ,,	,, 5	146 ,, ,,
,, 6	438 ,, ,,	,, 6	161 ,, ,,
,, 7	360 ,, ,,	,, 7	192 ,, ,,
,, 8	406 ,, ,,	,, 8	154 ,, ,,
,, 9	328 ,, ,,	,, 9	146 ,, ,,
,, 10	432 ,, ,,	,, 10	178 ,, ,,
	394·7 lbs. to the sq. inch.		163·7 lbs. to the sq. inch.

The briquettes were damp throughout, and had a coarse texture, and some of the briquettes having the lower fractures, were quite wet in the interior. The weight per bushel was 115 lbs. There are also exhibited flooring tiles which appear of good quality, but the cement is much too coarsely ground to give first-rate results. It is noteworthy that in all these trials the cement which gives the greatest breaking strain when cast neat gives also the greatest when mixed with sand, showing that a test of the neat shows accurately the proportion of sand the cement will bear. This shows that a material which costs more may actually be the cheapest in practical use, and especially so when the heavy cost of inland carriage is added to the original price.

WYNEN, LOUIS JEAN & CIE., Managers of the Belgian Marezzo Marble Company, Antwerp.

Paper-weights, table, pedestals for statues, and bust in cement.—Composition imitating black marble. A very good imitation, but the material is rather soft.

FRANCE.

THORRAND & Co., Grenoble (Isère).

Cement. Annual production, 25,000 tons.—The exhibit consists of cement, concrete paving, blocks and moulded garden borders, and architectural ornaments,—rather a nice exhibit. No samples were supplied for testing. The paving blocks of concrete with roughened surface appear well adapted for their intended purpose.

GERMANY.

GRAWITZ & Co., Stettin.

Portland-cement-fabrik "Stern" Portland cement in casks and barrels. Annual production 40,000 tons. Artificial stone of cement. Burnt cement material.

The following are the breaking strains made by us of ten briquettes of neat cement (Grawitz & Co.'s), and ten briquettes of two (2) parts sand and one (1) part cement. After being made, they were exposed to allow for setting for

twenty-four hours, and then put into water, and thence taken on the seventh day and at once tried in the testing machine :—

Neat cement.		2 parts sand and 1 part cement.	
No. 1	628 lbs. to the sq. inch.	No. 1	352 lbs. to the sq. inch.
,, 2	558 ,, ,,	,, 2	350 ,, ,,
,, 3	530 ,, ,,	,, 3	304 ,, ,,
,, 4	584 ,, ,,	,, 4	356 ,, ,,
,, 5	684 ,, ,,	,, 5	288 ,, ,,
,, 6	656 ,, ,,	,, 6	394 ,, ,,
,, 7	756 ,, ,,	,, 7	310 ,, ,,
,, 8	628 ,, ,,	,, 8	282 ,, ,,
,, 9	676 ,, ,,	,, 9	318 ,, ,,
,, 10	640 ,, ,,	,, 10	304 ,, ,,
Average	634·0 lbs. to the sq. inch.		325·8 lbs. to the sq. inch.

The briquettes made of neat cement, broken immediately on being taken from the water, were found to be only penetrated by damp to a depth of about a $\frac{1}{10}$ of an inch, and the fracture was very firm and dense. The weight of this cement was found to be 107 lbs. to the bushel, the weight being determined as described in the introduction, whilst the fineness in grain was remarkable, the grinding having been managed to perfection. The articles manufactured from this cement which are exhibited are all of excellent quality.

This cement is not only the best in the Exhibition, but is the best we have ever seen.

The following is an analysis of Stern Cement taken from H. Reid's Practical Treatise on Concrete and Cements (1879) :—

Silica	22·850	Magnesia	1·235
Alumina	5·511	Potash and soda ...	·923
Oxide of iron ...	2·760	Sulphate of lime ...	2·865
Lime	64·409		

This Company guarantee their cement seven days in water to have a breaking strain of 568·9 lbs. per square inch.

Schifferdecker und Söhne, Heidelberg.

Portland cement, of which the breaking strains were—

Neat cement.		2 parts sand and 1 part cement.	
No. 1	384 lbs. to the sq. inch.	No. 1	168 lbs. to the sq. inch.
,, 2	406 ,, ,,	,, 2	166 ,, ,,
,, 3	360 ,, ,,	,, 3	200 ,, ,,
,, 4	392 ,, ,,	,, 4	176 ,, ,,
,, 5	506 ,, ,,	,, 5	186 ,, ,,
,, 6	416 ,, ,,	,, 6	174 ,, ,,
,, 7	452 ,, ,,	,, 7	194 ,, ,,
,, 8	414 ,, ,,	,, 8	196 ,, ,,
,, 9	396 ,, ,,	,, 9	192 ,, ,,
,, 10	412 ,, ,,	,, 10	194 ,, ,,
Average	413·8 lbs. to the sq. inch.		184·6 lbs. to the sq. inch.

The briquettes of neat cement were damp through, and were strongly alkaline from the presence of free lime, so much so as to obliterate the marks made by a blue pencil coloured with Prussian blue. This cement

appears to be deficient in clay or silica, or to be burned at too low a temperature. The weight per bushel was 110 lbs. There were no exhibits of manufactured cement.

STETTINER PORTLAND-CEMENT-FABRIK, Stettin.

One barrel of Stettin Portland cement. One mosaic plate of cement and variously coloured granite sand.

The following are the breaking strains :—

Neat cement.		2 parts sand and 1 part cement.	
No. 1	322 lbs. to the sq. inch.	No. 1	250 lbs. to the sq. inch.
,, 2	492 ,, ,,	,, 2	184 ,, ,,
,, 3	304 ,, ,,	,, 3	178 ,, ,,
,, 4	420 ,, ,,	,, 4	178 ,, ,,
,, 5	410 ,, ,,	,, 5	180 ,, ,,
,, 6	368 ,, ,,	,, 6	226 ,, ,,
,, 7	448 ,, ,,	,, 7	196 ,, ,,
,, 8	472 ,, ,,	,, 8	202 ,, ,,
,, 9	452 ,, ,,	,, 9	232 ,, ,,
,, 10	480 ,, ,,	,, 10	240 ,, ,,
Average	416·8 lbs. to the sq. inch.		206·6 lbs. to the sq. inch.

The briquettes of this cement were damp throughout. The weight of the cement was 115 lbs. per bushel, and the cement was finely ground, considerably more so than that of Messrs. White Brothers.

The exhibit of cement tiles for paving purposes was very excellent, especially those made apparently with granitic sand, polished and laid together in a slab, the alternate tiles being grey and red. These would make a very excellent floor for a hall, vestibule, or verandah.

GREAT BRITAIN.

GOSTLING J. C., & Co., London, and Phœnix Cement Works, Stroud, Kent.

Portland cement.—This firm exhibit Portland cement concrete blocks, pillars, large vases, arch keys, &c., manufactured from their cement. The cement was not tried, as the agent did not supply us with any, but the manufactured exhibits appear of excellent quality.

JOHNSON J. C. & Co., London, and Gateshead-on-Tyne.

Cement, cement briquettes, concrete, &c.

The following are the breaking strains :—

Neat cement.		2 parts sand and 1 part cement.	
No. 1	378 lbs. to the sq. inch.	No. 1	184 lbs. to the sq. inch.
,, 2	336 ,, ,,	,, 2	182 ,, ,,
,, 3	330 ,, ,,	,, 3	174 ,, ,,
,, 4	350 ,, ,,	,, 4	184 ,, ,,
,, 5	430 ,, ,,	,, 5	174 ,, ,,
,, 6	500 ,, ,,	,, 6	174 ,, ,,
,, 7	516 ,, ,,	,, 7	182 ,, ,,
,, 8	430 ,, ,,	,, 8	250 ,, ,,
,, 9	426 ,, ,,	,, 9	264 ,, ,,
,, 10	450 ,, ,,	,, 10	204 ,, ,,
Average	414·6 lbs. to the sq. inch.		197·2 lbs. to the sq. inch.

The briquettes of this cement were damp throughout. The weight per bushel was 113 lbs. The exhibit includes blocks of concrete, and cement material in the different stages of manufacture, and was of considerable interest on that account.

Levett Wm. & Co. (Limited), London.

Portland silicate cement.—Show cement and small blocks of concrete, but the exhibit generally is not particularly good. We were not supplied with cement for testing.

White, J. B., and Brothers, London

Portland, Keene's, and Parian cements, plaster, &c.

The following are the breaking strains of this cement :—

Neat cement.			2 parts sand and 1 part cement.		
No. 1	594 lbs. to the sq. inch.		No. 1	180 lbs. to the sq. inch.	
,, 2	380 ,,	,,	,, 2	198 ,,	,,
,, 3	666 ,,	,,	,, 3	230 ,,	,,
,, 4	320 ,,	,,	,, 4	282 ,,	,,
,, 5	580 ,,	,,	,, 5	202 ,,	,,
,, 6	526 ,,	,,	,, 6	188 ,,	,,
,, 7	526 ,,	,,	,, 7	230 ,,	,,
,, 8	490 ,,	,,	,, 8	240 ,,	,,
,, 9	470 ,,	,,	,, 9	206 ,,	,,
,, 10	350 ,,	,,	,, 10	212 ,,	,,
Average	490·2 lbs. to the sq. inch.			216·8 lbs. to the sq. inch.	

The briquettes when broken presented a dry core having an area of about $\frac{1}{4}$ of an inch square, the water having penetrated considerably more than in the German "Stern" cement. This cement weighed 108 lbs. per bushel, and was not nearly so finely ground as the Stern cement, and more care in this particular would no doubt largely improve it.

The exhibit of cement slabs and concrete were good, and Messrs. White Brothers are to be commended for the novel application of cement slabs to form the exterior of a cottage which they exhibited on the ground. The slabs or tiles of cement are screwed to wood uprights, the horizontal joints overlapping weatherboard fashion, and the vertical joints being filled with cement, making a weather proof and durable covering.

NEW ZEALAND.

O'Neill, C., M.I.C.E., Wellington.

Artificial Caithness flagging, patented by the exhibitor, 12 × 33 feet, laid at the main or western entrance to the Garden Palace.—An excellent concrete flagging, which stands wear well. Some of this flagging has been laid at the main entrance to the Garden Palace for the last five months, and notwithstanding the immense traffic, at the present time has no appearance of being worn at all. It is a very excellent substitute for stone, in fact superior to sandstone as a pavement.

Class 103.—Lime, Plaster of Paris, &c.

NEW SOUTH WALES.

AUSTRALIAN AGRICULTURAL COMPANY, Newcastle.

Limestone.—No analysis given, but does not appear of much value.

BROWN, JOHN, Dapto.

Limestone.—Shell, showing a very excellent lime-making material.

HAWKE & PLUMB, Carcoar.

Marble, limestone, and lime. The marble shown does not deserve the name of marble, being grey and flawy, but appears an excellent material for lime-making. The lime shown from it looks good.

MAITLAND COMMITTEE, Maitland.

Three sorts of asphalt pavement.—No particulars are given concerning the exhibit, which, though an improvement on an ordinary gravel footpath, cannot be compared with proper paving.

STYLES, T., Yass.

Lime.—No analysis given, and no stone exhibited, so that we cannot judge by inspection or information as to quality.

SYDNEY, MELBOURNE, AND WALLERAWANG COAL COMPANY, Sydney.

Lime.—Only a light-grey fossiliferous limestone shown, of which no analysis is given, but it appears a good lime-making material.

THOMPSON, W. S., Avondale.

Limestone.—An exhibit of small pieces of limestone, but no particulars are given.

WALLERAWANG IRON AND COAL COMPANY, Sydney.

Lime.—This appears an excellent lime, but no particulars are given with exhibit.

WRIGHT, JOHN, Buckaroo Lime Works, Mudgee.

Pure marble limestone.

NEW ZEALAND.

DUNEDIN HARBOUR BOARD.

Cement boulders from sea beach, Port Moeraki, Otago.—Septarian nodules, washed from the Clay Cliff. The following is an analysis of them, from the New Zealand Handbook :—

Obtained.	New Zealand.				England.	France.
	Moeraki.		Amuri.		Sheppey.	Boulogne.
	2	1	3	4		
Carb. of lime	72·4	50·8	68·6	54·9	69·0	63·9
Carb. of magnesia ...	·3	—	1·7	1·5	—	—
Alumina & iron oxides ...	8·7	7·6	6·5	6·4	10·5	12·3
Soluble silica	·8	—	1·0	1·0	18·0	15·0
Sand and clay	17·8	41·6	31·2	31·9		
Water	·6	—	1·1	1·2	1·3	·6

These nodules are similar in composition to those of Sheppey in England, and to the Calderwood limestone in Scotland, from which "Roman cement" is made.

ELDRED, E., Few's Creek, Lake Wakatipu.

Specimens of limestone from Few's Creek, Lake Wakatipu, Otago. Supply unlimited, price for burnt lime, 5s. per sack, delivered at the Bluff Harbour.—A fair yellow-coloured limestone, good for local use. The quantity of which the price is 5s. is somewhat in dispute, but on the most favourable interpretation the article does not appear to be cheap.

MUNRO, GEORGE, Dunedin.

Six samples of hydraulic cement in its native state.—No opportunity of judging, on account of there being no analysis, without which we cannot judge of its value as a cement-making material, unless we had cement made therefrom to test.

SOUTH AUSTRALIA.

CROZIER, HON. JOHN, M.L.C.

Nodules of Gypsum, grey colour.

GAWLER LIME COMPANY, Gawler.

Lime, specimens of.

TOCCHI, AUGUSTUS, Yorketown.

Plaster of Paris, and gypsum from which it is made. This is an excellent exhibit of plaster of Paris, shown along with the material from which it is made. We made briquettes of this plaster, and tested them after standing eight days in air, which give an average breaking strain of 341 lbs. per square inch. We do not know what the usual breaking strain of plaster of Paris is, but H. Reid in his work on Concretes gives the breaking strain on Keene's cement as 240 lbs., and of Parian cement as 274 lbs., the first of these cements being made by the addition of alum, and Parian by the addition of borax to plaster of Paris, which enables the casts to offer considerable resistance to the action of moisture. We consider it quite equal to any plaster of Paris usually sold.

VERNON, CHARLES, Adelaide.

Plaster of Paris.—Briquettes of this plaster would not set, so that it was either not properly burnt, or had been left carelessly exposed to atmospheric influences, and so had deteriorated.

WARD, EBENEZER, M.P., Para Wurlie.

Limestone from Para Wurlie, extensively found on the southern sea-coast. —Might make a good lime; there being no analysis nor sample of lime shown, it is impossible to judge it.

Class 104.—Clays, &c.

In the class of pottery clays a classification was arrived at chiefly from an inspection of the goods produced. In the fine clay we were quite unable to arrive at any classification, as in most instances the clay was shown ground, which preclude any judgment from appearances, and in no case were any analyses given, by which we could judge of resistance to heat. Some of the clays shown certainly did not deserve the designation of fire-clay; they might be suitable enough for ordinary work, but for lining a puddling, re-heating in copper smelting furnace, the bricks made from them would be utterly useless.

NEW SOUTH WALES.

ANDREWS, JOHN, Cordeaux River.

Fuller's earth.—With this exhibit were shown limestone, clays, &c., but the exhibit is of no particular importance.

FOUNTAIN, J., Brisbane Water.

Fire-clay.—Could not judge of practical value of this exhibit, for want of analysis.

MOUNT KEIRA COLLIERY, Wollongong.

Fire-clay; white biscuit-clay.—Did not appear to be very good fire-clay. The white biscuit-clay looked a fair material, but hard.

MUDGEE COMMITTEE, Mudgee.

Fire-clay and fire-bricks.—Very sandy; neither of the samples have the appearance of being fire-clay.

SYDNEY, MELBOURNE, AND WALLERAWANG COAL COMPANY, Sydney.

Fire-clay.—Looked well. No particulars or analysis given.

NEW ZEALAND.

AUSTIN AND KIRK, Christchurch.

Specimens of fire-clay and ganaster.—Very fine-looking fire-clay. No analysis given.

BOYD, GEORGE, Newton, Auckland.

Specimen of fire-clay, bricks, and pozzuolana.—Looked good.

BRUNNER COAL COMPANY, Brunnerton, Grey River.

Samples of fire-clay (ground and unground) from seam underlying coal in Brunner Mine, from 2 feet to 5 feet thick. Value £2 per ton shipped. Sample of fire-bricks, manufactured from above clay. Value £6 per 1,000, shipped.

EDWARDS, E. R., Thames.

Potter's china clay, from Thames; Potter's felspar from Thames.—Appeared rather sandy, but would be good for the manufacture of porcelain.

FORD AND OGDEN, South Malvern, White Cliffs, Christchurch.

Fire-bricks, fire-clays.

GUM AND SPENCE, Lawrence, Tuapeka, Otago.

Specimens of pipe-clay.—Has been successfully manufactured at the Dunedin and Milton Potteries. Clay excellent, burns to a bluish-white. Samples of pottery made therefrom appear very good and show the excellence of the material.

JOHNSTON BROS. & Co., Aniseed Valley, Nelson.

Steatite; steatite block with inkstand cut therefrom.—Material of fair quality, soft and of even texture. Is very important for fire-bricks, lubrication, and for use as chalk.

MUNRO, GEORGE, Dunedin.

Sample of pottery clay. A very good fire-clay.

STANSELL, JOHN B., Christchurch.

Sample of glass-making sand; sample of pottery clay. The glass-making sand looks very good, and from its fine state of division would be easily fritted. The pottery clay is not of much importance.

SOUTH AUSTRALIA.

McEWIN, GEO., Glen Ewin.

Soapstone from Glen Ewin.

VICTORIA.

DAVIES, ROBERT, Chapel-street, South Yarra, Melbourne.

Raw fire-clay.—Looks very good, but there are no tests or analysis given.

HOFFMAN PATENT STEAM BRICK Co., Brunswick, Melbourne.

Specimens of ground clay. Specimens of reef and pipe-clay. 16 different samples exhibited. Some appear excellent material for bricks.

Class 105.—Graphite.

CEYLON.

DASANAYAKE, H. L., Ceylon.

Plumbago. Very excellent sample of plumbago.—A sample of graphite was exhibited in the Queensland Court by the Trustees of the Queensland Museum, but was not bright enough for polishing purposes, and appeared somewhat earthy. It might be suitable for crucible-making, but having no analysis we were unable to judge, as its value for that purpose depends on the amount of ember present and the character of the ash.

Class 106.—Grindstones, &c.

BELGIUM.

Société Industrielle du Grand Duché de Luxembourg (Société Anonyme), à St. Josse ten Noode lez Bruxelles.

Four grindstones. These were large-sized grindstones and of excellent quality.

The following certificate was handed to the Judges from Mr. Thos. B. Linley, importer of engineering materials, after we had classed the exhibit, and as the opinion expressed coincides with our own we append it :—

Dear Sir,—I beg to inform you that I have had the three grindstones from Belgium purchased from you fully tested, and with very satisfactory results. The stones cut quickly and are free from hard spots, and in my opinion are the best stones I have seen imported.

NEW SOUTH WALES.

Lassetter & Co., F. (Limited), 421, George-street, Sydney.

Trophy of grindstones. These stones are obtained from Hawkesbury sandstone, near Manly Beach, and appear of excellent quality, but not quite so good as the Belgian stone, being rather coarser and not so sharp in grain.

Mudgee Committee.

Collection of moulding sand.—This sand was coarse, and of no special interest.

QUEENSLAND.

Smellie, R. & Co., Brisbane.

Moulding sand. This is a very good specimen of dark brown sand or rather loam, and appears very suitable for fine castings.

Class 106.—Lithographic Stones, Hones, &c.

NEW CALEDONIA.

Lavigne, A. Presqu'ile Ducos.

Lithographic stones. Blue and yellow, take a fair surface, but are too mottled for drawing.

NEW SOUTH WALES.

Griffith, J. V., Maneroo.

Hone stones. Very excellent hone stone, approaching Turkey stone in character.

Lawson, P. H., Mudgee.

Dressed hone stone. Hone stone as quarried. A good hard quartz stone, but not so good as the Tasmanian stone.

NEW ZEALAND.

PAWA RIKA LITHOGRAPHIC STONE COMPANY, Abbey Rocks, Westland.

Slabs of lithographic limestone. Surface very good, but veiny; only suitable for transfer work.

TASMANIA.

CHARLES A. GLOVER, Franklin.

Two hone stones from the Huon River. Very good hone stone, takes steel well, but contains some grains of silica which are probably harder than the remainder of the stone.

Class 107.—Mineral Waters.

AUSTRIA.

LOSER BROS., Buda-Pesth.

Ofen-Rakoczy bitter water. The following is an analysis in 10,000 parts:—

Sulphate of magnesium	253·448
,, sodium	211·964
,, calcium	70·660
,, lithium	1·789
,, caseum	traces.
,, rubidium	,,
,, barium	,,
,, strontium	,,
,, potassium	0·976
Chloride of sodium	27·530
Bromide of sodium	0·079
Iodide of sodium	0·006
Fluoride of sodium	traces.
Carbonate of sodium	0·293
,, calcium	1·225
,, iron	0·489
,, manganese	traces.
Phosphate of alumina	·306
Silicic acid	0·560
Boracic acid	traces.
Combined water and loss	1·841

Analysis by Dr. Heim Vohl.

MATTONI, H., Carlsbad and Vienna.

Alkaline acidulous spring water. A slightly alkaline carbonetic acid water, of exceedingly pleasant taste, effervescing slightly. A good water for table use.

MATTONI & WILLE, Buda-Pesth.

Royal Hungarian bitter water. The analysis given shows this to be a similar water to that above, but more diluted.

SCHÖTTLANDER–LÖBEL, Carlsbad, Böhmen.

Carlsbad mineral waters. A very good mineral water.

ULBRICH, ANTON, Püllna, near Brüx.

Bitter water of Püllna. Very disagreeable to the taste, and we should imagine it would be a powerful purgative.

FRANCE.

MONTREUIL FRÈRES, Clichy la Garenne.

Mineral water. An interesting mineral water, as being the only natural nitrate water known. The following is an analysis by Dr. Bonis, of the Paris Academy of Medicine :—

	M. gr. per litre.	Gr. per gallon.
Alkaline nitrates	0 gr. 303	21·21
Carbonate of lime	0 ,, 320	22·40
Chloride of sodium	0 ,, 139	9·73
Carbonate of magnesia	0 ,, 096	6·72
Sulphate of soda	0 ,, 030	2·10
Insoluble residue and loss	0 ,, 016	1·12
	0 gr. 904	

We would have liked to have had some further information as to the source of this water, the large quantity of nitrates in it being remarkable. It would doubtless be of value as a diuretic.

VICHY MINERAL WATERS COMPANY.

(Elizabeth and St. Marie Springs), Cusset, near Vichy (Allier).—M. Baille, manager.—Main depôt, rue St. Lazare, Paris.

Mineral waters (sweet).—Well known, and an excellent water.

GERMANY.

DEUTSCHE WASSERWERKS-GESELLSCHAFT, FRANKFURT $^{a}/_{M}$.

Seltzer water.—Very excellent.

NEW SOUTH WALES.

ROTHERY, W. M., Cliefden, Carcoar.

Mineral waters from a hot spring at Bellubula.—Of no particular interest.

NEW ZEALAND.

ARCHARD, FREDERICK, Makaraka, Auckland.

Artesian mineral waters.—Chalybeate water, strongly impregnated with iron. No analysis is given, and, to the taste, it does not differ from other waters of the same description.

KELLY & FRASER, Thames.

Mineral waters from Puiri Springs, Thames.—Slightly alkaline water, artificially impregnated with carbonic acid. A pleasant soda water.

WILL. A. DIXON,
Chairman.

DEPARTMENT I.

MINING, METALLURGY, AND THEIR PRODUCTS.

GROUP.—Minerals, Ores, Building-stones, and Mining Products.

CLASSES 100–107.

AUSTRIA.

BLEIBERGER BERGWERKS UNION—Klagenfurt-Illyria.—Collection of Lead Ores. Honourable Mention.

LOSER GEBRÜDER—Buda-Pesth.—Bitter Mineral Waters. Highly Commended.

Report—Very fair quality.

MATTONI & WILLE—Buda-Pesth.—Bitter Mineral Waters. Highly Commended.

Report—Very fair quality.

MATTONI, Heinrich—Carlsbad and Vienna.—Sweet Mineral Waters. First degree of Merit.

Report—Exceedingly pleasant taste.

SCHOTTLÄNDER-LÖBEL — Carlsbad in Böhmen. — Sweet Mineral Waters. First degree of Merit.

Report—Quality very good.

ULBRICH, Anton—Püllna-Brüx.—Bitter Mineral Waters. Highly Commended.

Report—Quality good, with strong flavour.

BELGIUM.

BOUCNEAU, Léon—Brussels.—Marbles and Serpentines. First degree of Merit.

Report—Very excellent quality.

BRAGARD, Eugène—Brussels.—Marbles and Serpentines. Commended.

Report—Common and cheap marbles.

DE JAIFFE, DE VROYE—du Mazy.—Marbles and Serpentines.
First degree of Merit.

Report—The pavement slabs are of very good material.

JOSSON & DELANGLE—Antwerp.—Portland cement.
Commended.

Report—Average breaking strain of pure cement, 394 lbs. to the square inch, and of two parts sand and one of cement, 163 lbs. to the square inch.

LEFÈVRE, Gustave—Yvoir, près Dinand.—Marbles and Serpentines.
First degree of Merit.

Report—Black marble with white veins ; excellent quality.

MAUDOUX, Auguste—Walcourt.—Marbles and Serpentines.
Highly Commended.

Report—Good quality and cheap.

PUISSANT FRÈRES—Merbes le Château, sur Sambre.—Marbles and Serpentines. First degree of Merit.

Report—Good collection of Belgian and other marbles.

SOCIÉTÉ INDUSTRIELLE DU GRAND DUCHÉ DE LUXEMBOURG, St. Josse ten Noode lez Bruxelles.—Grindstones.
First degree of Merit.

Report—Very good quality, and very large size.

TAINSY T.—Brussels.—Marbles and Serpentines.
First degree of Merit.

VERBIST-LAMAL, Réné—Brussels.—Marbles and Serpentines.
First degree of Merit.

Report—Good collection of marbles.

CEYLON.

DASANAYAKE, H. L.—Ceylon.—Graphite.
First degree of Merit.

Report—Very excellent sample of plumbago.

GOMES, B. P.—Ceylon.—Gems and Precious Stones.
First degree of Merit.

Report—Very excellent collection.

GOVERNMENT OF CEYLON—Colombo.—Gems and Precious Stones.
First degree of Merit.

Report—Very good collection.

FRANCE.

COMPAGNIE DES EAUX MINERALES de VICHY—Cusset, près Vichy.—Sweet Mineral Waters. First degree of Merit.
Report—An excellent beverage.

MONTREUIL FRÈRES ET CIE.—Clichy la Garenne, près Paris—Mineral Waters. First degree of Merit.
Report—An interesting mineral water, being the only natural nitrate water known.

GERMANY.

DEUTSCHE WASSERWERKS-GESELLSCHAFT—Frankfurt a/M.—Sweet Mineral Waters. First degree of Merit.
Report—Very excellent quality.

KRANTZ, Dr. A.—Bonn a/R.—Mineralogical Collection. First degree of Merit.
Report—Very valuable and important collection of minerals, rocks, and fossils, some of which are of great rarity.

OPPEL, & Co., C.—Friedrichshall.—Saline Water. First degree of Merit Special.

SCHIFFERDECKER & SÖHNE—Heidelberg a/R.—Cements. Highly Commended.
Report—Average breaking strain of pure cement, 413 lbs. ; and of sand and cement, 184 lbs. to the square inch.

STETTINER PORTLAND-CEMENT-FABRIK—Stettin in Pommern.—Cements. Highly Commended.
Report—Average breaking strain of pure cement 416 lbs., and of two parts sand and one of cement, 206 lbs. to the square inch.

THIEMANN A.—Kronthal.—Natural Mineral Waters, in glass bottles. First degree of Merit.

THIEMANN A.—Kronthal.—Natural Mineral Waters, in stone bottles. Highly Commended.

TOEPFFER, GRAWITZ, & CO.—PORTLAND CEMENT-FABRIK "STERN"—Stettin.—Cements. First degree of Merit Special.
Report—Of excellent quality, finely ground, produces a superior mortar of great strength, hardness, and density; being the best exhibited. Average breaking strain of pure cement 634 lbs., and of 2 parts sand and 1 part cement, 325 lbs. to the square inch.

GREAT BRITAIN AND IRELAND.

BESSBROOK GRANITE CO.—Bessbrook, Ireland.—Granites, dressed and polished. First degree of Merit.

Report—The grey granite is particularly excellent.

FOSTER, Dr., Sc., C. Le Neve—Truro, Cornwall.—Geological Collection. First degree of Merit.

Report—Of much importance, because it represents the tin-producing minerals of Cornwall, and is of suggestive value to the Australian prospector.

GRANT & WATT—Aberdeen.—Polished Granite Monuments and Vases. First degree of Merit.

Report—The red granite is particularly good.

GREGORY, James R.—London.—Geological Collection, illustrating Professor Geikie's Primer and Professor Bormey's Manual of Geology. Commended.

Report—Good general collection.

JOHNSON, J. C.—London.—Cements. Highly Commended.

Report—Average breaking strain of the pure cement, 414 lbs. to the square inch; breaking strain of two parts of sand and one part of cement, 197 lbs. to the square inch.

HUNTER, James—Aberdeen.—Granite. First degree of Merit.

Report—Very good granite—takes a good polish.

PREVITE & GREIG—London.—Roofing-slates. Highly Commended.

Report—Very fair slates.

ROBERTS & HUNTER—London.—Roofing-slates. First degree of Merit.

Report—Good purple, blue, and grey slates; remarkably tough and not easily fractured.

WHITE & BROS., John Bazley—London.—Cements. First degree of Merit.

Report—Average breaking strain of the pure cement, 490 lbs. to the square inch; breaking strain of two parts sand and one part cement, 216 lbs. to the square inch.

ITALY.

ALBIANI, Tomei—Florence.—Marbles and Serpentines. First degree of Merit.

Report—Very good and cheap marbles.

MARIOTTI & FANTONI—Florence.—Marbles and Serpentines. Highly Commended.

Report—Good collection of marbles, jasper, chalcedony, &c., for inlaid work.

JAPAN.

KUWAI TAKUSHI—Yeddo.—Sulphur.

First degree of Merit.

Report—Very good quality.

NEW CALEDONIA.

LAVIGNE, Albert—Presqu'ile Ducos.—Lithographic Stones.

Commended.

Report—These stones have fair surfaces, but are rather mottled for drawing on.

MORGAN, T.—Balade.—Copper Ores.

First degree of Merit.

Report—Large block chalco-pyrites.

RATTÉ, F.—Nouméa.—Geological Collection. (Non-competitive.)

First degree of Merit.

Report—Collection of nickel and other New Caledonian minerals scientifically arranged.

ROSSITER, G.—Nouméa.—Antimony Ores.

Highly Commended.

Report—Well crystallized.

ROSSITER, G.—Nouméa.—Chromium.

First degree of Merit.

Report—Very important exhibit.

ROSSITER, G.—Nouméa.—Marbles and Serpentines.

Commended.

Report—Small specimens of serpentine for inlaid work.

NEW SOUTH WALES.

ANVIL CREEK COAL-MINING CO.—Anvil Creek.—Coal.

Highly Commended.

ATKINSON, J. J. O.—Berrima.—Coal.

Highly Commended.

Report—Analysis, water 1·26, volatile hydro-carbon 26·61, fixed carbon 62·28, ash 9·40, sulphur ·45.

AUSTRALIAN AGRICULTURAL CO.'S COLLIERY—Newcastle.—Coal.

First degree of Merit.

Report—Analysis, water 1·65, volatile hydro-carbon 35·45, fixed carbon 57·84, ash 4·44, sulphur ·62.

CLASSES 100–107.—*Minerals, Ores, Building-stones, &c.*

AUSTRALIAN ASBESTOS CO.—Gundagai.—Asbestos.
First degree of Merit.

Report—Very fine exhibit.

AUSTRALIAN KEROSENE OIL AND MINERAL CO.—Sydney.—Kerosene-Shale. First degree of Merit.

Report—Analysis, water ·41, volatile hydro-carbon 77·17, fixed carbon 12·03, ash 10.27, sulphur ·12.

BENSUSAN, S. L.—Sydney.—Mineralogical Collection.
Highly Commended

Report—Valuable collection of useful minerals.

BOOROOK EXHIBITION COMMITTEE—Boorook.—Silver.
First degree of Merit.

Report—Extremely important exhibit.

BROWNE, Thomas—West Maitland.—Building-stone.
First degree of Merit.

Report—Excellent quality.

BULLI COAL-MINING CO.—Bulli.—Coal.
Commended.

Report—Analysis, water ·65, volatile hydro-carbon 21·65, fixed carbon 65·68, ash 11·28, sulphur ·74.

COAL CLIFF COAL-MINING CO.—Coal Cliff.—Coal.
Highly Commended.

Report—Analysis, water ·86, volatile hydro-carbon 18·22, fixed carbon 69·84, ash 10·80, sulphur ·28.

COMMISSIONERS FOR NEW SOUTH WALES TO PARIS EXHIBITION, 1878.—Gems and Precious Stones.
First degree of Merit.

Report—Fine collection of native stones.

COOKBUNDOON FLAG CO.—Sydney.—Flagstones.
Commended.

Report—Suitable for inside work.

CO-OPERATIVE COLLIERY, Wm. Laidley, Proprietor.—Platts-burg.—Coal. First degree of Merit.

Report—Analysis, water 2·45, volatile hydro-carbon 34·38, fixed carbon 58·24, ash 4·20, sulphur ·73.

CO-OPERATIVE COLLIERY, Wm. Laidley, Proprietor—Platts-burg.—Coke. Highly Commended.

DEER BROTHERS' COPPER MINE—Frogmore.—Copper Ore.
Highly Commended.

Report—Very practical collection.

DEPARTMENT OF MINES—Sydney.—Mineralogical Collection.
First degree of Merit Special.

Report—Most excellent collection. Arranged by Mr. C. S. Wilkinson, F.G.S.

CLASSES 100–107.—*Minerals, Ores, Building-stones, &c.*

DEPARTMENT OF MINES—Sydney.—Geological Collection.
First degree of Merit.

Report—An excellent and complete collection.

DEPARTMENT OF MINES—Sydney.—Specimens of Coals the product of New South Wales Mines. First degree of Merit.

ESKBANK COLLIERY—Lithgow Valley.—Coal.
Commended.

Report—Analysis: Water 2·70, volatile hydro-carbon 28·78, fixed carbon 57·88, ash 9·88, sulphur ·76.

FERNDALE COLLIERY—Tighe's Hill, Newcastle.—Coal.
First degree of Merit.

Report—Analysis: Water 2·10, volatile hydro-carbon 36·22, fixed carbon 57·24, ash 3·84, sulphur ·60.

FOUNTAIN, J.—Brisbane Water.—Iron Ore, Fire-clay, Sandstone, and Pigments. First degree of Merit.

Report—Collection showing that most important industries may be developed.

GREAT COBAR MINING CO.—Sydney.—Copper Ore.
First degree of Merit.

Report—Most important collection.

GRETA COAL CO.—Greta.—Coal.
First degree of Merit.

GRIFFITH, J.—Sydney.—Honestones.
First degree of Merit.

Report—Approaching Turkey stone in character.

GULF TIN LODE MINING CO.—Sydney.—Tin Ores.
Highly Commended.

Report—Fine sample of lode tin.

HALL, G.—Lithgow Valley.—Building-stone.
Highly Commended.

Report—Very fair; rather porous.

HARNETT, R.—Sydney.—Building-stone.
Highly Commended.

Report—Excellent white rough freestone.

HAWKE & PLUMB—Blayney.—Limestone and Lime.
Highly Commended.

HENDERSON, W. B.—Sydney.—Tin Ores.
Honourable Mention.

HETHERINGTON, R.A.—Bonshaw.—New England.—Tin Ores.
First degree of Merit.

CLASSES 100–107.—*Minerals, Ores, Building-stones, &c.*

ILLAWARRA COAL CO.—Wollongong.—Coal.
Highly Commended.
Report—Analysis: Water ·70, volatile hydro-carbon 22·04, fixed carbon 68·08, ash 8·76, sulphur ·42.

ISAACSOHN, Martin—Tamworth.—Gold in quartz; other Minerals, and Fossils. Highly Commended.

KATOOMBA COAL CO.—Katoomba.—Coal.
Commended.
Report—Analysis: Water 2·25, volatile hydro-carbon 26·28, fixed carbon 60·84, ash 10·04, sulphur ·59.

KERRAWARRY SLATE CO.—Sydney.—Slates.
Commended.
Report—Good quality for writing slates; roofing slates rather rough.

LASSETTER & CO. (Limited) F.—Sydney.—Grindstones.
First degree of Merit.
Report—Appears to be a very good stone.

LAWSON, P. H.—Mudgee.—Honestones.
Commended.
Report—A good hard quartzose stone.

LITHGOW VALLEY COLLIERY CO.—Lithgow.—Coal.
Commended.
Report—Analysis: Water 2·24, volatile hydro-carbon 28·48, fixed carbon 58·80, ash 9·68, sulphur ·80.

LOWE, C. B.—Mudgee.—Silicified Wood, Topazes, &c.
Commended.

MACKENZIE, F.G.S., John—Newcastle.—Collection of 121 specimens of tin ores. Commended.

MACKENZIE, F.G.S., John—Newcastle.—Collection of Coals of New South Wales, arranged by exhibitor, with Maps of seams in each district.
First degree of Merit.

MILBURN CREEK COPPER-MINING CO.—Milburn Creek.—Copper Ore. Highly commended.
Report—Good collection.

MOUNT KEIRA COLLIERY CO.—Mount Keira.—Coal.
Highly Commended.
Report—Analysis: Water, 1·15; volatile hydro-carbon, 23·51; fixed carbon, 64·65; ash, 9·70; sulphur, ·99.

MUDGEE EXHIBITION COMMITTEE—Mudgee.—Geological Collection. Commended.
Report—Fair general collection.

MUDGEE EXHIBITION COMMITTEE—Mudgee.—Marbles and Serpentines. Highly Commended.
Report—Of good colour, and take a good polish.

NEWCASTLE COAL-MINING CO.—Newcastle.—Coal.
First degree of Merit.

Report—Analysis: Water, 2·14; volatile hydro-carbon, 33·26; fixed carbon, 59·16; ash, 4·76; sulphur, ·58.

NEWCASTLE-WALLSEND COAL CO.—Newcastle.—Coal.
First degree of Merit.

Report—Analysis: Water, 2·29; volatile hydro-carbon, 34·21; fixed carbon, 58·60; ash, 4·28; sulphur, ·62.

NEW LAMBTON COLLIERY—Newcastle.—Coal, sent for exhibition by Mr. J. C. Dibbs. Highly Commended.

Report—Analysis: Water, 2·61; volatile hydro-carbon, 30·62: fixed carbon, 59·56; ash, 6·72; sulphur, ·49.

NEW SOUTH WALES SHALE AND OIL CO.—Sydney.—Kerosene-Shale. First degree of Merit.

Report—Analysis: Volatile matter, 70 per cent.; coke—carbon, 8 per cent., coke-ash, 22 per cent.—total, 100 per cent.; purified gas per ton of shale, 15,399 cubic feet; illuminating power (standard test), 46·35 sperm candles; hydro-carbons, condensible by bromine, 24·05 per cent.; sulphuretted hydrogen in foul gas, ·5 per cent.; carbonic acid, in foul gas, 1·7 per cent.; ash in coal, 22·0 per cent.; ash in coke 74·5 per cent.; sulphur in coal, ·49 per cent.; tar, per ton of shale, 40 gallons; liquor, per ton, 24 gallons; coke and breeze, per ton, 4¼ cwt.; specific gravity, 1·060. The illuminating power ranges from 38·46 to 48·32 sperm candles. This is a remarkably rich cannel coal. It yields a large amount of gas of high illuminating power.

O'NEILL, D. J.—Burrowa.—Flagstones. Highly Commended.

Report—Fair stone.

OSBORNE-WALLSEND COLLIERY—Wollongong.—Coal.
Highly Commended.

Report—Analysis: Water, 1·19; volatile hydro-carbon, 21·07; fixed carbon, 66·92; ash, 10·20; sulphur, ·62.

PATTERSON, Henry—Rylstone.—Building-stone.
First degree of Merit.

Report—Very excellent white stone.

PETERS, George—Parramatta.—Building-stone. Commended.

Report—Rather coarse and ordinary stone.

PRITCHARD, James—Maitland.—Building-stone. Commended.

PURIFIED COAL AND COKE CO.—Sydney.—Coke.
First degree of Merit.

REDHEAD COAL-MINING CO.—Redhead.—Coal.
Highly Commended.

Report—Analysis: Water, 2·09; volatile hydro-carbon, 33·48; fixed carbon, 57·04; ash, 6·84; sulphur, ·55.

REFORM GOLD-MINING CO. (Limited)—Lucknow.—Gold sweated out of Arsenical Pyrites. Highly Commended.

RUSSELL, J. C.—Burraga.—Copper Ore. Highly Commended.
Report—Important ores, but not attractive in appearance.

RUTHERFORD, J.—Bathurst.—Opaline Gold Quartz.
Highly Commended.
Report—Curious and interesting.

SPENCER, Dr.—Bathurst.—Reef and alluvial Gold.
Highly Commended.
Report—Of interest as coming from a deep drift working.

STEWART, TAYLOR, & CO.—Mudgee.—Coal.
Highly Commended.
Report—Analysis: Water, 1·70; volatile hydro-carbon, 36·42; fixed carbon, 51·48; ash, 9·76; sulphur, ·64.

THOMAS, John—Upper Macleay.—Antimony Ore.
Highly Commended.
Report—Fine large specimen.

VALE OF CLYWDD COAL-MINING CO.—Lithgow.—Coal.
Honourable Mention.
Report—Analysis: Water, 2·15; volatile hydro-carbon, 35·02; fixed carbon, 52·36; ash, 9·72; sulphur, ·75.

WALLERAWANG IRON & COAL CO.—Wallerawang.—Exhibit showing the classification together of Coal and Ironstone.
First degree of Merit.

WARATAH COAL CO.—Newcastle.—Coal. First degree of Merit.
Report—Analysis: Water, 2·45; volatile hydro-carbon, 38·16; fixed carbon, 54·12; ash, 4·64; sulphur, ·63.

NEW ZEALAND.

ARCHARD, Frederick—Auckland.—Artesian Mineral Waters.
Commended.

BANK OF NEW ZEALAND—Wellington.—Alluvial Gold.
First degree of Merit.
Report—Capital collection.

BAY OF ISLANDS COAL CO.—Bay of Islands.—Coal.
First degree of Merit.
Report—Analysis: Water, 4·60; volatile hydro-carbon, 36·0; fixed carbon, 57·2; ash, 2·2.

BRUNNER COAL COMPANY—Grey River.—Coal and Coke.
First degree of Merit.

CANTERBURY MARBLE CO.—Christchurch.—Marbles and Serpentines. Commended.
Report.—Good for ornamental building purposes.

COAL-PIT HEATH COAL-MINING CO.—Greymouth.—Coal (section of 18 feet seam). First degree of Merit.
Report—Analysis: Water, 1·05; volatile hydro-carbon, 34·48; fixed carbon, 61·75; ash, 4·09.

DANIEL, William—Dipton, Oreti, Southland.—Building-stone. First degree of Merit.
Report—Limestone, suitable for heavy work.

D'URVILLE ISLAND COPPER-MINING CO. (Limited)—Wellington.—Copper Ores. Highly Commended.
Report—Very excellent.

ENYS, G. D.—Trellisic, Canterbury.—Building-stone. Highly Commended.
Report—Similar to Oamaru stone.

GUM and SPENCE—Lawrence, Tuapeka, Otago.—Pipe-clay. Highly Commended.
Report—Appears to be an excellent material.

HÆMATITE PAINT CO.—Nelson.—Hæmatite Ores and Paint. Commended.
Report—Fair exhibit.

HECTOR, M.D., F.R.S., C.M.G., James—Wellington.—Palæontological Collection. First degree of Merit.
Report—A remarkable collection.

HOOPER and DODSON—Nelson.—Coke. First degree of Merit.

JACKSON, H. D.—Nelson.—Pure Silver. First degree of Merit.
Report—A new mineral called Richmondite.

JOHNSTON, BROS. & CO.—Nelson.—Chrome Ore. First degree of Merit.
Report—Large specimen, non-competitive.

JOHNSTON, BROS. & CO.—Nelson.—Galena, Silver, Lead Ore, and Zinc Blende. Commended.
Report—Good exhibit of blende.

KAITANGITA COAL CO.—Otago.—Coal. Commended.
Report—Analysis: Water, 15·41; volatile hydro-carbon, 38·22; fixed carbon, 44·18; ash, 2·19.

KELLY & FRASER—Thames.—Mineral Waters. First degree of Merit.

M'CAFFREY, Edward—Queenstown.—Marble and Building-stone. First degree of Merit.
Report—Good hard stone, smooth surface.

MUNRO, George—Dunedin.—White and grey Marble. First degree of Merit.

MUNRO, George—Dunedin.—Pottery Clay.
Highly Commended.

Report—Very good fire-clay.

NELSON MUSEUM—Nelson.—Paving-stone.
Highly Commended.

OAMARU STONE CO. (Limited)—Oamaru.—Building-stone.
First degree of Merit.

Report—Light and easily worked.

O'NEILL, M.I.C.E., Charles—Wellington.—Artificial Caithness Flagging.
First degree of Merit Special.

OTAGO SLATE CO. (Limited)—Otepopo, Otago.—Slates.
Highly Commended.

Report—These take a polish well, but are rough.

PAWA RIKA LITHOGRAPHIC STONE CO.—Abbey Rocks, Westland.—Slabs of Lithographic Limestone. Commended.

Report—Very suitable for transfer work.

PORT CHALMERS BUILDING STONE Co.—Dunedin.—Building-stone. Highly Commended.

Report—Very excellent stone for basement and kerbing purposes.

STANSELL, John B.—Christchurch.—Glass-making Sand.
First degree of Merit.

Report—Very good quality.

VON HAAST, Ph.D., F.R.S., Julius—Director of Canterbury Museum, Christchurch.—Canterbury Building-stones.
First degree of Merit.

Report—Good collection.

WESTPORT COLLIERY CO.—Westport.—Coal.
First degree of Merit.

Report—Analysis: Water, 2·53; volatile hydro-carbon, 34·20; fixed carbon, 61·73; ash, 1·54.

QUEENSLAND.

BARTLEY, N.—Brisbane.—Mineralogical Collection.
Highly Commended.

Report—Large and interesting collection of metals and minerals.

BENNETT, Captain—Mount Perry.—Copper Ores.
Highly Commended.

Report—Very good collection.

CRITCHLEY, R.—Gympie.—Antimony Ore.
Highly Commended.

Report—Not particularly well crystallized.

ELDRED, W. H.—Sydney, N.S.W.—Cinnabar from Kilkivan Mines, Wide Bay.

First degree of Merit.

Report—Extremely interesting collection.

GLADSTONE PRESBYTERIAN CHURCH COMMITTEE.—Gladstone.—Marble Font, showing varieties of marble.

Highly Commended.

Report—Good collection of marbles.

GREGORY, C.M.G., A.C.—Brisbane.—Coal.

Highly Commended.

HODGKINSON, W.O.—George Town.—Reef and alluvial Gold.

Commended.

Report—An interesting collection.

HUNTER, R. M.—Rockhampton.—Varieties of Marble.

First degree of Merit.

Report—Very good; pink, grey, and black; cut and polished.

QUEENSLAND COMMISSION—Brisbane.—General collection of Ores, including Malachite.

First degree of Merit Special.

QUEENSLAND MUSEUM TRUSTEES—Brisbane.—Marbles and Minerals. Highly Commended.

ROCKHAMPTON EXHIBITION COMMITTEE—Rockhampton.—Cut and polished Marble. First degree of Merit.

Report—Very good.

SELLHEIM, P. F.—Maytown.—Tin and Quartz specimens.

Honourable Mention.

SMELLIE & Co., Robert R.—Brisbane.—Moulding-sand.

Highly Commanded.

Report—The best quality shown in the Exhibition.

SUTTON, J. W.—Brisbane.—Mineralogical Collection.

Honourable Mention.

Report—An ordinary collection.

WHITLEY, W.—Maryborough.—Coal.

Commended.

SOUTH AUSTRALIA.

ALLEN, John—Willunga.—Slates from Delabola quarries.

Commended.

Report—Rather coarse, and not very thin.

CRABB, R. S.—Adelaide.—Malachite.

First degree of Merit.

Report—Splendid specimen, encrusted with azurite.

ENGLISH & AUSTRALIAN COPPER CO.—Adelaide.—Copper Ores.
Highly Commended.

Report—Of very good quality.

KNIGHT, F.R.I.B.A., J.G.—Adelaide.—Gold from Port Darwin.
Honourable Mention.

MARTIN, J.—Willunga.—Slates.
Highly Commended.

Report—Good, but rather coarse and not very thin.

SOUTH AUSTRALIAN COMMISSION—Adelaide.—Copper Ores.
First degree of Merit.

Report—Excellent collection.

SOUTH AUSTRALIAN COMMISSION—Adelaide.—Dolomite and Marble.
First degree of Merit.

Report—Of very good quality.

SOUTH AUSTRALIAN GOVERNMENT—Adelaide.—Mineralogical Collection.
Highly Commended.

Report—Rather small collection as representative of such an extensive territory.

THOMPSON & PRIEST—Mintaro.—Flagstones.
First degree of Merit.

Report—Of large sizes, and very excellent in quality.

TOCCHI, Augustus—Yorketown.—Gypsum and Plaster of Paris.
First degree of Merit.

STRAITS SETTLEMENTS.

BORNEO CO.—Sarawak.—General collection of Ores.
First degree of Merit.

Report—Excellent collection—particularly fine.

GOVERNMENT OF PERAK—Perak.—Tin Ores.
Highly Commended.

Report—Not well dressed.

TASMANIA.

AUSTRALIAN SLATE CO.—Hobart Town.—Roofing-slates.
Honourable Mention.

Report—Rough in finish.

GLOVER, Charles A.—Franklin.—Honestones.
Highly Commended.

Report—They take steel well, but contain silica.

NORTHERN TASMANIAN COMMISSION—Launceston.—Alluvial Gold. Commended.

SHIELD, Rippon—Hobart Town.—Building-stone. First degree of Merit.

Report—Of good quality.

SOUTHERN TASMANIAN COMMISSION—Hobart Town.—Mineralogical Collection. Honourable Mention.

STEPHENS, F. G. S., Thomas—Hobart Town.—Geological Collection. Highly Commended.

Report—Very good; well illustrative of Tasmanian geology.

UNITED STATES.

PRATT, D. C.—New York.—Roofing and school Slates. Honourable Mention.

Report—Very ordinary in quality.

VICTORIA.

CUTTEN, Walter C.—Riddell's Creek.—Rough and polished Spherosiderite. Highly Commended.

DEPARTMENT OF MINES—Melbourne.—Collection, showing rock specimens from all the known Rocks of Victoria. First degree of Merit.

Report—A very good collection.

DEPARTMENT OF MINES—Melbourne.—Fac-similes of Nuggets found in Victoria. First degree of Merit.

Report—The collection shows well the richness of some of the Victorian alluvial diggings.

HOFFMAN PATENT STEAM BRICK CO.—Brunswick.—Clays. Highly Commended.

Report—Appear to be good material for making bricks.

HOLDSWORTH, Benjamin—Geelong.—Small specimen of Building-stone. Highly Commended.

MAGDALA CO.—Pleasant Creek.—Gold Quartz. Commended.

Reporrt—This specimen is from the deepest mine in the Colonies. [*Vide* General Report, page 16, for description.]

TAYLOR, James—Sandhurst.—Porphyroid Granite. First degree of Merit.

Report—The best and most ornamental granite in the Exhibition.

CLASSES 110–114.

Metallurgical Products.

JUDGES.

BROWN, ALEXANDER	Sydney.
BENSUSAN, S. L.	O'Connell-street, Sydney.
MONTEFIORE, OCTAVIUS LEVI, Consul for Belgium (Chairman)	Gresham-street, Sydney.
STRUTH, JOHN	Phillip-street, Sydney.

CLASSES 110-114.—Metallurgical Products.

The Judges report that the objects in this group are the largest and most varied in the Exhibition. This might have been expected, constituting as they do, the principal staples of the commercial and industrial world. Three of the largest European manufacturing countries, viz., Great Britain, Belgium, and Germany, are extensively represented. America exhibited iron manufactures, which did not, however, come under our consideration; and France is entirely unrepresented, a circumstance which is very much to be regretted.

The exhibits from Great Britain are by far the largest in number, and have proved the error of those who prognosticated, some years ago, that the iron trade of England was becoming a thing of the past. The productions are most excellent, both as regards the quality of material and workmanship, and are quite equal, if not superior in many instances, to those of other countries.

Amongst the principal exhibits in the British Court, those of Messrs. John Brown & Co. (Limited), Atlas Works, Sheffield, claim prior attention, and prove that they have gone to much trouble and expense to give a good idea of their manufactures, which are of such a nature as to show the great capabilities of this Company. The two pieces of armour plate, also the two steel boiler ends, one 9 ft. $4\frac{1}{2}$ in. $\times \frac{3}{4}$ in. thick, flanged, the other 10 ft. $\times \frac{3}{4}$ in. thick, unflanged, as well as several other exhibits, and a large collection of various qualities and descriptions of steel of superior manufacture, are well worthy of attention.

Next in rank to the above we would notice the exhibit of the Earl of Dudley, whose collection consists of a very great variety of different descriptions of iron and steel, with cold tests showing the superior quality of the metal, and the power of the machinery used in their preparation. The whole of this very remarkable collection is deserving of high commendation. It would be impossible to refer to all the various collections of iron and steel which are deserving of attention, but we would notice particularly the nickel steel exhibited by Messrs. William Barrows & Sons, Messrs. N. Hingley & Sons, and Messrs. Thomas Webb & Sons. Galvanized iron is also well represented by the Gospel Oak Company, Braby's, and others. Galvanized wire and other manufactures are well represented by several exhibitors, and we would specially note Messrs. J. B. Brown & Co.'s galvanized wire netting, the quality of which is very superior.

The Belgian exhibits attracted a vast amount of attention from the commencement of the Exhibition, and the great variety and excellence of these manufactures, proved the wonderful capabilities of that country.

The display of the various manufactures of La Société Cockerill, greatly surpassed anything of its kind in the Garden Palace.

Two castings of this firm may be considered as of high excellence, the one consisting of two marine cylinders cast in one piece, weighing $1\frac{1}{2}$ ton, the other of three cog wheels also cast in one piece without patterns, and manufactured to show the perfection which has been attained at these works. They are

deservedly the theme of universal remark, and are unsurpassed of their kind. A piece of steel rail, two hundred feet long, bent cold, (in coil), is a proof of splendid material and workmanship. In another department, steel tyres, shafts, and other various manufactures of steel, iron rails, girders, and plates for ship-building manufactured at these works, and which have undergone the most severe tests at Lloyds, are favourably commented on by all competent judges.

The firm of Riche & Cie. shows a variety of girder iron of great excellence, with tests proving its quality to be inferior to none. The iron exhibited by the Société des Hauts Fourneaux d'Ougrée is remarkable in quality; and the various exhibits of the Syndicat Liègois deserve special comment. Amongst these the steel manufactures of the Société d'Angleur, the articles shown by Messrs. Francotte, Pirlot, et Cie., and many other of the Belgian exhibits, are deserving of special comment.

Special attention should be called to the phosphor-bronze exhibited by G. Montefiore-Levi. This metal is remarkable for its tenacity and durability, and can be applied, as was shown by tests, to railway bearings (to which use it is applied in Belgium), to buckles, tools, arms, and a vast number of other purposes. For these reasons, and on account of its freedom from rust, this metal would be invaluable in this Colony.

In the German Court the world-renowned firm of Friedrich Krupp has a varied collection of its remarkable manufactures, but some disappointment was felt at the comparatively meagre display of the exhibits of this firm. The plates of crucible cast steel from the Essen Works are unequalled by anything in the Garden Palace, and the specimens and tests of steel, iron, iron and steel-plates, tyres, steel-rails, and other manufactures are remarkable both for quality and workmanship.

The Actiengesellschaft-Union, of Dortmund, have also a great variety of specimens and sections of steel and other manufactures of very superior quality. Amongst others we would specially mention the bridge iron of splendid quality, accompanied by photographs of bridges, exhibited by J. C. Harkort, Actiengesellschaft für Eisenindustrie, Duisburg, and the chilled iron, the manufacture of H. Gruson, Buckau-Magdeburg.

We noticed in the American Court a great variety of superior manufactures of iron and steel, which however were judged under classes other than those with which we were charged.

In the comparison of various exhibits so much resembling each other great difficulty was experienced by the Judges, as in some cases no tests were applicable. On the whole it may be considered that the Belgian manufacturers were better represented than those of other countries. The exhibit of La Société Cockerill is a leading feature in a portion of the Exhibition, but in both Great Britain and Germany the variety and excellence of all manufactures in iron and steel is remarkable, and in many cases it would be difficult to give the palm to either of the principal countries or manufacturers. But the price of Belgian iron in comparison with its quality, owing no doubt to the cheapness of labour, and the quality and quantity of raw material, is very noticeable.

In New South Wales the principal iron exhibit is that of the Eskbank Iron Company. Though it was most satisfactory to notice this progress in our industrial enterprise, the pig iron is not of the quality we would have expected to see; some of the rolled iron is however good, and we have no doubt that these manufactures, which are deserving of much commendation, will gradually be improved upon. Messrs. Brown and Brown's exhibit of iron

is of excellent quality, but not being manufactured by them from the raw material, we cannot consider that it should be ranked amongst other iron manufactures. The copper and tin exhibited deserve every attention. In the Victorian Court the Lal-Lal Iron Company exhibit good specimens of hard iron. The sheet lead shown by John M'Ilwraith deserves much commendation ; and the wire of Messrs. Greer and Ashburner and Henry Mackintosh is much to be admired.

The exhibit of the English and Australian Copper Company in the South Australian Court, is in every respect remarkable, as showing the excellence of the article produced at this Company's works.

A vast number of other exhibits are well worthy of special comment, but it would be impossible to particularize in detail other than the most noticeable of the exhibits in the limits of a brief report.

GROUP—Metallurgical Products.

CLASSES 110-114.

BELGIUM.

BELGIAN COMMISSION.—Collective exhibit of manufactured Iron and Steel.

First degree of Merit Special.

BLONDIAUX ET CIE.—Thy-le-Château.—Iron Rails and Sleepers.

Highly Commended.

Report—The iron rails are of good material, the quality of iron in broken sections seems excellent; the fish-plates are also good.

FRANCOTTE, PIRLOT, ET CIE.—Liège.—Sheet-Brass.

First degree of Merit.

Report—General superiority of all articles; brass hammered chaldrons specially commended, and the wire of various thicknesses cannot be excelled.

JOWA—Liège.—Galvanized Iron.

Commended.

Report—Roofing iron rather ordinary ; iron for bridges good of its class.

LAMAL ET CIE., E.—Brussels.—Rolled Lead, lead and tin-lined Pipes.

First degree of Merit.

Report—Quality of metal excellent, and all articles of superior description, the tin-lined lead pipe is deserving of special comment.

MARCHOT, H.—Liège.—Sheet-Iron.

First degree of Merit.

Report—Very superior quality of iron; thin, smooth and malleable.

MONTEFIORE-LÉVI, G.—Anderlecht Foundry, Brussels.—Phosphor-Bronze.

First degree of Merit.

Report—Superior quality and manufacture, remarkable tensile strength, and is not liable to rust.

ORTMANS ET FILS, C.—Verviers.—Manufactured Iron.

First degree of Merit.

Report—Horse-shoes from this material are of excellent make, very light, and cheap, the iron being of a superior quality.

PIERARD FRÈRES ET CIE.—Montigny sur Sambre.—Manufactured Iron.

Highly Commended.

Report—Iron of excellent quality.

RICHE ET CIE.—Marchienne au Pont.—Manufactured Iron.

First degree of Merit.

Report—The iron girders shown in sections evince great strength and capability of bearing the greatest strain. The whole exhibit is of great excellence; hoop and slit iron especially, are of very excellent quality.

SOCIÉTÉ ANONYME DES ACIÉRIES D'ANGLEUR—Ougrée, near Liège.—Iron and Steel First degree of Merit.

Report—A collective exhibit of steel manufactures. The quality of the rails appears very excellent, as is also that of the various specimens of steel exhibited.

SOCIÉTÉ ANONYME DE LA FABRIQUE DE FER DE CHARLEROI—Marchienne lez Charleroi.—Iron-plates.

First degree of Merit.

Report—Very large plates, all appearing to be of very excellent quality.

SOCIÉTÉ ANONYME DE LA FABRIQUE DE FER D'OUGRÉE—Ougrée, near Liège.—Iron. First degree of Merit.

Report—Most excellent descriptions of all qualities of iron, some specimens being particularly fine-grained. The fibrous iron is also most excellent, some of the samples being extremely large in size.

SOCIÉTÉ ANONYME DES FONDERIES, LAMINOIRS, ET TREFILERIES DE DAMPREMY—Dampremy.—Manufactured Iron, &c.

Highly Commended.

Report—Exhibits all of very good quality. The iron wire and copper-coated wire for springs, and the wire for nails are particularly noticeable.

SOCIÉTÉ ANONYME DES HAUTS FOURNEAUX D'ATHUS—Athus.—Pig-Iron. Highly Commended.

Report—This exhibit embraces six different qualities of pig iron, and shows excellence of manufacture.

SOCIÉTÉ ANONYME DES HAUTS FOURNEAUX DE MONCEAU SUR SAMBRE—Monceau, sur Sambre.—Manufactured Iron and rolled iron Joists. Highly Commended.

Report—Broken sections of iron show the material to be of superior quality. The rolled-iron joists are also strong and of good workmanship.

SOCIÉTÉ ANONYME DE MARCINELLE ET COUILLET—Couillet.—Iron and rolled-iron Rails.

Highly Commended.

Report—Sections only of these manufactures are exhibited, which appear to be of very good quality.

SOCIÉTÉ ANONYME METALLURGIQUE D'ESPÉRANCE LONGDOZ—Liège.—Iron and Steel. Highly Commended.

Report—All exhibits are of very good quality.

SOCIÉTÉ COCKERILL—Seraing, near Liège.—Castings, rolled Iron, steel Rails, &c.

First degree of Merit Special.

Report—The exhibits of this company are undoubtedly the best of their kind in the Garden Palace, comprising as they do a great variety of steel and iron exhibits of various qualities. The Judges would therefore remark on some of the principal. The iron-manufacturing department is represented by two trophies of bar iron, 28 feet long, of all shapes and thicknesses. Amongst these are one round bar, 6 inches in diameter, and one square bar of 6-inch sides; also girders of various sizes, all of which could only be made with iron of superior quality. There are also specimens of $\frac{5}{8}$-inch plates, hammered to a thickness of $\frac{1}{16}$ inch, and a collection of square and hexagonal nuts of sixty-four different sizes, all of excellent quality and workmanship. In the forging department there are four remarkable wheels for locomotives and waggons, made by a process patented by the company, which are quite unique, nothing of their kind being found elsewhere in the Exhibition. A double-crank locomotive axle of steel, weighing $1\frac{1}{2}$ ton in the rough state, shows great excellence of material and workmanship; as do also two shafts, bent cold. The foundry department is represented by two cast cylinders, cast in one piece of $1\frac{3}{4}$ ton weight, and three cog-wheels cast in one piece. These extraordinary castings, which are made without patterns, show what difficulties can be overcome, and the The stamped boiler ends exhibit also the excellent quality of material and workmanship of this company. The collection of steel for various iron is of most excellent quality. All who have seen these castings are satisfied that nothing in this respect can approach the Cockerill Foundry. purposes is very remarkable, and its quality cannot be surpassed, the case-hardened steel being worthy of special attention. A steel rail

200 feet long, coiled cold, is an extraordinary exhibit. This rail, weighing 70 lbs. to the yard, is coiled to a diameter of 11 feet, and shows the excellence of the material, as also the powerful nature of the machinery used. The extra steel plates for ship-building are tested by one plate being doubled up cold like a handkerchief without any perceptible fracture. In addition, there are steel waggon axles, bent bar-steel, burst, and a large collection of tests and specimens of various descriptions, together with tests of steel plates and angle iron, made according to Lloyd's directions, the official report on which was shown to the Judges, proving how highly the Cockerill steel is appreciated in England.

SOCIÉTÉ DES FORGES ET LAMINOIRS DE ST. FIACRE (Sohier et Cie., Alex.)—Monceau sur Sambre.—Manufactured Iron. Highly Commended.

Report—All articles of a superior quality, the crown iron being particularly noticeable.

SOCIÉTÉ DES FORGES, LAMINOIRS, ET FONDERIES DE JEMAPPES.—(Demerbe et Cie., V.)—Jemappes, near Liège.—Iron and Steel. Commended.

Report—Of good quality.

SYNDICAT LIÈGOIS—Liège.—Manufactured Iron, &c. First degree of Merit.

Report—A collective exhibit of great variety of iron and steel manufactures, the whole being of the best quality.

The Judges desire to comment specially on the general excellence of the whole of the exhibits in this section of the Belgian Court, and consider that a special collective award should be made.

FRANCE.

CHRISTOFLE ET CIE.—Paris.—Nickel. First degree of Merit.

Report—Quality of metal and alloys excellent, cheapness of manufactures especially noted.

SOCIÉTÉ ANONYME POUR LE TRAITEMENT DES MINERAIS DE NICKEL—Paris.—Nickel. Highly Commended.

Report—Nickel in various stages, extracted from New Caledonian ore. A most interesting exhibit.

GERMANY.

ACTIENGESELLSCHAFT FÜR EISENINDUSTRIE & BRÜCKENBAU (J. C. Harkort)—Duisburg.—Ornamental Iron-work. First degree of Merit.

Report—All the tests are undoubtedly good, the iron being particularly adapted for bridge-making.

DILLINGER HÜTTENWERKE—Dillingen a/d Saar.—Rolled-iron Armour-plate.

Highly Commended.

Report—One piece of large armour plate exhibited, showing the effect of heavy shot, proves that the quality must have been good.

DREHER, Ignatz—Gerresheim bei Düsseldorf.—Drawn iron Wire and wire Nails. Commended.

Report—Good collection of various descriptions of wire, nails, staples, &c.

FELTEN & GUILLEAUME—Mühlheim a/R.—Manufactured Iron.

Highly Commended.

Report—The fencing wire is of superior quality; all other manufactures are good.

GRUSON, H.—Buckau-Magdeburg.—Chilled and Malleable Cast-Iron.

First degree of Merit.

Report—The chilled iron as manufactured is very excellent; all the exhibits are of superior quality.

KARCHER, N., & WESTERMANN.—Ars a/d Mosel, Lothringen.—Rolled Fencing-Wire, Annealed and Galvanized.

Highly Commended.

Report—The exhibits are of good quality, and the varnished fencing wire is particularly good.

KRUPP, Friedrich—Essen a/d Ruhr.—Manufactured Iron and Steel.

First degree of Merit Special.

Report—These exhibits are undoubtedly of a superior class; the quality of the iron and steel cannot be surpassed; the large sheets of iron and steel plates are also of extra good quality.

UNION ACTIENGESELLSCHAFT FÜR BERGBAU, EISEN & STAHL-INDUSTRIE—Dortmund, in Westphalen.—Manufactured Iron and Steel. First degree of Merit.

Report—All the iron and steel exhibited are particularly good—the grain of some of the steel being remarkably fine.

WESTPHÄLISCHER DRAHT-INDUSTRIE VEREIN—Hamm, Westphalen.—Wire, Spikes, Nails, &c.

Highly Commended.

Report—Fencing wire of all descriptions, very good; spikes, nails, wires of various descriptions, all of satisfactory quality and make.

WESTPHÄLISCHE UNION ACTIENGESELLSCHAFT FÜR BERGBAU, EISEN & DRAHT-INDUSTRIE—Hamm, Westphalen.—Manufactured Iron. First degree of Merit.

Report—Excellent samples of iron and steel exhibited, all being of superior quality and workmanship.

GREAT BRITAIN AND IRELAND.

ASH & LACY—Birmingham.—Galvanized, Plain, and Corrugated Iron.
Commended.

Report—Of fair quality.

ASKHAM BROS. & CO.—Sheffield.—Cast, Spring, Shear, Blister, and Sheet-Steel. Highly Commended.

Report—All excellent. Some samples are of a remarkably fine grain.

BALDWIN, E. P. & W.—Wilden Works, near Stourport.—Sheet Iron, Tin-Plates, &c. First degree of Merit.

Report—Very superior quality of tin-plates, and remarkable for finish and general excellence. There are also exhibited in connection with the tin-plates, dishes, moulds, &c., showing that the material is of excellent quality and will stand severe tests.

BARROWS & SONS, William—Tipton, Staffordshire.—Manufactured Iron. First degree of Merit.

Report—Most excellent; the tests prove that the material must be of a superior nature.

BAYLISS, JONES, & BAYLISS—Wolverhampton.—Galvanized Fencing-Wire. Honourable Mention.

Report—Of fair quality.

BLACKWALL GALVANIZED IRON CO. (Limited)—London.—Galvanized-Iron, and Wares. Highly Commended.

Report—Iron of good description, and manufactures good.

BRABY & CO., Frederick—London.—Galvanized-Iron and Wares.
First degree of Merit.

Report—Galvanized iron of excellent quality; tanks specially of superior workmanship; perforated zinc very much approved of.

BROWN & CO., John (Limited)—Sheffield.—Manufactured Iron and Steel. First degree of Merit Special.

Report—A remarkable exhibit in every way. Steel boiler ends, steel screw blades, all steel specimens unsurpassed.

BROWN & CO., J. B.—London.—Galvanized Wire-Netting.
First degree of Merit.

Report—Very excellent quality, both as regards material, workmanship, strength, and regularity of mesh.

BROWN, BAYLEY, & DIXON (Limited)—Sheffield.—Steel.
Highly Commended.

Report—Bar and round steel of very good quality; there is also a very superior finish about the workmanship.

CASTLE IRON CO.—(Nettlefold's), Birmingham.—Bar and Rod-Iron and Fencing Wires. Highly Commended.

Report—Some of the tests in this exhibit are very excellent, the iron test, cold, being particularly noticeable.

COOKE & CO., William (Limited)—Sheffield.—Bar-Iron, Steel and Iron-Wire, Rods, and Hoops. First degree of Merit.

Report—All the articles are of superior quality, as exhibited by sections of bends and various manufactures.

DAVIES BROTHERS & CO.—Wolverhampton.—Galvanized Iron. Highly Commended.

Report—Exhibits of very good quality. Manufactures and galvanized wire are very good.

DUDLEY, THE EARL OF—Brierley Hill, Staffordshire.—Manufactured Iron. First degree of Merit.

Report—Quality of all iron, galvanized iron bars, and angle and girder iron, very excellent. The various cold tests show the excellent quality of the material; in fact one or two of the cold tests exhibited seemed almost incredible in their results.

ERHARDT & CO., H.—London.—Tin-foil. Highly Commended.

Report—Very excellent quality; the embossed tin-foil being particularly noticeable.

GOSPEL OAK IRON & GALVANIZED IRON & WIRE CO.—Tipton & Wolverhampton.—Galvanized Iron and Wire, and Galvanized Iron goods. First degree of Merit.

Report—Galvanized iron unsurpassed; all manufactures of superior description—rails, screws, bolts, &c.—very excellent.

HATTON, SONS & CO.—Kidderminster.—Tin-Plates, Tin-Sheets, and Sheet-Iron. First degree of Merit.

Report—Very excellent quality of various kinds of tin-plate. Some of the plates are ten feet long, the largest of the kind in the Exhibition. This exhibit stood some very severe tests.

HINGLEY & SONS, N.—Dudley.—Manufactured Iron, Chains, Cables, and Anchors. First degree of Merit.

Report—All exhibits of excellent quality. Some of the tests showed remarkable results.

IBBOTSON, BROTHERS & CO.—Sheffield.—Iron and Steel Manufactures. Highly Commended.

Report—All excellent quality; the grain and fibre are very good.

JOHNSON & NEPHEW, Richard—Bradford.—Telegraph and Fencing-Wire. Highly Commended.

Report—Iron and steel wires (cold drawn, varnished, and galvanized), all of excellent quality.

JOWITT & SONS, Thomas—Sheffield.—Steel and Files.
Commended.

Report—Steel appears to be of very good quality.

KENRICK & SONS, Archibald—West Bromwich.—Ironwares for Kitchen and Household. Commended.

Report—Thin even castings; material good.

LEACH, FLOWER & CO.—Neath, South Wales.—Tin-Plates.
Highly Commended.

Report—Very excellent in quality, and well adapted to the purposes to which they are put.

NEWBOULD & CO. Samuel (Limited)—Sheffield.—Steel manufactures: saws, files, edge tools. Honourable Mention.

Report—Good quality of steel.

NOTTINGHAM MALLEABLE IRON CO. (Limited)—Nottingham.—Malleable castings. First degree of Merit.

Report—A good collection of spanners, cogs, shoes, reaper points, brass taps, &c.

PARK GATE IRON CO. (Limited)—Rotherham.—Iron manufactures.
Commended.

Report—Good ordinary iron; shows good tests.

PEAT, CHATTOCK & Co.—London.—Tin-plates.
Highly Commended.

Report—The quality of the tin plates exhibited is very excellent, and they are well finished; the material from which they are made being evidently the very best.

RUSTLESS AND GENERAL IRON CO.—London.—Non-corrosive Tubing and Hollow-ware. Commended.
—A very important exhibit.

SCHREIBER, F. W.—London.—Tinfoil and Tinfoil Capsules.
First degree of Merit.

Report—Great varieties of embossed and inlaid foil; an extremely interesting exhibit, of excellent quality, much commended. Very excellent variety of capsules; all the material being of the best, as well as the workmanship.

SHOTTS' IRONWORKS—Glasgow.—Iron Manufactures.
Honourable Mention.

Report—Very fair quality.

SHROPSHIRE IRON COMPANY (Limited)—Hadley, near Wellington.—Galvanized Wire, Wire-Ropes, &c. Highly Commended.

Report—Excellent quality of wire rope.

SPENCER & CO., Walter—Rotherham.—Cast-Steel Files, Hand-cut and Cast-Steel. Commended.

Report—Of good description and manufacture.

STEEL COMPANY OF SCOTLAND (Limited)—Glasgow.—Steel manufactured by Siemen's process. Highly Commended.

Report—Very excellent quality of material; tests on steel plates remarkable.

VICKERS, SONS, & CO. (Limited)—Sheffield.—Steel Axles, Tyres, Crossings, Crank Shafts, and Propelling-Blades. Highly Commended.

Report—Excellent quality of steel for the manufacture of tools, &c.

WALKER BROTHERS—Dudley and Walsall.—Galvanised Sheet-iron and Wire. Commended.

Report—The iron is of good quality and moderate in price.

WALLACE, John—London.—Iron-girders. Highly Commended.

Report—Very excellent quality.

WEBB & SONS, Thomas—Stourbridge, Staffordshire.—Iron and steel Bars, Hoops, Rods, &c. Highly Commended.

Report—The nickel steel in this exhibit is very superior, and takes a most excellent polish; all the articles are good.

WEST CUMBERLAND IRON AND STEEL CO. (Limited)—Workington.—Iron and steel Rails, Plates, and Castings. First degree of Merit.

Report—All the materials of splendid quality. The fractures in the specimens show that the quality of the iron is of the very best; the grain of some of the specimens of steel was wonderfully fine.

WILKINSON & SONS, Joshua—Dudley.—Smiths' Tools and Wrought-iron. Commended.

Report—Various descriptions of excellent quality.

WOOD & CO., Henry—Liverpool.—Chains and Anchors. Commended.

Report—Very good quality.

NETHERLANDS.

ROUPPE VAN DER VOORT & LEWIN—s' Hertogenbosch.—Tinfoil Capsules. First degree of Merit.

Report—A great variety of capsules for covering bottles, all being of excellent quality and good finish.

ROUPPE VAN DER VOORT & LEWIN—s' Hertogenbosch.—Tinfoil. First degree of Merit.

Report—A very superior exhibit, remarkable for excellence and moderate price.

NEW SOUTH WALES.

BROWN & BROWN—Pyrmont.—Trophy of manufactured Iron.
Commended.

Report—Quality excellent of its description, but manufactured of scrap iron.

DEPARTMENT OF MINES—Sydney.—Trophy of Tin in ingots, bar, and grain. First degree of Merit.

Report—A very large and excellent trophy of tin in ingots, &c., the quality being of the very best.

ESKBANK IRON CO.—Lithgow Valley.—Trophy of Iron, in bar and pig. Highly Commended.

Report—Iron of rather an ordinary quality; the section of rail exhibited was very much superior in quality to the rest of the iron.

GREAT COBAR MINING CO.—Cobar.—Copper in ingots.
First degree of Merit.

Report—An excellent trophy of copper. The quality of the metal also appears to be very superior.

ICKE, Conrad—Newcastle.—Phosphor-Bronze.
Commended.

Report—Small samples of metal of good quality, but exhibited without specimens of manufacture. The phosphor-bronze in this exhibit is the metal invented by Georges Montefiore-Lévi, of Brussels, and patented in Belgium, England, and other countries in Europe.

SNOWBALL COPPER CO.—Gundagai.—Copper in ingots.
Highly Commended.

Report—Very good quality.

NEW ZEALAND.

HÆMATITE IRON CO.—Nelson.—Iron.
Commended.

Report—Good general quality.

TARANAKI IRON CO.—Taranaki.—Iron.
Commended.

Report—This iron is made from the Taranaki ironsand, and appears to be of excellent quality.

QUEENSLAND.

DEPARTMENT OF MINES—Brisbane.—Refined-Lead.
Highly Commended.

Report—Very good sample.

DEPARTMENT OF MINES—Brisbane.—Antimony.
Commended.

Report—Very good sample.

ELDRED W. H.—Sydney, New South Wales.—Quicksilver, from Kilkivan, Queensland. First degree of Merit.

Report—Very excellent sample.

QUEENSLAND COMMISSION—Brisbane.—Trophy of Copper.
Commended.

Report—Very good specimens of cake copper.

QUEENSLAND COMMISSION—Brisbane.—Trophy of Tin.
First degree of Merit.

Report—Manufactured tin, in ingots, of first quality.

SOUTH AUSTRALIA.

ENGLISH AND AUSTRALIAN COPPER CO.—Adelaide.—Copper Bars and Ingots. First degree of Merit.

Report—Very superior quality, and excellent in manufacture.

HOOKER, James—Adelaide.—Corrugated Iron-Plates and Boiler-Plates.
Commended.

Report—Quality of article very much commended.

STRAITS SETTLEMENTS.

BORNEO CO. (Limited)—Sarawak.—Tin-Ingots.
Highly Commended.

Report—Very fair quality.

CHINA, Captain—Selangor.—Tin-Ingots.
Highly Commended.

Report—Very good quality.

TASMANIA.

HOBART TOWN TIN-SMELTING CO.—Hobart Town.—Trophy of Tin, in Ingots, &c. First degree of Merit.

Report—Excellent quality.

VICTORIA.

BRIGHT BROTHERS & CO.—Melbourne.—Cake-Antimony.
Highly Commended.

Report—Excellent quality.

GREER & ASHBURNER—Melbourne.—Wire-Work.
First degree of Merit.

Report—All descriptions very good ; highly creditable as a colonial production.

LAL-LAL IRON CO.—Ballarat.—Pig-Iron.
Highly Commended.

Report—Very good hard pig-iron, but cannot compare in quality with the imported article.

MACKINTOSH, Henry—Melbourne.—Woven Wire and Quartz Gratings.
Highly Commended.

Report—Very superior exhibit.

McILWRAITH, John—Melbourne.—Sheet-Lead.
Highly Commended.

Report—Very superior for colonial manufacture, and quite equal to the imported article.

SNOWBALL & CO.—Melbourne.—Wire-Rope.
Highly Commended.

Report—Very excellent quality.

CLASSES 120–122.

Mine Engineering, Models, Maps and Sections.

JUDGES.

BINSTED, W. H., Surveyor ... ... Sydney.

TAYLER, JOSIAH, Survey Department of New South Wales ... Sydney.

GROUP—Mine Engineering, Models, Maps, and Sections.

CLASSES 120–122.

BELGIUM.

JASPART, Joseph—Courcelles-Hainaut.—Safety-lamps for Miners.
Highly Commended.

Report—These lamps are fastened by a spring and opened by a key; the lower part of the gauze being protected. They are produced at a remarkably cheap rate.

FRANCE.

DUBRULLE, Charles Cosset—Lille.—Safety Lamp for Miners.
Honourable Mention.

Report—The construction of this lamp is faulty; the glass should be retained in position by a spring, and the gauze is not sufficiently protected.

DUBRULLE, Charles Cossett—Lille.—Miners' Hats.
Highly Commended.

Report—Hats made of hide, particularly strong.

VAVIN, Charles—Paris.—Sorting Magneto-Machine for Metals.
Commended.

Report—A very useful machine.

GREAT BRITAIN.

NOTTINGHAM MALLEABLE CO. (Limited)—Nottingham.—The "Odling" Miners' Safety Lamp. First degree of Merit.

Report—This is the best miner's lamp in the Exhibition.

RAMSAY & FISHER—Ferry Hill, Durham.—Model of Patent Safety Cage, showing the application of self-locking detaching hook.
Commended.

Report—Not sufficiently simple in construction.

NEW SOUTH WALES.

DEITZ, J.—Canadian Lead.—Models of Appliances used in Alluvial Gold-Mining. Highly Commended.

Report—Rough models, but useful, as showing people unacquainted with diggings the methods of working.

DEPARTMENT OF MINES—Sydney.—Collection of Plans, Maps, and Sections. Highly Commended.

Report—This is hardly such a good collection as might have been exhibited by this Department, and is insufficient to convey an adequate idea of the magnitude of the mining capabilities of this important Colony; but in consideration of the coal sections, which are fairly representative, this award is made.

CLASSES 120–122.—*Mine Engineering, Models, Maps, and Sections.*

NEW ZEALAND.

HOKITIKA LOCAL COMMITTEE—Hokitika.—Model of Mining Claim "Morning Star." Honourable Mention.

QUEENSLAND.

QUEENSLAND COMMISSION—Brisbane.—Maps and Plans. Honourable Mention.

Report—Of no special merit.

TYREL, M.P., John de Poix—Stanthorpe.—Section showing the strata of alluvial tin mine at Stanthorpe, to scale. Highly Commended.

Report—Useful on account of giving the depths of the strata; no other exhibit of the kind is so complete.

SOUTH AUSTRALIA.

MARTIN & CO., James—Gawler.—Model of Warren and May's Ore Separator. Commended.

Report—Not in good working order, and the attendant not conversant with the use of it. Apparently a useful machine, and probably effective.

SANDERS, James—Burra Burra.—Jigging Machine. Commended.

Report—The remarks made on the previous exhibit are applicable to this.

VICTORIA.

ALLAN, Robert—Ballarat.—Model of Mining Safety Cage, with frame. First degree of Merit.

Report—Of great utility, as affording safety to the cage in the event of the hoisting gear's breaking. It appears to be of strong construction and effective.

SEYMOUR, J. H.—Sandhurst.—Model of Safety-cage. Highly Commended.

Report—Of good construction.

SEYMOUR, J. H.—Sandhurst.—Model of Safety-hook. Highly Commended.

Report—Of great utility and improved principle.

SEYMOUR, J. H.—Sandhurst.—Model of Pump-rod joint for connecting pump-rods. Highly Commended.

SEYMOUR, J. H.—Sandhurst.—Model of adjustable Crank for pumping machinery. Honourable Mention.

Report—Ingenious, but the relative strength of parts incongruous.

SEYMOUR, J. H.—Sandhurst.—Model of Disc for Quartz-crushing Machine. Highly Commended.

Report—Of great utility, on account of strength of joint and ready applicability.

DEPARTMENT II.

MANUFACTURES.

AWARDS NOMENCLATURE.

The following are the awards in this Department in their relative orders of merit:—"First degree of Merit Special"; "First degree of Merit"; "Highly Commended"; "Commended"; "Honourable Mention."

GENERAL REPORT.

CLASSES 200–294.—Manufactures.

The exhibits in this important department, as has been the case with all the international displays of the World's industries, were numerous, valuable, and interesting. In every group there were sufficient specimens of mechanical skill to illustrate the advance made in the particular productions comprised within that group, and the latest phases of industrial achievement attained in manufactures by the various competing Countries. One of the most agreeable features—and one which, it seems to us, especially marks the progress of the age—was the presence at the Garden Palace, as a competing nation, of the Empire of Japan, whose artificers were large exhibitors in the manufacturing groups. The Japanese exhibits of porcelain and bronze work of artistic finish were especially noticeable for their excellence, and variety of design, though the latter in its characteristics differs so materially from European models in the same art-industries. As the Empire of Japan showed a splendid general exhibit at the New South Wales Agricultural Society's Exhibition in Prince Alfred Park, in the year 1877, when the United States and Canada also took part, the people of Sydney may be said to have then made their first acquaintance with the Japanese and their wares ; but the exhibits of that year could not be compared for a moment with those displayed at the Garden Palace. Since then (1877) we have twice had visits from Japanese men-of-war, well disciplined and well armed.

Chemicals and chemical preparations, and such exhibits as come within these general designations, were not very largely represented in the Garden Palace ; but the products of the chief European Countries in this group of Classes (200–205), as apart from *materia medica*, and applied to household uses, were fairly illustrated by examples. It will be seen that sperm candles and soaps of good saleable quality as evidenced by exhibits, are largely manufactured in these Colonies, thus taking up the place once filled by the imported article. Essences and perfumeries from well-known London and Paris firms, and from the various establishments of the Farinas of Cologne, had a representation in numerous trophies.

To Mr. Bosisto, M.P. of Richmond, Victoria, is due the credit of being the exhibitor of essential oils and perfumes obtained from varieties of the eucalyptus genus,—a long study of which led him to a discovery of the virtues assigned to preparations which will probably become some day much better known. The antiseptic and febrifugal virtues of the eucalyptus are now recognised. It may be here remarked *en passant* that the Commissioners of the Sydney International Exhibition had applications from all quarters for space for the display of nostrums and empirical preparations, which led to the issue of a special regulation refusing their admittance.

The exhibits in Classes 206–216, "Ceramics, Pottery, Porcelain, &c.," were especially numerous and excellent in quality. The leading exhibits in this

group formed the characteristic feature of the space comprised in the western transept, where the visitor first encountered the splendid exhibit of Thomas Webb & Sons of Stourbridge, consisting of well-designed articles of pottery, porcelain, and especially of glassware, the latter making the finest display of the kind hitherto seen in Australia. In the same portion of the transept near to the dome was the valuable and imposing exhibit of Count Harrach of Neuwelt in the Tannwald, Bohemia. But besides the exhibit of Thomas Webb & Sons, the goods produced by several other leading Staffordshire firms, celebrated for their products of pottery and porcelain, were remarkable for their general excellence, and, apart from the exhibit of the Neuwelt Glass Works, other manufacturers in Bohemia showed capital assortments of their wares. Belgium, it will be observed, was a large exhibitor of sheet-glass. France and Germany were fairly well represented in this group (Classes 206–216), the latter Country having apparently taken great strides in this particular industry since 1876, when she exhibited at the Philadelphia Exhibition, in large measure in consequence of the representations of Professor Dr. Reuleaux, Imperial German Commissioner at Philadelphia, who was far from looking at the German exhibits of ceramics there as fairly representative of German enterprise and industry. But Japan, as has been stated earlier in these remarks, was well in the front rank with a display of porcelain and faïence-ware, for the production of which that Country has long held a high reputation. None of the intercolonial exhibits of glass-ware were worthy of particular mention, but the case was otherwise with the coarser kinds of pottery, such as jars, pots, crucibles, drain-pipes, and bricks, in the production of which the Colonies are fairly well advanced, and of all of which they showed commendable exhibits. Even objects of a higher order of artistic merit, such as ornamental designs in terra-cotta, were to be found among the exhibits in Colonial Courts.

In Class 217-227 ("Furniture and Objects of General Use in Construction, and in Dwellings") all the exhibiting Countries and Colonies were more or less largely represented, as will be seen on reference to the award list to be found further on. For the general variety of exhibits in this group, Great Britain occupied a first position, but the United States and leading Continental nations were well represented, while New South Wales, New Zealand, and other Australian Colonies had no reason to be ashamed of the appearance they made. In furniture Germany was especially noticeable for its collection of lamps and chandeliers, and together with Austria that Country exhibited largely in chairs, sofas, tables, and other articles used for interior decoration. Belgium had a creditable show of ornamental marble-work, chiefly in the form of mantelpieces. Blews & Son's (of Birmingham) exhibit of chandeliers, which was situated at the northern entrance to the nave, was good and varied in character. The exhibits of a like description of Thomas Webb & Sons (of Stourbridge), Isaac Barnes (of Birmingham), and of the Silber Light Co., of London, also elicited the favourable opinion of the Judges.—The silver-plate and electro-plated wares shown in the United States Court attracted considerable attention on account of their excellence of design and execution. The firms most largely represented in that country were Reed & Barton, Taunton, Mass., whose trophy was in the United States Court, facing the nave ; the Gorham Manufacturing Co., of Providence, Rhode Island ; Simpson, Hall, Miller & Co., of New York City ; and the Meriden Britannia Co., West Meriden, Conn. British manufactures however of a like description maintained their reputation for excellence, which was sustained, amongst others, by

such firms as the following: Flavelle Brothers, and Roberts, of London, Hardy Brothers, of London, and Martin Hall & Co., and Shaw & Fisher, of Sheffield. There were several exhibits in the New Zealand Court which clearly showed how well suited many of the New Zealand timbers are for the purposes of the cabinet-maker; New South Wales, South Australian, and Victorian exhibits also gave evidence that the value of Australian as well as imported woods is recognised by colonial makers of furniture.—The Japanese exhibits of lacquered ware were few in number, but decidedly good in quality.—France had but few exhibits in group of Classes 217 to 227, notwithstanding her high reputation for the production of decorative furniture and ornaments, but the fine exhibit of Christofle & Cie., of Paris, in a large measure made up for the want of number.

In class 229—"Coarse Fibres and Matting, &c."—Ceylon, Fiji, Japan, and India were the leading exhibiting Countries; but the most of the articles on view had little special value as apart from showing the mechanical ingenuity of natives in adapting fibres and rushes, &c., for the manufacture of articles of every-day use. A very noticeable exhibit in the New South Wales Court was a large trophy of mats woven from cocoa-nut fibre (which is the teased exterior husk of the nut), the results of prison labour in the Colony, judiciously and usefully directed into this particular channel. The prison-made mats show great thickness of fibre, and are remarkable for their durability.

Great Britain was by far the largest exhibiting Country in Classes 230 to 232—"Cotton Yarns, Fabrics, &c."; but Germany occupied no mean position, while in "Linen fabrics"—Class 233, Belgium showed well in the front both as regards the quality and number of her exhibits.

In Woollen goods, which take up the greater part of Classes 235 to 241, Belgium, Germany, Great Britain, and Austria were all large exhibitors; the articles shown being generally of excellent quality and finish; and the tweeds, &c. from Huddersfield and the woollen goods from the Saxon manufactories, and from Brünn in Moravia, and Verviers in Belgium, alike elicited the favourable comments of the Judges, and the approval of visitors to the Garden Palace. Similar industries have been for a considerable time in existence in the Australian Colonies, where the excellent qualities of colonial wools are, as it were, tested on the spot; but these industries have not attained, in individual cases, to the large dimensions of European woollen factories. An article of excellent quality is generally the result of these local industries, which purchasers can obtain at a reasonable rate. Several Victorian woollen mills sent representative exhibits to the Garden Palace; New South Wales showed tweeds and other woollen goods from the establishments of J. Vicars & Co., of Sydney, and Geo. French of Parramatta; the Colony of New Zealand was represented by the manufactures of the Mossgiel Woollen Factory Co. of Dunedin; Queensland, by the products of the Queensland Manufacturing Co. of Ipswich; and Tasmania, by the goods of the firm of Bulman, Johnston, & Co. of Launceston.

In Class 239—"Tapestry, Carpets, Rugs, &c."—Great Britain exhibited most largely, but both France and Germany were creditably represented.

There were few exhibits worthy of mention in Class 240—"Hair, &c."—but perhaps the most noticeable feature in this class were socks and mittens made at Goulburn, N.S.W., from thread spun from the fur of the Australian opossum.

Coming to Classes 242 to 249—"Silk and Silk Fabrics, &c."—France and Great Britain proved, apart from a few manufactured silks shown by Japan, to be the chief exhibitors of the completed fabric; but irrespective of the

exhibits of cocoons and raw silks in the Japanese Court, New South Wales showed herself well forward in the production of cocoons, and also of raw, and reeled-silks. Sericulture has so far been experimented upon in New South Wales as to show that the Colony is eminently suited for the cultivation of the mulberry and the successful rearing of the silkworm,—these being, it is generally understood, two of the necessary conditions for successful silk-culture. The experiments of the largest kind within the Colony of New South Wales have been conducted, we believe, at the Tweed River, in the northern extremity, and close to the Queensland border, by Mr. Brady; at Corowa, in the south of the Colony, near the border of the Colony of Victoria, the leading proprietrix of the latter place being Mrs. Bladen-Neill (of the Ladies' Silk Association of Corowa), who will be found as an exhibitor of the products of the enterprise of the Association; and at Albury, in the same district, by Mr. Thomas Affleck, who have all devoted much attention to this enterprise. With the exception of Mr. Brady, who did not show, the results of the silk industry were shown by exhibits. We have mentioned two conditions as being necessary to successful silk culture. A third and all-important condition is pointed out by Mr. Josiah Smale, of Macclesfield, a Judge in this class at the Sydney International Exhibition, who, in reply to queries put to him by letter after his return to England when the Garden Palace had been officially closed (and to which country he had taken with him samples of raw Australian silks, of which samples he had been a Judge), as to the commercial prospects of sericulture within the Australian Colonies, suggested that cheap labour was one of the essentials to the success of this particular industry. Mr. Smale, whose letter, at all events in its Australian application, and as pointing to a more than probable future source of supply of the raw material to the English market, is of considerable value, says :—

"Just before leaving Sydney I had an interview with both the Ministers for Lands and Mines of New South Wales, and they told me they would do all in their power to assist sericulture in the Colony. They will lease (say) up to 500 acres at a nominal rental for this object, but the use of this land must be almost wholly confined to silk-culture. The labour will be the difficulty. If you could import Chinese who have been used to the work, it might be done. There is a Chinese resident in Lower George-street, Sydney, who is anxious to go into the matter; he wants me to return to the Colony and get the land, and he says that if I do so he will find the labour, &c.; but I cannot well leave here. In reply to your first question as to the reeling of your samples: it is altogether imperfect in the reeling; I enclose sample of what we are buying to-day at 21s. per lb. (of 16 ozs.), laid down in our mill at Macclesfield. Silks are very cheap now—they have not been cheaper for the last twenty-five years. Good silk is spoilt and its quality is lost unless it is nicely reeled. Your samples"—(those of Mr. J. C. Johannsen, of North Shore, near Sydney, an exhibitor at the Garden Palace, at whose request the inquiries were preferred from the offices of the Sydney International Exhibition, to Mr. Smale),—"I am glad to inform you, have the quality, and if produced in quantity and properly reeled they would be appreciated by us manufacturers. I enclose you also a sample of Bengal silk which is produced in India. The quality of this is not so good as that of yours; we pay 16s. to 17s. per lb. for it, made up into long skeins, and put into bales, each containing from 130 to 160 lbs. in weight. Of Chinese silks I also enclose you a sample. This silk is inferior to Italian and Bengalese; it is always reeled more closely and more unevenly—it is also badly reeled. The price of this silk (China silk) ranges from 12s. to 16s. per lb. in bales of about 108 or 110 lbs. each. *The samples you produce will compare nearest to the* 21*s. quality.* The Japanese at the Sydney Exhibition, and the Chinese merchants to whom I have referred, told me that New South Wales was *the best place in the world for silk-growing,* and if you can get labour it would pay well."

It may here be stated that, apart from the three establishments which we have referred to at the Tweed River, Corowa, and Albury, sericulture is elsewhere

undertaken throughout the Colony, but only to a small extent and rather for purposes of experiment and finding therein an elegant employment for ladies and children of families, than for any hope, or wish for profit.

The exhibits comprised within Classes 250 to 257—"Clothing, Jewellery, and Ornaments, &c."—were exceedingly numerous, the majority of the Courts showing a fair representation. The comprehensive character of this group of classes will be seen when we state that, while we find at one end of the scale the most elaborate productions of modern art for the dress and ornamentation of people enjoying a high civilization, we discover at the other extreme, and comprised within the same classified group, the mat dresses of the South Sea Islander and his shell ornaments. For the proper exhibition of savage finery and the relics of barbarous nations doomed soon to disappear before the advance of the whites, as the Australian aborigines have almost already done, an Ethnological Court was provided, the extent and importance of which will be found detailed under the head of Department III, on Education and Science. It may here, although digressively be stated, for the information of other than colonial readers, that the aboriginal race, once the "lords of the soil," are now only represented in Victoria and New South Wales by straggling remnants of once powerful tribes, who are too often so debased and degraded as scarcely to deserve recognition as remains of even a savage race. The Australian black in his natural condition, and unspoilt by the evils that seem to exist coincident with our European civilization, is now only to be found in the most unfrequented parts of the recent Colony of Queensland, in the northern territory forming part of South Australia, and in Western Australia. English visitors to the Sydney International Exhibition had an opportunity of seeing in Sydney specimens of the aboriginal people of the great Australian continent, who on request being made on their behalf, were admitted free of charge to the Garden Palace.—In jewellery, apart from European and American exhibits, the Colonies of New South Wales and South Australia, and the former Colony in particular, had fair displays of personal ornaments wrought in gold and silver, showing that the Australian Colonies possess skilful artisans in this particular class. Perhaps it is natural to expect this, seeing that the raw material in the shape of Australian gold has been found in such abundance close at hand as it were. Of the Colonies, New South Wales had undoubtedly the best exhibit, not only of jewellery, but of "Boots and Shoes, and Hats," &c. (Class 251). In Sydney, as well as in leading country towns throughout the Colony of New South Wales, there are extensive manufactories of boots and shoes, which command a ready market, the general fair quality of which goods will be seen from the reports of the Judges in this section. Of course, goods of a superior class, viz., in point of finish, are not as yet largely made in the Colony, the imported article of this description having the preference, but for general wear colonial goods are unsurpassed. With the finer classes of British, French, and German boots and shoes, colonial productions, generally speaking, could scarcely enter into competition.—In the Indian Court there were some fine exhibits of inlaid metal work, Agra mosaic work, and Benares brass-ware; while in the Italian Court were shown some excellent filagree work in gold and silver, and mosaic, cameo, and coral jewellery.—There were some very fine exhibits of artificial flowers in the French Court, at the south-western extremity of the nave. The firm of Piloubet of Paris, for instance, is well known for its faithful imitations of Nature's blossoms.

The Continental Courts, in Classes 258–264—"Paper, Blank Books and Stationery"—showed some fine exhibits; but for articles comprised within this group Great Britain is ahead, both as regards number and quality. In the New South Wales Court there were two creditable exhibits of papers of colonial manufacture, the chief exhibit being from the mills of Williams and Murray, Liverpool, New South Wales. The Japanese Court had some paper exhibits of very fair finish of workmanship. The Government Printing Office department at Tokio exhibited telegraph tapes and vellum papers; while Takeya Seizo, of Tokio, took a first place in the award list for his exhibit of imitation leathers. The British exhibits of account books and general bookbinding, as compared with those of papers of different descriptions and qualities, were neither numerous nor remarkable. The exhibits of account books and bookbinding shown in the New South Wales and New Zealand Courts displayed generally good workmanship. The exhibit of the Government Printing Office, Sydney, New South Wales, consisting of general printing, account books, and bookbinding, was especially worthy of notice for the excellent quality and finish of the articles shown. The *Sydney Morning Herald* had a very creditable exhibit of newspaper printing and stereotyping; the *Evening News* had an excellent exhibit of a like description; and other Sydney firms were well represented.

Group of Classes 265 to 270 comprised "Military and Naval Armaments, Fire-arms, and Hunting Apparatus," in which Great Britain, Belgium, and Germany were the Countries exhibiting most largely. The most remarkable exhibits of heavy guns and their necessary materials were undoubtedly those in the British Court, of Sir William Armstrong & Co., of Newcastle-on-Tyne, and of Friedrich Krupp, of Essen a/d Ruhr, Germany, and of Ganz & Co., Germany (Eisengiesserei und Maschinen-Fabrik-Actien-gesellschaft in Ofen, Filiale Ratibor), who exhibited shot and shell. There were several good exhibits of rifles and revolvers in the United States, Belgian, and British Courts. Native weapons, war canoes, &c., which, so far as classification is concerned, may be included in this class, were relegated to the Ethnological Court.

Group of Classes 272–278–"Medicines, Surgery, and Prothesis." The exhibits in this group have been carefully reported upon by Dr. William Morris as Judge, and this gentleman has carefully pointed out the particular characteristics of the more noteworthy exhibits, whether in drugs or in surgical instruments and appliances.

Great Britain comes first in order as exhibiting in group of Classes 279 to 283—"Hardware, Edge-tools, Cutlery, and Metallic Products"—the United States being next, and New South Wales third in order, so far as the individual representation of these Countries in this particular group of classes is concerned; but comparing exhibits of first class quality in the United States Court, say of hardware or edge tools, with kindred exhibits in the British Court, it would be difficult to decide to which should be given the preference, their excellence being so nearly balanced.

Group of Classes 284 to 290—"Fabrics of Vegetable, Animal, or Mineral Materials." The exhibits coming under this group within the British and German Courts were of good quality and very fairly representative. Brushware was the leading exhibit in the group. New South Wales, New Zealand, and Victoria had each samples of rope, cordage, and brushware, of good marketable quality. The flax of New Zealand (*Phormium tenax*) gives her particular facilities for the manufacture of cordage. The total quantity of

New Zealand "flax," or, as it is now called "hemp," exported between 1864 and 1876 amounted to, says the "New Zealand Handbook," 26,434 tons, valued at £592,218.—The Government of Fiji has received a special award for the pre-eminence of that Colony in the production of South Sea Island cotton and other vegetable fibres. In the Fijian Court there were several exhibits of coir-rope and yarns. India-rubber clothing, and other articles manufactured from the gum caoutchouc, were only exhibited in the British and German Courts, but the firms showing these articles included some of the best known in this particular branch of industry.

Great Britain and New South Wales had both a very good show of exhibits coming within the scope of group of Classes 291 to 224—"Carriages, Vehicles, and Accessories"—the United States and the Colonies of Queensland and Victoria coming next in the number and variety of their respective exhibits. The awards, to be found in their proper order in this volume, will show that the exhibitors of New South Wales in Classes 291 to 294 well sustained the credit of the Colony for good workmanship so far as carriage-making is concerned. Several leading English firms of coach-builders exhibited novelties, comprising many excellent designs, and were successful in carrying off a very fair proportion of awards of the highest classes. The exhibits from the United States were chiefly waggonettes and farm waggons. There being no space on the main floor of the Garden Palace for the display of this particular description of manufactures, the exhibits were for the most part placed at the northern extremity of the basement, where the greater portion of the cast-metal ware exhibits, such as stoves and kitchen ranges, was also shown.

CLASSES 200–205.

Chemicals.

JUDGES.

CURRAN, JOHN JOSEPH, Merchant ... ... Sydney.

HAYES, PATRICK, Manufacture of Chemicals, Neutral Bay, St. Leonards, Sydney.

KIRSCHBAUM, A., Chemist ... ... Sydney.

POOLMAN, FREDERICK, New South Wales Sugar-refining Co. Sydney.

WATT, CHARLES, Analytical Chemist and Assayer (Chairman) Sydney.

Expert: HARTUNG, MAX JOS.... ... ... Sydney.

CLASSES 200–205.—Chemicals.

In placing the results of their labours before the Committee of Awards, the Judges in these Classes wish to state that a glance at the number of exhibits which have come under their notice, and a consideration of the great number of industries which these exhibits illustrate, clearly show that a very varied scientific and technical knowledge of the most recent kind was required to do them anything like justice.

At the commencement of their duties the Judges found themselves not only without the means of testing any of the assertions of the exhibitors with reference to the composition, &c., of the articles shown, their freeness from sophistication and other manufacturing and trade trickeries, but even without an apartment where they could place in security the various articles which they might select for a more critical examination than could be made by merely looking at a show-case of exhibits.

Household Soaps.—As this market is supplied exclusively with articles made in the Colony, and as the exhibitors compete with each other here, the Judges thought it their duty to pay much attention to this industry as represented at the Exhibition.

The articles exhibited are of two descriptions, "mottled" and "yellow." The former, as originally manufactured in England, was a tallow soap, containing more than two-thirds of its weight of fat-acids. The article made here is not a good imitation of the original, and there can be no doubt that, weight for weight, the old article was the most economical.

Yellow Soap.—This industry has experienced many changes during the last twenty years, partly caused by the introduction of caustic soda, which may be said to have decentralized the manufacture by rendering it more easy to carry it on in remote inland towns, and partly by the introduction of silicate of soda.

The latter was practically unknown to the soap trade in this Colony until within the last twelve years. It is clear that by the use of this substance a genuine tallow and resin soap is being gradually and steadily driven out of the market, to the pecuniary loss of the consumer and to the injury of the reputation and morals of the manufacturer.

As all the manufacturers appear to mix silicate with their soaps, it merely becomes a question of who can add the most and still produce a saleable article; and it is urged by the manufacturer in defence of this practice that the person who purchases from him in *bulk* is aware of the admixture, but it does not appear that these parties have taken the consumer into their confidence.

The Judges, knowing the origin of this sophistication, that it is a bad example—that it has materially injured both manufacturer and consumer—determined they would not judge the silicated soaps, and by so acting believed that they were considering the best interests of the consumer, and ultimately of the maker.

The Judges thought it proper they should make this explanation.

DEPARTMENT II.

MANUFACTURES.

GROUP—Chemicals.

CLASSES 200-205.

AUSTRIA.

CALDERARA & BANKMANN—Vienna.—Soaps and Perfumery.
Highly Commended.

DIEDEK'S, SOHN, A.C.—Vienna.—Soaps and Perfumery.
First degree of Merit.

DEMARTINI, J.—Prague in Böhmen.—Soaps and Perfumery.
Highly Commended.

HERBERT, F. P.—Klagenfurt und Wolfsberg in Illyria.—White Lead.
First degree of Merit.

LINDHEIM & CO.—Vienna.—Oxide of Zinc.
Highly Commended.

OFENHEIM, ZIFFER, & CO.—Elbeteinitz in Böhmen.—Mineral Wax and Wax Pencils.
First degree of Merit.

RIX, Anton—Vienna.—Soap.
Highly Commended.

SAMUELY, D.—Brünn in Mähren.—Chemicals.
Commended.

SARG'S, SOHN, & CO., F.A.—Liesing, near Vienna.—Glycerine.
First degree of Merit.

Report—With reference to the candles exhibited by this firm (Sarg's, Sohn, & Co.), the Judges conceive it impossible to make any better.

In this and several other important exhibits, such as those of "De Roubaix, Odenkoven, & Co.," of Belgium, and "Price's Candle Company," of London, some fine samples of glycerine, without colour or odour, and of high density, are shown.

As this article is of considerable scientific and domestic interest, the Chairman is tempted to place on record a few observations respecting its passing from a waste produce of the fat industries to a thing of every-day use. Of this article it may truly be said that it combines "the useful with the sweet."

Previous to the year 1840 various attempts were made in England "to do something with it," but these all failed. About that time the writer of this notice prepared a few pounds of glycerine, which were supplied gratuitously to Mr. Hennell, at that time Chemist to the Apothecaries'

Hall Co., of London, to see if he could suggest any use for it. Mr. Hennell employed that sample for the purpose of moistening certain matters which were to be made into pills, intended for exportation to India, complaints having frequently reached him as to the dried-up condition of those articles as ordinarily prepared, when they reached their destination.

The writer believes that, as far as England is concerned, this was almost, if not really the first useful application of glycerine.

This was only forty years ago; but what place does it now occupy? Some of the deadly missiles of war are sent on their journey by one of its compounds. With this same material the miner disturbs the rocks of ages. In its less potent state it is to be found in the studio of the artist, and in "my lady's chamber"; or, take it away from the hospital, there are not many preparations the loss of which would be much more felt, nor one whose place it would be more difficult to supply.

How widely it is distributed in nature may be conceived when it is borne in mind, that, either in a free or combined state, there is scarcely a substance which we consume as food, either solid or liquid, that does not contain it. There are few (if any) articles upon which a more instructive and interesting book could be written than upon glycerine, and that history would show how much the world is indebted to those who apply such discoveries to the requirements of a rapidly advancing civilization.

SCHLESINGER & SÖHNE, J.—Trencsin in Ungarn.—Potash.
Highly Commended.

SELL, CARLO—Pirano in Illyria.—Castilian Soap.
Highly Commended.

TAUSSIG, Gottlieb—Vienna.—Soaps and Perfumery.
First degree of Merit.

Report—The Judges feel they would be doing scant justice to these exhibits by merely passing them with an award of merit. The articles made from soap for toilet purposes are in a variety of shapes, such as peaches, apples, grapes, &c., &c., and it was only by close examinition they were found to be artificial.

WAGENMANN, Gustav—Vienna.—Mineral Wax, Wax Candles, and Tapers. First degree of Merit.

BELGIUM.

BOTELBERGE ET CIE., Gustave—Melle-lez-Gand.—Ultra-marine Blue, Green, and Violet. Highly Commended.

Report—A very good collection.

DE ROUBAIX, ODENKOVEN, ET CIE.—Antwerp.—Stearine Candles, Stearine, and Oleic Acids. First degree of Merit.

Report—This exhibit includes all the commercial products resulting from the conversion of certain fats into fat-acids, and candles manufactured from the solid fat-acids. It is stated that the articles shown represent their ordinary manufacture, in which beef and mutton fats are almost entirely used, and in all respects they are of excellent quality.

CLASSES 200–205.—*Chemicals.*

DE ROUBAIX-JENAR & CO.—Cureghem.—Stearine Candles.
First degree of Merit.

Report—Very good collection of stearine candles. This exhibit consists of candles made from mixtures of various fat-acids, and cakes of the material from which these candles are manufactured. Both articles are of excellent quality.

DUBOIS CRÈPY—Mons.—Toilet Soaps. Highly Commended.

Report—Very good collection of scented soaps.

HAANEN, Edouard—Verviers.—Eau-de-Cologne.
Highly Commended.

Report—A very fine exhibit of eau-de-Cologne of good quality.

LEBEGGE VAN PAEMEL—Ghent.—Oil Varnishes. Commended.

Report—A collection of oil varnishes of fair quality.

SOLVAY ET CIE.—Couillet.—Carbonate of Soda.
First degree of Merit Special.

Report—Carbonate of soda of the very first quality. We recommend this exhibit as of the first degree of merit and also for "Special Mention," on account of the great benefit to be derived in the future by the introduction of this article into the Colonies. This is a very interesting and important exhibit, and deserves more than a mere passing notice. The first attempt to manufacture soda from common salt by means of carbonate of ammonia was made in England, and a patent granted for it in 1838. Since that time the ingenuity of many scientific men and the resources of many capitalists have been exhausted in attempting to bring the process into practical working order. This has been at last accomplished, and as it is the only process now carried out on a large scale, it is likely, to supplant Lebanc's, and to take its place in some localities. It is well known that the sulphuric acid plan is a serious nuisance unless carried out under very strict regulations, and, especially as regards the labourers, it is not suited for a hot, or even a warm climate. As the manufacture of soda from salt is one of the fundamental industries of advanced civilization, its establishment in New South Wales would lead to the development of many other industrial pursuits, and it is right that early attention should be directed to "Solvay's" process. At the present time there is a very small local demand for the ammonia produced from the manufacture of coal gas in this country, and therefore the large supply, which is fast increasing, is available for producing carbonate of soda in the Colony. Common salt, the other important raw material required, could probably be obtained at a sufficiently low price from sea-water by the utilization of the waste small coal from some of the collieries which are near the sea.

VERZYL ET CIE., G.G.—Louvain.—Raw Materials for the Manufacture of Saltpetre. First degree of Merit.

Report—A very interesting exhibit.

CEYLON.

LEECHMAN & CO.—Colombo.—Cocoa-nut Oil.
Highly Commended.

FIJI.

BARRACK, Capt.—Savu Savu.—Cocoa-nut Oil, Dilo-nut Oil, and Candle-nut Oil. Commended.

HENNINGS, W.—Loma Loma.—Cocoa-nut Oil.
Highly Commended.

LEEFE, The Hon. R. B.—Nananu.—Dilo-nut Oil and Candle-nut Oil.
Commended.

NATIVE EXHIBIT—Levuka.—Cocoa-nut Oil, Dilo-nut Oil, and Candle-nut Oil. Commended.

RAMBI PLANTATION CO.—Rambi.—Cocoa-nut Oil.
Honourable Mention.

FRANCE.

ANTOINE FILS—Paris.—Inks. Highly Commended.

BISSEUIL ET CIE—Paris.—Inks and Blacking.
Highly Commended.

BOUDE ET FILS—Marseilles.—Sulphur.
First degree of Merit.

CHALMEL, Gustave—Paris.—Spirit Varnishes.
First degree of Merit.

CHEVILLET, Jules—Paris.—Water Colours for Artists.
Commended.

FOURNIER—Roanne-Loire.—Cream and Crystals of Tartar.
Highly Commended.

GUERLAIN—Paris.—Perfumery. First degree of Merit.

JOLIVET, Louis—Paris.—Tapers and Wax Candles.
First degree of Merit.

Report—A beautiful exhibit of wax candles for Church purposes.

LACROIX, Adolphe—Paris.—Vitrifiable Colours for Painting on Porcelain, &c. First degree of Merit.

LEVAINVILLE ET RAMBAUD—Paris.—White Lead, Colours and Varnishes. First degree of Merit.

LEFRANC—Paris.—Printing Inks, Colours, Varnishes.
First degree of Merit.

MICHAUD FILS ET FRÈRES—Aubervilliers-Seine.—Soaps.
First degree of Merit.

MONTREUIL FRÈRES ET CIE.—Clichy la Garenne.—Chemical and Pharmaceutical Products. First degree of Merit.

ORSAT ET CIE., L. H.—White Lead, Miniums, &c.
Highly Commended.

ROBELIN, Louis—Dijon (Côte d'Or.)—Ultramarine Blue.
Highly Commended.

ROCHER, PROST ET CIE.—Paris.—Colours in Cakes and Pastils.
Highly Commended.

ROUQUIER-MILIUS—Dugny-Seine.—Colours and Varnishes.
Highly Commended.

SOCIÉTÉ ANONYME DE FABRICATION DE PRODUITS CHIMIQUES—Paris.—Chemical Products. Highly Commended.

TOIRAY-MAURIN, C. G.—Paris.—Writing Inks.
First degree of Merit.

GERMANY.

BADISCHE ANILIN & SODA-FABRIK—Stuttgart und Ludwigshafen.—Aniline Colours and Dyes. First degree of Merit.
Report—This is a very important industry, and the exhibits are of the best quality.

BEYER, Eduard—Chemnitz-Sachsen.—Writing, Copying, Fancy, and other Inks. Honourable Mention.
Report—Very fair samples.

BÖHM, Gustav—Offenbach, a/M.—Fancy Soaps.
Highly Commended.

BRÜCKNER, LAMPE & CO.—Leipzig.—Drugs, Chemicals, Colours, and Essential Oils. First degree of Merit.
Report—Splendid samples of Essential Oils.

CHEMISCHE FABRIK AUF ACTIEN (vormals E. Schering)—Berlin.—Chemicals. First degree of Merit Special.
Report—The Judges think it due to this firm to state that the chloroform and chloral hydrate exhibited by them were found to be remarkably pure. The chloroform, although it had been long exposed to the action of light, suffered no change and was perfectly fit for medical use. The other preparations were all very good, and many of them excellent.

DEVRIENT, J. E.—Zwickau.—Chemicals and Dye Stuffs.
First degree of Merit.

FARINA, Franz Maria—Glockengasse, Cöln.—Eau-de-Cologne, Lavender Water, and Fancy Soaps. First degree of Merit.

FARINA, Johann Anton—zur Stadt Mailand, Cöln.—Eau-de-Cologne. Commended.

FARINA, Johann Maria—Gegenüber dem Altenmarkt, Cöln.—Eau-de-Cologne. Commended.

FARINA, Johann Maria—Jülichsplatz, Cöln.—Eau-de-Cologne. Highly Commended.

FIÉVET, Carl—Cöln.—Eau-de-Cologne. Commended.

GADEMANN & CO.—Schweinfurth, a/M.—White Lead and Colours. First degree of Merit.

Report—These colours are very fine and of the first quality.

GEHE & CO.—Dresden.—Drugs and Chemicals. First degree of Merit.

Report—A very good collective exhibit.

HAARMANN & REIMER—Holzminden, a/d Weser.—Prepared and Natural Vaniline. First degree of Merit.

Report—A very interesting exhibit, of pure quality.

HANNOVERSCHE ULTRAMARIN-FABRIK—Linden, Hannover.—Ultramarine Blue and Green. Highly Commended.

HARTMANN & HAUERS—Hannover.—Chemicals. Commended.

Report—Acetic acid and other chemicals, very good.

HEYDEN, Dr. F. von—Dresden-Neustadt.—Salicylic Acid. First degree of Merit.

Report—A new, very interesting, and useful industry. This exhibit has a highly scientific and practical value. The acid is made by a process invented by Professor Kolbe, and is capable of very many most important applications, such as the preservation of articles from fermentative decay, and as a most important remedial agent. Salicylic acid has gained the confidence of many medical practitioners of high repute, and is not, therefore, being used as a secret remedy.

HEYL, GEBRÜDER & CO.—Charlottenburg bei Berlin.—Chemical Colours. Commended.

Report—All of good quality.

JAENECKE, GEBRÜDER & F. SCHNEEMANN—Hannover.—Printing and Lithographic Inks and Varnishes. First degree of Merit.

Report—These exhibits are of excellent quality.

JUNG, Dr. H.—Arnstadt in Thüringen.—Water-colours and Artists' Materials. First degree of Merit.

Report—A very good collective exhibit. The special merit of this exhibit of water-colours is, that they are free from all poisons, and may therefore be placed in the hands of children or inexperienced persons.

KÖRPER & CO.—Mannheim, a/R.—Machine Oil.
Highly Commended.

MARTIN, Maria Clementine (Klosterfrau)—Cöln.—Eau-de-Cologne.
First degree of Merit Special.

Report—This exhibit is of the finest flavour and quality.

MERCK, E.—Darmstadt.—Chemical and Pharmaceutical Preparations.
First degree of Merit.

Report—An exhibit of excellent quality.

MOUSON & CO., J. G.—Frankfort, a/M.—Soaps and Perfumery.
First degree of Merit.

MOUSON & CO., J. G.—Frankfort, a/M.—Eau-de-Cologne.
Commended.

Report—An exhibit of fair quality.

NÜRNBERGER ULTRAMARIN-FABRIK — Nürnberg. — Ultramarines. Commended.

PIEDBŒUF, J. P.—Düsseldorf-Oberbilk.—Ultramarine Blue.
First degree of Merit.

RIEGER, Wilhelm—Frankfort, a/M.—Soaps and Perfumery.
First degree of Merit.

Report—A very fine exhibit of transparent soaps.

SACHSSE & CO., C.—Leipzig.—Essential Oils, Essences for Perfumery, &c. First degree of Merit.

SALZBERGWERK NEU-STASSFURT—Stassfurt-Sachsen.—Salt.
First degree of Merit.

Report—A fine exhibit of the best quality.

SCHWEINFURTHER ULTRAMARIN-FABRIK — Oberndorf-Schweinfurth.—Ultramarine. Commended.

TETZER, Reinhold—Berlin.—Black and Coloured Inks.
Commended.

Report—Very fair samples.

WOHLFARTH GEBRÜDER & BARLÖSIUS—Leipzig.—Colours for Painting, Printing, and Dyeing purposes. Honourable Mention.

WOLFF & SOHN, Friedrich—Karlsruhe in Schlesien. — Perfumery and Soaps. Highly Commended.

ZIFFER, L.—Berlin.—Colouring Extracts. Commended.

Report—Very good samples.

GREAT BRITAIN AND IRELAND.

ANSTEY, CHAVE, & CO.—Uxbridge, Middlesex.—Annatto.
First degree of Merit.

Report—Well bottled and secured for carriage.

CLASSES 200–205.—*Chemicals.*

BELL & BLACK (Limited)—London.—Wax Matches, Wood and Safety Matches. First degree of Merit.
Report—A splendid collection.

BICKFORD, SMITH, & CO.—Tackingmill, Cornwall.—Miner's Safety Fuse for Blasting. First degree of Merit.
Report—A fine exhibit of every kind of fuse adapted to quarry and submarine purposes.

BLUNDELL, SPENCE, & CO.—London.—Dry Colours, Oils, Paints and White Lead. First degree of Merit Special.
Report—An excellent exhibit of the first quality. We are of opinion that this firm should be awarded a special mention for the collection as a whole, but more particularly for the white lead shown, which is of the purest quality, not containing a particle of deleterious matter.

BENNETTS, William—Camborne, Cornwall.—Safety Fuses for blasting. First degree of Merit.

BOND, Mrs. M. A. (now Hickisson)—London.—Marking and Writing Inks. Highly Commended.
Report—All of good quality.

BORWICK & SONS, George—London.—Baking Powders. Highly Commended.
Report—Very good.

BRANDRAM BROTHERS & CO.—London.—White Lead, Zinc, Colours, Vermilion, Sulphur, and Saltpetre. First degree of Merit.

BRYANT & MAY—London.—Patent Safety Matches, and Wax Vestas. Highly Commended.
Report—A good assortment.

BUSH & CO., W. J.—London.—Colours and Essential Oils. Highly Commended.

CHAMBERS & CO., James—London.—Varnishes, Oils, Acids, Sulphur, &c. First degree of Merit.
Report—A very fine collection of chemicals, and a good specimen of superphosphates.

CLARK & CO., Robert Ingham—London.—Varnishes. Highly Commended.

COOPER & CO.—London.—Writing, Copying, and Marking Inks. Highly Commended.

CORBETT, M.P., John—Bromsgrove, Worcestershire.—Table and Rock Salt. Highly Commended.

CROWN PERFUMERY CO.—London.—Perfumery, articles for Toilet use, London. First degree of Merit Special.
Report—A splendid collection: over fifty varieties. Exceedingly well prepared, and of very elegant appearance.

CLASSES 200–205.—*Chemicals.*

CROWN PERFUMERY CO.—London.—Eau-de-Cologne.
Highly Commended.

Report—Of good quality.

DENTON & JUTSUM—London.—Colours, Varnishes, &c.
Highly Commended.

Report—Of good quality.

ELLIS, KISLINGBURY, & CO.—London.—Paraffine Candles.
First degree of Merit.

FLEMING & CO., A. B.—Edinburgh.—Printing Inks of various colours, Machinery Oil and Lithographic Varnish. Commended.

FOULGER & SONS, John—London.—Paints, Oils, and Varnishes.
Commended.

GOLDING, DAVIS, & CO. (Limited)—Widnes, Lancashire.—Bleaching-powder and Caustic Soda.
First degree of Merit.

GOSNELL & CO., John—London.—Soap and Perfumery.
Highly Commended.

Report—Very good collection of good quality.

HUDSON, R. S.—West Bromwich.—Extract of Soap.
Commended.

Report—Very good.

KNÖS & CO., A.—London.—Special Patent Safety Matches.
First degree of Merit.

Report—The Judges tested some matches made by this firm, and the results were highly satisfactory. If the wood be thoroughly ignited, directly the flame is extinguished it becomes black, and all combustion, and even smouldering, ceases. As many persons carelessly throw away incandescent matches, the Judges consider that the use of such lucifers as these would prevent many accidental fires. As genuine Safety Matches they recommend the exhibit for a First Award.

LUCE, George—Jersey.—Eau-de-Cologne. Commended.

LYONS, William—London.—Plain, Copying, and Marking Inks.
Commended

MACKAY & CO., John—Edinburgh.—Varnishes and Spirits.
Highly Commended.

Report—Good samples of spirit-varnishes.

MACKAY & CO. John—Edinburgh.—Flavouring essences.
First degree of Merit.

Report—A very good collection.

MANDER BROTHERS—Wolverhampton.—Varnishes and Colours.
Highly Commended.

Report—Very good samples of varnishes and stains.

MASON, G. H.—London.—Black and Coloured Printing Inks.
Honourable Mention.

CLASSES 200-205.—*Chemicals.*

PATENT LIQUID METALLIC CAPSULING, PAINT, GILDING, AND SILVERING CO. (Limited)—London.—Liquid Metal for capsuling bottles, &c. Highly Commended.

Report—A very good and useful invention.

PEACOCK & BUCHAN—Southampton.—Compositions for ships' bottoms. First degree of Merit.

Report—Very good.

PEARS, A. & F.—London.—Glycerine Soap. Highly Commended.

Report—Of good make and material.

PIESSE & LUBIN—London.—Perfumery, Soaps, &c. First degree of Merit.

Report—A splendid collection.

PIESSE & LUBIN—London.—Eau-de-Cologne. First degree of Merit.

Report—Taking this exhibit as a whole, the Judges have much pleasure in awarding it the highest degree of merit, and they desire to express their opinion that it fairly sustains the reputation of the firm. Some of the articles in the case are not surpassed, and others not equalled, by any similar exhibits in the Garden Palace.

PRICE & CO., Napoleon—London.—Perfumery, Fancy Soaps, Voilet Powder, &c. First degree of Merit

Report—A splendid collection, all of the first quality.

PRICE'S PATENT CANDLE CO. (Limited)—London.—Candles, Stearine, Glycerine, and Soaps. First degree of Merit.

Report—The Judges regard this as a splendid exhibit, taking it as a whole. The number of industries which it embraces and the quality of the articles produced render it the most varied and perfect of its kind which has come under their notice.

RECKITT & SONS, Isaac—London.—Ultramarine Blue. Commended.

RICHARDSON & CO., J.—London.—Perfumery and Soap. First degree of Merit.

RIMMEL, Eugène—London.—Perfumery, Soaps, Powders, &c. Highly Commended.

Report—Very fine collection, of very good quality.

SMITH & CO., T. & H.—London and Edinburgh.—Twenty-four samples of Flavouring Quintessences. First degree of Merit Special.

Report—Of excellent quality.

SMITH & CO., T. & H.—London and Edinburgh.—Medicinal preparations. First degree of Merit Special.

Report—This firm's exhibit possesses a very high degree of merit. The Judges consider that the very eminent position which the exhibitors hold with reference to their specialities renders it incumbent upon them not to pass their manufactures over with a mere award of merit.

They think they should state that this firm stands before the world, not only as eminent producers, on a large scale, of articles discovered by others, but as being themselves the discoverers of some of the articles which they exhibit. The exhibitors call attention, with justifiable pride, to the fact that one of the alkaloids discovered by them exists in opium in the proportion only of one part in ten thousand, and it will probably be readily admitted by those who have personally worked with such bodies, that there are not many instances in organic chemistry which can be placed on a parallel with this. The exhibitors say that to them belongs the "merit of being the only Englishmen who have discovered the principles of opium." As some excuse for this statement of facts, and to point a warning to those who make laws, it may be mentioned that alcohol, and consequently compounds made from it, were, at the time the study of the proximate principles of the vegetable kingdom was entered upon with vigour, far beyond the means of the chemical student and investigator in England. High excise duties, which it is well known in most cases double in amount before the article reaches the buyer of small quantities, drove these, in a pecuniary sense unprofitable and expensive studies, to parts of the world where they were less taxed. Many long, loud, and bitter complaints were made, but without effect, for years. It was many years after this that methylated spirit was allowed to pass duty free, and by that time a large portion of the harvest of discovery which awaited the early workers in this field of research had been reaped. In respect to cost of material, Scotland was not without a portion of the burden which has to be borne in the search for proximate principles, when a worthy implement such as alcohol is heavily taxed, but this amount was considerably less than in England. At that time there were no chemists in the British Parliament, and the science was totally without political and social influence. There are not many persons left who can now recollect how hard many young chemists tried then to make their voices heard and their wants known, and warn the powers that were, that the time would arrive when it would be said that English chemists had left to others the wide domain of organic chemistry.

STEPHENS, H. C.—London.—Writing Inks and Stains for Wood.
First degree of Merit.

Report—Many of the exhibits were subjected to various tests, with highly satisfactory results. The Judges did not find one article to which exception could be taken.

STIEBEL, L.—London.—Ultramarine Blue. Commended.

STORER & SONS, David—Glasgow.—Paints, Oils, Colours and Varnishes. First degree of Merit.

Report—Very good collective exhibit; the application of the colours shows to advantage.

TURNER & SON, Charles—London.—Colours.
Highly Commended.

YOUNG'S PARAFFINE LIGHT AND MINERAL OIL CO. (Limited)—Glasgow.—Candles and Oil. First degree of Merit Special.

Report—A splendid exhibit. This Company operates upon a mineral very similar to that which is now so well known in New South Wales; and Mr. Young may be regarded as the pioneer of an industry which has become firmly established in this colony. There can be no doubt that we are much indebted to that gentleman, who originally pointed out the nature of the mineral which has since been found here in such large quantities, and who first obtained valuable commercial products from it. The candles are of extreme transparency and beauty, and we recommend the exhibit for a special mark of merit.

INDIA.

GOVERNMENT OF MADRAS—Madras.—Indigo. Highly Commended.

ITALY.

DILETTI, Giovanni—Brisighella.—Writing Inks. Commended.

GNOCCHI, G.—Milan.—Writing Ink. Honourable Mention.

ORSENICO, Francesco—Milan. — Printing, Lithographic Inks, and Varnishes. Highly Commended.

Report—The coloured inks in glass are very fine samples, but those in tin have been so carelessly packed that they have completely dried up.

JAPAN.

INSATSU KIOKU—Government Printing Office, Tokio.—Pigments, Dyes, Colours, &c., for Printing. Highly Commended.

Report—A good collection.

TACHIBANA KISABURO—Osaka.—Indigo. Honourable Mention.

Report—The Judges cannot form a correct opinion of this exhibit because it is damp, still it is a very good sample.

NETHERLANDS.

GIST & SPIRITUS FABRIEK DE NEDERLANDSCHE—Delft.—Oils of Maize. First degree of Merit.

Report—A new industry, which will doubtless be of use in futurity; a very fair sample.

PARFUMERIE MAISON NEUVE—Delft.—Perfumery. First degree of Merit.

Report—A very excellent and beautiful collective exhibit, showing great taste and progress in manufacture.

NEW SOUTH WALES.

APOLLO STEARINE CANDLE CO.—Sydney.—Candles.
Commended.

AUSTRALIAN KEROSENE OIL AND MINERAL CO.—Sydney.—Kerosene Oil and Collective Exhibit.
First degree of Merit Special.

DAVIES, M.P., William—Goulburn.—Dr. Waugh's Baking Powder.
First degree of Merit.

DICKSON & SON—Balmain.—Common Soap.
Highly Commended.

ELLIOTT BROS.—Sydney.—Chemicals.
First degree of Merit Special.

Report—A most enterprising and instructive industry, of great benefit to the Colonies. The establishment of the works of this firm for the manufacture of mineral acids may be considered as forming an epoch in the manufacturing history of New South Wales. The manufacture of sulphuric acid upon a large scale has rendered it possible to found such important industries as those for the preparation of illuminating oils, soluble phosphates, salts of ammonia, &c. The establishment of these latter industrial pursuits has caused the utilisation of much raw material easily obtainable here, and for the products of which there is a wide and fast increasing demand, not only for home consumption, but for exportation to the various colonies and countries with which we carry on a steadily increasing trade. As the manufactures of this firm are all of good quality, and have contributed largely to the profitable employment of labour, and assisted to develop our resources, we recommend this exhibit for a special mark of merit.

GREGAN & CO.—Sydney.—Manuscript Copying Tablets and Inks.
Commended.

Report—Very fair exhibit, and sold at a cheap price. It is known as Mortimer's copying tablet.

KAYSER, A. C.—Sydney.—Disinfecting Fluid.
Highly Commended.

LAVERS, J. V.—Sydney.—Soap and Disinfecting Fluid.
Honourable Mention.

MULCAHY, P.—Redfern.—Tallow Candles.
Highly Commended.

MULCAHY, P.—Redfern.—Fancy, Crown, Mottled, and Soft Soaps.
First degree of Merit.

NEW SOUTH WALES SHALE & OIL CO.—Sydney.—Kerosene Oil and Collective Exhibit.
First degree of Merit Special.

PRITCHARD, J. & W.—Camperdown.—Soap and Candles.
Commended.

SELF, W. G.—Sydney.—Chemicals.
Highly Commended.

CLASSES 200-205.—*Chemicals.*

SYDNEY SOAP COMPANY—Sydney.—Tallow Candles and Crown Soap.

First degree of Merit.

NOTE.—The Judges having felt some difficulty in dealing with the exhibits of the Australian Kerosene Oil and Mineral Co. and those of the New South Wales Shale and Oil Co., have, after much consideration, determined to place them upon an equality.

The productions of these exhibitors are well-known, and as they are made from the same mineral their characters are of necessity very similar. One of the chief difficulties which the Judges experienced in this case arose from the fact that the exhibitors were not allowed to place their oils within the Garden Palace, owing to regulations for preventing danger from fire.

As this is a very important industry of New South Wales,—firstly, because it utilizes a natural product,—secondly, because the articles prepared are really good commercial products, and suited to our climate,—thirdly, because labour is extensively employed, and other industries are thereby materially developed,—and fourthly, because, in supplying an article of exportation to Europe, they have assisted to introduce our mineral resources to the world,—the Judges recommend each exhibitor for a special mark of merit.

NEW ZEALAND.

GRAYLING, W. Irwin—Taranaki.—Tanning Material.

First degree of Merit.

HATCH, Joseph—Invercargill.—Soap.

Commended.

KEMPTHORNE, PROSSER & CO.—NEW ZEALAND DRUG COMPANY (Limited)—Dunedin.—Chemicals, &c.

Commended.

Report—Of fair quality.

M'LEOD BROTHERS—Dunedin.—Soaps and Stearine Candles.

First degree of Merit.

Report—Very good pale yellow soap and stearine candles.

PARNELL SOAP FACTORY CO.—Auckland.—Soap.

First degree of Merit.

Report—Bright yellow common household.

QUEENSLAND.

BERKLEY, TAYLOR, & CO.—Brisbane.—Dugong Oil.

Honourable Mention.

Report—Very fair oil.

BOLDEMAN, W.—Rockhampton.—Soap.

First degree of Merit,

CARMICHAEL, L.—Brisbane.—Essential Oils, Tinctures, &c.
First degree of Merit Special.

Report—We desire to call particular attention to this valuable exhibit. Many of the essential oils are found to be of excellent quality, and many of them, especially those from the varieties of Eucalypti, only require to fall into proper hands to have many and important uses found for them.

The Judges are not aware what has hitherto been done by the Queensland Government to bring these oils into notice, but they feel inclined to suggest that sufficient samples of them should be forwarded to some of the leading technical colleges of Europe.

We recommend this exhibit for the highest award.

CLARKE, D.—Warwick.—Toilet Vinegar, Perfumery, &c.
First degree of Merit.

Report—A very good exhibit; of good colour and rich perfume.

STAIGER, F. L. S., K.T.—Brisbane.—Essential Oils.
Honourable Mention.

Report—Fair collective exhibit.

STILLER & CO.—Brisbane.—Dugong Oil.
Honourable Mention.

Report—Very fair oil.

SOUTH AUSTRALIA.

BURFORD & SONS, W.H.—Adelaide.—Varieties of Soap.
Commended.

TIDMARSH & CO., John—Adelaide.—Candles.
First degree of Merit.

TOCCHI, Augustus—Yorketown.—Salt.
Commended.

TASMANIA.

MURRAY, William—Glenorchy.—Soaps and Candles.
Highly Commended.

UNITED STATES.

AVERILL CHEMICAL PAINT CO.—New York City.—Ready Mixed Paints.
Commended.

CALIFORNIAN PAINT CO.—San Francisco.—Ready-mixed Paints.
Commended.

CRANE & BRIGHAM—San Francisco.—Bay Rum, Flavouring Extracts, &c.
Honourable Mention.

CLASSES 200-205.—*Chemicals.*

COOK & PULVER—New York City.—Lubricating Oils, Compounds, and Cups. First degree of Merit.

Report—Of the greatest excellence.

FOX & CO., H. S.—Philadelphia.—Toilet Powders.
Honourable Mention.

Report—A very fine collection, elegantly prepared.

HEUTER BROTHERS—San Francisco.—Fifteen samples of Varnish.
Highly commended.

HOLBROOK & CO., E. W.—New York City.—Lamp-wicks.
Highly Commended.

Report—A good assortment of wicks, of various shapes and sizes.

ILSLEY, DOUBLEDAY & CO.—New York City.—Machinery and other Oils. Highly Commended.

LANMAN & KEMP—New York City.—Toilet Waters.
Highly Commended.

LANGLEY & CO., Charles—San Francisco.—Flavouring Extracts.
Honourable Mention.

Report—Of excellent manufacture; well got up.

LUCAS & CO., John—Philadelphia.—Paints and Varnishes.
Highly Commended.

McKISSON & ROBBINS—New York City.—Chemical Preparations.
First degree of Merit.

MÖLLER & SCHUMANN—Brooklyn.—Varnishes.
Commended.

PEASE, F. S.—Buffalo, N.Y.—Lubricating and Illuminating Oils, &c.
First degree of Merit.

PURDY & HUNTINGTON CO. (Limited)—New York City.—Celluloid Exhibits. First degree of Merit Special.

Report—The Judges feel that they cannot pass this exhibit without a few remarks. They are informed that the exhibitors are the inventors of the compound from which the articles are made, and that the basis of the substance is a composition of non-explosive gun-cotton and camphor. The article is wonderfully strong and light, has a beautiful surface, and is evidently capable of many useful and ornamental applications, especially where strength and lightness are important qualities. They therefore recommend the exhibit for a special mark of merit.

TETLOW & BROTHER, H.—Philadelphia.—Perfumery and Cosmetics.
Highly Commended.

TILDEN & STOKES—New York City.—Varnishes and Lacquers.
Highly Commended.

YOUNG, LADD, & COFFIN—New York City.—Perfumery.
First degree of Merit.

YOUNG, LADD, & COFFIN—New York City.—Eau-de-Cologne.
Highly Commended.

Report—Fair quality.

VICTORIA.

APOLLO STEARINE CANDLE CO.—Melbourne.—Candles, &c.
First degree of Merit.

Report—This Company has a very fine exhibit.

BORTHWICK, Alex.—Melbourne.—Varnishes and Paints.
Commended.

BOSISTO, M.P., Joseph—Richmond.—Eucalyptus Essential Oils.
First degree of Merit Special.

Report—This is a most important exhibit, and is indicative alike of the industry, perseverance, and technical knowledge of the exhibitor, who states that he has been engaged in investigating the properties of the Eucalyptus for over twenty-five years. As this is another instance in which the resources of this continent are being steadily developed at the cost of much labour, and often with little profit to the pioneers, we think that this exhibit deserves a Special Mention, as there is every reason to believe that many of the products obtained from the Eucalypti will in the course of time be extensively used in medicine and the arts.

The Oils shown by Mr. Bosisto comprise the following—Essential Oil of Eucalyptus amygdalina odorata (Peppermint Gum-tree), Essential Oil of Eucalyptus globulus (Blue Gum), Essential Oil of Eucalyptus oleosa (Mallee Scrub), together with the following specimen samples showing the variety of aroma existing in the Eucalypti :—

Essential Oil, Eucalyptus sideroxylon (Ironbark Gum).
" " obliqua (Stringy Bark).
" " citriodora (Sweet-scented Gum, Queensland).
" " fissilis (Messmate).
" " Stuartiana (Appletree Gum).
" " goniocalyx (White Gum).

It is claimed for the oil from the Peppermint Gum that it is a rubefacient and disinfectant. This is the oil generally known as the Eucalyptus oil; it is employed externally in rheumatic affections, and also in the manufacture of perfumery and soaps. The oil from the Blue Gum is ranked as a tonic, stimulant, antiseptic, and anthelmintic; "Eucalyptol," obtained from the blue gum essential oil, is used for inhalation in bronchitis, diphtheria, and other throat affections. The essential oil obtained from the Mallee Scrub is employed chiefly in the manufacture of oil and spirit varnishes.

CUMING, SMITH & CO.—Melbourne.—Chemicals and Mineral Acids.
First degree of Merit.

FELTON, GRIMWADE & CO.—Melbourne.—Chemicals and Mineral Acids.
First degree of Merit.

WIMBLE & CO., F. T.—Melbourne.—Printing and Lithographic Inks and Varnish.
First degree of Merit.

Report—All the samples are of uniform good quality and in excellent condition.

CLASSES 206–216.

Ceramics, Pottery, Porcelain, Glass, Glassware, &c.

JUDGES.

BLUNT, GEORGE	Sydney.
FONTANA, GIOVANNI, Sculptor	London, England.
GOULD, JOHN	George-st., Sydney.
POOLMAN, FREDERICK, New South Wales Sugar-refining Co. (Chairman)	Sydney.
ROSENTHAL, C. M....	Philadelphia, U.S.A.
SIMONETTI, ACHILLE, Sculptor	Sydney.

GROUP—Ceramics, Pottery, Porcelain, Glass and Glass-ware, &c.

CLASSES 206–216.

AUSTRIA.

ELBOGENER PORZELLAN & KOHLEN-INDUSTRIE-GESELLSCHAFT—Elbogen in Böhmen.—Porcelain-ware.

Highly Commended.

Report—A large and well-assorted exhibit of porcelain-ware for household purposes; the designs, glazing, colours, and gold burnishing are very good. Several examples are quite new, very attractive, and marketable.

HARRACH'S (ERLAUCHT GRAF von) GLASFABRIK—Neuwelt-Tannwald in Böhmen.—Glassware. First degree of Merit Special.

Report—The exhibitor shows in coloured glassware for ornamental purposes, the finest collection in the Garden Palace,—more than thirty different colours and shades of new designs, and of very great beauty being exhibited. The painting and gilding on the medallions are excellent. The decorations in enamel are very fine, clear, and striking in appearance; several specimens of old Bohemian vases are magnificently decorated.

MELTZER & Co., Karl—Langenau-Haïda in Böhmen.—Ornamental Glassware. Commended.

Report—This is a collection of silvered glassware of good finish and designs, together with ornamental glassware, fairly well painted, of good shapes, and well gilt; the crystal table-ware fairly well engraved, and the goods very marketable.

MÜHLHAUS & CO., Julius—Haïda in Böhmen.—Ornamental and household Glassware. First degree of Merit.

Report—A very large and splendid collection of ornamental and household glassware, all delicately coloured and finely gilt. The paintings in colours and enamel are excellent, the designs new and striking in appearance; several specimens showing imitation of pâte sur pâte in delicate shades. Two large vases are of the highest possible finish, very richly gilt and ornamented, showing great progress.

MÜLLER, Hermann—Meistersdorf-Ullrichsthal in Böhmen.—Crystal Glassware. First degree of Merit Special.

Report—A collective exhibit of ornamental and household glassware, unsurpassed in the Garden Palace, on account of the high artistic engraving of the decorations. A splendid antique jug shows on one side the "Three Graces," on the other side "Trade," "Industry," and "Shipping," finished in a very fine and masterly manner. The ornaments and polish all over the jug are of the highest artistic merit, and many other works are equally good, showing great progress in the art of engraving on glass.

RÄDLER & PILZ—Vienna.—China and Porcelain ware.

First degree of Merit Special.

Report—The exhibitors display the finest collection of artistic ornamental porcelain in the Garden Palace. Two vases bear the following paintings, viz.:—

1. The Triumphal March of Lucretius into Rome.
2. Alexander cutting the Gordian knot.
3. Scipio at Carthage.
4. Coriolanus and his Mother, before Rome.

Each of these paintings is a work of art ; the colours brilliant, clear and harmonious ; the attitudes easy, graceful, and powerfully drawn ; the gilding and decoration in enamel may be considered triumphs in art. Another painting on a plate, representing the "Death of Germanicus," is of the same high standard. A great many other articles are equally well executed, and would be ornaments to any collection.

REICH & CO.—Vienna.—Coloured Glassware.

First degree of Merit.

Report—This a small but exceedingly fine collection of ornamental coloured glassware, very finely cut, beautifully painted, and richly gilt. The paintings in enamel are in relief, very delicate, and of artistic merit.

SCHREIBER & NEFFEN, J.—Vienna.—Ornamental Glassware.

Highly Commended.

Report—This firm exhibits a collection of ornamental glassware, well designed and beautifully coloured. The raised decorations are clear and tastefully painted. A new style of glassware called "Cracklein" is very pretty, and shows to great advantage. The crystalware with iridescent shades is very attractive. These exhibits represent very marketable goods.

ULLRICH, H.—Vienna.—Bohemian Glassware.

First degree of Merit.

Report—A most varied collection of Bohemian glassware for ornamental and household purposes. The ornamental exhibits consist of reproductions of old Persian designs, richly gilt and elaborately finished. Several large vases of good shape are gilt all over, and covered with a profusion of butterflies in enamel of several colours. All other articles are equally good. The iridescent and frosted glasses are very fine and well engraved.

WAGNER, Franz—Meistersdorf-Ullrichsthal in Böhmen.—Coloured and Mounted Glassware. First degree of Merit Special.

Report—This is the finest collection of coloured and mounted glassware in the Garden Palace for ornamental purposes. A splendid assortment of black, green, blue, and red coloured ornaments are painted in the style of pâte sur pâte, and show a highly artistic finish. All the figures and ornaments are clear, raised, and transparent, and several pieces of dark green glassware are ornamented with antique decorations in enamel of various colours. The mountings of bronze are well gilt, new in design, and durable.

WAHLIS, Ernst—Vienna.—Porcelain-ware.

First degree of Merit.

Report—A splendid collection of ornamental and household porcelain-ware, of new designs and graceful appearance. The gold burnishing is excellent, and of great artistic beauty. The black glazed exhibits with raised enamel decoration are very striking. Two fine paintings after Kaulbach, show the highest standard of porcelain painting.

ZSOLNAY, Wilhelm—Fünfkirchen in Ungarn.—Earthenware.

First degree of Merit.

Report—A large and excellent collection of ornamental and household earthenware, reproductions of Persian, Japanese, Moorish, Renaissance, old Roman, and Dresden designs. All the exhibits are beautifully painted and enamelled, and the glazing fine and delicate. The ornamentations in enamel are clear and in relief. The whole exhibit is very attractive showing great progress.

BELGIUM.

AGENCE GÉNÉRALE DE VENTE DES GLACERIES BELGES —Brussels.—Plate-glass.

First degree of Merit Special.

Report—Two beautiful sheets of plate glass, one silvered, measuring 141 in. × 78 in., the other plain, 138 in. × 100 in. Clear and without blemish.

BANDOUX ET CIE., L.—Charleroi.—Coloured Sheet-glass.

First degree of Merit.

Report—Very good collection of coloured glass ; the patterns clean and well defined, of great variety and beautiful designs.

BIVOR, T. H. J.—Jumet-Charleroi.—Sheet-glass.

First degree of Merit.

Report—A very fine collection of sheet-glass.

BOULVIN-LEDOUX, P. & C.—Charleroi.—Collection of Glass Bottles

First degree of Merit.

Report—Splendid collection of spirit, basket, and chemical bottles.

CRISTALLERIES DU VAL—St. Lambert.—Crystal Glassware.

First degree of Merit.

Report—A very large and well-assorted collection of crystal glassware for household purposes, splendidly cut, engraved, and etched. The cut glass is very clear, even, and highly finished ; the engraving finely executed with delicate lace-like patterns, the etching of pure symmetry, showing great progress in this branch ; the facets, even on the stoppers, are brilliantly cut and carefully fitted. Several specimens of green and pink coloured glassware are very finely and creditably finished.

DE DORLODOT ET CIE., L.—Lodelinsart près Charleroi.—Sheet, Ground, Fluted, and Photographic Glass. Highly Commended.

Report—Very good collection of all kinds.

FOURCAULT, FRISON ET CIE.—Dampremy.—Sheet, Plain, Coloured, Enamelled, and Ground Glass. Highly Commended.

Report—Very good collection of all kinds.

HENROZ, Camille—Floreffe près Namur.—Pavement Slabs, Tiles, &c. Commended.

LAMBERT ET CIE.—Jumet-Charleroi.—Collection of Glass. Highly Commended.

Report—Very good collection of sheet, plain, coloured, engraved, fluted, and pictorial glass.

MONDRON, Léon—Lodelinsart près Charleroi.—Window and Photographic Glass. First degree of Merit.

Report—A very good collection of all sizes.

MOREL, Alphonse—Lodelinsart près Charleroi.—Sheet-glass of various descriptions. Commended.

MOUZIN LECAT ET CIE.—Nimy près Mons.—Earthenware. Highly Commended.

Report—This firm exhibits a collection of earthenware for household purposes, of very good material, well glazed, good make and finish, suitable for any country.

SCHMIDT, DE VILLEZ ET CIE.—Dampremy.—Sheet-glass. Highly Commended.

Report—Very good collection of plain, coloured, enamelled, and ground sheet-glass. From inquiries it appears that not a single sheet of this collection was broken in transit from Belgium, thus showing great care must have been exercised in the packing.

SOCIÉTÉ ANONYME DES VERRERIES DE CHARLEROI (Andris Jochams, Manager)—Lodelinsart près Charleroi.—Sheet-glass. Highly Commended.

Report—Very good collection of plain, engraved, and ground sheet-glass.

SOCIÉTÉ ANONYME DES VERRERIES NATIONALES DE JUMET—Jumet-Charleroi.—Coloured Glass. Highly Commended.

Report—A good collection of coloured glass; the patterns are sharp, clean, and of great variety.

VERRERIES DE MARIEMONT—Mariemont.—Collection of Plain and Coloured Sheet Glass, Cylinders, and Fluted Tiles. Highly Commended.

Report—A very good exhibit of all descriptions of glass.

With reference to the exhibits of glass in the Belgian Court, the Judges are of opinion that, considering their high quality and taken as a collective and national exhibit, they deserve "Special Mention."

FIJI.

NATIVE EXHIBIT—Levuka.—Native Pottery.

Commended.

Report—Considering the want of appliances, &c., this production deserves mention.

FRANCE.

BARLUET ET CIE.—Paris.—Plaques and Ornaments.

First degree of Merit.

Report—This firm exhibits several Plaques and Ornaments of great artistic merit, showing a style of painting named "Porte Raporto," very striking and of great beauty.

BARLUET ET CIE.—Paris.—Table-ware.

Highly Commended.

Report—A fine collection of earthen table-ware and toilet sets of very good material and make, finely painted and well glazed.

BIRGKANN, Paul—Paris.—Ornamental Porcelain.

First degree of Merit.

Report—A large and very fine collection of ornamental porcelain mounted in fire-gilt bronze. The exhibits are well designed, beautifully painted, and graceful in appearance.

FAÏENCERIE de GIEN—Gien-Loiret.—Earthenware.

First degree of Merit.

Report—A splendid and well-assorted collection of faïenceware for ornamental and household use, the general appearance being very elegant and of great beauty, and the colouring and glazing very fine. Several exhibits of "Barlotine," a description of rough painting, are very striking in execution, and show a high degree of artistic beauty.

LISSAUTE ET COSSON—Paris.—Glassware.

First degree of Merit.

Report—A large and varied assortment of Glassware of all kinds.

PEULLIER, L.—Paris.—Ornamental Porcelain-ware.

First degree of Merit.

Report—A superb collection of porcelain-ware of splendid designs and finish. The decorations creditable, gold burnishing excellent and praiseworthy.

VION ET BAURY—Paris.—Artistic Porcelain Ornaments.

First degree of Merit.

Report—A splendid collection of highly artistic ornaments, made of porcelain, consisting of statuettes, candelabras, and fancy articles beautifully executed, and fine and delicately painted. The statuettes show anatomical study and fine expression.

GERMANY.

GLASHÜTTE STOLBERG—Stolberg bei Aachen.—Table Glassware.
Highly Commended.

Report—A very large collection of table glassware, plain, cut, and engraved, of good designs, very well assorted, the engraving very creditable, cutting clear and attractive ; very saleable.

HENNEBERG & CO., F. E.—Gotha.—White Household Porcelain.
Commended.

Report—A collection of white household porcelain, of good material and shapes, well gilt.

HECKERT, Fritz—Petersdorf.—Crystal Glassware.
First degree of Merit.

Report—A very fine and splendidly assorted collection of ornamental and household glassware, of very elegant designs. The decorations in enamel of various colours are executed with great skill and artistic merit. The gilding and ornamentation is very fine, and the whole exhibit attractive and creditable.

SCHOMBURG & SÖHNE, H.—Berlin.—Enamelled Insulators.
First degree of Merit.

Report—A very good collection of enamelled insulators, pans, mortars, jars, and speculums.

STETTINER CHAMOTTE FABRIK-ACTIENGESELLSCHAFT —Stettin.—Tiles, Drain Pipes, and Fire-clay. First degree of Merit.

Report—A splendid collection.

UECHTRITZ & FAIST—Schramberg.—Majolica-ware.
Highly Commended.

Report—A large and well assorted collection of majolica-ware of excellent designs, clear, bright colours, very finely glazed, and free of crazing.

UNDERBERG-ALBRECHT, H.—Rheinberg a/NR.—Wine-bottles.
Highly Commended.

Report—A collection of green and other wine-bottles, good in shape, but very much speckled.

VÖN ROMER & FOEDISCH—Fraureuth bei Werdau, Sachsen.—Household Porcelain-ware. Highly Commended.

Report—A fine collection of household porcelain-ware of very good designs, excellent material, well painted, and the gold burnishing creditable.

WESSEL, Ludwig—Bonn a/R.—Fancy Earthenware.
Highly Commended.

Report—A good collection of fancy articles made of earthenware, of very good designs ; colours and glazing durable, and very marketable.

GREAT BRITAIN AND IRELAND.

BAILEY, W. & J. A.—Alloa, Scotland.—Majolica-ware. Commended.

Report—Fairly well made and glazed.

BATES, GILDEA & WALKER—Burslem, Staffordshire.—Jasper-ware. Highly Commended.

Report—A well assorted and fine collection; very finely designed, with clear mixed figures and ornaments; very marketable on account of low prices.

BATES, GILDEA & WALKER—Burslem, Staffordshire.—Toilet Sets of Earthenware. First degree of Merit.

Report—The largest assortment in the Exhibition. Of very fine material, new designs, excellent colours, fine gilding and finish; very marketable.

BEVINGTON, Ambrose — Hanley, Staffordshire. — Porcelain and Earthenware for household purposes. Highly Commended.

Report—Of good material and tastefully decorated.

BEVINGTON, Thomas—Hanley, Staffordshire.—Ornamental Porcelain. Highly Commended.

Report—A collection of ornamental porcelain-ware, with raised flower decoration; very tastefully coloured, and of creditable finish.

BOULTON & MILLS—Stourbridge, Staffordshire.—Cut and Engraved Crystal-Glassware. Highly Commended.

Report—A good collection of finely-engraved, etched, and cut crystal glass-ware, very tastefully designed, and well finished. The cut glass is very even, clear, and correctly executed.

BOURNE & SON, Joseph—Derby.—Stoneware Jars, Bottles and Jugs. Commended.

Report—Very fair quality.

BREFFIT & CO., E.—Castleford, Yorkshire.—Glass Bottles. Highly Commended.

Report—A good collection of every description, and of very fair quality.

BRITISH SYPHON MANUFACTORY (Eugster & Koertgen, Proprietors)—London.—Syphons and Seltzogenes. First degree of Merit.

Report—A very fine collection of glass bottle syphons, of every size and description; all well made.

BROWNFIELD & SONS, William — Cobridge, Staffordshire.—Majolica-ware, Parian-ware. Two Highly Commended Awards.

Report—Very artistic designs and shades in majolica; very fine. The small collection of Parian-ware statuettes and ornaments are finely executed, and of fair artistic merit.

BROWNFIELD & SONS, William—Cobridge, Staffordshire.—Table Chinaware and Stoneware. First degree of Merit.

Report—An excellent assortment of tableware, consisting of dinner, tea and coffee sets, dessert plates, tête-à-tête sets, and toilet sets. All are beautifully painted and richly decorated; the colouring and glazing are very delicate; all are of striking appearance.

BROWNHILLS POTTERY CO.—Tunstall, Staffordshire.— Ornamental and Household Articles made of Earthenware. Highly Commended.

Report—Of very good material, finely painted and handsomely gilt. Several large ornamental pieces of artistic merit are splendidly gilt and decorated.

BROWN-WESTHEAD, MOORE & CO., T. C.—Hanley, Staffordshire.—Ornamental and Household Articles made of Porcelain. First degree of Merit.

Report—A large and well-assorted collection, the material of which is very fine, and the glazing durable. The decorations and paintings are beautiful, and skilfully finished. The raised flower ornamentation on some of the articles is very natural and creditably done, showing artistic merit. The gold burnishing is rich, and exceedingly attractive.

BROWN-WESTHEAD, MOORE & CO., T. C.—Hanley, Staffordshire.—Artistic Majolica-ware. First degree of Merit.

Report—A very fine collection. Splendid designs and shades, beautifully painted, and free from blemishes.

CHANCE BROTHERS & CO.—Birmingham.—Sheet and Plate Glass, rough, plain, fluted, and coloured; Lamp-glasses, &c. First degree of Merit.

Report—A splendid collection.

COPELAND & SONS, W. T.—Stoke-upon-Trent, Staffordshire.—Parian Statuettes. First degree of Merit.

Report—The Parian statuettes shown by this firm are of high artistic merit, pure in material, and of great beauty.

COPELAND & SONS, W. T.—Stoke-upon-Trent, Staffordshire.—Porcelain. First degree of Merit.

Report—A fine collection of porcelain-ware, consisting of dinner, tea, coffee, and tête-à-tête sets, vases, fruit-stands, plaques, and toilet sets. All of the goods are finely painted, beautifully decorated, and the gold burnishing is of great merit.

CRAVEN, DUNNILL, & CO. (Limited)—Ironbridge, Shropshire.—Encaustic, Geometrical, Pictorial, and Enamelled Tiles. First degree of Merit.

Report—A splendid collection.

DALEHALL BRICK & TILE CO.—Burslem, Staffordshire.—Plain and Ornamental Bricks and Tiles. Highly Commended.

Report—A fine collection of blue clay bricks and ornaments.

DOULTON & CO., H.—London.—Crucibles, Pots, Chemical Stoneware, Condensers, Bottles, and Jars. First degree of Merit.
Report—Very good collection.

DOULTON & CO., H.—London.—Encaustic, Geometrical, and Enamelled Tiles. Highly Commended.
Report—A good collection.

DOULTON & CO., H.—London.—Drain Pipes.
First degree of Merit.
Report—A fine collection.

DUNNACHIE, James—Glasgow.—Fire-bricks, Fire-clay Apparatus, &c.
First degree of Merit.
Report—A very fine collection of fire goods; truly made.

FARNLEY IRON CO.—Leeds.—Mosaic Bricks: Glazed Bricks.
Two first degrees of Merit.
Report—Mosaic bricks, clean, sharp, and pattern well defined. The glazed bricks are a splendid collection. This firm also shows very good drain-pipes.

FARROW & JACKSON—London.—Spirit Jars.
First degree of Merit.
Report—A beautiful collection. The enamelling and burnishing are of very good quality.

FORD & CO., John—Edinburgh.—Cut Crystal-ware.
First degree of Merit.
Report—A very good collection, of exceedingly fine finish. Very elaborate, and beautifully executed; material pure, and without blemish, showing progress. The collection of engraved crystal-ware shown by this firm is of artistic merit, the designs are new, and the patterns of the engraving are lace-like. A large jug, representing a tournament, would be an ornament to any museum.

FURNIVAL & SONS, Thomas—Cobridge, Staffordshire.—Earthenware for Household Purposes. Highly Commended.
Report—Of good design, bright colours, and tasteful finish.

HAMBLET, Joseph—West Bromwich.—Blue clay Bricks and Ornaments, Terra Cotta and Red Bricks. First degree of Merit.
Report—A splendid collection; all sharp and clean as iron castings.

HARPER & MOORES—Stourbridge, Staffordshire. — Fire-clays, Bricks, and Crucibles. Commended.

HARRISON, G. K.—Stourbridge, Staffordshire.—Fire-bricks, Clays, and Gas Retorts. First degree of Merit.
Report—Clean, sharp, and well-made goods. The material is of excellent quality.

HOLLAND & GREEN—Longton, Staffordshire.—Household Earthenware.

Report—Of good designs, well painted and glazed.

HOPE & CARTER—Burslem, Staffordshire.—Ornamental and Household Earthenware. First degree of Merit.

Report—Of very good material, the glazing durable, colours beautiful, gold-burnishing rich and attractive. The paintings are of great artistic beauty and merit.

JENNINGS, George—London.—Sanitary Earthenware, Drain-pipes, &c. First degree of Merit Special.

Report—Specially mentioned for variety of design and for workmanship; also for improvements in sanitary fittings.

JONES & SONS, George—Stoke-upon-Trent, Staffordshire.—Vases and Stands. First degree of Merit.

Porcelain and Majolica-ware. First degree of Merit Special.

Report—This firm shows a splendid collection of porcelain-ware of the finest description. The paintings are very fine, and the colours and shades are delicate, the gold burnishing is of a superior standard, the designs are new and exceedingly attractive; the shadings of the leaf-painting show great progress. A beautiful collection of raised flower ornaments is very artistic, the formation of the flowers and leaves is correct and finely finished, and the designs unique. A great many specimens of dark-coloured-bodied ornaments with clear-cut, raised figures, show to great advantage, and denote very great progress. This firm also shows a very good collection of earthenware, the quality of which is very fine, the painting and glazing excellent, the styles new and very creditable, and the gilding exceedingly attractive. The large majolica vase and stand, and the other vases and stands, are of very high artistic designs, fine colours and shades. The household articles are of equal merit. The majolica tiles are very good.

KILNER BROS.—London.—Glass Bottles and Jars. First degree of Merit.

Report—A splendid collection of glass bottles and jars, of excellent make and material.

MAW & CO.—Brosely, Shropshire.—Encaustic Tiles. First degree of Merit Special.

Report—A most excellent exhibit of tiles,—the floral, pictorial, and geometric features being of a clear colour and design; the tiles are also perfect in shape. This is the best exhibit, by far, of its kind in the Exhibition.

MONCRIEFF, John—Perth.—Steam Boiler Water-gauge Glasses. First degree of Merit.

Report—A splendid collection; of good material, and very straight.

MOORE BROS.—Longton, Staffordshire.—Artistic porcelain.
First degree of Merit Special.

Report—A very fine and well-assorted collection of raised flower ornaments, all of the highest artistic design, and beautifully executed. The combination of the various colours in all articles is very delicate and striking, and denotes great progress. An excellent collection of pâte-sur-pâte work, the originality of design and skill displayed in workmanship being of the greatest artistic merit. The colours are delicate, the glazing is very fine, and the transparency is remarkable. This firm also shows a collection of cloisonné enamel upon a turquoise ground, which rivals in colour old Sèvres. The gold burnishing is of the greatest delicacy and beauty, showing the greatest progress in porcelain decoration. We consider the combined collection as worthy of a special mention.

MOORE & CO., Edward—South Shields.—Moulded and Pressed Glassware. Highly Commended.

Report—Of very fair execution, good material, and well finished.

OLD HALL EARTHENWARE CO. (Limited)—Hanley, Staffordshire.—Large Earthenware Vases. First degree of Merit.

Report—Of very fine design, excellently painted and decorated, and creditable in finish.

OLD HALL EARTHENWARE CO. (Limited)—Hanley, Staffordshire.—Ornamental and Household Earthenware.
Highly Commended.

Report—Of very good designs, and tastefully decorated.

PINDER, BOURNE & CO.—Burslem, Staffordshire.—Earthenware and China, for Ornamental and Household purposes.
Highly Commended.

Report—A large and well-assorted collection of good material, well painted and gilt. Several specimens are of excellent design, and finely decorated.

PLUMBAGO CRUCIBLE CO.—London.—Assay goods, Crucibles, Retorts, Plumbago Cells, &c. Highly Commended.

Report—A well-made collection.

POWELL, BISHOP, & STONIER—Hanley, Staffordshire.—China and Earthenware. First degree of Merit Special.

Report—A very fine collection of Porcelain and Earthenware, both for ornamental and household purposes. All the articles are of excellent design, the glazing and gold burnishing are superior, the painting and decoration very creditable, and the general appearance of the whole exhibit is very striking, and shows great progress.

PRICE & BROTHERS, J. & C.—Bristol.—Collection of Jars, Jugs, Pans, and Spittoons and Stoneware. First degree of Merit.

Report—Bright, clean, and good colour.

CLASSES 206–216.—*Ceramics, Pottery, Porcelain, Glass, &c.*

SYKES, MACVAY & CO.—Castleford, Yorkshire.—Collection of Bottles. First degree of Merit Special.

Report—A large and splendid collection of every description, including Aerated Waters, Medicine, Pickle and other Bottles. We consider this exhibit the best of its kind shown.

WEBB & SONS, Thomas—Stourbridge, Staffordshire.—Bronze Glass. First degree of Merit Special.

Report—A fine collection of bronze glass, very finely painted and designed after ancient patterns, which are beautiful and attractive. Several designs in jardinières show elegance and creditable finish. A great many of the other ornaments deserve great praise for artisic finish and execution.

WEBB & SONS, Thomas—Stourbridge, Staffordshire.—Crystal Glass. First degree of Merit.

Report—A very fine and splendidly assorted collection of engraved crystal glass, both useful and ornamental. A great many of the articles shown in this line are works of art and of artistic beauty; the polishing is very clear, even and brilliant—the designs are new, and very graceful. A marked progress is noticeable in all their goods. The collection of massive cut crystal glass gives a splendid opportunity to study the high art to which England has reached in the cutting of glass. Every piece is of the clearest material, and without blemishes, the cut is even, deep, and of great merit. Several specimens of ruby-coloured glass, finely cut, are very striking.

WEDGWOOD & SON, J.—Stoke-upon-Trent, Staffordshire.—Earthen, Jasper, and Majolica ware. Three first degrees of Merit.

Report—A collection of jasper-ware, finely designed. The raised figures and ornaments are very clear, delicate, and of striking appearance, showing great merit. There is also a large and well-assorted collection of earthenware goods, consisting of table sets, jugs, ornaments, toilet sets, &c., the material of which is excellent; the painting and colours are very fine and attractive, the designs new, and the glazing clear and beautiful. Several of the large ornamental pieces show great artistic merit in the paintings and designs. One large and two small majolica vases are of excellent colour, splendid designs, beautifully executed, and free from blemish. The household articles are fairly well executed.

WHITE & BROTHERS, John Bazley—London.—Movable Cottage made of Tiles. Highly Commended.

Report—Very good tiles.

WITTMANN & ROTH—London.—Iridescent Glassware. Highly Commended.

Report—A large and well assorted collection, of excellent colours and attractive appearance; of good design and finish. Several specimens of cracklein glassware are new, and show to advantage.

WOOD & CO., William—Burslem, Staffordshire.—China Door-furniture and specialities. First degree of Merit.

INDIA.

WATSON & CO.—Bombay.—Native Pottery.

Commended.

Report—Fairly well made and glazed; the colours are bright and the decorations pretty.

ITALY.

MANIFATTURA GINORI—Doccia, Florence.—Reproductions of Capo di Monte Porcelain. First degree of Merit Special.

Report—This is a magnificent collection of reproductions of Capo di Monte porcelain-ware. The raised ornamentations are fully up to the original, and show great artistic merit both in the carving and colouring of the decorations, and deserve much credit. The same firm also exhibits a very superior dinner and toilet set of excellent quality, the gold burnishing being well executed; also, a large and artistic collection of faïence-ware of beautiful designs, splendid ornamentation, and creditable execution, the gilding and glazing being of a superior character.

TORELLI, Jafet—Florence.—Collection of Faïence Plaques and Vases.

First degree of Merit.

Report—A very fine collection of plaques and vases made of faïence, of great artistic merit. The paintings on all the exhibits are executed with great care and skill. The designs of the vases are new and attractive, the colours and glazing being very fine, bright, and durable.

JAPAN.

HIO-CHI-YEN-SHA—Tokio.—Porcelain, Painted Flower-vases, Pots, &c.

First degree of Merit.

Report—A collection of ornamental porcelain ware, very finely executed, beautifully decorated, well designed, and painted with great care, and shows to much advantage. Two plaques painted beautifully, belong to a higher standard of artistic merit.

KANZAN DEN-SHICHI—Kioto.—Flower-vases, Coffee Sets, Jars, &c.

Highly Commended.

Report—A small collection of artistic porcelain-ware, very elaborately finished, splendidly decorated, and of very good material.

KEISHIKIOKU—Tokio.—Collection of Porcelain.

First degree of Merit.

Report—A small, but very beautiful exhibit of porcelain. The decorative designs are very fine. The gold burnishing is excellent and durable, and the shapes of the exhibits are new and creditable.

KINKOZAN SOBEI—Kioto.—Earthenware.

Highly Commended.

Report—A collection of earthenware, very finely executed, beautifully painted, richly gilt, the glazing being very good, and appearance attractive.

KORANSHA—Hizen.—Flower-vases.

First degree of Merit Special.

Report—These exhibits of ornamental porcelain are of great artistic beauty and execution ; the immense size of the vases show the care and skill which has been bestowed upon them to much advantage. The gold burnishing on all the exhibits is excellent, the colours being bright and attractive, and the exhibits denote the greatest progress in this description of goods.

MARU YOSABURO—Tokio.—Earthenware.

Highly Commended.

Report—A collection of about 100 tea-pots of different shapes and various colours, made of earthenware. The material is of very good quality and eggshell transparency, the glazing and decorations being bright and attractive.

MATSUMOTO HOYEN—Tokio.—Porcelain Vases.

Commended.

Report—Two pairs of vases of good shape, finely decorated, and well glazed.

MITSUI BUSSAN KUWAISHA, KIRITSU KOSHO KUWAISHA AND OKURA & CO.—Tokio.—China and Earthenware.

First degree of Merit.

Report—A very large and excellent collection of china and earthenware, for ornamental and household purposes. Some of the large pieces are very carefully painted and richly gilt, showing great merit,—the glazing being very delicate and durable. The whole exhibit is very creditable.

MIYAGAWA KOZAN—Yokohama.—Porcelain and Faience.

First degree of Merit.

Report—This is the finest collection of porcelain and earthenware in the Japanese Court, for ornamental and household purposes. The designs are new, and very attractive, the decorations being of very high artistic merit, the paintings although odd and bizarre, are executed with great care and show much patience in the carving of minute embellishments,—the glazing exhibiting to great advantage the characteristic style of "Cracklein." A great many of the ornamental pieces would grace any museum.

NISHI-WOORA YENJI—Mino.—Chinaware.

Highly Commended.

Report—This is a very large collection of chinaware for ornamental and household purposes, very fairly painted,—the colours are bright, with very good glazing and excellent material ; very marketable.

NOTOMI KAIJIRO—Tokio.—Ornamental Porcelain.

First degree of Merit.

Report—This is a small collection of ornamental porcelain, of good designs, tastefully decorated, richly gilded, and of very fine material.

OTA MANKICHI—Tokio.—Porcelain Tea and Coffee Sets.

Highly Commended.

Report—A collection of tea and coffee sets of porcelain, of good shapes, well painted and decorated, of good material. Two vases exhibited by this firm are very finely decorated, of good design, and very attractive.

SHIMADA SOBEI—Osaka.—Porcelain Ornaments.

Highly Commended.

Report—A collection of ornaments made of porcelain and earthenware, of very creditable make; the raised flower decorations and other ornamentation shows to great advantage, the gilding and glazing are good and durable, the designs being pleasing and attractive.

SHIMIDZU ROKU-BEI—Kioto.—Porcelain-ware.

Commended.

Report—This exhibitor shows several pieces of porcelain of good designs, well glazed, and fairly well decorated.

SHIPPO KUWAISHA—Nagoya, Owari.—Ornamental Porcelain.

First degree of Merit.

Report—Here we have a very large collection of ornamental porcelain-ware of the finest description. The cloisonné enamel decorations on many of exhibits of which this firm are the inventors, are of the greatest artistic merit, and challenge any maker of porcelain; the gilding, executed with great care, is of special merit; the designs of all the articles are new, attractive, and very creditably finished,—the material used being of very good quality.

TAKAHASHI DOHACHI—Kioto.—Flower-vases, Pots, Trays, &c.

Highly Commended.

Report—An exhibit of ornamental porcelain-ware, new in design, the raised ornamentation clear, colours and glazing fine and attractive.

WAKI KITEI—Kioto.—Porcelain.

Commended.

Report—The exhibits of this maker are of good design and material, the gilding and decoration good, the glazing being fine and durable.

NEW SOUTH WALES.

BALDOCK & CO., F.—Camperdown.—Jars, Pots, Pans, Kegs, Fountains, and Bottles. Highly Commended.

COCHRANE, G.—North Willoughby.—Fire-bricks, &c.

Honourable Mention.

Report—Good common bricks.

CORNISH & CO., J. C.—Marrickville.—Bent-Glass, and Show-cases made therefrom. Commended.
Report—A good collection.

ELLIOTT BROTHERS—Sydney.—Chemical and Pharmaceutical Glass-ware. First degree of Merit.
Report—A very good collection, of good shape, and good metal.

FIELD & SONS, T.—Sydney.—Bricks, Tiles, Drain-pipes, Terra-cotta Vases and Brackets, and Keystones. First degree of Merit.
Report—A splendid collection, all of good workmanship.

FIELD & SONS, Sydney.—Battery and Assay Cells, Jugs, Jars, Bread-pans, Chimney-pots, Bottles, Spittoons, and Kegs. First degree of Merit.
Report—A very fine collection.

GOODLET & SMITH—Sydney.—Drain-pipes, Bricks, Ventilators, and Tiles. Highly Commended.
Report—Very good collection.

GOODWIN & CO., J. C.—Sydney.—Silvered Plate-glass. Highly Commended.
Report—Very good; silvering, clean. A fair assortment of bent-glass also exhibited.

HOLROYD, Arthur Todd—Parramatta.—Drain-pipes, and Roofing and Flooring Tiles. Highly Commended.
Report—Of good quality.

LITHGOW VALLEY COLLIERY CO. (Limited)—Lithgow Valley.—Drain-pipes, Fire and common Bricks, Pottery. Highly Commended.
Report—A good collection of drain-pipes, and terra-cotta brackets and ornaments.

M'FARLANE, Duncan—Mudgee.—Common Bricks. Highly Commended.
Report—Of very good quality.

ROSS, J.—Camperdown.—Glass and Blue-metal Bottles and Jars, Medicine Bottles, &c. First degree of Merit.
Report—A good collection; the shapes good, but the metal coarse.

THORPE, George Stone, late Thorpe & Davis—Camperdown.—Terra-cotta Ornaments. Highly Commended.
Report—Good collection.

NEW ZEALAND.

AUSTIN & KIRK—Christchurch.—Stoneware, Drain-pipes, and Pottery-ware. Two first degrees of Merit.
Report—Samples of pottery-ware, enriched by hand—modelled foliage and fruit, showing great ingenuity and artistic taste.

BOYD, George—Newton, Auckland.—Retorts, Crucibles, and Fire-bricks. Highly Commended.

Report—A good collection.

PLANT, William—Thames.—Insulators and Drain-pipes. First degree of Merit.

Report—Of good quality.

Pottery-ware made by amateur. Commended.

QUEENSLAND.

STAIGER, F.L.S., K. T.—Brisbane.—Fire-bricks. Highly Commended.

Report—Very good material used, and capable of standing great heat.

UNITED STATES.

HOBBS BROCKUNIER, & CO.—Wheeling West, Va.—Plain and Pressed Table-ware. First degree of Merit.

Report—A very large and well assorted collection, of excellent designs, and pure in colour. The stems of the glasses, though thin, are strong and well shaped. All the goods are very marketable in the Colonies.

MERIDEN FLINT GLASS CO.—Meriden, Conn.—Crystal Table-ware. Highly Commended.

Report—A very fine collection of massive cut crystal table-ware. The cutting is rich, even, and creditable; the designs are new and attractive.

VICTORIA.

GUTHRIE, G. D.—Sandhurst.—Stoneware. Commended.

Report—A very fair and large collection.

GUTHRIE, G. D.—Sandhurst.—White Terra-Cotta. Highly Commended.

HOFFMAN PATENT STEAM BRICK CO.—Melbourne.—Plain and Moulded Bricks. Commended.

MELBOURNE GLASS BOTTLE WORKS CO.—Melbourne.—Bottles and Jars. Highly Commended.

Report—A good collection.

NOLAN, Luke—Brunswick.—Stoneware, Jugs, &c., and Retorts. Commended.

Report—A very fair collection.

WIPER, John—Melbourne.—Bent Lamp-glass, plain, coloured, and cut. Commended.

Report—A very fair collection.

CLASSES 217–227.

Furniture and Objects of General Use in Construction and in Dwellings.

JUDGES.

ALEXANDER, William ... ... Sydney.

BARNET, JAMES, Colonial Architect ... ... Sydney.

BLACHMANN, C. H. E., Architect ... ... Sydney.

EWING, G. C., Jun.. ... ... St. Johnsbury, Vermont, U.S.A.

FORSYTH, ARCHIBALD ... ... Sydney.

GELL, EDWARD ... ... Bathurst, N.S.W.

MACKENZIE, DAVID ... ... Sydney.

MEYER, OTTO L., Acting Vice-Consul for Austria ... Sydney.

SELFE, NORMAN, C.E., Architect and Consulting Engineer (Chairman) ... ... Sydney.

WOOSTER, J. F. ... ... Sydney.

AND ON FILTERS.

BLACKET, OWEN ... ... Sydney.

JONES, J. TREVOR, C.E. ... ... Sydney.

GROUP—Furniture and Objects of General Use in Construction and in Dwellings.

CLASSES 217–227.

AUSTRIA.

BRÜNNER GEBRÜDER—Vienna.—Petroleum Lamps.
Highly Commended.

FISCHEL SÖHNE, D. G.—Nimes in Böhmen.—Bent-wood Furniture.
Highly Commended.

GRÜNING, Hermann—Vienna.—Solid Bent-wood Furniture.
Commended.

KOHN, Jacob & Josef—Wsetin in Mähren.—Solid Bent-wood Furniture.
First degree of Merit Special.

Report—Highly commended, and specially noticed for superiority of design.

RIBY, Carl A.—Wolfsberg in Kärnten.—Folding Garden Chairs.
Highly Commended.

RIBY, Carl A.—Wolfsberg in Kärnten.—Photograph-frames.
Commended.

Report—Very neat in design and ingenious in construction.

SCHEIDL, Alois—Vienna.—Frames and Bands.
First degree of Merit.

THONET GEBRÜDER—Vienna.—Solid Bent-wood Furniture.
First degree of Merit Special.

Report—This exhibit sustains the reputation of the makers, and is highly commended for faithful workmanship.

ZIZULA GEBRÜDER—Vienna.—Carambole Billiard-table.
First degree of Merit.

Report—This exhibit was only judged as furniture.

BELGIUM.

BELOT, FILS, L. E.—Brussels.—Frames, Cornices, Hangings, &c.
Highly Commended.

BOUCNEAU, Léon—Brussels.—Marble Mantel-pieces.
First degree of Merit.

BRAGARD, Eugène—Brussels.—Marble Mantel-pieces.
Highly Commended.

BRAUN FILS—Ghent.—Gilt Rods.
Highly Commended.

CAMBIER, L. & H.—Ath en Hainaut.—Chairs and Stools.
Highly Commended.

Report—Recommended for usefulness and cheapness.

DELAIRESSE, C.—Liège.—Kitchen and Hot-air Stoves.
Highly Commended.

DEMEUTER, Léopold—Brussels.—Furniture and Upholstery.
First degree of Merit.

Report—Specially commended for design and construction.

DE MUNTER, Pierre—Brussels.—Imitation of Ancient Tapestry.
Highly Commended.

Report—This exhibit is specially noteworthy for great cheapness.

GLIBERT ET CIE., A.—Brussels.—Enamelled Kitchen and Pantry Utensils. Commended.

HENRICOT, Emile—Court St. Etienne.—Enamelled Cast-iron-ware.
Commended.

MOLH, Th.—Gosselies en Hainaut.—Enamelled Cooking and Pantry Utensils. Commended.

MOULY, T. V.—Brussels.—Apparatus for heating and ventilating.
Highly Commended.

NAGUELS, Jules—Fontaine l'Evêque, Charleroi.—Tinned and galvanized Kitchen and Pantry Utensils. Honourable Mention.

OMNOZEZ, T.—Brussels.—Marble Clocks and Vases.
First degree of Merit.

PUISSANT FRÈRES—Merbes-le-Château.—Marble Mantel-pieces.
Highly Commended.

SOCIÉTÉ ANONYME DES FONDERIES D'ANDENNE—Andenne sur-Meuse.—Cooking Utensils. Honourable Mention.

SNYERS-RANG ET CIE.—Brussels.—Furniture.
First degree of Merit.

Report—A buffet is specially commended for its general excellence.

TAINSY, T.—Brussels.—Marble Mantel-pieces.
First degree of Merit.

TASSON & WASHER—Brussels.—Inlaid Flooring.
First degree of Merit Special.

Report—This exhibit is of the highest merit and workmanship.

TREMOUROUE, N. & G.—Brussels.—Enamelled and tinned Kitchen Utensils. Highly Commended.

VERBIST-LAMAL, Réné—Brussels.—Marble Mantel-pieces, Clocks, &c.
First degree of Merit.

WYNEN ET CIE., Louis Jean—Antwerp.—Tables, Pedestals, &c., of Cement. Commended.

CANADA.

BROWNE, James—Toronto, Ontario.—Map-stand.
First degree of Merit Special.

Report—Strong, well made, and highly serviceable.

M'CLARY MANUFACTURING COMPANY—London, Ontario.—Cooking-stoves. First degree of Merit.

FRANCE.

ADAM ET CIE.—Paris.—Carved Oak Furniture.
Commended.

Report—Elaborate in design, but being cheap it is rather rough and inferior in workmanship.

BARBIER FILS, Stanislas—Paris.—Billiard-table Accessories.
First degree of Merit.

CHRISTOFLE ET CIE.—Paris.—Electro-plated Nickelware.
First degree of Merit Special.

Report—This ware being plated on hard metal is serviceable and durable, and is specially commended for general excellence.

CONZA—Paris.—Camp Kitchen. Honourable Mention.

Report—This is a very creditable appliance for rapid camp cooking, and is adapted for either grilling or boiling meat.

DAMON, NAMUR, ET CIE.—Paris.—Walnut and Ebonized Furniture.
First degree of Merit.

Report—An exhibit of ebonized furniture of first-class design and workmanship, specially commended for elegance of design.

GENESTE HERSCHER—Paris.—Military Camp Ovens.
Honourable Mention.

JOURNET ET CIE.—Paris.—Bronze and Algerine Marble Onyx Articles.
First degree of Merit.

Report—This collection of elaborate and artistic goods is specially commended for high finish.

MOONEN, Léon—Paris.—Carved oak Furniture.
Highly Commended.

Report—The design is superior to the workmanship.

POULLAIN, A.—Paris.—Bronze Lamps and Chandeliers.
Highly Commended.

GERMANY.

ACTIENGESELLSCHAFT FÜR GLAS, SPIEGEL & ZINNFOLIEN FABRIKATION—Fürth in Bayern.—Mirrors.
Highly Commended.

ANCION F. & SCHNERZEL—Berlin.—Basket-work Furniture, and Fancy Baskets. Highly Commended.

BALTZER & SOHN, B.—Berlin.—Bronze Chandeliers and Candlesticks.
First degree of Merit.

BERLINER ACTIEN-GESELLSCHAFT FÜR CENTRALHEIZUNGS, WASSER, & GAS-ANLAGEN—Berlin.—Gasaliers and Candelabras. Highly Commended.

CLASSES 217-227.—*Furniture, &c.*

BAER & REMPEL.—Wringing machines.
First degree of Merit.

DISTRICTS - SCHNITZSCHULE WERDERFELS — Werderfels–Partenkirchen.—Carved oak Linen-press and Statuettes.
First degree of Merit.

Report—Special attention is called to these specimens of carving.

DOBBELMANN, Josef—Deutz-Cöln.—Gilt and Polished Mouldings, &c.
First degree of Merit.

ECKERMANN, Ferdinand—Hamburg.—Patent Universal Chair.
Highly Commended.

FALBE, Oscar—Berlin.—Hanging Lamps and Chandeliers for Petroleum.
Commended.

GNÜCHTEL & CO., F. A.—Lauter in Sachsen.—Japanned Kitchen Utensils.
Commended.

GOLIASCH & CO., G.—Berlin.—Galvano-plastic Tobacco and Cigarette Boxes, &c.
Highly Commended.

Report—Articles of tasteful design, produced by a cheap process.

GRITZNER & CO.—Durlach-Baden.—Cabinets for Sewing-machines.
Highly Commended.

HESS & ROM—Berlin.—Dining-room and other Furniture.
Commended.

Report—Workmanship good, but the style is too heavy for this climate.

HEYMANN, J. D.—Hamburg.—Patent Extension Dining-table.
First degree of Merit.

Report—Commended for ingenuity of construction, and decoration by means of incised work.

HINCKH & CO., C. H.—Hamburg.—Beechwood Furniture.
Highly Commended.

HÖRICH & CO., C. G.—Berlin.—Ebonized Furniture.
Highly Commended.

Report—The sitting room suite is very effective for ebonized furniture.

JUNGÉ, M. G.—Berlin.—Fancy Boxes, Picture-frames, &c.
First degree of Merit.

KELTERBORN & CO., Robert—Berlin.—Cabinet for Silver.
First degree of Merit.

Report—The carving of this piece of oak furniture deserves special recognition.

KELTERBORN & CO., Robert—Berlin.—Carved part of Church Pew.
Highly Commended.

KOCH & BERGFELD—Bremen.—Silver-ware.
First degree of Merit.

Report—Specially noticed for artistic merit.

KOHNLE & CO., F.—Stuttgart.–Württemberg.—Folding Washstand.
Highly Commended.

Report—A very compact and useful arrangement for office use.

KOEPPEN & WENKE—Berlin.—Petroleum Lamps.
Honourable Mention.

KÖRNER & CO.—Berlin.—Bronze Lamps.
First degree of Merit.

KURTH, Wwe. F. E.—Berlin.—Silver-ware.
Highly Commended.

LAUCHHAMMER FOUNDRY—Lauchhammer.—Iron Stoves.
First degree of Merit Special.

Report—Commended for excellence of design and workmanship.

LUND, F.—Bremen.—Cabinet for Silver.
Highly Commended.

MASSMANN, F.—Kiel.—Fancy Mouldings.
First degree of Merit.

MEURER, G.—Dresden. — Petroleum Cooking-stoves and Kitchen Utensils. Commended.

MEYER, Leo—Dresden.—Buffet with painted China Plates and Bronzes.
Highly Commended.

NORDDEUTSCHE EISWERKE - ACTIENGESELLSCHAFT — Berlin.—Ice-boxes. First degree of Merit

PRÄCHTEL, C.—Berlin.—Carved Oak Furniture.
First degree of Merit.

Report—Commended for very effective design.

RAPHAEL, Max—Breslau in Schlesien.—Mica Lamp Chimneys and Shades. First degree of Merit.

RICHTER & CO., W.—Berlin.—Side Table and Bookcase.
First degree of Merit.

Report—Massive design executed in oak and walnut, the workmanship being very good.

SÄCHSISCHE HOLZ-INDUSTRIE-GESELLSCHAFT—Rabenau, near Dresden.—Solid Bent-wood Furniture. First degree of Merit.

SCHÄFER & HAUSCHNER—Berlin.—Bronze Chandeliers and Lamps.
Honourable Mention.

SCHLEICHER, M. L.—Berlin.—Carved Marble Mantelpieces.
First degree of Merit Special.

SCHMIDT & JAEDICKE—Berlin.—Petroleum Table-lamps.
Honourable Mention.

SILBERMANN, Albert—Berlin.—Petroleum and Gas Burners and Shade-holders. Highly Commended.

Report—An exhibit of great variety.

STADELMANN & CO., Jean—Nürnberg in Bayern.—Lardstone Gas-burners. Commended.

STERN'S MÖBELFABRIK—Stuttgart-Württemberg.—Black Maple Furniture. Commended.

TENNER, A. B.—Eisfeld, Sachsen-Meiningen.—Window Blinds and Shades. Honourable Mention.

THOMPSON & FÜRSTENAU—Berlin.—Bedsteads, Tables and Chairs. First degree of Merit.

Report—The folding bedstead with telescope posts, curtains, &c., complete, is a very ingenious and well constructed piece of furniture.

TÜRPE, A.—Dresden.—Clock-case à la Boule. First degree of Merit Special.

Report—Elegantly and artistically finished.

VOGTS & CO., Ferdinand—Berlin.—Carved Oak Furniture. First degree of Merit.

WAAGEN & CO., A.—Berlin.—Lamps, Chandeliers, &c. First degree of Merit.

Report—These exhibits are of very tasteful design.

WELT & PÖHLER—Berlin.—Lamps of Bronze and Iron. First degree of Merit.

WERKMEISTER, A.—Berlin.—Gilt and Polished Mouldings. First degree of Merit.

GREAT BRITAIN AND IRELAND.

ALLEN, Thomas—Bristol.—Hospital and other Bedsteads, &c. Honourable Mention.

Report—Commended for strength and utility.

ARROWSMITH & Co., Arthur J.—London.—Parquetry Flooring. First degree of Merit.

Report—Commended for artistic design, good taste, and solidity of construction.

ARROWSMITH & CO., Arthur J.—London.—Furniture. First degree of Merit Special.

Report—This exhibit deserves special notice for design, skilled workmanship, and selection of materials.

BARNES & SON, Isaac—Birmingham.—Paraffine Lamps, Chandeliers, &c. First degree of Merit.

Report—Commended for originality of design and for first-class burner.

BATES, GILDEA, & WALKER—Burslem, Staffordshire.—Sanitary-ware. Highly Commended.

BELL & BLACK (Limited)—London.—Tinware (Boxes). First degree of Merit.

BELL & CO., J. M.—London.—"Home" Washing-machine. First degree of Merit.

BELL & CO., J. M.—London.—"Dolly" Washing-machine. Highly Commended.

CLASSES 217-227.—*Furniture, &c.*

BELL & CO., J. M.—London.—Washing, Wringing, and Mangling Machines. First degree of Merit.

BEVERLEY & WYLDE—Leeds.—Gas Cooking Apparatus.
First degree of Merit.

BIRMINGHAM LAMP CO.—Birmingham.—Lamps.
Honourable Mention.

Report—Commended for utility and cheapness.

BLEWS & SONS, William—Birmingham.—Chandeliers.
First degree of Merit.

BLEWS & SONS, William—Birmingham.—Lectern.
Highly Commended.

BRADFORD & CO., Thomas—Manchester.—Washing, Wringing, and Mangling Machines; Patent Shuttle Steam-power "Vowel" Machine.
First degree of Merit.

BRADFORD & CO., Thomas — Manchester. — "Vowel" Washing Machine, and Steam ditto. First degree of Merit.

BRYANT & MAY—London.—Tinware (Boxes, &c.)
First degree of Merit.

BURROUGHES & WATTS—London.—Billiard-table and accessories; Cabinet of Oak. First degree of Merit Special.

Report—Specially to be noticed for elegant design and finish, but judged as furniture only.

CHEAVIN, George—Boston, Lincolnshire.—Animal Charcoal Filters.
First degree of Merit.

Report—Speed of filtration, one gallon in six minutes; degree of purity, fair; price, 30s. The filter arrests colour and taste from beer, and some of the salt from sea-water; easily cleansed. Mr. J. Trevor Jones, C.E., and Owen Blacket, the Judges on Filters, state that in examining the whole of the exhibits of Filters in the Garden Palace, they adopted the rule of judging from appearance, taste, smell, and price, applying no chemical test to show whether organic matter was arrested, believing that the best filters only partially eliminate such impurities. They assigned relative merit to those filters which passed water most quickly, but qualified the merit in proportion to the purity. The test of running beer, wine, salt water, &c., through the filters was carried out in only a few cases, and must therefore be looked upon more as an interesting experiment. In their opinion the greatest merit is due to Cheavin's filter for speed, and to Slack and Brownlow's for purity and price.

CLARK & CO., T. & C.—Wolverhampton.—Cooking Utensils.
First degree of Merit Special.

CLARK & CO., T. & C.—Wolverhampton.—Sanitary-ware.
Highly Commended.

COLLINS, SONS & CO., William—London.—School Furniture.
Honourable Mention.

COLMAN & GLENDENNING—Norwich.—School Furniture.
First degree of Merit.

Report—Very good indeed; well planned, and reasonable in price.

CORBETT, Thomas—London.—Mantelshelf.
Highly Commended.

CROSBIE & CO.—Birmingham.—Bedsteads.
Honourable Mention.

DOULTON & CO., H.—London—Sanitary Stone-ware.
First degree of Merit.

DOULTON & WATTS—London.—Filters. Highly Commended.
Report—Speed of filtration per gallon, nine minutes; degree of purity, moderate; price, 13s. 6d. These are evidently good filters, but compete mainly as pottery.

EDUCATIONAL SUPPLY ASSOCIATION (Limited)—London.—School Desks. Commended.
Report—Noticeable for cheapness.

ENGERT & ROLFE—London.—Roofing Felt. Highly Commended.

FELL & CO., John—Wolverhampton.—Sanitary-ware. Commended.

FELSENTHAL & CO., A. M.—London.—Brass Cornices, Locks, Gas-burners, &c. Highly Commended.

FLAVEL & CO., Sidney—Leamington.—Kitcheners.
Highly Commended.

FLAVELLE BROTHERS, & ROBERTS—London.—Silver-plated Ware. First degree of Merit.

GREENE & SON, Henry—London.—Gas Chandeliers, Brackets, &c.
First degree of Merit.

GROVE, George William—Leamington.—Kitchen Ranges.
First degree of Merit Special.

HALL, Thomas—Edinburgh.—Styles of Decoration for Internal Wood-work. First degree of Merit Special.

HAMILTON, William—Brighton.—Invalid's Couch and Reading-table.
First degree of Merit.

HAMMER, George M.—London.—School Furniture.
Highly Commended.

HARCOURT & SONS, R. & C.—Birmingham.—Patent Sash Chain.
Honourable Mention.

HARDY BROTHERS—London.—Silver-plate and Electro-plate.
First degree of Merit Special.
Report—This exhibit, though small, deserves special notice for superior design and workmanship.

HART, Matthew John—Birmingham.—Tin Stamped-ware.
Honourable Mention.

HINKS & SON (Limited), James—London and Birmingham.—Duplex and other Lamps. Highly Commended.

HODD & SON, R.—London.—Knife-cleaner. Highly Commended.

HOPKINS & SONS, J. H.—Birmingham.—Stamped and Japanned Ware. First degree of Merit Special.
Report—Commended for trays.

HOWORTH, James—Farnworth, near Manchester.—Ventilators.
First degree of Merit.

KENRICK & SONS, Archibald—West Bromwich.—Kitchen Utensils.
First degree of Merit Special.

KENT, George—London.—Domestic Labour-saving Inventions.
First degree of Merit.

KENT, George—London.—Kent's Improved Ascension Filters.
Highly Commended.

Report—Speed of filtration, one gallon in ten minutes; degree of purity, moderate; price, 17s. 6d.

KERR, Edward—Dublin.—Patent Safety Lamp.
First degree of Merit.

LAZARUS & SON, Henry—London.—Models of Furniture.
Honourable Mention.

Report—Commended for improvement of table-expander.

LEACH, FLOWER & CO.—Neath, South Wales.—Tinware (boxes, &c.)
First degree of Merit.

MARSDEN & SAFFLEY—Liverpool.—Iron Billiard-table.
Commended.

Report—Judged as furniture.

MARTIN, HALL & CO. (Limited)—Sheffield.—Silver-plated Ware.
First degree of Merit Special.

Report—A very good exhibit, and worthy of special mention.

LIGHT, C. & R.—London.—Dining-room, Drawing-room, and Bed-room Suites of Furniture. Highly Commended.

LUNE CHAIR CO.—Lancaster.—Chairs, Easy Chairs, &c.
First degree of Merit.

Report—Commended for design, workmanship, and finish.

MIDDLETON, James—Birmingham.—Brass and Iron Bedsteads, Fenders, and Fire-irons. Honourable Mention.

Report—Commended for usefulness and price.

MIGLIORINI, Giovanni—London.—Looking-glasses.
Commended.

M'INTOSH, Alex. H.—Kirkcaldy, Scotland.—Carved Oak Furniture.
First degree of Merit.

Report—Good workmanship.

MUSGRAVE & CO. (Limited)—Belfast & London.—Slow Combustion Stoves. Commended.

PAPIER MÂCHÉ CO. (Limited)—London.—Decorative Work in Papier Mâché. First degree of Merit.

Report—Centre pieces and ornamental models for architecture, of considerable merit.

PERRY & CO. (Limited)—London.—Stands for Lamps, &c.
Honourable Mention.

Report—Cheap.

PEYTON & PEYTON—Birmingham.—Metallic Bedsteads.
First degree of Merit Special.
Report—Substantial, elegant in design, and of faithful workmanship.

PHILLIPS, Albert—London.—Brass and Iron Bedsteads.
Honourable Mention.

PHILLIPS & SON—Birmingham.—Brass and Iron Bedsteads.
Commended.

RUSSELL & CO. (Limited), John—London.—Chandeliers.
Honourable Mention.

RUSSELL & CO. (Limited), John—London.—Gas-fittings—Globe-holders.
First degree of Merit.

SHAW & FISHER—Sheffield.—Britannia Metal, Nickel-plated, and Electro-plated Wares. Highly Commended.

SESSIONS & SONS, J.—Gloucester.—Baths, Mantel-pieces, &c., of Slate.
Highly Commended.

SHELDON & CO., Edward—Coseley, near Bilston, Staffordshire.—Kitchen Utensils. Commended.

SILBER LIGHT CO.—London.—Lamps, &c.
First degree of Merit.
Report—Commended for burner.

SILICATED CARBON FILTER CO.—London.—Filters.
Highly Commended.
Report—Speed of filtration, 1 gallon in 6 minutes; degree of purity, bright and clear; price, 21s.

SLACK & BROWNLOW—Sheffield.—Compressed Mineral Charcoal Filters. First degree of Merit.
Report—Speed of filtration per gallon, 12 minutes; degree of purity, very bright and clear; price, 21s. 6d. These filters discharge salt from sea water almost perfectly, arrest soap and dirt from soap-suds almost entirely.

SMEE, William A. & S.—London.—Dining-room, Drawing-room, and Bed-room Suites of Furniture. First degree of Merit.
Report—Variety of design; workmanship excellent throughout. A satin-wood toilet table deserves special recognition.

SMITH & WELLSTOOD—Glasgow.—Cooking-stoves.
First degree of Merit.

STONE, J.—Deptford.—Sanitary-ware.
Highly Commended.

THURSTON & CO.—London.—Billiard-table and Cabinet.
First degree of Merit.
Report—Judged as furniture.

TOPHAM & CO., Charles—London.—Sausage-machines.
Highly Commended.

TYLOR & SONS, J.—London.—Sanitary-ware.
Commended.

UDAL & CO., Wm.—Birmingham.—Door-fittings, &c.
First degree of Merit.

UDAL & CO., Wm.—Birmingham.—Electro-plated ware.
Commended.

WALKER & HALL—Sheffield.—Silver-ware, Electro-plated-ware, &c.
First degree of Merit.

WALKER & SONS, William—London.—Dining-room, Drawing-room, and Morning-room Suites of Furniture.
First degree of Merit Special

Report—Excellent taste—very best materials—first-class workmanship.

WEBB & SONS, Thomas—Stourbridge, Staffordshire—Glass Chandeliers, Mirrors, &c. First degree of Merit Special.

WHITFIELD, S. B.—Birmingham.—Iron and Brass Bedsteads, Cots, &c.
Honourable Mention.

Report—Commended for construction of stretchers.

WILCOX, Joseph—Birmingham.—Kitchen wire-work.
First degree of Merit.

WILSON BROTHERS, & CO.—Birmingham.—Brass and Iron Bedsteads.
Commended.

WRIGHT & BUTLER—Birmingham.—Lamps, Cooking-stoves, &c.
Highly Commended.

Report—Commended for variety and cheapness.

WRIGHT & CO., John—Birmingham.—Gas-cooking and Heating Stoves.
Commended.

Report—Commended for utility and cheapness.

WRIGHT & FLETCHER—Birmingham.—Bronzes and Chandeliers.
Commended.

YATES, HAYWOOD & CO.—London and Rotherham.—Mantel-pieces.
First degree of Merit.

YATES, HAYWOOD, & CO.—London and Rotherham.—Ranges, Fenders, &c. Highly Commended.

YATES & SONS, John—Birmingham.—Electro-plated ware.
Commended.

YOUNG'S PARAFFINE LIGHT AND MINERAL OIL CO. (Limited).—Glasgow.—Lamps, &c. Highly Commended.

ZIMMERMANN & CO.—London.—Composition and real Bronzes, &c.
Commended.

INDIA.

WATSON & CO.—Bombay.—Carved Indian Furniture.
Honourable Mention.

Report—Very elaborate in design, good workmanship and finish.

ITALY.

GAJANI, Egisto—Florence.—Book-cabinet.
First degree of Merit Special.
Report—Design beautiful, and workmanship most excellent.

GAMBERAI, Saul—Florence.—Walnut Book-case.
Highly Commended.

MORINI, Francesco—Florence.—Carved Frames, Book-cases, &c.
Highly Commended.

MOROZZI FRATELLI—Florence.—Gilt Lustre. Commended.

JAPAN.

HORI KOSHI CHI—Osaka.—Folding Screens.
Highly Commended.

ISOGAYA RISANJI—Shidzuoka.—Lacquered Ware.
First degree of Merit.

KUBOTA KANBEI—Kioto.—Lacquered Ware.
Highly Commended.

MITSUI BUSSAN KUWAISHA, KIRITSU KOSHO KUWAISHA AND OKURA & CO.—Tokio.—Screens.
First degree of Merit.

OTA MANKICHI—Tokio.—Wooden Bureau, and other Lacquered Furniture. First degree of Merit.

NEW CALEDONIA.

BAKER, Captain—Nouméa.—Carved Book-case and Escritoire.
Highly Commended.
Report—This exhibit is commended for originality of design.

NEW SOUTH WALES.

BATSON & BREWER—Albury.—Shaving-stand of Murray Pine.
Honourable Mention.

BOOK & COLLINGS—Wollongong.—Painted and Grained Doors.
Honourable Mention.
Report—The oak graining commended.

BROOKS, H. C.—Sydney.—Moule's Patent Dry-earth Closets.
First degree of Merit.
Report—Very good in design, good material, work and finish; well worthy the attention of sanitary authorities.

BUCHANAN, J.—Sydney.—Manufactured parts of Buildings, in Colonial woods. First degree of Merit.

CLASSES 217-227.—*Furniture, &c.*

COOMS, H.—Darlington.—Double self-supporting Staircase.
Highly Commended.

Report—Commended for its principle.

CORTI, J.—Sydney.—Large Mirror. First degree of Merit.

Report—Commended for plate and gilding; but in the opinion of the Judges the exhibit would have been much better without the pictures.

COULTER, David—Sydney.—Sun-lights.
Highly Commended.

DELARUE, H. F.—Sydney.—Silver-ware.
Highly Commended.

DRYSDALE & ROBERTS—Sydney.—Boot-blacking Machine.
Honourable Mention.

DRYSDALE & ROBERTS—Sydney.—Mantel-shelf.
Highly Commended.

FIELD & SONS, T.—Sydney.—Animal Charcoal Filters.
Highly Commended.

Report—Speed of filtration, 1 gallon in 1 minute. Degree of purity, indifferent; price, 40s. Of simple construction—easily cleansed and managed. Very suitable for the country.

FORSTER & SONS, S.—Sydney.—Metallic Bedsteads.
First degree of Merit.

Report—Commended as being of colonial make.

FOY, W.—Sydney.—Japanned-ware, Baths, Boxes, &c.
First degree of Merit.

FULHAM, J.—Redfern.—Cooking-stoves.
Honourable Mention.

HOWARD & ANDERSON—St. Leonards, North Shore.—Hall Suite in Oak. (Early Gothic style.) Highly Commended.

HUDSON BROTHERS—Redfern.—Doors.
Highly Commended.

JOHNSTON, W. J.—Sydney.—Colonial Ovens.
First degree of Merit.

JONES & CO., David—Sydney.—Suites of Bed-room Furniture, in Huon Pine. Commended.

JONES, Evan—Sydney.—Silver-mounted Emu Eggs, and Silverware.
First degree of Merit.

Report—Excellent workmanship and modelling of figures.

JONES & SON, W.—Glebe.—Pine Wardrobes.
Highly Commended.

JULEFF BROTHERS—Redfern.—Cooking-stoves.
Highly Commended.

KERR, William—Sydney.—Silver-ware.
Highly Commended.

KERR, William—Sydney.—Silver Statuette of Captain Cook.
Highly Commended.

LASSETTER & CO., F. (Limited)—Sydney.—Roller Skates, Indian Clubs, &c. First degree of Merit.

Report—Commended for the collection.

LASSETTER & CO., F. (Limited)—Sydney.—Wire Meat safes.
Highly Commended.

LAVERS, J. V.—Redfern.—Capillary Attraction Filters.
Commended.

Report—Speed of filtration, slow; degree of purity, moderate—particles of wool in suspension. The vessel being porous, and made of cement, cools the water by evaporation from outside. It requires considerable attention to keep it clean. Price, 50s.

LAWLER, J.—Sydney.—Mattresses.
Highly Commended.

LAWSON, J.—Sydney.—Sitting-room and Bed-room Furniture.
First degree of Merit Special.

Report—Highly commended for design, selection of materials and workmanship.

MILLER & HARRISON—Sydney.—Glass-door and Fan-lights.
Highly Commended.

MILLSON, A.—Sydney.—Cornice-poles, Turnery, &c.
Highly Commended.

M'DONALD, R.—Braidwood.—Suite of Drawing-room Furniture, in New South Wales blackwood. Highly Commended.

Report—Of sound workmanship.

M'LEAN & SON, John.—Sydney.—Electro-Gold and Silver Plating.
Highly Commended.

NEWTON, J.—Sydney.—Ottoman and Chairs.
Highly Commended.

NORTON, A. W.—Sydney.—Cylinder Secrétaire and Hall Chairs.
Highly Commended.

PARTRIDGE, J.—Sydney.—Ovens and Japanned-ware.
Highly Commended.

PENSON, J. A.—Sydney.—Lamps and Reflectors.
Highly Commended.

Report—For kerosene and gas; of colonial manufacture and lightly made; shows some specialities in design.

PENSON, J. A.—Sydney.—Self-acting Water-closets.
Highly Commended.

PENSON, J. A.—Sydney.—Sun-lights.
Highly Commended.

Report—Commended for diffusing an equable light by the use of opal glass for reflectors.

PETRIE, J. W.—Grafton.—Secrétaire.
Highly Commended.

RALEIGH, M.—Sydney.—Gas Water-heater.
Highly Commended.

Report—Ingenious construction for converting cold water into hot water for bath purposes.

RALEIGH, M.—Sydney.—Gas Range.
Commended.

ROGERS, H.—Manly.—Marble Mantel-piece.
First degree of Merit.

ROWE & SON.—Sydney.—Venetian Blinds.
First degree of Merit.

SLEE, R.—Sydney.—Cooking-stoves.
First degree of Merit.

TOOSE, W. E.—Sydney.—Articles mounted in Gold and Silver.
Commended.

TURNER, W. J.—Hunter's Hill.—Mirror, with Frame of cones.
Honourable Mention.

Report—Commended for originality.

VINTON, T.—Redfern.—Safety Kerosene Measurer.
Highly Commended.

Report—Commended for originality.

VINTON, T.—Redfern.—Gas Cooking-stoves.
Commended.

WACEY, George—Sydney.—Mantel pieces.
Highly Commended.

WOOLDRIDGE, J.—Sydney.—Ovens.
Highly Commended.

NEW ZEALAND.

BURT, A. & T.—Dunedin.—Gasaliers.
First degree of Merit.

Report—Tasteful design, combined with solid construction.

BURT, A. & T.—Dunedin.—Cabinet Washstand.
Commended.

CHILD, Samuel—Christchurch.—Picture-frame, made of New Zealand Cones. Commended.

FLEMING, George—Nelson.—Inlaid Tables and Boxes of New Zealand woods. First degree of Merit.

GREENFIELD & STEWART—Wellington.—Mantel-shelf made of New Zealand woods. Highly Commended.

GUTHRIE & LARNACH—Dunedin.—Cabinet, Drawing-room, and Bed-room Suites. Highly Commended.

GUTHRIE & LARNACH—Dunedin.—Tubs and Buckets; Hall Door.
First degree of Merit.

Report—The hall door is specially commended for originality of design.

HALLEY & EWING—Wellington.—Door made of New Zealand red pine. Highly Commended.

LARGE & TOWNLEY—Napier.—Work-table made of New Zealand woods. First degree of Merit.

MYERS, Thomas—Wellington.—Picture-frame.
First degree of Merit.

NEW ZEALAND GOVERNMENT—Wellington.—Maori House.
First degree of Merit Special.

Report—An excellent example of Maori architecture, showing great ingenuity in grotesque carvings, in pilasters and panels, and in all other detail very novel and interesting.

NICHOLSON, William—Wellington.—Sideboard made of New Zealand woods. Highly Commended.

PETERS, Carl—Wellington.—Octagon Table, made of New Zealand woods. First degree of Merit.

PETERSEN & CO., B.—Christchurch.—Silver Claret Jugs and Cups.
First degree of Merit Special.

Report—Of high artistic merit.

SANDSTEIN, M.—Christchurch.—Silver Epèrgne.
Highly Commended.

SCOTT BROS.—Christchurch.—Stoves.
Commended.

SEUFFERT, Anton—Auckland.—Chess-table.
First degree of Merit.

Report—Specially commended for taste and workmanship.

STEWART & CO.—Wellington.—Door made of New Zealand woods.
Highly Commended.

THOMSON, Thomas—Bluff Harbour.—Washing-machine. Commended.

WHITE, Mrs. S.—Picture-frame, made of New Zealand Pine-Cones.
Commended.

QUEENSLAND.

BOWDEN, W.—St. Helena.—Writing Desk and Table of St. Helena woods. Commended.

CAREY, J. W.—Brisbane.—Wardrobe, Sideboard, Turnery, and Show-cases. Commended.

HARDY, T. P.—Brisbane.—Book-case of Queensland Woods.
First degree of Merit.

Report—Specially noticed for taste and selection of woods.

PETTIGREW, M.L.C., The Hon. W.—Brisbane.—Hall Door, Mantel-piece, Mouldings. Highly Commended.

THOMLE, P.—Brisbane.—Inlaid Table and Cabinet.
First degree of Merit.

Report—Commended for ingenuity and workmanship of cabinet.

SOUTH AUSTRALIA.

BATTERY BROS.—Adelaide.—"Davenport" in Huon pine.
Highly Commended.

FRASER, M.P., Hugh—Adelaide.—Marble mantel-pieces.
Highly Commended.

GAY, P.—Adelaide.—Inlaid Table and Chest of Drawers.
Honourable Mention.

GERNER, F. K.—Adelaide.—Washing-machine.
Commended.

GRAY, W. F.—Adelaide.—Model representing the System of Ventilation used in the Public Schools of South Australia; also Chimney-tops.
First degree of Merit.

HERRING, E. H.—Adelaide.—Marble Mantel-pieces.
Highly Commended.

STEINER, Henry—Adelaide.—Silver-ware and Plated-ware.
First degree of Merit.

Report—The goods designed and manufactured by the exhibitor are specimens of advanced colonial art, and are deserving of special notice.

WENDT, Joachim M.—Adelaide.—Silver-ware and Plated-ware.
First degree of Merit.

Report—We commend the taste shown in the mounting of the emu-eggs. The design of the centre-pieces and models is taken from colonial natural objects.

WEST-ERSKINE, M.P., W. A. E.—Adelaide.—Room-cooler.
Honourable Mention.

TASMANIA.

ROBINSON, M.—Bothwell.—Writing-desk of Musk-wood.
Commended.

WEBSTER, Alexander—Launceston.—Plunge and Hip Bath.
Commended.

UNITED STATES.

ABENDROTH BROS.—New York City.—Cooking Stoves and Ranges.
First degree of Merit Special.

Report—Commended for the size and variety of collection.

BARROW, SAVERY & CO. (Limited)—Philadelphia.—Cooking Utensils and Range. Highly Commended.

BRUNSWICK & BALKE CO. The J. M.—Chicago, and New York City.—Billiard-tables and accessories. First degree of Merit.

Report—Judged as furniture.

CLASSES 217-227.—*Furniture, &c.*

COLLENDER, H. W.—New York City.—Billiard-tables and Accessories.
First degree of Merit.

Report—Judged as furniture.

GARDENER & CO.—New York City.—Perforated-wood Furniture.
Highly Commended.

GORHAM MANUFACTURING CO.—Providence, Rhode Island.—Silver-plated Ware. First degree of Merit Special.

Report—Artistic in design, and excellent in workmanship.

HARTSHORN, S.—Philadelphia.—Window-Blinds.
Commended.

HINCKLEY, Ezra—San Francisco.—Bedsteads and Spring Mattresses.
First degree of Merit.

HOLBROOK & CO., E. W.—New York City.—"White Star" Lamp-wicks. First degree of Merit.

LOUDERBACK, E.—Philadelphia.—Rustic Window-shades.
First degree of Merit.

MACDONALD, T. E.—New York City.—Washing-machines.
Honourable Mention.

MERIDEN BRITANNIA CO.—Meriden, Conn.—Silver-plated ware.
Commended.

METROPOLITAN WASHING-MACHINE CO.—New York City.—Doty's Washing-machines. Highly Commended.

METROPOLITAN WASHING-MACHINE CO.—New York City.—Universal Clothes-wringer. First degree of Merit.

MILLER & CO., E.—Meriden, Conn.—Kerosene Lamps, &c.
Highly Commended.

MITCHELL, VANCE & CO.—New York City.—Chandeliers.
Highly Commended.

MOTT, J. L.—New York City.—Stoves and Ranges.
First degree of Merit.

NATIONAL SCHOOL FURNITURE CO.—New York City.—School Furniture. First degree of Merit.

NATIONAL WIRE MATTRESS CO.—New Britain, Conn.—Wire Mattresses. Highly Commended.

PATON & SONS, Robert—New York City.—School Furniture.
Highly Commended.

REED & BARTON—Taunton, Mass.—Silver Plated-ware.
First degree of Merit Special.

Report—Of novel design, excellent workmanship, and high finish.

SIMPSON, HALL, MILLER & CO.—New York City.—Silver-plated-ware. Highly Commended.

ST. LOUIS STAMPING CO.—St. Louis.—Granite Ironware.
First degree of Merit.

TUCKER MANUFACTURING CO.—Boston.—Wire Mattresses.
Highly Commended.

UNION STOVE WORKS—New York City.—Cooking-stoves and Ranges.
First degree of Merit.

WOODS, SHEERWOOD & CO.—Lowell, Mass.—Wire Goods.
First degree of Merit.

VICTORIA.

ADAMS, Reuben Thomas—Melbourne.—Adams' (late Dahlke's) Filters.
First degree of Merit.

Report—Speed of filtration, 1 gallon in six minutes; degree of purity, fair; price, not named.

ALCOCK & CO.—Melbourne.—Billiard-tables and Accessories.
First degree of Merit.

Report—Judged as furniture.

BELL BROTHERS—Richmond.—Pedestal Library-table.
First degree of Merit.

CARR & SONS—Melbourne.—Venetian and Spring Roller Blinds.
First degree of Merit.

Report—The stop especially commended.

CONNELLY, Thos. James—Sandhurst.—"Excelsior" Steamboat Lamp.
First degree of Merit.

DOUGLAS & SONS—Melbourne.—Chandeliers.
First degree of Merit.

Report—Commended for colonial manufacture.

DRAPER & SONS—Melbourne.—Patent Earth-closet.
Highly Commended.

DRYSDALE & FRASER—Melbourne.—Ornamental Iron Ventilators.
Highly Commended.

FORD, R. G.—Melbourne.—Boiler for washing Clothes.
Highly Commended.

GARDINER, J. H.—Hotham.—Invalid's Chair.
Commended.

GUTHRIE, G. D.—Sandhurst.—Filters.
Honourable Mention.

Report—Speed of filtration, very slow; degree of purity, indifferent; price, not named. The design and form are neat and very elegant.

HARNWELL, William—Melbourne.—Colonial Ovens.
First degree of Merit.

HOLLOWAY & SONS, John—Ballarat.—Japanned-ware.
Commended.

HOLLOWAY & SONS, John—Ballarat.—Wash-boards.
Highly Commended.

Report—Commended for colonial make.

HOLT, John G.—Melbourne.—Carbon Filters.
Commended.

Report—Speed of filtration, extremely slow; degree of purity, very clear. Muddy water came out very clear. Price 26s.

HUGHES & HARVEY—Melbourne.—Tin and Japanned-ware.
Highly Commended.

HUMBLE & NICHOLSON—Melbourne.—Funnel for boiling and washing Clothes. Highly Commended.

JEANS, Samuel E.—St. Kilda.—Gas Cooking-stoves and Water-heating Apparatus. First degree of Merit.

JORGENSEN, Niels—Melbourne.—Work-table.
Highly Commended.

M'NEILL, Thomas Henry—Melbourne.—Mirror and Console Table.
Highly Commended.

ROBINSON & SONS—Melbourne.—"Little Gem" Washing-machine.
Honourable Mention.

SHALLARD, T. F.—Melbourne.—"Austral" Dolly Washing-machine.
Highly Commended.

STOKES & MARTIN—Melbourne.—Struck Goods (Soup-dishes and Goblets). Commended.

TIPPETT, J. C.—Melbourne.—Refrigerators and Filters combined.
Commended.

WALLS, John—Camperdown.—Washing-machine.
Commended.

WHITELAW & BLAIR—Melbourne.—Mirrors.
Commended.

WILLIAMS, Price—Melbourne.—Washing-machines.
Highly Commended.

WILLIAMS, Price—Melbourne.—Patent Self-closing Hinges.
Highly Commended.

Report—Highly commended for simplicity of construction and usefulness.

WILSON, CORBEN, & CO.—Melbourne.—Baths and Mantelpieces of Enamelled Slate. First degree of Merit.

WOLTER & ECHBERG—Melbourne.—Washing-machine and Churns.
First degree of Merit.

Report—Specially commended as being all of metal and adapted to meet colonial wants.

CLASSES 228–241.

Yarns and Woven Goods of Vegetable or Mineral Materials, and Woven and Felted Goods of Wool, and Mixture of Wool.

JUDGES.

BAHSE, MORITZ F.	Dresden, Germany.
HAUTRIVE, MARCEAU	Paris, France.
HOLLE, JOHN FREDERICK	Sydney.
JAMIESON, G....	Sydney.
PERRY, J. STEPHEN (Chairman)	Sydney.
TUTING, G. C....	Sydney

GROUP—Yarns and Woven Goods of Vegetable or Mineral Materials, Woven and Felted Goods of Wool and Mixture of Wool.

CLASSES 228–241.

AUSTRIA.

ABELES, Leopold—Vienna.—Cotton-yarn, Thread, Linen Goods, &c.
First degree of Merit.

Report—The calicoes and linen goods are excellent in quality, make, and finish.

BRUNFAUT, Amalia de—Vienna.—Embroideries, Weavings, and Wool of Glass.
First degree of Merit.

Report—This exhibit is remarkable for the beauty and originality of its glass wool, which is eminently adapted for filtering acids, &c.

KLINGER, Heinrich—Vienna.—Canvas, Calicoes, and Handkerchiefs.
Highly Commended.

Report—Very useful goods, of good quality.

LIEBIG, Franz—Reichenberg in Böhmen.—Woollens, Prints, and Shawls.
First degree of Merit Special.

Report—This is a very fine exhibit of great variety, beautifully got up, and excellently finished.

The following exhibits were forwarded to Sydney under the auspices of the Chamber of Commerce of Brunn :—

AUSPITZ'S ENKEL, L.—Brünn in Mähren.—Tweeds.
First degree of Merit.

Report—Very good finish and fair value.

BAUER & WIEDMANN—Brünn in Mähren.—Tweeds.
First degree of Merit.

Report—Well finished and good value.

ENGEL & CO., Bernhard—Brünn in Mähren.—Tweeds.
Honourable Mention.

KALLAB & SÖHNE, Franz—Brünn in Mähren.—Tweeds.
First degree of Merit.

Report—Good style and finish.

OFFERMANN, J. H.—Brünn in Mähren.—Tweeds.
Highly Commended.

Report—Good patterns and well made.

POPPER & CO., Leopold—Brünn in Mähren.—Tweeds.
Highly Commended.

Report—Good quality and finish, but price high.

POPPER, Isidor—Brünn in Mähren.—Tweeds.
Commended.

Report—Fair value.

REDLICH, Friedrich—Brünn in Mähren.—Tweeds.
Highly Commended.

Report—Value and quality good.

REISHORN & FRIEDEL—Brünn in Mähren.—Tweeds.
First degree of Merit.

Report—Well finished, and excellent quality.

SAMEK BRÜDER—Brünn in Mähren.—Tweeds.
First degree of Merit.

Report—Good finish and value.

SIEGL, Senr., Karl—Mährisch-Schönberg.—Linen.
Commended.

Report—Fair quality and finish.

SORER, E. M.—Brünn in Mähren.—Tweeds.
First degree of Merit.

Report—Good finish and value.

SPITZ, S.—Brünn in Mähren.—Tweeds.
Commended.

Report—Fair quality, but price high.

STEINBRECHER, Anton und Fritz—Trübau in Mähren.—Cottons.
First degree of Merit.

Report—Well finished, and of good quality.

STRAKOSCH & SÖHNE, S.—Brünn in Mähren.—Tweeds.
Commended.

Report—Heavy, and high-priced.

N.B.—The above fifteen exhibits being patterns only, although judged worthy of one of the different degrees of merit, are not supposed to hold the same position as comprehensive collections of large samples.

HANDELS & GEWERBE-KAMMER (Chamber of Commerce)—Brünn in Mähren.—Collective Exhibit of Tweeds, &c.
First degree of Merit.

BELGIUM.

BAERTSOEN A., ET BUYSSE, A.—Ghent.—Cotton Velvet.
First degree of Merit.

Report—These are excellent goods, beautifully got up in rather a new style.

CLASSES 228–241.—*Yarns, and Woven Goods, &c.*

BAERTSOEN, A., ET BUYSSE, A.—Ghent.—Linen and Canvas.
First degree of Merit.

Report—These exhibits are of good value, and very well made.

BAERWINKEL ET ROSENBERG—Verviers.—Coatings and Tweeds.
Highly Commended.

Report—Well finished, excellent value, and good patterns, but wanting in elasticity.

BORREMAN, Réné—Ghent.—Damasks, Piqués, &c.
First degree of Merit.

Report—These goods are of superior quality, of good value, and well fitted for the use of the general public.

BIOLLEY FRÈRES—Verviers.—Tweeds.
First degree of Merit Special.

Report—Well finished goods of excellent quality.

CERCLE COMMERCIAL ET INDUSTRIEL DE GAND.—Ghent.
—Collective Exhibit of Velvet, Linen, &c. First degree of Merit.

CHAMBER OF COMMERCE—Ghent.—Collective exhibit of Velvet, Linen, &c. First degree of Merit.

CHAMBER OF COMMERCE—Verviers.—Collective Exhibit of Cloth, &c. First degree of Merit.

COOLS ELIAERT—Alost.—Threads.
First degree of Merit.

Report—The threads of all descriptions of this firm are remarkable for evenness of make, and lustre of appearance.

DE MONT VAN DEN AKKER—Ninove.—Threads.
Highly Commended.

Report—Threads of very fair quality and finish.

DRESSE, PIRON, ET CIE.—Ensival.—Tweeds.
Highly Commended.

Report—Well finished articles, of good value and patterns.

DREZE FRÈRES—Verviers.—Tweeds.
First degree of Merit.

Report—Well finished, and of excellent quality.

DRUWÉ ET HENDRICKX—Alost.—Sewing and Knitting Threads.
First degree of Merit.

Report—These are of really first-class material, and not expensive.

GAROT, L. ET E.—Verviers.—Tweeds.
First degree of Merit Special.

Report—These goods are of the best quality and excellently finished.

HENRION, J. J.—Hodimont-Verviers.—Tweeds.
First degree of Merit.

Report—Very well finished, good patterns and value.

LEJEUNE, Vincent H. T.—Dison.—Tweeds.

First degree of Merit.

Report—Good patterns and value, very well finished.

MIGEON FRÈRES—Ghent.—Canvas, Wool-Baling, Sacks, &c.

Highly Commended.

Report—These are particularly serviceable goods, of very fair quality, and moderate price.

PARMENTIER, VAN HOEGAERDEN ET CIE.—Ghent.—Cotton Threads. First degree of Merit.

Report—This firm exhibits threads of great evenness and beautiful finish.

PELTZER ET FILS—Verviers.—Broad Cloths, and Tweeds.

First degree of Merit Special.

Report—Very well finished goods of excellent quality.

REY AINÉ—Brussels.—Linens, and Sheetings.

First degree of Merit Special.

Report—This exhibit is excellent in every respect, and not surpassed by anything of its kind in the Garden Palace.

ROLIN FILS ET CIE., H.—St. Nicholas-Waes.—Tweeds.

Highly Commended.

Report—Good value and well finished.

SAUVAGE, A. J.—Verviers.—Tweeds.

First degree of Merit.

Report—Very good patterns, and very well finished.

SIMONIS, Iwan—Verviers.—Cloths.

First degree of Merit.

Report—Well finished and excellent value.

SUPPES, F.—Ghent.—Cotton, and Linen Fabrics.

First degree of Merit.

Report—Excellent manufacture, and very good value.

TASTE, Jean—Verviers.—Tweeds.

First degree of Merit.

Report—Good patterns, excellent value, and well finished.

VAN DE WYNKELE, Charles—Ghent.—Threads.

Commended.

Report—These threads of all descriptions, are of fair quality, and not expensive.

VREEDE, L. ET H.—Verviers.—Flannels.

Highly Commended.

Report—These flannels have good weight, are marked at moderate prices, and are fairly finished.

CEYLON.

GOVERNMENT OF CEYLON—Ceylon.—Six Mats.
Honourable Mention.

Report—These are skilfully made, of fair quality, and useful in their way.

LEECHMAN & CO., G. & W.—Ceylon.—Bags, Rugs, Mats, Yarn, &c.
Commended.

Report—Very useful, and really well made.

FIJI.

FIJI NATIVE EXHIBIT—Levuka.—Floor and Sail Mats, White, Coloured, and Fancy Mats. Highly Commended.

Report—Very useful, serviceable, and excellently made.

FIJI NATIVE EXHIBIT—Levuka.—White and Coloured Tapa, and Turbans. Two Highly Commended Awards.

Report—This exhibit (which includes the coloured Tapa shown by Mr. F. C. Hedemann) shows great originality in design and ingenuity, and some skill in construction.

HEDEMANN, F. C.—Sydney.—Mats, Coloured and Plain (from Fiji).
Highly Commended.

Report—Made of excellent materials, and show good workmanship.

HEDEMANN, F. C.—Sydney.—Coloured Tapa (from Fiji).
Highly Commended.

VICKERY, Junior, J.—Sydney.—Cocoanut Fibre Matting (from Fiji).
Commended.

Report—An exhibit well fitted to answer its purposes, and of excellent materials.

FRANCE.

BABEY, Charles—St. Pierre les Calais.—Curtains and Guipures.
Highly Commended.

Report—Original in design, and most skilfully and prettily made.

BOULLA, Bertrand—Nîmes-Gard.—Carpets, and Imitation Tapestry.
First degree of Merit Special.

Report—These exhibits are of excellent quality, beautiful in design, and rich in colouring.

BRAQUENIÉ ET CIE.—Paris.—Tapestries and Carpets.
First degree of Merit Special.

Report—Tasteful and varied designs, excellent quality, and softly and richly coloured.

BRÉANT—Paris.—Brocaded and Imitation Indian Shawls.
First degree of Merit.

Report—Very good quality and design, well got up.

BRUN, Ernest—Uzès-Gard.—Tissues and Ticking.
Honourable Mention.

Report—Fair quality, and well made.

CHALAMEL ET CIE.—Paris.—Dyed and Printed Linen, Woollen and Silk Goods. First degree of Merit.

Report—These exhibits are not shown as manufactured articles, but as specimens of colouring and dyeing, and deserve recommendation for the richness and bloom of the colouring.

CHAMBRE DE COMMERCE DE REIMS—Reims.—Merinos, Flannels, and samples of Woollen stuffs for Shawls. First degree of Merit.

Report—These woollen stuffs, merinos, flannels, &c., are of very good quality and finish, and the dyeing is excellent.

CHAMBRE DE COMMERCE DE REIMS—Reims.—Collective Exhibit. First degree of Merit.

CORBIÈRE ET FILS, ET BLONDET—Paris.—Furniture Stuffs, and Carpets. First degree of Merit.

Report—These goods are of pretty design, and very good material—are well coloured and finished.

DELECROIX—Lille.—Sewing-Threads.
First degree of Merit.

Report—Excellent quality.

DESMARETS ET CIE.—Paris.—Oilcloth.
Highly Commended.

Report—Good and useful oilcloth, of very fair quality and finish.

DUPLAN ET HAMOT—Paris.—Aubusson Tapestry.
Highly Commended.

Report—Great originality in design, and very useful.

DUPONT ET HERVÉ, Louis—Paris.—Carpets, Table-covers, &c.
First degree of Merit Special.

Report—These goods are superior in every respect; new in design, rich in colouring, excellent in taste, and beautifully finished.

FRÈTÉ ET CIE.—Paris.—Tents, and Camp Articles.
Highly Commended.

Report—Very useful articles, of good construction.

GRAVIER, Clement—Nîmes-Gard.—Velvet Pile Carpets, &c.
First degree of Merit.

Report—Tastefully designed carpets, of excellent quality and well-finished.

JOUBERT, BONNAIRE ET CIE.—Angers-Loire-et-Main.—Sail and Bag Canvas, Sewing Twine. First degree of Merit.

Report—These goods are well made, of excellent material, and very useful and serviceable.

PINON ET GUERIN—Reims.—Cloths and Tweeds. First degree of Merit.

Report—Good quality, excellent finish, and low price.

SALLANDROUZE FRÈRES—Aubusson (Creuse), and Paris.—Carpets. First degree of Merit.

Report—These carpets are of excellent material, tastefully designed, and well finished.

SAINT FRÈRES—Paris.—Yarns and Tissues of Flax. First degree of Merit.

Report—These goods are of very good material, serviceable, and moderate in price.

TANGRE—Paris.—Wire Gauze and Wire Netting. First degree of Merit.

Report—Excellent quality, and beautifully made.

TRESCA, Edmond—Paris.—Machine-made Point Tapestry. First degree of Merit.

Report—Very good designs, excellent material, and beautifully got up.

GERMANY.

BAECKER & CO.—Johannisthal bei Iserlohn.—Wire-Cloths. Commended.

Report—Fair quality and finish.

BECKER & HOFBAUER—Berlin.—Carpets. First degree of Merit Special.

Report—This is an exhibit of carpets of many kinds, all of very good design, beautifully made, and richly coloured.

BOENICKE, C. F.—Luckenwalde.—Tweeds. Highly Commended.

Report—Good value and finish.

BORN & JOACHIM—Berlin.—Machine and hand-knitted Shawls, Opera Cloaks, &c. First degree of Merit Special.

Report—These are of a soft rich quality, beautifully coloured and finished.

BRODBECK & CO.—Reichenbach in Sachsen.—Woollen Cloths, Llamas, &c. Highly Commended.

Report—Good quality, and well got up.

DELIUS, C.—Aachen (Aix-la-Chapelle).—Cloths.
First degree of Merit Special.
Report—Very good value and finish, weight, and quality.

EDLER & CO., Harry.—Bielefeld in Westphalen.—Machine-made Quilts, of Silk and Italian Cloth. Highly Commended.
Report—Very cheap goods, of good manufacture, and very useful.

EHRENHAUS, N.—Berlin.—Carpets, Table-covers, &c.
First degree of Merit Special.
Report—This exhibit is chiefly remarkable for its table and furniture covers of new and pretty patterns. The colouring is very good, the get-up and finish excellent.

FÄHNDRICH, C. W.—Luckenwalde.—Tweeds.
Commended.
Report—Good quality, fair value, and heavy make.

FRÖHLICH & WOLFF—Cassel.—Filter-Cloths, Fire-Hose, and Buckets.
Honourable Mention.
Report—Good and useful articles.

GEBHARDT & WIRTH—Frauenmühle, Sorau.—Tweeds.
First degree of Merit.
Report—Good style, value, and finish.

GENTSCH, Louis—Zeitz in Sachsen.—Woollen Shawls, &c.
Commended.
Report—Fair quality, and very moderate prices.

GLASER & KINDERMANN—Leipzig.—Table-covers.
Highly Commended.
Report—This is a collection made of excellent material, at moderate prices.

GLENCK & WEISSE—Leipzig.—Woollen Cloths and Coatings.
First degree of Merit.
Report—Good style, and very well manufactured.

GÖHRING & BÖHME—Leipzig.—Baize for Table Covers, &c.
First degree of Merit.
Report—These goods are well made, of first-class material, and low in price.

GREVE & UHL—Osterode am Harz.—Fancy Blankets and Horse-rugs.
First degree of Merit.
Report—These goods are of very good quality—some of the designs rather original.

GREVE & QUENTIN—Osterode am Harz.—Travelling and Horse-Blankets. Commended.
Report—Well made, of very fair material.

HAAS GEBRÜDER—Lambrecht in Bayern.—Tweeds.
First degree of Merit Special.
Report—Very good value and patterns, excellently finished.

HEERKLOTZ & THÜRMER—Döbeln in Sachsen.—Boot and Shoe Uppers. Highly Commended.

Report—These embroidered uppers are very well finished, and moderate in price.

HIRSCH & MARKWALD—Berlin.—Tweeds. Commended.

Report—Fair quality and finish.

JÄGER & ELWERT—Reutlingen in Württemberg.—Corsets, Quilts, Toilet-covers, &c. Commended.

Report—Well suited to the general public, well got up, and moderate in price.

JOHANNES, Carl—Saalfeld in Thüringen.—Brass and Iron Wire-Cloths. Highly Commended.

Report—Very well made and very useful.

KANTOROWICZ, Robert—Berlin.—Blankets and Carpet Bags. Highly Commended.

Report—Very well and nicely made.

KLEIN-SCHLATTER, C. F.—Barmen.—Zanellas, Cashmeres, &c. First degree of Merit.

Report—Very well finished, good material, and very low prices.

KLEMM, G.—Forst.—Tweeds. First degree of Merit.

Report—Quality and finish excellent, value and style fair.

KOSSACK, H. J.—Spremberg.—Tweeds. First degree of Merit.

Report—Good style, value, and finish.

KRÜGER GEBRÜDER—Cottbus.—Tweeds. Highly Commended.

Report—Good patterns and value.

LAEHR & SOHN—Berlin.—Berlin "Zephir" Wool, and Worsted. First degree of Merit Special.

Report—These splendid goods show great novelty in the dyeing, and excellence in the get-up and style.

LEHMANN, A. M.—Finsterwalde.—Cloths. Commended.

Report—Good finish, but heavy make.

LEONHARDT, G. F.—Hainichen in Sachsen.—Flannels. First degree of Merit Special.

Report—Excellent value, finish and weight, superior in quality.

LEVIN, Hermann—Göttingen, Hannover.—Flannels. First degree of Merit.

Report—Excellent finish, good body, and fair value.

LEWINSTEIN GEBRÜDER—Berlin.—Waterproof Coatings.
First degree of Merit Special.

Report—Very good quality, excellent value, and well finished.

LÖHLER, Theodor—Mannheim a/R. (Baden).—Wire Mattresses.
First degree of Merit.

Report—This exhibit, the only one of its kind in the Garden Palace, is excellent in every respect, and very useful.

MARGGRAFF GEBRÜDER—Schwiebus.—Tweeds.
Highly Commended.

Report—Good make and finish.

MECHANISCHE-DRILLWEBEREI—Göppingen in Württemberg.—Bed and Mattress Ticks. First degree of Merit Special.

Report—An exhibit of superior quality, beautifully coloured, and excellently finished.

MÜLLER, Adolf—Reutlingen in Württemberg.—Cotton Quilts.
First degree of Merit.

Report—Excellent goods, at a very low price.

MÜLLER, Gustav—Fulda in Hesse-Cassel.—Felt, Felt Hats, Caps, &c.
First degree of Merit.

Report—Very good quality and value.

PICHLER, Hermann—Urach in Württemberg.—Damask Table-cloth.
First degree of Merit Special.

Report—A splendid exhibit, most beautifully finished, of a soft, bright, lustre, eminently attractive.

REIFSCHNEIDER, Paul—Glauchau in Sachsen.—Silk Canvas, Rugs, &c. First degree of Merit Special.

Report—The canvas of these goods is made from refuse and waste silk, and is deserving great credit. The rugs, &c., are of excellent colouring and finish.

RICHARD, C.—Spremberg.—Tweeds.
Highly Commended.

Report—Good style and finish.

RICHARD, F. A.—Spremberg.—Cloths.
First degree of Merit.

Report—Very good value, good quality and finish.

RICHTER, August—Muskau in Schlesien.—Tweeds.
First degree of Merit.

Report—Very good style and finish, good value.

RISCHBIETER, Carl—Dessau.—Window Shades.
First degree of Merit Special.

Report—These are really excellent in design, workmanship, and quality.

ROITHNER & CO., Hugo—Schweidnitz in Schlesien.—Hammocks.
First degree of Merit Special.

Report—These woven hammocks are turned out in a most useful and workmanlike manner, of excellent quality, and remarkably low in price.

ROSKAMP & DEHMANN, Carl — Springe-Hannover. — Persian Carpets. Commended.

Report—Fair quality.

SAMSON, Gustav—Cottbus.—Tweeds. First degree of Merit.

Report—Very good quality and good patterns.

SCHILLING & PHILLIP—Grossenhain in Sachsen.—Tweeds. Highly Commended.

Report—Good patterns and value.

SCHILLING & ZÜRN — Johann-georgenstadt in Sachsen.—Embroidered and Tamboured Woollen Table-covers. Highly Commended.

Report—These covers are of good quality, very good workmanship, and well adapted to general requirements.

SCKERL, A.—Schwiebus.—Cloths. First degree of Merit.

Report—Very good style and finish.

SINAPIUS, A.—Spremberg.—Tweeds. First degree of Merit.

Report—Very good quality, value, and finish.

SINGER, C. T.—Kirchberg.—Cloths. Commended.

Report—Good value and fair quality.

SOMMERFELD, M. & O.—Cottbus.—Tweeds. Highly Commended.

Report—Good patterns and value, very fair quality.

SCHRAMM & SOHN, C. F.—Heidenheim-Wurttemberg.—Blankets, Honeycomb, Quilts, and Toilets. Commended.

Report—Very useful ; suitable goods at moderate prices.

STIELER & SOHN, J. B.—Nürnberg.—Gold and Silver Wire, Wire-Cloth. Commended.

Report—Good material and workmanship.

TEICHMANN, M.—Leobschütz in Schlesien.—Shawls, Jackets, Ladies' Operettes, &c. First degree of Merit Special.

Report—A most beautiful exhibit of shawls, &c., richly finished in a somewhat novel style at moderate prices.

THIEL, ALBERT—Düsseldorf.—Woollen and Silk mixed Blankets. First degree of Merit.

Report—Very beautiful goods, of soft nice material, and rich colouring.

THIELE & STEINERT—Berlin und Freiberg.—Gold and Silver Wire, Wire Cloth. First degree of Merit.

Report—A varied exhibit of gold and silver wire, lace, &c., of excellent workmanship, well adapted to any use to which it can be put, well got up, and very low in price.

TITTEL & KRÜGER—Leipzig.—Yarns for Embroidery.
First degree of Merit.
Report—Very good quality, beautiful colours, and excellent finish.

TREFFTZ & SOHN, J. G.—Leipzig.—Cloths and Coatings.
First degree of Merit Special.
Report—Excellent quality.

TUCHFABRIK-LANGENSALZA—Langensalza.—Tweeds.
First degree of Merit.
Report—Excellent quality, good value and finish.

VALTE, Hermann—Cottbus.—Tweeds.
First degree of Merit.
Report—Very good value and patterns.

VAN GÜLPEN, J.—Aachen (Aix-la-Chapelle).—Woollen Cloths and Doeskin. First degree of Merit Special.
Report—Excellent make and finish.

WERTHEIM, Louis—Frankfurt a/M—Bornheim—Asbestos and Soap-stone, Steam-packing. First degree of Merit.
Report—A most useful and excellent exhibit.

WOLLFILZFABRIK-LAMBRECHT—Lambrecht.—Varieties of Felt.
First degree of Merit Special.
Report—Superior quality, very good value and finish.

WOLF, Senr., J. G.—Kirchberg.—Cloths.
Commended.
Report—Fair style and value.

WOLFF, F.—Gladbach.—Dress Goods, Zanellas, &c.
First degree of Merit Special.
Report—These are very useful, serviceable goods, of excellent material and low in price.

WOLFF & SPEYER—Berlin.—Waterproof Sail Cloth and Horse Rugs.
First degree of Merit Special.
Report—This exhibit is chiefly remarkable for its horse-rugs, which are of superior quality and very good in style and colouring.

ZSCHILLE & CO., Feodor—Grossenhain in Sachsen.—Coatings.
Highly Commended.
Report—Good value and style.

GREAT BRITAIN AND IRELAND.

AINSWORTH, Thomas—Whitehaven.—Linen Threads and Towels.
First degree of Merit.
Report—These goods are of excellent material, and well made, and of a very serviceable character.

CLASSES 228-241.—*Yarns, and Woven Goods, &c.*

ARMITAGE BROTHERS—Huddersfield.—Coatings.
Highly Commended.

Report—Of fair value, style, and quality.

ASHWORTH & SONS, Edmund—Bolton.—Cottons for Machine and hand Sewing. Highly Commended.

Report—Very useful cottons of good quality.

ATKINS & NAYLOR—Kidderminster.—Brussels Carpets.
First degree of Merit Special.

Report—These carpets are of very excellent quality, with good and tasteful designs.

BARBOUR & SONS, Wm.—Lisburn, Ireland.—Linen, Shoe Kilting and Netting Threads, Linen and Hemp Yarns. First degree of Merit.

Report—These are good serviceable articles, of excellent material and make.

BARLOW & JONES (Limited)—London and Manchester.—Quilts, Towels, Toilet Covers, Mats, &c., &c. Highly Commended.

Report—A very good exhibit of useful articles, being well made and of good material.

BIRCHALL & CO., J. D.—Leeds.—Tweeds.
Commended.

Report—Fair style and finish.

BIRCHALL & CO., J. D.—Leeds.—Coatings.
Highly Commended.

Report—Of good value and finish.

BLISS & SON, William—Chipping Norton, Oxfordshire.—Tweeds.
First degree of Merit Special.

Report—Of good quality and finish.

BOULINIKON FLOOR-CLOTH & MANUFACTURING CO. (Limited) —Manchester.—Boulinikon, or Buffalo-hide Floor-cloth.
First degree of Merit.

Report—A very good, very useful, and very cheap oil-cloth. The material of which it is made is new.

BROOKE & SONS, John—Huddersfield.—Broad-cloths, Serges, Beavers, Doeskin, &c. First degree of Merit.

Report—Very well finished and of good value.

BROOKE & SON, James—Huddersfield.—Broad-cloths.
Highly Commended.

Report—Well finished and of good value.

BROOKE & SON, James—Huddersfield.—Rugs.
First degree of Merit.

Report—These are of good finish, useful style, and are excellently well made.

BROOK & BROTHERS, Jonas—Huddersfield.—Sewing and Embroidery Cotton. First degree of Merit Special.

Report—This is an exhibit of excellent cottons, beautifully finished and remarkable for their strength.

BRINTON & CO., John—Kidderminster.—Tapestry; Brussels and Wilton Carpets. First degree of Merit.

Report—These are carpets of good quality and of a very serviceable character.

BROWN & SONS, Wm.—Wilderbank, Galashiels, Scotland.—Scotch Tweeds. Honourable Mention.

CARLILE, SONS, & CO., James—Paisley.—Sewing and Crochet Cottons. First degree of Merit.

Report—Of excellent materials, make and finish good.

CHILD, William Shelley—Huddersfield.—Sealskins and Astrakhans. First degree of Merit Special.

Report—Of good value and excellent quality and finish.

CLARK & CO. & CLARK, THREAD CO.—Paisley.—Cottons (all kinds), Yarns from Raw Cottons. First degree of Merit.

Report—Of excellent materials, make and finish good.

CLARKE & SONS, Enoch—London.—Floor-cloth. First degree of Merit.

Report—Excellent in design and utility, and low in price.

COATS, J. & P.—Paisley.—Cottons of all kinds. First degree of Merit.

Report—For utility and strength specially adapted for machine work.

COCHRANE & BROTHERS, A. L.—Netherdale, Galashiels, Scotland.—Scotch Tweeds. Highly Commended.

Report—Fair value and style.

CREWDSON, CROSSES, & CO. (Limited)—Manchester.—Calicoes, Shirtings, and Twills. First degree of Merit.

Report—An exhibit of very soft, beautifully finished calicoes, admirably adapted for domestic purposes.

CROSLAND & SONS, B.—Huddersfield.—Coatings, Sealskins, and Astrakhans. Highly Commended.

Report—Of good quality and style and fair value.

CROSSLEY & SONS, John (Limited)—Halifax.—Carpets, Rugs, &c. First degree of Merit Special.

Report—This is a large, varied, and beautiful exhibit, of most excellent quality of material, designs new and good, being superior in every respect.

CRUM & CO., W.—Manchester.—Printed Goods. First degree of Merit Special.

Report—These goods are exhibited not as manufactures but as specimens of printing and colouring. The designs are beautiful, and the clearness of print and colouring is beyond praise.

FAWCETT & WATSON—Stourport.—Carpets and Rugs.
Highly Commended.
Report—Remarkably well made, useful carpets.

FAUDEL, PHILLIPS, & SONS—London.—Embroidery, Knitting-wools, &c. Highly Commended.
Report—An exhibit of very useful, serviceable wools, nicely got up.

FENBY & CO., J. B.—Birmingham.—Camp Furniture and Tents.
Highly Commended.
Report—This is an exhibit of a very useful kind, having some degree of originality in the designs.

FERGUSON BROTHERS—Carlisle.—Cotton Goods.
First degree of Merit Special.
Report—These are very superior goods, excellent in quality, make, and finish.

GLEDHILL, Thomas—Golcar, near Huddersfield.—Tweeds.
Highly Commended.
Report—Of good style, fair value, and suitable.

HALL & CO., Ralph—Manchester.—Velvets, Velveteens, Cords, Moles, Plushes, Linings, Felts, &c., &c. Commended.
Report—These goods are suited to public requirements.

HARRISON, Charles—Stourport.—Brussels and Velvet Pile Carpetings.
Highly Commended.
Report—Of excellent quality, well got up, and useful for ordinary purposes.

HARRISON & CO., E.—Manchester.—Plain and Fancy Cotton Dress Goods, &c. First degree of Merit.
Report—For general excellence of material and make.

HARRIS & SONS, Jonathan—Cockermouth, Cumberland.—Linen Threads for machine and hand sewing. First degree of Merit.
Report—These are of good material, well finished, and of a serviceable nature.

HENDERSON & CO.—Durham.—Carpets.
First degree of Merit.
Report—A collection of carpets of good quality, very well got up, and of a useful appearance.

HOOPER & CO., C.—Stonehouse, Gloucestershire.—Tweeds.
First degree of Merit.
Report—Of very good finish, style, and value.

HOOPER & CO., C.—Stonehouse, Gloucestershire.—Cloths and Coatings. First degree of Merit.
Report—Of excellent quality, good finish and value.

HUMPHRIES & SONS, James—Kidderminster.—Brussels and Wilton Carpets. Highly Commended.
Report—These carpets are of excellent material, well made, and useful.

CLASSES 228–241.—*Yarns, and Woven Goods, &c.*

JOHNSON & FILDES, Jabez—Manchester.—Quilts, Table-cloths, Cotton Blankets, Towels, Quiltings, &c. Highly Commended.
Report—Very useful goods indeed, and very reasonable in cost.

JONES, Pryce—Newtown, North Wales.—Welsh Flannels, Shawls, &c. First degree of Merit.
Report—These goods are well got up, serviceable, and of good quality. The travelling rug or "battle-field blanket," made by exhibitor, shows originality of invention, is made of good material, and is well adapted to the purpose for which it is intended.

JONES, Pryce—Newtown, North Wales.—Shawls.
First degree of Merit Special.
Report—These are of excellent make and finish, splendid in quality, and serviceable.

KERR, PRICE, & CO.—Paisley.—Sewing Cotton and Linen Thread.
First degree of Merit.
Report—These goods are useful, serviceable articles, of excellent make and material.

LAW, RUSSELL & CO.—Bradford, Yorkshire.—Dress Materials, Woollens, Blankets. First degree of Merit.
Report—These are excellently made, useful goods, of excellent quality of material.

LAWTON & SONS, Geo.—Saddleworth and Micklehurst.—Flannels.
First degree of Merit Special.
Report—Of high-class quality and superior make, the colouring and finish being good.

LIBBY & CO., John—Stroud, Gloucestershire.—Cloths.
Highly Commended.
Report—Of good quality and finish.

LINOLEUM MANUFACTURING CO. (Limited)—Staines, Middlesex.—Linoleum Floor-cloth. First degree of Merit.
Report—This exhibit is particularly excellent in quality of material, and of a highly useful character.

LOCKWOOD & KEIGHLEY—Huddersfield.—Woollen and Worsted Cords. First degree of Merit.
Report—Of good value, quality, and style.

MARLING & CO.—Stroud, Gloucestershire.—Cloths, Doeskins, Beavers, and Tweeds. First degree of Merit Special.
Report—Of very superior finish, excellence of quality, and weight.

MORTON & SONS—Kidderminster.—Velvet and Brussels Carpets.
Highly Commended.
Report—An exhibit of very useful carpets, very well made.

MOSES, H. E. and M.—London.—Moleskins.
First degree of Merit Special.
Report—Very first-rate goods of excellent quality, the printing having a soft finish peculiarly attractive.

NAIRN & CO., M.—Kirkcaldy, Scotland.—Floor-cloths, and Linoleum.
First degree of Merit.

Report—Good cloths, of very excellent quality of material, being moderate in price.

RAISTRICK & SONS, John—Thackley, near Leeds.—Cloths.
First degree of Merit.

Report—Of good finish, value, and style.

RANDALL & WAY—London.—Quorn Cloth.
First degree of Merit.

Report—Showing excellence both in finish and adaptability.

ROLLS & SONS, James—London.—Floor-cloths and Linoleum.
First degree of Merit.

Report—This exhibit of oil-cloths is of good quality, good style and finish, and deserving of notice for the large size of the pieces.

RUST & CO., T. W.—Leicester.—Worsted, Knitting, and other Yarns.
First degree of Merit.

Report—Of good quality, well got up, and serviceable.

RYDER & SONS, J.—Selby, Yorkshire.—Shoe Thread, Machine Thread, and Twines. Highly Commended.

Report—Threads of various kinds, all of good quality and well made.

SALTER & Co., Samuel—Trowbridge, Wilts.—Tweeds.
First degree of Merit.

Report—These goods are of very good finish and of first-class quality of wool.

SHAW & SON, Frederick—Huddersfield.—Wire-cards for Carding-engines. First degree of Merit.

SKILBECK & CO., Robert—Huddersfield.—Tweeds.
Commended.

Report—Of fair style and value.

SMITH & SONS, Richard—Kidderminster.—Carpets and Rugs.
Commended.

Report—Useful and serviceable carpets, and of fair quality.

STANLEY, Deane—Manchester.—Towels, Terry Cloths, &c.
First degree of Merit Special.

Report—A remarkably fine exhibit of very beautiful goods, of splendid quality and good value.

STANTON & SON, Stroud—Gloucestershire.—Cloths, Coatings, and Billiard-cloths. Highly Commended.

Report—Of very fair value and finish.

STARKEY BROTHERS—Huddersfield.—Broad-cloths, Worsteds, and Coatings. First degree of Merit.

Report—Very well finished, and of good value.

STEPHENS, James—London, and Liversedge, Yorkshire.—Axminster Carpets, Stair Carpets, &c. Highly Commended.

Report—Very well made, nicely-finished carpets, of good material and useful style.

STRACHAN & CO.—Stroud, Gloucestershire.—Cloths and Coatings. First degree of Merit.

Report—Well finished, of good quality and value.

STUART, J. & W.—Musselburgh, Scotland.—Cotton, Hemp, and Flax Twines, Fishing Nets. First degree of Merit.

Report—A fine exhibit of excellent goods, well got up, and particularly serviceable.

SWAINSON, BIRLEY, & CO.—London, Manchester, and Preston.—Long Cloths, Shirtings, Muslins, Matelassé Drills, etc. Highly Commended.

Report—These are remarkably cheap goods, useful and well got-up.

TAPLING & CO., Thomas—London.—Tapestry, for ecclesiastical wall decoration and other purposes. First degree of Merit Special.

Report—This is a magnificent exhibit, richly and beautifully finished and coloured, and the design of the piece is so well executed as to render the exhibit a work of art.

TAYLOR & CO.—Huddersfield.—Tweeds. Highly Commended.

Report—Of good style, finish, and fair value.

TAYLOR & LITTLEWOOD—Huddersfield.—Tweeds. Highly Commended.

Report—Of fair style and quality; the worsted goods of this firm are of good finish.

TOMKINSON & ADAM—Kidderminster.—Axminster Carpets. First degree of Merit Special.

Report—This firm shows a collection of exquisite Axminster carpets, of novel and beautiful patterns, and general superiority.

TURNER & CO., J. B.—Huddersfield.—Tweeds. Highly Commended.

Report—Of good style and finish, and fair value.

UNITE, John—London.—Hay-rick Covers, Tarpaulins, and Canvas. First degree of Merit.

Report—A good exhibit of a useful and well-made article.

VICKERMAN & SONS, B.—Huddersfield.—Coatings and Serges. Commended.

Report—Good value.

WALKER & SONS, Joseph—Huddersfield.—Sealskins, Astrakhans, Cloakings, and Billiard-cloths. First degree of Merit.

Report—Of fair value, style and quality being very good.

WALKER & SONS, Joseph—Huddersfield.—Rugs.
Honourable Mention.
Report—Showing good workmanship, and of fair material.

WATSON & NAYLOR—Kidderminster.—Carpets.
Highly Commended.
Report—A useful and well got up collection of carpets, chiefly for bedroom purposes.

WEBSTER & SON, Francis—Arbroath, Scotland.—Flax and Cotton Sail Canvas, Waggon and Rick Cloths. First degree of Merit.
Report—This is an exhibit excellent in every respect, well-made, of splendid material, highly serviceable, and of good value.

WELSH WOOLLEN MANUFACTURING CO. (Limited)—Newtown, Montgomeryshire.—Tweeds. Commended.
Report—Of good style and value.

WHITLEY & CO.—London.—Gwynfé Hammock Tents (Leycester's patent). First degree of Merit Special.
Report—A very useful and creditable exhibit. Well adapted to the use of travellers who need to carry house and bed in small compass, being very light and portable.

WHITTALL & CO., M.—Kidderminster.—Brussels Carpets.
First degree of Merit Special.
Report—These are excellent carpets, of original designs and splendid quality.

WHITWAM & CO.—Huddersfield.—Tweeds.
Highly Commended.
Report—Of fair style and finish, well got up, and of moderate value.

WILSON & CUNNINGHAM—Arbroath, Scotland.—Navy Canvas.
Highly Commended.
Report—These goods are of excellent quality, and well got up.

WOODWARD, GROSVENOR & CO.—Kidderminster.—Brussels and Velvet Pile Carpets. Highly Commended.
Report—Useful, serviceable carpets, well made, and of good materials.

INDIA.

CALCUTTA JUTE MILLS CO. (Limited)—Bengal.—Samples of Gunny Bags, Cornsacks, Woolpacks, and Cloth. Honourable Mention.
Report—Useful and well made.

ELGIN MILLS CO. (Limited)—Cawnpore.—Thirteen pieces of Striped and Chequered Cotton. Honourable Mention.
Report—Useful, and serviceable.

GOVERNMENT OF THE NORTH-WESTERN PROVINCES AND OUDH.—Carpets made in Mirzapore and Jhansi Jails, and in Agra Central Prison. Highly Commended.

Report—These are chiefly commendable for the skill with which they are made, being novel in design, and fairly useful.

GOVERNMENT OF THE NORTH-WESTERN PROVINCES AND OUDH.—Umritsur Shawls. Commended.

Report—These are useful, serviceable Shawls, of excellent material, showing great skill in the making up.

GOVERNMENT OF THE NORTH-WESTERN PROVINCES AND OUDH.—Cotton Fabrics of Azamgarh (Adharsa). Highly Commended.

Report—These are well got up, useful and serviceable articles.

GOVERNMENT OF MADRAS.—Rattan Mats. Highly Commended.

Report—Well got up and useful mats.

GOVERNMENT OF MADRAS.—Grass Mats. Highly Commended.

Report—These mats are made of indigenous grasses, being skilfully woven, and very serviceable.

MUIR MILLS CO. (Limited)—Cawnpore.—Two pieces of Kháki Drills (Yarn dyed). Commended.

Report—Very well finished, and of a useful description.

MUIR MILLS CO. (Limited)—Cawnpore.—Twelve pieces of Drills, Dusuti Cloth (Double Warp), and two pairs Sheets. Commended.

Report—Of good quality, and useful for purposes intended.

SUPERINTENDENT OF CENTRAL PRISON, AGRA.—Carpets. Highly Commended.

Report—Another exhibit chiefly noticeable on account of its originality and skill shown in construction. Fair quality.

JAPAN.

AKAGAWA KIUBEI—Osaka.—Fern-tree Mat. Commended.

Report—Well made, very useful, and original.

MATSUMOTO TETSUZO—Tokio.—Floor-cloth. Imitation of Leather. Commended.

Report—For skill in workmanship and originality in design.

MITSUI BUSSAN KUWAISHA, KIRITSU KOSHO KUWAISHA, & OKURA & CO.—Tokio.—Different sorts of Cotton Rugs. Honourable Mention.

Report—Suitable and useful.

OTA WOOHEI—Osaka.—Cotton Canvas, &c.

Honourable Mention.

Report—Of very good material, and useful.

SAKAI GOICHI—Osaka.—Cotton Cloths, &c.

Honourable Mention.

Report—Well and skilfully made, and of fair material.

SASAKI, T. T.—Nagasaki.—Feather Rug.

Highly Commended.

Report—Original, good, and useful.

SHIN-SHIO-SHA—Osaka.—Silk Rug.

First degree of Merit.

Report—Excellent manufacture, good colour, and original.

YANAGITA WOOHEI—Osaka.—Rattan Oil-cloth.

Highly Commended.

Report—Very good and useful.

NEW CALEDONIA.

MORGAN, J.—Nouméa.—Cocoa-nut Fibre.

Highly Commended.

Report—These fibres look very nice and clean, and are of a useful character.

NEW SOUTH WALES.

ANDREWS, R. A.—Sydney.—Dressed Horse-hair.

Commended.

Report—For its excellent quality and usefulness.

ARMFIELD, The Misses—Sunnyside, Berrima.—Opossum Fur Socks.

Commended.

Report—For novelty and usefulness.

EASTWAY BROS.—Sydney.—Wire-work.

First degree of Merit.

Report—An exhibit of handsome looking wire-work goods, well made and well finished.

FRENCH, George—Parramatta.—Tweeds.

Honourable Mention.

Report—Fair patterns, but inferior finish.

FRYER, Mrs. Thomas—Goulburn.—Two Hearth-rugs of old Woollen Rags. Honourable Mention.
Report—For originality.

LASSETTER & CO., F. (Limited)—Sydney.—Collection of Canvas Waterproof Goods. First degree of Merit.
Report—A varied collection of extremely useful waterproof goods, made of very excellent materials.

McINNIS, Arabella—Goulburn.—Gloves and Stockings made from Opossum Fur. Highly Commended.

READ, J. C.—Darlinghurst Gaol.—Mats, Matting, &c., prison made. First degree of Merit Special.
Report—A collection of mats and other goods, which make up a particularly good exhibit; excellent in design, make, and finish.

VICARS, J. & CO.—Sydney.—Tweeds.
First degree of Merit Special.
Report—Of very superior quality and style. Are specially suitable for large contracts, or Government purposes, on account of their admirable finish and fast dyes.

NEW ZEALAND.

BEVAN, Jun., Thomas—Waikawa, Foxton.—Collection of Fishing-lines, Twine, Rope, Horse Halters, &c., all made from New Zealand Flax. Commended.
Report—For good quality and workmanship.

BRAITHWAITE, A.—Welllington.—Homespun-Yarn.
Honourable Mention.
Report—Very useful.

COOK, William—Wellington.—Four Mats made from New Zealand Flax and Wool. Commended.
Report—For good make and usefulness.

ELLIS & NICHOLSON—Dunedin.—Samples of Flock for Upholstering Purposes. Commended.
Report—For quality of material and skill used in preparation.

HENRY, Miss Mary—Nelson.—Woollen Scarf, spun and knit by hand. Honourable Mention.
Report—Nicely made, and of good material.

JORDAN, Joseph—Dunedin.—Counterpane or Table Cover (ornamented). Highly Commended.
Report—Of good material, and excellently got up.

KAIAPOI WOOLLEN MANUFACTURING CO. (Limited)—Kaiapoi, Canterbury.—Samples of Yarn, Plaiding, and Tweed. Commended.

Report—Good quality, and useful.

KAIAPOI WOOLLEN MANUFACTURING CO. (Limited)—Kaiapoi, Canterbury.—Blankets. Commended.

Report—Serviceable goods.

KAIAPOI WOOLLEN MANUFACTURING CO. (Limited)—Kaiapoi, Canterbury.—Flannels. First degree of Merit.

Report—Of stout make and good body.

LAWLESS, Thomas—Thames.—Wool-work in Frame. Commended.

Report—For skill in execution and excellence of material.

MOSGIEL WOOLLEN FACTORY CO.—Dunedin—Shawls, Blankets. Highly Commended.

Report—Of good material, and very serviceable.

MOSGIEL WOOLLEN FACTORY CO.—Dunedin.—Woollen Fabrics. Highly Commended.

Report—Well made and useful goods, of good material.

MOSGIEL WOOLLEN FACTORY CO.—Dunedin.—Flannels. Commended

Report—Of good weight and make, but rough finish.

MOSGIEL WOOLLEN FACTORY CO.—Dunedin.—Tweeds. First degree of Merit.

Report—Well finished, and of good patterns.

QUEENSLAND.

BOTANIC GARDENS—Brisbane.—Collection of Fibres. Commended.

Report—Of good and useful quality.

MACPHERSON, Alexander—Brisbane.—Textile Fabrics. First degree of Merit.

Report—A very interesting exhibit of Textile Fabrics, reflecting great credit on the exhibitor, who has succeeded in initiating an industry that may one day be very beneficial to the Colonies.

QUEENSLAND WOOLLEN MANUFACTURING CO.—Ipswich.—Tweeds and Serges. Honourable Mention.

Report—Rough finish, wanting in body.

QUEENSLAND WOOLLEN MANUFACTURING CO.—Ipswich.—Flannels. Honourable Mention.

Report—Good make and well finished; but value not good.

SOUTH AUSTRALIA.

CHAMBER OF MANUFACTURES—Adelaide.—Linen made from South Australian Flax. First degree of Merit.

Report—An interesting exhibit, as being the first one of linen manufactured in the Colony. The result is highly creditable.

STRAITS SETTLEMENTS.

GOVERNMENT OF STATE OF PERAK.—Four Malay Mats. Highly Commended.

Report—These are remarkably well made, and useful for purposes intended.

TASMANIA.

BULMAN, JOHNSTON, & CO.—Launceston.—Tweeds. Commended.

Report—Good patterns, but wanting in weight and finish.

BULMAN, JOHNSTON, & CO. — Launceston. — Blankets, Shawls, Pattern Tweeds. First degree of Merit.

Report—These goods are of excellent materials, serviceable character, and well made.

UNITED STATES.

BLABON & SON, G. W.—Philadelphia.—Oil-cloth. First degree of Merit Special.

Report—A very good useful oil-cloth, printed in beautiful colours, and of very superior quality.

BRINKERHOFF, TURNER, & CO.—New York City.—Cotton Duck, and Sail Twine. Highly Commended.

Report—Of good quality of material, and useful.

HOLBROOK, E. W., & CO.—New York City.—Shirtings, Duck, Carpet, Warp, Peerless-Warp. Honourable Mention.
Report—These are of good material, and well adapted to the wants of the public.

JOHNS MANUFACTURING CO., H. W.—New York City.—Asbestos Roof Coating, Sheating, Felting, &c. Highly Commended.
Report—Report of excellent quality.

MORRISON & HUTCHINSON—New York City.—Linen Shirts. Highly Commended.
Report—Quality good, and well got up.

POTTER, SON, & CO., Thomas—Philadelphia.—Oil-cloth. First degree of Merit.
Report—This is an exhibit of excellent material, noticeable for good colouring and design.

SEYMOUR, SCOTT, & BROTHER, T.—Philadelphia, Penn.—Papoleum Floor-cloth, and Waterproof Building Paper. First degree of Merit.
Report—For design and utility.

WAMSUTTA MILLS CO.—New Bedford, Mass.—Calicoes, Shirtings, and Sheetings. First degree of Merit.
Report—A really beautiful exhibit of undressed calicoes, well finished, and of particularly good material.

VICTORIA.

BALLARAT WOOLLEN CO.—Ballarat.—Tweeds. Commended.
Report—Fair patterns, and moderate finish.

BALLARAT WOOLLEN CO.—Ballarat.—Flannels. Commended.
Report—Good wool, but finish defective.

BALLARAT WOOLLEN CO.—Ballarat.—Blankets and Shawls. Highly Commended.
Report—Good useful articles, well made.

BARWON WOOLLEN MILL CO. (Limited)—Geelong.—Tweeds. Highly Commended.
Report—Finish fair, weight and patterns good.

BARWON WOOLLEN MILL CO. (Limited)—Geelong.—Blankets. First degree of Merit.
Report—An exhibit of soft, rich, weighty blankets, with great finish and well made.

CLASSES 228-241.—*Yarns, and Woven Goods, &c.*

CASTLEMAINE WOOLLEN MILL CO. (Limited)—Castlemaine.—Blankets. Commended.
Report—For the good quality of materials and work shown.

CASTLEMAINE WOOLLEN MILL CO. (Limited)—Castlemaine.—Flannels. First degree of Merit.
Report—Good heavy make and finish.

DAVIDSON, George—Ballarat Woollen Mills, Ballarat East.—Sheepskin Mats. First degree of Merit.
Report—Made with great finish, from beautiful long staple wool.

GOYNE, John, & CO.—Sandhurst.—Stamper Gratings. Commended.
Report—This is a useful article, of fair quality.

M'PHERSON, Thos.—Melbourne.—Woolpacks. Highly Commended.
Report—Useful goods, well made, and of excellent quality.

MELBOURNE WOOLLEN MILL CO. (Limited)—Melbourne.—Tweeds. First degree of Merit.
Report—Patterns fair, of good quality and finish.

MILLER, Jas., & CO.—Melbourne.—Matting, Mats, Woolpacks, and Jute Goods. Commended.
Report—These are well made, fairly suitable, and useful goods.

ROWLEY, W. & G.—Melbourne.—Canary and Parrot Cages. Commended.
Report—Serviceable articles, well made, and of fair material.

VICTORIAN WOOLLEN AND CLOTH MANUFACTURING CO.—Geelong.—Tweeds. First degree of Merit.
Report—Of good patterns and quality, and well finished.

VICTORIAN WOOLLEN AND CLOTH MANUFACTURING CO.—Geelong.—Woollen Goods. Commended.
Report—Good serviceable articles, of fair quality.

YOUL, J. B.—Melbourne.—Shawls, Scarfs, and Antimacassars. Commended.
Report—Serviceable articles.

CLASSES 242–249.

Silk and Silk Fabrics and Mixtures in which Silk is the predominating material.

JUDGES.

DOUBLET, M.	France.
LARK, F. B.	Sydney.
PIOTROWSKI, KENNEDY DE	Rosedale, New Zealand.
SMALE, JOSIAH (Chairman)	Macclesfield, England.
WEBB, EDMUND, M.P.	Sydney.

GROUP—Silk and Silk Fabrics and Mixtures in which Silk is the predominating material.

CLASSES 242–249.

FRANCE.

BONNET ET CIE., Les petit-fils de C. J.—Lyon.—Satins.
First degree of Merit.

BONNET ET CIE., Les petit-fils de C. J.—Lyon.—Black Silks.
First degree of Merit.
Report—This firm exhibits a great variety of black silks of excellent quality, adapted to the Australian market.

GUINET ET CIE., A.—Lyon.—Black Silks.
Highly Commended.
Report—These silks are of good quality, and adapted to the Australian market.

PERMEZEL ET CIE.—Lyon.—Coloured Silks.
First degree of Merit.

GREAT BRITAIN AND IRELAND.

FAUDEL, PHILLIPS, & SONS—London.—Braids, Cords, and Upholsterers' Trimmings. First degree of Merit.
Report—A very fair collection.

MILNER & SONS, William—Leek, Staffordshire.—Sewing Silks.
Commended.

JAPAN.

GUNMA KEN, LOCAL GOVERNMENT OF.—Cocoons and Raw Silk. Highly Commended.
Report—A fine collection of 13 specimens of raw silk, of good quality.

KAITAKUSHI—Tokio.—Cocoons and Raw Silk.
Commended.
Report—Fair sample of silk, showing great care in the manipulation.

MITSUI BUSSAN KUWAISHA, KIRITSU KOSHO KUWAISHA, AND OKURA & CO.—Tokio.—Upholstering Silk.
First degree of Merit.

Report—This exhibit is of very good quality, and the only one of its kind shown at the Garden Palace.

MITSUI BUSSAN KUWAISHA, KIRITSU KOSHO KUWAISHA, AND OKURA & CO.—Tokio.—Figured Silk. Commended.

MITSUI BUSSAN KUWAISHA, KIRITSU KOSHO KUWAISHA, AND OKURA & CO.—Tokio.—Plain Woven Silks.
Honourable Mention.

Report—The material used in the manufacture of these exhibits is of good quality.

ORI DONO—Kioto.—Silk Handkerchiefs.
First degree of Merit.

Report—These handkerchiefs are manufactured from the purest silk, are well finished and superior in quality to some European manufactures of the same description. The prices are extremely moderate for the quality of the goods.

OSHIMA SHOSHA (OSHIMA & CO.)—Shimotsuke.—Cocoons and Raw Silk. First degree of Merit.

Report—These samples are of the best quality, and far surpass any other exhibit shown in the same class.

NEW SOUTH WALES.

AFFLECK, Thomas—Albury.—Silk Cocoons and Silk.
First degree of Merit.

Report—For progress in sericulture.

BLADEN-NEILL, Mrs., LADIES' SILK ASSOCIATION—Corowa.—Cocoons, Spun Silk, and Silk Fabrics. First degree of Merit.

Report—Judged for the cocoons and the variety of manufactures in which the silk is presented (knitting, woven, and embroidered silk). The Judges consider that, from the fact of the exhibitor having 50 acres under mulberry cultivation, her success is a matter of public importance.

BOWMAN, Miss M.—Jerry's Plains.—Case of Reeled Silk.
Highly Commended.

Report—This case of reeled silk, like Mr. Johannsen's, shows how well the climate and country of New South Wales are adapted to the mulberry and the production of silk. In quality it is equal to Mr. Johannsen's, but part of it is unworkable, because of the over-application of some sticky substance during reeling.

JOHANNSEN, J. C.—St. Leonards, North Shore.—Cocoons, Raw Silk, as reeled from Cocoons. First degree of Merit.

Report—From the healthy appearance and quality of the fibre it would, if it were reeled with proper appliances, be equal to anything that could be produced.

NEW ZEALAND.

DIGNAN, Richard Edward—Auckland.—Reeled Silk. Commended.

Report—This collection is good, and the silk is of good quality, and reeled for immediate manipulation. The strength and quality go to show that the climate of New Zealand must be adapted to sericulture.

QUEENSLAND.

CHUBB, C. F.—Ipswich.—Cocoons, Raw Silk, as reeled from Cocoons; also Silk spun, dyed, and in fabric. Honourable Mention.

SOUTH AUSTRALIA.

CHAMBER OF MANUFACTURES—Adelaide.—Cocoons, and Raw Silk. Honourable Mention.

SWITZERLAND.

BALLY GEBRÜDER—Schoenenwerd.—Silk Ribbons. Highly Commended.

Report—A large variety of cheaply-made silk ribbons, which chiefly recommend themselves for their nice finish, brilliant colours, and low prices.

UNITED STATES.

BELDING BROTHERS—San Francisco.—Thrown or Twisted Silks. First degree of Merit.

CLASSES 250–257.

Clothing, Jewellery, Ornaments, and Travelling Equipments.

JUDGES.

BLAU, ADOLPH, Jeweller	Sydney.
CARTER, J. B.	New York, U.S.A.
GILLES, A. W.	Glebe Point, Sydney.
ABIGAIL, FRANCIS, M.P.	Sydney.
MOONEN, LÉON (Chairman)	Paris, France.
M'COY, RICHARD	Sydney.
PETRIE, ADAM	George-st., Sydney.
SMITH, JOHN M'GARVIE, Jeweller	Sydney.
WOOLNOUGH, HORACE, Importer	York-st., Sydney.

GROUP—Clothing, Jewellery, Ornaments, and Travelling Equipments.

CLASSES 250–257.

AUSTRIA.

BOLLARTH, Franz—Vienna.—Lace Ware.
Highly Commended.
Report—Exhibiting skill and good workmanship, together with elegance and good taste.

BUDISCHOWSKY & CO.—Vienna.—Boots and Shoes.
Honourable Mention.

DANNHAUSER BRÜDER—Vienna.—Underclothing.
Commended.
Report—Good style and quality, useful, cheap, and well adapted to Colonial requirements

DEWIDELS, S.—Prague.—Gloves.
Honourable Mention.
Report—Fair quality, and cheap.

DRÄCHSLER, C.—Vienna.—Trimmings and Fringes.
First degree of Merit.
Report—Good designs, durable, well made, useful, and cheap.

FRIC, V.—Prague.—Imitation Precious Stones.
Honourable Mention.

FOGL E.—Vienna.—Mercery for the Army and Navy.
Honourable Mention.

GLÄSER, Hermann—Hernals-Vienna.—Match and Tobacco Boxes, Cigarette Machines, &c. Commended.

HARTMANN & EIDAM, L.—Vienna.—Pipes and Cigar-holders of Meerschaum and Amber. First degree of Merit.
Report—Original designs, good quality and workmanship.

HESSL, Anton—Vienna.—Gloves.
Commended.
Report—Well made, useful, and cheap.

HIESS & SÖHNE, Franz—Vienna.—Pipes and Cigar-holders of Meerschaum and Amber. First degree of Merit.
Report—Original, elegant, and of good quality.

HOCHSTÄDTER, J. N.—Vienna.—Embroidered Handkerchiefs, &c.
Commended.
Report—Skilled workmanship, good quality combined with utility.

KRAULIZ, Michael—Vienna.—Photograph Frames and Fancy Ornaments.
Highly Commended.

Report—Good quality, well made, in good taste and design.

LOGEMANN, Franz—Vienna.—Gloves.
Honourable Mention.

Report—Well made and useful.

LÖWENSTEIN, Adolph R.—Vienna.—Fancy Shoes, &c.
Commended.

Report—Good quality and cheap.

MANDL, M. & J.—Prossnitz and Vienna.—Men's and Boys' Clothing.
Commended.

Report—Good styles and shapes, skilfully made, cheap, and well adapted for Colonial wear.

MAYER & CO., Alex.—Vienna.—Mother-of-Pearl Buttons.
Commended.

Report—Good quality and cheap.

MEINLS A. Erben—Vienna and Bärringen.—Embroideries.
Highly Commended.

Report—Original in design, skilful workmanship, useful, and cheap.

RASCH, Joseph.—Vienna.—Braces, Garters, &c.
Commended.

Report—Well made and cheap.

RICHTER, E. A.—Vienna.—Embroideries.
First degree of Merit.

Report—Original, well made, good quality, and useful.

SALCHER & SÖHNE, M.—Wagstadt and Vienna.—Cloth, Stone-nut and Metal Buttons. Highly Commended.

Report—Well made, cheap, and useful.

SCHITTENHELM & SOHN, K.—Vienna.—Travelling Trunks.
Honourable Mention.

Report—Good quality, well made, useful, and cheap.

SCHÖNBERGER GEBRÜDER—Vienna.—Fancy Leather and Bronze Goods. Highly Commended.

Report—A very good exhibit.

SCHWARZMANN & CO., D.—Vienna.—Clothing.
Highly Commended.

Report—Well made, good cut, excellent style, and cheap.

SKRIVAN & SOHN, Johann.—Schwechat and Vienna.—Collection of Hats. Highly Commended.

Report—Well made, good quality, useful, and cheap.

STIASSNY, Franz & Max—Vienna.—Collection of Gloves.
Commended.

Report—Well made, useful and cheap.

STRAKOSCH, Bernhard—Vienna.—Shoes and Slippers.
Commended.

Report—Good material, combined with cheapness and adaptability.

STRAMITZER, J.—Vienna.—Lace, and Tape Lace.
First degree of Merit.

Report—Well made, good workmanship, useful, and cheap.

TREBITSCH, Arnold—Vienna.—Pipes and Cigar-holders of Imitation Meerschaum and Amber. Commended.

Report—Good workmanship and material, combined with cheapness.

WIENER SCHUHWAARENFABRIK ACTIENGES: (Vormals D. H. Pollak & H. Horwitz)—Vienna.—Boots and Shoes.
First degree of Merit.

Report—Good workmanship, economical, and well suited to Colonial requirements.

WEISS, Martin—Vienna.—Fancy Articles in Wood, &c.
Highly Commended.

Report—Well made and useful.

WEISS, Rudolph—Gaudenzdorf bei Vienna.—Collection of Gloves.
Commended.

Report—Cheap and well made.

BELGIUM.

FRANCO-BELGIAN FELT HAT CO.—Felt Hats.
Highly Commended.

Report—Well shaped, good workmanship and material, and cheap.

GOOSENS NEERMAN—Ghent.—Clothing, Millinery, &c.
Highly Commended.

Report—Well made, good material, most useful, and cheap.

ROMBOUTS, Mme. Marie—Brussels.—Lace.
Highly Commended.

Report—Skilfully made, excellent in design, and cheap.

MONTEFIORE-LEVI, Georges—Brussels.—Brussels Lace.
Highly Commended.

Report—A very fine exhibit.

VAN SPEYBROUCK, E. D.—Bruges.—Lace.
Commended.

Report—Well made, useful, and cheap.

CEYLON.

CEYLON, GOVERNMENT OF—COLOMBO.—Historical Jewellery.
Highly Commended.

FRANCE.

BAPTEROSSES—Briare (Loiret) et Paris.—Buttons.
Highly Commended.

Report—Well made, useful, and cheap.

BARBIER FILS, Stanislas—Paris.—Fans and Fancy Articles in Ivory.
First degree of Merit.

Report—Skilful workmanship.

BESSAND ET CIE.—Paris.—Clothing.
Highly Commended.

Report—Good shapes, styles, and quality, cheap, and well adapted.

BLED & LABBÉ—Paris.—Feathers for Bonnets and Clothing.
Honourable Mention.

Report—Good material, well made, and useful.

BLANCO—Paris.—Eyelets and Fastenings for Stays.
Commended.

Report—Well made, useful, and well adapted for the purpose.

BONDIER, ULBRICH ET CIE.—Paris.—Briarwood Pipes, G.B.D.
First degree of Merit.

Report—Good designs, well made.

CANDELOT, Prosper—Paris.—Gold Bracelets, Brooches, &c.
Highly Commended.

Report—Very good and cheap gold jewellery.

CARCAUT, Gustave—Paris.—Busks and Ribs for Stays.
Highly Commended.

Report—Cheap, and well made.

CLERMONT ET CIE., DE—Paris.—Felt Hats, Furs, and Hatters' Materials.
First degree of Merit.

Report—This exhibit is the finest of its class in the Garden Palace, the shapes are elegant, the workmanship skilful, tastefully got up, and the articles well adapted for Colonial use, and cheap.

COURVOISIER ET CIE.—Paris.—Gloves.
Highly Commended.

Report—Good make and material, and useful.

CUISIN—Paris.—Fancy Leather Goods.
Highly Commended.

Report—Artistically made, of good skilful workmanship, useful, and cheap.

DAVID ET FRÈRE—Paris.—Imitation Diamonds.

Highly Commended.

DIENIS, Mme. Henriette—Paris.—Costumes.

Highly Commended.

Report—Showing elegance in style, skilful workmanship, and good material.

DUBROCA, Germain—Paris.—Imitation Jewellery.

Honourable Mention.

Report—For Nickel Chains.

FARCY ET OPPENHEIM—Paris.—Corsets.

Highly Commended.

Report—Well made, and well adapted for Colonial use.

FÉAU, Alfred—Paris.—Gold and Silver Thimbles.

Commended.

Report—The gold thimbles especially are tasteful in design, of good workmanship, and well adapted for use.

FRANTZEN—Paris.—Artificial Flowers.

Highly Commended.

Report—Well made, show good taste and quality.

GAILLARD—Paris.—Boots and Shoes.

Honourable Mention.

Report—Well made and of fair quality.

GONTRAN, Mlle.—Paris.—Painted Silk Fans.

Honourable Mention.

GONTARD, MARTEAU, ET CIE.—Paris.—Fastenings for travelling articles. Highly Commended.

Report—Skilful workmanship, good material, well adapted for Colonial manufactures, useful, and cheap.

GRÉBERT BORGNIS, J. B.—Paris.—Fur Cloaks, &c.

First degree of Merit

Report—The finest exhibit of its kind, showing great elegance of style, high artistic taste, with good skill and workmanship.

GRILLON, Mlle.—Versailles.—Artificial Flowers.

Highly Commended.

Report—Very well made.

GRUT PÈRE ET FILS—Paris.—Sewn Stays.

Commended.

Report—Good shapes, well made, durable, cheap, and well adapted for Colonial use.

GUERIN BRÈCHEUX—Paris.—Fans.

First degree of Merit.

Report—Elegant designs and tastefully mounted, of high class taste.

HATTAT FRÈRES—Paris.—Boots and Shoes.

Highly Commended.

Report—Skill and workmanship ; good quality of material and cheap.

HUARD, L.—Paris.—Boots and Shoes.
Commended.

Report—Well made, and of good quality.

JUMEAU, Emile—Paris.—Dolls.
First degree of Merit.

Report—Artistically made, and elegant in style.

KAMPMANN ET CIE.—Epinal (Vosges).—Palm and Panama Hats.
First degree of Merit.

Report—Well made, of fine materials, cheap, and well suited to this Colony.

LANGENHAGEN, C. G., De—Nancy (Meurthe et Moselle).—Palm, Panama, and Whalebone Hats. Highly Commended.

Report—Useful and cheap.

LEVY, Marc.—Paris.—Dress Shoes, and Bows for Boots and Shoes.
First degree of Merit.

Report—Speciality of Knots and Bows, exhibiting originality of design, elegance and skilful workmanship, together with good quality of material.

LIBRON ET STIEGLER—Paris and Bar-le-Duc (Meuse).—Seamless Stays. Highly Commended.

Report—Very good style and shape, well made, and cheap.

LOCHET AÎNÉ ET DEBERTRAND—Paris.—Dog Collars.
First degree of Merit.

Report—A very superior exhibit.

MARIENVAL ET CIE.—Paris.—Artificial Flowers.
First degree of Merit.

Report—Very good style and shapes, well made, and cheap.

MARIENVAL ET CIE.—Paris.—Ostrich Feathers.
Highly Commended.

MARLIÈRE ET CIE.—Argenteuil (Seine-et-Oise).—Machine made Embroideries. Honourable Mention.

Report—Elegant and fashionable.

MAY FRÈRES ET CIE.—Paris.—Buttons.
First degree of Merit.

Report—Good designs, well made, useful, and cheap.

MÉLIÈS—Paris.—Boots and Shoes.
Commended.

Report—Skilful workmanship, and good quality of material.

PARENT ET CIE.—Paris.—Buttons.
Commended.

Report—Good quality, skilfully finished.

PERRIN FRÈRES—Grenoble (Isère).—Gloves.
Commended.

Report—Well made, useful, and cheap.

PIEL, Alexandre—Paris.—Imitation Jewellery.
First degree of Merit.
Report—The exhibits display originality of design and artistic taste.

POITEVIN, Gustave—Paris.—Artificial Flowers.
First degree of Merit.
Report—Original in design, skilful workmanship, of good quality, useful, and cheap.

ROUILLON, Ferdinand—Grenoble (Isère).—Gloves.
First degree of Merit.
Report—Skilfully made, of good material, and well adapted for use.

SALOMON—Paris.—Jewellery and Enamels.
Highly Commended.
Report—Skilfully made, and cheap.

SAVARD VEUVE—Paris.—Plated Jewellery.
First degree of Merit.
Report—This exhibit is very superior, and highly artistic in design, elegant, cheap, well adapted, and of good quality.

VESSIÈRE, Paulin—Paris.—Clothing.
First degree of Merit.
Report—Exhibiting high artistic taste, skilled workmanship, the best exhibit of its kind.

VILLARD ET WEILL—Lunêville (Meurthe et Moselle).—Toys.
Highly Commended.

ZIMMERLI, Edouard—Paris.—Preparations for Jewellery.
Commended.

GERMANY.

ACKERMANN, Eduard—Berlin.—Writing Pads, Cigar Cases, Purses, &c.
Honourable Mention.

ALFERMANN & JACOBI—Herford (Rh: Preuss:).—Clothing.
Commended.
Report—Well made, very suitable for the Colony, and cheap.

AUSSTELLUNGS-COMITE FÜR THUM & UMGEGEND—Thum bei Chemnitz.—Collection of Hosiery. Honourable Mention.
Report—Well adapted for Colonial use.

BACHER & LEON—Berlin.—Trimmings, Buttons, &c.
First degree of Merit.
Report—The finest exhibit of its kind, good quality, workmanship, and usefulness.

BAUER, Oscar—Johann-georgenstadt in Sachsen.—Trimmings, &c.
Highly Commended.
Report—Useful and cheap.

BRANDT, Wilhelm—Berlin.—Wood Buttons.

Honourable Mention.

Report—Well made.

BRETSCH, H.—Berlin.—Fancy Goods.

Honourable Mention.

Report—Fanciful, and tastefully made.

BURGFELDT, Louis—Breslau.—Straw Hats.

Commended.

Report—Good material, and well adapted for the Colony.

CELLER SCHIRMFABRIK, vormals Gebrüder Hugo—Celle in Hannover.—Umbrellas and Parasols.

First degree of Merit.

Report—Well made, of good material, useful, and cheap.

CHARISIUS, J.—Königsberg, Ost Preussen.—Hosiery.

Highly Commended.

Report—Of good quality, well made, useful, and cheap.

CREUTZNACH, Eduard (Nachfolger)—Chemnitz.—Cotton Hosiery.

Commended.

Report—Well made, useful, and cheap.

ERLEMANN, Robert—Hamburg.—Sleeve Links, Studs, &c.

Honourable Mention.

ERBERT & SOHN—Planen.—Collars and Cuffs.

Honourable Mention.

Report—Skilfully made, useful, and cheap.

EPHRAIMSOHN & NATHANSOHN—Berlin.—Collars and Cuffs.

Commended.

Report—Well made and useful; well adapted for Colonial requirements.

EBENSTEIN GEBRÜDER—Berlin.—Ladies' Mantles.

Commended.

Report—Cheap and useful; well suited for Colonial wear.

EBELS, Franz (Nachfolger)—Berlin.—Carriage Trimmings and Saddlers' Furniture. Highly Commended.

Report—A fine exhibit; well made, of good quality, and useful.

FISCHER, NAUMANN, & CO.—Ilmenau.—Toys and Fancy Articles.

Highly Commended.

Report—Original, and well made.

FÖRSTER, Albert—Berlin.—Albums in Leather.

Commended.

Report—Elegant designs, well made, and cheap.

FÖRSTER & CO.—Berlin.—Felt Hats.

Highly Commended.

Report—Skilful make, well shaped, good material, useful, and cheap.

FRANK, J. C.—Stolp in Pommern.—Amber Jewellery.
Honourable Mention.
Report—Well made and cheap.

GRÄSSER, Louis—Zwickau in Sachsen.—Gloves.
Commended.
Report—Good and useful quality.

HÄNDEL, A. M.—Leipzig.—Kid Gloves.
Commended.
Report—Ladies' kid gloves, cheap and well made.

HANNES, Theodor—Dresden.—Straw Bags.
Highly Commended.
Report—An exhibit of great variety, and very moderate in price.

HARBURGER GUMMI-KAMM CO.—Harburg a. Elbe.—Vulcanized Combs, Pipes, &c. Highly Commended.
Report—Good workmanship and designs, well adapted for Colonial use.

HEINZ, G.—Johann-georgenstadt in Sachsen.—Handkerchief and Glove Boxes, &c. Honourable Mention.
Report—Well made and cheap.

HERTZ & CO., Otto—Frankfurt a/M.—Boots and Shoes.
First degree of Merit.
Report—Exhibit skill and good workmanship, good material, and cheapness.

HILLIG, C. G.—Gersdorf in Sachsen.—Hosiery.
Commended.
Report—Skilfully made, useful, and cheap.

KOENNECKE & CO.—Berlin.—Berlin Wool-work and Embroideries in Silk. Highly Commended.
Report—Good material and workmanship, combined with utility.

KULLRICH, F. F. (Inhaber C. G. Lehmann)—Berlin.—Fancy Leather Goods. First degree of Merit.
Report—Well made, excellent quality, simple, and elegant.

KURTH, Wwe. F. E.—Berlin.—Gold Jewellery.
Commended.
Report—Elegant in design, and well made.

LAMBERT & SAMHAMMER—Sonneberg bei Coblenz.—Dolls and Dolls' Heads. Commended.

LANGENHAGEN, O. von—Saarunion—Elsass-Lothringen.—Palm and Panama Hats. Highly Commended.
Report—Good quality, useful, and cheap.

LEHMANN, Heinrich—Berlin.—Calfskin and Kid Gloves.
Highly Commended.
Report—Good shape, well made, useful, and cheap.

LEHMUS & CO., C.—Berlin.—Embroidery in Wool.
Highly Commended.

Report—Well made, useful, and cheap.

LEWINSOHN, E.—Berlin.—Ostrich and Fancy Feathers, &c.
First degree of Merit.

Report—A fine collection.

LEWINSTEIN GEBRÜDER—Berlin.—Elastic Fabrics and Waterproof Indiarubber Cloth. Commended.

Report—Well made, good quality, and cheap.

MANEGOLD, H. (Inhaber R. Voorgang)—Berlin.—Fancy Leather Goods. Honourable Mention.

Report—Elegant and well made.

MANNHEIMER, V.—Berlin.—Ladies' Mantles.
First degree of Merit.

Report—Elegant in design, shape, and style; good taste, and excellent workmanship.

MARTENS, L.—Berlin.—Leather Goods.
Honourable Mention.

Report—Well made and useful.

MARTHALER, J.—Zeitz in Sachsen.—Black Kid Gloves.
Commended.

Report—Fair quality.

MEISTER, Th. Wilhelm—Berlin.—Embroidery Patterns.
Commended.

MÖNCH & SEIFFERT—Berlin.—Albums in Leather.
Commended.

Report—Elegant designs, good make, and useful.

MORAL, S., Junr.—Berlin.—Youths' and Girls' Clothing.
Highly Commended.

Report—Of good quality, well made, cheap, and suitable for Colonial wear.

MOSSE, Salomon—Berlin.—Shirts, Collars, Cuffs, &c.
Commended.

Report—Skilfully made, of good material, and useful.

MOTSCHMANN & HÜFNER, P.—Sonneberg.—Toys and Dolls.
Commended.

MÜLLER, Heinrich—Berlin.—Ivory and Tortoise-shell Ware.
Commended.

Report—Well made, good in style and taste.

NEUFELDT, Adolph H.—Elbing.—Varnished and White Tin Toys.
Honourable Mention.

Report—Well made, cheap, and useful.

OTTENHEIMER & SÖHNE, J. M.—Stuttgart.—Woven Corsets.
Commended.

Report—Well made, and most useful.

PEINE, Eduard—Hamburg.—Sleeve Buttons and Solitaires.
Commended.

Report—Skilfully made, elegant, and cheap.

PELLENS & SOMMER—Berlin.—Scarfs and Ties.
Highly Commended.

Report—Well made, good value, useful.

PERLBACH, H. L.—Danzig.—Amber Ornaments and Bijouterie.
Commended.

Report—Elegant, skilful workmanship, and cheap.

PHILIPPSOHN & LESCHZINER—Berlin.—Shirts, Collars, and Cuffs.
Highly Commended.

Report—Well made, cheap, and adapted for Colonial use.

RÄTZER, F. G.—Burgstädt, bei Chemnitz Sachsen.—Hosiery.
Highly Commended.

Report—Well made, good style, useful, and cheap.

REINGLASS, R.—Weimar und Wiesbaden.—Kid and other Gloves.
Commended.

Report—Well made, useful, and cheap.

ROCK & GRANER—Biberach, Württemberg.—Varnished Tin Toys.
Commended.

Report—Well made, useful, and cheap.

SCHMIDT, J. C.—Erfurt.—Dried Flowers.
Honourable Mention.

Report—Cheap and original.

SCHWALBE, A.—Berlin.—Pocket-books, Fancy Leather Goods, &c.
Highly Commended.

Report—Well made, elegant, tasteful, cheap, and useful.

SELIGMANN & CO., J. A.—Berlin.—Needle-work.
Highly Commended.

Report—Good and useful.

SELIGSOHN, EHRMANN, & CO.—Berlin.—Collars and Cuffs.
Highly Commended.

Report—Exhibiting skilful workmanship, cheap, and well adapted for Colonial use.

TITTEL & KRÜGER—Leipzig.—Embroidery for Chairs, Slippers, &c.
Commended.

TOURTE & BRÜGGEMANN—Berlin.—Pocket-books and Fancy Leather Goods.
Commended.

Report—Well made, and elegant in style.

VEREINIGTE DRESDNER STROHHUT & FEDER-FABRIK—Dresden.—Straw Hats. Commended.

Report—Good average material, and useful; well adapted for Colonial use.

VITÉ, François—Berlin.—Pocket-books and Fancy Leather Goods. Honourable Mention.

Report—An elegant and well-made exhibit.

VOGEL, Fritz—Sonneberg in Thüringen.—Toys, Bijou Theatres, &c. Commended.

Report—Useful and cheap.

WAGNER & SOHN, D. H.—Grünhainichen in Sachsen.—Toys. Commended.

Report—Ingenious and well made.

WILD, J. C.—Idar.—Agates, Bloodstones, &c. Honourable Mention.

WILKE, C. G.—Guben.—Woollen Felted Hats. Commended.

Report—Well made, useful, and cheap.

WILKENS & DANGER—Bremen.—Gold-ware and Jewellery. First degree of Merit.

Report—The best exhibit in gold and diamond jewellery ; original in design, of skilful workmanship, well adapted, and cheap.

WOLF, S.—Mainz, a/R.—Boots and Shoes. First degree of Merit.

Report—Elegance, good taste, skill in manufacture, and good quality of material and economy are displayed in this exhibit.

WOLFF & GLASERFELD—Berlin.—Collars and Cuffs. First degree of Merit.

Report—Well made, cheap, and well suited for Colonial use.

GREAT BRITAIN.

ALLCOCK & CO., S.—Redditch.—Fishing Rods, Hooks, and Tackle. Highly Commended.

Report—Cheap and useful.

ANDERSON, ABBOTT, & ANDERSON—London, Bristol, and Swansea.—India-rubber and Oilskin Manufactures. First degree of Merit.

Report—Ladies' and gentlemen's waterproof clothing in silk, &c. General excellence and good workmanship.

ASHFORD & WINDER, W. & G.—Birmingham.—Leather Goods. Honourable Mention.

Report—Leather purses, well made and useful. "Dram" bottles, cheap and well made.

CLASSES 250–257.—*Clothing, Jewellery, Ornaments, &c.*

BAILEY & KERR—London.—Ostrich feathers (unprepared, for dresses, &c.) Commended.

BARTRUM, HARVEY, & CO.—London.—"Ventilatorium" Waterproof Clothing. Highly Commended.

Report—This clothing in serge, tweed, &c., is skilfully made, of good style and quality of material, and suited to the climate.

BAUMANN, A. & D.—London.—Fur and Straw Hats. Commended.

Report—A good general display of well made and useful hats.

BEEBEE & NICKLIN—Walsall.—Purses in Leather, &c. Honourable Mention.

Report—Well made and useful.

BELL, Henry—Birmingham.—Pins of various kinds. Honourable Mention.

Report—Suitable and cheap.

BERTHIER & CO., R.—London.—Boots and Shoes. Commended.

Report—Exhibitors have a fine show of foreign boots and shoes.

BIRNBAUM, Bernard—London.—Waterproof Clothing. First degree of Merit.

Report—Vulcanized coats, ulsters in twill, tweed and silk for ladies and gentlemen. Well made, durable, and well suited for Colonial use.

BOSTOCK & CO.—Stone, Staffordshire.—Boots and Shoes. First degree of Merit.

Report—Skilful workmanship and economy. The ladies' boots show good quality of material, and are well adapted to the requirements of the Colony.

BRIGHTMAN BROTHERS—London, Bristol, and Paris.—Ladies' Fancy Boots and Shoes. Honourable Mention.

Report—The workmanship and quality of these goods are excellent.

BROOKE & CO., Joseph—London.—Paper and Linen Faced Collars and Cuffs. First degree of Merit.

Report—The paper collars are skilfully made, and are well adapted for use in the Colony.

CHAPMAN, SON, & CO.—London.—Fancy Leather Goods, Travelling Bags, &c. First degree of Merit.

Report—Jewel-cases, boxes, &c., elegant, of good workmanship and material.

CHRISTY & CO., J. E. & W.—London.—Hats, Helmets, Caps. First degree of Merit.

Report—The wool, fur, beaver and felt hats, silk hats and linings of this firm are in excellent styles, show careful finish, good shaping and trimming, with novelty in linings. The exhibits are suited to the Colonies, and cheap in price.

CLARKE & SON, J. C.—Birmingham.—Leather Purses, Pocket-books, &c. Commended.

Report—Fancy leather goods and portrait-frames, fanciful, elegant, and well made.

COOKE BROTHERS—Birmingham.—Shawl-pins. Honourable Mention.

Report—Suitable and cheap.

COOPER, BOX, & CO.—London.—Hats and Caps. Honourable Mention.

Report—Silk, felt, and straw hats of good average make and value, well suited for the Colonies.

COOPER, BOX, & CO.—London.—Travelling Rugs. Commended.

Report—Well made in imitation sealskin, &c. ; good quality of material, useful, and qualified to rank as a superior article. Well adapted to the wants of travellers.

COOPER, BOX, & CO.—London.—Gentlemen's and Youths' Wearing Apparel. Highly Commended.

Report—Distinguished for elegance of shape, cut, and style, good workmanship, and quality of material, and are economical.

COOPER, BOX, & CO.—London.—Waterproof Clothing. Highly Commended.

Report—Waterproof clothing for ladies and gentlemen ; shows good skill, workmanship, and quality of material.

COPE, Benjamin—Walsall.—Purses. Honourable Mention.

Report—Hand-sewn, well made, and cheap.

COVE & WEST—Northampton.—Boots and Shoes. First degree of Merit.

Report—This firm shows skill and good workmanship in gentlemen's boots. They are of good quality of material, economical, and well suited to the requirements of the Colony.

CRIDLAND & ROSE—Bristol.—Boots and Shoes. Honourable Mention.

Report—Of excellent quality.

DEAN & SON, William—Derby.—Gaiters. Commended.

Report—These gaiters are original in style, the workmanship is excellent, and the quality of the material good.

DIMBLEBY & CO., Stephen—Northampton.—Boot-uppers. Commended.

Report—These uppers are of good quality of material, and cheap.

DUKE & SON—Penshurst, Kent.—Cricketing appliances.
First degree of Merit.

Report—Cricket bats, balls, and gloves of superior make.

FELTHAM & CO.—London.—Cricketing, Archery, and Croquet Articles.
First degree of Merit.

Report—The cricket-balls shown by this firm are well made and specially patented.

FIELD & SONS—London.—Hats and Bonnets in Straw, Felt, and Seal.
First degree of Merit.

Report—Straw hats and bonnets skilfully made, and of fair quality.

FLATAU & CO., A. & W.—London and Northampton.—Boots, Shoes, and Uppers. Highly Commended.

Report—These exhibits are skilfully made, elegant in appearance, and of good quality of material. We also note them for their cheapness and adaptability.

FLAVELLE, BROTHERS, & ROBERTS—London.—Jewellery and Ornaments. First degree of Merit.

Report—For the best general exhibit of jewellery, mounted cameos, &c.

FOWNES, BROTHERS, & CO.—London.—Gloves.
First degree of Merit.

Report—Taffetas and deerskin driving gloves, with thumb cut, spring-tops. Originality, skill, good quality.

FYFE & ROBINSON—London.—Dress-holders, Studs, Buckles, Ladies Belts, &c. First degree of Merit.

Report—Elegant in style, and in good taste.

GOLDING, Alfred—London.—Boots and Shoes.
Commended.

Report—The "Vulcanite" soles for cricketing boots are well made.

HADWEN & CO., William—Manchester.—Frillings.
Highly Commended.

Report—Frillings (plain and embroidered) for dresses. Well made, useful, and cheap.

HARDY, BROTHERS.—London.—Diamond Jewellery and Pearl Settings.
First degree of Merit.

Report—A fine display of jewellery and diamond goods.

HARRISON & SMITH—Birmingham.—Metal Buttons.
Commended.

Report—For tailors' use, well finished, and of good quality.

HERBERT & CO.—London.—Corsets and Binding Belts.
Commended.

Report—The ladies' binding-belts show originality, good workmanship, and good material.

HICK, William—Huddersfield.—Solitaires, Studs, and Buttons.
Honourable Mention.

Report—The solitaires have a special fastening.

HODGES & SONS, T. W.—Leicester.—Elastic Webs.
Highly Commended.
Report—We consider the web made by this firm to be of excellent quality.

HODGES & SONS, T. W.—Leicester.—"Magic" Self-closing Umbrellas.
Highly Commended.
Report—Novelty and skill in umbrella-making.

HOLLINGTON BROTHERS—London.—Men's, Youths', Boys', and Children's Ready-made Clothing. Highly Commended.
Report—Youths' clothing in suits and gentlemen's Ulsters; show good style and shapes, well made, and of good quality of material.

HOLME, George—Derby and Bradford.—Elastic Web.
First degree of Merit.
Report—We give this firm the above award for the excellence of its elastic web.

HOPKINS & SONS, J. H.—Birmingham.—Japanned Iron Travelling Trunks. First degree of Merit.
Report—Made of japanned tin and tinned iron. Are strongly made, of good quality, durable, useful, and cheap.

JONES, William—London.—Boots and Shoes.
Commended.
Report—Commended for their excellence, good quality, and cheapness.

JOSEPH, Nathan—London.—Ladies' and Children's Boots and Shoes.
Commended.
Report—Ladies' lasting and children's elastic boots and shoes; cheap, and well adapted to the requirements of the Colony.

LEVETUS BROTHERS—Birmingham.—Fire-Gilt Metal Chains, Brooches, Lockets, Seals, and Watches. Honourable Mention.
Report—The Albert chains in imitation of gold are cheap and well made.

LINCOLN, BENNETT, & CO.—London.—General Exhibit of Hats.
First degree of Merit.
Report—The silk hats are well made, of good quality, and well suited to this Colony.

LINCOLN, BENNETT, & CO.—London.—Military and Naval Hats.
First degree of Merit.

MACINTOSH & CO., Charles—London and Manchester.—Waterproof Clothing and Travelling Equipments. First degree of Merit.
Report—Ladies' and gentlemen's waterproof clothing, of general excellency and skilled workmanship.

MANFIELD & SONS—Northampton.—Boots and Shoes.
Highly Commended.
Report—The men's and ladies' boots, and men's walking boots, are of good material and skilfully made.

MARION & CO.—London.—Portrait Albums, Photograph Frames and Mounts. First degree of Merit.

Report—Leather-covered albums show good workmanship, elegance of style, and the good quality of the material employed.

MARSHALL & SNELLGROVE—London.—Waterproof Clothing. Highly Commended.

Report—Ladies' waterproof clothing of good quality, shape, and durability, skilfully made, adapted to this climate, and cheap.

MARTIN & SON, John—Tunbridge Wells, Kent.—Cricket Bats and Balls. Highly Commended.

Report—Well made, cheap, and of good material.

MILWARD & SONS, Henry—Redditch.—Needles. Highly Commended.

Report—Of excellent quality and finish.

MOOS, David—London.—Lace Curtains. Commended.

Report—Elegant in design.

MOTTRAM, T. B.—London.—Boots and Shoes. Commended.

Report—The women's calf and kid boots and shoes shown by exhibitor are of good material and cheap in price.

PAGE & CO., E. J.—London.—Cricketing articles and requisites for out-door games. First degree of Merit.

Report—Well-made cricket balls, bats, &c.

PERRY & CO. (Limited)—London and Birmingham.—Solitaires. Commended.

Report—For pencils worn as charms, solitaires, &c.

PERRY & CO. (Limited)—London and Birmingham.—Split Rings. Honourable Mention.

Report—Excellent assortment.

ROBATHAN & CRANMORE—Birmingham.—Afghanistan imitation Gold Jewellery. Highly Commended.

Report—This jewellery in imitation of gold is cheap and well made.

SCOTTISH VULCANITE CO.—Edinburgh.—Combs, Knitting Needles, &c. Commended.

Report—Of good make, useful, and cheap.

SELIGSON & SOMMERFELD—London.—Photographic Albums (Foreign). Commended.

Report—For a very fine show of foreign albums.

SIMPSON & CO., H.—London.—Boots and Shoes. Commended.

Report—The children's kid and patent leather boots and shoes, shown by this firm, are of good material, and well adapted for Colonial requirements.

SINGER MANUFACTURING CO.—Glasgow.—Work executed by Singer's Sewing Machines. Commended.

Report—Ladies' and children's machine-embroidered clothing and fancy goods, skilfully made.

SLAZENGER ET FILS—Manchester.—Leggings and Gaiters. Honourable Mention.

Report—Material of good quality.

STEWART & CO., S. R.—Aberdeen.—Combs, Horn and Tortoise-shell Goods. First degree of Merit.

Report—Combs tasteful and elegant in design.

STILLWELL & SON, Edward—London.—Laces and Embroideries, Military and Naval Accoutrements. First degree of Merit.

Report—This firm shows military embroideries of very superior workmanship and style.

TALLERMAN, Saml. D., & Lewis A.—London.—Boots and Shoes. Honourable Mention.

Report—This firm has a large show of English, French, and German Boots and Shoes.

THOMAS & SONS, S.—Redditch.—Needles. First degree of Merit.

Report—Needles with machine-polished eyes, skilfully made, useful, and cheap.

THOMSON & CO., W. S.—London.—Corsets, Corset-busks, and Dress Steels. First degree of Merit.

Report—The Corsets, Dress Steels, and Stay-busks of this firm show originality, good workmanship, are of good quality, and well adapted for Colonial use.

TOWNEND & CO., Thos.—London.—Hats. Highly Commended.

Report—Silk and Felt Hats, Tuson Helmets; show originality, good workmanship and material, and are both useful and cheap.

TRESS & CO.—London.—Hats. First degree of Merit.

Report—Silk, felt, and pith hats, skilfully made, well shaped and trimmed, good quality of material, well adapted for Colonial wear, and moderate in price.

TURNER & SONS, R.—Redditch.—Needles. Commended.

Report—Well finished.

TURNER & SONS, R.—Redditch.—Pins. First degree of Merit

Report—Well made and cheap.

WARD & CO., Marcus—London and Belfast.—Pocket-books, Fancy Leather Goods, &c. First degree of Merit.

Report—For the finest show of travelling bags, stationery cases, pocket-books, and fancy goods in leather. The exhibits show good workmanship and quality, are original in design, and useful and cheap. The display is a first-class one.

WELCH, MARGETSON, & CO.—London.—Shirts, Ties, Scarfs, &c. First degree of Merit.

Report—The shirts are of good shapes, well made, of good quality of material, and economical. The collars, cuffs, ties, and scarfs show skilled workmanship, good shapes and material, and are well suited for Colonial wear.

WHITE & SON, William—Glasgow.—Clay Pipes. Highly Commended.

Report—Show great variety; are cheap and useful.

WOODFIELD & SONS, Wm.—Redditch.—Needles and Fish-hooks. Honourable Mention.

Report—Needles of good quality and cheap.

YOUNG & LARK—London.—Lace. Highly Commended.

Report—Machine-made lace curtains, elegant and tasteful in design, useful and cheap.

ITALY.

MARIOTTI & FANTONI—Florence.—Roman, Florentine, and Turquoise Jewellery. Honourable Mention.

Report—Fine exhibits.

BENUCCI, CAIOLI, & CO.—Florence.—Straw Hats and Straw-work. Commended.

BAESE—Florence.—Straw Hats. Highly Commended.

Report—Well made, style good, and price low.

MARCHINI, Cesare, Florence.—Straw Hats, and Collection of Straw-work. Commended.

Report—Fancy straw-work, well-made and elegant.

JAPAN.

FUJIWARA SEIBEI—Osaka.—Ornaments. Honourable Mention.

MYAGAWA CHOJIRO & SAITO KIUOSUKE—Tokio.—Pipes, Buttons, &c. First degree of Merit.

Report—Exhibiting high artistic taste and skill.

NAKAMURA RIKICHI—Tokio.—Fishing-hooks (imitation Fly, &c.)
Highly Commended.

SASAKI, T. T.—Ragasaki.—Bamboo Fishing-rods and Tortoise-shell. Buttons.
Two Honourable Mentions.

SHIPPO KUWAISHA—Owari.—Fans, &c.
Honourable Mention.

Report—Useful and cheap.

TAKEYA SEIZO—Tokio.—Tobacco Pouches, &c.
First degree of Merit.

Report—Exhibiting originality and invention, and highly adapted for a variety of purposes.

WOOYENO YEIZABURO—Kioto.—Fans.
Commended.

NETHERLANDS.

PRINCE & CO., Jan.—Gouda.—Clay Pipes.
First degree of Merit.

Report—Fine quality of clay, well-made, and cheap.

MANILLA.

BAER & SUHM—Manilla.—Straw Hats, and other manufactures of the Philippine Islands.
Honourable Mention.

Report—The Manilla straw hats are skilfully made, of good material, and very useful.

NEW SOUTH WALES.

ALDERSON & SONS—Sydney.—Leather Portmanteaus and Travelling Bags.
Highly Commended.

Report—Exhibits carefully finished and well made in every respect.

ALDERSON & SONS—Sydney.—Boots and Shoes (factory-made).
Highly Commended.

Report—The men's boots and shoes of colonial material are well made.

ALLERDING & SON, F.—Sydney.—Shell Jewellery.
Commended.

Report—For skilful workmanship and good quality of gold and shell jewellery.

ANDERSON, J.—Sydney.—Boots and Shoes.
Highly Commended.

Report—The boots exhibited are hand-sewn, and of good quality, economical in price, and adapted to Colonial requirements.

CLASSES 250–257.—*Clothiny, Jewellery, Ornaments, &c.*

ARNOLD, A. S.—Sydney.—Felt and Straw Hats.

Commended.

Report—Colonial felt pull-over hats and straw plait, from Colonial wheat straw. Originality, skill, and utility.

AUSTRALIAN MUSEUM—Sydney.—Dresses and Ornaments of Native Tribes of New Zealand, New Caledonia, and Fiji, &c., &c.

First degree of Merit.

Report—The finest collection (Ethnological) in the Exhibition.

BEATTIE, Madame—Sydney.—Lace (Point de l'Aiguille and Point de Venice), Roses and Flowers in Silk.

Honourable Mention.

Report—Very fine show; well made and useful.

BLACK, A. T.—Broken Bay.—New Zealand Costumes, Flax, and Feathers (Ethnological Court). First degree of Merit.

BOARD, G., Junr.—Sydney.—Fretwork in Tortoise-shell and Wood.

Commended.

Report—Tortoise-shell jewellery and fancy goods show good amateur work.

BRAZIER, John—Sydney.—Articles of Dress in Banana Fibre and Ornaments in Beads and Shell from the Caroline and other Groups of Islands. (In Ethnological Court.) Commended.

BYRNE, Thomas—Moss Vale.—Boots and Shoes.

Highly Commended.

Report—The boots are of excellent quality, well made, and suitable to the requirements of the Colony.

COHEN, HARRIS, & CO.—Sydney.—Cricketing Materials.

Honourable Mention.

Report—Exhibitors have a fine show of cricket-bats, balls, &c.

COX, M.D., J. C.—Sydney.—Dresses of Banana Fibre from the Caroline Islands.

NOTE.—Dr. Cox was awarded diploma for services for exhibiting these dresses in the Ethnological Court. The Judges in this group gave them an Honourable Mention.

DAVENPORT & ALCOCK—Sydney.—Boots and Shoes.

Highly Commended.

Report—These boots and shoes of Colonial material are well suited to the requirements of the Colony.

DELARUE, H. F.—Sydney.—Jewellery and Goldsmith's and Silversmith's work. First degree of Merit.

Report—We award a first place to this exhibit of the best Colonial-made jewellery. The exhibits are elegant and tasteful, and show good workmanship.

DELARUE, L. H.—Sydney.—Fretwork in Wood and Tortoise-shell.

Commended.

Report—These fancy goods show good amateur work.

DON, D.—Sydney.—Waterproof Oilskin Clothing.

Commended.

Report—Useful and well made.

FABBRI & CO., G.—Sydney.—Felt Hats.

Commended.

Report—Hand-made fur-felt hats, well made, of good style, useful, and well adapted for Colonial wear.

GILLESPIE, C.—Goulburn.—Boots and Shoes.

First degree of Merit.

Report—Skilfully-made boots and shoes for ladies, gentlemen, and children. They are of good quality, and well suited for the Colony.

GLEDHILL & CO., E. R.—Sydney.—Hats and Caps.

Highly Commended.

Report—The silk-felt and pull-over hats are exceedingly well finished. They show skilful workmanship, cheapness, and utility.

GOLDIE, Andrew—Sydney.—Dresses, Ornaments, &c., collected by exhibitor in New Guinea. (Ethnological Court.) First degree of Merit.

GOLDSTEIN, A.—Sydney.—Waterproof Oilskin Clothing.

Commended.

Report—Useful and well made.

GOODMAN, F.—Sydney.—Colonial Tuscan Hats.

Commended.

Report—Colonial Tuscan hats skilfully sewn; good material, and useful well adapted for Colonial use.

GURNEY, Professor A. C.—University of Sydney.—Articles of Dress from Santa Cruz Islands. (Ethnological Court.) Honourable Mention.

HILDER, H.—Sydney.—Boot Uppers.

Honourable Mention.

Report—These uppers are well made, and suitable for the Colonies.

HARDWICK, Mrs. V.—Sydney.—Waterproof Clothing.

Highly Commended.

Report—The coachmen's waterproof double-lap coats and waterproof clothing are generally well made, and very suitable for Colonial use.

HILLIARD, Henry—Sydney.—Cricket Bats.

First degree of Merit.

Report—Of good quality.

JONES & CO., David—Sydney.—Ladies' Riding Habits.

Highly Commended.

Report—These habits are for summer and winter wear. They are made of Colonial tweeds, and show good style, shape, and workmanship.

JONES, Evan—Sydney.—Jewellery.

Honourable Mention.

KERR, Wm.—Sydney.—Jewellery and Works of Art in Silver.

Commended.

Report—Gold and shell jewellery of tasteful design and well made.

LANCASHIRE & SON, W. B.—Sydney.—Leather Portmanteaus, Trunks, and Travelling Bags. Highly Commended.

Report—Well made, durable, and useful.

LAW, G. F.—Sydney.—Silk and Pull-over Felt Hats.

Commended.

Report—Well made, of good material, and well adapted to the Colony.

PATE, Mrs. G.—Sydney.—Ladies' Corsets, Stays, &c.

Honourable Mention.

Report—The corsets and lasting in coutil, jean, and satin, are well made, of good quality, and suitable for the Colony.

PEAPES & SHAW—Sydney.—Shirts.

Highly Commended.

Report—The exhibits are well made, of excellent shapes and style, durable, and of good Colonial workmanship.

ROWE, E. S.—Sydney.—Fretwork in Tortoise-shell and Wood.

Commended.

Report—The tortoise-shell jewellery shows good amateur work.

SULLIVAN, J.—Sydney.—Umbrellas and Parasols.

Commended.

Report—Excellent Colonial work, good quality, and cheap.

WEST, A.—Sydney.—Copper Toe-tips for Boots and Shoes.

Honourable Mention.

WITTEN, J.—Paddington.—Cabbage-tree Hats.

Commended.

Report—Skilfully made, and of good shape.

WILLIAMS, John—Sydney.—Dresses and Mats from the Samoa and Marshall Islands.

NOTE.—Exhibitor was awarded Certificate for sending these exhibits to the Ethnological Court, and they were mentioned with honour by the Judges.

WOOD & CO., W. T.—Goulburn.—Boots and Shoes.

First degree of Merit.

Report—This exhibit consists of men's and women's strong boots and shoes, well made, of good material, and cheap. They are well suited for the Colonial trade, and form on the whole a very creditable exhibit.

NEW ZEALAND.

ALMAO, V.—Dunedin.—Hats and Caps.
Highly Commended.
Report—Silk and felt hats well made, of good material, and useful.

BLACK, Margaret Ann—Wellington.—Knitted Goods and Hosiery for men, women, and children. Highly Commended.
Report—Well made.

COLONIAL MUSEUM OF NEW ZEALAND—Wellington.—Dresses and Ornaments of the Maori Tribes. First degree of Merit.

COOMBES & SON—Dunedin.—Boots and Shoes.
Highly Commended.
Report—This firm shows skilful workmanship in men's strong and light boots. They are of good material, and well adapted for the Colonies.

LIARDET, H. E.—Wellington.—Furriers' Work.
Highly Commended.
Report—Shows well-made fur and feather muffs.

LIGHTBAND, ALLAN, & CO.—Christchurch.—Boots and Shoes.
Commended.
Report—Skilful workmanship in ladies', gentlemen's, and children's boots and shoes ; of good quality of material.

MOSGIEL WOOLLEN FACTORY CO.—Mosgiel, Dunedin.—Hosiery. First degree of Merit.
Report—The men's half-hose are well made, show good quality of material, adaptability, and cheapness.

PROCTER, Thomas R.—Christchurch.—Specimens of Jade or Greenstone, mounted and unmounted. Honourable Mention.

SARGOOD, SON, & EWEN—Dunedin.—Boots and Shoes.
Honourable Mention.
Report—Of good quality of material and well made.

QUEENSLAND.

DAVIDSON, J.—Toowoomba.—Cabbage-tree Hats.
Honourable Mention.
Report—Well made, and useful.

LADE, N.—Brisbane.—Portmanteaus.
Highly Commended.
Report—Colonial-made trunks in solid leather. Good, strong, and durable ; cheap and useful.

SOUTH AUSTRALIA.

WENDT, J. M.—Adelaide—Jewellery and Silver-ware.
First degree of Merit.

Report—The Colonial-made jewellery in gold shows excellence, elegance of design, and skilful workmanship.

WILLS & CO., G. R.—Adelaide.—Boots and shoes.
Honourable Mention.

Report—Of excellent manufacture and good quality of material.

STRAITS SETTLEMENTS.

SYED INCHE MAHOMED—Singapore.—Jewellery and Ornaments.
Highly Commended.

SULTAN OF SELANGOR, H. H.—Selangor.—Jewellery and Ornaments.
Highly Commended.

WIJENARAYANA—Straits Settlements.—Tortoise-shell Fancy Goods.
Commended.

Report—Of excellent quality, good design, and skilful workmanship.

SWITZERLAND.

BLUMER & WILD—St. Gall.—Shawls.
Highly Commended.

Report—Good, useful, and cheap.

BISCHOFBERGER, Eduard—St. Gall.—Curtains.
Commended.

Report—Well made and cheap.

REICHENBACH & CO., M. L.—St. Gall.—Machine Embroideries.
First degree of Merit.

Report—Skilfully made, elegant in style, and well adapted.

REINER, W.—Aaran.—Elastic Boot Web.
Honourable Mention.

RUTISHAUSER & DOUILLON—Geneva.—Jewellery.
Highly Commended.

Report—Elegant in style and skilfully made, the sides being turned in, little or no solder being used.

SCHLAPFER-ZUBERBÜHLER, J.—Speicher.—Curtains.
Commended.

Report—Well made, good, and cheap.

TASMANIA.

BURROWES, S.—Risdon.—Opossum Rugs.
Honourable Mention.

OMANT, Joseph—Hobart Town.—Fur Clothing.
Highly Commended.

UNITED STATES.

AIKEN, LAMBERT, & CO.—New York City.—Pencils, Pencil-cases, &c.
First degree of Merit.

Report—The gold pencil-cases and charms are of elegant design and substantial make.

AMERICAN NOVELTY CO.—New York City.—Toys, &c.
Highly Commended.

Report—The toys are good and cheap, and the fancy articles useful.

DEMOREST, Madame—New York City.—Paper Patterns for Ladies' Dresses, &c.
Highly Commended.

PURDY & HUNTINGTON CO. (Limited)—New York City.—Collars and Cuffs in Celluloid.
Highly Commended.

Report—These exhibits display originality, usefulness, and durability.

PURDY & HUNTINGTON CO. (Limited)—New York City.—Jewellery and Fancy Articles in Celluloid.
First degree of Merit Special.

Report—For invention, skilful workmanship, adaptability, and cheapness in jewellery; umbrella handles, and fancy articles made of celluloid.

RUMPP, C. F.—Philadelphia.—Leather Dressing-cases, Pocket-books, &c.
Commended.

Report—Leather purses and bags in fancy leather and in imitation Russia and Morocco leather. Well made, and cheap.

SCHLESINGER & CO.—New York City.—Tin Toys.
Honourable Mention.

Report—Well made and cheap.

VICTORIA.

BEATH, SCHIESS, & CO.—Melbourne.—Clothing and Shirts.
Commended.

Report—This firm's gentlemen's suits of Colonial tweeds, &c., show elegance of cut, good material, and fair value.

CURTIS, John—Melbourne.—Portmanteaus.
Honourable Mention.

Report—Well made.

HARRIS & SON, J.—Melbourne.—Boots and Shoes.
Commended.

Report—Men's boots and shoes, well made, of good material, and adapted to colonial requirements.

HENDERSON, Samuel—Melbourne.—Dress Shirts, Collars, Cuffs.
First degree of Merit.

Report—Shirts show elegance of cut and shape, are of good designs, and afford a fine and varied show.

HOLLOWAY & SONS—Ballarat.—Travelling Trunks.
Highly Commended.

Report—Japanned metal, well made, and useful.

JACKSON, T. C.—Melbourne.—Portmanteaus.
Commended.

Report—In solid leather, carefully made, useful, and of good material.

M'GUIGAN, John—Melbourne.—Boots.
Honourable Mention.

Report—The shooting boots shown by exhibitor are of good quality.

STEVENSON & SONS, L.—Melbourne.—Felt Hats.
Highly Commended.

Report—Felt hats, pull-overs, &c., good style, useful.

SIMONS, Mrs. E. P.—Melbourne.—Artificial Flowers made from Wax and Paper.
Commended.

Report—Well made.

YOUL, J. B.—Melbourne.—Hosiery.
Honourable Mention.

Report—Useful, and well adapted to colonial wants.

CLASSES 258–264.

Paper, Blank-books, Stationery, and Printing.

JUDGES.

GELL, EDWARD	Lithgow, N.S.W.
GEORGE, HUGH, *Sydney Morning Herald*... ...	Sydney.
GROTH, HERMANN H., Importer	Sydney, George-st.
RICHARDS, THOMAS, Government Printer ...	Sydney.
WILTON, THOMAS T., Greville's Telegram Co. (Chairman)	Sydney.

CLASSES 258–264.—Paper, Blank-books, Stationery, and Printing.

THE Stationery exhibits are numerous, diversified, and important.

The printing and other descriptions of paper—especially those of English manufacture—deserve very high commendation, while the articles under the comprehensive term of "Fancy Stationery" are of the most miscellaneous, interesting, and in many cases, beautiful description, not a few of them being really works of art.

The exhibits of Marcus Ward & Co., as well as those of Goodall & Sons, are especially worthy of notice, as much on account of the originality, neatness, and ingenuity of the designs, as for the excellent quality of the material. The comprehensive exhibit of Pirie & Sons also is well entitled to the highest commendation.

It is worthy of remark that the news printing and the packing papers of our local manufacturers (Williams & Murray, and the packing papers of Wearne & Co.) compare favourably with the best productions of English competitors in those two lines.

The perfection attained in the production of most of the numerous articles submitted for examination, coupled with the extreme degree of competitive excellence and approximating similarity in the texture and finish of each manufacturer, has rendered the work of the Judges both onerous and difficult.

The fibre used in the manufacture of the rough specimens of bags and packing paper exhibited in the New Zealand Court is worthy of remark, whilst the almost endless variety of uses to which the Japanese apply their paper manufactures cannot be passed over without the expression of the Judges' admiration of the originality and diversified taste evinced in the numerous paper exhibits of this interesting country.

The exhibits of Pens are very numerous, and varied in design and material.

There are a few novelties worthy of mention, such as the new "Mackinnon Pen," which provides for a continuous supply of ink from a reservoir in the handle, and several adaptations of this method as shown in the "Automatic Fountain Pen" (American), which is serviceable for its cheapness, though wanting in finish, the "Patent Reservoir Pen" (by Leonardt, of London), and "The Neptune Pen" (by the same maker), the latter of which having a supply of aniline pigment in the pen, merely requires to be dipped in water to be ready for use.

Extreme elegance is the characteristic of all the "pen" exhibits—the products of some of the manufacturers differing from those of others merely in the greater variety of style and finish.

While the great variety of book-work exhibits shown by Marcus Ward & Co., London, entitle that firm to a Special Award, still the productions of the Government Printing Office of New South Wales are a model of excellence, which remain unsurpassed by anything in the Garden Palace. The "Statutes of New South Wales" stand in the highest rank as examples of the

typographic art, and so also do the specimens of intricate tabular work, brought under the notice of the Judges in the various statistical "brochures" issued by the Government. Indeed, the position taken by the Government Printing Office of the oldest Australian Colony demands special remark.

If it be permitted to the Judges, they desire to express their highest appreciation of the generous and liberal policy which has actuated succeeding Governments in permitting this establishment to devote a portion of its energies to the experimental study and perfection of all the latest and most important discoveries in the printing art. It is a pioneer work which redounds to the credit of the Colony, since it is resulting in the acquisition of trained skill of the highest order, and in proof of this, the Judges point to the display of stereotypes, electrotypes, Woodbury-types, phototypes, or helio. types, &c., which the Government Printer has submitted to public inspection. In a word, the Government Printing Office is an establishment of which the Colony of New South Wales may justly feel proud.

Whilst according this meed of praise to the Government establishment, the Judges feel bound to make special mention of the miscellaneous work produced by Messrs. Gibbs, Shallard, & Co., and Mr. John Sands (both of Sydney), as exhibiting skill and taste in display of the highest order.

The most extraordinary evidence, however, of the vitality of the printing trade in the Colonies, is afforded by the newspapers they produce. It is a remarkable circumstance, and one which is worthy of note, that in this direction, so far as mechanical aids are concerned, the Colony of New South Wales occupies a leading position in the very van of progress. In Sydney are now to be found in daily operation all the latest machinery and appliances which scientific research, discovery, and ingenuity have yet brought to bear in order to secure for the leading newspapers of the Old World the greatest rapidity in production. This is a fact the inference of which cannot be mistaken, and therefore it ought not to be omitted from the valuable historical records which it is one of the provinces of the present Exhibition to collate and preserve. It is the opinion of the Judges that the proprietors of the *Sydney Morning Herald* and the *Evening News* (to whose exhibits the above remarks specially apply) had no desire to enter into competition with each other, but displayed their journalistic productions more to gratify public curiosity than for any other reason. It is, however, suggested that such enterprise as they have evinced should meet with some marked recognition at the hands of the Commission. To the Messrs. Fairfax, of the *Sydney Morning Herald*, the Judges award the First degree of Merit, with the highest commendation, for the excellence of their stereo-plates and the perfection of their printing; and they give the Second degree of Merit to the Messrs. Bennett, of the *Evening News*.

The Judges wish to call special attention to the exhibits of the proprietors of the *Graphic*, London, which, for excellence of skill as models of first-class printing, have formed one of the principal and most noteworthy features of the Garden Palace. The printing in colours, as shown in half-tone gradations, and various progressive stages, by Marcus Ward & Co., London, are also worthy of the highest praise, and must have proved as instructive to Colonial printers as they were undoubtedly interesting to the general public.

In Account Books and the various ramifications of the Bookbinder's art, a very excellent display was submitted to the inspection of the Judges. In every branch, specimens were exhibited, of such taste and elegance in design,

neatness in execution, as well as strength and skilful workmanship, as to prove unmistakably that the art, as practised in Australia, holds a very satisfactory position as compared with other countries. The Judges were so much impressed with this conviction that they had some difficulty in deciding in what way they should recommend awards to be made, so that while according the highest merit to Messrs. Waterlow & Sons, and Messrs. Marcus Ward & Co. (of London), for the particular descriptions of work displayed by them, they might avoid doing such injustice to Colonial productions as would be probably implied by ranking them in a lower grade. And here the Judges have to express their regret that they were unable to avail themselves of the valuable assistance of the Government Printer (Mr. Richards), who, being himself a competitive exhibitor, was necessarily obliged to withdraw from the examination of everything connected with this class.

The Judges feel it to be their duty to record their admiration of the skill displayed by Colonial artisans, and to state their belief that, given the same conditions and exigences of trade as exist in Europe, they could produce work equal in every respect to the very best manufactures of the Old World.

The extensive variety, and the almost unbounded demand which exists in England for every description of bookbinding, make comparison, as a whole, somewhat unfair to Colonial firms, because in the restricted trade of the Colonies the opportunity for a display of similar skill is in a measure denied to them. To remove misconception on this ground, the Judges therefore suggest that a Special Award should be made in the cases of Messrs. Waterlow & Sons and Marcus Ward & Co. : to the first for their splendid account-books, and to the second for their excellent exhibits of albums and cloth bindings. But while making this suggestion, the Judges desire to record their opinion that in first-class library and letter-press bindings, upon which in great part dependence must be placed for the preservation of the highest taste in decoration, ingenuity, and skill in workmanship, the Colonies show excellence in a marked degree, and indeed are almost the sole exhibitors. Particular attention is drawn to the exhibits in this branch submitted by the Government Printer of New South Wales, as being worthy of high commendation, and entitled to some special mention.

Class 264a—The Art of Printing.—It is with much pleasure that the Judges record their satisfaction with the specimens of printing submitted to their criticism ; because conclusive evidence is offered by the exhibits that the Australian Colonies may fairly stand side by side with other nations, and claim equal excellence in skill and execution in all those descriptions of work which the circumstances of young communities admit of being produced.

There is no test of the actual status of a country and the progress it has achieved more crucial than is afforded by an inquiry into the condition of its printing-press and of the enterprise displayed by its workers. Estimated by this standard, the Colonies have every reason to be satisfied with the position they take in the present Exhibition ; for, though few opportunities are permitted them of displaying skill in what are considered the higher branches of the art, viz., book-work, still on such occasions as do transpire, it is made manifest that they possess workmen whose talent loses nothing by comparison with that of artisans elsewhere.

CLASSES 258-264.—*Paper, Blank-books, Stationery, and Printing.*

AUSTRIA.

ACTIENGES: PAPIERFABRIK-SCHLOEGLMÜHL—Schloeglmühl bei Gloggnitz.—Blotting Paper. Highly Commended

Report—A useful paper, well made.

ACTIENGES: PAPIERFABRIK-SCHLOEGLMÜHL—Schloeglmühl bei Gloggnitz.—Book-binding and Book-printing Paper. First degree of Merit.

Report—First-class papers, good in colour and texture.

ELLISSEN, ROEDER, & CO.—Theresienthal and Vienna.—Tissue Paper. First degree of Merit Special.

Report—A specimen book of richly-coloured and varied tissue papers, of splendid quality.

ELLISSEN, ROEDER, & CO.—Theresienthal and Vienna.—Book-binding and Book-printing Paper. First degree of Merit.

Report—The Plain paper is of fair quality, and the Coloured is decidedly of a very high class.

ELLISSEN, ROEDER, & CO.—Theresienthal and Vienna.—Post Paper. Highly Commended.

Report—The Tinted papers are very good specimens.

RUHMANN, Adolf—Guggenbach and Vienna.—Tissue Paper. First degree of Merit Special.

Report—Fine papers of first-rate quality, of great variety, and beautifully coloured.

RUHMANN, Adolf—Guggenbach and Vienna.—Hand-made Paper. First degree of Merit.

Report—A clean, well made, well finished hard paper, very low in price.

RUHMANN, Adolf—Guggenbach and Vienna.—Packing, Cigarette, and News Paper. Three Highly Commended Awards.

Report—These are good, serviceable, and very cheap papers.

RUHMANN, Adolf—Guggenbach and Vienna.—Bookbinding and Book-printing Paper. Honourable Mention.

Report—An inferior, but very cheap paper.

BELGIUM.

DAVELUY D'ELHOUGNE—Bruges.—Playing Cards. Commended.

Report—A fair card, unique, and moderate in price.

DESSAIN, H.—Malines.—Bookbinding. Commended.

Report—A fair sample of bookbinders' work.

DESSAIN, H.—Malines.—Printing.

First degree of Merit.

Report—This is an exhibit of ecclesiastical printing, displaying much skill and care.

PFEFFER ET CIE. J.—Ghent.—Vellum, Bookbinding, and Book-printing Paper. Two Highly Commended Awards.

Report—Good papers, of medium quality.

PFEFFER ET CIE., J.—Ghent.—Card-board, Wrapping, and Hand-made Papers. Three First degrees of Merit.

Report—The card-boards are serviceable, with very good surface. The wrapping-papers are very good and serviceable, whilst the hand-made papers compare favourably with those of British manufacture, being of good even texture, and hard sized, uniform in colour, and free from spots.

FRANCE.

BLANCHET, FRÈRES, ET KLEBER—Rives (Isère) and Paris.—Cardboards, Photograph, Bank, Post, and Wrapping Papers.

Four First degrees of Merit.

Report—The "Plain" cardboards are good samples of the very finest material, and have a good surface; the "Tinted" are good samples of fine, delicately tinted serviceable boards. The photograph paper is of a description which is serviceable for many purposes in the art, and when albumenized it is used for silver printing. The exhibit is of extra good quality, having a smooth surface, and is close and even in texture. The bank-post is a fine, strong paper excellently made. The wrapping-papers are strong, serviceable, and of various colours, well made.

BLANCHET, FRÈRES, ET KLEBER—Rives (Isère) and Paris.—Drawing-paper. First degree of Merit Special.

Report—An exhibit of remarkably good papers, excellent in every respect.

BLANCHET, FRÈRES, ET KLEBER—Rives (Isère) and Paris.—Post Paper. Highly Commended.

Report—Very good medium quality papers.

DUBOURGUET, A.—Paris.—Requisites for Office use.

Highly Commended.

Report—An exhibit of great variety, and consisting of very fair goods.

DUNOD, Pierre C.—Paris.—Bookbinding.

Highly Commended.

Report—A large exhibit of good substantial binding.

FOLLOT, F.—Paris.—Paper-hangings.

First degree of Merit.

Report—A most excellent exhibit of flock papers and decorations. The designs are particularly elegant and nicely executed.

GRIMAUD, CHARTIER, ET MARTEAU—Paris.—Playing Cards.
Commended.

Report—A sample book of cards, of medium description.

HATTERER VEUVE—Paris.—Cigarette Papers.
First degree of Merit.

Report—A very good exhibit of first-rate papers, tastefully displayed.

HENNUYER, Firmin—Paris.—Letter-press Printing and Bookbinding.
Two Highly Commended Awards.

Report—This is a varied, extensive, and well executed exhibit of book-printing, especially adapted to suit a large general circulation, the engravings in some of the books being very good. The bindings are strong and useful.

HUTINET, Désiré—Paris.—Fancy Stationery.
Highly Commended.

Report—A small exhibit of neatly got up goods.

LEFRANC—Paris.—Printing.
First degree of Merit.

Report—A miscellaneous exhibit of beautiful wood-cut printing, showing great taste in the bringing-up and in working. The ink used is particularly fine.

ROGER, Jules—Mouy (Oise).—Machine-made Wall-papers.
First degree of Merit.

Report—This is a very nice collection of landscape papers, of novel and pleasing designs.

VILLENEUVE, Ernest J.—Paris.—Fancy Bookbinding Materials.
First degree of Merit.

Report—A most excellent exhibit of useful and tasteful goods.

GERMANY.

DESSAUER, Alois—Aschaffenburg.—Fancy Papers.
First degree of Merit Special.

Report—This is a beautiful exhibit, showing excellent and highly-finished workmanship, together with a variety of the most brilliant colours.

FABER, A. W.—Stein-Nürnberg.—Lead Pencils.
First degree of Merit Special.

Report—An exhibit of office and drawing pencils, well displayed, and equal to those of the highest standard.

FISCHER, G.—Nürnberg.—Pencils and Pencil-cases.
Highly Commended.

Report—A small exhibit of pencils and pencil-cases. The cases are fairly finished.

FLINSCH, Ferdinand—Weesenstein bei Dresden.—Cardboards.

First degree of Merit.

Report—A good and well graduated exhibit of highly serviceable "Tinted" papers also "Plain" papers with good surface.

FLINSCH, Ferdinand—Weesenstein bei Dresden.—Tissue-paper.

Highly Commended.

Report—A very small exhibit of tissue and other fine papers, of good quality.

FROESCHEIS, Johann—Nürnberg.—Lead and other Pencils.

Highly Commended.

Report—A large exhibit of good useful articles. A stencil-plate is also shown, which is well adapted for domestic uses.

GROSSBERGER & KURZ—Nürnberg.—Lead Pencils.

First degree of Merit Special.

Report—A very fine and varied exhibit, well displayed; a speciality shown is a covered India-rubber eraser, in the form of a pencil.

GUTKNECHT, J. W.—Nürnberg.—Lead Pencils.

First degree of Merit.

Report—A good display of well-finished pencils.

HEINICKE, GOTTHARDT, & CO., MULDENTHAL PAPIER-FABRIK, COMMANDIT-GESELLSCHAFT — Freiberg in Sachsen.—Book-printing and Bookbinding Paper.

First degree of Merit.

Report—Tinted papers in great variety and beautiful colours, exceedingly well made.

HOCHSTEIN & WEINBERG—Berlin.—Card-boards, &c.

Highly Commended.

Report—These are well made boards, of fine tints and good surface.

HOLTZMANN, Emil—Speyer, a/R.—Tracing-paper.

First degree of Merit.

Report—Fine papers, of great strength and superior finish. A novelty exhibited is the patent process of Polychrom-autography, to which the attention of engineers and architects is specially directed, as by its use many copies of coloured plates can be reproduced.

KLINGSPOR, Junr., F.—Siegen in Westphalen.—Inkstands.

Highly Commended.

Report—An exhibit of useful inkstands. A slight novelty is the introduction of a floating cup, which regulates the supply of ink at every dip of the pen.

KOCH, Carl—Nachfolger—Frankfurt, a/M.—Fancy Papers.

First degree of Merit Special.

Report—These exhibits are of beautiful colours, excellently made, and highly finished.

CLASSES 258–264.—*Paper, Blank-books, Stationery, and Printing.*

KRAUSE & BAUMANN—Dresden.—Coloured Papers.
First degree of Merit Special.
Report—These exhibits are plain and embossed, of great variety in colour, and of excellent quality.

KRAUSE & BAUMANN—Dresden.—Bookbinding Materials.
First degree of Merit.
Report—Sample-books, showing a splendid variety. The papers are all of admirable texture and beautiful colouring.

LIEPMANN, H.—Berlin.—Paper-hangings.
Highly Commended.
Report—A good exhibit of gold and flock papers, together with gold and flock borders and corners.

LÜDECKE, F.—Berlin.—Hand-made, Bookbinding, and Book-printing Papers. Two Highly Commended Awards.
Report—These exhibits are of very fair quality.

MÜNCHEN-DACHAUER-ACTIENGES: FÜR MASCHINEN-PAPIER-FABRIKATION—München. — Cigarette and Copying Papers. First degree of Merit.
Report—Very useful, clean, well made papers.

MÜNCHEN-DACHAUER-ACTIENGES: FÜR MASCHINEN-PAPIER-FABRIKATION.—München.—Tissue-paper.
First degree of Merit Special.
Report—A sample book containing exhibits of tissue paper, of various colours, and exceedingly fine quality.

PEINE, G. L.—Hildesheim.—Paper-hangings.
Commended.
Report—A fair exhibit of plain papers.

ROTTER, Georg—Dresden.—Photograph Paper.
Highly Commended.
Report—A good clean made paper with a fine surface.

SCHÄFER & SCHEIBE, Otto—Berlin.—Fancy Stationery, &c.
First degree of Merit Special.
Report—This exhibit consists of stationery, embossed in various colours, gold and silver valentines, &c. The whole get up is highly artistic and tasteful.

SCHLESINGER, Martin—Berlin.—Fancy Stationery, &c.
Highly Commended.
Report—This is a small but very fair exhibit of Christmas, birthday cards, valentines, &c., some of which are elegantly arranged. Floral designs are also shown.

SCHÜTZ, August—Wurzen in Sachsen.—Paper-hangings.
First degree of Merit.
Report—A very fine exhibit of flock and gold papers, elegant in design, and well finished.

GREAT BRITAIN AND IRELAND.

ALLAN & SON, John—London.—Paper-hangings.
First degree of Merit.

Report—The bulk of this exhibit consists of varnished papers, which are of good patterns and nicely finished.

AVRIL, H.—London.—Writing, Tracing, Copying, and Cigarette-Papers.
Commended.

Report—Fairly good papers; but show nothing very special in quality.

BOWMAN, Charles—London.—Stencil-plates, &c.
First degree of Merit.

Report—Good, cheap, and well-finished articles, producing a clear and well-defined stencil.

BRANDAUER & CO., C.—Birmingham.—Steel Pens.
First degree of Merit.

Report—A very varied exhibit of strong, serviceable, well-made pens.

CANTON, Robert—London.—Valentines, Christmas and New Year's Cards.
First degree of Merit.

Report—A very pretty display, showing much taste and artistic skill in all the exhibits.

CARLISLE & CLEGG—London.—Wall-Papers.
First degree of Merit.

Report—A small exhibit of excellent papers. It contained especially a dining-room lawn leaf filling paper, with border and "dado" of exceptional beauty in colouring and design.

COCHRANE, George—Edinburgh.—Lithographic Printing, &c.
First degree of Merit Special.

Report—A remarkable exhibit of lithographic printing, both plain and coloured. An important feature introduced is the use of a grained or strippled transfer paper, by which the actual work of an artist can be transferred direct to the stone.

COLLINS, SONS, & CO., William—Glasgow.—Bookbinding.
Highly Commended.

Report—A sample of plain useful bindings.

COLLINS, SONS, & CO., William—Glasgow.—Account-books.
Honourable Mention.

Report—Ordinary specimens of workmanship.

COLLINS, SONS, & CO., William—Glasgow.—General Printing.
First degree of Merit.

Report—A large exhibit of general and commercial printing, entitled to a first-class award.

CLASSES 258–264.—*Paper, Blank-books, Stationery, and Printing.*

COLLINS, SONS, & CO., William—Glasgow.—Steel Pens.
First degree of Merit.

Report—A meritorious display.

COLLINS, SONS, & CO., William—Glasgow.—Machine-made Paper.
Highly Commended.

Report—A good assortment of papers of various makes.

COLLINS, SONS, & CO., William—Glasgow.—Commercial Envelopes.
Commended.

Report—A large sample of good average envelopes.

COOPER & CO.—London.—Quill Pens.
First degree of Merit.

Report—Clear, neatly-cut, well-finished pens.

COOPER & CO.—London.—Vellum-Parchment.
First degree of Merit.

Report—This is an exhibit of really magnificent parchments, of which the Judges cannot speak too highly.

COWAN & CO.—Edinburgh.—Machine-made Papers.
First degree of Merit.

Report—Record-paper: a very excellent and economical substitute for hand-made paper.

COWAN & CO.—Edinburgh.—Book-printing Papers, white and toned.
First degree of Merit.

Report—The white is a clean, well-made paper. The toned is well-made and uniform in tone. Both suitable for high-class book-printing.

COWAN & Co.—Edinburgh.—News-paper.
First degree of Merit Special.

Report—A clean, well-made paper.

COWAN & CO.—Edinburgh.—Account-books.
Highly Commended.

Report—Strong, substantial, and exceedingly cheap; and well adapted to the requirements of ordinary business.

DANIELL, S. A.—Birmingham.—Copying Presses.
First degree of Merit.

Report—A very fine display of beautifully-finished presses of various sizes.

DARWEN PAPER-STAINING CO.—Darwen, Lancashire.—Paper-hangings.
Highly Commended.

Report—A collection of wall-papers, varied in design, and of fair quality.

DOWNING, J. S.—Birmingham.—Stationers' Articles.
First degree of Merit.

Report—A very fine display of excellent and useful articles in this branch of the stationer's trade, especially remarkable for their cheapness, combined with first-class workmanship.

ERHARDT & CO., H.—London.—Foil Paper.
First degree of Merit Special.
Report—An exhibit showing high quality and great variety.

ERHARDT & CO., H.—London.—Parchment and Vellum Paper.
Highly Commended.
Report—A sample book, showing a great variety of useful goods.

FOURDRINIER, HUNT, & CO.—London.—Playing Cards.
First degree of Merit Special.
Report—A beautiful display of cards, of very artistic and tasteful designs.

FOURDRINIER, HUNT, & CO.—London.—Wrapping-paper.
First degree of Merit Special.
Report—A highly-finished paper, clean, and well made.

FOURDRINIER, HUNT, & CO.—London.—Copying-paper.
First degree of Merit.
Report—An exhibit of very good paper.

FOURDRINIER, HUNT, & Co.—London.—Drying and Filtering Paper.
First degree of Merit.
Report—First-class paper, excellently made.

FOURDRINIER, HUNT, & CO.—London.—Tissue-paper.
First degree of Merit.
Report—A very small exhibit, but showing tissue-paper of good colours and fine quality.

FOURDRINIER, HUNT, & CO.—London.—Cartridge-paper.
First degree of Merit.
Report—Good, serviceable papers.

FOURDRINIER, HUNT, & CO.—London.—Hand-made Papers.
Highly Commended.
Report—A good assortment.

FOURDRINIER, HUNT, & CO.—London.—Brown Paper.
Highly Commended.
Report—A good paper, but deficient in strength.

FOURDRINIER, HUNT, & CO.—London.—Commercial Envelopes.
Highly Commended.
Report—A large collection of useful envelopes.

FOURDRINIER, HUNT, & CO.—London.—Book-printing Papers.
Highly Commended.
Report—Good papers, of average quality.

FOURDRINIER, HUNT, & CO.—London.—Blotting-paper.
Highly Commended.
Report—An exhibit of good, useful paper.

FOURDRINIER, HUNT, & CO.—London.—Bank Post Paper.
Highly Commended
Report—Paper of fair, medium quality.

FOURDRINIER, HUNT, & CO.—London.—News-paper.
Commended.

Report—Commendable display.

GILLOTT, Joseph—Birmingham.—Steel Pens.
First degree of Merit Special.

Report—A small exhibit, but showing rare excellence and high finish.

GOODALL & SON, Charles—London.—Fancy Envelopes.
First degree of Merit.

Report—A very elegant and useful exhibit.

GOODALL & SON, Charles—London.—Menu and Programme Cards.
First degree of Merit.

Report—An exhibit showing numerous designs of exquisite beauty; also commendable for the very high quality and finish of the goods.

GOODALL & SON, Charles—London.—Playing Cards.
First degree of Merit Special.

Report—An excellent exhibit of cards of fair material, and of artistic and tasteful designs.

GOODALL & SON, Charles—London.—Post Paper.
First degree of Merit.

Report—Samples of the finest description of papers, and shown in a very appropriate manner.

THE "GRAPHIC"—London.—Letter-press, Stereotype, and Electrotype Printing.
First degree of Merit.

Report—A praiseworthy exhibit. Attention is drawn to the superior stereo- and electro-types produced from wood-engravings, and the great care bestowed upon the letter-press. The "bringing-up" of the wood-cuts is particularly worthy of commendation.

HUNT & CO., W. F.—London.—Paper Capsules.
First degree of Merit.

Report—A novelty which supplies a want, and is likely to be useful.

LAW, SONS, & CO.—London.—Bookbinders' Cloth.
First degree of Merit.

Report—Of various shades, and well made.

LEONARDT & CO., D.—Birmingham—Steel Pens.
First degree of Merit Special.

Report—A varied exhibit of every conceivable pattern, with prices as varied as the patterns. Two novelties—the "Reservoir" and "Neptune" pens—are also shown. The exhibit is worthy of a Special First Award.

LIGHTBOWN, ASPINALL & CO.—London.—Paper-hangings.
Highly Commended.

Report—A good selection of machine-made papers.

LYONS, William—London and Manchester.—Sealing-wax.
Honourable Mention.

Report—A common wax

MARION & CO.—London.—Fancy Envelopes.
Highly Commended.

Report—A limited display, but worthy of this award.

MARION & CO.—London.—Photographic Mounts.
Highly Commended.

Report—Cleanly cut and well ornamented.

MARION & CO.—London.—Menu and Programme Cards.
Highly Commended.

Report—A limited display of fair average cards, &c.

MARION & CO.—London.—Fancy Stationery.
Highly Commended.

Report—Display of neatly got up goods.

PAGE & SONS, S. D.—Norwich.—Paper-Bags.
First degree of Merit.

Report—An exhibit which is, of its class, worthy of the highest commendation.

PERRY & CO. (Limited)—London and Birmingham.—Split-Rings.
Honourable Mention.

Report—Excellent assortment.

PERRY & CO. (Limited)—London and Birmingham.—Steel Pens.
First degree of Merit Special.

Report—A large display of well-made pens, of all forms and sizes, designed for all possible uses.

PIRIE & SONS, Alexander—London and Aberdeen.—Machine-made Paper.
First degree of Merit Special.

Report—Very fairly finished papers, almost equal to hand-made. The exhibit is of a high quality, and is varied, comprehensive, and excellent in its character.

PIRIE & SONS, Alexander—London and Aberdeen.—Post Paper.
Paper.
First degree of Merit Special.

Report—This is a very remarkably fine exhibit. The purity of the watering, the super-excellent finish, and the general get-up of the papers entitle them to a special first award.

PIRIE & SONS, Alexander—London and Aberdeen.—Loan Paper.
First degree of Merit.

Report—Plain, strong, clean, well-made paper, specially commended for superior finish.

PIRIE & SONS, Alexander—London and Aberdeen.—Fancy Envelopes.
First degree of Merit.

Report—A very elegant and useful exhibit.

PIRIE & SONS, Alexander—London and Aberdeen.—Cardboards, &c.
First degree of Merit.

Report—A light cardboard of fine delicate tints, of first-rate serviceable material.

PIRIE & SONS, Alexander—London and Aberdeen.—Bank Post Paper.
First degree of Merit.
Report—Fine, strong, well-made paper.

POTTER, C. & J. G.—Darwen, Lancashire.—Paper-hangings.
First degree of Merit Special.
Report—A very large selection of very good papers, showing great variety in qualities and patterns; some of the patterns, especially those for hall, wainscoting, and staircase purposes, being very neat and appropriate.

SAUNDERS & Co., T. H.—London.—Loan Paper (Coloured).
First degree of Merit Special.
Report—This is a fine paper, of most excellent texture, beautifully toned and water-marked.

SAUNDERS & CO., T. H.—London.—Hand-made Papers.
First degree of Merit.
Report—These are really good writing papers. They are of even texture, uniform in colours, hard in the sizing, and free from spots.

SAUNDERS & CO., T. H.—London.—Blotting-paper.
First degree of Merit.
Report—A very good exhibit of well-made paper.

SAUNDERS & CO., T. H.—London.—Loan Paper (Plain).
First degree of Merit.
Report—Plain, clean, and strongly-made papers.

SAUNDERS & CO., T. H.—London.—Machine-made Paper.
Commended
Report—A small exhibit of good papers.

SMEE, William, A. & S.—London.—Wall-paper.
Highly Commended.
Report—A small selection of papers of very good designs.

SPICER BROTHERS—London.—News-paper. (Sample No. 1.)
First degree of Merit Special.
Report—A clean, well-made paper, uniform in every respect.

SPICER BROTHERS—London.—News-paper. (Sample No. 2.)
First degree of Merit Special.
Report—An excellent commercial news.

SPICER BROTHERS—London.—Book-printing Paper.
First degree of Merit.
Report—Clean, well-made, uniform paper, and highly finished.

SPICER BROTHERS—London.—Loan Paper.
First degree of Merit.
Report—Plain, clean, and strongly-made paper.

CLASSES 258–264.—*Paper, Blank-books, Stationery, and Printing.*

SPICER BROTHERS—London.—Hand-made Papers.
First degree of Merit.
Report—These are good papers, of fine texture, and hard size; uniform in colour, and free from spots.

SPICER BROTHERS—London.—Mill-boards.
First degree of Merit.
Report—A most excellent exhibit of first-rate boards.

SPICER BROTHERS—London.—Photographic Mounts.
First degree of Merit.
Report—A good exhibit of first-rate serviceable cards.

SPICER BROTHERS—London.—Loan Paper (Coloured).
First degree of Merit.
Report—These are papers of wonderful strength and substance, well toned, and water-marked.

SPICER BROTHERS—London.—Bank-note Paper.
First degree of Merit Special.
Report—A very fine exhibit of very strong, good, substantial papers, admirably adapted to the purpose for which they are intended.

SPICER BROTHERS—London.—Wrapping-paper.
Highly Commended.
Report—Good serviceable paper, of medium quality.

SPICER BROTHERS—London.—Post Paper.
Highly Commended.
Report—Very good medium-quality paper.

STEPHENS, H. C.—London.—Steel Pens.
First degree of Merit.
Report—A good exhibit of useful pens.

STEPHENS, H. C.—London.—Sealing-wax.
Highly Commended.
Report—A serviceable sample.

UNWIN BROTHERS—London.—Account-books and Bookbinding.
First degree of Merit.
Report—An exhibit showing good, sound, strong workmanship.

UNWIN BROTHERS—London.—Printing.
First degree of Merit.
Report—A beautiful exhibit of old style printing, especially commendable for its press-work.

WALTON & CO., F.—Sunbury-on-Thames.—Raised Papers for Wall Decorations. First degree of Merit.
Report—A small collection of "muralis" raised papers, very elegantly designed, and of beautiful finish.

WARD & CO., Marcus—London and Belfast.—Bookbinding.
First degree of Merit Special.

Report—This exhibit, which is of exceptional excellence, deserves the highest commendation. The design and execution, especially in the case of albums, show great originality and ingenuity—the hand-tooling being performed with masterly skill. In fact the whole exhibit is a real work of art.

WARD & CO., Marcus—London and Belfast.—General Printing.
First degree of Merit.

Report—A beautiful display of book and general printing.

WARD & CO., Marcus—London and Belfast.—Chromo-lithographs.
First degree of Merit Special.

Report—The chromo-lithographs show exquisite skill, and taste in workmanship.

WARD & CO., Marcus—London and Belfast.—Fancy Envelopes.
First degree of Merit.

Report—A very elegant and useful exhibit.

WARD & CO., Marcus—London and Belfast.—Menu and Programme Cards.
First degree of Merit.

Report—An exhibit of varied and highly valuable character, being also commendable for artistic and tasteful design and good material.

WARD & CO., Marcus—London and Belfast.—Post Paper.
First degree of Merit.

Report—A very excellent exhibit, and well got up.

WATERLOW & SONS (Limited)—London.—Commercial Envelopes.
First degree of Merit Special.

Report—Sample-book containing large variety of well-made and useful envelopes.

WATERLOW & SONS (Limited)—London.—Bookbinding, Account Books, Letter Books, &c.
First degree of Merit Special.

Report—An exhibit of which the Judges cannot speak too highly, and one which they deem worthy of recommendation for special award. The ruling and paging are faultless, and the binding is perfection. In the latter the use of a patent wire has been introduced with undoubted advantage, imparting both strength and flexibility—two important points in all such work.

WATERLOW & SONS (Limited)—London.—Telegraph-Tape.
First degree of Merit.

Report—A collection of very good "tapes." A sample for use on the "Morse" instrument is of especial excellence. The "Wheatstone" and "Type-printing" tapes are also very good. A blue "Morse's" tape is a good tape, but for use it is of a bad colour.

WATERLOW & SONS (Limited)—London.—Railway-Tickets.
First degree of Merit.

Report—Varied assortment of good serviceable tickets.

WATERLOW & SONS (Limited)—London.—Stylograph.
First degree of Merit.
Report—A highly useful invention, cleanly in operation, effecting a saving of time, and especially valuable to all who have much writing to do.

WATERSTON SONS & STEWART, G.—London and Edinburgh.—Sealing-wax. First degree of Merit.
Report—A good, serviceable article, of peculiarly brilliant colour.

WHITFIELD, S. B.—Birmingham.—Steel Pens.
First degree of Merit.
Report—A very tasteful exhibit, and worthy of a first award.

WILLIS, William Henry—London.—Playing-Cards.
First degree of Merit.
Report—A varied collection of tasteful designs, exceedingly well printed.

WILLIS, William Henry—London.—Menu and Programme Cards and Fancy Stationery. Highly Commended.
Report—A commendable display.

WOOLLAMS & CO., William—London.—Flock Papers, Plain and Embossed, Embossed Leather Papers, &c., &c.
First degree of Merit.
Report—A large and varied assortment of papers, elegant in design and nicely finished.

WYLIE & LOCHHEAD—London and Glasgow.—Paper-hangings.
First degree of Merit.
Report—This is a splendid exhibit of plain and stamped gold papers, of beautiful designs and most excellent finish.

JAPAN.

HANG SHUCHO—Osaka.—Wrapping-paper.
Honourable Mention.
Report—Exceedingly rough in make, but strong; commercially of little value, from the small size of the sheets.

INSATSU KIOKU, GOVERNMENT PRINTING OFFICE—Tokio.—Telegraph Tape. Highly Commended.
Report—A strong, good paper, but apt to "run."

INSATSU KIOKU, GOVERNMENT PRINTING OFFICE—Tokio.—Vellum, and Tracing papers.
Two First degrees of Merit Special.
Report—An excellent specimen of paper parchment, of wonderful strength and texture. This is the best as well as the most remarkable exhibit of paper manufacture that has yet come under the notice of the Judges. The tracing is also a splendid exhibit.

SEICHIRO HAYASHI—Tokio.—Tissue-paper.

First degree of Merit.

Report—A paper of delicate texture, of considerable strength, printed in colours imitating muslin, and is used when transparent effects are required.

TAKEYA SEIZO—Tokio.—Imitation-Leather.

First degree of Merit.

Report—A very creditable exhibit, showing great ingenuity in the manufacture and design.

WOOYENO YEIZABURO—Kioto.—Wall-papers.

Highly Commended.

Report—This exhibit is very interesting from the material (bark of a tree) used in its manufacture.

WOOYEMURA SANJIRO—Tokio.—Enamelled and Coloured Papers.

First degree of Merit.

Report—This is a novel and interesting exhibit, being a glass paper used for the ornamentation of windows.

NETHERLANDS.

GELDER & VAN ZOON—Amsterdam.—Bank-note Paper.

Highly Commended.

Report—A miscellaneous exhibit, very strong, but rather heavy.

NEW SOUTH WALES.

"EVENING NEWS," PROPRIETORS OF—Sydney.—Newspaper Printing. Highly Commended.

Report—An interesting exhibit. The moulds and stereo-plates from which the impressions are taken are fair specimens of workmanship; the printing, however, is hardly equal to the excellent mechanical appliances which this journal undoubtedly possesses.

GIBBS, SHALLARD, & CO.—Sydney.—Letter-press and Lithographic Printing. First degree of Merit.

Report—An excellent display of lithographic printing.

GIBBS, SHALLARD, & CO.—Sydney.—Stereotypes and Electrotypes.

First degree of Merit.

Report—Exhibits varied and well executed.

GIBBS, SHALLARD, & CO.—Sydney.—Account-books.

Highly Commended.

Report—This exhibit displays meritorious workmanship.

CLASSES 258–264.—*Paper, Blank-books, Stationery, and Printing.*

JERREMS, C.—Sydney.—Bookbinding. Highly Commended.

Report—An exhibit displaying good, sound, finished workmanship, with considerable taste in ornamentation.

LEIGH & CO., S. T.—Sydney.—Bookbinding.

Highly Commended.

Report—A very creditable exhibit.

MOTE, William I. B.—Sydney.—Paper-hangings.

First degree of Merit.

Report—A neat collection of ornamental papering, tastefully and attractively exhibited.

RICHARDS, Thomas, GOVERNMENT PRINTER—Sydney.—Printing—Letter-press, Photo-lithographic, Photo-mechanical, Stereotype, and Electrotype. First degree of Merit Special.

Report—A highly valuable and instructive exhibit, showing specimens of the very latest improvements and inventions of scientific and mechanical art as applied to printing.—Letter-press: The letter-press printing in all branches is of a very superior character.—Photo-lithographic, Photo-mechanical, &c.: This printing embraces the following processes—The Woodbury, heliotype, Albertype, Obernetter, Waterhouse, photo-xylography, photo-skytography, photo-engraving, and autotype. The exhibit also includes carbon prints by double transfer, and on porcelain; also polygraphic prints, all of which are exceedingly well executed.—Stereotypes: The stereotype exhibits display most skilful and highly finished workmanship. A new feature (the invention of an employé in the office, to which the special attention of printers is directed) is an adjustable type-high "core," which for larger plates gives a much better support than is found in Harrild's patent.—Electrotypes: The electrotypes are very fair specimens of the art, displaying perfect workmanship.—The whole exhibit reflects great credit upon the establishment, and well deserves a special first award.

RICHARDS, Thomas, GOVERNMENT PRINTER—Sydney.—Bookbinding, Account Books. First degree of Merit.

Report—A very meritorious exhibit of general bookbinding, calling for special remark as showing exceptional skill and taste in every branch of the art. The specimens of library and decorative binding display particular excellence in the hand-tool work, chasteness of design, and execution. Particular attention is deserved by the first-class workmanship in both the printing and binding of the "N.S.W. Statutes," the specimen volumes of which are unapproached by any similar exhibit brought under the notice of the Judges.

SANDS, John—Sydney.—General Printing.

First degree of Merit.

Report—An exhibit of commercial and general printing, worthy of great praise.

CLASSES 258–264.—*Paper, Blank-books, Stationery, and Printing.*

SANDS, John—Sydney.—Account Books, Bookbinding.
First degree of Merit.

Report—This is an exhibit of account-books and account book binding which is worthy of high praise, and reflects great credit upon the Colony. The Judges think it right to notice a novelty introduced by this firm, in the use of hogskin in the binding of heavy account-books, which meets with their approval. For style and finish the productions of this firm entitle them to a first-class award.

SHORT, G.—Sydney.—Book-binding (India-rubber Backing).
Commended.

Report—The novelty in this exhibit is the use of India-rubber backing, which seems to be specially suited for music, and map work. Should experience prove that the material will be unaffected by warm climates, an important improvement will have been introduced.

"SYDNEY MORNING HERALD," PROPRIETORS OF—Sydney.—Newspaper Printing. First degree of Merit Special.

Report—A very valuable exhibit, as indicating the progress made in New South Wales in the production of newspapers. The moulds are remarkable for their depth and clearness of impression, and the stereo-plates from them are first-class. The printing, though done from one set of plates, at the great speed of 12,000 perfected copies per hour, could hardly be surpassed.

TROEDEL & CO., Charles—Sydney.—Printing.
First degree of Merit.

Report—This is a miscellaneous display of letter-press, lithographic, and copper-plate printing.

WEARNE, W. C.—Holdsworthy, near Liverpool.—Brown Papers.
First degree of Merit Special.

Report—A good serviceable paper, showing progress in colonial manufacture.

WILLIAMS & MURRAY—Liverpool.—Wrapping Papers.
Highly Commended.

Report—A small collection of good wrapping and parcel papers.

WILLIAMS & MURRAY—Liverpool.—Brown Papers.
First degree of Merit Special.

Report—Strong paper, of good texture, and free from grit.

WILLIAMS & MURRAY—Liverpool.—News-paper (sample No. 1).
First degree of Merit.

Report—A well-made and useful news-paper, and as a local product deserving of high commendation and first-class award.

WILLIAMS & MURRAY—Liverpool.—News-paper (sample No. 2).
First degree of Merit.

Report—A clean, well-made paper, and as a colonial product deserving of first-class award.

NEW ZEALAND.

DIDSBURY, George—Wellington.—Printing.
Highly Commended.
Report—A display not very large, but deserving of a second-class award.

DIDSBURY, George—Wellington.—Bookbinders' Work.
Commended.
Report—A fair specimen of strong and substantial workmanship.

FERGUSON & MITCHELL—Dunedin.—Bookbinding, and Account-books. Highly Commended.
Report—A very creditable exhibit, showing considerable excellence in both printing and binding. As a whole, the work displayed shows some slight inequalities, but is deemed worthy of a second-class award.

INVERCARGILL PAPER-BAG FACTORY—Invercargill.—Paper-Bags. Honourable Mention.
Report—Well-made bags, but of no special excellence.

LYON & BLAIR—Wellington.—Bookbinding.
Commended.
Report—A very small exhibit of only one specimen, showing workmanship rather above the average.

MATAURA PAPER MILL CO. (Limited)—Mataura.—Brown Paper.
First degree of Merit.
Report—Good paper, and remarkably tough.

OTAGO PAPER CO. (Limited)—Dunedin.—Brown Paper.
First degree of Merit Special.
Report—A most excellent paper, well made, clear, and remarkably tough.

SMITH & CO., J. T.—Christchurch.—Bookbinding.
Commended.
Report—A creditable exhibit, displaying good workmanship.

TOMBS & DAVIES—Christchurch.—Bookbinding and Account-books.
Honourable Mention.
Report—A fair average specimen of bookbinders' work, calling for no particular comment.

QUEENSLAND.

BEAL, J. C., GOVERNMENT PRINTER—Brisbane.—Bookbinding and Account-books. Highly Commended.
Report—A small exhibit, showing good average workmanship, and many points of excellence in binding, lettering, and ruling.

CLASSES 258–264.—*Paper, Blank-books, Stationery, and Printing.*

BEAL, J. C., GOVERNMENT PRINTER—Brisbane.—Album Binding. Highly Commended.

Report—This is a specimen of an apprentice's workmanship, evincing considerable skill, and worthy of commendation.

MACPHERSON, Alex.—Brisbane.—Fibres for Paper-making. Highly Commended.

Report—An exhibit of fibres, which may become of great value, for the manufacture of the rougher kinds of wrapping-paper.

SOUTH AUSTRALIA.

GOVERNMENT PRINTER—Adelaide.—Bookbinding. Honourable Mention.

Report—A creditable display.

SOUTH AUSTRALIAN COMMISSION—Adelaide.—Bookbinding. Honourable Mention.

Report—A show case, exhibited by the Commission, containing specimens of creditable workmanship.

UNITED STATES.

CARTER, DINSMORE, & CO.—New York City.—Inks, and Liquid Gum. First degree of Merit.

Report—The gum is smooth, pure, clean-looking, and highly scented. It is claimed that it does not thicken or sour.

COWPERTHWAITE & CO.—Philadelphia.—Printing. Highly Commended.

Report—A small exhibit of cheap school printing.

EDISON, Professor Thos. A.—Menlo Park, New Jersey.—Electric Pen. First degree of Merit.

Report—Though not new, the Judges deem this a remarkable invention, and worthy of a first-class award.

LOCKWOOD, H.—New York City.—Specimens of Printing—*American Mail.* First degree of Merit Special.

Report—As a specimen of periodical newspaper printing (the publication is monthly), this exhibit is equal to anything produced in London, or indeed anywhere else. The type is sharp and distinct; the woodcuts so artistically brought-up and worked that they resemble steel engravings; the paper has a beautiful glazed surface; and the ink, which is a glossy black, is distributed with perfect uniformity.

CLASSES 258-264.—*Paper, Blank-books, Stationery, and Printing.*

PHILADELPHIA NOVELTY CO.—New York City.—"Fountain" Pen. Highly Commended.

Report—A good pen; rough in finish, but cheap.

PORTER & COATES—Philadelphia.—Printing. Highly Commended.

Report—Small exhibit of general book-printing, possessing several points of excellence.

STODDART & CO., Jun.—Philadelphia.—Bookbinding. Honourable Mention.

Report—A fair sample of good average work.

VICTORIA.

CURTIS, James—Ballarat.—Job Printing. Highly Commended.

Report—A miscellaneous display of general job printing.

DETMOLD, William—Melbourne.—Account-books. First degree of Merit.

Report—In all points displaying very excellent workmanship.

DETMOLD, William—Melbourne.—General Bookbinding. First degree of Merit.

Report—Tastefully and skilfully executed, showing throughout first-class workmanship.

FERRES, John, GOVERNMENT PRINTER—Melbourne.—Printing. First degree of Merit Special.

Report—A small exhibit, but containing samples of first-class workmanship. particularly in tabular work. The exhibit of printing in "Neumayer's Meteorological and Nautical Observations, Victoria, 1851–62, 1 vol., cloth," taken at the Melbourne University, is a splendid specimen of the typographical art.

MARSHALL, William—Melbourne.—Show Printing. Highly Commended.

Report—A display of good ordinary poster printing.

WHITEHEAD & CO., Edward—Melbourne.—Fancy Envelopes. Commended.

Report—A collection of well-made ordinary envelopes.

CLASSES 265–270.

Military and Naval Armaments, Ordnance, Firearms, and Hunting Apparatus.

JUDGES.

CRAIG, WILLIAM	Sydney.
BREWSTER, WILLIAM (*Expert*)	Sydney.
GANNON, FREDERICK	Temple Court, Sydney.
JAUBERT, LÉON	Church Hill, Sydney.
MANN, GOTHER K., Captain	Sydney.
MANSON, DONALD	Waltham, Mass., U.S.A.
ROBERTS, C. F., Colonel, R.A. (Chairman) ...	Sydney.

CLASSES 265–270.—Military and Naval Armaments, Ordnance, Firearms, and Hunting Apparatus.

The Judges appointed to decide upon this group beg to submit their report; and in so doing, they respectfully wish to draw the attention of the Commission and the public, through the Commission, to the very superior collection of arms and weapons of all kinds which were exhibited in the Garden Palace. Commencing with the ethnological exhibits of weapons of the most primitive descriptions, the Judges followed up with those in the Foreign, British, and American Courts, where firearms capable of being fired at least thirty times per minute with accuracy, were displayed. The Judges hoped that. steps would be taken to induce the Government of this Colony to obtain for retention in the Museum a complete assortment of these weapons and arms.

The Ethnological Department comprised almost every conceivable description of offensive and defensive weapons, leading up to primitive examples of the firearm. The degree of civilisation is strangely marked by superiority of manufacture as well as design in the different weapons gathered together from nearly all the known islands of the Pacific. This collection is well worthy of special commendation.

In the European Courts, as was naturally to be expected, the highest degree of excellence and finish were found, and in combination with the prior named qualities, the great essential of moderate cost was not overlooked. After having submitted arms produced from the different Courts to a practical test at fixed ranges, and having taken into consideration the merits of each exhibit from a critical examination, the Judges have awarded as follows :—

GROUP—Military and Naval Armaments, Ordnance, Firearms, and Hunting Apparatus.

CLASSES 265–270.

BELGIUM.

ANCION ET CIE. J.,—Liège.—General collection of Arms.
First degree of Merit.

BACHMAN, Louis—Etterbeck, near Brussels.—Collection of Cartridges and compressed Bullets. First degree of Merit.

Report—This is an excellent collection of all varieties.

DRESSE, LALOUX ET CIE.—Liège.—Rook Rifles.
Highly Commended.

DRESSE, LALOUX, ET CIE.—Liège.—General collection of Arms.
Highly Commended.

PIRLOT ET FRÉSART—Liège.—Revolvers.
Highly Commended.

PIRLOT ET FRÉSART—Liège.—General collection of Arms.
Commended.

The Belgian Court can without doubt claim for the various exhibits displayed therein, the advantage of cheapness of manufacture, and this has not been attained by entirely dispensing with excellence of material and finish. Among the different arms exhibited there are notably many instances of first-class material.

In Classes 265 and 269 this Court has a large display.

FRANCE.

MONTAIS, ROGER DE—Paris.—Sporting Guns.
First degree of Merit.

The French Court has only one exhibit of arms, and that for sporting purposes (Class 269). These guns, well worthy of notice on account of their peculiar action, which, although it contains the great element of safety in the field, is in the opinion of the Judges too delicate to stand much rough usage. The prices asked are very moderate when the excellence of material and workmanship is considered.

GERMANY.

DEUTSCHE METALLPATRONENFABRIK LORENZ—Karlsruhe-Baden.—Material for Cartridges. Commended.

DREYSE, N. Von—Sömmerda.—Patent Fire-arms.
Highly Commended.

GANZ & CO., EISENGIESSEREI UND MASCHINEN-FABRIK ACTIENGESELLSCHAFT IN OFEN.—Krupp's Shot and Shell.
First degree of Merit.

Report—The shells for heavy guns are well worthy of special notice by all interested in such exhibits, being of a novel description of construction.

HAENEL, C. G.—Suhl in Sachsen.—Breechloaders, &c.
First degree of Merit.

KRUPP Friedrich—Essen a./d. Ruhr.—Field Gun, 75 calibre.
First degree of Merit.

Report—This exhibit is not so easily handled as others of the same class, on account of its weight, but it is of first-class finish.

LÖWE & CO., LUDWIG—Berlin.—Gunsmiths' Tools and Revolvers.
First degree of Merit.

Report—This exhibit is well worthy of special remark, as it displays the whole process in the manufacture of the Pistol, and all its parts.

MAUSER GEBRÜDER & CO.—Oberndorf am Neckar.—Revolvers.
First degree of Merit Special.

Report—The pistols of this firm are most worthy of notice for excellence in pattern and finish, being in the opinion of the Judges the best samples of revolvers in the Garden Palace, combining as they do lightness, superior design and finish, efficiency, durability, and moderate price.

The German Court contains arms of the best description, exhibiting many various systems of breechloaders, the workmanship and material of which it would be difficult to surpass, and Classes 265 and 269 are represented extensively.

GREAT BRITAIN AND IRELAND.

ARMSTRONG & CO., Sir William G.—Newcastle-on-Tyne.—Field, Mountain, and Machine Guns, and Models of Heavy Ordnance.
First degree of Merit Special.

Report—In Classes 266 and 267 the exhibits of Sir W. G. Armstrong & Co. stand pre-eminent, and the Judges especially draw attention to the very excellent finish and strength, combined with lightness, of the field-gun, as well as of the mountain-gun exhibited. The machine-gun also is worthy of special notice on account of the very complete manner in which it is fitted with appliances for repair in all its parts. In Class 267 this firm exhibits models of heavy ordnance, all of which are well worthy of special notice.

BENTLEY & PLAYFAIR—Birmingham.—Guns, Rifles, Pistols, &c.
First degree of Merit.

Report—For adaptation to public wants.

ELEY, BROTHERS (Limited)—London.—Cartridges.
First degree of Merit Special.

Report—In Class 265, Messrs. Eley Brothers make a display of cartridges adapted to nearly every known firearm; and the Judges recommend, as this exhibit is by far the best in the building in this class, that a Special First-class Award be given to it.

EVANS & WORMULL—London.—Hunting Gear, Spears, and Knives.
First degree of Merit.

Report—Well got up.

GRANT, Stephen—London.—Express Rifles.
First degree of Merit Special.

GRANT, Stephen—London.—Sporting Guns.
First degree of Merit.

GREENER, W. W.—London and Birmingham.—Wedge-fast Hammerless Guns, &c.
First degree of Merit Special.

Report—For general excellence.

CLASSES 265–270.—*Military and Naval Armaments, &c.*

HILL, W. J.—Birmingham.—Revolvers.
Highly Commended.

HOLLAND & HOLLAND—London.—Kangaroo or Rook Rifles.
First degree of Merit Special.

HOLLAND & HOLLAND—London.—Sporting Guns, &c.
First degree of Merit.

HOLLIS & SON (Limited)—Birmingham.—Firearms.
Honourable Mention.

LEWIS, G. E.—Birmingham.—Guns and Rifles.
Honourable Mention.

PURDEY & SONS, James—London.—Sporting Guns and Rifles.
First degree of Merit.

RILEY, W. S.—Birmingham.—Sporting Rifles.
First degree of Merit.

SCOTT & SON, W. & C.—London and Birmingham.—Guns, Rifles, Revolvers, &c. First degree of Merit.

Report—Highly commended for process of manufacture.

SOPER, William—Reading.—Rifles.
Highly Commended.

TISDALL, Wm. H.—Birmingham.—Guns, Rifles, Revolvers, &c.
Highly Commended.

WEBLEY & SON, P.—Birmingham.—Sporting Rifles and Revolvers.
Highly Commended.

The British Court made a display in firearms which, considering its moderate size, will be seldom equalled—combining, as it did, nearly every known system of loading, with the elements of safety. From this fact the Judges experienced extreme difficulty in settling their awards. Arms of every description were shown, and, owing to its having been almost impossible to ascertain accurately who the manufacturer of the arms in all cases were, the principle has been adopted of judging as far as possible the respective merits of the comparative exhibits. In some instances the exhibit contained a very large and varied assortment; in others, a small but very choice one. In the former class pre-eminent are the displays of Messrs. W. W. Greener, W. and C. Scott & Son, Bentley and Playfair, and in the latter Messrs. J. Purdey & Sons, William Soper, Stephen Grant, P. Webley & Son, Holland & Holland, and W. S. Riley.

NETHERLANDS.

ROUPPE VANDER VOORT & LEWIN—s' Hertogenbosch.—Small Shot. First degree of Merit.

Report—A very fine exhibit of a collection of small shot for sporting purposes; the prices being very moderate, combined with fair finish.

NEW SOUTH WALES.

MODINI, G. B.—Sydney.—Collection of Sporting Firearms.
First degree of Merit Special.

Report—The only display made by this Colony was that of Mr. G. B. Modini; and although the arms were not manufactured in the Colony, yet so worthy of notice is this exhibit for excellence of finish and workmanship, combined with most moderate prices, that the Judges recommend, on account of the finish being purely colonial work, that a special First-class award be given.

STRAITS SETTLEMENTS.

JOHOR, K.C.S.I., G.C.M.G., MAHARAJAH OF—Johor.—Collection of Native Arms. Honourable Mention.

Report—Commended as a collection.

TASMANIA.

MOIR, James G.—Queenborough Glens.—Shot of various sizes.
Commended.

Report—This exhibit of shot for sporting purposes is of very good quality, but the Judges are unable to make any special award, not having been furnished with the necessary qualification, viz., cost; however, they commend it.

UNITED STATES.

WINCHESTER REPEATING ARMS CO.—New Haven, Conn.—Rifles, Muskets, Carbines, and Cartridges.
First degree of Merit Special.

Report—In this Court there is one display of the Winchester Repeating Magazine Rifle type; and although specimens of this rifle are to be found among the Belgian exhibits, yet this one being solely of magazine rifles, must stand alone. The rifle, for excellence of material, finish, and cheapness, is without a rival; the cartridges also, for this class of weapon, are of the very best make and finish, and, on account of their strength, are capable of being reloaded several times. The Sporting Rifles exhibited by this Company are specially to be recommended on account of the facility of loading, and accuracy and rapidity in firing. The Carbines of this type would be excellent weapons for mounted police, carrying, as they do, eight or nine shots in the magazine portion of the weapon. The Judges therefore recommend an award to this exhibit of a special First degree of Merit, and special distinction for general excellence in all points.

CLASSES 272–278.

Medicine, Surgery, Prothesis.

JUDGE.

MORRIS, WILLIAM, M.D. ... ... Sydney.

GROUP—Medicine, Surgery, Prothesis.

CLASSES 272–278.

AUSTRIA.

ODELGA, J.—Vienna.—Surgical Instruments, Bandages, &c.

First degree of Merit.

Report—The trusses, aspirators, carbolized gauze and wool, jute and medicated wool, are all of very good quality.

POCHTLER, Carl—Vienna.—Enema Apparatus, with spiral wire.

First degree of Merit.

Report—This exhibit deserves recognition for its simplicity and cheapness.

REINER, Heinrich—Vienna.—Surgical Instruments.

Commended.

Report—Some of these instruments are covered with hard gum, especially the midwifery instruments, and deserve special recognition on this account. The microphone is an apparatus specially constructed for detecting stone in the bladder. It seems that the exhibitor sold and delivered some of his best instruments before they were examined.

WILHELM & CO., Franz—Vienna.—Drugs and Chemicals.

First degree of Merit.

Report—This is a very good exhibit of organic and inorganic preparations of Materia Medica, and deserves special notice on account of its variety.

FRANCE.

ARMET DE L'ISLE—Paris.—Salts of Quinine.

First degree of Merit.

Report—All these preparations of quinine stand the "P.B." test, and form a very fine exhibit ; but the quotation of price is high compared with the English and German articles.

ARNAUD—Paris.—Pharmaceutical Products.

First degree of Merit Special.

Report—The pure cafeine is of the best quality, and reasonable in price. The syrup and pills of valerianate of cafeine are both very good combinations.

DUPOUY ET LISSOUDE—Paris.—Medicated Sweetmeats and Acids.

Commended.

Report—The gelatinous phosphate of lime is a very good preparation.

CLASSES 272-278.—*Medicine, Surgery, Prothesis.*

LIMOUSIN ET CIE.—Paris.—Apparatus for Medicated Wafers Manufacture. First degree of Merit.

Report—The "cachets de pain," or wafer capsules, are an elegant mode of rendering medicine tasteless. These exhibitors are the original inventors (1873) of this process.

MONTREUIL, FRÈRES, ET CIE.—Clichy-la-Garenne, près Paris.—Pharmaceutical Preparations, &c. First degree of Merit.

Report—This exhibit deserves a special notice for the purity and excellence of the drugs; especially the sample of iodoform cannot be surpassed in quality.

PRADEL, PAQUIGNON, ET BAILLY—Paris.—Medicine Chests and Quinine Wine. Highly Commended.

Report—The medicine cases of various sizes are very serviceable, and reasonable in price. The quinine wine (La Roche) is a preparation of the three barks in first-class wine, and this is a very good way of giving the active ingredient without the intense bitter taste.

THEVENOT—Dijon (Côte d'Or).—Medicinal Capsules. First degree of Merit.

Report—These pills in gelatinous capsules were originally invented by Mr. Thevenot, and form a very good means of giving nauseous medicines and essential oils, and deserve a special notice on this account. The gelatine capsule is entirely dissolved within two hours in cold water (60° Faht.)

TORCHON, Charles—Paris.—Preparations of Chloral, &c. First degree of Merit.

Report—The chloral hydrate and its preparations are of the best quality. A dog mummified by means of chloral shows a new way of embalming, and the antiseptic properties of chloral hydrate. The artificial petroleum is a new preparation hitherto unknown in the chemical world, and is exhibited as a chemical curiosity. The gelatinous capsules are very good samples.

GERMANY.

CHININFABRIK-BRAUNSCHWEIG — Braunschweig. — Quinine, Strychnine, and other Chemical Preparations. First degree of Merit.

Report—All these preparations stand the "P.B." test. The whole is a very fine exhibit of quinine and strychnine and their preparations.

HEUBACH & CO.—Lauscha, bei Coburg.—Artificial Eyes. First degree of Merit.

Report—These are the best manufactured specimens of artificial eyes shown at the Garden Palace.

LIEBE, J. Paul—Dresden.—Preparations of Malt.
First degree of Merit Special.

Report—All these various preparations or extracts of malt are of first-class quality. The "Leguminose" in soluble form is a sound wholesome article, and the pepsine wine is a very good sample.

MESSTER, Eduard—Berlin.—Artificial Eyes.
Highly Commended.

MESSTER, Eduard—Berlin.—Optical and Medical Instruments.
First degree of Merit.

Report—The "Pneumatic Apparatus" deserves special notice as illustrating a new method of treating affections of the chest by compressed or rarified air at pleasure. The case of specimens illustrating Diseases of the Eye is also a very good exhibit.

MÜLLER, Ludwig—Uri, Lauscha in Thuringen.—Artificial Eyes.
Highly Commended.

MÜHLE & CO. H. L.—Hamburg.—Refined Cod-liver Oil.
First degree of Merit.

Report—This exhibit is of very good quality, and specially commended for its purity.

GREAT BRITAIN AND IRELAND.

ARNOLD & SONS—London.—Surgical Instruments.
First degree of Merit Special.

Report—Taking this exhibit as a whole, it is one of the best surgical instruments in the Exhibition. The steam-spray apparatus is a very fine exhibit, and the enema apparatus is simple and useful.

ARNOLD & SONS—London.—Stethoscopes, Ophthalmoscopes, Chemical Thermometers, &c.
Highly Commended.

Report—A very good exhibit. The thermometers have neither magnifying indices nor the Kew Observatory mark.

BELL, Henry—London.—India-rubber Surgical Appliances.
First degree of Merit.

Report—Good exhibit, but no new inventions worthy of notice.

COWARD & CO.—London.—Seidlitz Powders and Essences.
Commended.

Report—There is nothing special about this exhibit except its variety.

DIVER, Dr.—Kelso, Surrey.—Tocophelia, or Obstetric Dress.
Highly Commended

Report—This invention is ingenious, and calculated to be useful under certain circumstances to a lying-in woman.

EVANS & WORMULL—London.—Air-cushions, air-beds, cork-beds, &c.
First degree of Merit.

Report—A special exhibit of their kind.

EVANS & WORMULL—London.—Surgical Appliances.
First degree of Merit.

Report—A special exhibit of their kind.

EVANS & WORMULL—London.—Veterinary Surgeons' Instruments.
First degree of Merit.

EVANS & WORMULL—London.—(1) Instruments for physical diagnosis. (2) Spirometer (clock-work), Test-cases.
First degree of Merit Special.

Report—(1) The largest and best assortment in the Exhibition. (2) Very fine exhibit—compact and neat.

EVANS & WORMULL—London.—Instruments of Mechanical Skill.
First degree of Merit.

Report—A fine exhibit of instruments, but no originality. A fine selection of Skipton's splints, in wood, iron, and cane.

EVANS & WORMULL—London.—Dental Instruments.
Highly Commended.

Report—Very good exhibit.

HOCKIN, WILSON, & CO.—London.—Seidlitz Powders.
First degree of Merit.

Report—A very good way of administering a saline draught, being a combination of the acid and alkali.

KOPF & CO.—London.—Concentrated Extract of Beef, Consolidated Soup, Concentrated Scotch Broth, Nutritious Soup.
First degree of Merit.

Report—All good preparations of their kind.

LEMALE & CO.—London.—Dental Instruments, Mineral Teeth and Dentists' requisites. First degree of Merit.

Report—Very fine exhibit.

LONGDON & CO., F.—Derby.—Elastic Stockings, Knee-caps, &c.
First degree of Merit.

Report—A first-class exhibit.

LYNCH & CO.—London.—Pharmaceutical and Surgical Appliances.
Highly Commended.

Report—A very good selection, but not worthy of special notice.

MACINTOSH & CO., Charles—London & Manchester.—India-rubber Surgical Appliances. First degree of Merit.

Report—Good exhibit, but no new inventions worthy of notice.

MAYER & MELTZER—London.—Surgical Instruments. First degree of Merit Special.

Report—The finest exhibit of all the latest improvements in surgical instruments. They are said to be designed and manufactured by the exhibitors' firm; and for quality and originality they are not surpassed. The silver catheters (improved eyes) require special notice. The bone forceps (lever action) are very ingeniously constructed. Sayers' apparatus and appliances for deformities are a very good selection. The artificial arms and legs are a very elegant exhibit, and deserve special recognition on account of their excellence, lightness, and easy adaptation to the body. The galvanic battery for cauterization is a first-class apparatus, and the combination is likewise a fine exhibit. The cap for hot or ice water is a very good invention.

MAYER & MELTZER—London.—Stethoscopes, Laryngoscopes, Clinical Thermometers, Urethrometers, &c. First degree of Merit.

Report—This exhibit stands in quite as good a position, in make and finish, as Messrs. Evans and Wormull's, but there is not such a variety. The thermometers are of the best, and have the Kew certificate. The spirometer (clock-work) requires special notice for its usefulness and originality.

RICHARDSON & CO., John—Leicester.—Pearl-coated Pills, Hydroxylized Lint, Cod-liver Oil Emulsion, Phosphorised Cod-liver Oil, Oxyozone, Thymol Soap. First degree of Merit.

Report—A very large and showy exhibit of pills, but very insoluble. Good sample of lint. A very convenient way of administering cod-liver oil in a disguised state. The oxyozone is a good disinfectant. The Thymol soap is a good substitute for carbolic acid soap, and is more pleasant to use.

RIGOLLOT & CO.—London.—Mustard Leaves (sinapism). First degree of Merit.

Report—A very convenient way of applying a sinapism; the quality of the article is excellent.

ROLLS & SONS, James—London.—White Oiled Silk. First degree of Merit.

Report—A very good specimen, and the only exhibit of the kind.

SMITH & CO., T. & H.—London & Edinburgh.—Salts of Morphia and other Opium products; Strychnine, its Salts and other Alkaloids. First degree of Merit Special.

Report—This is the best exhibit of opium and its preparations in the Exhibition. The other preparations are likewise good, but no information was obtainable as regards price. The strychnine and its preparations are very fine. No quotation of price given.

SMITH & CO., T. & H.—London & Edinburgh.—Swiss Condensed Milk, Cacao-lactine, Choco-lactine, Condensed Café-au-lait.

First degree of Merit.

Report—Very good preparations.

WHIFFEN, Thomas—London.—Quinine and its preparations, Strychnine and its Salts, Brucine, Salicine, &c. First degree of Merit Special.

Report—These preparations all stand the "P.B." test, and constitute one of the best exhibits of cinchona barks and their alkaloids in the Exhibition. The quinetum and its preparations deserve special notice, as these are the alkaloids of the red bark, which came into notoriety on account of their wonderful effects on dipsomaniacs. The exhibit of strychnine and its preparations is excellent, and being coloured pink can at once be distinguished from oxalic acid and sulphate of magnesia. Good preparations of brucine and of salicine and a fine collection of barks are also exhibited.

INDIA.

GOVERNMENT OF MADRAS—Madras.—(1) Cinchona Barks; (2) Jalap, in slices and in powder; Taraxacum root.

First degree of Merit.

Report—(1) A fine variety; (2) fine specimens.

NETHERLANDS.

GOULMY, P. V.—s'Hertogenbosch.—Extract of Meat.

First degree of Merit.

Report—This is a watery extract of meat, and evidently not made for keeping, as it was covered over with a fungoid growth within five days of being opened. For immediate use it would prove a useful article, and as such is a good sample.

NEW CALEDONIA.

MALAN, Charles—Dombéa.—Cajeput Oil, or Melaleucine.

First degree of Merit.

Report—This is a very fine sample of oil.

NEW SOUTH WALES.

GUYATT, George—Sydney.—Surgical Instruments and Appliances.

First degree of Merit.

Report—Best exhibit of colonial manufacture.

LACHAUME, Jules Joseph—Sydney.—Exhibit of Mechanical Dentistry.
Non-competitive.

PATE, Mrs. G.—Sydney.—Surgical Corsets, Trusses and Belts.
Highly Commended.

SPENCER, J.—Sydney.—Specimens of Artificial Teeth, set in gold, vulcanite, and celluloid. First degree of Merit.

Report—Mechanical skill good.

UNITED STATES.

AMERICAN ABSORPTIVE PAD CO.—Philadelphia.—Medicinal Pads for Lungs and Liver. Honourable Mention.

Report—Well got up ; stated to have been used with great efficacy. Very portable, and easily applied.

BROWN, Frederick—Philadelphia.—Spirit of Ginger.
First degree of Merit.

Report—A very fine exhibit.

JUSTI, H. D.—Philadelphia.—Case of false Teeth, set in artificial gums.
Honourable Mention.

SCHIEFFELIN & CO.—New York City.—(1) Soluble Coated Pills and Granules ; (2) Essential Oils, Fruit Juices, Elixirs, and Insect Powders ; (3) Fluid Extracts. First degree of Merit.

Report—(1) This is a type of condensed pill, very soluble, and elegantly finished ; the ingredients are active. (2) Very good samples. (3) Very fine preparations.

WARNER & CO., William R.—Philadelphia.—(1) Soluble Sugar-coated Pills ; (2) Ingluvin ; (3) Pepsine Wine.
First degree of Merit Special.

Report—(1) This is a very fine pill, of which the sugar-coating is dissolved in ten minutes in cold water (60° Fahrenheit), after which the active ingredients are gradually taken up by the water, leaving no debris behind ; (2) This is a great improvement on the old pepsine preparation; (3) A good sample.

WHITE, Samuel S.—Philadelphia.—Dental Instruments, Artificial Teeth, and Operating Chair. First degree of Merit Special.

Report—The operating chair is a very good and strong apparatus, well adapted for effectively carrying out the object for which it is invented. The manner in which it can be readily raised by hydraulic pressure is of great merit. The burring engine with appliances is neat, simple, and effective ; the right angle adjustment is an improvement upon others. The corundum wheel-lathes are neat and compact. The especial

advantage of these is the ease with which they are worked by means of a band of elastic steel attached to the treadle, and working on a crank. The operator's adjustable stool admits of being elevated or lowered, or swung from operator, and is a useful adjunct to the operating-room. A good and varied assortment of flat gum and vulcanite teeth, also of celluloid, carefully made to closely imitate nature. The way in which the natural varieties and peculiarities of the cavity of the mouth have been imitated by art deserves great praise. The nickel-plated forceps are carefully finished and useful instruments, being especially valuable in a hot climate or a saline atmosphere, as they save much time and trouble by the avoidance of rust. The abscess syringe, with appliances, is very useful for the accurate and intelligent treatment of alveolar or antrum abscess, the quantity of injection used being indicated on a graduated cylinder. The stopping instruments, with gilt handles, are well cut, and a good variety of useful shapes is exhibited. An experienced dentist says, with regard to the gold stoppings, "E. G. and L. Kearsing's prepared gold-foil blocks, manufactured for S. S. White, No. 60, size 'C,' made a good, compact, and hard-surfaced stopping. They are altogether a very useful variety of gold stoppings, and if prepared as carefully in general, as in the samples, they cannot fail to afford great satisfaction to the operator in bringing the case to a good result, where care is taken to select a suitable preparation for the individual case.—Pack's Crystal gold pellets, soft: Used the soft for body, and capped with the crystal gold pellets for grinding surface; worked kindly and well.—Quarter Century foil, No. 5: Could pack it with decision, and send the folds well home. Made a good compact stopping, and when heated, formed a capital working adhesive stopping, solid and good.—Globe gold-foil, No. 60: Makes a good hard dense stopping; well adapted for molar work.—Globe gold-foil, No. 6: Non-adhesive, works very softly, like Pack's soft pellets, and is like kid leather to the sensation. The whole of this exhibitor's goods are excellent."

WYETH & BROTHER, J. (now Lanman & Kemp)—Philadelphia.—Fluid Extracts, compressed Powders and Tablets.

First degree of Merit.

Report—These powders and tablets are compressed by hydraulic pressure, by which means the patient is enabled to swallow a large dose in a small compass, and the ingredients are as represented. The extracts are also good.

VICTORIA.

BOSISTO, M.P., Joseph—Melbourne.—Products of the Eucalyptus family.

First degree of Merit.

Report—A very good exhibit of the various products of the eucalyptus family.

CLASSES 279–283.

Hardware, Edge Tools, Cutlery and Metallic Products.

JUDGES.

BLACKET, OWEN, Engineer, Bathurst-street	Sydney.
CRAIG, WILLIAM	Sydney.
GANNON, FREDERICK, Temple Court	Sydney.
JAUBERT, LÉON	Sydney.
JONES, J. TREVOR, C.E., City Engineer	Sydney.
MANN, GOTHER K., Captain (Chairman)	Sydney.
MANSON, DONALD	Waltham, Mass, U.S.A.
ROBERTS, C. F., Colonel, R.A.	Sydney.

The following gentlemen acted as Judges of Horse-shoes.

COX, HON. G. H.	Mudgee.
LAMB, J. DE V.	Sydney.
WANT, G. F. (Chairman)	Sydney.

CLASSES 279–283.—Hardware, Edge Tools, Cutlery, and Metallic Products.

The Judges appointed to inspect and report upon the exhibits in these classes are anxious to draw prominent attention to the great extent, variety, and value of these exhibits, comprising as they do tools, implements, locks, fittings, ornamental castings, and designs of great utility.

All the articles under this group of classes examined by the Judges embrace in various degrees of excellence the elements of merit enumerated and desired by the Commission, viz., originality, invention, utility, quality, and skill.

The value of the information obtainable from this Section of the International Exhibition, and the instruction it affords to the people of the Colony, cannot be over-estimated; and the Judges therefore confidently recommend for adequate awards those exhibits which have been enumerated in this Report (after close examination) deserving of notice, either for the entire exhibit, or for any particular portion of it.

GROUP—Hardware, Edge Tools, Cutlery, and Metallic Products.

CLASSES 279–283.

AUSTRIA.

EISENWAAREN-INDUSTRIE & HANDELS-ACTIENGESELLSCHAFT MORAVIA—Olmütz.—Nails, Tacks, &c.
Highly Commended.

WEISS & SOHN, Johann—Vienna.—Tools and Implements for Printers.
Commended.

WERTHEIM & CO., F.—Vienna.—Iron Safes.
First degree of Merit.

Report—Secure, elegant, and commodious.

BELGIUM.

ALLEBOS, E.—Cureghem, near Brussels.—Iron Safes.
Honourable Mention.

ANCION ET CIE., J.—Liège.—Wire, wrought, and cut Nails, Tacks, &c.
Highly Commended.

DAWANS ET ORBAN—Liège.—Wire and Nails.
Commended.

FIX, Adolphe—Molenbeek (St. Jean).—Iron and Brass Wire Nails, Machine-made Rivets.
First degree of Merit.

Report—Great variety and excellent manufacture.

HOORICKX—Brussels.—Iron Safes.
Honourable Mention.

JAMAR ET CIE.—Liège.—Wrought Nails.
Commended.

NAGUELS, Jules—Charleroi.—Nails, Chains, &c.
Honourable Mention.

SOCIÉTÉ ANONYME DES CORDERIES ET CLOUTERIES DU CHÂTELET.—Assorted Nails, &c. Highly Commended.

SOCIÉTÉ ANONYME DES CLOUTERIES MÉCANIQUES DE FONTAINE L'ÉVÊQUE.—Tacks, Nails, &c. Highly Commended.

FRANCE.

CHAPPÉE, Armand—Le Mans (Sarthe).—Water and Gas Pipes, &c.
First degree of Merit.

Report—Excellent manufacture.

DURENNE, A.—Paris.—Ornamental Castings.
First degree of Merit Special.

Report—Designs and casting excellent. The cast-iron works of art (bronzed) deserve special recognition, as enabling persons of moderate means to possess themselves of the most elegant figures, formerly confined to bronze.

GALLAIS, A. C.—Paris.—Nails.
First degree of Merit.

Report—Great variety and very good quality of material.

MESUREUR ET MONDUIT FILS—Paris.—Reduced Model, in hammered copper, of the Lion of Belfort.
Honourable Mention.

Report—Commended as a work of art.

PIAULT, Jules—Paris.—Fine Cutlery.
First degree of Merit.

Report—Quality of material and manufacture are excellent.

GERMANY.

ARNDT & MARCUS—Berlin.—Ornamental Bronze Castings.
Commended.

BALDAUF, G.—Stuttgart.—Carpenters', Joiners', and Glaziers' Tools.
Honourable Mention.

CURDTS, E. H. Otto—Solingen in Rh : Preussen.—Cutlery. Commended.

DREHER, Ignatius.—Gerresheim bei Düsseldorf.—Iron Wire, and Wire Nails. Commended.

GEERKEN, Stephan—Bremen.—Iron Safe. First degree of Merit.

Report—This is a very strong, admirably finished safe, of first-class workmanship.

KOCH & BEIN—Berlin.—Sign-boards with Metal Letters. Honourable Mention.

LAUCHHAMMER FOUNDRY—Lauchhammer.—Artistic Castings and Decorative Work. Highly Commended.

VORSTER, R. & H.—Hagen in Rh: Preussen.—Axes, Cutlery, &c. Highly Commended.

WESTPHÄLISCHE UNION-ACTIENGESELLSCHAFT FÜR BERGBAU, EISEN UND DRAHT-INDUSTRIE—Hamm a./d. Lippe, in Westphalen.—Wire Nails, Screws, &c. Highly Commended.

WÜST & CO., Wilhelm—Laupheim in Württemberg.—Carpenters' Tools. Honourable Mention.

GREAT BRITAIN AND IRELAND.

ANGLO-AMERICAN TIN-STAMPING CO. (Limited)—Stourport.—Tinned and Enamelled Stamped-ware. First degree of Merit Special.

Report—Fine exhibit, of excellent manufacture.

ASKHAM BROS. & CO.—Sheffield.—Collection of Miners' Tools, and Steel. Highly Commended.

Report—For general exhibit.

ASTON & CO., J. Wood—Stourbridge.—Ship-chandlery. Highly Commended.

BALDWIN, SON & CO.—Stourport.—Tinned and Enamelled Hollow-ware, Butt-Hinges, Ornamental Castings, &c. Highly Commended.

Report—For general exhibit.

BARROWS & SONS, William.—Tipton, Staffordshire.—Horse-shoes. Highly Commended.

Report—Good workmanship and material.

BELL, Henry—Birmingham.—Shoe-tips, Nails, Eyelets, and Shoemakers' Tools. Commended.

BLEWS & SONS, William—London and Birmingham.—Wrought Iron Gas- and Water-pipes. Highly Commended.

BLYDE, John—Sheffield.—Cutlery. Highly Commended.

BOURNE & CO., Joseph—Sheffield.—Cutlery.
Highly Commended.

BROOKER, DORE & CO.—London.—Screws.
Highly Commended.

Report—A very complete exhibit of galvanized and bright screws.

BURGON & BALL—Sheffield.—Sheep-shears.
First degree of Merit.

CHATWOOD, Samuel—London.—Iron Safes.
First degree of Merit Special.

Report—Fire-proof, 1st; thief-proof, 1st; finish, 1st; price, 1st. These safes are excellent in every respect. [As this is the first exhibit of safes in connection with which a figured analysis is given, it is desirable here to state that the figures as given represent the values of the exhibit—thus, in this case: 1st, meaning that the fire-proof qualities of the exhibit are of the first-class, and with regard to price, 4th class would represent the exhibit as exceedingly dear in comparison with its utility otherwise.]

CLARK & CO., T. & C.—Wolverhampton.—Enamelled and Tinned Cast Iron and Wrought Iron Ware, &c., Patent Hinges and Pulley-blocks. First degree of Merit Special.

Report—This firm's exhibit of hollow-ware is well worthy of special notice.

CLARK & CO., T. & C.—Wolverhampton.—Patent Hinges and Pulley-blocks. First degree of Merit.

CONEY & CO.—Birmingham.—Corkscrews, Can-openers, &c.
First degree of Merit.

COOKE BROS.—Birmingham.—Brass Hardware.
First degree of Merit.

Report—An attractive exhibit of safety-pins, curtain-hooks and rings, fancy chair nails, &c.; well made and highly finished.

COPE, Benjamin—Wallsall.—Saddler's Hardware.
First degree of Merit.

Report—Commended for variety and excellence of manufacture.

CROSBEE & SONS—Birmingham.—Harness Fittings.
Commended.

DODGE, Joseph & Robert (Limited).—Sheffield.—Files, Saws, Steel Edge Tools, Cutlery, &c. First degree of Merit.

Report—For admirable collection.

EVANS & WORMULL—London.—Table Cutlery, Pocket Knives, Shears, Scissors, &c. First degree of Merit.

Report—For invention and excellence of manufacture.

GILPIN, Senr., & CO., William—Cannock, Stafford.—Augers and Bits.
First degree of Merit Special.

GILPIN Senr., & CO., William—Cannock, Stafford.—Edge Tools, Hammers, Vices, &c. First degree of Merit Special.

Report—The goods shown by this Company were found to be of good quality and excellent manufacture.

GREGORY & BRAMALL—Sheffield.—Tools.
Highly Commended.

HARCOURT & SONS, R. & C.—Birmingham.—Ornamental Fittings, Handles and Plates. First degree of Merit.
Report—For originality and excellence of workmanship.

HARDY PATENT PICK CO.,—Sheffield.—Miners' Picks and Handles.
First degree of Merit
Report—For invention.

HARLEY & CO., Geo.—Wolverhampton.—Locks.
Highly Commended.
Report—For general exhibit.

HARPER & CO., John—Willenhall, South Staffordshire.—Collection of General Builders' Cabinet Ironmongery. Commended.

HILL & SMITH—London and Dudley.—Cast and Wrought-iron Plates for Targets and Sections. Honourable Mention.
Report—The wrought-iron targets are so made as to be easily connected if greater width is required, and the centre-plates can be removed and renewed at pleasure.

JOWITT & SONS, Thomas—Sheffield.—Steel and Files.
Highly Commended.

KENRICK & SONS, Archibald—West Bromwich, Staffordshire.—Tinned and Enamelled Hollow-ware and Ornamental Castings.
Highly Commended.

LEE & GRIFFITHS—Birmingham.—Door Locks and Door Furniture.
Commended.

MACBRAIR BROS. & CO.—Sheffield.—Saws and Blacksmiths' Tools.
Commended.

MADELEY, Frederick—Birmingham.—Cutlery and General Hardware.
Commended.
Report—As a collection.

MARPLES & SONS, William—Sheffield.—Tools.
First degree of Merit.
Report—For general excellence of manufacture.

MAYER & MELTZER—London.—Pocket and Table Cutlery.
First degree of Merit.

MILNER'S SAFE CO., (Limited)—Liverpool.—Iron Safes.
First degree of Merit.
Report—Fire-proof, 1st; thief-proof, 2nd; finish, 1st; price, 1st.

NETTLEFOLDS—Birmingham.—Screws, Screw-hooks, Nails, Bolts, and Rivets. First degree of Merit Special.
Report—Specially commended for variety and assortment of screws.

NEWBOULD & CO., Samuel (Limited)—Sheffield.—Steel, Saws, Files, Edge Tools. Highly Commended.
Report—For general exhibit

CLASSES 279-283.—*Hardware, Edge Tools, Cutlery, &c.*

OSBORN & CO., Samuel—London and Sheffield.—Steels, Castings and Forgings, Files, Saws, Hammers, &c. First degree of Merit.
Report—A fine exhibit, the assortment of files deserving special notice.

PARKES, John Israel—Smethwick, near Birmingham.—Collection of Hardware and Hollow-ware. Commended.

PARKES, John Israel—Smethwick, near Birmingham.—Cut Nails, Shoe-tips. Highly Commended.
Report—A good exhibit of useful, well made articles.

PARR & PHILLIPS—Wolverhampton.—Patent Lead-Head Nails. Commended.

PATENT NUT AND BOLT CO. (Limited)—Birmingham.—Bolts, Nuts, Rivets, Coach Screws, Washers, &c. First degree of Merit.
Report—These goods are of excellent manufacture, and well adapted for the purposes intended.

PEYTON & PEYTON TUBE CO. (Limited)—Smethwick, near Birmingham.—Iron Tubes, Fittings for Gas and Water, &c. Commended.

PHOSPHOR-BRONZE CO.—London.—Table of Tests made with Phosphor-bronze. Honourable Mention.

PRESTON, Edward—Birmingham.—Joiners' Tools, Planes, Tin-opening Knives. Highly Commended.
Report—For general exhibit.

PRICE, George—Wolverhampton.—Iron Safes. Highly Commended.
Report—Fire-proof, 1st; thief-proof, 2nd; finish, 2nd; price, 2nd.

READ, Jefferson—Birmingham.—Cutlery, Silver-plated by the "Arcanum" process. Highly Commended.

REYNOLDS & SONS, John—Birmingham.—Cut Nails. Highly Commended.
Report—A small but good exhibit of nails, from tacks to the length of 8 inches.

RUSSELL & CO., John (Limited)—London.—Wrought Iron Tubes and Fittings, Gas-fitters' Tools. First degree of Merit.

SHELDON & CO., Edward—Coseley, near Bilston, Staffordshire.—Tinned and Enamelled Cast Iron Hollow-ware. Commended.
Report—For exhibit.

SICKER SAFE AND STRONG ROOM CO. (Limited)—Soho, near Birmingham.—Iron Safes. Highly Commended.
Report—Fire-proof, 1st; thief-proof, 3rd; finish, 2nd; price, 2nd.

SMITH & SONS, Thos.—Birmingham.—Tools for Miners, Stonemasons, Engineers, &c., Augers, Hammers, Coach and Railway Wrenches and Bicycle Fittings. Highly Commended.
Report—For general collection.

CLASSES 279-283.—*Hardware, Edge Tools, Cutlery, &c.*

SPENCER & CO., Walter—Rotherham.—Cast Steel Files—Hand-cut, and Cast Steel. Highly Commended.
Report—For general exhibit.

STEVENSON, MAWHOOD, & CO.—Attercliffe, Sheffield.—Steel Files, Edge Tools. Highly Commended.

TANN, John—London.—Iron Safes. Highly Commended.
Report—Fire-proof, 1st; thief-proof, 2nd; finish, 2nd; price, 2nd.

TAYLOR BROTHERS—Sheffield.—Saws, Steel, Files, Edge Tools, Machine Irons, Hatchets, Chaff and Sugar-cane Knives.
First degree of Merit Special.
Report—All these goods of excellent quality, but specially commended for invention and improvement in saws.

TIMMINS & SONS, Richard—Birmingham.—Hammers, Pincers, Augers, Quoits, and Shoemakers', Farriers', and other Tools.
First degree of Merit.

TURNER, NAYLOR & MARPLES—Sheffield.—Edge Tools, Saws, and Hammers. Highly Commended.

TURTON BROS. & MATTHEWS—Sheffield.—Cast, Shear, Mining, and other Steels,—Files, Springs, Hammers, Saws, Engineers' Tools, &c.
First degree of Merit.
Report—For general collection.

TYLOR & SONS, J.—London.—Plumbers' and Gasfitters' Hardware.
Highly Commended.

UDAL & CO., William—Birmingham.—Collective Exhibit of Brass-ware. Highly Commended.
Report—Very creditable exhibit.

UDAL & CO., William—Birmingham.—Collective Exhibit of Hard-ware. First degree of Merit.
Report—Commended as a collective exhibit.

VAUGHAN, H. & T.—Willenhall, South Staffordshire.—Door-locks, &c. Commended.
Report—For general exhibit.

WALKER, J.—Birmingham.—Door-locks (Patent handles), and Ornamental Fittings. First degree of Merit.
Report—For originality of door-handle fixtures.]

WHITFIELD & CO., Frederic—Birmingham.—Iron Safes.
Commended.
Report—Fire-proof, 3rd; thief-proof, 3rd; finish, 4th; price, 3rd.

WOSTENHOLM & SON, George (Limited)—Sheffield.—Knives, Table Cutlery, and Razors. First degree of Merit Special.
Report—Specially commended for excellence of manufacture.

YATES & CO., John—Birmingham.—Axes, Picks, Spades, Shovels, &c.
Highly Commended.
Report—For general exhibit.

JAPAN.

GOVERNMENT OF JAPAN—Tokio.—Firemen's Hooks and Knives.
Honourable Mention.

HIRO-YEMON-FUKUCHI—Mino.—Knives, Scissors, &c.
Honourable Mention.

OTA MANKITCHI—Tokio—Bronze Castings and Flower Vases.
First degree of Merit Special.

Report—Fine collection of bronzes.

SAHEI SHIMA—Osaka.—Copper Castings, Flower Vases, &c.
First degree of Merit Special.

SHOBEI OSAWA—Osaka.—Iron and Copper Castings, Flower Vases, &c.
First degree of Merit Special.

SHIN-SHI-CHI YOSHIDA—Osaka.—Knives.
Honourable Mention.

TAZAYEMON OKAMOTO—Mino.—Ornamental Bronze Castings, in imitation of old Vases. First degree of Merit Special.

Report—Splendid collection of castings.

NEW SOUTH WALES.

AHEARN, W.—Kiama.—Horse-shoes.
Commended.

Report—A good collection, by various makers.

BEILER, P. H.—Sydney.—Iron Safe.
Commended.

Report—Fire-proof, 3rd ; thief-proof, 3rd ; finish, 1st ; price, 4th.

CRUMP, J.—Sydney.—Brass Castings.
First degree of Merit.

Report—For colonial manufacture.

DADD, E.—Sydney.—Horse-shoes, non-concussive.
First degree of Merit Special.

Report—Fine exhibit of shoes, of excellent workmanship and finish, showing great care and judgment in the formation. This collection includes shoes for veterinary purposes.

DEERY, James—Sydney.—Horse-shoes.
Highly Commended.

Report—Good collection for draught purposes.

FOY, W.—Sydney.—Metal Hollow-ware and Hard-ware.
Highly Commended.

Report—For colonial manufacture.

HARPER, W.—Tamworth.—Farriers' Tools.

First degree of Merit.

Report—Remarkably good exhibit of farriers' tools, well finished, and material excellent.

HAZELTINE, George—Mudgee.—Collection of Horse-shoes.

First degree of Merit.

Report—These shoes are well shaped and finished, and the materials and workmanship good.

JULEFF, BROS.—Redfern.—Ornamental Iron-work, Balcony Railings.

Highly Commended.

Report—For colonial manufacture.

M'EACHERN, J. A.—Wollongong.—Horse-shoes.

Honourable Mention.

Report—A large and varied assortment.

MARSHALL & CO., A. A. — Sydney. — Plumbers', Gasfitters', and Ships' Hard-ware, Hollow-ware, and Ornamental Castings.

First degree of Merit.

Report—For colonial manufacture.

MARSHALL & CO., A. A.—Sydney.—The "Marshall" Patent Window-fastener. First degree of Merit Special.

Report—It is claimed for this exhibit that it fastens the window at any height, and can be used with or without cords and weights. It is a safe and effectual lock, and prevents all rattling. The wedge is the principle of its construction.

MILHAM, H. W.—Sydney.—Plasterers' Tools, Rules, &c.

First degree of Merit.

Report—For colonial manufacture.

MITCHELL, W.—Richmond.—Horse-shoes.

First degree of Merit.

Report—Material and workmanship good, well finished, and of good variety.

MODINI, G. B.—Sydney.—Cutlery.

First degree of Merit Special.

Report—For colonial work.

PATTERSON, J. J.—Sydney.—Cast-iron Railings.

Commended.

PARTRIDGE, J.—Sydney.—Hollow-ware.

Highly Commended.

RICHARD, F. C. W.—Sydney.—Ornamental Metal-ware.

First degree of Merit.

Report—For colonial manufacture.

TALL, George—Sydney.—Patent Strong Door Locks, and Plasterers' Tools. First degree of Merit.

Report—For invention.

WALKER, J. A.—Wollongong.—Collective Exhibit of Horse-shoes.
Honourable Mention.

Report—Very roughly finished.

NEW ZEALAND.

BIRLEY, Peter—Auckland.—Wrought Iron Work.
First degree of Merit Special.

Report—A very fine specimen of wrought iron work, executed by hand, showing a fuschia and foliage, natural size, entwined on twisted vine.

KEMPTHORNE, PROSSER, & CO., New Zealand Drug Company (Limited).—Knife Polish. Commended.

Report—For colonial manufacture.

QUEENSLAND.

HIPWOOD BROS.—Brisbane.—Brass Castings for Water-pipes.
Commended.

Report—For colonial manufacture.

SMELLIE & CO., R. R.—Brisbane.—Ornamental Castings, &c.
Highly Commended.

Report—For colonial manufacture.

SOUTH AUSTRALIA.

SIMPSON & SON, A.—Adelaide.—Iron Safes.
Commended.

Report—Fire-proof, 2nd; thief-proof, 3rd; finish, 3rd; price, 3rd.

STRAITS SETTLEMENTS.

GOVERNMENT, STATE OF PERAK.—Tin Ornaments.
Honourable Mention.

WESTERHOUT, J. E.—Malacca.—Wood Chopper and Hatchet.
Honourable Mention.

TASMANIA.

HYATT & SON, Joseph—Hobart Town.—Brass Cupboard and Desk Locks. Commended.

UNITED STATES.

ABENDROTH BROS.—New York City.—Plumbers' Goods, &c., Ornamental and other Castings. First degree of Merit.

Report—The manufacture of the ornamental and other castings of this firm is commended for excellence.

AMES & SON, Oliver—North Easton, Mass.—Shovels and Spades. First degree of Merit Special.

Report—These goods are deserving of special notice for excellence of manufacture and quality of material used.

BOYNTON, E. M.—Newark, New Jersey.—Lightning Cross-cut Saws (assorted). Patent handles. First degree of Merit.

Report—For invention and excellence of manufacture.

CHENEY, Henry—Little Falls, New York.—Steel Hammers, Sledges. Commended.

Report—For exhibit.

COLLINS & CO.—Hartford, Conn.—Axes, Hatchets, Joiners' Knives, various styles of Edged Tools. First degree of Merit Special.

Report—Highly commended for excellence of manufacture and quality of materials.

COOK & SONS, B.—Winstead, Conn.—Carriage and Buggy Axles. Highly Commended.

Report—For general exhibit.

DISSTON & SONS, Henry—Philadelphia.—Circular and other Saws. First degree of Merit Special.

Report—Specially commended for utility and invention.

DOUGLAS AXE MANUFACTURING CO.—Boston, Mass.—Hatchets and Axes. First degree of Merit.

Report—For excellence of manufacture.

DOUGLAS MANUFACTURING CO.—New Britain, Conn.—Mechanics' Tools (assorted). First degree of Merit.

Report—For utility and excellence of manufacture.

DURRIE & CO., Horace—New York City.—Hoes, Weeders, Rakes, Sluice Forks, Manure and Spading Forks. Highly Commended.

Report—For general exhibit.

FISCHER, J. S.—Philadelphia.—Razor-Strops. Honourable Mention.

Report—Very novel, light, cheap razor and knife strops.

GLOBE NAIL CO.—Boston, Mass.—Machine-made Horse-Shoe Nails.
First degree of Merit.
Report—For excellence of material and manufacture.

GRAHAM & HAINES—New York City.—Axes, Hatchets, Scythes, Wrenches, Hand-saws, Picks, Mattocks, and Hoes.
Highly Commended.
Report—For general exhibit.

HERRING & CO., S.C.—New York City.—Iron Safes.
Highly Commended.
Report—Fire-proof, 2nd; thief-proof, 2nd; finish, 1st; price, 4th.

HOE & CO., R.—New York City.—One Circular Saw, inserted chisel-tooth (patent). First degree of Merit.
Report—This saw is specially commended for the patent of the inserted chisel tooth.

HOOPES & TOWNSEND—Philadelphia.—Nuts, Bolts, Boiler and Bridge Rivets. Highly Commended.
Report—For general exhibit.

IVES & CO.—New Haven, Conn.—Augurs, Bits, Planes, Rules and Squares. First degree of Merit.
Report—For invention and general exhibit.

IVES & MILLER—New Haven, Conn.—Common and Concord Axles, Rubber-cushioned Axles. First degree of Merit.
Report—For invention and excellence of manufacture.

LANE, GALE & CO.—New York City.—Axes and Squares.
Highly Commended.
Report—For general exhibit.

MAGEE, Nelson—New York City.—Harness-making Machinery.
First degree of Merit.

MILLER LOCK CO., D. K.—Philadelphia.—Self-locking Padlocks and Combinations. Highly Commended.
Report—For general exhibit.

MORRIS, WHEELER & CO.—Philadelphia.—Collection of Nails, Spikes, and Drabs. Honourable Mention.

MYERS & ERWIEN—Philadelphia.—Hay, Sluice, Spading, and Manure Forks; twelve-pronged Fork. First degree of Merit.
Report—For excellence of manufacture.

OSBORNE & CO., C. T.—Newark, New Jersey.—Case of Harness-makers' Tools. First degree of Merit.
Report—Fine collection of Harness-makers' tools.

CLASSES 279-283.—*Hardware, Edge Tools, Cutlery, &c.*

RHODE ISLAND HORSE-SHOE CO.—Rhode Island.—Horse-shoes. Commended.
Report—Large collections, good material, but wanting in finish.

ROWLANDS & SONS, T.—Philadelphia.—"Empire" Brand of Cast-Steel, Back Strap Shovels and Spades. Highly Commended.
Report—For general exhibit.

RUSSELL & ERWIN MANUFACTURING CO.—New Britain, Conn.—Locks, Latches, Hinges, Screws, and Ornamental Castings. First degree of Merit Special.
Report—The goods exhibited by this Company embrace every variety of mortice and ornamental locks and fittings, and are specially commended for invention, utility, and excellence of manufacture. The Judges are of opinion that this Company showed the best locks in the Exhibition.

SHEBLE & FISHER—Philadelphia.—Cast Steel Rakes, Sluice and Manure Forks, Spading Tools. Highly Commended.
Report—For general exhibit.

SHELDON & CO.—Auburn, N.Y.—Anchor Brand of Carriage Axles. Highly Commended.
Report—For quality.

WEED & BECKER MANUFACTURING CO.—Cohoes, N.Y.—Axes, Hatchets, and Edge Tools.
Report—For general exhibit.

YERKES & PLUMB—Philadelphia.—Hammers, Axes, Hatchets, and Sledges. First degree of Merit.
Report—For general exhibit.

YALE LOCK MANUFACTURING CO.—Stamford, Conn.—Patent Zale Locks, and Bronze Door-fittings. First degree of Merit.
Report—Well worthy of notice.

VICTORIA.

BROWN, Thomas—Melbourne.—Butchers' Window-Fittings. Highly Commended.

BROWN, Thomas—Melbourne.—Horse-shoes. Highly Commended.

CAREY, William—Mansfield.— Collection of Corn-Preventive, Patent Hunting and Steeple-chasing Horse-shoes. Highly Commended.

HILLMAN, Joseph—Ballarat.—Improved Adze-eye Mining Picks. First degree of Merit.
Report—Worthy of notice for excellence of manufacture.

CLASSES 284–290.

Fabrics of Vegetable, Animal, or Mineral Materials.

JUDGES.

BAHSE, MORITZ F. (Chairman)	Dresden, Germany.
BARNET, JAMES, Colonial Architect	Sydney.
BROOMFIELD, JOHN, Captain	Sydney.
SEE, JOHN	Sydney.

Fabrics of Vegetable, Animal, or Mineral Materials.
CLASSES 284–290.

FIJI.

JOHNSTON, Mrs.—Taviuni.—Coir-yarn.
Commended.

NATIVE EXHIBIT—Levuka.—Coir Rope and Yarns.
Commended.

PEATE BROTHERS & MOORE—Undu Point.—Coir-yarn.
Commended.

VICKERY, E.—Sydney.—Coir-rope from Fiji.
Commended.

FRANCE.

GAUCHOT ET FILS—Paris.—Brushware.
Highly Commended.

Report—This is an exhibit of elegant style, good workmanship and quality, at fair prices.

RAVENET, Aîné, L. A.—Paris.—Combs.
Honourable Mention.

Report—These combs of buffalo-horn and vulcanite are of good design and manufacture.

ROQUET, F.—Rouen.—Brushware.
First degree of Merit.

Report—Brushware of every description, excellent manufacture, and fair prices.

GERMANY.

ADLER, Georg—Buchholz in Sachsen.—Wooden Boxes, Writing Desks, &c.
First degree of Merit Special.

Report—This firm exhibits wooden boxes, writing desks of a most excellent description at very low prices, also a collection of pasteboard boxes of elegant style and superior workmanship.

BLANCKE, Emanuel A. R.—Frankfurt a/O.—India-rubber Goods.
Highly Commended.

Report—This exhibit consists of india-rubber plates, sweeping-cloths, &c., of very good quality and fair prices.

DOBLER & GEBRÜDER, Ernst—Berlin.—India-rubber Goods.
First degree of Merit Special.

Report—The various articles made of india-rubber show much originality and excellent workmanship. The prices are exceedingly low.

CLASSES 284–290.—*Fabrics of Vegetable, Animal, or Mineral Materials.*

FLEMMING & CO., Ed.—Schönheide in Sachsen.—Brushware.
First degree of Merit Special.

Report—This exhibit contains brushes of every kind, of excellent quality and very low prices.

GNÜCHTEL & CO., F. A.—Lauter in Sachsen.—Wooden Baskets.
Highly Commended.

Report—A collection of small basketware, exceedingly cheap, and very useful.

HARBURGER GUMMI-KAMM CO.—Harburg am Elbe.—India-rubber Goods. First degree of Merit Special.

Report—An exhibit of great variety of most useful articles of excellent design and workmanship. The combs especially are very cheap.

KNAUTH & CO.—Leipzig.—India-rubber Table-covers and Aprons.
First degree of Merit Special.

Report—These are an imitation of linen damasks of great originality, most useful articles, well got up, and at low prices.

PRUCKNER, Dionys—München.—Brushware.
First degree of Merit Special.

Report—These brushes are of particularly good manufacture, and at very low prices.

ROEGNER, C. H.—Striegau.—Machine-made Brushware.
Highly Commended.

Report—Brushes of good quality and workmanship.

TUCHTFELDT, Ad.—Hamburg.—India-rubber Hose.
First degree of Merit Special.

Report—The hose exhibited is of particularly good quality, and it has been proved, having been used during the currency of the Exhibition. Its reasonable price, added to its usefulness, entitles it to the highest commendation.

VOGES & SOHN, Wilhelm—Graudenz—West-Preussen—Brushware.
First degree of Merit.

Report—This exhibit of most useful articles is of very good quality and finish, at fair prices.

WEGNER, H.—Berlin.—Exhibit of Turnery.
First degree of Merit Special.

Report—This is a collection of very handsome articles, of excellent manufacture and quality, at exceedingly low prices.

GREAT BRITAIN AND IRELAND.

ANDERSON, ABBOTT, & ANDERSON—London.—India-rubber Manufactures. Commended.

Report—For utility, good workmanship, and fair price.

BAILEY & KERR—London.—The "Ashworth" Magnetic-Wire Hair-brushes. Commended.

Report—A well-finished article.

CLASSES 284–290.—*Fabrics of Vegetable, Animal, or Mineral Materials.*

BELFAST ROPEWORK CO. (Limited)—Belfast, Ireland.—Ropes of Manilla and Russian Hemp. First degree of Merit.
Report—Useful ropes, of excellent quality.

BELL, Henry—London.—India-rubber Goods.
First degree of Merit Special.
Report—The goods of this firm for technical purposes of all kinds are excellent in every respect.

BIRNBAUM, Bernard—London.—India-rubber Goods.
Highly Commended.
Report—For the good manufacture of useful articles for technical purposes.

BOWMAN, Charles—London.—Plates and Brushes for Stencilling, &c.
Commended.
Report—Useful, and of very good make.

CROWDEN & GARROD—London.—Brushware.
First degree of Merit Special.
Report—These goods are of excellent quality, good workmanship, and of fair value.

HOGG, SELBY, & CO.—London.—Matting and Yarns.
Highly Commended.
Report—Of very good quality and workmanship.

KENT & CO., G. B.—London.—Brushes of every description.
First degree of Merit Special.
Report—This firm exhibits some most elegant goods, excellent in every respect, and at very reasonable prices.

LAYCOCK & SONS, Samuel—Sheffield.—Brushmakers' Materials.
First degree of Merit Special.
Report—An exhibit of very useful articles in brushmakers' materials, excelling in hair-seating, of particularly good colouring and design.

LIVERPOOL SPUN OAKUM CO.—Liverpool.—Patent Spun and Machine-made Unspun Oakum. Highly Commended.
Report—Of good quality and fair price.

MACINTOSH & CO., Charles—London.—India-rubber Goods of every description. Highly Commended.
Report—The goods of this firm are of very fair value and good workmanship, besides being fit for the purposes intended.

MACLELLAN & CO., George—Glasgow.—India-rubber Goods.
First degree of Merit Special.
Report—Commended for excellence in every respect.

PAGE & SONS, S. D.—Norwich.—Brushes of all kinds.
First degree of Merit.
Report—This firm exhibited brushes of very good quality, and at very reasonable prices.

STAR BRUSH CO. (Limited)—London.—Machine-made Brushes.
Highly Commended.

Report—There is much originality and good workmanship shown in the manufacture of these goods, combined with moderate cost. It will take time to test the improvements made in this style of brush-making.

TOPHAM & CO., Charles—London.—Boiler-Tube Brushes.
Highly Commended.

Report—Of very good quality and workmanship.

TUTILL, G.—London.—Regalia and Banners for Masonic, Oddfellow, and other Societies. First degree of Merit Special.

Report—These goods are of superior make, and show great taste in their manufacture, the materials used being chiefly the exhibitor's own make.

UDAL & CO., William — Birmingham.— "Hinde's" Patent Wire Brushes. Highly Commended.

Report—Well-made and useful articles, of fair value.

JAPAN.

ASAHI HATSU—Tokio.—Lacquered Ware.
Commended.

Report—The small wooden boxes of the well-known Japanese style, with paintings in gold, &c., are of good workmanship.

SANO TOKUJIRO—Osaka.—Basket-ware.
Commended.

Report—The small baskets of bark are of good workmanship, but the lining is wanting in accuracy, and they are not mounted well enough for fine basketwork.

NEW SOUTH WALES.

ANDERSON, G.—Sydney.—Letters in Wood.
Commended.

Report—Colonial-make, well designed, and of excellent workmanship.

FORSYTH & CO.—Sydney.—Rope and Cordage.
First degree of Merit Special.

Report—Superior goods, of excellent quality and make.

GARDINER & COOL—Sydney.—India-rubber Stamps.
First degree of Merit Special.

Report—The stamps of this firm are of excellent workmanship, very useful, and of fair prices, showing great progress in this class of manufacture.

GREGAN & CO.—Sydney.—India-rubber Stamps.
Highly Commended.

Report—For good workmanship, and reasonable prices.

CLASSES 284–290.—*Fabrics of Vegetable, Animal, or Mineral Materials.*

SYDNEY BROOM-MANUFACTURING CO. — Sydney. — Millet Brooms. First degree of Merit Special.

Report—This Company has a very fine display of brooms, of excellent workmanship and very good quality.

TAYLOR, Samuel—Sydney.—Brushware and Brush Materials. First degree of Merit Special.

Report—An excellent exhibit of brushware, of great variety, commended for quality and workmanship.

ZOLLNER, Simon—Sydney.—Bellows. First degree of Merit.

Report—An excellent exhibit of household and blacksmiths' bellows, strongly made and well finished.

ZOLLNER, Simon—Sydney.—Galvanized Iron-work. Highly Commended.

Report—An assortment of tubs and buckets, of good material, substantially made.

NEW ZEALAND.

AUCKLAND STEAM ROPE FACTORY—Ponsonby, Auckland.—Manilla Ropes, Hawsers, and Dressed Flax. First degree of Merit.

Report—This collection of ropes is of very good quality and workmanship, and the prices fair.

BEVAN, Junr., Thomas—Waikawa, Foxton.—Ropes, Brushes, &c. Highly Commended.

Report—Very good quality.

FFROST, John W.—Wellington.—Rubber Stamps. Commended.

Report—These stamps are well made, of fair value, and fit for the purposes intended.

HARBUTT, Thomas J.—Auckland.—Brushware. Commended.

Report—Of fair quality and make.

QUEENSLAND.

FORSYTH & CO., A.—Brisbane.—Ropes and Cordage. Highly Commended.

Report—Very useful ropes, of good quality and fair prices.

SOUTH AUSTRALIA.

TANNERT, O. E.—Adelaide.—Basket-ware. First degree of Merit.

Report—An exhibit of chairs and baskets of very good quality, showing excellent workmanship.

CLASSES 284–290.—*Fabrics of Vegetable, Animal, or Mineral Materials.*

STRAITS SETTLEMENTS.

STRAITS SETTLEMENTS GOVERNMENT—Singapore.—Prison-made Cane-work. Highly Commended.

Report—Lounge, arm, and fancy chairs, made from cane, showing very good workmanship.

UNITED STATES.

SILVER LAKE CO.—Boston, Mass.—Cotton and Worsted Cords of all kinds. First degree of Merit.

Report—An excellent exhibit of different kinds of cordage, of superior quality.

WASHBURN & MOEN MANUFACTURING CO.—Worcester, Mass.—Iron Wire (barbed). Highly Commended.

Report—Exceedingly well made, and suitable for the purposes intended.

WATERBURY & Co., L.—Brooklyn, N.Y.—Manilla and Hemp Cordage. First degree of Merit.

Report—Of fine quality and fair price.

VICTORIA.

BONNETTI, G.—Melbourne.—Wine-casks, Butter-churns, and Cheese-vats. First degree of Merit.

Report—Of excellent workmanship.

DONAGHY, Michael—Geelong.—Rope and Cordage.
First degree of Merit Special.

Report—These goods are of very superior quality, and in every respect excellent.

MILLER & CO., James—Melbourne.—Manilla Rope.
First degree of Merit Special.

Report—A superior exhibit of Manilla ropes, of most excellent manufacture.

O'NEIL, James—Melbourne.—Bow-strings, Sash-lines, &c.
Highly Commended.

Report—Of very good make and material.

ZEVENBOOM, John—Melbourne.—Brushware.
First degree of Merit.

Report—This exhibit of brushware is deserving of special commendation, for excellent quality, very good workmanship, and fair prices.

ZEVENBOOM & THOMPSON—Melbourne.—Brushware.
First degree of Merit.

Report—This firm shows a fine collection of brushware, of very good quality and make, and of moderate price.

CLASSES 291–294.

Carriages, Vehicles, and Accessories.

JUDGES.

BULL, WILLIAM	Glebe Point, Sydney.
DOUGLAS, PERCY	Sydney.
DOUGLAS, W. H.	United States.
WANT, GEORGE F. (Chairman)	Hunter-st., Sydney.

GROUP—Carriages, Vehicles, and Accessories.

CLASSES 291-294.

CANADA.

ADAMS, Peter—Paris, Ontario.—Heavy Team and Farm Waggons.
First degree of Merit.

ADAMS, Peter—Paris, Ontario.—Express and Delivery Waggons.
First degree of Merit.

CAMPBELL, John—London, Ontario.—Sociable.
Commended.

SCOTT, Robert—Galt, Ontario.—Hickory Spokes, Rims, and Hubs.
First degree of Merit.

GERMANY.

ALVES GEBRÜDER—Berlin.—Collection of Whips.
Honourable Mention.

GREAT BRITAIN AND IRELAND.

BEEBEE & NICKLIN—Walsall.—Harness and Saddlery.
Highly Commended.

BEEBEE & NICKLIN—Walsall.—Harness Pads.
First degree of Merit.

BERRY & SON, Richard—Birmingham.—Coach Springs and Axle-trees.
First degree of Merit.

Report—A good exhibit, well made and of good materials.

BLISS & CO., William—London.—Harness and Saddlery.
First degree of Merit Special.

Report—The case of saddlery is the best exhibited. The workmanship and material are good—next to perfection. The patterns are modern, and the prices reasonable.

BRACE & CO., Henry (Limited)—Walsall.—Harness and Saddlery.
First degree of Merit.

Report—For general collection of British saddlery and harness, and harness-furniture, whips, &c.

BURKITT, R. L.—Wolverhampton.—Bicycles.
Highly Commended.

COVENTRY MACHINISTS' CO. (Limited)—Coventry.—Bicycles.
First degree of Merit Special.

Report—For patent rollers, and general finish.

CLASSES 291-294.—*Carriages, Vehicles, and Accessories.*

ENGSTROM, A.—London.—Patent Trace Buckle.

First degree of Merit Special.

Report—We recommend this exhibit for special mention, as it is one of the most necessary improvements in harness-buckles. This is an exceedingly useful invention, enabling the driver to release his horse from the vehicle instantaneously.

GOLD, Henry—London.—Dogcart.

Commended.

JONES, Edward—Birmingham.—Saddlery and Bridles.

Honourable Mention.

Report—Worthy of award, for cheapness of article, being good for the money.

KING, William—Leighton Buzzard.—"Battlesden" Car.

First degree of Merit Special.

Report—Well finished, and of excellent material.

KING, William—Leighton Buzzard.—Gig.

Highly Commended.

KING, William—Leighton Buzzard.—"T" Cart.

First degree of Merit

Report—For workmanship, material, cheapness, and suitability.

MADELEY, Frederick—Birmingham.—Saddlery and Harness.

First degree of Merit.

Report—Material and workmanship good, prices low, and adapted to requirements.

MAKEPEACE, Thomas—Birmingham.—Saddletrees.

Honourable Mention.

McNAUGHT & SMITH—London and Worcester.—Mail Phaeton.

First degree of Merit Special.

Report—We award to this exhibit the highest number of points obtainable, and give it special mention as the best finished trap in the Exhibition. Workmanship and material are of the highest quality.

McNAUGHT & SMITH—London and Worcester.—Landau.

First degree of Merit Special.

Report—We award this the highest number of points obtainable for workmanship, material, and invention.

McNAUGHT & SMITH—London and Worcester.—Victorias.

Commended.

NICHOLS & BEDDOWS—Walsall.—Saddlery.

Honourable Mention.

OFFORD, Joseph—London.—Mail-Phaeton.

Highly Commended.

OFFORD, Joseph—London.—Victorias.

Honourable Mention.

Report—Material and work good, but deficient in suitability to this climate.

OFFORD, Joseph—London.—Dog-cart.

Honourable Mention.

OFFORD, Joseph—London.—Dog-cart.

Highly Commended.

OFFORD, Joseph—London.—Landau.

Highly Commended.

Report—Fair workmanship.

OFFORD, Joseph—London.—Gig.

First degree of Merit.

RIGBY & SONS, John—Wednesbury.—Exhibit consisting of axletrees, including long bolt, mail arm ½ round, do. do., square bed; do. do., 1⅛ square bed. Rugby axlearm, Colling's Patent, square and round, each 1¼. Trolly arms with safety pin; also extensive and well finished collection of springs; with several bolts and nuts, the former tied in knots to show quality of material—clamps and nuts ready for bending.

First degree of Merit Special.

Report—We have carefully examined this exhibit, and consider it worthy of a first place, owing to the quality of material and excellent workmanship.

THORN, Charles—Norwich.—Hunting Dog-cart.

First degree of Merit.

Report—Finish and material excellent; invention good; well balanced.

THORN, Charles—Norwich.—Shooting Cart.

First degree of Merit.

Report—For adaptability.

THORN, Charles—Norwich.—" T " Cart.

Highly Commended.

Report—Deserves mention for originality of invention, but the wheels seem unfit to bear the weight imposed on them.

ZAIR, G. & J.—Birmingham.—Whips.

First degree of Merit Special.

Report—This is finest exhibit of whips shown in the building. The whips are very cheap, and of the finest finish and material.

NEW SOUTH WALES.

ALDERSON & SONS—Sydney.—Saddlery and Harness.

First degree of Merit.

Report—For exhibit of colonial saddlery and harness and general goods, including bridle-straps, &c., all being manufactured from colonial leather, and made by exhibitors; very cheap, and well adapted for colonial use.

ANGUS, W. T.—Sydney.—Tray Buggy, no top.

First degree of Merit Special.

Report—We commend this exhibit for its invention, being convertible from a single to a double buggy without inconvenience.

ANGUS, W. T.—Sydney.—Hampshire Buggy.

First degree of Merit.

ANGUS, W. T.—Sydney.—Hooded Sociable.

First degree of Merit.

COBB & CO.—Sydney.—Travelling Coach.

First degree of Merit Special.

Report—We consider this exhibit worthy of special mention, for workmanship and material, and fitness and adaptability for the purpose intended

DRYSDALE & ROBERTS—Sydney.—Carriage Lamps.

Highly Commended.

Report—These lamps show a novel and improved method of fixing the candle, and are fitted with a reflector which appears to be very good.

HAINING & SCHIMEL—Sydney.—Victorias.

First degree of Merit.

Report—Workmanship and material excellent, lightness of draft, general adaptability; price moderate.

HAINING & SCHIMEL—Sydney.—C Spring Single Buggy.

First degree of Merit.

HAINING & SCHIMEL—Sydney.—Light Carriage Wheels.

Highly Commended.

HAINING & SCHIMEL—Sydney.—Heavy Dog-cart Wheels.

First degree of Merit Special.

HOFFNUNG & CO., S.—Sydney.—Saddles and Bridles.

First degree of Merit.

Report—Colonial make, adapted for use in the Colony; material and workmanship exceedingly good, and the prices low.

KEARY BROTHERS—Sydney.—Hampshire Buggy.

Highly Commended.

KEARY BROTHERS—Sydney.—Single Hooded Buggy.

Commended.

KEARY BROTHERS—Sydney.—Double Buggies.

Commended.

KEARY BROTHERS—Sydney.—Queen's Phaeton.

Commended.

KEARY BROTHERS—Sydney.—Hooded Sociable.

Commended.

MOORE & SON, Thomas—Sydney.—"Loftus" Private Hansom.

First degree of Merit Special.

MOORE & SON, Thomas—Sydney.—Hansom Cab.

First degree of Merit.

Report—Shape not modern.

NORTHUMBERLAND CARRIAGE CO.—West Maitland.—Double Buggy.

Highly Commended.

NORTHUMBERLAND CARRIAGE CO.—West Maitland—Box Buggy, no top.

Commended.

O'BRIEN, E. & J.—Sydney.—Concord Buggy.

First degree of Merit.

Report—For workmanship and material.

O'BRIEN, E. & J.—Sydney.—Waggonette.

Highly Commended.

O'BRIEN, E. & J.—Sydney.—Queen's Phaeton.

First degree of Merit

O'BRIEN, E. & J.—Sydney.—Overland Waggonette (Covered).

Highly Commended.

ROBERTSON, John—Sydney.—Axle-trees, Arms, Brake-screws, Carpenter's Bench-Screw, Timber Carriage Axle, Half Patent Axles, Colling's Patent Axles, Common Nut End Axles, Nosecap Axles, all turned and of colonial workmanship and material. The exhibit also includes turned Axle Blocks, Shafts bent by steam, Cart Shafts, and various other exhibits of timber for carriage purposes, all colonial made.

First degree of Merit Special.

Report—We have carefully examined this exhibit, and consider the workmanship and material equal to those of any other exhibit in the same class. We consider this exhibit to be deserving of a special award.

ROBERTSON, John—Sydney.—Queen's Phaeton.

Highly Commended.

SHARP, R.—Sydney.—Colonial Harness.

Highly Commended.

Report—Workmanship exceedingly good, but material and mountings inferior as regards modern use.

SWEENEY, S. & F.—Parramatta.—Hansom Cab.

Highly Commended.

Report—Very heavy ; shape not modern.

TUCK & CO., H. G.—West Maitland.—" Canoe" Barouche.

First degree of Merit.

Report—Commended for workmanship, material, utility, and cheapness.

TUCK & CO., H. G.—West Maitland.—Double Buggy.

First degree of Merit.

Report—Workmanship and adaptability exceedingly good.

TUCK & CO., H. G.—West Maitland.—Tray Buggy (no-top).

Highly Commended.

Report—Superior finish.

TUCK & CO., H. G.—West Maitland.—Sociable.

Highly Commended.

TUCK & CO., H. G.—West Maitland.—Single Buggy (no-top).

Commended.

VIAL & SON, Wm.—Sydney.—Florentine Phaeton.

First degree of Merit Special.

Report—For workmanship, appearance, and quality, cheapness and originality.

VIAL & SON, Wm.—Sydney.—Landaus.

Commended.

Report—Workmanship good, but material for lining seemed scarcely adapted to public wants.

VIAL & SON, Wm.—Sydney.—Victorias.

Highly Commended.

NEW ZEALAND.

COOK, James—Auckland.—Collection of Plated Harness Furniture.
First degree of Merit.

Report—We have no hesitation in awarding this a first order of merit for excellence of workmanship and material.

COOMBES & SON, C.—Dunedin.—Saddlery.
Honourable Mention.

SOUTH AUSTRALIA.

COLTON & CO., J.—Adelaide.—Harness and Saddlery.
Honourable Mention.

Report—The workmanship and material deserving of commendation, but the price exceedingly high.

CRIMP, J.—Adelaide.—Single-hooded Buggy.
First degree of Merit.

Report—Price excessive, but workmanship and material unsurpassed.

QUEENSLAND.

CHUTE, R.—Brisbane.—Horse Collars.
Highly Commended.

CHUTE, R.—Brisbane.—General collection of Harness.
Highly Commended.

Report—For variety and general collection, workmanship, and material.

HILL, John—Brisbane.—Saddlery.
Honourable Mention.

JARMAN, R. E.—Brisbane.—Saddlery and Harness.
Two Highly Commended Awards.

JOHNSTON, W.—Ipswich.—Stock-whips.
First degree of Merit.

MICHAEL, H. T.—Brisbane.—Saddlery.
Commended.

M'LEAN, Alexander—Brisbane.—"Whitechapel," or "Pagnel" Cart.
Highly Commended.

Report—We commend this exhibit on account of adaptability to requirements, workmanship, material, economy, and cheapness.

UNITED STATES.

ABBOTT, DOWNING & CO.—Concord, N.H.—Waggonette.
First degree of Merit.

ABBOTT, DOWNING & CO.—Concord, N.H.—Light Carriage-wheels.
First degree of Merit.

ABBOTT, DOWNING & CO.—Concord, N.H.—Single-hooded Buggy.
First degree of Merit.

ABBOTT, DOWNING & CO.—Concord, N.H.—Box Buggy (no-top).
Highly Commended.

CORTLAND WAGGON CO.—New York City.—Two "Express" Waggonettes. First degree of Merit.

CORTLAND WAGGON CO.—New York City.—Two Light Farm Waggons. Highly Commended.

DOLE & OSGOOD—Boston, Mass.—Light Farm Waggons. First degree of Merit.

FISH BROTHERS & CO.—Racine, Wisconsin.—Box or Trotting Buggy (hooded). Highly Commended.

HILL & CO., J. R.—Concord, N.H.—Carriage, Buggy, and Waggon Harness. First degree of Merit Special.

Report—Workmanship, material, mountings, and general furniture are all excellent exhibits, and specially adapted to colonial requirements.

HOOKER & CO., H.—Newhaven, Conn.—Hooded Box Buggy (single). First degree of Merit.

Report—For excellence of work and material.

HOOKER & CO., H.—Newhaven, Conn.—Box Buggy (no-top). First degree of Merit Special.

Report—For excellence of workmanship, material, and general finish.

STUDEBAKER BROTHERS—South Bend, Ind.—Nevada Farm Waggons. Honourable Mention.

WILSON & CO., W. D.—New York City.—Perambulators. First degree of Merit.

VICTORIA.

HILLMAN, Joseph—Ballarat.—Tip-cart. First degree of Merit.

PROCTOR, William—Melbourne.—C-Spring Single Buggy. Highly Commended.

Report—This exhibit is specially commended as being the work of apprentices.

STEVENSON & ELLIOTT—Melbourne.—Landau. Honourable Mention.

Report—Workmanship good, but price too high.

WHITE, Daniel—Melbourne.—Stanhope-Phaeton. Honourable Mention.

Report—We recommend that a certificate of merit be given for originality of design and workmanship.

The following German Exhibitors in Department II, on Manufactures, do not appear in their proper order, as they declined to accept the awards recommended by the Judges as under :—

BERNHARDI, J.—Leipzig.—Drugs and Chemicals (Classes 200–205). Honourable Mention.

JEITTELES, Daniel—Esslingen am Neckar.—Kid and Lambskin Gloves (Classes 250–257). Commended.

Report—Of good quality, skilful make, useful and cheap.

DEPARTMENT III.

EDUCATION AND SCIENCE.

AWARDS NOMENCLATURE.

The Awards in Department III.—Education and Science, are thus described in their relative orders of merit:—"First degree of Merit Special"; "First degree of Merit"; "Highly Commended"; "Commended"; "Honourable Mention."

GENERAL REPORT.

CLASSES 300-329.—Education and Science.

THERE was a fair representation at the Garden Palace of the many objects coming within the scope of the various Classes in this important Department. These exhibits have been especially beneficial to the Colony, as apart from the immediate instruction which resulted from their mere inspection by visitors to the Exhibition. One known and valuable result from the exhibits in this as in other departments has been the establishment in Sydney of a Technological Museum, which is now located in the Garden Palace, and in a very large measure formed either from voluntary contributions of exhibits or from their purchase. There have thus been retained for permanent inspection and study some of the more remarkable objects displayed at the Sydney International Exhibition. The success of this particular department is in a large measure attributable to the efforts of the Commissioners' Committee, XIII, on Education and Science, which had as its Chairman Professor John Smith, C.M.G., M.L.C., and the assistance of a goodly array of honorary members. This Committee, and a similar plan was adopted by other Committees, issued a special circular, widely distributed, inviting the "co-operation alike of Governments, public bodies, and private individuals."

The first Group, consisting of Classes 300–306, is devoted to "Educational Systems, Methods and Libraries." A valuable report on the school systems of Europe, &c., with remarks on school buildings their designs and ventilation, by Mr. Edward Combes, C.M.G., Executive Commissioner for New South Wales at the Paris Exposition Universelle of 1878, and who was deputed by the New South Wales Government to report on this important subject, refers at length to the "Kindergarten" system of instruction pursued on the Continent and elsewhere. The appliances connected with this system came under this department. As was to be expected, there were exhibited in the German Court specimens of elaborately prepared diagrams and models used in the educational establishments of the Empire, not merely in the simpler elementary tuition, but for the guidance and training of more advanced students. The German mechanical diagrams and anatomical models exhibited by several firms were especially valuable for their excellence, their finish, and their adaptation to the purposes intended. The value of such modes of tuition as seek to convey impression and instruction to the mental vision through the external organs of sight is recognised outside of Germany. Now-a-days many of the toys prepared for the instruction as well as the delight of children partake of the "Kindergarten" character. The well known "Noah's Arks," "dissected maps," wooden blocks for architectural puzzles,—all these, notwithstanding their simplicity, have an admitted educational value. In the British Court the excellent exhibit of the London School Board comprised numerous valuable apparatus, diagrams, &c.; and Mr. Twining, of Twickenham, was the designer of models, &c., for use in technical lectures, which were made to

the order of and exhibited by the Technical College at the Sydney Mechanics' School of Arts, the committee of which institution, with commendable wisdom, also secured for its use other valuable exhibits of a kindred character. In the French Court there are several excellent exhibits of manuals of instruction, scientific and other maps, and diagrams. The Education Department of Toronto, Ontario, Canada, through the Hon. Adam Crook, the Minister in charge of that Department, sent for exhibition copies of models, diagrams, school-books, school reports, and other illustrations of the system of education pursued within the Dominion, which after exhibition were presented to this Colony. Through the permission of the Lord President of the Council (the Duke of Richmond and Gordon), the Science and Art Department of South Kensington exhibited "contributions illustrative of the action of the Department, and comprising drawings and paintings by the students of the School of Art." This exhibit, we believe, has since become the property of the Colony.

The exhibits of the South Kensington Museum and the London School Board were shown on the gallery floor of the northern tower. The electrotype copies of the regalia from South Kensington were shown under the dome. Several firms, British, German, and others, exhibited school and educational appliances and requisites of the most approved and modern descriptions. Chief amongst these may be reckoned the exhibit of James Rigg, of Chester. Some of the objects in the Department of Education and Science occupied a doubtful position between this Department and that devoted to manufactures. We refer to school furniture, &c., of which the exhibits were not numerous, but still evidently well suited for the purpose intended. Colman and Glendenning's (of London), G. M. Hammer's, London, and the Educational Supply Association's (of London), exhibits of school desks and seats, &c., showed excellence of arrangement. A. Boucard, of London, showed natural history and geological diagrams with explanatory manual, and several natural history publications. Several most valuable and comprehensive geological and mineralogical collections will be found fully described under the cognate Department I, on Mining, Metallurgy, and their Products. The natural history of the Colony of Queensland was illustrated by several exhibits.

Class 306, besides containing "school and text books, includes newspapers and journals, illustrated papers and periodical literature." Several exhibits in the British Court come particularly within the latter description: amongst which "The Graphic" display is pre-eminent, in which the whole of the various stages of intelligent artistic labour necessary for the production of that highly esteemed illustrated weekly were fully portrayed; and wherever information was required by visitors to the "Graphic" alcove, although the exhibits "spoke for themselves," it was readily afforded by Mr. John Plummer, the "Graphic" representative. Marcus Ward & Co., of London and Belfast, had in the nave an exhibit of the valuable publications of that now well-known firm. Trübner & Co., of London, had also an excellent representative exhibit of the works of that leading firm of "foreign" publishers, shown in revolving book-cases. We must not omit to mention a folio illuminated volume in vellum, in carved oak covers, containing the genealogies of the Bisson family, and shown by Capt. F. S. de Carteret-Bisson, who was also the exhibitor of a compendious work on the educational establishments of Great Britain, entitled "Our Schools and Colleges." Porter & Coates, of Philadelphia, U.S., exhibited a case full of their well-printed publications.

Through the efforts of the heads of the Council of Education (now the Department of Public Instruction of New South Wales), the schools of the Colony contributed to the Garden Palace display numerous exhibits, chiefly of crayon drawings, maps, illuminations, and needlework, and the pupils of these schools secured in all between five and six hundred awards, bearing testimony to the general merit of their handiwork. The Council of Education exhibited models and photographs of buildings, illustrations of the grades of the New South Wales Public Schools, together with reports, statistics, school registers, &c.

The Group under which "Scientific and Philosophical Instruments and Methods" were shown (comprising Classes 300–307) was so comprehensive in character that the work of inspection had to be divided between several groups of Judges. Among the subdivisions of the Group are "Weights, Scales, Balances, &c." "Watches, Chronometers, &c.," "Telegraphic Instruments and Methods," "Musical Instruments and Methods," besides minor subdivisions. The principal exhibiting countries in weights, scales, and balances, were Great Britain and the United States; and the exhibits shown, by the best known makers of each country, reflected much credit on the accuracy and finish of their workmanship. The report on watches, clocks, &c., which has been carefully drawn up by the Judges, who had the valuable assistance of Mr. H. C. Russell, B.A., F.R.A.S., the Astronomer for New South Wales, in the testing of the time-keeping qualities of the exhibits of the several competing firms of manufacturers, will be found to afford the fullest information on the subject, which is rendered all the more clear through its being accompanied by a diagram of results prepared at the Sydney Observatory, under the personal supervision of Mr. Russell. The results of the competition gave the palm to the watches made by the American Watch Co., of Waltham., Mass., for time-keeping qualities, finish, and improvements in action. Dr. William Morris, of Sydney, reports upon microscopes, telescopes, &c., the principal exhibits of which were to be found in the British, French, and German Courts, in which labour he had the valuable assistance of Dr. H. G. A. Wright, of Sydney, like himself a practical microscopist. The leading exhibits described under Class 312, "Telegraphic Instruments and Methods," are fully reported upon by the Judges.

The Department of Electric Telegraphs of New South Wales exhibited what may be fairly considered an historical series of telegraphic instruments and accessories, its head, Mr. E. C. Cracknell, having secured the thorough efficiency of his department by keeping it fully provided with the latest scientific improvements. The rapid erection of the Garden Palace, which was pushed forward by night as well as by day, was in a very great measure facilitated by the use of electric lights, which were under the management of officers of the Electric Telegraph Department. Mr. Cracknell, as commanding officer of the New South Wales Torpedo Corps, it will be noticed, also exhibited torpedo apparatus, the use of these submarine engines of warfare being regarded as essential to the proper defence of the harbour of Port Jackson. Professor Edison, of Menlo Park, New Jersey, U.S., was an exhibitor of telephones; while Siemens and Halske, of Berlin, exhibited telephones after Graham-Bell's system, and various other electrical appliances. The telephonic transmitters manufactured by Mr. Edwards, of Melbourne, Victoria, were used as means of communication between the head offices of the Commissioners of the Sydney International Exhibition and the manager's office in the Garden

Palace. The Telegraph Construction and Maintenance Co. (Limited), of London, exhibited interesting sections of submarine telegraph cables, which illustrated the progress and development of submarine telegraphy. The people of these Colonies have a special interest in this matter, as, by means of the communication afforded by the telegraph, terraneous as well as submarine, her isolated position in the matter of intelligence of the world's affairs has been practically nullified. Musical instruments, as far as regards pianos, were represented by the manufactures of leading firms in Great Britain, on the Continent, and in the United States of America ; and their number, and the uniform excellence of so many of the exhibits, rendered the work of the Judges no easy one. Of other musical instruments, if we except harmoniums and American organs, there were not many exhibits. Mr. W. Ezold, of Sydney, N.S.W., obtained a first prize for a piano of colonial manufacture. One attractive feature to visitors in connection with the piano exhibits was that the proprietors and agents of the chief firms had engaged competent performers to give recitals on their pianos, which were frequently combined with well-chosen programmes of concerted music.

Group "Engineering, Architecture, Charts, Maps, &c."—Classes 314–319. —A large number of architectural designs sent for exhibition by leading British architects were shown in the Art Gallery. The Survey Department of New South Wales showed valuable maps and plans, while carefully drawn geological maps were to be found suspended in the New South Wales, New Zealand, and other Courts, where they attracted the scientific visitor from Europe, and silently testified to the magnitude and variety of the mineral resources of the Australian Colonies. The Lords Commissioners of the Admiralty sent to the Exhibition copies of their invaluable Hydrographical Charts of the Australian Coasts, and copies of their Sailing Directions to navigators in the adjoining waters. The Admiralty also exhibited sets of sounding apparatus. We must not omit to mention an important exhibit in chartography, viz., a map of Africa, the largest in the world of that continent, embodying the most recent geographical discoveries, prepared by hand especially for Leopold II, King of Belgium, and exhibited by His Majesty. This appeared in the Art Gallery, although properly classified under this Department.

In the next group of Classes, 320–329, the Sydney Branch of the Royal Mint exhibited largely under Class 324, "Money, Current Coin, Historical Collections, &c." The British and Foreign Bible Society had an interesting exhibit of the Society's issues of the Scriptures in various languages, which took up a prominent position at the northern end of the Nave; while the Religious Tract Society exhibited and disseminated its literature from a kiosk in the grounds outside the main building.

We come now to speak of a special feature of the Sydney International Exhibition—the Ethnological Court in the northern gallery of the eastern transept, where the habits, dresses, ornaments, weapons, canoes and paddles, implements for fishing and the chase, and the rude pottery of the aboriginal inhabitants of the various Australian Colonies and the natives of the several groups of Polynesia, were illustrated by a collection of samples which, for variety and extent as relating to the races named, has, in every probability, never been got together before, and one which it would be scarcely possible to bring together again. This Court, which occupied the whole of the north-eastern gallery of the eastern transept, was officially opened on the 11th

of November, 1879, by His Excellency Lord Augustus Loftus, and Sir Henry Parkes, Premier of the Colony; the delay having occurred through some of the contributions of the Australian Governments not having arrived in time to admit of the Court being thrown open earlier. The Court would not have been anything like so complete as it proved but for the circumstance that the Trustees of the Australian Museum of Sydney lent their very comprehensive ethnological collection, usually displayed at that institution as part of its permanent treasures, while many owners of private collections resident in New South Wales gave them for the duration of the Exhibition. Commodore Wilson, of H.M.S. "Wolverene," having cheerfully undertaken the task, at the request of the Commissioners, obtained by barter, during a cruise in the South Seas, numerous specimens of the weapons and dresses of the Islanders, to which were added contributions from officers of H.M.S. "Danae"; while the chief Australian Governments and those of Fiji and the Straits Settlements, &c., contributed illustrative exhibits. We have just said that it will be almost impossible to get such a large collection together again, and we are led to this conclusion by the rapid disappearance of the Australian aborigines from the face of the earth, while other savage peoples represented in the Court are suffering from a like decadence in an ever increasing ratio. The Government of the Colony of Tasmania, the last representative of whose native race, Truganini, died in 1876—the last male, William Lanné, having died a few years before—sent skulls and casts of skulls of a people now extinct, but whose history will be found graphically described in Bonwick's "Last of the Tasmanians." The Maoris of New Zealand, who are physically and mentally superior to the Australian aborigines, were represented in the Ethnological Court by numerous exhibits of matting and implements, and by a complete Maori house of native timbers, embellished with grotesque carvings in wood, and covered with a roof of mats. This building was erected in the grounds of the Garden Palace, under the superintendence of Dr. Hector, C.M.G., the Executive Commissioner for New Zealand. The Maori house referred to originated with Hohaia Matatehokia, chief of the Ngatipukeko tribe, who decided to build a house and represent all his ancestors in it, and to reconcile thereby the tribes Ngatiawa and Urewera, between whom there existed much ill-feeling in consequence of murders perpetrated by the latter tribe during the war. The house was completed in 1874, and in March, 1875, it was opened by the late Sir Donald M'Lean, with great demonstrations, in the presence of numerous native and European visitors. Visitors to the Garden Palace had an opportunity while the Exhibition lasted of seeing Maoris as well as Fijians, two small companies of whom were in readiness to be interviewed, in houses within the grounds specially erected for their accommodation; but neither the Maori nor the Fijian of to-day, even should he come from the more isolated provinces of New Zealand, or the least known islands of the Fijian Archipelago, is to be taken as a type of his race as it existed but recently; and he is far from seeming at his ease in war-paint and feathers. The Maori, like the Fijian, however, retains his language, although generally both know something of English. In the Court devoted to ethnology, the Fijians were also represented by their native dresses and weapons; but as has been hinted, these dresses and weapons will soon have ceased to be characteristic. The Fijian native now lives under British rule and institutions, but before his people had become British subjects they had attained the semblance of an established Government, and had copied European

institutions, as had previously been done by the islanders of the Hawaiian group, another superior aboriginal race, in an endeavour after better things. The Australian aboriginal native, however, seems incapable of the improvement of other native races to which we have referred; he appears to have few aspirations beyond the satisfying of the necessities of nature, and indulgence when near European settlements in acquired but questionable tastes. In the Court are shown specimens of the food of the Australian natives. The most palatable exhibit of this kind shown is a sort of arrowroot, from the root of the "Burrawang," exhibited by Mr. H. Moss, of Nowra, N.S.W.; but the aborigine is an indefatigable hunter of the kangaroo and the opossum and smaller Australian animals. On the river Murray at Maloga there has existed for some time a mission to the Australian aborigines, remnants of the once powerful Murray River tribes of blacks, where with a certain degree of success the children have been taught to do something in the way of reading and writing, while their seniors have had lessons given them in the tillage of the soil. The London Missionary Society, through the Rev. J. P. Sunderland, of Sydney, the resident secretary, lent an excellent series of ethnological exhibits, from the island-continent of New Guinea, in which the Society has several missionary stations, which have been maintained in spite of almost overwhelming obstacles, such as the unhealthiness of the climate. [The list of awards for services, to be found in the introductory portion of this work, includes the names of the leading ethnological exhibitors, although a few received awards from the Judges in the department of manufactures.] The success of the Ethnological Court was in a very great measure due to the efforts of the following gentlemen forming the Ethnological Sub-committee of Committee XIII, on Education and Science—Dr. Alfred Roberts (Chairman); Professor Dr. Reuleaux, P.C., Imperial Commissioner for Germany; Dr. Hector, C.M.G., Executive Commissioner for New Zealand; Mr. W. J. Stephens, M.A.; and Professor Liversidge, Sydney University. This Sub-committee recognized the value, and contemplated the publication of an illustrated catalogue of the exhibits in the Ethnological Court; but the expenditure which would have been entailed in having the necessary drawings made, engraved, and printed, led to the abandonment of the projected work, which would certainly have possessed a high scientific value. The original proposal for the formation of an Ethnological collection in the Garden Palace included:—"First—The erection of full-sized typical models of the habitations of man and of the buildings used for public purposes by the various races found in the South Pacific Ocean, together with samples of the natural history surroundings of each tribe. Second—Specimens of articles of costume and of personal ornament, and of those used in ceremonies, weapons of warfare and of the chase, articles of furniture and of pottery, implements and machines used in agriculture and other industries. Third—Specimens of food, animal and vegetable." The whole of these may be said to have been represented more or less fully by the 5,200 exhibits set forth in the Ethnological Catalogue. Much of the success of the Court depended on the ready response of Colonial Governments to the appeal of the Commission that they would take part. The Colony of New South Wales has benefited largely from the combined nature of the display, for some of the more important collections have been presented by the exhibitors to the Colony since the close of the International Exhibition.

CLASSES 300–306.

Educational Systems, Methods and Libraries.

JUDGES.

BANNISTER, R. D., Secretary to Victorian Commission, Melbourne, Victoria.

GURNEY, Professor THEODORE T., M.A., University ... Sydney

RAWORTH, WILLIAM H. ... ... Sydney

STEPHENS, W. J., M.A. ... ... Sydney.

TAYLER, JOSIAH, Survey Department ... ... Sydney.

WILKINS, WILLIAM, Under Secretary to Department of Public Instruction ... ... Sydney.

PUBLIC SCHOOLS EXHIBITS.

BANNISTER, R. D. (Chairman), Secretary to Victorian Commission, Melbourne, Victoria.

RAWORTH, WILLIAM H. ... ... Sydney.

TAYLER, JOSIAH, Survey Department ... ... Sydney.

DEPARTMENT III.

EDUCATION AND SCIENCE.

GROUP—Educational Systems, Methods, and Libraries.

CLASSES 300–306.

AUSTRIA.

VERNAY, J. N.—Vienna.—Printing and Lithography.
Honourable Mention.

BELGIUM.

BELOT FILS, L. E.—Brussels.—School Furniture.
Commended

Report—Well designed and cheap.

BELGIAN COMMISSION—Brussels.—Book on Belgian Industry.
Honourable Mention.

BERNARDIN, M.—Melle.—Books on Commercial and Industrial Subjects.
Honourable Mention.

SERRURE, E.—St. Nicholas-Waes.—Atlas and Books on Architecture.
Honourable Mention.

Report—Well arranged and engraved.

CANADA.

EDUCATIONAL DEPARTMENT OF ONTARIO—Toronto, Ontario.—Anatomical and other Models, Globes, Orreries, Diagrams, &c.
First degree of Merit.

FRANCE.

ARMENGAUD, Aîné, C. E.—Paris.—Works of Industrial Technology.
Highly Commended.

CHAIX ET CIE.—Paris.—Works on Printing Establishments.
Honourable Mention.

DUFRENOY—Paris.—Maps.
Commended.

DUNOD, Pierre C.—Paris.—Special Works on Science.
First degree of Merit.

DURU—Bordeaux.—Case for Teaching the Metric System.
Highly Commended.

LECOINTE—Paris.—Elementary Arithmetic.
Honourable Mention.

LE VASSEUR (Ancienne Maison Abel Pilon)—Paris.—Dictionary of Natural History. Commended.

MIDY, Charles F. E.—St. Quentin (Aisne).—Works on Mathematics.
Honourable Mention.

MOONEN, Léon—Paris.—Printed and Lithographed Books.
Honourable Mention.

MÜLLER ET CACHEUX—Paris.—Treatise on the Dwellings of the Working Classes. Highly Commended.

THIRION, C. A.—Paris.—Table of the Legislature on Patents.
Honourable Mention.

GERMANY.

BLANKENHORN, Dr. Adolph—Karlsruhe in Schlesien.—Treatise on Vine-Culture. Commended.

BOPP, Carl—Stuttgart.—Charts for use in Technical Schools.
Highly Commended.

BRETSCH, Hugo—Berlin.—Kindergarten Toys.
Honourable Mention.

FISCHER, Theodor—Cassel.—Plates and Books on Zoology and Natural History. First degree of Merit.

Report—An excellent exhibit of Diagrams, of very high merit.

FRIEDERICHSEN & CO., L.—Hamburg.—Books and Maps.
Commended.

Report—A good exhibit.

HERMES, Wilhelm—Berlin.—Drawing Books.
Highly Commended.

Report—A great variety and well executed.

KELLER & SOHN, Heinrich—Darmstadt.—Book, and Drawings of Grasses. Highly Commended.

Report—Well excecuted.

KÖNIGLICHE KOMMISSION FÜR DIE GEWERBLICHEN FORTBILDUNGS-SCHULEN—Stuttgart.—Drawing Models.
First degree of Merit.

Report—A large exhibit of the highest merit, being very superior in workmanship and finish.

LOCHMANN, J. G. & Paul—Zeitz in Sachsen.—Models of Steam-engines. Highly Commended.

RAMMÉ, F.—Hamburg.—Anatomical Models in Papier Mâché.
First degree of Merit.

Report—Excellently made, and moderate in price.

SCHRÖDER, Carl—Darmstadt.—Mathematical and other Models. First degree of Merit.

Report—Models for instruction in mathematics, physics, and drawing, excellent in design, of great variety, and high finish.

WINCKELMANN & SÖHNE—Berlin.—Architectural and Ornamental Drawing-books. First degree of Merit.

Report—Excellent in design, tone, and bold in execution.

GREAT BRITAIN AND IRELAND.

BISSON, Captain F. S. De Carteret.—Illuminated Genealogical Records of the "Bisson" Family. First degree of Merit Special.

BOUCARD, A.—London.—Complete Set of Diagrams of Natural History. Commended.

COLLINS, SONS, & CO., Wm.—Glasgow.—Books, Maps, and other School Appliances. First degree of Merit.

Report—A very large and varied exhibit.

DAMON, Robert—Weymouth.—Models of Diamonds, Collection of Fossils, Agates, and Mollusca. Highly Commended.

EDUCATIONAL SUPPLY ASSOCIATION (Limited)—London.—School Furniture. Highly Commended.

Report—Very good indeed, well planned, and reasonable in price.

FOSTER, D. Sc., C. Le Neve—Truro.—Mineral Specimens. Honourable Mention.

GREGORY, James R.—London.—Fossils, Minerals, &c. First degree of Merit.

HAMMER, Geo. M.—London.—School Furniture. Highly Commended.

Report—Very good indeed, well planned, and reasonable in price.

JOHNSTON, W. & A. K.—London and Edinburgh.—Maps, and Geographical and Educational Publications. First degree of Merit.

LAURIE, J. Stewart—London.—Books, School Series. Highly Commended.

LOW, MARSTON, SEARLE, & RIVINGTON, Sampson—London.—Printed Illustrated Books. Highly Commended.

MORGAN, William—Birmingham.—Library Indicator. Honourable Mention.

MYERS & CO., A. N.—London.—Educational Appliances. First degree of Merit.

Report—Chiefly for young children (Kindergarten).

PLUMMER, John—London.—Collection of Scientific and Technical Works. Commended.

RIGG, James—Chester.—Educational Apparatus.
First degree of Merit.

Report—A very large exhibit, comprising articles of various degrees of merit, but on the whole the exhibit is very useful and suggestive.

SCHOOL BOARD FOR LONDON—London.—Methods for Instruction in Schools. First degree of Merit.

Report—A magnificent exhibit of apparatus, models, illustrations of methods, books, &c., of high educational value.

SCIENCE & ART DEPARTMENT—South Kensington.—Systematic Instruction in Art. First degree of Merit.

Report—Examples of the workings of English schools, and designs showing a very remarkable degree of proficiency in drawing and painting, and design. This collection should if possible be retained in the Colony, as a type of the excellence that may be attained in a comparatively short time under the direction of Art and Technical Schools.

SMITH & SON, C.—London.—Maps and Globes.
Highly Commended.

Report—Good and cheap.

STANFORD, Edward—London.—Maps, chiefly relating to Australia.
First degree of Merit.

Report—Large collection of very fine maps, special merit attaching to the large map of Australia.

TRÜBNER & CO.—London.—Books and Revolving Book-cases.
Highly Commended.

TWINING, Thomas—Twickenham.—Diagrams and Apparatus for Lectures. First degree of Merit.

Report—A novel and interesting exhibit.

UNWIN BROTHERS—London.—Fac-simile Reprints of "Biblia Pauperum" and Black-letter Publications. Commended.

WARD & CO., Marcus—London and Belfast.—School Appliances.
First degree of Merit.

ITALY.

CANN, Cavaliere T. C.—Florence.—Method for the Study of the English Language. Honourable Mention.

NEW CALEDONIA.

LEMIRE, C.—Nouméa.—Statistical Works on New Caledonia.
Honourable Mention.

NEW SOUTH WALES.

BRAY, James S.—Sydney.—Ornithological Collection.

First degree of Merit.

Report—Collection illustrative of the ornithology of St. Leonards, Sydney.

COUNCIL OF EDUCATION (Now DEPARTMENT of PUBLIC INSTRUCTION)—Sydney.—Exhibit of Models and Photographs of Buildings, illustrative of the three grades of Public Schools; samples of the various Reports. Statistics, School Registers, Text-books, Maps, &c., in use therein. First degree of Merit.

COUNCIL OF EDUCATION (Now DEPARTMENT of PUBLIC INSTRUCTION)—Sydney.—Public School Exhibits.—The exhibits which appear in the following pages were exhibited under the auspices of the Council of Education in New South Wales, whose place has now been filled by the appointment of a Minister for Public Instruction in the Colonial Cabinet.

Name.	Age.	Exhibit.	Award.
Armidale Public School.			
Miller, James	13	Drawing	Honourable Mention
Dean, Annie	14	Needlework, &c	,,
M'Alpine, Laura	12	,,	,,
Swain, Annie	14	,,	Highly Commended
Ashfield Public School.			
Mills, Arthur	16	Maps	Honourable Mention
Wells, Richard	14	,,	,,
Balmain Public School.			
M'Donald, Alexander	14	Drawing	Honourable Mention
Simons, Frederick G.	14	,,	Commended
Shaw, Harold	12	,,	Honourable Mention
Cavill, Jessica	12	Needlework	Commended
Ferguson, Agnes	14	,,	,,
Gow, Isabella	12	,,	Highly Commended
Green, Bessie	10	,,	,,
Hay, Elizabeth	12	,,	Honourable Mention
Hyam, Florence	14	,,	First degree of Merit
Johnson, Susie	12	,,	,,
Kirkpatrick, Annie	14	,,	,,
M'Kay, Mary	14	,,	Commended
M'Rae, Janet	12	,,	First degree of Merit
Nichols, Eva	11	,,	Commended
Perdriau, Gertrude	11	,,	,,
Philps, Annie L.	16	,,	Highly Commended
Pierce, Mary Ann	16	,,	First degree of Merit
Porteous, Maggie	15	,,	,,
Shenstone, Alice	12	,,	Highly Commended
Stewart, Lena	13	,,	First degree of Merit
Telfer, Mary	14	,,	Honourable Mention

CLASSES 300–306.—*Educational Systems, Methods, and Libraries.*

Name.	Age.	Exhibit.	Award.
Bowning Public School.			
Briggs, Mary	11	Needlework	Honourable Mention
M'Clure, Mary	11	,,	Commended
Bega Public School.			
Baker, Alfred	15	Drawing	Honourable Mention
Manbey, Arthur	16	,,	,,
Tingell, May	14	Map	,,
Underhill, John	11	,,	First degree of Merit
Broughton Village Public School.			
Caldwell, W.	16	Drawing	Honourable Mention
Speer, C.	18	Illumination	,,
Speer, C.	18	Drawing	,,
Beaumont A.	11	Needlework	,,
Caldwell, E.	14	,,	Commended
Knight, M. E.	16	,,	Highly Commended
Hicks, M.	11	,,	Commended
Burwood Public School.			
Bell, William Henry	15	Map	First degree of Merit.
Clark, Daniel	16	Maps	Highly Commended
Cowdery, Edward Henry	15	Drawing	Honourable Mention
Cowdery, Edward Henry	15	Map	First degree of Merit Special
Hancock, A.	16	Ornamental Writing	Highly Commended
Thornthwaite, Ernest John	13	Map	First degree of Merit
Truscott, A.	13	Maps	Commended
Campbelltown Public School.			
Newman, Gerald	12	Drawing	Honourable Mention
Graham, Elizabeth	13	Needlework	,,
Milgate, Lily	13	,,	Commended
Walsh, Alice	13	,,	,,
Warby, Esther	13	,,	Highly Commended
Camperdown Public School.			
Hall, Eugènie	9	Needlework	Honourable Mention
Kerr, Clara	9	,,	,,
M'Cloy, Louisa	12	,,	Commended
Canadian Lead Public School.			
Fowler, Mary	12	Needlework	First degree of Merit
Charcoal Creek Public School.			
Lindsay, Isabella	11	Needlework	Commended
Richardson, Letitia Heron	18	,,	Highly Commended
Christ-Church Church of England Certified Denominational School, Sydney.			
Day, Frederick	14	Drawing	Honourable Mention
Haviland, Edgar	15	,,	,,
Page, William	15	,,	Commended

CLASSES 300–306.—*Educational Systems, Methods, and Libraries.*

Name.	Age.	Exhibit.	Award.
Cleveland-street Public School, Sydney.			
Crane, Frederick	13	Illumination	Highly Commended
Docksey, William	14	,,	,,
Elder, John	13	,,	,,
Friend, Owen	14	,,	,,
Rae, C.	15	,,	Commended
Somerville, H. J.	16	Drawing	Honourable Mention
Young, Robert	13	Illumination	Highly Commended
Crane, Kate	15	Needlework	Commended
Dibley, Mary Jane	13	,,	Honourable Mention
Duffy, Margaret	15	,,	Commended
Dyson, Evelyn	12	,,	Highly Commended
Ellard, Annie	15	,,	,,
Hannington, Mary	15	,,	,,
Hodson, Amelia	12	,,	,,
Holloway, Harriet	13	,,	,,
Perry, Ida	12	,,	,,
Scott, Lizzie	15	,,	Commended
Somerville, Annie		,,	,,
Stehr, Annie	9	,,	Honourable Mention
Wilson, Elizabeth	14	,,	Commended
Cooyal Public School.			
Gleeson, Margaret	14	Needlework	Highly Commended
Priest, Martha	17	,,	Honourable Mention
Stapleton, Mary Ann	12	,,	Commended
Coraki Public School.			
M'Laren, Hugh George	12	Drawing	Honourable Mention
Yabsley, Arthur Henry	14	,,	Commended
Dawson, Mabel Constance	12	Needlework	Highly Commended
Crown-street Public School, Sydney.			
Anderson, William	14	Illumination	First degree of Merit
Anderson, William	14	Map	Highly Commended
Buchanan, Agnes	15	Ornamental writing	,,
Buchanan, Agnes	15	Map	,,
French, Henry	12	,,	Honourable Mention
Marquies, Miriam	15	,,	Highly Commended
Marquies, Miriam	15	Ornamental writing	Honourable Mention
Marquies, Miriam	15	Drawing	,,
Marquies, Miriam	15	,,	Highly Commended
Oliver, Albert	14	Map	Commended
Palmer, Henry	12	Maps	Honourable Mention
Petrie, Fitt Charles	15	Map	,,
Davies, Florence	12	Needlework	First degree of Merit
Goff, Dora	14	,,	Highly Commended
Harper, Fanny	13	,,	,,
Krauss, Emma	15	,,	Commended
Layman, Lillie	14	,,	Highly Commended
Liston, Annie	11	,,	Honourable Mention
Moir, Emma	12	,,	Commended
Petrie, Ellen	14	,,	Honourable Mention
Todderdale, Alice	13	,,	Commended
Walden, Ellen	12	,,	,,
Zlotskowski, Ora	13	,,	Highly Commended

CLASSES 300–306.—*Educational Systems, Methods, and Libraries.*

Name.	Age.	Exhibit.	Award.
Darlinghurst Public School, Sydney.			
Hirst, George	11	Drawing	First degree of Merit
Wilson, William Alfred	15	,,	Highly Commended
Darlington Public School, near Sydney.			
Macnamara, Louisa	13	Needlework	Commended
Pier, Fanny	12	,,	Honourable Mention
Ross, Annie	13	,,	Commended
Devonshire-street Public School, Sydney.			
Duncan, Elizabeth	13	Drawing	Honourable Mention
Clark, Josephine	14	Needlework	Commended
Darke, Ida	15	,,	,,
Granleese, Eliza	12	,,	Honourable Mention
Prince, Lucy	16	,,	Commended
Dowling-street Public School, Sydney.			
Gilberthorp, Julia	12	Needlework	Commended
Goldsborough, Sarah	9	,,	Honourable Mention
Eden Public School.			
Noble, Grace	14	Needlework	Commended
Fairy Meadows Public School.			
Caldwell, Frank	14	Drawing	Honourable Mention
Caldwell, Isabella J.	11	Needlework	Highly Commended
Cheney, Martha	14	,,	Commended
McKinnon, Isabella A.	14	,,	,,
Fish River Creek Public School.			
Hawke, Henrietta	8	Needlework	Honourable Mention
Kean, Mary	15	,,	Commended
Kean, Sophia	13	,,	,,
Phair, Annie	13	,,	Honourable Mention
Fort-street Public School, Sydney.			
Arkins, Daniel	15	Illumination	Highly Commended
Barton, Alice	15	,,	,,
Blanchard, George	15	Drawing	,,
Cathells, Sydney	13	,,	First degree of Merit
Dunn, Lizzie	14	Illumination	Honourable Mention
Edgecombe, William	14	Drawing	,,
Gostellow, Ebenezer E.	13	Illumination	Highly Commended
Gostellow, Ebenezer E.	13	Drawing	Honourable Mention
Kopsch, Charles	13	Illumination	First degree of Merit
Lyons, Henry	14	Ornamental Writing	,,
Metcalf, Arthur	14	Drawing	Honourable Mention
M'Intosh, Annie	15	Illumination	Highly Commended
Perdriau, Albert	15	,,	Commended
Potter, Annie	14	Drawing	First degree of Merit Special
Poolman, Cissy	15	Illumination	Commended
Roper, Walter	14	Drawing	Honourable Mention
Shields, Fannie	15	,,	Highly Commended
Steele, Christina	16	,,	Commended
Wakfer, Ada	15	,,	Honourable Mention
Winstanley, Ida	12	,,	,,
Arnold, Charlotte	16	Needlework	,,

CLASSES 300–306.—*Educational Systems, Methods, and Libraries.*

Name.	Age.	Exhibit.	Award.
Fort-street Public School, Sydney—*continued.*			
Allen, Adelaide	14	Needlework	Honourable Mention
Baily, Jessie	10	,,	Commended
Barton, Alice	15	,,	Honourable Mention
Bentley, Caroline	14	,,	Highly Commended
Booth, Mary	14	,,	Commended
Blackadder, Amy	13	,,	,,
Cook, Lucy	14	,,	,,
Cripps, Esther	11	,,	,,
Dunn, Lizzie	14	,,	,,
Findlater, Edith D.	13	,,	Honourable Mention
Fleming, Amy	11	,,	Commended
Greig, Agnes	16	,,	,,
Goulding, Carrie	13	,,	Honourable Mention
Grisbrook, Maud	15	,,	,,
Hoseman, Marion	14	,,	Commended
Humberstone, Laura	15	,,	,,
Jennings, Alice	15	,,	Honourable Mention
Johnson, Mary	9	,,	,,
Joseph, Bella	15	,,	Commended
Kippax, Emily	14	,,	Honourable Mention
Landers, Jessie	14	,,	First degree of Merit
Lessing, Clara	12	,,	,,
Lessing, Matilda	14	,,	,,
Levey, Minnie	11	,,	Commended
Lipman, Rachel	13	,,	,,
Lynch, Louisa	12	,,	Honourable Mention
Merriman, Florence	9	,,	Highly Commended
Milham, Nettie	14	,,	Commended
M'Camley, Theresa	15	,,	Honourable Mention
M'Lachlan, Ellen	15	,,	Commended
Murray, Annie	11	,,	Highly Commended
Poolman, Belinda	14	,,	Honourable Mention
Robertson, Annie	13	,,	,,
Robertson, Ellen	15	,,	Highly Commended
Sanders, Brenda G.	12	,,	Commended
Shaw, Mary	12	,,	Honourable Mention
Steele, Jessie	15	,,	Commended
West, Clara	14	,,	Honourable Mention
Young, Addie	12	,,	First degree of Merit
Glebe Public School.			
Munro, William	13	Drawing	Honourable Mention
Taylor, Charles	14	Map	,,
Sundry Pupils	11 to 14	Ornamental Writing	Highly Commended
Callaghan, Blanche	10	Needlework	Honourable Mention
Carter, Australia	15	,,	Highly Commended
Hart, Phoebe	14	,,	Honourable Mention
Hulbert, Adelaide	14	,,	Highly Commended
Jordan, Anna	15	,,	Commended
Macintyre, Adelaide	13	,,	First degree of Merit
Mitchell, Florence	13	,,	,,
Rush, Maggie	14	,,	Commended
Shearsby, Florence	14	,,	First degree of Merit
Wells, Ada	12	,,	,,
Williams, Ellen	14	,,	Commended

CLASSES 300–306.—*Educational Systems, Methods, and Libraries.*

Name.	Age.	Exhibit.	Award.
Glebe Church of England Certified Denominational School.			
Duncan, James	14	Drawing	Honourable Mention
Fortescue, W.	12	,,	,,
Harrang, Eugène	12	Map	,,
Thomas, Emily A.	12	,,	Highly Commended
Thomas, Augustus G.	10	Writing	,,
Goulburn Public School.			
Ball, Alfred	14	Drawing	Honourable Mention
Jacob, Henry	15	,,	,,
Landsdown, Frederick	13	,,	Commended
Liggins, William	13	,,	Honourable Mention
Olliver, Edwin	14	,,	,,
Grafton Public School.			
Blackfield, Eva	14	Drawing	Honourable Mention
Bratfield, Ellen	14	Maps	Commended
Davies, Clarence	...	,,	,,
Fraser, Annie M.	13	Drawing	,,
Fraser, Annie M.	13	Maps	Highly Commended
Smith, Stephen H.	13	,,	Honourable Mention
Bratfield, Eva	14	Needlework	Highly Commended
Fraser, Annie	13	,,	,,
Hill, Susan	13	,,	Honourable Mention
Guildford Public School.			
Carron, Emily	8	Needlework	Commended
Doran, Fanny	10	,,	Honourable Mention
Ettinger, Annie	12	,,	Commended
Ettinger, Barbara	6	,,	Highly Commended
Ettinger, Theresa	8	,,	Commended
Gassaw, Lily	7	,,	,,
Hamilton, Florence	10	,,	,,
Fear, Jane	5	,,	Honourable Mention
James, Alice	7	,,	Commended
Klein, Adelaide	12	,,	,,
Stinson, Barbara	5	,,	Honourable Mention
Stinson, Caroline	10	,,	Commended
Stinson, Grace	5	,,	Honourable Mention
Stinson, Sarah	7	,,	Commended
Tame, Elizabeth	6	,,	Honourable Mention
Tame, Martha	13	,,	Commended
Thomas, Edith	11	,,	,,
Thomas, Rachel	13	,,	,,
Stinson, Eliza	16	,,	,,
Stinson, Emma	14	,,	,,
Stieme, G.	...	,,	Honourable Mention
Gulgong Public School.			
Howard, Kate	13	Needlework	Honourable Mention
O'Neil, Amelia	16	,,	Commended

CLASSES 300–306.—*Educational Systems, Methods, and Libraries.*

Name.	Age.	Exhibit.	Award.
Gullen Flat Public School.			
Bennett, Elizabeth	11	Needlework	Commended
Langdon, Harriet	7	,,	Honourable Mention
O'Neile, Ellen M.	14	,,	Highly Commended
O'Neile, Julia C.	9	,,	Honourable Mention
O'Neile, Johanna	9	,,	Honourable Mention
Spackman, Elizabeth	6	,,	Highly Commended
Spackman, Harriet	13	,,	Commended
Gunning Public School.			
Woodward, Walter	13	Maps	Commended
Woodward, Walter	13	Writing	Honourable Mention
Brain, Clara J.	12	Needlework	,,
Hay Public School.			
Duncan, Nellie	8	Needlework	Honourable Mention
M'Andrew, Sarah	13	,,	First degree of Merit
Hinton Public School.			
Cameron, Sarah	13	Needlework	Commended
Cook, Sarah	13	,,	First degree of Merit
Keen, Ada	16	,,	Highly Commended
King, Annie	11	,,	Honourable Mention
Morris, May	14	,,	Highly Commended
Mossman, Lavinia	15	,,	Honourable Mention
Partridge Annie	13	,,	Highly Commended
Read, Bessie	11	,,	First degree of Merit
Simmons, Annie	14	,,	Honourable Mention
Stewart, Harriet	11	,,	,,
Hurstville Public School.			
Anderson, Helen	12	Needlework	Honourable Mention
Watson, Eleanor	12	,,	Commended
Kogarah Public School.			
Skidmore, Elizabeth	13	Needlework	Honourable Mention
Lochinvar Public School.			
Brown, Herbert	15	Illumination	Commended
Greedy, Albert	14	Drawing	,,
Hewston, Ellen	9	Needlework	Honourable Mention
Howell, Adeline	9	,,	Commended
Humphreys, Jane	12	,,	Honourable Mention
King, Maria	11	,,	,,
Palmer, Barbara	13	,,	Commended
Russell, Emily	11	,,	Honourable Mention
Lambton Public School.			
Steel, Louisa	13	Needlework	Honourable Mention

CLASSES 300-306.—*Educational Systems, Methods, and Libraries.*

Name.	Age.	Exhibit.	Award.
Maitland East Public School.			
Bearham, Martha	13	Needlework	Highly Commended
Bradley, Minnie	13	,,	Honourable Mention
Maitland West Public School.			
Hughes, Leslie		Drawing	Honourable Mention
Weston, Charles D.	13	,,	,,
Marrickville Public School.			
Harber, Mary	12	Needlework	Highly Commended
Owen, Lydia	15	,,	Honourable Mention
Wilkinson, Fanny	10	,,	Commended
Wilkinson, Sarah	12	,,	,,
Moama Public School.			
Boyd, Jessie T.	15	Needlework	First degree of Merit
Kyle, Ada	10	,,	Commended
Moore, Mary E.	13	,,	Honourable Mention
Newman, Isabella	13	,,	,,
Penton, Jane	14	,,	,,
Russell, Fanny	6	,,	Highly Commended
Mudgee Public School.			
Thurston, Emily J.	14	Illumination	Commended
Newtown Public School.			
Wightman, William	15	Illumination	Commended
Wright, William T.	14	,,	Honourable Mention
Barnes, E.	13	Needlework	Honourable Mention
Bridges, M.	10	,,	Highly Commended
Cashman, E.	14	,,	Commended
Cashman, L.	14	,,	Honourable Mention
Durell, E.	15	,,	Highly Commended
Durell, Grace	13	,,	First degree of Merit
Epthorpe, M.	13	,,	Honourable Mention
Gardiner, M.	13	,,	Highly Commended
Gardiner, A.	14	,,	,,
Griffiths, J.	16	,,	,,
Morris, A.	15	,,	Commended
Munro, E.	13	,,	,,
Munro, L.	15	,,	Honourable Mention
Reynolds, R.	10	,,	Highly Commended
Stewart, F.	14	,,	Commended
Vincent, E.	13	,,	First degree of Merit
Wannel, A.	11	,,	Highly Commended
Oswald Public School.			
Gordon, Henry	12	Drawing	Highly Commended

CLASSES 300-306.—*Educational Systems, Methods, and Libraries.*

Name.	Age.	Exhibit.	Award.
Paddington Public School.			
Cruikshank Alexander	14	Illumination	Honourable Mention
Goddard, E.	14	Drawing	,,
Goddard, A.	15	,,	,,
Spark, Henry Lyon	11	Maps	Highly Commended
Willis, Thomas Charles	12	,,	,,
Churchill, Clara	15	Needlework	,,
Goddard, D.	14	,,	Honourable Mention
Gordon, Jessie	11	,,	,,
Herbert, Emily	13	,,	Commended
Patterson, L.	11	,,	,,
Peters, Minnie	13	,,	Honourable Mention
Yates, Fanny	14	,,	Commended
Parramatta Public School.			
Davies, William E.	14	Maps	Highly Commended
Davies, William E.	14	Drawing	Honourable Mention
Hart, John	12	,,	,,
Parramatta South Public School.			
Bishop, May	11	Needlework	First degree of Merit
Bremner, Kate	14	,,	Highly Commended
Curry, Rebecca	15	,,	,,
Payten, Susan	13	,,	Commended
Ritchie, Edith	14	,,	First degree of Merit
Taylor, Florence	12	,,	Highly Commended
Watson, Emily	12	,,	,,
Parramatta North Public School.			
Houison, May	8	Needlework	First degree of Merit
Peakhurst Public School.			
Corbett, Victoria	14	Needlework	First degree of Merit
Peak, Elizabeth	12	,,	Honourable Mention
Peak, Mary Ann	12	,,	,,
Rose, Amy	12	,,	,,
Penrith Public School.			
Fulton, Edgar	14	Drawing	Highly Commended
Lott, Frederick	14	,,	,,
Price, Edwin	15	,,	,,
Perry, William	15	,,	First degree of Merit
Robbins, Henry	15	,,	Highly Commended
Ashbury, Sophia	11	Needlework	Honourable Mention
Bissland, Alice	13	,,	,,
Bradshaw, Ettie	11	,,	Commended
Chisholm, Maud	11	,,	Highly Commended
Elliott, Mary	14	,,	,,
Kilgannon, Cecilia	13	,,	Honourable Mention
Lang, Maud	9	,,	,,
Neale, Edith	11	,,	,,
Price, Amy	13	,,	,,
Simpson, Alice	11	,,	,,
Upton, Emma	12	,,	Commended
Vine, Florence	13	,,	,,
Vine, Letitia	11	,,	Honourable Mention
Waring, Alice	10	,,	Commended
Warboys, Mary	9	,,	,,

CLASSES 300-306.—*Educational Systems, Methods, and Libraries.*

Name.	Age.	Exhibit.	Award.
Petersham Public School.			
Ellis, James Frank	13	Drawing	Honourable Mention
Neilson, Archibald	13	,,	,,
Wood, Ebenezer Clarence	14	,,	,,
Quorribolong Public School.			
Baker, Jane	15	Needlework	Commended
Foster, Rebecca	15	,,	,,
Kenny, Judith	14	,,	,,
Lewis, Martha	15	,,	,,
O'Haran, Bridget	12	,,	,,
Redfern Public School, Sydney.			
Hull, Ada	14	Illumination	Commended
Mitchell, Albert	13	Ornamental Writing	Highly Commended
Richmond Public School.			
Cavanough, Florence	12	Needlework	Highly Commended
Tomkinson, Florence	12	,,	Honourable Mention
Ryde Public School.			
Bailey, Florence	15	Illumination	Highly Commended
Foulcher, James	12	Map	Commended
Gascoigne, Annie	15	Drawing	Honourable Mention
Bailey, Lily	11	Needlework	Highly Commended
Gascoigne, Elizabeth	13	,,	First degree of Merit
Gascoigne, Annie	15	,,	Honourable Mention
Goulding, Elizabeth	14	,,	Commended
Hatton, Alice	13	,,	Honourable Mention
Heard, Edith	13	,,	Highly Commended
Newman, Mary J.	17	,,	Honourable Mention
Newman, Priscilla	14	,,	,,
Small, Amy	12	,,	Highly Commended
Small, Charlotte	16	,,	Honourable Mention
Saumarez Creek Public School.			
O'Brien, Catherine	12	Needlework	Honourable Mention
St. Barnabas' Church of England Certified Denominational School, Glebe, Sydney.			
Austen, Jessie	11	Needlework	Highly Commended
Austin, Ettie	11	,,	Honourable Mention
Bowler, Lucy	14	,,	,,
Buchanan, May	13	,,	Highly Commended
Buchanan, Laura	11	,,	Honourable Mention
Crow, Mary	11	,,	,,
Duffy, Barbara	11	,,	Highly Commended
Duffy, Margaret	11	,,	Commended
Freitas, Josephine	9	,,	,,
Heath, Ada	10	,,	,,
M'Keown, Annie	11	,,	Honourable Mention
Pearson, Jessie	9	,,	,,
Pitman, Harriet	11	,,	,,
Smith, Maud J. E.	12	,,	Commended
Williams, Evelyn	13	,,	Honourable Mention
Fehrenbach, Annie	10	,,	,,

CLASSES 300–306.—*Educational Systems, Methods, and Libraries.*

Name.	Age.	Exhibit.	Award.
St. Benedict's Roman Catholic Certified Denominational School, Sydney.			
Delargy, Mary	12	Needlework	Highly Commended
Downes, May	11	,,	Honourable Mention
Downes, Maud	9	,,	Commended
Hefferman, Frances	11	,,	,,
Hefferman, Mary	13	,,	Honourable Mention
M'Mahon, Mary	11	,,	Highly Commended
Rooney, Mary	13	,,	,,
Vaughan, Bridget	9	,,	Commended
Woolley, Kate	12	,,	Honourable Mention
St. James's Church of England Certified Denominational School, Sydney.			
Dagnall, C. H. B.	13	Drawing	Honourable Mention
Downey, George	12	,,	,,
Wallis Austen A.	12	,,	,,
Wallis, Albert	12	,,	,,
St. Leonard's Public School, Sydney.			
Bezer, Emily	14	Drawing	Honourable Mention
Dind, Arthur	14	,,	,,
Guise, James	13	,,	,,
Bezer, Mary	11	Needlework	,,
Bezer, Emily	14	,,	,,
Lutwyche, Emily	12	,,	,,
Nichols, Amelia	12	,,	Commended
Oag, Maggie	11	,,	Honourable Mention
Rickles, E.	10	,,	Commended
Thompson A.	12	,,	,,
St. Mary's Roman Catholic Certified Denominational School, Sydney.			
Willes, Mary	11	Illumination	Commended
Cullen, Ellen	13	Needlework	Highly Commended
Donovan, Celia	15	,,	Commended
St. Paul's Church of England Certified Denominational School, Redfern, Sydney.			
Beech, Harry	15	Drawing	Honourable Mention
Herald, Joseph	14	,,	Commended
Langley, Herbert	13	,,	Honourable Mention
St. Peter's Church of England Certified Denominational School, Cook's River, near Sydney.			
Farley, Edward	12	Drawing	Honourable Mention
Willard, Charles	12	,,	Highly Commended
Willard, Frederick	11	,,	Honourable Mention
St. Philip's Church of England Certified Denominational School, Sydney.			
Fiske, Henry Charles	14	Drawing	Highly Commended
Sharp, Frederick L.	14	,,	Commended
Singleton Public School.			
Anderson, Marshal	14	Drawing	Commended

CLASSES 300–306.—*Educational Systems, Methods, and Libraries.*

Name.	Age.	Exhibit.	Award
Smith's Flat Public School.			
Smith, Christopher	16	Drawing	Commended
Surry Hills Roman Catholic Certified Denominational School, Sydney.			
Hooper, Elizabeth	13	Needlework	Honourable Mention
Melia, Stanislaus	15	,, ...	Commended
Slyney, Amelia	11	,, ...	,,
O'Connell, Mary	14	,, ...	Honourable Mention
Tenterfield Public School.			
Sturdy, Alice	12	Needlework	Honourable Mention
Ullmarra Public School.			
Bowling, Annie	12	Drawing	Honourable Mention
Walcha Public School.			
Barth, Millicent Sarah	11	Needlework	Highly Commended
Farrell, Alice Sarah	13	,, ...	,,
Mitchell, Jessie Anderson...	13	,, ...	,,
Farrell, Eliza	15	,, ...	Honourable Mention
Pierce, Emily Louisa.....	13	,, ...	Commended
Waterloo Public School, near Sydney.			
Clarke, Florence.....	11	Needlework	Honourable Mention
Fezarkerley, Hannah.....	10	,, ...	Commended
Hannan, Ellen.....	9	,, ...	Honourable Mention
Moloney, Nellie	11	,, ...	,,
Moloney, Mary	13	,, ...	Commended
Melly, O.	12	,, ...	Honourable Mention
O'Brien, Maggie	12	,, ...	,,
Russell, Kate	11	,, ...	Commended
Rowe, Grace	11	,, ...	,,
Simpson, Amelia	11	,, ...	,,
Waterloo Roman Catholic Certified Denominational School, near Sydney.			
Fullin, Fanny	11	Needlework	Highly Commended
Waverley Public School.			
Allen, Elsie Jane	7	Needlework	Commended
Allen, Mary	15	,, ...	,,
Dickson, Agnes	14	,, ...	,,
Firth, Amy	12	,, ...	Highly Commended
Hamburger, Jane	15	,, ...	Commended
Harrison, Louise Maud	13	,, ...	Honourable Mention
Harrison, Eliza Jane	11	,, ...	Commended
Humbly, Mary	13	,, ...	Honourable Mention
Iredale, Florence	12	,, ...	,,
Iredale, Gertrude	11	,, ...	,,
Pottie, Elsia Isabel.....	11	,, ...	Commended
Richardson, Harriet	9	,, ...	,,
Richardson, Mary	13	,, ...	Honourable Mention
Rowe, Ruth.....	13	,, ...	,,
White, Mary Ann	13	,, ...	,,

CLASSES 300–306.—*Educational Systems, Methods, and Libraries.*

Name.	Age.	Exhibit.	Award.
Wickham Public School.			
Hackworthy, Arthur	13	Illumination	Honourable Mention
Hackworthy, Arthur	13	Drawing	,,
Berry, Ada	12	Needlework	First degree of Merit
Cameron, Janet	13	,,	Honourable Mention
Gulliver, Ettie	11	,,	,,
Farnham, Mary	12	,,	Highly Commended
Martin, Emma	12	,,	Honourable Mention
Martin, Eliza	14	,,	,,
Martin, Julia	10	,,	,,
Norman, Emily	14	,,	,,
Walsh, Nora	15	,,	,,
Wilkins, Jessie	11	,,	,,
William-street Public School.			
Browne, Mary	15	Drawing	Commended
Formsby, Jessie	17	,,	Highly Commended
Simpson, May	15	,,	,,
Simpson, May	15	Illumination	Commended
Smithers, Gertrude	14	Drawing	Honourable Mention
Anderson, Jessie	12	Needlework	First degree of Merit
Ayres, Bessie	14	,,	,,
Armstrong, Alice	16	,,	,,
Baird, Nelly	14	,,	Highly Commended
Bozon, Daisy	12	,,	Commended
Clarke, Clara	14	,,	,,
Campbell, Priscilla	14	,,	Highly Commended
Cummins, Lizzie	14	,,	First degree of Merit
Drake, Louisa	17	,,	Commended
Duff, Nelly	13	,,	,,
Edwards, Jeannie	15	,,	First degree of Merit
Fitzgerald, Mary A.	15	,,	Highly Commended
Fitzpatrick, Kate	19	,,	Commended
Hamilton, Emonie	12	,,	Highly Commended
Holt, Jessie	13	,,	Commended
Norton, Ada	15	,,	Honourable Mention
Parr, Alice	17	,,	Highly Commended
Parr, Lizzie	18	,,	,,
Smith, Annie	12	,,	,,
Smithers, Gertrude	14	,,	Commended
Smithers, Ada	11	,,	,,
St. Julian, Blanche	13	,,	,,
St. Julian, Eleanor	16	,,	,,
Taylor, Emily	13	,,	Honourable Mention
Watson, Katie	15	,,	Commended
Watson, Mary	17	,,	,,
Whysall, Nelly	15	,,	,,
Williamstown Public School.			
Boyce, Emily	11	Drawing	Honourable Mention
Blackwood, Horatio	14	,,	,,
Wilton Public School.			
Kemiff, Michael	14	Drawing	Honourable Mention
Best, Catherine	14	Needlework	Commended
Spearin, Eliza	14	,,	Honourable Mention

CLASSES 300–306.—*Educational Systems, Methods, and Libraries.*

Name.	Age.	Exhibit.	Award.
Windsor Public School.			
Anderson, Rosanna	13	Drawing	Highly Commended
Birckleman, Adolphus	11	,,	,,
Carroll, William	13	,,	,,
Lane, James	12	,,	Honourable Mention
Anderson, Rosanna	13	Needlework	Commended
Anderson, Annie	15	,,	Highly Commended
Busby, Lizzie	12	,,	,,
Dick, Maggie	11	,,	,,
Dyer, Minnie	12	,,	Commended
Johnson, Emma	14	,,	Highly Commended
Lane, Clara	14	,,	,,
Linsley, Kate	12	,,	Commended
Linsley, Minnie	14	,,	,,
Maisey, Jane	11	,,	Honourable Mention
Mortley, Sarah	14	,,	Commended
Redshaw, Agnes	15	,,	Honourable Mention
Turnbull, Clara	15	,,	,,
Teale, Lavinia	16	,,	First degree of Merit
Wall, Ada	11	,,	Highly Commended
Wollombi Public School.			
Macfarlane, Hagar	17	Drawing	Honourable Mention
Wollongong Public School.			
Anstey, Fanny E.	11	Needlework	Commended
Beattie, Julia	13	,,	First degree of Merit
Dobinson, Fanny	12	,,	Highly Commended
Hill, S.	13	,,	Honourable Mention
Anstey, George W.	15	Drawing	Commended
Wollongong Church of England Certified Denominational School.			
Woollard, George	14	,,	Honourable Mention
Brown, Lily	13	Needlework	,,
Craig, Mary	11	,,	Commended
Davis, Bertha	9	,,	,,
Davis, Clara	14	,,	,,
Makin, Edith	11	,,	Highly Commended
Searle, Louisa	9	,,	First degree of Merit
Searle, Alice	14	,,	Honourable Mention
Woodville Public School.			
Harris, Charlie	15	Drawing	First degree of Merit
Harris, Nellie	16	,,	Honourable Mention
Wynn, Lily	16	,,	Commended
Woodville Church of England Certified Denominational School.			
Harris, Frank	12	Drawing	Highly Commended
Woonona Public School.			
Graham, Winifred	13	Needlework	First degree of Merit
Parkhill, Laura	12	,,	Highly Commended
Yass Public School.			
Beverley, Robert	14	Drawing	Commended

DEAF AND DUMB, AND THE BLIND—N.S.W. INSTITUTION FOR THE—Sydney.—Fancy Work. Highly Commended.

PALMER & SON, Mrs. J. S.—Sydney.—Ornithological Collection. Highly Commended.

PRESCOTT, H.—Sydney.—Embossed Writing for the Blind. Highly Commended.

RUSSELL, B.A., F.R.A.S., H.C., Government Astronomer—Sydney.—Meteorograph and Reflecting Telescope (of colonial manufacture). First degree of Merit Special.

Report—The meteorograph for recording barometrical and thermometrical changes, and indicating the direction and velocity of wind and rain, was shown in operation at the Garden Palace. This valuable instrument, together with the reflecting telescope, were manufactured within the Colony, under the supervision of the Government Astronomer, for the use of the important department of which he has the charge. [Though a Judge in this section, Mr. Russell had no part in this recommendation.]

TOST & ROHU, Mesdames—Sydney.—Museum of Natural History—Stuffed Birds. First degree of Merit.

QUEENSLAND.

ALDER, Anthony—Brisbane.—Natural History Group. First degree of Merit.

COXEN, Mrs. Charles—Brisbane.—Stuffed Birds. First degree of Merit.

DIGGLES, S.—Brisbane.—Exotic Beetles. Honourable Mention.

DIGGLES, S.—Brisbane.—Collection of Insects, &c. First degree of Merit.

GULLIVER, T. A.—Thornborough.—Collection of Native Birds. First degree of Merit.

HARTMANN, C. H.—Toowomba.—Collection of Insects injurious to Plants, &c. Commended.

Report—A very important and useful collection, but crowded and not very skilfully arranged.

JAMIESON, J. T.—Ipswich.—Natural History Group. First degree of Merit.

PILCHER, G. L.—Rockhampton.—Entomological Specimens. Highly Commended.

QUEENSLAND MUSEUM TRUSTEES—Brisbane.—Ceratodæ Fosterii (Fish), Live and Stuffed. Highly Commended.

ROBINSON, W. R.—Toowoomba.—Queensland Scrub Birds, Mounted. Commended.

STILLER & CO.—Moreton Bay.—Stuffed Dugong. Commended.

NEW ZEALAND.

BARRAUD, C. D.—Wellington.—Copy of "New Zealand Graphic." Commended.

BUCHANAN, F.L.S., John—Wellington.—Illustrations of Grasses and Alpine Plants of New Zealand, drawn on stone. First degree of Merit.

BURTON, Joseph R.—Wellington.—Specimens of Taxidermy. Highly Commended.

COLENSO, F.L.S., W.—Napier.—Early New Zealand, and Maori Publications. Honourable Mention.

COLONIAL MUSEUM—Wellington.—Ethnological Collection. First degree of Merit Special.

COLONIAL MUSEUM AND GEOLOGICAL SURVEY DEPARTMENT OF NEW ZEALAND—Wellington.—Collection illustrating the Geology and Natural History of New Zealand. First degree of Merit.

HAAST, Ph.D., F.R.S., Professor Julius Von, Director, Canterbury Museum—Christchurch.—Collection illustrating the Ethnology of New Zealand, &c. First degree of Merit.
Report—A fine collection.

JENNINGS, Edwin—Dunedin.—Stuffed Mammals, Birds, &c. Highly Commended.

ZOUCH, W. H.—Ashburton, Canterbury.—Stuffed Birds. Honourable Mention.

SOUTH AUSTRALIA.

BOOTHBY, C.M.G., Josiah—Adelaide.—Statistical Sketch of South Australia, and other Statistical Publications. Honourable Mention.

GRAY, W. F.—Adelaide.—Model representing system of Ventilation for Schools, &c. Honourable Mention.

SOUTH AUSTRALIAN COMMISSION—Adelaide.—Books printed for Government. Commended.

STRAITS SETTLEMENTS.

ROLLAND, J. B.—Kessang, near Malacca.—Ornithological Collection. First degree of Merit.

SWITZERLAND.

ALBRECHT, E.—Aarau.—Newspaper Printing. Honourable Mention.

WELLAUER, J., & MUELLER, J.—St. Gall and Uesslingen.—Statistics of Benevolent Institutions in Switzerland. Commended.

UNITED STATES.

BRUCE NEW YORK TYPE FOUNDRY—New York City.—Specimens of Printing Type, in book form. Honourable Mention.

COWPERTHWAITE & CO.—Philadelphia.—School Books, Text Books, and Charts. Commended.

Report—Novel and ingenious.

PRATT, D. C.—New York City.—School Slates, Crayons, and Pencils. Honourable Mention.

PRANG & CO., L.—Boston, Mass.—Natural History Series. Highly Commended.

CLASSES 307–312.

Scientific and Philosophical Instruments and Methods.

Omitting Class 310—*Horology, &c.*

JUDGES.

ADAMS, P. F., Surveyor General of New South Wales ... Sydney.

BECKMANN, E., Watchmaker ... ... Sydney.

BOUND, PAUL EDWARD, Watchmaker ... ... Sydney.

CRACKNELL, E. C., Superintendent of N. S. W. Telegraphs Sydney.

HARTE, GREGORY P. (Chairman) ... ... San Francisco, U.S.A.

MAGUIRE, W. H. ... ... Sydney.

RUSSELL, H. C., B.A., F.R.A.S., Government Astronomer Sydney.

SAVIGNON, F. DE, French Commissioner ... ... Paris, France.

SMITH, JOHN M'GARVIE, Jeweller ... ... Sydney.

Of the above Judges of this Group, Messrs. HARTE, RUSSELL, SMITH, BOUND, and BECKMANN, specially reported on CLASS 310—HOROLOGY.

MICROSCOPES.—CLASS 311.

MORRIS, WILLIAM, M.D. ... ... Sydney.

Expert.—WRIGHT, HORATIO GEORGE A., M.R.C.S.E. Sydney.

GROUP—Scientific and Philosophical Instruments and Methods.

CLASSES 307, 308, 309, 311, and 312.

AUSTRIA.

BURIAN, Otto—Imperial Austrian Navy.—Dromoscope.
First degree of Merit Special.

Report—A hurricane-dromoscope in model; a most valuable idea, as the instrument would enable any one, even a novice, to tell on which side of a hurricane he was, by merely setting this mechanical contrivance according to the observed winds.

FRANCE.

ARROUIT, Léon—Paris.—Aneroid-Barometers.
Highly Commended.

Report—An exhibit of good aneroids, from 2 to 7 inches in diameter, all of moderate price. We note particularly a new form of aneroid in which the hollow band is placed so that its lower end curves to or from the face, and this motion is made to act on the index, much in the same way as the motion of the ordinary round box. It is an obvious simplification, but trial alone can test it.

COLLOT—Paris.—Scales.
Highly Commended.

D'APICÉ, Charles—Sydney, N.S.W.—Arithmometer or Calculating Machine. Highly Commended.

Report—Comment on the value and utility of this well-known instrument is unnecessary.

DARSONVILLE, Henri—Paris.—Glass Instruments, Apparatus, &c., for Scientific Studies. First degree of Merit.

Report—Highly commended for excellence and variety of instruments in glass for scientific investigation.

DUCRETET ET CIE.—Paris.—Instruments of Precision, and Scientific Instruments for Physical Laboratories. First degree of Merit Special.

Report—This firm exhibits some of the most valuable and interesting philosophical apparatus for lecture and school purposes. Among the more noticeable of which are—A large Ruhmkorff coil, having plate glass ends, highly insulated, and generally faithfully made. With a battery of six bichromate elements we obtained a spark of nearly five inches in length and of good thickness.—A large and very excellent electro-magnet for the illustration of diamagnetism,

one of the discoveries of the late Professor Faraday.—A fine instrument by Foucault for showing the heating of a copper disc caused to rotate between the poles of two electro-magnets, exhibiting the existence of a strong resisting force.—A superior apparatus for illustrating De la Rive's experiment by which the electric arc is caused to rotate round the pole of a magnet, *in vacuo*.—A very sensitive Melloni galvanometer.—An excellent Weber galvanometer, wound differentially with fine wire of high resistance and having a bifilar reflecting needle suspension.—Another Weber galvanometer as above, but wound with coarser wire.—Thompson reflecting galvanometer, of high resistance, with scale lamp, &c., complete.—Two sensitive and valuable galvanometers, specially constructed for torpedo testing. Attached to the galvanometer and fitted in the same case is a zinc-copper element, forming a compact, safe, and portable means of readily testing a circuit for conductivity.—A Pouillet sine and tangent galvanometer—really an excellent instrument.—One Melloni cube thermopile.—One small Melloni thermopile, arranged so as to show the construction and manner of uniting and arranging the plates.—One Melloni thermopile, with attachments for adaptation to the analysis of radiant heat.—A Rheostat or set of resistance coils, adjustable from one to twenty Siemen's units, a most useful instrument for electrical testing; one Siemen's unit being 4·4 per cent. greater than the English Ohm.—A useful telescope for taking the readings of a reflecting galvanometer from an inverted scale below it.—A compound inclination and declination compass, carefully graduated.—An ingenious apparatus by M. L. Cailletet, for the liquefaction of gas by hydraulic action, deserves more than mere mention.

GUICHARD ET CIE, Simon—Paris.—Aneroid-barometers, Hydrometers, &c. First degree of Merit.

Report—A very fine exhibit of aneroids and several varieties of pressure gauges both for water and steam. We remark especially Decoudun's patent hydrometer for registering at a distance the level of fluids, which is a most useful invention, and under the tests applied to the model seems thoroughly reliable, and would be most useful in any large establishment where the quantity of liquid present in a number of vessels is required to be shown constantly, in the overseer's room, as in large wine cellars, or similar places. The prices of all these instruments are very moderate and the work good.

LAMY FILS, Auguste—Morez du Jura.—Spectacles and Eye-glasses. Honourable Mention.

Report—Various designs, good workmanship, and reasonable in price.

OYENS, Gérard—Paris.—Aneroid-barometers, Clocks, and Binoculars. Commended.

Report—Exhibits of fair quality, at a very low price.

PIFRE, Abel—Paris.—Mauchot's Apparatus for employing the heat of the Sun. Honourable Mention.

RENOUARD D'ADRIEN—Paris.—Commercial Scales. Commended.

GERMANY.

BREITHAUPT & SOHN, F. W.—Cassel.—Theodolites and Surveying Instruments. Highly Commended.

Report—Commended for excellent constructing and graduation of surveying, and drawing instruments. We note particularly the 7½-inch transit theodolite and a large V level, a pocket mining theodolite, with signals, and a miner's compass with suspensory apparatus.

DENNERT & PAPE—Altona.—Theodolites and Levels. Honourable Mention.

Report—Commended for an ingenious modification of the usual conical axis in theodolites and levels.

HAHN, A. & R.—Cassel.—Levelling Instruments. Highly Commended.

Report—Commended for an excellent exhibit of graduation in theodolites. We note especially the graduation of the horizontal circle of a 5-inch theodolite, fitted with tangent micrometer, and scale for use in determining angles of elevation and depression.

LEPPIN & MASCHE—Berlin.—Scientific and Technical Apparatus for Schools. First degree of Merit.

Report—General collection of electrical apparatus, adapted for students.

MESSLER, Eduard—Berlin.—Medical Coils, Vacuum Tubes, Telephones, Electric Batteries, &c. Highly Commended.

NAGLO GEBRÜDER—Berlin.—Telegraphic Instruments. First degree of Merit.

Report—One Morse set complete, connected upon neat base-board, comprising transmitting key, ink recorder, relay, galvanometer, and lightning-arrester, all of first-class workmanship and finish. A duplicate set of instruments not connected, but of equal quality and finish. A direct working recorder and key, suitable for military purposes, connected in a neat folding portable box. It may be well to mention that the system adopted in connection with telegraphy in New South Wales is that known as the single current or closed circuit system; the arrangement of the above instruments, when they are connected as in the exhibit first named, is not therefore suitable for this Colony. The relays would also require modification if introduced; but this is in no way noted as against the exhibits.

RICHTER & CO., E. O.—Chemnitz in Sachsen.—Mathematical Instruments. Highly Commended.

Report—Commended for variety, accuracy, and workmanship, with originality in these instruments for the use of draftsmen, lithographers, &c. The proportional compasses in this collection are worthy of special note.

CLASSES 307, 308, 309, 311, and 312.—*Scientific and Philosophical Instruments, &c.*

RIEFLER, Clemens—München.—Compasses and Drawing Instruments.
Commended.

Report—The exhibits of this firm are of good construction and workmanship, showing improvements in detail.

SCHRÖDER, Dr. Hugo—Hamburg.—Microscopes and Telescopes.
First degree of Merit.

Report—This firm shows an excellent 3-inch astronomical telescope, on tripod. We note the surprising power of a miniature telescope fitting into a walnut shell. The microscopes exhibited possess the characteristics of all German makers, viz., the loose horse-shoe foot to the stand, and fixed upright body, which is often so inconvenient and fatiguing when used for any length of time. There are no mechanical movements for stage, excepting the fine adjustment, which, by means of a screw acting as a lever, tilts up one end of the stage. The whole of this microscope is of the very best workmanship, but its construction is inconvenient, and strikes one accustomed to English microscopes as being far too heavy, and therefore clumsy. The eye-pieces and polarising apparatus are admirably made. The object glasses, five in number, range from 1 inch to $\frac{1}{8}$ inch; they are beautifully made, but cannot compare with the definition obtained by Ross's O.G. The $\frac{1}{8}$-inch works very close to the object, but could not be used with covering glasses exceeding 006 in thickness. The definition of this glass is very good, but not equal to the same power supplied by the best English makers.

SIEMENS & HALSKE—Berlin.—Electric-lamps, Reflectors, and Telegraph Material. First degree of Merit Special.

Report—This firm exhibits two small electric lamps of the Hefner-Alteneck pattern and carbons for same—one of their own small dynamo-machines—a light and handy parabolic reflector, suitable for ship purposes—a specimen coil of cable for electric lighting—some telephones and insulated wire.

GREAT BRITAIN AND IRELAND.

AVERY, William & Thomas—Birmingham.—Scales and Weighing Machines. Highly Commended.

Report—We carefully examined this exhibit, but could not understand the deadness or inflexibility of the balance, which might, however, be attributable to the neglect of those having the exhibit in charge. After a careful examination of the construction and the position of the knife-edges, we were forced to the conclusion that the same care had not been exercised in the construction of the scales and the right line of the knife-edge bearing upon the sockets as in other exhibits in the same class.

AVERY, William & Thomas—Birmingham.—Butchers' Scales.
First degree of Merit.

Report—We recommend that a first-class award be given for the Avery balance butchers' scales on agate bearings.

CLASSES 307, 308, 309, 311, and 312.—*Scientific and Philosophical Instruments, &c.*

BARKER & SON, Francis—London.—Magnetic Compasses and Scientific Instruments. Highly Commended.

Report—The exhibits of this firm are highly commended, especially for compasses, all of which are of excellent quality and moderate in price.

BEL & CO., August—London.—Chemical and Electrical Apparatus. First degree of Merit.

BLEWS & SONS, Wm.—Birmingham.—Standard Weights and Measures. First degree of Merit.

Report—The Judges find this the only exhibit of its class in the Exhibition; and, as they, without other tests, can only judge of the manufacture from the reputation of the firm, they adjudge an award as above.

BUSS, Thomas O.—London.—Hydrometers and Saccharometers. First degree of Merit.

CHESTERMAN & CO., James—Sheffield.—Tapes, Chains, Steel Rules, &c. First degree of Merit.

COWAN, W. & B.—London.—Gas Meters. First degree of Merit.

Report—These wet Gas Meters have an excellent compensating arrangement, and are not surpassed by any similar machines in use.

CUSHING, Thomas—London.—Levelling Instrument. Honourable Mention.

Report—Of peculiar construction, having the diaphragm and object-glass reversible in position, for convenience in adjustment. It is well and accurately made.

DOLLOND & CO.—London.—Sextants. First degree of Merit.

Report—Highly commended for design and good workmanship. One divided on gold, the other on silver. These instruments are the best of their kind in the Exhibition.

DOLLOND & CO.—London.—Telescopes. Highly Commended.

Report—Commended for the general good quality of the binocular and hand telescopes. The latter having only double objectives, were yet nearly equal to Ross's, and one, No. 5,941, a cheap glass, was worthy of high commendation.

DOLLOND & CO.—London.—Eirometer. First degree of Merit.

Report—This instrument is a microscope with a double-image micrometer, designed for measuring wool fibre. By removing the micrometer the microscope is available for ordinary work. This is a most useful instrument, and low in price.

CLASSES 307, 308, 309, 311, and 312.—*Scientific and Philosophical Instruments, &c.*

DOLLOND & CO.—London.—Pocket Compasses.

Honourable Mention.

Report—Commended for good quality and cheapness.

FARROW & JACKSON—London.—Hydrometers, Wine-Tests, &c.

Highly Commended.

GRIFFIN & SONS, John Joseph—London.—Wanklyn and Cooper's Moist Combustion process of Water Analysis.

First degree of Merit Special.

GLOVER & CO., George—London.—Gas-Measures, Holders, and Meters.

First degree of Merit Special.

Report—The standard gas-holder and measure forms a most useful apparatus for testing the accuracy of gas-meters. The "dry" meters are specially adapted for use in hot climates. There is exhibited a very interesting and excellent model, showing the construction and working of dry meters.

KENNEDY'S PATENT WATER METER CO. (Limited)—Kilmarnock, N.B.—Water-Meters. Highly Commended.

Report—An exact system of measuring by inflow through a cylinder with piston and valve, registering the distance travelled by the piston. This system is the most exact, but has the disadvantage of being somewhat cumbersome and costly, requiring exact finish, and at a high pressure, subjecting the roller-valve to great strain and wear, and frequent renewal.

KULLBERG, Victor—London.—Gas-Governor.

Honourable Mention.

Report—This is an instrument for regulating the amount of heat in the testing of chronometers. It is commended as a useful invention.

MIDDLETON, T. J.—London.—Magic-Lanterns and Lantern-Slides.

First degree of Merit.

Report—Magic-lanterns and dissolving-view apparatus; lantern slides, coloured and plain. We specially note in this exhibit an elegant triple lantern of excellent finish, and possessing all the most modern improvements, well suited for lecture purposes; also one biunial lantern, plated.

POOLEY & SON, Henry—Liverpool and London.—Scales.

Commended.

PRESTON, Edward—Birmingham.—Rules and Spirit Levels.

First degree of Merit.

Report—Exhibits perfectly accurate. They have more finish, but a higher price than similar goods shown by an American firm.

RABONE & SONS, John—Birmingham.—Steel and Metallic-Tapes.

First degree of Merit.

RABONE & SONS, John—Birmingham.—Rules, Tapes, and Levels.

First degree of Merit.

ROSS & CO.—London.—Telescopes.

First degree of Merit.

Report—The variety and excellence of this exhibit is worthy of special remark. The work is of high class throughout, and the objectives are triple and cemented. One binocular in aluminium proved, both in defining power and achromatic correction, the best of the kind in the Exhibition. The hand telescopes are all of high quality, and several were worthy of particular attention. No. 20517, $2\frac{3}{4}$-inch objective, is the best telescope in the Exhibition.

ROSS & CO.—London.—Microscopes.

First degree of Merit.

Report—This exhibit consists of eight microscopes and accessories, all of the very highest order of workmanship. The largest and most costly is the improved "Ross" model, which for steadiness in use is unsurpassed. The other instruments are made on the principle patented lately by Messrs. Ross, and known as the Zeutmayer stands. In this form the stage is made as thin as possible consistent with steadiness, so as to obtain very oblique illumination, and this is the more readily obtainable by means of a tail-piece, which carries the mirror and substage, and which can be swung any side to any required angle, and can be used with or without the condensing apparatus. It may be carried above the stage, and the mirror used as a condensing lens; the swinging is effected upon a centre, that is on a line with the optic axis intersecting the plane of the object on the stage. The stage can be removed from the microscope and may be fixed on either side at an angle of 45°, so as to view the sides of the objects under low powers. The whole of the condensing, polarizing, and other illuminating apparatus, together with the object-glasses, can be used readily with any one of the microscopes supplied by this firm. With respect to the mechanical construction and workmanship of this exhibit, it is as near perfection as possible, and several improvements are to be noted in the stands during the past two years, and since the Zeutmayer patent stage was first exhibited at the Paris Exhibition. The optical part now exhibited (object-glasses) consists of object-glasses ranging from the 4-inch to the $\frac{1}{10}$-inch. The lower powers are (4-inch to $\frac{1}{2}$-inch) fine in definition, and made in the most perfect manner. They show all the list for low powers, and are of varying angles of aperture. The $\frac{1}{2}$-inch o. g., with an angle of 80°, shows very distinctly the marking upon the pluma sigma angulatum, with the C and D eye-pieces, but they bear dress eye-pieces with loss of definition. This glass when used with the binocular prism is all that can be desired. The highest powers, the $\frac{1}{3}$ and $\frac{1}{10}$, are equally good in quality but of a low angle, but although they show the markings on the p. s. angulatum and the "Podura" scale, with great perfection, they fail to show the very fine marking on the Fonstula Saxonica, and the finer Rhomboides which can be readily seen by the very high-angled German and American glasses of equal magnifying power. The glasses, which have the collar adjustment for thickness of covering glass, are of an improved form—the cover moving the two inner lenses of the o. g., so that the distance of the front lens from the object remains unaltered, and thus the safety of the covering glass is not endangered, as in the old form of collar adjustment.

SAX, Julius—London.—Electrical Apparatus.

First Degree of Merit.

Report—This most useful and interesting exhibit consists of a large variety of excellent bells, indicators, telephones, "presses," and "pulls." The bells are of different sizes and tones, and are of excellent quality, all in circuit, some being in connection with hall or office indicators. The battery actuating them consists of several Leclanché elements, which are placed at the base of the case. A very useful burglar-alarm is also shown; it is sounded by the opening of a door or window, as may be desired—the bell continuing to ring until the opening of circuit is effected by the inmates. Surmounting the bells is an electric sign bearing the exhibitor's name, operated by two large cells of the gravity form. The indicators bespeak precision, and easy adjustment. Four telephones are shown, neatly arranged in cases with glass fronts, and are in circuit with call bells attached in the usual manner; the workmanship and quality of these are in keeping with the rest, and are a credit to the exhibitor. The exhibit of "presses," "pulls," &c., shows great perfection and taste.

TELEGRAPH CONSTRUCTION AND MAINTENANCE CO. (Limited)—London.—Specimens of Submarine Telegraph Cables.

First degree of Merit Special.

Report—Specimens of submarine telegraph cables, being lengths and sections of those from Europe to North America, Brazil, Egypt, India, China, Australia, Tasmania, New Zealand, and other parts, representing 63,000 statute miles in length.

TYLOR & SONS, J.—London.—Inferential Meter.

Highly Commended.

Report—An inferential meter, of good construction and apparent delicacy of movement, with adjustments to regulate the inflow within certain limits. Constructed in brass and gun metal; the working parts are not liable to rust, and should be quite durable.

NEW SOUTH WALES.

BLADEN, Frank M.—Sydney.—Telephones.

Highly Commended.

Report—A highly creditable collection of telephones, made of colonial woods, well finished and of good quality. Exhibitor claims to have effected some improvement on the "Bell" telephone, in the coil, diaphragm, and mouthpiece.

CRACKNELL, Major—New South Wales Torpedo Corps.—Torpedo Apparatus. First degree of Merit Special.

Report—Major Cracknell, of the Torpedo and Signalling Corps, exhibits a very interesting collection of apparatus used in connection with that branch of the Service. The "shutter" apparatus for testing and

exploding electro-contact mines; firing and observing arcs for ground mines, and all the most modern appliances of a kindred nature; a very excellent holophote, and lamp for electric lighting; also, Siemen's machine and lamps with holophotes and field reflectors, which it will be remembered did good service during the erection and completion of the Exhibition Building. As this collection was non-competitive, and was placed in the Exhibition at great trouble and inconvenience, we would recommend that a special award be given it.

ELECTRIC TELEGRAPH DEPARTMENT OF NEW SOUTH WALES—Sydney.—Collection of Electrical Instruments, showing the progress of Telegraphy. First degree of Merit Special.

Report—The Superintendent of the Electric Telegraph Department, Mr. E. C. Cracknell, exhibits a very interesting collection of scientific apparatus, including, amongst a large number of general electrical instruments, the various telegraph systems from the very earliest to the most modern class of instrument, notably Cooke and Wheatstone's 5-needle instrument; Henley's single and double needle; the Morse, from the earliest to the latest pattern; Siemen's automatic system; two or three systems of type-printing instruments; Sir Charles Wheatstone's automatic system, which, it may be mentioned, bears a world-wide reputation, and is most extensively used; the Duplex and Quadruplex systems, all in full working order; a powerful Ruhmkorff coil; a large variety of interesting tubes (vacuum), air-pump, &c., electro-magnetic engines, &c., &c. Not the least interesting is a complete set of Preeces railway block signalling apparatus. There is also exhibited apparatus for cable signalling and testing, including Sir William Thomson's very excellent "mirror" galvanometer, and a large variety of different battery elements. There are also two charts, one 12 feet by 8, showing the routes of telegraphic communication from New Zealand, Tasmania, and Australia, to China, India, and Europe; and the other, 8 feet square, showing the routes of communication in the Colony of New South Wales. These charts have been drawn and enlarged by an officer of the Department, and as works of reference are of a most valuable and comprehensive character. As this collection was placed before the public at considerable expense and inconvenience, and during the Exhibition proved itself one of the most attractive to visitors generally, besides possessing the greatest interest for persons of a scientific turn of mind, we would recommend that a special award be given, seeing that the exhibits were of a non-competitive character.

FLAVELLE BROTHERS AND ROBERTS—Sydney.—Surveying Instruments, &c. Highly Commended.

Report—A very fine exhibit of surveying, mathematical, and scientific instruments.

HEWETT, T. E.—Sydney.—Microscope Preparations of Australian Subjects. First degree of Merit.

Report—An excellent exhibit of microscopic subjects, arranged and mounted by exhibitor.

SHARP, Henry—Adelong.—Microscopic Subjects and Brass Mounting Tables. First degree of Merit.

Report—Beautifully mounted microscopic subjects, also two brass mounting tables, manufactured by exhibitor.

QUEENSLAND.

WEABER, Henry—Brisbane.—Spectacles. Highly Commended.

Report—For finish of fitting.

SWITZERLAND.

KERN, J—Aarau.—Mathematical Instruments. Commended.

Report—Commended for excellence of manufacture, and production at a low price.

UNITED STATES.

FAIRBANKS & CO.—St. Johnsbury, Vermont.—Scales. First degree of Merit Special.

Report—We adjudge Messrs. Fairbanks & Co. to have exhibited the largest and most complete assortment of scales for all purposes, from heavy truck scales to delicate chemist's scales, shown at this exhibition. We find the same uniformity of skilful manufacture in all their scales, and the same requisite sensibility of balance. The most severe tests of the quality of the materials employed prove the uniformity and excellence of the same in every part. The variety of manufacture and modifications of form and adaptability of the scales of this firm exceed all the other combined exhibits in the Exhibition—all the designs having originated with the firm. They show over thirty patents for improvements made in the manufacture since the establishment of the manufactory. The levers being all in a direct line and free from torsion, with a simple beam combination, make them less liable to error than any scale we examined. By a new process of surface carbonization, the pivot sand bearings, made from the toughest "Bessemer" steel, are rendered hard as agate, without destroying to any appreciable extent their tensile strength, and by a scientific and practically tested distribution of weight and strength, the scales are lighter than any others of equal capacity. The system of suspending the weigh-bridge platforms on swivels, with corner lockings, is specially to be commended, as there can be no unequal settling or strain upon the levers, and the transmission of the strain in a vertical line prevents any cramp of the levers. By the system of levers shown there is practically no limit to

the modifications of form of platform and adaptability to every conceivable want. There are already over eight hundred modifications now in use, including the balance and tray scales. The different parts being made by machinery and first tested to standard gauge, are all interchangeable, the beam of any 10-ton scale being equally serviceable for any other scale of the same capacity. Check-rods are used on all platform scales the same as former lockings upon the weigh-bridges, which prevent any oscillations upon the knife-edges of the pivots, and must necessarily greatly increase the longevity of the scale and preserve the sensibility of the balance. In view of the many practical advantages which this scale possesses over any and all exhibited, and as a collective exhibit showing the perfection now arrived at by the genius of one family, we recommend a special distinction, diploma, or medal, to Messrs. Fairbanks, in addition to what would be simply a first-class award.

HOWE SCALE CO.—Rutland, Vermont.—Scales.

First degree of Merit.

Report—The same delicate sensitiveness of the balance observable in the Fairbanks' is noticeable in this scale, but the degree of oscillation to the platforms is so marked that we greatly fear the wearing qualities of the scale. Whilst new there can be no appreciable advantage, one over the other, but we think the ball system with the continuous oscillation must produce an unnecessary wear of the bearings.

STANLEY RULE AND LEVEL CO.—New Britain, Conn.—Rules and Levels. First degree of Merit.

Report—These exhibits are equal in accuracy to those shown by Edward Preston, of Birmingham, England, and much cheaper in price, but they are not so well finished.

VICTORIA.

EDWARDS, John E.—Melbourne.—Microphone Transmitters.

First degree of Merit.

EDWARDS, John E.—Melbourne.—Telegraph Apparatus and Electric-Bells. Highly Commended.

Report—Not original, but of good workmanship and finish.

JENNINGS, James—Melbourne.—Spectacles.

Highly Commended.

Report—For finish of fitting.

CLASS 310.

Chronometric Apparatus, Chronometers, Astronomical Clocks, Watches, Chronographs, &c., &c.

JUDGES.

BECKMANN, E.	Germany.
BOUND, P. E.	Switzerland.
HARTE, GREGORY P. (Chairman)	United States.
RUSSELL, H. C., B.A., F.R.A.S.	Great Britain.
SMITH, JOHN M'GARVIE	New South Wales.

CLASS 310.—Chronometric Apparatus, Chronometers, Astronomical Clocks, Watches, Chronographs, &c.

To the Committee on Judging and Awards, Sydney International Exhibition.

Gentlemen,—I have the honour to hand you herewith the report of the Judges of Class 310, as above

And remain, sirs, your obedient servant,

GREGORY P. HARTE,
Chairman.

The following exhibits were submitted for examination :—

U. S. Exhibit, 537, American Watch Company, Waltham, Mass., U.S.A. Watches and Chronographs.

British Exhibit, 1048, Victor Kullberg, London, England—Watches and Chronographs.

British Exhibit, 1054, Nicole & Nielsen, London, England—Watches and Chronographs, &c.

British Exhibit, 1060, T. Russell & Sons, London, England—Watches, Chronographs, &c.

British Exhibit, 1041, Castelberg & Co., London, England—Watches, &c.

British Exhibit, 1060a, F. Bachschmid, Switzerland—Watches.

New South Wales Exhibit, 492a, F. Allerding & Sons, Sydney, N.S.W.,—Tools, &c.

German Exhibit, 369, Würtemberg Clock Factory, Schwenningen in the Schwarzwald, Germany—Watchmen's and Railway Control Clocks.

German Exhibit, 364, A. Lange and Sons, Dresden, Germany—Watches, &c.

Swiss Exhibit, L. Audemars, Brassus, Switzerland—Watches, &c.

French Exhibit, 174, A. H. Rodanet, Paris, France—Chronometers.

French Exhibit, 177, G. Tribaudeau, Besançon, France—Watches.

Swiss Exhibit, 14a, International Watch Company—Watches.

In presenting the following report, we desire to make some explanations, which, we trust, will excuse us in the minds of the impartial for any apparent neglect in the form of our report, and for the limited number of tests made of the horological exhibits.

We were appointed too late to do the fullest justice we should have desired, inasmuch as the number of exhibits was so much in excess of any reasonable allotment of time for examination and report before the closing of the Exhibition.

Commencing our labours, however, immediately after the first call, the examinations were not complete until March 3rd, which only permitted a time test to be made of nine days in a single position. This single position test was objected to by some of the exhibitors, but ill-advisedly, for the ratings observed in the watches of the objecting exhibitors were of such character

as to establish in the minds of the Judges the conclusion that their watches would not have made so good a comparative showing if there had been more time to observe the ratings in other positions.

Great care was taken by us individually in making up our note-books during the examination of the watches, and scrutinising the inherent and comparative merits of the exhibits under the ten different heads unanimously agreed upon as follow :—

1. Originality.
2. Invention and discovery.
3. Utility and quality of material.
4. Skill in workmanship.
5. Fitness for purposes intended.
6. Adaptation to public wants.
7. Economy.
8. Cost.
9. Finish and elegance of cases.
10. Time-keeping qualities.

It was agreed that we should use the number 100 as expressing the highest degree of excellence in each of these ten elements of inherent and comparative merit, and to adjudge individually to each of the several exhibits such rating as our respective judgments would warrant after careful examination ; each set of opinions being made a portion of this report, and in the *résumé* the mean average being taken as our unanimous verdict.

It was also decided we should take up each exhibit in the order originally examined, and beginning with the first element of merit (originality), each Judge should in numbers express his judgment of the inherent and comparative merit attaching to each exhibit in this one element ; this being done, to proceed with each succeeding element in order and in the same manner. The five judgments being complete, and in numbers, the aggregated verdict is arrived at simply by addition and division.

This is not only a verdict as to the inherent comparative merits of each exhibit, but also a full analysis of each order of merit in any exhibit, as compared with all the others.

Names of Exhibitors.	Originality.	Invention and discovery.	Utility and quality of material.	Skill in workmanship.	Fitness for purposes intended.	Adaptation to public wants.	Economy.	Cost.	Finish and elegance of cases.	Time-keeping qualities.	Totals.
American Watch Co ...	100	100	100	100	100	100	100	100	100	100	1000
Victor Kullberg.....	0	0	60	60	90	60	50	60	60	95	535
Nicole & Nielsen	10	10	60	50	60	50	40	40	60	75	455
T. Russell & Sons	0	0	20	20	25	30	20	30	40	50	235
Castelberg & Co.....	0	0	30	25	30	40	25	35	40	50	275
F. Bachschmid	0	0	10	10	0	10	10	10	10	0	60
A. Lange & Sons	25	20	60	70	90	75	50	75	60	90	615
Louis Audemars	100	20	60	60	50	30	25	40	60	70	515
G. Tribaudeau	0	0	30	25	25	30	25	45	30	0	210
International Watch Co.	0	0	10	15	10	10	25	25	30	0	125

J. M. SMITH.

CLASS 310.—*Chronometers, Clocks, Watches, &c.*

Names of Exhibitors.	Originality.	Invention and discovery.	Utility and quality of material.	Skill in workmanship.	Fitness for purposes intended.	Adaptation to public wants.	Economy.	Cost.	Finish and elegance of cases.	Time-keeping qualities.	Totals.
American Watch Co....	100	75	75	75	100	100	100	100	100	100	925
Victor Kullberg.....	0	0	60	100	100	75	75	75	80	100	665
Nicole & Nielsen	25	25	40	50	75	75	50	40	70	80	530
T. Russell & Sons	40	0	40	50	50	50	25	30	50	50	385
Castelberg & Co.....	0	0	30	25	25	40	25	30	40	50	265
F. Bachschmid	0	0	10	10	10	10	10	10	10	0	70
A. Lange & Sons	50	25	60	75	90	80	75	75	70	90	690
Louis Audemars.....	100	25	80	100	100	80	80	75	80	80	800
G. Tribaudeau	0	0	10	25	25	25	25	25	25	0	160
International Watch Co.	0	0	30	30	50	50	70	75	40	0	345

P. E. BOUND.

Names of Exhibitors.	Originality.	Invention and discovery.	Utility and quality of material.	Skill in workmanship.	Fitness for purposes intended.	Adaptation to public wants.	Economy.	Cost.	Finish and elegance of cases.	Time-keeping qualities.	Totals.
American Watch Co...	100	100	100	100	100	100	100	100	100	100	1000
Victor Kullberg.....	0	0	100	80	90	40	40	70	70	95	585
Nicole & Nielsen	30	0	50	60	80	50	40	30	70	80	490
T. Russell & Sons	0	0	20	30	40	30	20	20	40	30	230
Castelberg & Co.....	0	0	30	40	50	40	25	30	40	60	315
F. Bachschmid	0	0	10	10	0	10	10	10	10	0	60
A. Lange & Sons	60	40	70	90	80	70	50	75	80	85	700
Louis Audemars.....	90	20	70	90	80	60	40	50	80	80	660
G. Tribaudeau	0	0	10	20	15	10	10	10	10	0	85
International Watch Co.	0	0	40	40	40	50	30	60	40	0	300

H. C. RUSSELL.

Names of Exhibitors.	Originality.	Invention and discovery.	Utility and quality of material.	Skill in workmanship.	Fitness for purposes intended.	Adaptation to public wants.	Economy.	Cost.	Finish and elegance of cases.	Time-keeping qualities.	Totals.
American Watch Co...	90	100	100	90	100	100	100	100	100	100	980
Victor Kullberg.....	0	0	80	80	90	50	70	60	80	95	605
Nicole & Nielsen	50	50	60	80	75	75	70	50	90	80	680
T. Russell & Sons	0	0	20	20	20	20	25	25	40	50	220
Castelberg & Co.....	0	0	25	20	35	35	25	35	40	50	265
F. Bachschmid	0	0	15	15	15	20	20	10	10	0	105
A. Lange & Sons	40	50	80	90	90	80	80	80	80	90	760
Louis Audemars.....	100	30	80	100	90	50	25	50	80	85	690
G. Tribaudeau	0	0	20	0	10	10	15	25	10	0	90
International Watch Co.	0	0	30	30	40	50	40	60	30	0	280

E. BECKMANN.

CLASS 310.—*Chronometers, Clocks, Watches, &c.*

Names of Exhibitors.	Originality.	Invention and discovery.	Utility and quality of material.	Skill in workmanship.	Fitness for purposes intended.	Adaptation to public wants.	Economy.	Cost.	Finish and elegance of cases.	Time-keeping qualities.	Totals.
American Watch Co.	100	100	100	100	100	100	100	100	100	100	1000
Victor Kullberg	0	0	85	80	75	40	50	60	75	95	560
Nicole & Nielsen	25	25	50	50	60	50	40	30	80	85	495
T. Russell & Sons	0	0	25	30	30	40	20	25	40	40	250
Castelberg & Co. ...	0	0	30	40	35	50	25	30	50	55	315
F. Bachschmid	0	0	10	10	10	25	10	10	10	0	85
A. Lange & Son ...	50	30	70	90	80	60	40	90	85	90	685
Louis Audemars	100	25	75	75	80	50	50	75	80	80	690
G. Tribaudeau	0	0	10	15	15	20	15	10	25	0	110
International Watch Co.	0	0	30	30	30	65	40	75	30	0	300

GREGORY P. HARTE.

Names of Jury.	American Watch Co.	V. Kullberg.	Nicole & Nielsen.	T. Russell & Sons.	Castelberg & Co.	F. Bachschmid.	A. Lange & Sons.	L. Audemars.	G. Tribaudeau.	International Watch Co.
Originality.										
J. M' G. Smith.....	100	...	10	...	...	...	25	100	...	...
P. E. Bound	100	...	25	40	...	...	50	100	...	...
H. C. Russell...	100	...	30	...	...	...	60	90	...	...
E. Beckmann.....	90	...	50	...	...	...	40	100	...	...
Gregory P. Harte.....	100	...	25	...	...	...	50	100	...	...
	490	...	140	40	...	...	225	490	...	...
Invention and discovery.										
Smith	100	...	10	...	...	...	20	20	...	...
Bound.....	75	...	25	...	...	...	25	25	...	...
Russell	100	...	...	...	...	...	40	20	...	...
Beckmann	100	...	50	...	...	...	50	30	...	...
Harte	100	...	25	...	...	...	30	25	...	...
	475	...	110	...	...	...	165	120	...	...
Utility and quality of material.										
Smith	100	60	60	20	30	10	60	60	10	30
Bound.....	75	60	40	40	30	10	60	80	10	30
Russell	100	100	50	20	30	10	70	70	10	40
Beckmann	100	80	60	20	25	15	80	80	10	30
Harte	100	85	50	25	30	10	70	75	10	30
	475	385	260	125	145	55	340	365	50	160
Skill in workmanship.										
Smith	100	60	50	20	25	10	70	60	15	25
Bound.....	75	100	50	50	25	10	75	100	25	30
Russell	100	80	60	30	40	10	90	90	20	40
Beckmann	90	80	80	20	20	15	90	100	20	30
Harte	100	80	50	30	40	10	90	75	15	30
	465	400	290	150	150	55	415	425	95	155

CLASS 310.—*Chronometers, Clocks, Watches, &c.*

Names of Jury.	American Watch Co.	V. Kullberg.	Nicole & Nielsen.	T. Russell & Sons.	Castelberg & Co.	F. Bachschmid.	A. Lange & Sons.	L. Audemars.	G. Tribaudeau.	International Watch Co.
Fitness for purposes intended.										
Smith	100	90	60	25	30	0	90	50	10	25
Bound	100	100	75	50	25	10	90	100	25	50
Russell	100	90	80	40	50	0	80	80	15	40
Beckmann	100	90	75	35	40	15	90	90	10	40
Harte	100	75	60	30	35	10	80	80	15	30
	500	445	350	180	180	35	430	400	75	185
Adaptation to public wants.										
Smith	100	60	50	30	40	10	75	30	10	30
Bound	100	75	75	50	40	10	80	80	25	50
Russell	100	40	50	30	40	10	70	60	10	50
Beckmann	100	50	75	20	35	20	80	50	10	50
Harte	100	40	50	40	50	25	60	50	20	65
	500	265	300	170	205	75	365	270	75	245
Economy.										
Smith	100	50	40	20	25	10	50	25	25	25
Bound	100	75	50	25	25	10	75	80	25	70
Russell	100	40	40	20	25	10	50	40	10	30
Beckmann	100	70	70	25	25	20	80	25	15	40
Harte	100	50	40	20	25	10	40	50	15	40
	500	285	240	110	125	60	295	220	90	205
Cost.										
Smith	100	60	40	30	35	10	75	40	25	45
Bound	100	75	40	30	30	10	75	75	25	75
Russell	100	70	30	20	30	10	75	50	10	60
Beckmann	100	60	50	25	35	10	80	50	25	60
Harte	100	60	30	25	30	10	90	75	10	75
	500	325	190	130	160	50	395	290	95	315
Finish and elegance of cases.										
Smith	100	60	60	40	40	10	60	60	30	30
Bound	100	80	70	50	40	10	70	80	25	40
Russell	100	70	70	40	40	10	80	80	10	40
Beckmann	100	80	100	40	40	10	60	80	10	30
Harte	100	75	80	40	50	10	85	80	25	30
	500	365	380	210	210	50	355	380	100	170
Time-keeping qualities.										
Smith	100	95	75	50	50	...	90	70	...	...
Bound	100	100	80	50	50	...	90	80	...	...
Russell	100	95	80	30	60	...	85	80	...	...
Beckmann	100	95	80	50	50	...	90	85	...	...
Harte	100	95	85	40	55	...	90	80	...	...
	500	480	400	220	265	...	445	395	...	...

CLASS 310.—*Chronometers, Clocks, Watches, &c.*

Résumé of individual opinions and final verdict of the whole Jury, expressed in figures.

Name of Exhibitors.	Originality.	Invention and discovery.	Utility and quality of material.	Skill in workmanship.	Fitness for purposes intended.	Adaptation to public wants.	Economy.	Cost.	Finish and elegance of cases.	Time-keeping qualities.	Totals.
American Watch Co.	98	95	95	93	100	100	100	100	100	100	981
Victor Kullberg.....	0	0	77	80	89	53	57	65	73	96	590
Nicole & Nielsen	28	22	52	58	70	60	48	38	76	80	532
T. Russell & Son	8	0	25	30	36	34	22	26	42	44	267
Castelberg & Co.	0	0	29	30	36	41	25	32	42	53	288
F. Bachschmid	0	0	11	11	7	15	12	10	10	0	76
A. Lange & Sons	45	33	68	83	86	73	59	79	71	89	686
Louis Audemars.....	98	24	73	85	80	54	44	58	76	79	671
G. Tribaudeau	0	0	10	19	15	15	18	19	20	0	116
International Watch Co.	0	0	32	31	37	49	41	63	34	0	287

The foregoing tables have been prepared in the following order :—

First.—Five tables, representing the judgment of each of our number upon each of the ten exhibits, and upon each of the ten elements of inherent and comparative merit ; each of the five tables having the name of its author at the bottom, and the total number of points awarded to each exhibit in the righ-hand column.

Second.—As each of the elements of inherent and comparative merit is not of the same exact value, the second set of tables is prepared, showing the number of points awarded by the whole of the Judges to each exhibit upon each of the ten separate elements of merit. This table, we trust, may be found of interest, showing as it does a remarkable uniformity of judgment, and presenting a digest of the result of a long and critical examination of every watch presented for competition, in all its parts, and for whatever purpose intended. The relative or comparative merit of each exhibit is readily discerned, and the same are correctly stated ; and that our judgments were influenced only by the facts developed in the examinations is evidenced in the figures of each Judge approximating a certain mean in each case.

Third.—The final table is simply a *résumé* of the two preceding sets ; and, assuming the standard of greatest excellence to be 100 in each of the ten elements of merit, this table gives the combined judgment of the five Judges upon each of these ten points as to each of the ten exhibits, and the sum of the same in each exhibit. This then being the result of our judgment, expressed in hundreds as to each of the ten elements of merit, produces a result in parts of 1,000 as to each separate exhibit. In giving this verdict, it was absolutely necessary to ascertain to the fullest extent the time-keeping qualities of the exhibits. We were led to this conclusion from the fact that, in some of the exhibits, we were shown watches of equal finish, containing every known application of horological science in practically the same construction, which should, as far as we could determine by merely optical examination, keep quite

as good time as watches of double and treble the cost in other exhibits, thus involving our judgment in doubt upon several elements of merit.

In justice to ourselves and to the exhibitors, we determined to make the test in only one position, and give the whole of the time at our disposal to testing the watches in what might be considered their normal position, if such term is allowable—that is, "pendent" or hanging up.

At our solicitation, Mr. H. C. Russell, Astronomer-Royal at the Sydney Observatory, kindly consented to make the tests, and each of the exhibitors was requested to send three watches of his own selection to the Observatory for this trial.

As will be seen by the report of Mr. Russell, eight of the ten exhibitors availed themselves of this opportunity. It is proper, however, to state here that none of the exhibitors apparently anticipated this test, and that it is possible some of the watches might have made a better record if they had been differently attended to since the opening of the Exhibition; but they were in this respect all upon a par.

The majority of the watches had been made for Exhibition purposes, and specially prepared to that end, and some had been previously rated at observatories before sending.

Notably, however, to the contrary of the above, the exhibit of the American Watch Company was the ordinary and regular product of the factory, such as is finished every day.

Notwithstanding the possibility that these exhibits might have been better prepared for Observatory time-tests, some of the exhibits, as will be seen by the rating, demonstrate the wonderful advances made in the application of horological science to the manufacture of watches, and that their rating is being made equal to that of the best marine chronometers.

The following is the report of Mr. Russell; and the accompanying diagram will readily give an idea of the comparative performances of the different watches :—

Sydney Observatory, 26 February, 1880.

Gregory P. Harte, Esq.,
Chairman of the Judges in Horology.

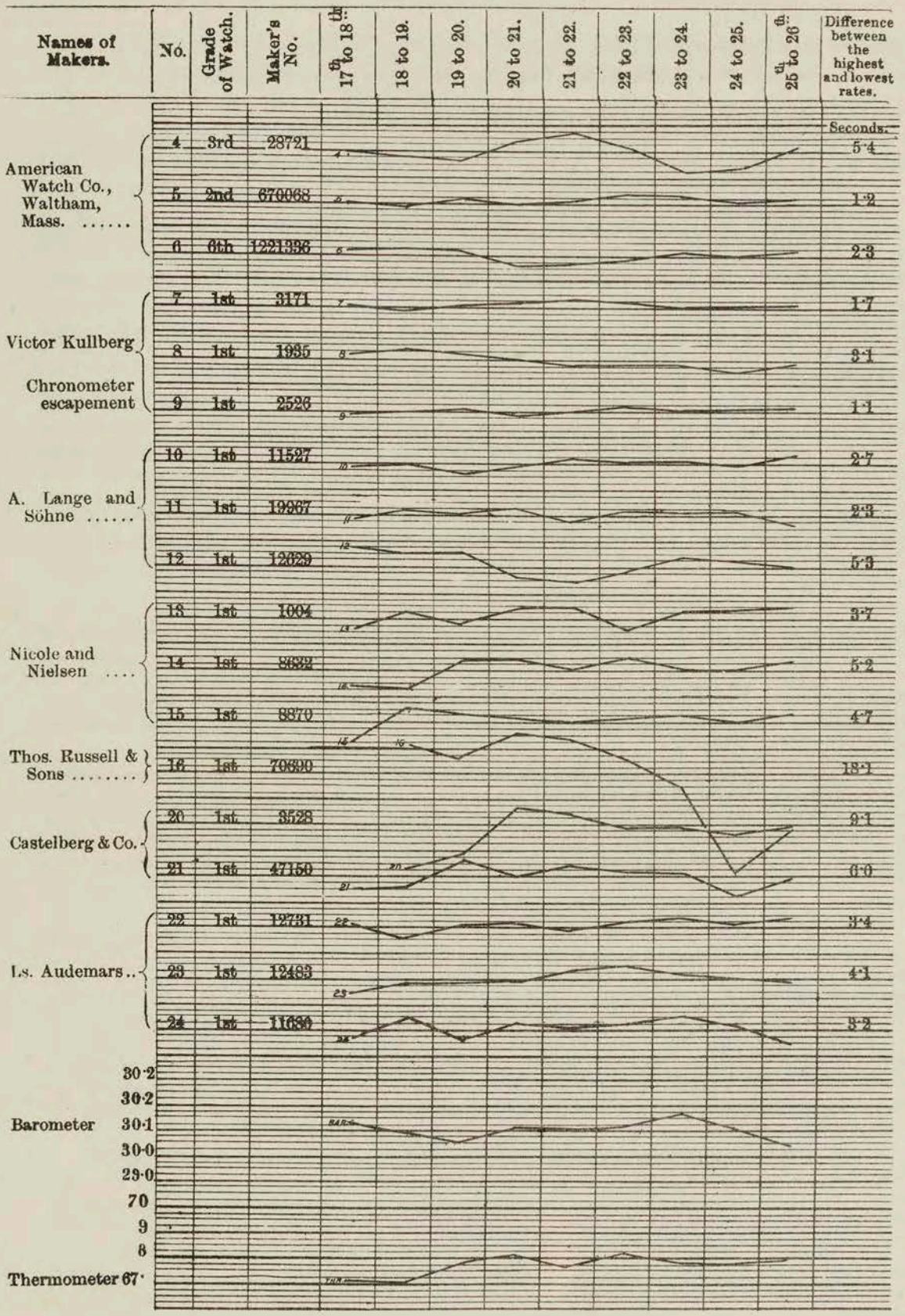
Sir,—I have the honour to report that, in response to your circular, inviting exhibitors of watches each to send three watches to the Observatory to be tested, I received on Monday, February 16th—

Three watches, Nos. 611, 669, 237, from Mr. Dolman, agent for G. Tribaudeau, of Besançon.
Three watches, Nos. 987,271, 670,068, 1,221,336, from Mr. Donald Manson, agent for Waltham Watch Company.
Three watches, Nos. 3,171, 1,935, 2,526, from Mr. Allerding, agent for Mr. Kullberg.

And on the forenoon of February 17th—

Three watches, Nos. 11,527, 19,967, 12,629, from Mr. Hoffnung, agent for Lange & Söhne.
Three watches, Nos. 1,004, 8,632, 8,870, from Mr. Jacob, as agent for Nicole & Nielson.
Three watches, Nos. 70,690, 23,496, 113,516, from Mr. Jacob, as agent for Thomas Russell & Sons.
One watch, No. 47,150, from Mr. Jacob, as agent for Castelberg.
Three watches, Nos. 12,731, 12,483, 11,680, from Mr. Wiesener, as agent for L. Audemars.

DIAGRAM showing the change of Rate in Watches tested at the Observatory, Sydney, February 17th to 26th, 1880.



H. C. RUSSELL,
Royal Observatory,
Sydney, N.S.W.

And on 18th February—

Two watches, Nos. 2,724, 3,528, from Mr. Jacob, as agent for Castelberg.

On the 17th I began rating these watches, keeping them all in one position (hanging), and subject to the same conditions of temperature; in fact they were all hung on one board and kept in a compartment locked up, so as to avoid change of temperature, except such changes as were due to changes in the weather.

They were rated once a day by the standard clock, which affords special convenience for this work, and the error of which was found by daily astronomical observations giving the absolute time; great care was taken in rating so as to get the exact error of each watch every day, care being taken at the same time to avoid errors in the seconds dials, a fault sufficiently obvious in some of these exhibits.

In presenting the result of this test in the form of a diagram [*see diagram*] it is necessary to explain that the curves show only the change of rate in each case, and nothing is shown here of the actual rate, which was large in several instances.

In the diagram the spaces between faint lines represent seconds; and the thicker faint lines represent the mean rate in each case. When the curve rises, it shows that the watch was gaining on its previous rate, and when it falls the watch was losing on its previous rate. For example, in No. 4 curve, the thicker line shows the position of a gaining rate of 3 sec. per day; on the 18th, watch No. 4 had a gaining rate of 2·7 sec., and is plotted below the thick line; on the 19th and 20th it was less than 3 sec., but on 21st the rate increased to 4·8 sec., and the curve rises above the line. The same rule is followed with losing rates, and therefore each curve shows whether the watch was gaining or losing on its own rate.

For convenient reference the barometer and temperature curves are plotted on the same sheet. Although from the short time at command the watches could only be tested in one position, a glance at the diagram will show that in some degree at least the temperature adjustment and the isochronal properties of the balance springs were also tested; and I wish to call your attention to the fact that the whole of these watches show in a more or less degree a marked response to the changes in temperature, some being over and others under corrected.

This fact is important, because it adds another proof that the old form of compensation balance, even when combined with chronometer spring and escapement, and all the refinements which the best modern workman can add to it, fails to yield a complete correction for temperature; and I much regret that the American Watch Company, who claim to have overcome this fault by means of a balance involving a new arrangement of the metals, did not send to be tested any of their first-class watches containing this important improvement.

Several of the rate curves, especially Nos. 4, 10, 13, 16, 21, and 24, respond to the change in the barometer in a way that shows the isochronal properties of their balance springs are not quite perfect. Looking down the curve, it becomes at once evident that watch No. 5, which is No. 670,068, second grade, of the American Watch Company, remarkably free from these defects, and presents the best rate of all the watches tested. No. 9, which is No. 2,526, Kullberg, is the nearest approach to No. 5; indeed the difference between its highest and lowest rates is 0·1 sec. less than No. 5, but it has not such a steady rate. The time-keeping of both these watches is remarkably good, and shows that we have entered upon a new era in the manufacture of pocket chronometers; for these rates are better than the majority of marine chronometers.

Amongst the cheaper watches tested, No. 6, which is 1,221,336 of the American Watch Company, is worthy of notice; it is a watch of the sixth grade, yet its performance has been better than that of many very expensive and otherwise first-class watches amongst those tested; such a watch speaks volumes in favour of the system under which it was made, and is the best comment upon the accuracy of the machines that produced it.

There are several watches amongst those tested which have kept wonderfully steady rates, but their comparative merit is shown in the diagrams much better than it could be by any description. The daily rate of each watch will be found in a table attached.

The changes in Nos. 1, 2, 3, 17, and 19 were too great to plot.

H. C. RUSSELL,
Government Astronomer.

RATES OF WATCHES TESTED AT THE OBSERVATORY, SYDNEY, FEBRUARY 17TH TO 26TH, 1880, SHOWING DAILY GAIN OR LOSS OF EACH EXHIBIT.

Number.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Maker's Number.	611	669	2370	987271	670068	1221336	3171	1935	2526	11527	19967	12629	1004	8632	8870	70690	23496	113516	2724	3528	47150	12731	12483	11680
	m. s.	m. s.	m. s.	secs.	secs.	secs.	secs.	secs.	secs.	secs.	secs.	secs.	secs.	secs.	secs.	secs.	m. s.	secs.	secs.	secs.	secs.	secs.	secs.	secs.
	Gain	Loss	Loss	Gain	Loss	Gain	Loss	Gain	Gain	Gain	Loss	Gain	Loss	Gain	Loss	Gain	Loss	Loss	Loss	Loss	Gain	Gain	Loss	Loss
Feb. 18 ..	3 59·8	0 47·1	2 24·8	2·7	2·0	4·8	0·8	1·7	1·4	3·3	0·2	3·0	2·4	2·3	10·6	....	....	21·7	..	..	12·0	0·2	3·1	1.2
											Gain											Loss		Gain
,, 19 ..	2 15·0	1 8·4	2 57·8	2·2	2·1	5·0	1·5	2·2	1·9	3·8	0·6	2·4	0·3	2·0	5·9	2·4	2 23·2	24·7	0·3	20·7	12·2	1·9	1·5	2·0
																						Gain		Loss
,, 20 ..	4 15·0	1 4·1	2 42·2	1·5	1·8	4·5	0·7	1·8	2·2	2·5	0·4	2·2	1·8	6·9	6·8	0·4	2 37·3	34·9	4·7	18·6	16·8	0·3	1·2	1·2
												Loss	Gain						Gain					Gain
,, 21 ..	2 32·0	1 27·2	2 35·3	4·8	1·9	2·7	0·5	1·4	1·4	3·5	0·9	1·8	0·8	6·8	7·4	4·4	2 44·3	38·3	5·5	11·6	14·0	0·7	1·4	1·1
							Gain				Loss								Loss			Loss	Gain	
,, 22 ..	3 30·0	1 35·0	2 34·0	5·3	1·3	2·8	0·2	0·4	2·0	4·2	1·0	2·3	0·5	5·6	7·9	3·5	2 56·0	41·8	15·5	12·4	15·8	0·3	0·4	0·6
													Loss									Gain		
,, 23 ..	1 30·0	1 29·0	2 28·0	3·5	0·9	3·9	0·0	0·3	2·2	4·0	0·2	0·7	2·9	7·2	7·6	0·0	Spring broken	37·2	9·0	14·4	15·2	1·1	1·0	1·0
							Loss					Gain	Gain			Loss							Loss	Loss
,, 24 ..	3 45·0	1 51·0	2 51·5	0·0	0·9	4·6	0·9	0·1	2·1	4·0	0·4	1·3	0·1	5·6	7·2	4·5	....	40·3	11·0	14·3	15·1	1·5	0·5	0·7
								Loss																Gain
,, 25 ..	2 45·0	1 14·0	2 25·7	0·6	1·2	4·0	0·7	0·9	2·3	3·8	0·5	0·7	0·7	5·3	7·9	13·7	....	30·0	9·2	15·4	10·8	0·7	1·0	0·5
				Loss				Gain																Loss
,, 26 ..	3 15·0	1 19·0	2 33·8	0·1	1·1	4·4	0·7	0·5	2·5	5·2	1·4	0·0	0·8	6·3	6·9	10·1	....	31·2	22·3	15·1	13·8	1·3	1·4	0·9
Extreme Rates.	2 45·0	1 3·9	0 33·0	5·4	1·2	2·3	1·7	3·1	1.1	2·7	2·3	5·3	3·7	5·2	4·7	18·1	32·7	20·1	27·8	9·1	6·0	3·4	4·1	3·2

CLASS 310.—*Chronometers, Clocks, Watches, &c.*

AMERICAN WATCH COMPANY, WALTHAM, MASS., U.S.A.

The facilities afforded us for the examination of this exhibit were of such an unusual and unexpected character that we cannot refrain from here expressing our admiration of the forethought and care shown by the Company, and our thanks to the agent for his attention and patience during the protracted examination.

Every grade, except one, of the fifty-six made by this Company was shown running, and at the same time a dissected movement of each grade placed alongside the running movement, so that the examination could be most critical. Before, however, going into the detail of our examinations, it will not be amiss for us to give a slight sketch of the Waltham Factory, that a better understanding may be had of the system which alone in the world originates, and manufactures the thousands of machines by means of which a watch is made complete in its entirety, and which can rank higher in each of the ten elements of inherent and comparative merit which the Judges adopted than any other watch presented for our examination.

This factory system is divided into twenty-one compartments, each under its own competent foreman, and the whole under the charge of a mechanical superintendent, as follows, viz :—

1. The foundation of the whole system is an extensive machine shop and draughting rooms, where the machinery used in the manufacture of watches is constructed.
2. The press-room, where the metals—brass, steel, copper, nickel, &c., are prepared, and then punched into blanks for wheels, regulators, ratchets, clicks, indices, dials, &c.
3. Frame-room, where the brass and nickel are completed up to process of stoning.
4. Dial making and enamelling.
5. Dial painting.
6. Flat steel work made and finished.
7. The whole process of jewel-making, using as working material, diamonds and sapphires, and the ruby, chrysolite, garnet, and aqua marina, for the jewels ; taking the rough stone, and by micrometric measurements cutting each jewel and finishing the whole to an exact given size.
8. Train-making, including barrels, wheels (except scape-wheels), barrel and pallet, arbour, balance-staff, pinions and cannon pinion.
9. Hardening and tempering all steel pieces.
10. Train finishing.
11. Screw-making.
12. Setting jewels in watches.
13. Hand-making.
14. Escapements, including forks, pallets, rollers, scape-wheels, and putting them together.
15. Balance-making.
16. Springing, including hair-spring and main-spring making.
17. Gilding, including stoning and frosting.
18. Assembling the parts of the watches.
19. Adjusting the movements.
20. Engraving.
21. Case-making in its several divisions.

Supplementary to these are shops for blacksmithing, carpentering, packing, &c., necessary to receive the raw materials and provide for the shipping and distribution of the perfected work.

There are nearly 2,000 persons employed in the factory, about evenly divided between the two sexes; and the daily product of this aggregated mass of humanity and machinery is equal to the production of nearly 800 completed watches.

Each machine of the thousands employed, many of which will perform the work of fifty skilled mechanics, guided by trained and most intelligent artisans, performs some particular function in the formation and finish of the watch, always in the same manner, and in exactly the same form and of the same finish. In some instances the machinery is wholly automatic, but in most cases the working of the machine is guided by the human hand, and always attains the same accurate result, making thousands of pieces exactly alike, interchangeable and undistinguishable one from the other, except in the polish and finish, by use of powerful microscopes.

In the assembling of the pieces of the watch, the pinions and jewel-holes, and all points of contact, teeth, &c., are tested by micrometers, the finest of which measures to the 25-thousandth part of an inch. By this measure the most infinitesimal variation of either pinion or hole, tooth, pallet, arbor, or balances, is at once detected, and a perfect correction determined for a possible error in the machinery.

This is the first principal claim to preferences advanced for this system—the interchangeability of parts of all watches of the same grade.

The materials all being taken in the rough state, are prepared for their different functions in temperature, density, hardness, &c., each in its separate grade, with unvarying precision; and, from the time it leaves the sheet or bar, until it is a completed component part, each and every similar piece has received the exact treatment in every respect which has been given its neighbour, and the thousands are the faithful duplicates of the original.

The economy of this method of construction being then a determinate quantity and being the basis of the system, the next point for consideration is the scientific and horological principles embodied in the watch manufactured in this way.

The introduction of so much that is novel in machinery and economic in the processes of execution, if applied and confined to the manufacture of watches of many complications, would not be considered of any materially great advantage to the human family; but if applied to a simplified form of construction, which could be made to perform as well as, or better than the more complicated and less durable systems or styles of watches, it would then result that what had been a luxury only within the reach of the rich would be equally within the reach of all, both poor and rich.

There are, however, certain thoroughly established principles in the proper construction of a watch, such as the form of the teeth of the wheels, the leaves of the pinions, and the numbers for each, the escapement, springing, &c., which result from the application of mechanical laws.

For a pocket watch, no escapement has yet been discovered equal in every respect to the lever; from the results of most careful experiments it is ascertained that, everything being equal in construction, trains, springing, &c., the performance of the lever, the duplex, and chronometer escapement are substantially the same. There being then no objection to the lever escapement as regards its time-keeping qualities, and very decided objections to the duplex

and chronometer escapements, when it is considered how the watch must be carried and the cost of repairs in the event of any accident, the Waltham Company adopted the lever escapement.

What was long considered an impracticable innovation by the English and many other makers, the "going barrel," dispensing with the fusee and chain, presented many advantages in simplifying the watch, if the ultimate force with which the power of the mainspring acting upon the escapement could be made even approximately constant.

By isochronal adjustment of the balance-spring, it was discovered that the inconstant force of the main-spring, made of the ordinary Swiss or English length and strength, could be corrected to a comparative degree of perfection, but there still remained a variation which required to be rectified.

The American Watch Company, as is evidenced by the time tests forming portion of this report, have succeeded in this, by making an equi-mobile adjustment of the main-spring itself, increasing its length ; so that, when wound in many turns, it is only unwound a few turns in the course of twenty-four hours, with but the slightest variation in the force transmitted to the train in that time, and its irregularity easily counteracted by the isochronal adjustment of the balance-spring, thus overcoming the only objection to the going-barrel and very greatly diminishing the complications, beginning with the prime motive-power of the watch. This motive-power in the main-spring and going-barrel being now in perfect restraint, so far as the transmission of its force to the train is concerned, and the equi-mobile adjustments complete to give the most active time-keeping results, there remains but to provide against the contingency of accident from this force or power. If the main-spring should break, the recoil is of such sudden force as to strip many of the teeth from the wheels and pinions ; and, to provide effectually against any injury of this kind, this Company use in all their watches their device known as "Fogg's patent safety pinion," which may be described as follows:—The arbor is tapped with a triple left-hand thread, upon which the pinion screws. This pinion is toothed into the great wheel upon the barrel, and the action of the great wheel upon it is in the direction of tightening the screw. Whenever, therefore, the main-spring breaks, the recoil of the great wheel unscrews the safety pinion from the arbor, and thus instantaneously releases the whole movement from the effect of the reaction.

To proceed with the balance of the train, theoretically the form of the teeth of the wheels should be epicycloidal, but in every properly constructed movement made under other systems this result is only approximated ; and it is here again that the superiority of this system is manifested ; all the teeth are cut and polished by machinery, and the forms of the cutters and polishers are kept true by means of a second machine, which gives the true epicycloidal form to each tooth, so that in the train the perfection of smooth and continuous action is secured, and the action of the machines is precisely the same for all grades. Having examined the system of construction, the means of applying the power to the train, and the original equi-mobile adjustment of the main-spring, the going barrel, the safety pinion, the practical adaptation of the epicycloidal theory as to the shape of the teeth, and its application to the train of the watch in every grade, we now come to the construction of the part connected with the escapement.

All the error corrected and degrees of perfection arrived at up to this point would be of little avail for accurate time-keeping, unless absolutely perfect

constructions and adjustment are arrived at in the escapement; any imperfections or failures at this point render the movement practically worthless, and for the purposes of this report we will consider only the balance-spring and the balance proper in the system of construction.

The pre-requisites for perfection in the balance-spring are that it must be of the very best material, evenly coiled, and so tempered as to secure continuously and undiminished the maximum of elasticity, which is attained by this Company by means of instrumental appliances, with precision, even for the lowest grades of movements. Detaching the balance and spring from the movement, the latter was frequently pulled out nearly straight by the Judges to test its elasticity, and allowed to fly back, and the most critical examination with glasses could develop no change in the symmetry of the coil or its action. The contraction and expansion of the coil are carefully tested by an indicator, so that the centre of torsion shall be coincident with the axis of the balance staff; and the elastic force of the spring for different degrees of winding being determined in advance, certain isochronal conditions are reached in all the grades without any special adjustments. It is evident that the possibility and even the probability exists, in taking at random any low-grade watch of this Company, that the performance will fully equal that of specially-adjusted watches made upon any system relying mainly upon the adjustment of the balance segments to correct all the errors of vibration in the balance-spring, as well as the errors arising from imperfect teeth and the unequal transmission of the force of the main-spring. The use of instrumental appliances of extreme micrometric fineness to establish an isochronal adjustment of the balance-spring itself produces a result which leaves to the bi-metallic segments of the balance in its ultimate adjustment a large portion of ordinary functions already performed, and the antecedent errors already in part eliminated.

When it is considered that the watch is carried in the pocket, subjected to the concussion of movement of the wearer, difference of position, extremes of temperature, &c., &c., it becomes a matter of the highest importance that the isochronal conditions of the balance-spring shall be as nearly perfect as possible; and that end being attained in every grade of these watches, it only remains in the higher grades, specially adjusted for temperature, isochronism, and position, to discover the best system for the construction of a balance-wheel of such exceeding susceptibility that it can be used, let it be said, to entirely eliminate all remaining errors, and that in the least complicated manner.

The form of compensation hitherto employed in the balance of watches and chronometers can be made perfect only for two critical temperatures, and for intermediate or extreme temperatures the compensation is imperfect. Devices called secondary or auxiliary compensation have been applied to remedy this defect in a partial degree. The effect of the temperature is to modify the elastic force of the spring, as well as to change its length; and to change the form of the balance, and perfect compensation, requires that the time of vibration of the balance shall be constant under all the vicissitudes of temperature to which the instrument may be subjected. This requires that an arrangement of the parts shall be made such that the moment of inertia of the balance shall maintain a constant ratio to the moment of the elastic force of the balance-spring. The law of the change of the effective elastic force of the spring is not certainly known; but sufficient is known in regard to it to make it certain that the compensation cannot be made perfect except at two

Fig. 1.

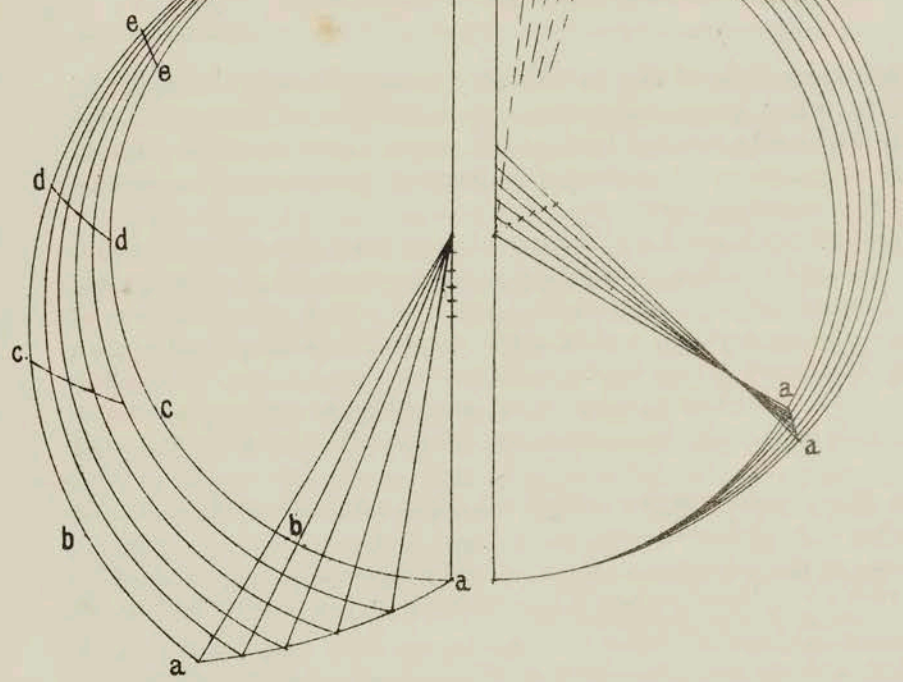


Fig. 2.

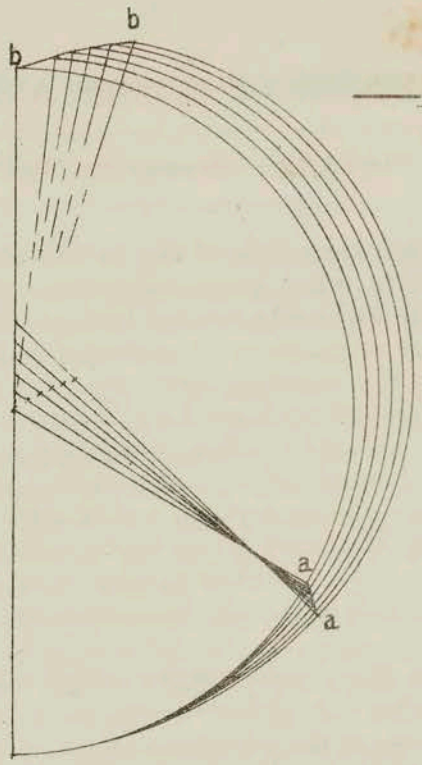
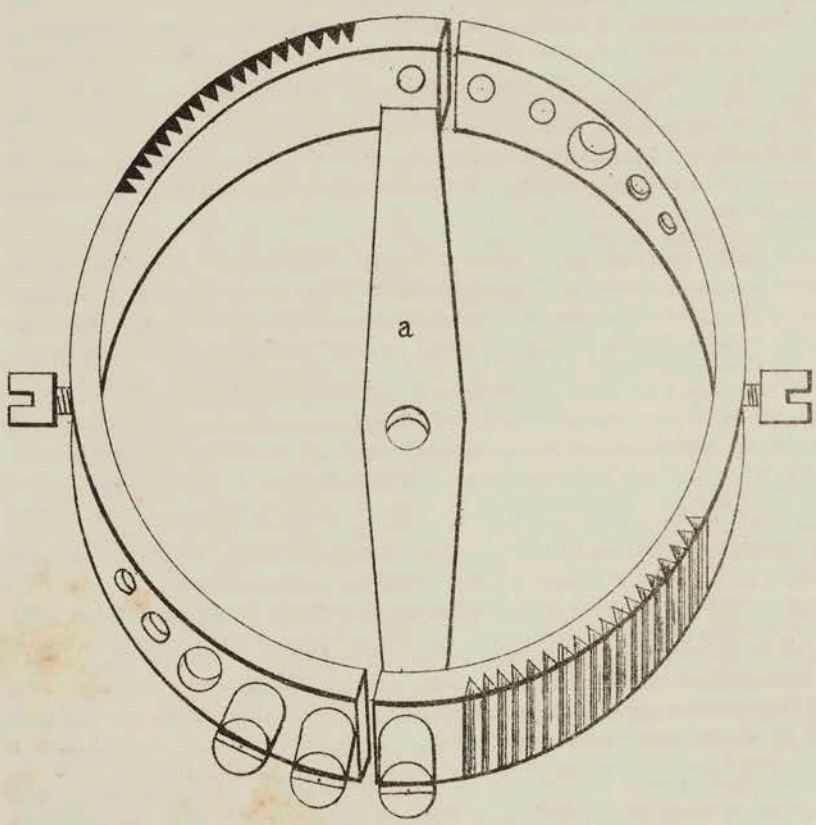


Fig. 3.



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SYDNEY, NEW SOUTH WALES.

temperatures. The expressions of the variations of these moments in respect to the temperature give, when graphically represented, two curved lines; and the adjustment can be made only for the two points where these curves intersect.

We would draw attention to the honourable position occupied by this Company in regard to this scientific discovery.

Mr. Charles Vanderwoerd, mechanical superintendent of the factory of the American Watch Company, after five years' patient study and experiment, has invented a new mode of compensating-balance, which we consider of such importance in this connection, and of such exceeding delicacy, strength, and simplicity, that we cannot do better than repeat here his claims for the merits of his invention, which has their heartiest endorsements—an understanding of which will be greatly facilitated by reference to the accompanying diagram and text.

The wording of Mr. Vanderwoerd's caveat, which is a full description of his invention and claim, is as follows:—

"My device consists in the substitution of an entirely different arrangement of bi-metallic laminæ in such a way that the ratio of the moments of the balance and of the spring shall remain constant during all the temperatures to which the watch or chronometer may be subjected while in use. First, I employ for the inner lamina steel as usual, but for the outer lamina I employ a composition of higher expansibility than brass, hitherto used for that purpose. Instead of two parallel connected laminæ, I use only a short arc of the outer composition, and this is connected with the steel in the form of intermeshing teeth fused solidly to the steel. The outer rim is turned down, so that the fine edge of the steel teeth separates the composition into a succession of prisms.

By this means the action is different from that of continuous bi-metallic-laminæ, in that it avoids the difficulties arising from the constrained and irregular actions of the laminæ, and provides for that freedom of movement of the compensating weights which is necessary to fulfil the actual requirements of the adjustment for temperature. Second, by means of my arrangement it is always possible to find the number of teeth in the bi-metallic part of the rim which, in connection with the proper compensating weights, will make the motion of these weights correspond with the requirements of the balance spring for tautochronous vibrations at different temperatures. In order to lighten the steel rim and keep the effective weight of the balance as near the extremities of the segments as possible, I drill one or more holes in this steel rim, and intermediate between the bi-metallic part and the compensating weights, so that the desired effect may be produced by a limited arc of the two metals. This provides also for a delicate adjustment of the poise of the balance.

Fig. 1 represents the movement of the compound laminæ under a decrease of temperature, in the form of bi-metallic compensation hitherto used. The inner curve represents the rim of the balance at a middle or normal temperature. The outer curves represent its successive positions at diminished temperature, and the oblique lines (*aa*), (*bb*), &c., show the motion of the compensating weights placed at different positions of the rim. The curves described by these weights do not in any case change the moment of the inertia of the balance in the required ratio, and the compensation is, therefore, imperfect. Fig. 2 represents the motion of the rim of the balance when constructed in accordance with my device. The inner curve shows the normal position at a middle temperature, and the other curves show its motion under successively diminished temperatures. The curved line (*aa*) shows the path of the extremity of the bi-metallic arc, and (*bb*) shows the curve described by the compensating weights at the outer extremity of the segment. The proper number of teeth in the bi-metallic part to correspond with the thickness of the continuous steel rim, to be easily found in the actual adjustment, will give to this curve the form which is required, in order that the rate of change of the moment of inertia of the balance shall be always sensibly the same as that of the moment of the elastic force of the balance spring, so that the compensation may be made practically perfect.

The forms and relation of the curves in the two cases will be similar when the temperature is increased from the normal temperature considered. Fig. 3 represents the balance complete, constructed in accordance with my device. The steel arm of the balance is represented at (*a*), the steel portion of the rim is shown by the light portions, and the composition for the outer part of the bi-metallic portion of the rim is indicated by the lined parts. The number of teeth depends upon the thickness of the rim, and should

include in general about one-sixth part of the circumference. The rim is cut very close to the extremities of the arm of the balance, and the compensating weights are placed near the outer extremities of the segment. The smaller holes shown intermediate, are made in order to keep the resultant action as far as possible from the bi-metallic part of the rim."

Owing to some spots of rust on the balance of the only watch having this new invention which was exhibited by this Company, which damage was possibly occasioned by the too critical and continued examination and handling by the Judges, or by some other accidental cause, the only watches sent by this Company for tests at the Observatory were of the second, third, and sixth grades, and no practical tests were made by the Judges of the performance of this balance after complete adjustment. In fact, unless a watch had been perfectly adjusted prior to its being placed in the hands of the Judges, there would be no time under any circumstances to experiment with the delicacy of this adjustment. We, however, are of opinion that every theoretical requirement is more fully met in this balance than in any brought before the notice of your Judges up to this date.

The only complication introduced in any of these watches is the fly-back, fifth-second chronograph, which can be attached to any of the grades of 14-size watches made by this Company; all of this series having 18,000 vibrations per hour.

The attachment is made by the addition of only two milled-edge wheels, is exceedingly simple and strong, and perfectly accurate, in no manner defacing the dial, as it is attached at the back of the watch, having a separate dial for itself in place of the usual up or down. The simplicity and accuracy of this construction cannot be too highly commended.

In the construction and ornamentation of the cases over 300 designs are employed, notably among which is a dust and waterproof case, largely used by railway employés, usually made of nickel, from which, ascending in degrees of ornamentation, a new process of enamelling is reached, in which the design is first deeply carved in the gold, and the enamelling then run in and afterwards polished and smoothed down, producing an artistic effect rarely equalled by the most costly Roman mosaics, and as indestructible as the gold itself. The marvellous finish of all the joints of the cases, from a case weighing only $1\frac{1}{4}$ oz. of silver to those weighing 65 dwts. of gold, particularly attracted the attention of your Judges, as the same perfection was observed in all alike.

In consideration of the facts developed in this examination, and the preponderance of elements of inherent and comparative merit adjudged by us (each in independent judgment) being equal to nearly 70 per cent. more than the next highest exhibit, we have found it exceedingly difficult to make such a classification in degree as will give even-handed justice to all.

We adjudge to the American Watch Company of Waltham, Mass., U.S.A., a first-class award, and such other special distinction, diploma, medal, or award as is consistent with the duties and obligations of the Sydney International Exhibition Commission, for the largest and most complete exhibit of horological instruments examined.

We also propose, as the only means by which our appreciation of the merits of the production of this Company can be adequately or equitably recognised by the Committee on Judging and Awards, that a separate first-class award be given for the time-keeping qualities of all grades of these watches.

Also, a separate first-class award for the perfection of this system of watch-making, and the improvements in the mechanical parts of the watch, being notably in the main spring and going barrel, the patent-safety-pinion, the

perfect epicycloidal form of all the teeth of the train, in every grade of watch alike, and the isochronal adjustment of the balance spring.

Also to Charles Vanderwoerd, mechanical superintendent of the American Watch Company, Waltham, Mass., U.S.A., a first-class award for his new mode of compensating balances.

Also a separate first-class award for the improvements in cases, the number of artistic forms and designs used, the beauty and elegance of their finish, and for their new and indestructible method of enamelling.

LOUIS AUDEMARS

exhibits a wonderful class of complicated watches, calendars, repeaters, chronographs, &c., &c., combined in one watch, and elaborately cased and artistically finished. The great element of merit in this exhibit is the combination of the great number of unusual functions for a watch, and by skill in workmanship and mechanical science securing a correct performance.

The enormous cost of these watches is an effectual embargo on their use to any except the very few, and their utility is therefore very limited. In their class they are, however, of the first degree of merit, and are adjudged an award accordingly.

F. BACHSCHMID

exhibits a class of cheap watches, of very inferior workmanship and finish, of the last order of merit, and are adjudged a fourth-class award, viz., "Honourable Mention."

N. CASTELBERG & CO.

exhibit a meritorious line of watches in many respects, of good finish, and not excessively high-priced for their performances; of the second order of merit, and adjudged a Highly Commended award.

INTERNATIONAL WATCH COMPANY

exhibits a collection of watches of the third order of merit, and adjudged a "Commended" award.

VICTOR KULLBERG.

The display of marine chronometers by this maker, with the Observatory ratings is of the very first order. Every part of these instruments is remarkably well made, and the modifications of some of the balance wheels worthy of special attention. Adjudged a first-class award.

The display of watches by the same maker, although small, commands attention from their very nice finish in all parts. As will be seen from the report and diagram of Mr. Russell, they are good timekeepers, especially the one having the chronometer-escapement. This style of watch, however, is of too delicate construction and too costly to fully meet the requirements of any considerable public want. The same objection will hold good as to the lever escapement as far as cost or economy is concerned, they being comparatively too high-priced. Representing a certain class of manufacture, they are of the first order of merit, and are adjudged a First degree of Merit.

The "gas-governor," exhibited by the same maker—an instrument for regulating the amount of heat in the testing of chronometers—is commended as a useful invention.

A. LANGE & SÖHNE

exhibit a class of watches possessing many elements of merit and of superior finish in many respects, and at a cost which is quite reasonable. That the watches are constructed upon scientific principles, and are intended as reliable timepieces,

is shown from the Sydney Observatory tests. The variations show that care has been taken to approximate a perfect adjustment, and that a partial success has been attained. A peculiarity in the construction of the balance wheel, having a horizontal split from the timing second holes each way, is noticeable, which we fail to understand. This exhibit was made expressly for this Exhibition, and Observatory rates sent with each watch, and as a representative exhibit, although small, it is the second best examined, and is in its class of the first degree of merit, and we adjuge an award accordingly.

NICOLE & NIELSEN.

This exhibit, made specially for the Exhibition, comprises a full line of plain levers, split-seconds, chronographs, calendars, repeaters, &c., and is a representative display of their peculiar style of manufacture in all its details. The cost of these watches, compared with others of similar construction and finish, is excessive ; and while they show good time-keeping qualities, they do not in this respect equal other exhibits.

As representing their own methods of construction, they are of the first order of merit, and are adjudged a First degree of Merit.

A. H. RODANET

exhibits two marine chronometers only, one of which was broken, and the other out of order ; "Commended" award.

THOS. RUSSELL & SON

exhibit a full line of their manufacture, which, upon comparison with other exhibits of the same general character and construction, places them in the third order of merit, and they are adjudged a "Commended" award.

G. TRIBAUDEAU

exhibits a considerable collection of watches in a great variety of cases, of a class of workmanship, finish, and performance calling for a fourth-class or "Honourable Mention" award.

WURTEMBERG-UHREN-FABRIK

exhibit watchmen's control clocks and railway clocks for registering the time and duration of delays upon the line; of the first degree of merit, and adjudged an award accordingly.

In concluding this report, the Judges very much regret the limitation in time which has prevented them securing position tests of this very interesting exhibit in horology, as much on account of the exhibitors as on their own account. Such advances have, in the last few years, been made in this science that, in the interest of the public as well as of the manufacturer, a sufficiency of time is desirable to make tests in five or six positions, and fourteen days should be allowed to each position. Tests for heat and cold, and an opportunity to carefully note barometric and thermometric influences upon the various systems of adjustments, would be very valuable and interesting.

GREGORY P. HARTE, Chairman, United States.
H. C. RUSSELL, B.A., F.R.A.S., Great Britain
J. M'GARVIE SMITH, New South Wales.
P. E. BOUND, Switzerland.
E. BECKMANN, Germany.

Chronometric Apparatus, Chronometers, Astronomical Clocks, Watches, Chronographs, &c., &c.

CLASS 310.

AUSTRIA.

SCHLESINGER, Anton—Vienna.—Pendulum Clocks.
Honourable Mention.

FRANCE.

QUINET ET RICHARD—Paris.—Clocks.
First degree of Merit.

Report—We adjudge a first-class award to these exhibitors for the excellence of manufacture and elegance of design of their carriage clocks, although they are too high-priced and too highly finished to meet any considerable public want.

RODANET, Auguste H.—Paris.—Chronometers.
Honourable Mention.

Report—*Vide* page 418.

TRIBAUDEAU, G.—Besançon.—Watches.
Honourable Mention.

Report—*Vide* page 418.

GERMANY.

BECKER, Gustav—Freiburg, in Schlesien.—Regulators, Table and Alarm Clocks. Highly Commended.

FÜRDERER, JAEGLER, & CO.—Neustadt, in Baden.—Regulators and Clocks. Honourable Mention.

LANGE & SÖHNE, A.—Glashütte bei Dresden.—Gold and Silver Watches. First degree of Merit.

Report—*Vide* page 417.

WEULE, J. F.—Boeckenem, in Hannover.—Church Clocks.
Highly Commended.

WÜRTEMBERGISCHE-UHRENFABRIK–Schwenningen (Schwarzwald).—Control Clocks, &c. First degree of Merit.

GREAT BRITAIN AND IRELAND.

BACHSCHMID, F.—London.—Watches.
Honourable Mention.

Report—Vide page 417.

CASTELBERG & CO.—London.—Watches.
Highly Commended.

Report—Vide page 417.

KULLBERG, Victor—London.—Watches.
First degree of Merit.

KULLBERG, Victor—London.—Chronometers.
First degree of Merit.

Report—Vide page 417.

NICOLE, NIELSEN, & CO.—London.—Watches.
First degree of Merit.

Report—Vide page 418.

RUSSELL & SON, Thomas—London and Liverpool.—Watches and Watch Movements. Commended.

Report—Vide page 418.

NEW SOUTH WALES.

COCHRAN, J.—Sydney.—Astronomical Clock.
First degree of Merit.

Report—This award is given for the energy and perseverance of the exhibitor in the construction of a clock of this description, which, although not mathematically perfect, is yet, under the circumstances and difficulties of the exhibitor's position, a wonderful achievement.

ROYAL MINT—Sydney.—Automatic Balance.
First degree of Merit Special.

SMITH, John M'Garvie—Sydney.—Watch, Clock, and Chronometer Wheels and Pinions. First degree of Merit Special.

Report—After examination of this exhibit of clock, watch, and chronometer wheels and pinions, and delicate parts of telegraphic apparatus, we find them equal to any of the best English, French, or Continental make. [Mr. Smith, although one of the Judges in Horology, had no voice in this award.]

SWITZERLAND.

AUDEMARS, L.—Brassus.—Watches.
First degree of Merit.

Report—Vide page 417.

INTERNATIONAL WATCH CO.—Schaffhausen.—Watches.
Commended.

Report—Vide page 417.

UNITED STATES.

AMERICAN WATCH CO.—Waltham, Mass.—Gold & Silver Watches.
First degree of Merit Special.

AMERICAN WATCH CO.—Waltham, Mass.—Watches, time-keeping qualities.
First degree of Merit.

AMERICAN WATCH CO.—Waltham, Mass.—Watches, perfection in system.
First degree of Merit.

AMERICAN WATCH CO.—Waltham, Mass.—Watches—New Mode of Compensating-Balance.
First degree of Merit.

AMERICAN WATCH CO.—Waltham, Mass.—Improvement, Elegance, and Finish of Watch-cases.
First degree of Merit.

Report—Vide page 411.

ANSONIA CLOCK CO.—Ansonia, Conn.—Clocks.
Highly Commended.

Report—The case, designs, and effects in marbleized iron are deserving of special commendation.

ITHACA CALENDAR CLOCK CO.—Ithaca, N.Y.—Clocks.
Highly Commended.

Report—The "calendar" attachment is deserving of special notice.

THOMAS & CO., Seth—Bristol, Conn.—Clocks.
Highly Commended.

Report—We particularly commend the variety of styles.

VANDERWOERD, Charles—Mechanical Superintendent, American Watch Co., Waltham, Mass.—New mode of Compensating Balance for Watches. The invention of exhibitor. First degree of Merit Special.

WATERBURY CLOCK CO.—Waterbury, Conn.—Clocks.
Highly Commended.

CLASS 313.

Musical Instruments.

JUDGES.

BLACKET, EDMUND T., Architect ... ... Sydney.

D'APICÉ, Chevalier CHARLES, Professor of Music ... Hunter's Hill, Sydney.

JACKSON, CHARLES J., Organbuilder ... ... Newtown, Sydney.

KRETSCHMANN, JOSEF, Professor of Music ... ... Sydney.

PACKER, CHARLES, Professor of Music ... ... Sydney.

THORNTON, Hon. GEORGE, M.L.C. (Chairman) ... Sydney.

YOUNGER, MONTAGUE, Professor of Music ... ... Sydney.

GROUP—Musical Instruments, &c.

CLASS 313.

AUSTRIA.

FIEHN, Heinrich—Vienna.—Ocarinas.
Highly Commended.

Report—A novelty in musical instruments.

KIRCHNER GEBRÜDER—Vienna.—Zithers, and Strings.
First degree of Merit.

THIE, Wilhelm—Vienna.—Mouth Harmonicas.
First degree of Merit.

Report—The best of this class.

BELGIUM.

CAMPO BROS.—Brussels.—Grand and Upright Pianos.
Two Commended Awards.

Report—The semi-grand pianos are clear in tone, and very elegant in appearance. The upright pianos are also clear in tone, and in very elegant cases.

CAMPO BROS.—Brussels.—Poisoned Wrest-Plank for Pianos.
First degree of Merit.

Report—Manufactured expressly to resist the ravages of insects in India.

GÜNTHER, J.—Brussels.—Grand and Upright Pianos.
Two first degrees of Merit.

Report—Short grand piano, good touch, clear in tone, and well finished. The upright pianos are worthy of the same remarks.

MAHILLON, Charles—Brussels.—Musical Instruments, of Metal and Wood.
First degree of Merit Special.

CANADA.

BELL & CO., William—Guelph, Ont.—Organs.
First degree of Merit Special

Report—Special mention for improved pipe-action.

CLASS 313.—*Musical Instruments.*

FRANCE.

ALEXANDRE, PÈRE ET FILS—Paris.—Harmoniums.
Highly Commended.

BAILLY, Paul—Mirecourt (Vosges).—Violins.
Commended.

BEAUVOIS—Paris.—Music-Engravings.
First degree of Merit.

Report—Very good and cheap.

BORD, Jean Antoine—Paris.—Grand Piano.
Honourable Mention.

Report—A well-finished instrument, and low in price.

BURDIN, Aîné—Lyon.—Small Church Bell.
First degree of Merit.

CORBEEL, Jules—Paris.—Ivory Piano-Keys.
First degree of Merit.

ERARD, S. & P.—Paris.—Grand Piano.
First degree of Merit Special.

Report—Special mention for powerful and rich tone, constructed of first class material, and suitable for concert purposes.

ERARD, S. & P.—Paris.—Upright Piano.
First degree of Merit Special.

Report—Superbly elegant case of inlaid wood with gold mountings.

ESTÈVE, Jean—Paris.—Harmonium-Reeds.
First degree of Merit.

Report—Very good, and price reasonable.

GRUS—Paris.—Musical Publications.
First degree of Merit.

Report—Operatic works bound, comprising nearly all known operas.

LEDUC, Alphonse—Paris.—Musical Publications.
First degree of Merit.

Report—Instruction books for every instrument.

MARTIN, Albert—Paris.—Harmoniums.
Commended.

METZNER, Camille—Nancy (Meurthe et Moselle).—Methods of Music.
First degree of Merit.

MOONEN, Léon—Paris.—History of Harmoniums.
First degree of Merit.

MOONEN, Léon—Paris.—Improvement in Harmoniums.
First degree of Merit Special.

Report—Special mention for improvement in the supply of wind.

PALING & CO.—Paris and Sydney.—Upright Pianos.

Commended.

Report—These pianos are well constructed and finished, the price is reasonable, and they will wear well, and stand in tune.

PIERPONT, Mlle. Marie de.—Methods of Music.

First degree of Merit.

GERMANY.

ASCHERBERG, Emil—Dresden.—Grand and Upright Pianos.

Two Highly Commended Awards.

Report—Full grand pianos, of good tone, power, and well-finished. The same remarks apply to the upright pianos.

BECHSTEIN, C.—Berlin.—Grand and Upright Pianos.

Two First degrees of Merit Special.

Report—These pianos deserve special mention on account of the richness of tone and skill displayed in their construction.

BLÜTHNER, Julius—Leipzig.—Grand Pianos.

First degree of Merit Special.

Report—These pianos are worthy of special mention, on account of their aliquot construction, sweetness of tone, and adaptability to change of climate.

BLÜTHNER, Julius—Leipzig.—Upright Pianos.

First degree of Merit.

Report—Pianos of good tone, and well constructed.

DEESZ, Julius—St. Johann-Saarbrücken.—Upright Pianos.

Commended.

DOERFEL, STEINFELSER, & CIE, C. F.—Klingenthal, in Sachsen.—Concertinas. Commended.

HAENEL & SOHN, F.—Naumburg, a/S.—Grand Piano.

Commended.

Report—Possesses good touch, and is well constructed.

HESS, Ernst—Klingenthal, in Sachsen.—Accordeons.

Honourable Mention.

HÖLLING & SPANGENBERG—Zeitz, in Sachsen.—Upright Pianos.

Honourable Mention.

Report—Very low in price, with good action and tone, well suited to this climate.

IBACH & SOHN, Rudolf—Barmen.—Upright Pianos.

Commended.

Report—Well made, with good tone and power.

CLASS 313.—*Musical Instruments.*

IMHOF & MUKLE—Vöhrenbach, in Baden.—Orchestrion or Self-acting Organ. First degree of Merit.

Report—Very good ; the only exhibit of its kind.

JACOB & BECKER—Leipzig.—Orchestrionettes.
Honourable Mention.

Report—This is the only exhibit of its kind.

KAHN, Leopold—Stuttgart.—Harmonium.
Commended.

LIPP & SOHN, Richard—Stuttgart.—Upright Pianos.
Honourable Mention.

Report—Well constructed, and of good tone.

LIPP & SOHN, Richard—Stuttgart.—Grand Piano.
Highly Commended.

Report—Possesses very good tone, and is well constructed.

MAND, Carl—Coblenz, a/R.—Upright Piano.
Commended.

Report—Possesses good tone, touch, and finish ; action and material very good, suitable for the Australian climate.

MANTHEY, W. Vormals E. Thurmer.—Berlin.—Upright Piano.
Honourable Mention.

Report—Good tone, material, and workmanship.

NEUFELD, L.—Berlin.—Grand and Upright Pianos.
Two Honourable Mentions.

Report—These pianos are well finished, and very low in price.

RÖNISCH, Carl—Dresden-Neustadt.—Upright and Semi-grand Pianos.
Two first degrees of Merit Special.

Report—These pianos deserve special mention for strength and purity of tone, as well as for exact workmanship.

ROSENKRANZ, Ernst—Dresden-Aldstadt.—Upright Piano.
Highly Commended.

Report—A well-finished instrument, of good material.

SCHIEDMAYER & SÖHNE—Stuttgart.—Upright and Grand Pianos.
Two Commended Awards.

Report—Are well constructed, and of good action.

SCHILLING, Friedrich—Stuttgart.—Upright Piano.
Highly Commended.

Report—Of good solid construction ; the tone pure and sound—suitable for a small concert-room.

SCHUSTER GEBRÜDER—Markt-Neukirchen, in Sachsen.—Violins and Strings. Highly Commended.

STRATHMANN & JOACHIM—Leipzig.—Concertinas.
Highly Commended.

TIEFENBRUNNER, Georg—München.—Zithers.
Highly Commended.

TRAYSER & CIE, Ph. J.—Stuttgart.—Harmoniums.
Highly Commended.

VOSS & SOHN, C.—Stettin.—Church-Bells.
First degree of Merit.

GREAT BRITAIN AND IRELAND.

BESSON & CO., F.—London.—Brass and Wood Musical Instruments.
First degree of Merit.

BLEWS & SONS, William—Birmingham.—Hand Bells, in the Keys of C and G.
First degree of Merit.

BLEWS & SONS, William—Birmingham.—Treble Bell.
First degree of Merit.

BRINSMEAD & SONS, John—London.—Semi-Grand Pianos.
First degree of Merit Special.

BRINSMEAD & SONS, John—London.—Upright Pianos.
First degree of Merit Special.

Report—Special mention for delicate and firm touch, full and sweet tone, faultless repetition, simple and improved action, constructed to withstand a large amount of wear and tear, as well as the influence of the climate.

CHAPPELL & CO.—London.—Upright Pianos.
Commended.

Report—Of good tone, well finished, and of good materials; low in price. This firm shows a small piano for students, suitable for beginners, and very low in price.

DREAPER, Wm. H. & G. H.—Liverpool.—Upright Pianos.
Commended.

Report—Well finished, of good material, but high in price.

IVORY & CO., H. A.—London.—Cottage Piano (with Robinson's Patent Harmonium attached).
First degree of Merit.

Report—Suitable for a small music hall.

IVORY & CO., H. A.—London.—Upright Piano.
Commended.

Report—Simple action, and well finished.

KIRKMAN & SON, J.—London.—Upright Pianos.
Highly Commended.

Report—Good, sound, and serviceable instruments, well finished.

CLASS 313.—*Musical Instruments.*

LACHENAL & CO.—London.—English and Anglo-German Concertinas.
First degree of Merit.

POHLMANN & SON—Halifax.—Upright Pianos.
Highly Commended.

Report—Wonderfully strong in construction, tone bright and clear, with good repeater action.

SAMUEL & SONS, Barnett—London.—Harmoniums.
First degree of Merit.

SAMUEL & SONS, Barnett—London.—Nickel Flutes.
First degree of Merit.

VICKERS, SONS, & CO. (Limited)—Sheffield and London.—Steel-Bells.
First degree of Merit.

WALLIS, Joseph—London.—Nickel-Flutes.
Highly Commended.

WORNUM & SONS, R.—London.—Small Grand Piano.
Highly Commended.

Report—Patent action constructed so as to be taken out from the side; of good material and well made.

NEW SOUTH WALES.

CROOK, R. W.—Sydney.—Contra-bass, Colonial manufacture.
First degree of Merit.

EZOLD, William—Sydney.—Cottage Piano, made in the Colony.
First degree of Merit.

Report—Well made; good workmanship and material; good tone and touch.

PALING, W. H.—Sydney.—Upright Pianos, manufactured in Paris.
Commended.

Report—Good action, construction, and finish; price reasonable; will wear well, and stand in tune.

SHERAR, George—Burwood.—Bagpipes, made in the Colony.
Honourable Mention.

Report—Well made, and deserve honourable mention.

ST. HEAPS, C.—Sydney.—Violins and Violoncello.
Highly Commended.

SWITZERLAND.

SWISS COLLECTIVE EXHIBIT.—Musical-boxes.
First degree of Merit Special.

Report—Very good, and worthy of special notice.

TROST & CO., J.—Zürich.—Upright Piano.
Highly Commended.
Report—Well-made instrument, with strong and serviceable action.

UNITED STATES.

BRIDGEPORT ORGAN CO.—Bridgeport, Conn.—Cabinet Organs.
Commended.

CHICKERING & SONS—Boston, Mass.—Grand Pianos.
First degree of Merit.
Report—Solid in construction; good action, tone, and power.

CHICKERING & SONS—Boston, Mass.—Upright Pianos.
First degree of Merit.
Report—Solid in construction; good action, tone, and power.

ESTEY & CO.—Brattleboro, Vt.—Organs.
Commended.

NEW ENGLAND ORGAN CO.—Boston, Mass.—Organs.
First degree of Merit.

PELOUBET, PELTON, & CO.—New York City.—Organs.
First degree of Merit.

STEINWAY & SONS—New York City.—Grand Piano.
First degree of Merit Special.
Report—Special mention for touch, tone, finish, and construction.

STEINWAY & SONS—New York City.—Upright Piano.
First degree of Merit Special.
Report—Special mention for touch, tone, finish, and construction.

TAYLOR & FARLEY ORGAN CO.—Worcester, Mass.—Organs.
Honourable Mention.

WATERS, Horace—New York City.—Organs.
Commended.

CLASSES 314–329.

Engineering.

JUDGES.

MORIARTY, EDWARD ORPEN, Engineer-in-Chief, Harbours and Rivers Department, N.S.W. (Chairman)... Sydney.

MERRETT, SAMUEL H., Assistant-Engineer, Railway Department ... ... Victoria.

JONES, J. TREVOR, City Engineer ... ... Sydney, N.S.W.

Architecture, Charts, Maps, Graphic Representations, &c.

JUDGES.

MOONEN, LÉON ... ... Paris, France.

STOPPS, ARTHUR JAMES ... ... Sydney.

TAYLER, JOSIAH, Survey Department ... ... Sydney.

GROUP—Engineering, Architecture, Charts, Maps, &c.

CLASSES 314–329.

AUSTRIA.

GEOLOGISCHE REICHSANSTALT, K. K.—Vienna.—Geological Map of the Austro-Hungarian Empire. Commended.

Report—The printing and execution in general is fair, and the geological formation of the country seems to be carefully shown.

POPOVITZ, Lazarus—Marchegg.—Photograph of the Transportable Railway Station "Glorine." Highly Commended.

Report—The design possesses merit, and would be useful for military purposes when large station accommodation might be suddenly required at certain points on a railway.

BELGIUM.

INSTITUT CARTOGRAPHIQUE MILITAIRE DE LA BELGIQUE —Brussells.—Geological Maps, &c., of Belgium.

First degree of Merit.

Report—Good collection of maps, well printed, and carefully executed.

LEOPOLD II., ROI DES BELGES.—Map of Africa.

First degree of Merit Special.

Report—This map, which is admirably executed by hand, on a scale of $\frac{1}{5000000}$ more fully exhibits the geographical features of Africa, and the latest explorations of that continent, than any other in the world.

FRANCE.

BALLIEU, Théodore—Consul de France a Sydney, N.S.W.—Model of the Hawaiian Islands. Commended.

DUFRENOY—Paris.—Maps.

Commended.

LE VASSEUR (Ancienne Maison Abel Pilon)—Paris.—Maps.

Commended.

GERMANY.

ACTIENGES: FÜR EISEN-INDUSTRIE & BRÜCKENBAU (J. C. Harkort)—Duisburg.—Iron Sections and Photographs of Bridges.

First degree of Merit.

GREAT BRITAIN AND IRELAND.

APPLEBY BROTHERS—East Greenwich, London.—One Span of the Iron Cove Creek Bridge, constructed from the designs of Mr. W. C. Bennett, Engineer-in-Chief for Roads and Bridges, Sydney.

First degree of Merit Special.

Report—The girders have been designed upon a well-understood and accepted principle of construction, and very extensively used both for road and railway purposes in England, the Continent of Europe, and these Colonies. The distinguishing feature of these girders is the adoption of a triangulated system of latticed struts and ties connecting the top and bottom booms of the girder with fixed or riveted ends and connections in lieu of pins or bolts, as used in the American bridge previously described. The use of pins or bolts in bridge-building has of late years in England (except under certain circumstances) been discarded, the preference after long experience being given for riveted and rigid connections in all parts of the structure, so as not to depend for the safety of the whole work on any one minor part or detail. Calculations have been made by a member of the Board of the strains to which the several parts of the girders would be subjected by its own weight as well as by the moving load, as estimated by the Department of Roads and Bridges; and it has been found that a large factor of safety has been employed in the calculations for strength, that is to say, that the ironwork in all parts will have a less strain per square inch of section than is usually assigned by engineers in such works. This is not necessarily regarded as a defect, as it is obvious under the above conditions the strength of the bridge is increased, and may be trusted to sustain with the greater safety the loads it has been designed to carry. The Judges, in drawing comparisons between this and the American pin-truss bridge as to their respective adaptability, made the following remarks:—The lattice system of bridge can be readily manufactured from materials easily and always obtainable in the Colonies, and in such forms as to be readily transported to any proposed site and put together with ordinary skill in close proximity to the position they are to occupy, and then either lifted at once into position, or, in case of a river, be floated out and lifted with the minimum of staging or scaffolding. The quality of workmanship shown in the girders is excellent, and the Judges are of opinion that care has been shown in carrying out the work generally; and from due consideration of the foregoing points (unless under peculiar circumstances), the preference is awarded to the lattice rather than the pin-truss type.

WARD & CO., Marcus—London and Belfast.—Duplex Cheque Paper, for prevention of fraud. Highly Commended.

Report—The cheques or other papers treated by this system undoubtedly betray any attempt to remove written words or figures by means of acids, with the view of substituting other words or figures, and so far render valuable assistance in the prevention of fraud or forgery.

WATERLOW & SONS (Limited)—London.—Duplex Cheque Paper, for prevention of fraud. Highly Commended.

Report—The cheques or other papers treated by this system undoubtedly betray any attempt to remove written words or figures by means of acids, with the view of substituting other words or figures, and so far render valuable assistance in the prevention of fraud or forgery.

NETHERLANDS.

VONCK, E.—Sourabaya, Netherlands-India.—Novel Scarf. Honourable Mention.

Report—This is an ingenious invention, specially applicable to the joining of keels of ships, but, without the means of testing it, the Judges are unable to assign any special classification to it.

NEW SOUTH WALES.

BATES, C.E., Onward—Sydney.—Designer of Span for Nowra Bridge, over Shoalhaven River, N.S.W. First degree of Merit Special.

HEALTH SOCIETY OF NEW SOUTH WALES—Sydney.—Plan showing good sanitary arrangements according to Dr. Teale's designs. First degree of Merit.

ROBERTS, M.R.C.S.E., Alfred—Sydney.—Sanitary Appliances. First degree of Merit.

Report—Recognition for having imported certain appliances, chairs, baths, &c., suitable for hospitals or sick-rooms.

ROYAL MINT—Sydney.—Collection of Medals, and British and Colonial Coins. First degree of Merit Special.

Report—A very fine and complete collection.

ROWE, Thomas—Sydney.—Model of Wesleyan College. Highly Commended.

Report—Excellent model.

SURVEY DEPARTMENT—New South Wales Government.—Maps of New South Wales. First degree of Merit

Report—Most useful for general information for the public.

PALMER, H.—Railway Department, Sydney.—Model of Centre Span of Railway Bridge over Macquarie River at Bathurst, N.S.W., Lattice Girder Span, 150 feet. First degree of Merit.

Report—As a model this is simply faultless. This bridge exhibits the most modern and perfect class of iron railway bridge designed.

NEW ZEALAND.

ALVES, J.—Dunedin.—Silt-elevator.
Honourable Mention.

BEETHAM, George—Wellington.—Model of Mount Ruapehu.
Highly Commended

BLACKETT, John—Wellington.—New Zealand Light-house Chart.
Honourable Mention.

BROWN, S.—Wellington.—Model of Cape Farewell Light-house.
Highly Commended.

Report—Well designed and suitable under purposes sought to be obtained, under circumstances where economy is so important a consideration as is the case in the Colonies.

BURNSIDE, H.—Dunedin.—Model of the Residence of Hon. R. Campbell, Otekaika. Honourable Mention.

DEVERELL, Walter—Invercargill.—Specimens of Survey Drafting.
Commended.

GEORGE, Thos.—Dunedin.—Plan and Soundings of Otago Harbour.
Honourable Mention.

HECTOR, James, C.M.G.—Wellington.—Model of Mount Tongariro.
Highly Commended.

Report—As these two exhibits are included in the one model, an award can only be given for the whole.

HECTOR, M.D., C.M.G., F.R.S., James—Wellington.—Maps of New Zealand, including a relief map, coloured. First degree of Merit.

Report—Excellent collection, admirably executed.

HOLLIDAY, Captn. J.—Wellington.—Plan of Wellington Harbour.
Commended.

MACGEORGE, Leslie Duncan—Clyde, Vincent County.—Plan of Suspension Bridge over River Clutha. Commended.

O'CONNOR, C.E., E.—Hokitika.—Plans and Photographs of Nelson Creek Water-race. Highly Commended.

Report—Seems a costly undertaking

SPREAT, W. W. J.—Wellington.—Lithographic Map of Otago.
Highly Commended.

Report—Good lithographic production, carefully drawn on stone.

SURVEYOR GENERAL OF NEW ZEALAND—Wellington.—Specimens of lithographs made by the Survey Department.
Highly Commended.

QUEENSLAND.

FOX, H. W.—Survey Office, Brisbane.—Specimen School Map of Queensland. Commended.

Report—Valuable as an engraving.

LUKIN, Gresley—Brisbane.—Map of the route of the *Queenslander* Trans-continental Expedition, with original sketches illustrating the plan, by Favenc. First degree of Merit.

Report—This map is the result of a most praiseworthy enterprise, and the careful manner in which it has been compiled entitles it to high commendation.

SOUTH AUSTRALIA.

GOYDER, George W.—Adelaide.—Maps showing the Exploration of the Northern Territory. First degree of Merit.

MAIS, H. C.—Adelaide.—Working Drawings of the Port Augusta and Government-Gums line of Railway. First degree of Merit.

Report—Exhibiting a very complete system of railway-engineering, roads, bridges, stations, &c.

UNITED STATES.

EDGEMOOR IRON COMPANY.—Wilmington, Delaware.—The American Pin Truss Non-continuous Girder Bridge for the Shoalhaven River, at Nowra, designed in Sydney. First degree of Merit Special.

Report—This bridge was ordered by the New South Wales Government, on the suggestion of the Commissioners of the Philadelphia Exhibition, with a view to determine the relative merits of this type of bridge and those generally adopted in the Colony previously, and was designed in Sydney by Mr. Onward Bates, C.E., the Agent in New South Wales for the Company, under the general direction of Mr. W. C. Bennett, Engineer-in-Chief for Roads and Bridges. The workmanship of the bridge exhibited in the grounds of the Garden Palace is excellent,

and the design is a good example of a system of construction adopted by many engineers and manufacturing bridge companies in the United States, and extensively used in that country and in South America, both for railways and public roads. A diagram sheet showing the strains to which the various parts of the bridge would be subjected from its own weight, and also from the moving loads of a public road, as well as that due to the running of a heavy locomotive, has been submitted to the Board, and checked by one of its members, and found to be correct. The dimensions of the respective members of the bridge appear to the Board to have been carefully considered and adjusted to their loads, with an ample allowance for safety in all parts. In the comparison drawn by the Judges between this and the bridge exhibited by Messrs. Appleby Bros., East Greenwich, London, as to their relative adaptability for the uses of the Colony, the following remarks were made :—That much as this type of bridge is admired, it is not to be forgotten that every part has to be very carefully made by experienced workmen in a factory possessing special facilities and appliances for this particular description of work. The iron is also of a superior description prepared for the purpose, and is more costly than the ordinary plate and bar-iron used in English bridges. Although this description of bridge can be readily transported to a site for erection, and be put together with great rapidity and certainty, yet from its construction it requires staging of a more extensive character than that necessary for lattice or plate girder bridges, thereby forming a serious item in the expenditure of the work, especially in this Colony, where the rivers are subjected to great floods. This bridge shows a less quantity of iron in its construction than the lattice type ; but on the other hand, the first cost both of material and labour is much greater, which would probably be found to bring the cost up to the same amount in both descriptions of bridge. Great care has been taken in the quality of workmanship of the girders, which may be considered excellent. Taking all the different points into consideration the Judges arrived at this conclusion:—" That, unless under *peculiar* circumstances, the lattice type of bridge is preferable for both railways and roads in this Colony."

VICTORIA.

PURNELL, Alexander—Geelong.—Model of a Bowstring Girder Bridge, in wood. First degree of Merit.

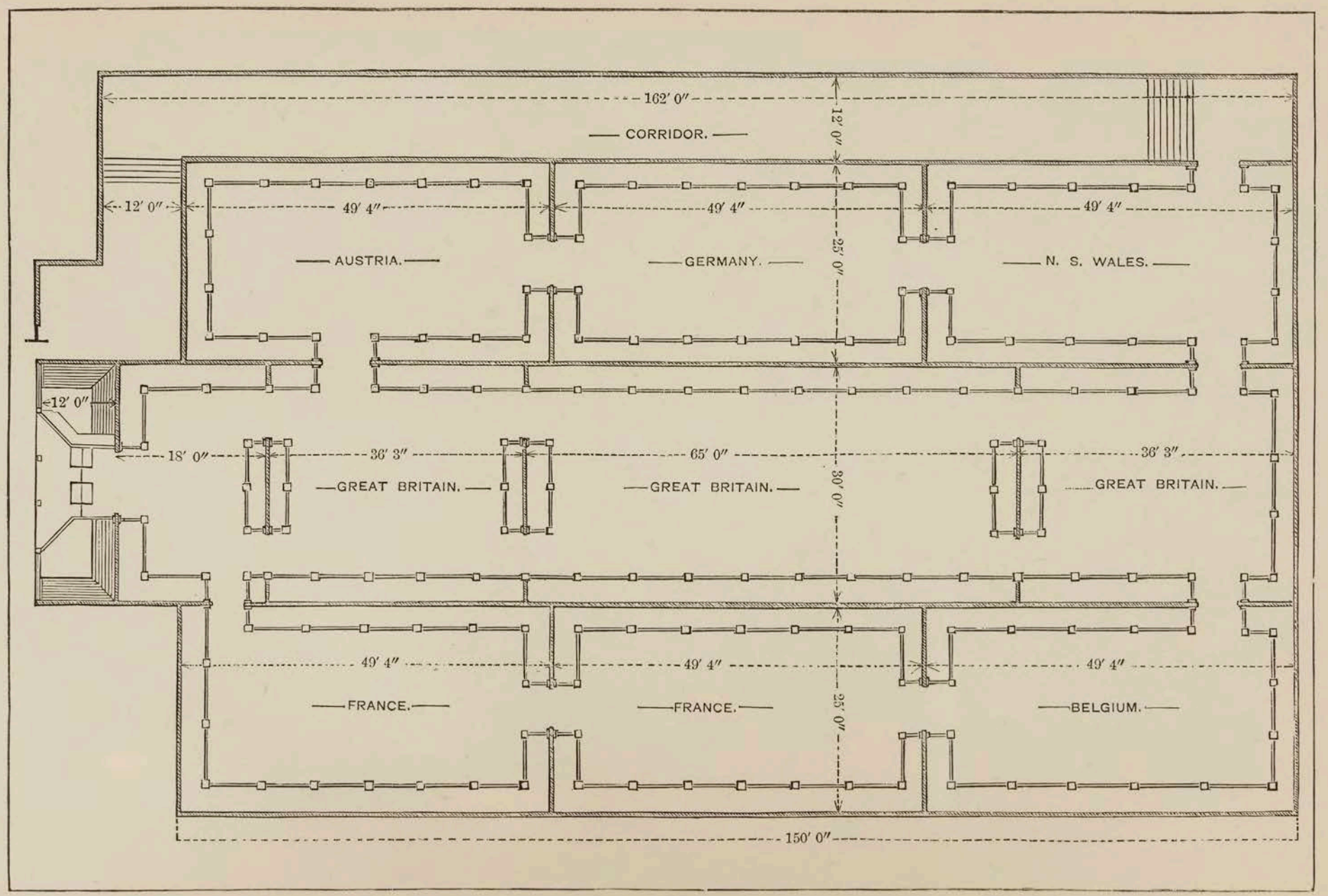
Report—This is a beautifully-made model, showing great ingenuity and skill in workmanship, but not claiming originality.

DEPARTMENT IV.

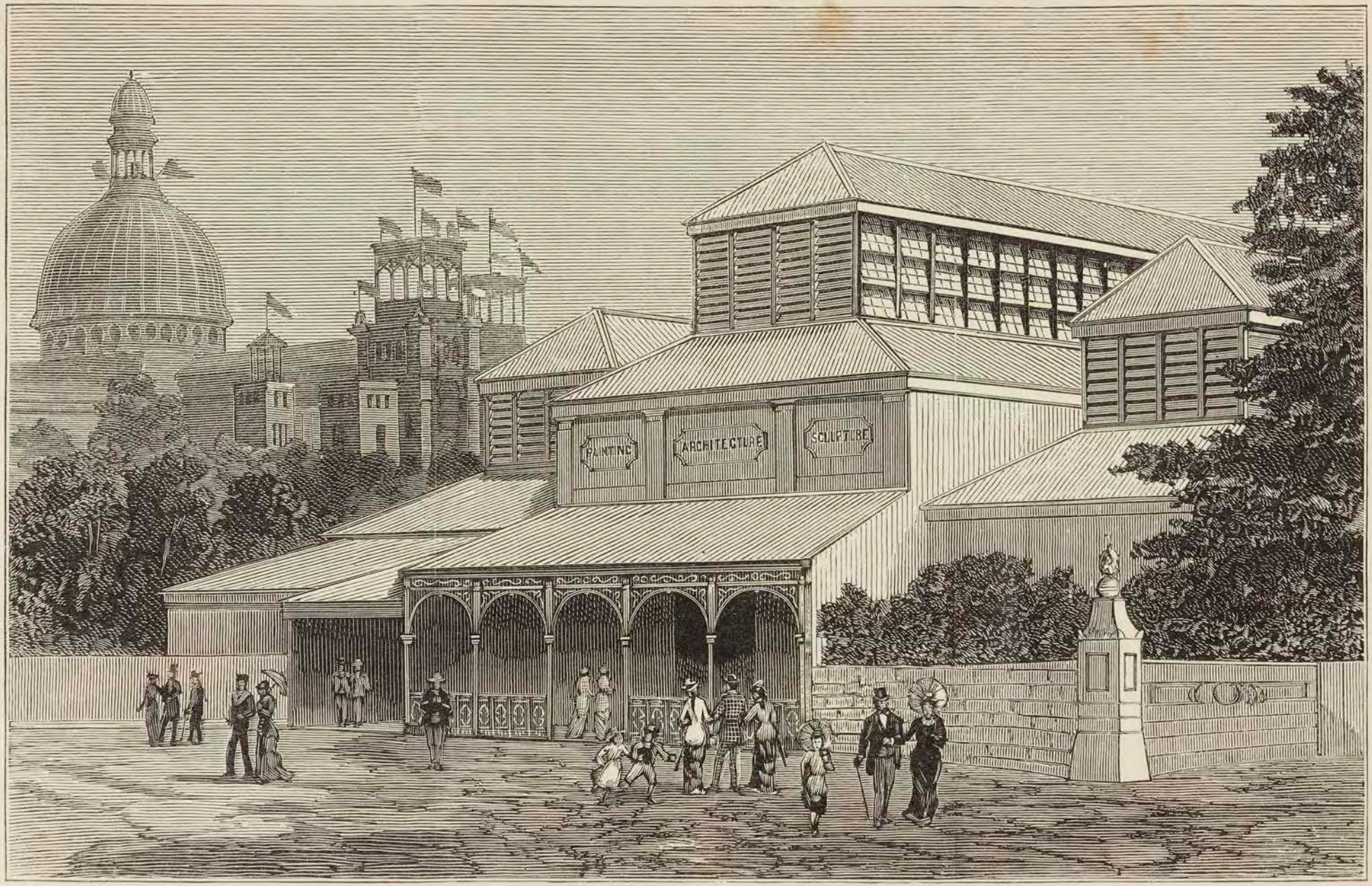
ART.

AWARDS NOMENCLATURE.

The Awards in Department IV.—Art, are thus described in their relative orders of merit:—'First degree of Merit Special"; "First degree of Merit"; "Highly Commended"; "Commended"; "Honourable Mention."



ART GALLERY [GROUND PLAN.]



ART GALLERY (EXTERIOR VIEW.)

GENERAL REPORT ON THE FINE ARTS.

By EDWARD COMBES,

CHAIRMAN OF THE ADVISORY COMMITTEE.

CLASSES 400–427—Art.

A GREAT development of imitative art is not to be expected among the inhabitants of a country still in the first century of its existence. The many causes that disturb the social relations and culture generally in the young life of a Nation or a Colony are altogether adverse to the cultivation of the Fine Arts. In the struggle for life, agriculture first, and then manufacturing industries are resorted to as the source of subsistence. It is not until a country is comparatively settled, that the necessary time can be afforded for the consideration of matters pertaining to art. The soul has to be satisfied with Nature's own loveliness, and to the attentive eye, every change is a new picture—every variety of expression a new element of delight.

Australia may be said to have definitely solved the great problem of colonization. We have here a community, not yet a century in existence, in a position to organize and carry out an International Exhibition. While this seems incredible, it is in reality an established fact. A few years since, such an Exhibition would have been deemed utterly and completely impossible—not even Dr. Darwin could have imagined when he penned his prophetic verses on Sydney Cove, that in less than a century his predictions would have been extravagantly realized. That the products of "peace, and art, and labour," of the entire world should not only "dance on the tide" of Port Jackson, but that the great European Nations should meet at Sydney to compete in friendly rivalry for prizes given by the Government of that country,—which was at the time the poem was written, a *terra australis incognita*,—was certainly far beyond what the poet imagined he saw in the dim and distant future. Nothing more wonderful was ever attributed to the genii of oriental romance than the magic transformation necessary to make such an Exhibition possible. It needed the great inventive magicians, who since the time Darwin wrote, have discovered, controlled, and utilized the imponderable natural forces of

steam and electricity. These inventions, the real "slaves of the lamp" have almost vanquished distance; they have bridged the Atlantic, Pacific, and Indian Oceans, broken down all opposing barriers, connected the Mediterranean with the Red Sea, and brought Australia within a month's journey of England. We can truly say to-day that in point of time, London is no further from Sydney than Edinburgh was from Exeter a couple of centuries since. These great humanizing and colonizing forces have enabled us to overcome difficulties which only a generation ago appeared insurmountable.

The Sydney International Exhibition has shown the nations of Europe, Asia, Africa, and America that there has arisen

"With flag unfurled
A new Britannia in another World,"

and which, in all probability, will in another century be as populous and powerful as the old one.

A hundred years ago the colonization of Australia was scarcely contemplated, and, although Captain Cook had given Port Jackson a name, he had never explored, nor had he ever seen, its beautiful shores and coves. According to his own narrative the famous navigator never entered the harbour.

It was not until 1788, the year before the French Revolution, that Captain Phillip cast anchor in Sydney Cove. The foundation of Australian colonization was then laid, and a commencement made to build a structure destined to become a *Greater Britain* in the Southern Hemisphere.

The cultivation of the Fine Arts in so young a country as Australia must naturally be mainly restricted to those who have leisure time for the occupation. It may attract a select class, but the masses of the people know little and care less about it. In the early youth of nations, man's whole time is engrossed by those pursuits which provide him with food and shelter. The ground has to be cleared, fenced and tilled, houses and towns built; then, in order to facilitate commerce, roads and bridges have to be made, railways and telegraphs constructed, harbours and docks established. In the natural order of things it is imperatively necessary that agriculture and the mechanical arts have precedence, and speaking generally, men who have to battle with Nature in the wilderness, have neither the time nor the inclination to take much interest in the Fine Arts. After a time, however, the aspect changes—the wilderness has become a smiling field; fortune or competence is won; the coveted leisure is obtained; articles of luxury and decorated furniture take the place of the rough and rude household stuff which served the purpose of the early colonists; a taste for the beautiful in Art is then awakened, and its culture becomes a natural consequence.

CLASSES 400–427.—*Art.*

If we consider Art as a civilizer we shall at once recognize its immense importance. Nothing tends more to refine the manners, cultivate the taste, and improve the mind than the contemplation and study of all that is true and beautiful. In the first place motives of curiosity may attract the public to look at fine pictures or statuary, and the result will be a feeling of more or less admiration for what strikes the individual mind with sympathy in sentiment. This will lead to high and noble thoughts associating themselves with whatever is good and true in the picture. There must be a system of Art culture where a public have to be educated in æsthetics; we must first of all, by appealing to the eye, induce that love for the beautiful in Art which lies latent in almost every breast.

This "*terra australis incognita*," the antipodes to civilized Europe, a country rescued from cannibal savages almost within the memory of living men, could not be expected to offer much inducement to the Great Masters of Europe as a fitting place for the exhibition of their works. Their representation could not be secured by payment, or indeed were there any funds available for this purpose. Thanks, however, to the noble example of our gracious Sovereign, and the exertions of the British Loan Committee in London, a goodly collection of paintings and water-colour drawings was got together and forwarded to Sydney for exhibition. The heartfelt thanks of the people of Australia have been given to their beloved Queen for this expression of confidence in, and consideration for Her Australian subjects. The glorious example of Her Majesty the Queen was worthily followed by His Royal Highness the Prince of Wales, the President of the British Commission, who shares with Her Majesty the loyalty and devotion of the colonists, and also by a large number of exhibitors, who co-operated liberally in loaning works of Art to represent at Sydney the English School of Painting. Without such aid, the Fine Art Exhibition would have been a very meagre one.

The thanks of the community are also eminently due to the European Governments that contributed, and more especially to France, Germany, and Belgium, to whom Australians are under many obligations for the able assistance those nations afforded.

The Sydney Exhibition Fine Art Section was comparatively small, nevertheless it comprised works representing many eminent painters from England and the European Continent.

It must, however, be apparent, when speaking of the Sydney International Exhibition of 1879 as a comparative exhibition of contemporary Art, that it is understood this is simply so far as it goes. Comparatively few of the

world's greatest artists were represented. Truly the works of many painters standing in the first rank were exhibited at Sydney, but there can be no real comparison where the best works of the most distinguished are absent. From England we missed Millais, Long, Vicat Cole, Fildes, Briton Rivière, Macwhirter, S. J. Poynter, Bouverie Goddard, Gow, G. H. Boughton, Marcus Stone, H. S. Marks, P. Graham, Miss Thompson. Redgrave and Alma-Tadema are represented truly, but how? The former with his small picture of "*Will-o'-the-Wisp*," and the latter with three small paintings called "*Miss Thackeray's Elizabeth*," and "*Spring*" and "*Sunflowers*." The famous artists of the Continent of Europe are still less represented. France sends us nothing of Meissonier, Bonnat, Cabanel, Bougareau, Doré, Emile Binpils, Perrault, Layraud, H. Dubois, Henner, Feyen-Perrin, Fleury, Louis Lenoir, and a host of others. We miss the great Makart from Austro-Hungary; and what has been said of England, France, and Austria, applies equally to other countries.

It was originally the intention of the Commission that the Fine Art Exhibition should be held in the main building subsequently called the Garden Palace; but it was pointed out by Messrs. Montefiore and Du Faur (two of the Trustees of the Art Gallery) that the space was altogether inadequate and unsuited, no proper provision having been made therein for the display of paintings to the best, or even to ordinary advantage—that the spaces available in the galleries of the Palace were not properly lighted, and that, as in all great Exhibitions much attention had been paid to the lighting of the spaces set apart for the display of paintings, this matter of lighting, it appeared to them, had not received sufficient consideration from the architect. The galleries were chiefly lighted from east and west, with cross-lights coming in overhead. This was of such vital importance that after discussion at a meeting of the Fine Art Committee, representations were made to the Commission to the effect that, owing to the unsuitability of the galleries of the Garden Palace, they should be re-arranged or improved, or that some other suitable place should be found for the display of Works of Art. These representations were referred to the Colonial Architect, who considered that the objections of the members of the Art Committee were premature, more especially as he pointed out that he believed there was a sufficient quantity of space for the exhibition of the pictures in the galleries of the main building.

It transpired afterwards, as the erection of the Garden Palace proceeded, and the claims for space were compared with the total quantity available for exhibition purposes, that there was in the Garden Palace an absolute insufficiency of area for the display of the numerous objects pertaining to the Art

section, other than Painting and Sculpture, comprising exhibits in Photography, Photo-lithography, Engravings, Charts, Maps, &c.

The countries to which space had been allotted on the main floor of the Garden Palace, found it altogether insufficient for the display of their exhibits, and it became necessary to lay out and arrange the galleries over the Courts of the respective Countries and Colonies for the exhibition of the Art objects above referred to. In fact, the question had now assumed this aspect,—the Commissioners had found the space in the galleries of the Garden Palace altogether inadequate for the exhibition of the oil paintings, and that this space ought to be devoted to other classes of Art exhibits, and that a separate building, or Art Annex, with proper provisions for lighting, should be erected for the paintings and drawings.

At a meeting of the Commissioners of the Sydney International Exhibition held on the 21st of August, the Executive Commissioner, in his weekly progress report, said:—"After some calculation he found that if some plan could be adopted for dealing with the exhibits of pictures, so that the galleries could be used for such exhibits as school furniture, maps, drawings, photographs, and such lighter goods, there would be no necessity for applying for another annexe. The question had come to this—that they had not sufficient space as it was; and if there was no separate building provided for the picture and Art gallery, they could not hang the pictures. He had a consultation with the Art Committee, and a sketch of a building in the form of a hollow square, suitably lighted, and estimated to cost £4,600, was prepared. He then placed himself in communication with the Premier and laid the matter before him, urging the necessity for the erection of an Art annexe, and he was happy to state that he had been that morning informed by the Colonial Secretary that the Government would undertake the erection of the required Picture and Art Gallery without delay. Thus that difficulty was obviated, and they could now utilize the galleries in the main building as before stated; they might even find space there for oleographs and copies; but these galleries were decidedly unsuited for the exhibition of oil-paintings and water-colours, both on account of the angle at which the light fell and on other grounds. They would thus have the galleries for ordinary exhibits, and the special building for fine Arts."

While the settlement of these all-important matters was pending, it became necessary to appoint an Advisory Committee on Art to deal with matters of detail connected with the Department of Art, and to decide as to the merits of the incoming colonial exhibits. This was done, and the Committee consisted of Mr. Edward Combes, C.M.G., the Chairman, and Messrs. James Fairfax, E. L. Montefiore, and E. Du Faur.

At the meeting of the Commission held 30th August, the Executive Commissioner said:—"With regard to the Art Gallery, after consultation with the Chairman of the Advisory Committee on Art (Mr. Edward Combes, C.M.G.), that gentleman had offered to assist him by active personal supervision; and he would be glad if the Commission would sanction his action in that matter. The authority and permission to erect this gallery was given last Thursday morning, and on the same day the contract was signed, the ground marked out, and the whole thing had been proceeded with without an hour's delay." The Commission gave its approval to this, and from that time the superintendance of all matters pertaining to the Art Gallery devolved on the Advisory Committee. The Art Department was therefore the last to be fully organized, this having been done only two months and eleven days before the opening.

The time being so limited for the erection of the Art galleries and the preparation of the ground on the site decided upon near the entrance to the Sydney Botanic Gardens, it was necessary to work day and night, and hurry the work forward as fast as possible. The amount of money placed at the disposal of the Commission for the purpose was so small, that it was essential to exercise the strictest economy consistent with the attainment of the object in view. The plans had therefore to be arranged in accordance with these considerations.

It will be seen on reference to the plan and elevation herewith that the original design of a hollow square was abandoned. There did not exist sufficient area on the only available convenient space where art galleries could be erected for the adoption of such a design. The plan was therefore modified by the architect, Mr. W. Wardell, and the work pushed forward by Mr. John Young, the contractor.

Meanwhile the Art exhibits were arriving,—Mr. Henry Mort, a member of the Commission, having with great forethought placed his extensive wool stores at the disposal of the Commission, they were stored there until the Art Annex was ready to receive them. The English pictures, including Her Majesty's collection, arrived about this time, in charge of Mr. George S. Evans, who had been recommended by Sir Michael Hicks-Beach, the then Secretary of State for the Colonies, to His Excellency the Governor of New South Wales, as a person with special qualifications as caretaker of the collection. Works of Art from New South Wales and the neighbouring Colonies were also received here and examined, with a view to their rejection or acceptance, as exhibits, by the Advisory Committee. Thus, while the Annex was in progress of erection, the work incident to the Exhibition was being carried on without loss of time.

The Art Annex covered an area of 192 feet by 95 feet. It was divided into a vestibule and nine galleries, together with a long corridor. It will be seen, on reference to the ground plan, that the centre of the building was occupied by the Paintings, and Water-colour Drawings of English artists; that a portion of the vestibule was also set apart for English Works of Art, while France occupied its remaining space. The three galleries on the right were taken up by the French and Belgian exhibits, while Austria and Germany had the rooms on the left side. In a gallery at the north end of the western side the British Architectural Drawings were exhibited, together with original works by New South Wales artists; while in the corridor, extending from north to south, outside the western galleries, were placed stained-glass, terra-cottas, &c., &c.

The walls and partitions of this Annex were constructed of wooden uprights, covered on each side with tongued and grooved boards, the spaces being filled in with sawdust. The centre galleries had walls 25 feet high irrespective of the height of the roof. They were lighted from the top by means of glass *louvres*, which also served to ventilate the galleries, in the manner shown. The walls of the side galleries were 16 feet high, and lighted in a similar manner.

The ground plan and elevation will sufficiently explain the peculiarity of construction and general arrangement. The ground space given above was divided into nine galleries, all lighted through the roof, and a long corridor extending the entire length of the building. The floors were framed on piles some distance above the ground, which was at the place very uneven and ten feet lower at one end than the other. The floor spaces within the hand-rail and the several walls were latticed the whole length of the galleries. Thus a perforated floor, acting in connection with the glass *louvres* before-mentioned, afforded excellent ventilation; and in order to keep the building cool, water was laid on, in pipes finely perforated, along the ridge of the roofs. This arrangement permitted a constant trickle of water over the corrugated iron, and was always resorted to during the hot weather. Fire-plugs were also fixed in the centre of each gallery, at suitable distances, provided with hose and all other requisites. These measures rendered it comparatively secure from fire, as a sufficient force of janitors and watchmen were always on duty.

The nine galleries and the corridor were arranged as shown in the ground plan and occupied by the several nationalities. The walls were coloured a dullish red—somewhat of a dark maroon—which answered admirably, and upon which the paintings showed to the best advantage. The size of the various galleries will be found on the ground plan.

The European Commissioners, preferred to exhibit their photographs, engravings, and chromo-lithographs upon the walls of their respective Courts in the main building, while a good deal of the statuary was exhibited in this manner and in spaces under the dome of the Garden Palace and also in the nave and transept.

The New South Wales gallery space in the Garden Palace was also made the most of, by means of ten large screens of the whole width of the gallery after allowing sufficient space to get round them. Upon these screens, upon the gallery walls, and upon the walls of the south-east tower, were exhibited most of the photographs and engravings. Many loaned paintings, many of which were copies, were also hung upon the wall spaces leading to the stairs. Previously to the opening of the Garden Palace the labour of arranging the various details was very considerable; and in the Art Annex it was only by the most strenuous exertions and personal energetic application, that the Advisory Committee succeeded in completing their task before the Prince of Wales' Birthday. This was, however, fairly accomplished by simultaneously carrying forward the decoration of the galleries and the hanging of the pictures.

The Art Annex was not handed over to the Commissioners until the 7th November. The whole arrangements were, however, completed, the pictures hung, and the Art galleries opened by His Excellency Lord Augustus Loftus, on the 10th of November, 1879, on which date the anniversary of the birth of H.R.H. the Prince of Wales was celebrated, the day being kept as a public holiday. The enthusiam displayed by the people was unbounded, while the attendance was greater than on any day during which the Exhibition was open.

It will not be out of place here to speak of the individual merits of the various collections; the absence of any definite School in Australasia clearly permitting comments on the relative merits of the various European Schools, so that the national incidences which separate their various styles may be observed and indicated. As I have before observed, the Exhibition, while International, could not be considered altogether as a comparative contemporary one,—for it must be remembered that in lending works of art to go on a voyage around the world, the risk incurred of sending priceless pictures—*impayables chefs-d'œuvres* of art—twenty thousand miles would reasonably deter most people from contribution, as the loss if any accident happened would be utterly irreparable. Numerous proofs of the most disinterested generosity and confidence were however given; and it is with the most lively sense of gratification that we contemplate these evidences of goodwill which have been evinced towards us by the rest of the world. These confidences encourage us

to hope that Australia will, at no distant period, see the necessity of affording that encouragement to the Fine Arts which, even in an industrial point of view, has been proved so beneficial by all the great nations of Europe.

The Art Section was classed under five different sub-sections—1, Sculpture; 2, Painting; 3, Engraving and Lithography; 4, Industrial and Architectural Designs; 5, Ceramic Decorations, Mosaics, &c. It will be seen that for the purposes of a general report it will be better to take the first three sub-sections, viz., from Class 400 to 418, together, as they all especially belong to that refining element of our existence in which imagination plays so important a part in the development of a refined and correct taste.

English Painting and Sculpture.

It has been repeatedly stated by many writers on æsthetics, during the latter part of the last century, that the degree of excellence in the Fine Arts attainable by any nation is limited and restricted by its climate. This statement they no doubt based upon the fact that Greece and Rome had been so much further advanced in everything pertaining to painting and sculpture than the more northern nations. It did not occur to these writers that Greece and Rome owed their pre-eminence in art rather to their advanced civilization and superior culture than to any physical or climatic influences. The Schools of northern nations, and of Great Britain in particular, have of late years clearly shown that climate has little or nothing to do with the matter, but that wherever the country may be situated art advances in direct proportion to its progressive advancement in knowledge and increase of material wealth.

The paintings lent by Her Majesty the Queen were four in number No. 1. Mr. C. R. Leslie's fine picture of "*The Queen receiving the Sacrament*," (the concluding part of the ceremony of Her Majesty's Coronation), on the 28th June, 1838. This picture most faithfully represents the grand and impressive ceremony, and is exceedingly interesting as containing so many authentic portraits. The following description is from the catalogue furnished by the Royal Commission for the Australian International Exhibitions:—"The picture represents Her Majesty in the Dalmatic Mantle (the coronation robe), having taken off the Crown in approaching the altar, and wearing no jewels. The peers and peeresses, who had worn their coronets from the moment in which the Queen was crowned, have now put them off. The Sacrament is administered by the Archbishop of Canterbury (Dr. Howley), assisted by the Rev. Lord John Thynne, in the absence of the Dean of Westminster. On the furthest side of the altar is the Lord Chamberlain (the

Marquis of Conyngham), and the Bishop of London (Dr. Blomfield). The Sword of State is borne by Viscount Melbourne, near whom are the Duke of Wellington and the Duke of Sutherland. The Crown is held by the Lord Great Chamberlain (Lord Willoughby d'Eresby), next to whom is the Earl Marshal (the Duke of Norfolk). Under the lower canopy are seated the Ladies of the Royal Family; nearest Her Majesty are the late Princess Augusta, attended by Lady Mary Pelham, the Princess Augusta of Cambridge, attended by the Hon. Miss Kerr, the Princess Hohenlohe, and the Duchess of Kent, attended by Lady Flora Hastings and Viscount Morpeth. The other ladies and gentlemen in attendance under the canopy are the Ladies Caroline Campbell and Caroline Legge, and Viscounts Villiers and Emlyn. Immediately behind the Queen are the Mistress of the Robes (the Duchess of Sutherland), and Lady Barham, the Lady-in-waiting. In the foreground are five of the eight young ladies who bore the Queen's train, namely, the Ladies Caroline Lennox, Adelaide Paget, Fanny Cowper, Wilhelmina Stanhope, and Mary Grimston. Beyond the coronation chair are the Duke of Nemours and Prince George of Cambridge, and behind it are the Dukes of Sussex and Cambridge, the Duke of Coburg, Prince Ernest of Phillipstahl, and the Duke of Argyll and two Pages of Honour (the Marquis of Stafford, and Lord Mount Charles)." No. 2. Signor Belli's copy of Winterhalter's celebrated picture of "*The Royal Family in* 1857." No. 3. "*The Marriage of His Royal Highness the Prince of Wales at St. George's Chapel, Windsor Castle.*" The great interest of this painting is also in the numerous portraits so beautifully grouped and excellently handled. No. 4 is Mr. Chevalier's picture of "*The Royal Procession to St. Paul's Cathedral, on the Thanksgiving Day, 27th February,* 1872," which not only represents a goodly collection of the most distinguished personages, but also shows us the great and distinctive features of the Royal procession. The descriptions of this and the following picture are from the Royal Commissioners' catalogue :—

"First carriage :—Their Royal Highnesses Prince Leopold and Prince Christian and suite.

"Second carriage :—Their Royal Highnesses the Duke of Edinburgh and the Duke of Connaught and suite.

"On horseback :—The Lord Mayor and the Civic Authorities.

"Third carriage :—Her Majesty the Queen, and their Royal Highnesses the Prince and Princess of Wales, and Princess Beatrice."

The painting lent by His Royal Highness the Prince of Wales was Mr. Chevalier's painting of "*The Ceremony of the opening of the International Exhibition in Vienna, 1873.*" Its description is as follows :—"This picture

contains more than 100 portraits. On a platform profusely decorated with plants and flowers are seated the Emperor and Empress of Austria; the Prince of Wales, the Crown Prince and Princess of Germany, the Duke of Connaught, the Crown Prince of Denmark, the Count of Flanders, the Countess Girgenti, the Princess Amalia of Coburg, and the Grand Duke of Coburg are also present, and a vast concourse of princes and nobility of all nations occupy the second and successive rows of seats. The Archduke Carl Ludwig is represented in the act of reading the first address."

Among the English painters who exhibited in connection with the Sydney International Exhibition we had a goodly array of Royal Academicians. These were headed by their President, Sir Frederick Leighton, and followed by Alma-Tadema, R. Ansdell, E. Armitage, P. H. Calderon, E. W. Cooke, T. Sidney-Cooper, C. W. Cope, W. C. T. Dobson, A. Elmore, W. P. Frith, Sir John Gilbert, F. Goodall, J. E. Hodgson, J. C. Horsley, E. F. Poole, Val. Prinsep, R. Redgrave, G. A. Storey, and G. F. Watts. Seventeen of these are members, and three, viz., Hodgson, Prinsep, and Storey, associates.

Among the works exhibited by these artists are many truly worthy of great honour. Sir Frederick Leighton, President of the Royal Academy, is without doubt in the first rank of English painters. In his "*Samson and Delilah*," however, he is not altogether at his best. Delilah, "with all her bravery on, and tackle trim, sails filled, and streamers waving," is charmingly drawn and perfect in colour. The contrast of mingled grief and shame, anger and anguish, on the countenances of Samson and his friends, show great depth of poetic feeling, and are quite worthy of the great painter; but the attitudes are stiff, and the principal lines follow each other with too much similarity, to make the composition entirely pleasing. Alma-Tadema is not represented by any of his great works. He exhibits two very small panels, called "*Spring*" and "*Sun-flowers*," charmingly rendered, but giving no adequate idea of his great powers. Miss Thackeray's "*Elizabeth*" is simply a portrait, which might be Miss Thackeray's "*Elizabeth*" or that of any other young lady. It is much to be regretted that this great painter was not represented by a work equally grand with his "*Audience at Agrippa's*" or "*After the Dance*," exhibited at the Royal Academy in 1876. Richard Ansdell has three canvases:—"*Evening—Girl and Dogs*," "*The Anxious Mother—Sheep*," and "*Partridge-shooting*." "*The Anxious Mother*" is by far the best of these works. It represents a ewe with two lambs, made anxious by the appearance of an eagle hovering in the sky, and is a fair example of the artist's manner. E. Armitage exhibits "*The Mother of Moses*," and "*Pygmalion's Galatea*." Pygmalion is bowing his head, in earnest prayer that his work may be endowed with life, not noticing that

his supplication has been granted, and that the statue is already changing from the cold marble to the ruddy hues of life. The transformation is cleverly portrayed. The feet of the statue retain the cold stony appearance of the marble, while the head is full of warm life and expression. The great fault in this picture, and which also applies to that of "*The Mother of Moses*," seems to be in the figure—the model has no pretensions to beauty, and is altogether too masculine in form and feature for the "*Galatea*" of Pygmalion or "*The Mother of Moses.*" The details are accurately painted in both pictures.

John Brett's large landscape of *Mount's Bay, Cornwall*, is in the artist's best manner, and one of the most realistic coast scenes ever painted. The porphyritic rocks with their peculiar richly coloured lichens, the furze with its blossoms, the herbage and sheep, are drawn in the most exact manner, all in the bright sunlight, with the calm and beautiful sea below. The great charm of this picture is in its execution, which is most admirable. R. Beavis exhibited two Oriental pictures—a "*Bedouin Caravan descending the high ground at Wady Ghurundel, en route to Mount Sinai*," and a "*Threshing-floor at Gilgal.*" Both of these pictures are powerful, and admirably composed. There are, however, some anachronisms which tell against the character of the latter picture—for example, that while the cattle on the threshing-floor are well drawn and grouped, they are not the breed of cattle peculiar to Egypt or Syria, but are on the contrary fairly bred Durhams. The old Arab who is represented as driving is highly characteristic; and while the paintings of Mr. Beavis are imposing and effective, the accessories of the foreground are sometimes carelessly and negligently drawn, and altogether without sufficient detail—Mr. Beavis does not act fairly either towards his genius or himself.

P. H. Calderon's "*Jeanne d'Arc*" partakes more of the character of a landscape than of a figure-painting. The story which the artist represents is thus told in the old legend :—"From the age of thirteen, at first in her father's garden, then in the church, and more frequently in the fields, a dazzling light appeared to her, and 'voices' told her that she had been chosen for a great purpose; and as the time of her mission drew near, the 'voices' spoke to her more frequently, and called upon her to leave her home, fly to the relief of Orleans, and crown her King."—*Report of Jeanne's trial at Rouen.* The landscape and sky in Calderon's picture are well drawn and charming in colour; but were it not for the legend, there would certainly not have been any idea suggested that it was an historical painting. C. W. Cope's large canvas of "*Lieutenant Cameron's Welcome Home*" from his exploration in Africa can have little interest for any one not connected with the Cameron family, as the

picture is intended to commemorate a family event. There was luckily, however, a fine portrait of Dr. Barker, the Anglican Bishop of Sydney, which gave the Australian public a much clearer idea of this distinguished painter's colouring and great power of execution.

Elmore was strongest in his picture "*On the Housetops, Algiers,*" which represents the outdoor life of Algerian women and children on the tops of their houses. The figures are admirably drawn, and quite oriental in conception and finish. The quizzing, giggling, mischief-loving faces of the women are charmingly rendered, giving great vivacity of expression, and making a most agreeable life-like picture. He also exhibited "*Lenore,*"* and "*John Alden and Priscilla.*"* Sir John Gilbert's "*Doge and Senators of Venice in Council,*" is a fine composition. The heads of the Doge and the members of his Senate are full of individual character, while the colouring is strong, rich, and harmonious. He also sent an excellent water-colour drawing equally good in its kind. F. Goodall exhibited two oriental landscapes called "*Spring-time in Egypt,*" and "*The Banks of the Nile.*" These paintings are in strong sunlight, which to render successfully is no doubt extremely difficult. The total absence of herbage is to be deplored, as where water exists there is generally vegetation of some sort. The pictures, however, are well composed and harmonious in character. In M. J. E. Hodgson's "*Loot*" there is considerable life and expression in the figures, which, however, seem to be got up more in holiday costume than as appearing to have just returned from a marauding expedition with their plunder. The accessories are no doubt accurately painted, scrupulously clean and without a scratch; but the stable is entirely an English one, while the horse in the background is "fearfully and wonderfully made." It is to be regretted that a painter of so much power as this artist evidently possesses, should make such glaring mistakes. J. C. Horsley exhibits "*Cupboard Love*" and "*Discipline oblige*" (the Unwilling Salute). Both these pictures are in the best manner of the artist. The tale of "*Cupboard Love*" is admirably told. The children are crowding round their mother or nurse, who is about to unlock the cupboard door; one child is clinging round her neck, while a boy in dark green velveteens is neglecting his drum to pull her sleeve. A little girl in a red velvet cap and black velvet cape, with golden-yellow hair, falling down between the crimson and black, is standing by the side of another and older girl who is holding out her hand in expectation. The group is finished by a black and tan terrier with a deep blue ribbon round his neck, sitting up in a begging posture. The management and colouring are

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marvellous. The texture of the different fabrics, silks, satins, velvets, woollen and cotton stuffs, all tend to show the extreme care and consummate skill of the artist. P. F. Poole's "*Wounded Knight*" is powerfully drawn, in a low tone of colour, and quiet and *triste* in character; the dark figures coming out in bold relief against the twilight sky are very effective. Val. C. Prinsep's "*Linen-gatherers*" is a picture full of life and spirit, the dark blue and brown cotton dresses contrasting cleverly with the beautiful faces of the young women. The figures are admirably drawn, while the landscape is low-toned, with a fine evening sky. G. F. Watts's two pictures, "*Esau*" and "*Britomartis and her Nurse*," are powerfully executed and harmoniously composed; they show great strength of colour, while the handling is broad and masterly. Claude Calthorp's picture of the "*Meeting of Scotch Jacobites*" is a pleasing and picturesque composition. It may perhaps be urged that the dash and glitter make the group too theatrical, but it is highly finished, and harmonious in colour. H. H. Canty's "*Tramps*" is a picture which shows great power of drawing, and George Chester's "*Hampshire Hatches on the River Avon*" is eminently characteristic of English scenery. K. Halswelle sent a large canvas, "*Non Angli sed Angeli*,"* prettily telling the story of the great Pope Gregory and the British Children in the Slave Market at Rome, when, upon inquiring what they were, he was informed they were "Angli,"—"Non Angli sed Angeli"—Not English but Angels,—returned His Holiness, who thereupon was determined to convert the English to the Christian faith. The colouring is very pleasing, but the children although charming are not altogether faultless in drawing. The head of the Pope is dignified, thoughtful, and expressive. J. Faed's painting of "*King James the Fourth before the battle of Flodden*," is a careful and well arranged composition. The heads are full of character and correctly drawn, while the tints are charmingly broken, quiet and full of harmony. The grouping is excellent and the work well executed. It is an impressive subject, and finished in a masterly manner. Hargitt showed a fine landscape of the "*Carse-o' Gowrie*,"* and C. E. Johnson's "*Gipsy Encampment*" is an admirable piece of good honest work. The setting sun glinting across the upper branches of the trees, under which gipsies have camped, is managed in a most exquisite manner; the massing of the trees is good, and the warm glow of sunset preserved throughout. H. R. Robertson's "*Gleaners*" is quiet and truthful, the figures coming out well against the twilight sky. E. H. Fahey sent "*All among the Barley*," a composition full of harmony. The ripe barley with the red wild poppies in the foreground, with

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the trees and farm buildings breaking the sky line, while the sky itself is covered with light silvery clouds, gives characteristic truth to the picture, which charms with its peaceful beauty. C. J. Lewis paints with breadth and freedom; his "*Water Lane*"* is fresh and natural, and a work of great merit. "*Dittisham on the Dart*" is a lovely little landscape. David Law works with the spirit of David Cox, and appeals at once to the heart. R. Lehmann is represented by his "*Ophelia*," a fine picture. The unconscious expression and simple beauty of the unfortunate girl are somewhat marred by the expansion of the dress, which may probably be natural under the circumstances, but gives a somewhat grotesque appearance to the figure. The colour is natural, and the drawing of the broken willow very accurate, and quite in harmony with the feeling of the picture.

T. Sidney Cooper's cattle subject called "*Minster Marshes, East Kent*,"* is a fine work, notwithstanding the smoothness and mannerism of the artist. The drawing is very good, and the colouring harmonious, the *ensemble* quiet, life-like, and happy. W. C. Horsley's "*Mufti's Solace*"* is a pleasing study, and so also is J. R. Dicksee's "*Daughter of the House.*"* Wm. Bromley's "*Gossip at the Stile*"* is a charming little picture. The figures are carefully studied, and the attitudes easy and natural. M. E. Dockree's "*Old Mill at Pembroke, South Wales*,"* is a striking and remarkable landscape, painted with care, and accurately studied. Mogford's "*Crossing the Bar, Scarborough*,"* is faulty in composition, but pleasing in colour; while Carl Bauerle's "*Happy Children*" is an admirably sweet picture, low in tone, excellent in expression, and accurate in its details.

C. E. Perugini sent two good pictures, "*Finishing Touches*," and "*A Modern Bacchante.*" The latter a pretty piquant brunette walking through a hop garden, crowned with a wreath of hops. The colour is pleasing, and the accessories carefully painted. "*Finishing Touches*" represents a lady having her head powdered; she looks saucy and pretty, while the dapper Figaro, as he shakes the *poudrette* box, can be easily imagined to be paying madame a fine compliment.

J. Smart, of the R.S.A., was represented by a large landscape highly characteristic of the land of mist and flood. It is entirely in keeping with the sentiment of the picture. It is called "*The Crofter's Flitting.*" The cold sombre day, the sweep of cloud and mountain, are finely rendered, and one cannot but feel a sense of freedom while looking at the steep hillside and the grand and gloomy distance. The handling comes near perfection in

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landscape art, showing the artist's power in a most impressive manner. B. Colles Watkins, R.H.A., shows a fine quiet landscape of the "*Ecclesiastical Ruins and Round Tower on Inniscaltra or Holy Island.*" James Webb's "*Brighton*" is very far behind his usual work, and certainly cannot be placed in the same rank as his "*Rotterdam*" in the Melbourne Gallery. D. W Wynfield's "*Joseph revealing himself to his Brethren*" is a painting replete with feeling, low in tone, and skilfully executed. The colouring is somewhat peculiar, but altogether it is a picture of great merit.

The British Water-colour School is eminently national, and for many years stood quite alone. Its superior merit has always been acknowledged by European connoisseurs. Many excellent water-colour drawings were exhibited at Sydney by British artists, notably Absolon, Bayliss, Brierley, Duncan, Fripp, Sir John Gilbert, E. A. Goodall, Carl Haag, Louis Haghe, Hargitt, Edwin Hayes, H. G. Hine, Maculloch, Mogford, Mole, Clara Montalba, A. P. Newton, Severn, Tayler, and Warren.

Most of the drawings exhibited were of high class and average merit. Carl Haag's "*In the Cloisters of the Stiptskirche, at Berchtesgarten, Bavarian Highlands,*" leaves little to be desired in the accuracy of its drawing, and harmony of colouring; its quiet tone and sombre repose give that indescribable sentiment which indicates the true artist. H. G. Hine, always excellent in technical skill, was very happy in his little country scenes of the "*East Cliffs, Hastings, Sussex,*"* and at "*Wareham, Dorsetshire,*" These were in the artist's best manner, and superior in tone and feeling to the more imposing picture of "*Thirlwall Castle.*" E. Hargitt exhibited, in addition to the large oil picture of the "*Carse-o'-Gowrie,*" two very pleasing water-colours, "*Highland Drovers*" and "*Evening.*" Edwin Hayes was very successful in his drawing of the "*Dutch Pinks returning from Sea,*"* the scene being full of life and motion. Sir John Gilbert's fine drawing of "*Louis XIV transacting business with his Ministers in the apartment of Madame de Maintenon*" is powerful, even when compared with the most important works of this artist; it is admirably composed, showing great strength of drawing and harmony of colour. Oswald W. Brierly exhibited a marine subject of "*Whaleboats from Simon's Bay saving a Crew wrecked off the Cape of Good Hope.*"* This picture is highly characteristic of the style of the artist. The drenching spray is fairly blinding, and the heavy roll of the sea fresh and natural. We fancy we hear the roar of the tempest and the crashing breakers upon the fearful beach. E. Duncan sends a charming small study, "*Near Hurley Mill, on the Thames,*" and A. D. Fripp, in his drawing

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of the "*Common*,"* sent a work very perfect and natural both in composition and in colouring. E. A. Goodall's oriental subjects were drawn with breadth and freedom. The tints were in harmony with the subject, which breathed of warmth and repose. J. Absolon, in addition to a charming bit of Wiltshire landscape, exhibited a fine drawing of an "*Emigrant Ship on Sunday Evening.*" The gleam of lamp-light reflected on the faces of the group assembled to hear the bible read by one of the female emigrants is admirably rendered. A very fine drawing was shown by H. A. Harper, "*The Mount of God—Sinai*," in which the artist gives a very accurate idea of desert scenery. The warm, arid nature of the atmosphere seems to be felt, while the repose the artist has managed to convey is indicative of the land of the sphinx. Louis Haghe exhibited a fine interior called the "*Roodloft in the Church of Dixmude, Belgium.*" Mogford's drawings were fresh and natural, but somewhat faulty in composition. J. H. Mole's "*Trevellet Old Mill, near Tintagel, Cornwall*," was a charming little drawing, full of light and sparkle. A. P. Newton's "*Study in the New Forest, Hampshire*," gives a correct representation of what is perhaps the only remaining portion of primeval forest in the whole of England. The transmitted light is admirably managed. Clara Montalba was strong in her sketch of a "*Wreck in the Baltic*," while E. G. Warren gave drawings of "*Beeches*," and of the "*Greendale Oak*," which were most noticeable and praiseworthy. T. C. Dibdin's "*Butter Tower of Rouen Cathedral ;*"* and Jas. Maculloch's "*Blaven*"* and "*Ben-na-Caleach*,"* do not require any special mention.

The specimens of British Sculpture were necessarily limited,—the risk, cost of packing, transit, &c., made it almost impossible to induce contributors to send other than works of mediocrity. While this is to be regretted, it was inevitable. The most noticeable work in this class was the fine bronze group of Mr. C. R. Birch, called "*Retaliation.*"* The attitude of the figure is natural, graceful, and full of animation, and the modelling very fine, and will certainly increase Mr. Birch's reputation. The original model was exhibited at the Royal Academy, London, in 1878. Mr. Woolner exhibits busts of the "*Poet Laureate (Tennyson)*," "*Charles Dickens*," and "*Ophelia*" ; and Mr. A. Bruce Joy's "*First Flight*,"* and "*Reading Girl*"* are pleasing and attractive. Mr. T. Adams-Acton shows some fine terra-cotta busts, as well as two marble busts of "*Mirth*" and "*Sadness.*" There is a statue of "*The Youth at the Stream*," by the late Mr. J. H. Foley, R.A., worthy of careful consideration. Mr. Giovanni Fontana exhibits ten nearly life-sized statues which have been purchased by the Government for the permanent decoration of the Garden

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Palace. Mr. George Halse gives three examples of his work in marble. Mr. W. D. Stevenson exhibits the "*Nymph at the Stream*," "*The Fair Maid of Perth*," and "*Beatrice.*"

The Architectural Drawings from Great Britain were, many of them, of the very highest character. The greater portion were hung in the gallery devoted to original works by New South Wales artists, while the others were hung in the corridor. Designs by Chas. Barry, Wyatt, Waterhouse, Seddon, Roger Smith, Scott, Bonham, Braddon, Brooks, Hansard, I'Anson, were very beautiful, and commanded great attention. Mr. Waterhouse sent the drawings of his late great work, viz., the "*Natural History Museum, South Kensington.*"

The Society for the Encouragement of Arts, Manufactures, and Commerce, Adelphi, London, exhibited a series of twenty-nine etchings by the late James Barry. The Society also lent a painting by that artist representing the "*Temptation of Adam.*"

There were also exhibited by the Royal Commission for the Australian International Exhibitions contributions illustrative of the action of the Department of Science and Art at South Kensington, London, by permission of the Duke of Richmond and Gordon, K.G., Lord President of the Council; consisting of drawings and paintings by students and schools of the United Kingdom, exhibited by the Science and Art Department of the Committee of the Council of Education.

A fine collection of etchings and engravings was shown by the Art Union of London, and the Fine Art Society, by Fredk. Stacpoole, Saml. Cousins, E. Girardet, F. S. Haden, A. Appleton, J. Chant, W. Holl, J. B. Pratt, C. W. Sharpe, L. Stocks, G. T. Willmore, A. Ballin, Thos. Oldham Barlow, A.R.A., A. Evershed, J. P. Heseltine, L. Lowenstam, W. H. Simmons.

Photographs were exhibited illustrative of the Autotype and Calotype processes. Vernon Heath, Lemere, Bedford & Co., Marion, and others exhibited photographs. Colonel Stuart-Wortley and Mr. Sherlock exhibited a series of views known as "*Artistic Studies from Nature*," and are exclusively for the use of artists. These photographs are said to be taken instantaneously, so as to show the drifting clouds, the curl of the waves, the ripple of the stream, and other objects in rapid motion.

The London "*Graphic*" Company had a separate Court in the Garden Palace where they exhibited, through Mr. John Plummer, a most interesting collection of original drawings by Herkomer, Dollman, Constant, Hall, Fripp, Mrs. Butler Thompson, and other well-known artists—a selection of which have been purchased for the New South Wales Art collection, together with their reproductions as wood engravings. This formed a most excellent art exhibition in

itself; while the art of wood engraving and electro-type making were fully explained and shown in their various stages. Marcus Ward & Co., Waterlow & Sons, Goodall, and others exhibited fine samples of chromo-lithography.

The British Royal Commission also exhibited the electro-type reproductions of the Regalia preserved in the Tower of London contributed by the Department of Science and Art, South Kensington Museum, London. The greater part of the original plate was made about the time of the Restoration in the year 1660.

French Painting and Sculpture.

The influence of the French School in figure-painting has shown itself in a remarkable manner among English artists during the last decade, while apparently to compensate this the best French landscapes are all more or less *Constablesque*. In France historical art has progressed with great rapidity of late years. French schools are of the highest character, and give excellent opportunities to the students for the study of the best examples of ancient and modern art. The characteristics of French artists appear to be great determination and power, intimate knowledge of form and figure, and consummate boldness in execution. In no country in the world has high art been so favoured, or received such patronage from Government. Year after year sums of money are patriotically devoted to the production of grand historical paintings, to be placed in public buildings; indeed, whatever may be the form of Government in France, it has always exercised a paternal influence over art, which cannot be overrated. It gives its youth every inducement and opportunity to study, and holds out valuable prizes for the most successful. The prize most eagerly sought after is the *Prix de Rome*, which, like the presentation to an English college, means in reality a free and complete education. The fortunate recipients are trained in a classical way, as befitting artists of admitted ability. After several years of close application in France they are sent to Rome to complete their art culture, from which city they are obliged to send specimens of their progress to the Director of the École des Beaux-Arts in Paris. The competition for this prize takes place every year, and the emulation which it causes and industry which it excites are productive of the best results.

France sent one hundred and eighty-two oil paintings and eight water-colour drawings to the Sydney Exhibition. Although the greatest of her painters were unrepresented, the collection was an excellent one, containing a variety of well executed works vigorous in thought and happy in expression. It will be therefore understood that while the collection comprised many admirable paintings, it could not possibly

represent the true position of the art in France. While commenting on a few of the most striking pictures, I must necessarily pass over many of equal or perhaps higher merit. Lefebvre's "*Chloë*" displays great skill in classic composition; it is a strong, unswerving study of the nude female form, is well drawn, and comes boldly off the canvas. It is of too real a type to be god-like, but is honest and truthful, and treated in a chaste and perfectly natural manner; its simplicity and beauty combine to make it a marvellously fine picture. Another charming study a "*Nymph of Diana*,"* by C. Landelle, of the purest classic type, with little colour, but having an exquisite grace of outline and delicacy of modelling. He also exhibits a "*Coptic Woman selling Oranges at Cairo*,"* a picture of excellent quality, finely imagined, and attractive. Both these pictures have been purchased by the Trustees of the Art Gallery. L. F. Comerre had a large canvas representing "*Jezebel devoured by Dogs.*" The subject and its treatment present many and serious difficulties, which have been ably surmounted; the fore-shortening of the figure indicates marvellous power of drawing, and the whole composition displays the influence of that classic education which makes the study of form its great characteristic. E. Dubufe exhibits "*The Widow's Mite*," a striking picture of the modern religious school, which, although somewhat low in colour, is a work of considerable interest and very impressive. "*The Refectory*," by A. Gautier, is a pleasing, well balanced composition; the nuns and children are treated with great delicacy and graceful simplicity. J. Badin's "*Haidée*" is a well-drawn and expressive picture, with a display of costume beautiful and varied in colour. E. Toudouze exhibited "*Lot's Wife changed into a Pillar of Salt.*" The figures are large and masterly, showing great knowledge of form and technical skill. Severe in treatment and execution, the picture haunts us like a horrible reality.

For pictures of the *genre* type the French have long been especially noted. Adolphe Leloux's "*Family of Wooden-shoemakers*" is quite worthy of the artist's reputation, and one of those scenes of rustic life that is always pleasing. Le Matte's "*Knuckle-bone Players*" is a work of great merit, and genuine in its childish earnestness. This picture obtained the *Prix de Rome* in 1870. P. M. Beyle was very successful in "*Coco's last Journey*," which is full of pathos and poetry. The poor horse of a travelling showman has fallen dead of fatigue and exhaustion, in a sloppy, snow-covered road, while the showman, his wife, and dog are grouped round with expressions of the most genuine grief and perplexity. The snowy waste, the distant town, the approach of night, all conspire to augment the distress, so beautifully and

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truthfully pourtrayed. A Defaux's "*Feeding the Fowls*"* is remarkably well painted, correct in detailed drawing, and pleasing in light and shade. It has been purchased by the Art Trustees for the New South Wales Gallery. A. Lesrel's beautiful picture of the "*Amateurs*"* was especially noticed for its accuracy of drawing. The draperies of the group are admirably rendered, while the accessories are drawn and painted with an almost *Meissonier*-like finish. This would be a truly great work if the harmony of the colouring only equalled the marvellous drawing and skill in handling. T. Laubrichon, in a picture called "*A Covey*," has painted a family group of a mother with three children. The youngest, a baby, held between the knees of the mother, is exquisitely drawn. The picture is sweetly conceived, and the attitude of the child an excellent study of child life. J. Maisiat's "*Washerwomen of La Marne*" is fresh and agreeable, and expressive of energetic action. The colouring is somewhat peculiar, but delicate in tone. C. A. Pabst exhibited a fine picture called "*A Bowling Alley in Alsace*,"* which bears in every part the stamp of careful study from nature; it is a genial and pleasant composition, excellent in execution, with all its details carefully drawn and studied. "*The Siesta*," by Berne Bellecour, represents a soldier in buff doublet and high boots, asleep on a bench out of doors. This little work is beautifully finished, and reminds one unmistakably of Meissonier's early works.

French landscape has been singularly improved since Corôt's marvellous paintings gave such an impetus to this class of art. There can be little doubt but that he based his studies on the great English master Constable; but having a more poetic imagination he infused more sentiment and pathos into his compositions. He has been ridiculed for his eccentricity, and so also has our greatest of landscape masters—Turner. The mystery of Corôt has been characterized as a "vapouriness of colour," put in to hide defects in drawing. This is altogether unwarranted, as his works undoubtedly show vast knowledge and skill in accurately representing the works of nature. At all events his example has been productive of great and good results in French landscape painting, and we find in the limited collection at the Sydney Exhibition many good pictures illustrative of this fact, and proving beyond dispute the progress that has been made since the time of Vernet. Allongé has a pretty composition of a "*Road Scene*," very realistic with its ruts, ditches, and water-weeds; and C. J. Beauverie a "*Lane in Cordeville*," exceedingly attractive in its brightness and animation. L. le G. de Bellé shows a level prairie subject, "*La Sinope*," with grasses, weeds, and water fairly good;

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while P. E. Berton has two examples, "*Through the Woods at Fontainebleau,*" and a "*View of the St. Clair Reservoir, Sologne,*"* both of considerable merit. M. Bouquet's "*Morass in Britanny*" is a charming landscape; and A. E. E. Buttura's "*Coast Scene*" wild and imaginative. O. de Champeaux's "*Banks of the Arroux*" is a strong example of the artist, and well balanced in light and shade. P. Collin's "*View in Jersey*" is a capital coast scene with a fisherman's cottage, sand, and rocks. A. Defaux's "*Snow Effect*" is masterly and broad, indicating great technical skill. M. A. Flameng's "*Low Water at Yport*" and "*Oyster Park, Cancale,*" are well painted, low in tone, and grey. G. Guignard's "*Snow Effect in Britanny*" is a familiar subject of a village with horses, carts, &c., represented with great fidelity and feeling. F. Montenard's "*Borders of a Forest*" is admirably composed and thoroughly like the country it represents. Altogether France is very successful in landscape, showing at once a distinct character and characteristic of life and truth.

There was nothing particular to be noticed in the few French water-colour drawings that were exhibited, but the drawings and etchings of Allongé, Lalanne and Edwards in black and white were admirable. There were also shown some excellent engravings and etchings by Brunet-Debaisnes, Barbant, Champollion, Flameng, Hildibrand, Laguillermie, Courtry, and others.

France exhibited twenty-four examples of sculpture and modelling in marble and bronze, forming a very interesting collection, and especially in the bronzes some very excellent work. "*The Muse of André Chenier,*" by H. Louis Noël, is a statue of the Poetic Muse caressing the head of the unfortunate bard. This work is not altogether pleasing, but exhibits a great deal of technical skill. Many of the bronzes exhibit much refinement in feeling character, delicacy, and expression. "*The Runaway Slave strangled by a Dog,*" and "*Louis XI, Prisoner at Péronne,*" of F. Martin, the "*Child on a Tortoise,*" of E. Delaplanche, J. Cambos' "*Woman taken in Adultery,*" and "*The Grasshopper,*" Bartholdy's "*Genius in the Grasp of Misery,*" and Doublemard's "*Education of Bacchus,*" were all charming in their conception and modelling, as well as in the skill attending their execution.

The people of Australia were also to be congratulated on the opportunity of seeing a magnificent piece of the celebrated Gobelins Tapestry. The fine example exhibited, represented the "*Earth,*" from a design of the great seventeenth century artist, Charles le Brun. It is of the highest quality, and no less than fourteen experts in this class of art co-operated in its production. Other tapestries designed by M. Chabal-Dussurgey, were shown from the National

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Manufactory at Beauvais. The French Commission also exhibited many beautiful vases; among them the Clodion Vases which were painted by Baldisseroni, presented by the Government of the French Republic to the Government of New South Wales; the Vase of Salamine, with decorations designed by Mde. Escallier, and executed by M. Célos; the Vases of Rimini; and an Etruscan Vase painted by M. De Courcy.

German Painting and Sculpture.

The art of painting in the Germany of to-day partakes more of a natural and realistic character than it did twenty years ago. The colouring is more brilliant, approaching nearer to the Venetian than the French School, while the drawing and handling are admirable. The older painters of Germany did not pay sufficient attention to colour, evidently considering that severe and classical drawing was the only thing in art worthy the study of great artists. This style of work is fast passing away, although perhaps the strong point of German art is still in the wondrous drawing found in their cartoons. German artists are also seen to advantage in their frescoes, and the Government is munificent in its public patronage of historical painting.

Religious art in Germany has also undergone a complete change of late years. The manner of Overbeck is a thing of the past, and a style strong in colour and rough—though correct—in technical skill has taken its place. Spiritualism has given way to realism. It is the same with historical painting. The consolidation of the Empire in a united Germany has given a patriotic impulse to the production of grand and impressive compositions on national subjects. Naturally, however, there is also a great love of *genre* pictures. The picturesque costumes of the peasantry, together with the social domesticity of the country people, will always combine to make subjects of this class extremely popular.

The collection sent to Sydney was not at all calculated to give a correct impression of the high art of the German Schools; but among the seventy oil paintings exhibited, there were many that were truly admirable and from which general conclusions could be drawn, especially with reference to the value of their landscapes and scenes of domestic life. All of these have a certain individuality of character, which shows at once the vigour and animation that have been infused of late years into the different German Schools.

It cannot be too much regretted that Germany was not represented by some of her greatest men, although the same sentiment applies equally to

all other nations. Nevertheless, we miss Peter Janssen, Edward Gebhardt, Joseph Fluggen, Fritz Neuhaus, Hans Thoma, Adolf Freidler, Bauer, Ewart Leubach, and a host of others well known and eminently distinguished. It would be out of place here to speak of the various German Schools, further than to state they were not represented by their most distinguished masters.

Lindenschmidt's "*Venus and Adonis*" was the only really large canvas in the collection. It is a well arranged composition representing the Goddess of Love weeping over the dead body of Adonis. The chief merit of the picture is displayed in the grouping and the expressive emotion of the principal figure. The colouring is rich and harmonious, but the handling shows a deficiency of technical skill. The principal figure, however, is the most successful, and altogether it is a grand and impressive picture.

Von Cramer's picture, called "*Watching*," though somewhat conventional is evidently studied from life, and evinces considerable power. It is a large picture representing two ladies on a balcony conversing upon some very interesting matter, totally unconscious that a duenna is listening.

In landscape, German Art is rapidly advancing and their cattle scenes especially are pleasing for their quietude and beauty. "*In the Woods*,"* by Bennewitz von Lœfen, is a very charming bit of landscape, full of life and light. "*Königssee in the Bavarian Mountains*," by A. Becker, is a fine, broad piece of work. "*Cows grazing*," by A. Brendel, is an excellent animal painting, and a good example of an artist well known in Europe for works of the kind. "*Venice by Moonlight*," by Louis Douzette, is a pleasing composition, which gives a very good idea of the effect of moonlight on an Italian landscape. The dome and campanile of the church of Santa Maria della Salute, seen by the mysterious moonlight, add greatly to the beauty of the picture. The "*Sunrise at Whatcombe, near Freshwater Bay, Isle of Wight*,"* by H. Eschke, is an excellent landscape, very rich in colour, showing the sun breaking through a fog bank and throwing a lurid and lovely light over the rocks and seaweed on the beach. Carl Hübner's "*Expectation*" is interesting from the poetic feeling and general management of the details. F. Huth's "*Roadstead of Helsingor*"* is a "marine" subject, in which the effect of light is well managed. "*The Rhone Glacier*," by O. von Kameke, is a good study of mountain forms, with an admirable dreamy effect on the rocky steep in the distance. G. Koken sent two of his excellent landscapes, the one "*A Forest Scene in Autumn*,"* the other "*Winter*,"* both good examples of German landscape, painted with great breadth and freedom. D. Langko exhibits an autumn landscape of "*Freisinger Moos, near*

* Purchased for the Government by the Trustees of the Art Gallery of New South Wales.

Münich," representing a flat swampy moor, with deer crossing from one dry spot to another. The sedges and stunted scrubs with their autumnal hues form a beautiful foreground, while the city of Munich is to be seen in the distance in a gleam of sunlight. The showery sky is full of light and motion, making a most agreeable and striking picture. "*Evening*," by R. von Poschinger, is also a beautiful landscape. It is a twilight scene, showing trees reflected in the beautifully still and transparent water, giving a perfect sense of repose. K. Rettich's "*Pheasantry in the Spring-time*" is redolent of sunshine and animation, the light gleaming through rows of poplars. V. Ruth's "*Beech Forest*"* is an excellent study of forest scenery; the varied foliage of the trees, the brown hues of the mast and dead leaves, and the dark shadows of the glades are all true in detail and carefully painted. The "*Spring*" landscape by the same artist shows the same careful study of nature. A "*Wood Scene in West Virginia*,"* by J. N. T. von Starkenborgh, is remarkable for colour. A "*Storm in Autumn*,"* by C. M. Strecker, is full of "motion," but somewhat too purple in colour. The picture is well composed, and would have been more pleasing and effective had it been of a lower tone. L. Willroider shows a fine "*Landscape with Cows grazing*," in which the animals are well and accurately painted.

Among the *genre* pictures in the German Court which it is desirable to particularise are the following:—"*Scene in Switzerland*,"* by Conrad Grob, representing a strolling musician, a "Pifferaro" (with marionettes), who stands playing his bagpipes before the entrance of a châlet, with a picturesque audience of old men, women, and children. The picture is pleasing in composition, and rich in tone of colour. J. Grünfeld's "*Sheep-shearing*" is an animated scene of men and women indiscriminately engaged in shearing sheep. The picture is well composed, and full of life. To Australians the idea of men and women shearing sheep in a cottage can scarcely be conceived to be natural; but with the cottagers of the Swiss Alps, keeping only a few sheep, this is strictly true, and the event is invariably made the occasion of a merry-making. The human figures, the sheep, are all remarkably well portrayed, and the effect of light and shade are excellent. Carl Wagner's "*The Cobbler as a Critic*" is worthy of remark, as is also the picture of the "*Singing Wood-workers in the Bavarian Mountains*," by F. Mayer-Wismar. A "*Kitchen Interior*,"* by F. Sturzkopf, representing an old woman peeling potatoes, is remarkably well painted, with all the accessories carefully drawn. A pretty little picture by E. Schulz-Briesen, called "*The Rendezvous*," is nicely conceived, full of truth and feeling.

* Purchased for the Government by the Trustees of the Art Gallery of New South Wales.

Germany exhibited two marble busts, by Carl Begas, and no other sculpture excepting of a class known as church furniture. There was however a fine bronze by F. von Miller, and some good engravings.

Belgian Painting and Sculpture.

Like the French, the Belgian School is very animated, and has great artistic as well as technical skill. It adopts the same low tone of colour and style of handling. Situated contiguously to France, it is naturally influenced by the grand French School, and follows in the footsteps of her neighbour's great masters.

To be in a position to examine works from the various Schools of Europe hung together in one building, gives the opportunity so coveted by connoisseurs in Art, of studying comparatively their respective merits as well as the different tendencies which divide and give individual expression to the art of different countries.

Belgium has painters of great merit, but unfortunately here, as among other nations, the works of the best artists remained at home. We have nothing from Florent Willems, Gallait, Haussman, Adolph Dillens, Markelbach, Braycker, Keelkof, Quinaux, Bourn, Verbeckhoven, Van Schendel, and many others,—but we have Heymans and Rossells to show us good average examples of Belgian landscape.

Our Colony is under great obligations to Mr. Georges Montefiore Levi of Brussels (the Commissioner General of Belgium), for his active and energetic co-operation in getting together a good collection of pictures, as most of the work incident to the choice of fine art exhibits for the Sydney Exhibition was performed by that gentleman.

Belgium sends sixty-four oil paintings, all partaking more or less of the character of the French School. They were chiefly *genre* subjects and landscapes, and many of them exquisitely executed. Portaels, E. Seeldrayers, and X. Mellery, exhibited figure subjects, of good quality full of life and character. "*Cornelia, the Mother of the Gracchi,*" by the latter, is masterly and carefully painted; the subject, however, is not pleasing. Felix Cogen sent a picture of a "*Fisherwoman of the Island of Marken, in Holland,*" well drawn, low in tone, and quiet in colour. It is strong and bold, and expressive of courage and determination, there is a certain brilliancy of effect in the wind blowing through the hair which gives a sort of animation to the general character of the picture. Some of the Belgian landscapes are so quiet and

truthful in expression as to compel our respect and admiration. J. Rosseels exhibited a landscape called "*Midday on the Scheldt*," altogether a remarkably fine picture. The flat country, the quietude about the Dutch dwellings on the banks of the river, are well balanced by the beautiful sky. The picture is full of sunshine and sparkle, and is an excellent example of landscape painting. Heyman's "*Sunrise*" is a delightful subject, subdued and mysterious. It gives a correct feeling of a foggy morning. The gray pearly tints are very true to nature. Henri Von Seben's "*Winter*" is worthy of notice; the dark figures coming out into bold relief against the snow, and the cold grey of the sky. Asselberghs' "*Winter's Day*," with its glimpses of sunlight across the moor, its ice-covered pools, and the bare trees against the snow, makes an excellent portrait of winter. A. Bouvier exhibits a landscape "*On the Scheldt at Tolen*," which is grey and quiet, and altogether of the best form of French landscape. Kühnen, Musin, Heyermans, and Verheyden, all sent landscapes of considerable merit. The picture of A. Francia, "*On the Beach at Scheveningen*," is a fine coast scene. The road coming down between sand-hills, with boats and people on the beach, combine to make a very effective picture. Markelbach's "*Cromwell by his Daughter's bedside*," is a remarkable painting, grey in colour, with well-balanced light and shade; the distress of the Lord Protector and his wife is portrayed with great ability. Farasyn's "*Naughty Pussy*" is quaint and pretty. The cat is not so well drawn as the child, whose pouting expression is charmingly natural and childlike. One of the most notable paintings in the Belgian Gallery is the fruit piece by Jean Robie, "*Flowers and Fruit.*"* It is a beautiful composition, executed with the most consummate technical skill. The iridescent pearly hues of the shell and of the substance of the vase holding the flowers are marvellously imitated, while the bloom on the grapes is exquisite and perfectly true to nature. M. Robie is certainly one of the best painters of still-life, and the picture, under notice gives a good idea of his great powers. Portael's "*Fugitive*"* is a pleasing composition, low in tone and very effective. Mdlle. Beernaert's "*Oak Trees at Modave*" is worthy attention; and L. Robbe's "*Meadow in Flanders*" shows the artist's great skill as an animal painter.

Belgium exhibited a marble statue, "*The Captive*," by M. Vinçotte, and a beautiful terra-cotta by Wiener, called "*Mutual Love.*" There was also exhibited in the Belgian Gallery the Map of Africa, prepared for King Leopold, giving the most recent discoveries and showing the routes of the great explorers Livingstone and Stanley, with the fullest information as to the physical

* Purchased for the Government by the Trustees of the Art Gallery of New South Wales.

features of the Continent that could be collected up to the date of its preparation. It is as fine a specimen of chartography as could possibly be executed.

Painting and Sculpture of Austria, Switzerland, Holland, and others.

In the Austrian gallery were gathered everything of European art that remained for exhibition, with the exception of the Italian collection, which consisted chiefly of copies of a very mediocre quality that were arranged in the Italian Court of the Garden Palace. Mr. Neumann, a gentleman from Vienna, had some little time previous to the opening of the Exhibition brought a mixed collection of pictures from Europe. These were all exhibited in this gallery, and the collection contained some admirable examples. "*The St. Cecilia*," by G. Max, was a most attractive picture, representing the saint, on the eve of her martyrdom, striking the keys of her marvellous invention for the last time. There was great pathos and depth of feeling displayed in this composition, which appealed directly and forcibly to the heart. The colour is harmonious and quiet, with great delicacy and precision of touch. The expression is perfect. None but a painter of rare talent and deep poetic feeling could possibly have executed so fine a work of art. A landscape by Ludwig Munthè, of "*A Fishing Village on the North Sea*," was very remarkable, and worthy of more than passing attention. This artist, who was born at Bergen, in Norway, where he commenced his artistic studies, went from thence to Düsseldorf, where he studied with Flam, the landscape painter, and where he has since resided. Though by birth a Norwegian, Munthè by virtue of his training is usually considered to be a German artist; but his style more resembles the French School of landscape than the German. For simplicity and originality Munthè is fully as remarkable as for the richness of his colouring. His great strength lies in pathos. He is never so much at home as in depicting scenes of poverty and desolation; Norwegian coasts; flat tracks, over moors, or snow-covered roads in winter, with dark gloomy skies overhead, full of haze and mystery. There is no living painter of landscape who has a deeper feeling of poetic sentiment or who is more dreamy and mysterious in imagery than this artist. The picture above mentioned represents a little fishing village in Norway, and the deep and desolate sensitiveness conveyed to the mind was unequalled by anything in the Exhibition. A. Bourlard's "*Bull-fight in the Roman Campagna*," was strong and careful in execution; while the "*Bay of Palermo*," by Lojakono, was full of light and shadow, and bore the impress of accuracy. A. Achenbach's "*Bay of Naples*" is well drawn and composed. Max Schödl's

"*Still Life Antiques*" is painted with great minuteness and care; and "*The Juggler, a Village Fair*,"* by F. Beinke, is a subject full of life and action, and a picture full of interest.

A. Achenbach exhibited a small "*Dutch Landscape*," and Ranzoni gives five examples of cattle subjects—"*Sheep in Repose*," and "*Cattle returning Home*," "*Cows in Repose*," "*Sheep Grazing*," and a "*Pastoral Scene*"; Höfner sends a "*Study of Sheep*." There were also other animal paintings by Munsch, Amerling, and Mahlknecht. Menzler's two portraits,* one a blonde and the other a brunette, are brilliant in colour and carefully executed. Some of the landscapes were pleasing, but call for no particular remarks as to their execution. A small loan collection of Dutch paintings, and three American landscapes, by J. P. Weber, were also hung in this room; these, however, require no special mention.

The chromo-lithographs and photographs were fairly good, but the collection was not extensive.

Australian art is still in its infancy. The number of its painters is very small, and these are more or less imitative. It is to be regretted that the patronage of art is so limited, but probably the demand for pictures will increase as the quality of the work improves. Subjects for the pencil are numerous, and there can be little doubt but that at no very distant period colonial painters will introduce into their pictures more feeling and individuality, characteristic of the fresh air and liberty incident to Australian out-of-door life.

Industrial and Architectural Designs will be reported upon in another place by the Judges who made the awards in that class.

As special reports have also been made by the Judges on Ceramics, it will be unnecessary to speak of that industry, excepting so far as it pertains to the question of Art. The decoration of porcelain and stoneware has during the last half century occupied the attention and given work to thousands of artists. France has always been in advance both in variety of subjects and technical skill. The fabrication of vases and their manner of decoration have been studied with the most minute care, and extraordinary progress has been made in almost every country. England especially, since the establishment of the South Kensington schools, has done wonders in the development of this class of art; and while not altogether original or national, she has in richness of ornament and variety of form fairly equalled France in almost every detail of the manufacture. Beautiful examples of all classes of pottery-work were exhibited, and specimens of Sèvres, Dresden, Minton, Limoges, Wedgwood,

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Delft, Worcester, and Doulton's wares vied with each other in their respective characteristics of form and colour. Objects of the most common domestic use were decorated in every conceivable manner. The French manufacturers have probably shown more originality and taste than any other nation. Always progressive, they have been eminently successful in new designs and the beauty of their compositions. The Japanese are very advanced in this industry, and exhibited admirable work executed in the most perfect manner. Germany and Belgium showed fine collections, full of interest, combining beauty with great strength and permanency.

Italy exhibited a good collection of Mosaic work, some enamelled ornaments, and a good many reproductions in marble. These deservedly attracted a good deal of attention.

Since the International Exhibition of London in 1851 the industries connected with the fabrication of porcelain and stone-ware have made rapid strides towards perfection; difficulties supposed to be insurmountable have been vanquished, and the products exhibited at Sydney indisputably bear witness to the value of the discoveries which have in so marked a manner contributed to their development.

This brief general report of the character and condition of the exhibits in the Art Section is nothing more than a sketch passing in review the collections brought together from the different Schools, remarking on their distinctive national styles and characteristic excellencies. It will not be expected that detailed criticisms should find a place here, however important they may be; they must be left to the intelligence of the community, and it is to be hoped the grand opportunity afforded for examining the works of the great painters with a view of acquiring a better knowledge of Art will not have been lost. It must necessarily be a long time before such a large and varied collection of paintings will be again got together for exhibition in Sydney; the galleries were fairly typical of the countries represented up to a certain point, and indicated the realistic tendency generally pervading all, without sameness or loss of national orginality.

The Exhibition of 1851 was productive of great good in awakening the English people to a knowledge of the deficiency which existed in Great Britain in everything connected with the Fine Arts. The perfection attained on the Continent, and more particularly in France, was easily traceable to the excellent instruction in drawing that could be obtained at their Schools of Design. The severe classical training of students, whether at the École des Beaux Arts, or at the Düsseldorf School, was strikingly apparent, and its superiority was incon-

testable. It was therefore necessary to popularize art instruction in England, in order that beauty of form and outline should be better understood and more generally recognized. The Government, realizing this necessity, set about finding a remedy, and were led to the institution of the Schools of Design, now centred at South Kensington, and radiating throughout Great Britain. The experience of the last fifteen years has conclusively shown the important results of such a wise and comprehensive policy.

What applied to Great Britain at that period, applies with equal force to Australia at the present time, and Australia can never be expected to attain even a mediocre position among other and more favoured communities until she has organized a system of Art Education, based on those general principles which have been attended with such beneficial results in other countries.

Of natural materials for forming native artists we have abundance ; our scenery is beautiful, impressive, and of undoubted excellence. We have an unbounded field of subjects striking and picturesque, both in landscape and scenes of domestic life, all equally inspiring to the painter, and peculiar to the country. Thus we may fairly conclude that sooner or later a distinctive School of Art will develop itself in Australia, and take a high place among those of the northern nations.

To bring this about as quickly as possible should be the aim of the several Australian Governments. It is for the public authorities to initiate rudimentary courses of instruction, as the people comprehend their importance, and appreciate their value ; children should be taught to use their hands in the delineation of form, and object lessons can be easily made subservient to this purpose. The diffusion of this education cannot be accomplished without teachers, and without proper training-schools teachers cannot be taught how to teach. This, the first and greatest element in every public school system that has successfully stood the test of experience, is in this country scarcely recognized. The science of teaching can only be acquired in properly organized normal schools, and when these have been established it will be comparatively easy to furnish to every primary school the teaching power that is required to put children on the right track to develop any special talent they may have for drawing. When this has been accomplished we may expect to see a love of art grow up with our children, a refinement of taste become general, and a proper reverence and admiration by the masses of the people for all that is pure and bright.

The simple and delightful enjoyment of those who cultivate æsthetics can be only understood aright by those who study the varieties of colour and form.

The more cultivated a person becomes, the more he enjoys the landscape; and the more skill he acquires in the imitation of nature, the more exquisite is his enjoyment of its beauties. "The blue and gold, and vermilion of the heavens" fill him with joy at sunrise and sunset, while no change in the greys of the sky or atmosphere escapes his observation. He is always watchful for happy combinations of form, and keenly relishes the picturesque. Nor should we forget that wherever skill has been attained it necessarily follows that a discipline of both hand and heart has been necessary, that passions have been brought under subjection, and that in all probability the successful art student becomes not only distinguished and able, but a better man and citizen.

It cannot be doubted but that the Sydney International Exhibition will give an impulse to the practice of the Arts, and this tide should be taken at the flood. To become great, a people must be trained in the Arts, and to become good, they must be taught to pay due reverence to the true and beautiful. Our ideal must be an attainable and a practical one; we must accept truth as our guide, and pursue the narrow and straight path of incessant application which alone leads to success. Then will an animated national interest be awakened—the exhibitions of our Art Societies will be deservedly popular, all that we now so earnestly desire to see accomplished will come to pass, and Australia will take her proper position and achieve a real distinction in the Fine Arts.

In conclusion, I must be permitted to perform the pleasing duty of placing on record my grateful acknowledgments to the Executive Commissioner, and to my colleagues of the Advisory Committee, and especially are my thanks due to Messrs. E. L. Montefiore and E. Du Faur, for their cordial co-operation, and active personal assistance in services both responsible and arduous.

EDWARD COMBES,
Chairman of the Advisory Committee.

CLASSES 400–409.

Sculpture and Painting.

JUDGES.

BALLIEU, THEODORE, Consul for France... ... Sydney.

DU FAUR, ECCLESTON, F.R.G.S. (Chairman) ... Sydney.

FORDE, W., Public Works Department ... ... Sydney.

LIX, GUSTAVE ... ... Paris, France.

MONTEFIORE, EDWARD LEVI ... ... Sydney.

STEPHENS, W. J., M.A. ... ... Sydney.

WALLIS, W. ... ... George-st., Sydney.

WISE, HENRY ... ... Belgium.

WOOLCOTT, CHARLES H., Town Clerk ... ... Sydney.

DEPARTMENT IV.

ART.

GROUP—Sculpture and Painting.

CLASSES 400–409.

AUSTRIA.

BEINKE, F.—Düsseldorf.—Oil Paintings, "The Juggler" and "A Village Fair." First degree of Merit.

HOFNER, L.—München.—Oil Painting, "The Sheepfold." First degree of Merit.

HORST-HACKER—München.—Oil Painting, "Vierwaldstädtersee, bei Brunnen, Schweiz." First degree of Merit.

HAAG, T.—Vienna.—Oil Painting, "Race-horse, Othello." Highly Commended.

JÄCKEL, Z. J.—Vienna.—Wood Carvings. First degree of Merit.

LOJAKONO—Palermo.—Oil Painting, "Bay of Palermo." First degree of Merit.

MAHLKNECHT, E.—Vienna.—Oil Painting, "The Prize Cow." Highly Commended.

MAX, Gabriel—München.—Oil Painting, "St. Cecilia." First degree of Merit.

Report—For drapery and colouring.

MENZLER, W.—München.—Oil Painting, "Agnes Bernauer." First degree of Merit.

MUNTHE, L.—Düsseldorf.—Oil Painting, "Fishing Village on the North Sea Coast." First degree of Merit Special.

RÄDLER & PILZ—Vienna.—Painting on Porcelain. Highly Commended.

Report—Artistically executed, the subjects "Europa," and "Gutenberg," show good taste and colouring.

NEUMANN, H. L.—Vienna.—Collection of Oil Paintings. First degree of Merit Special.

Report—The valuable Austrian collection of Paintings was brought together by Mr. H. L. Neumann.

SCHAUMANN, H.—München.—Oil Painting, "A Travelling Circus." Highly Commended

SCHÖDL Max — Vienna. — Oil Paintings, Antiques, "The Supper," "Breakfast," "The Toilette," "The Amateur's Salon."
First degree of Merit Special.

TIESSENHAUSEN, P. von—München.—Oil Painting, "Sea Coast."
Highly Commended.

UNTERBERGER, Franz—Innsbruck, Tyrol.—Wood Carvings, "The Eagle Slayer," and "The Poacher." First degree of Merit.

BELGIUM.

ARENS, O.—Antwerp.—Repoussé Work.
Commended.

BEERNAERT, M'lle Euphrosine—Brussels.—Oil Painting, "Oak Trees at Modave." Highly Commended.

BOURLARD, A.—Brussels.—Oil Painting, "Bull Fight in the Roman Campagna." Highly Commended.

BOUVIER, A.—Brussels.—Oil Painting, "The Scheldt at Tolen."
Highly Commended.

CARABAIN, J.—Brussels.—Oil Painting, "View at Anticoli, Corrado, Italy." First degree of Merit.

CERCLE ROYALE ARTISTIQUE DE BRUXELLES—Collection of Oil Paintings, and other Works of Art. First degree of Merit Special.

COMEIN, Polydore—Brussels.—Terra-cotta Statuettes.
First degree of Merit Special.

FARASYN, E.—Brussels.—Oil Painting, "Naughty Pussy."
First degree of Merit.

GÉRARD, T.—Brussels.—Oil Painting, "Shares Alike."
First degree of Merit.

GASPAROLI, Maria—Ixelles near Brussels.—Paintings on Porcelain.
Honourable Mention.

GÜNTHER, Louise—Brussels.—Paintings on Porcelain.
Honourable Mention.

KÜHNEN, Victor—Brussels.—Oil Painting, "The Steen at Antwerp."
First degree of Merit.

LAUMANS, J. A.—Laeken, near Brussels.—Group in Bronze, "Exercise."
First degree of Merit Special.

MALTBY, Gertrude—Brussels.—Paintings on Porcelain.
Highly Commended.

MALTBY, Eva—Brussels.—Paintings on Porcelain.
Highly Commended.

OYENS, P.—Brussels.—Oil Painting, "The Studio."
First degree of Merit.

PORTAELS, Jean—Brussels.—Oil Painting, "The Fugitive."
First degree of Merit.

ROBIE, Jean—Brussels.—Oil Painting, "Flowers and Fruit."
First degree of Merit Special.

ROCHARD, Henriette—Brussels.—Paintings on Porcelain.
Highly Commended.

ROSSEELS, J.—Brussels.—Oil Painting, "Mid-day on the Scheldt."
Highly Commended.

SEELDRAYERS, E.—Brussels.—Oil Painting of 1540, "Monks Begging." First degree of Merit.

SOUBRE, Charles—Brussels.—Oil Painting, "The Notched Sword."
First degree of Merit.

TOURTEAU, E.—Brussels.—Paintings on Porcelain.
First degree of Merit.

VAN BOMBERGHEN, Josephine—Brussels.—Paintings on Porcelain.
Commended.

VAN IMMERSEEL—Brussels.—Paintings on Porcelain.
Honourable Mention.

VERHAS, J.—Brussels.—Oil Painting, "In the Corner."
Highly Commended.

VINÇOTTE, T. H.—Brussels.—Marble Statue, "The Captive."
Highly Commended.

WIENER, C.—Brussels.—Terra-cotta Group, "Mutual Love."
First degree of Merit Special.

FRANCE.

AIZELIN, Eugène—Paris.—Marble Bust, "Une Merveilleuse."
Highly Commended.

BAIL, Jean Antoine—Paris.—Oil Painting, "L'enfant aux Raisins"—"Child and Grapes." First degree of Merit.

BARLUET ET CIE.—Paris.—Paintings on Porcelain.
First degree of Merit.

BARTHOLDI, F.A.—Paris.—Bronze Group, "La Génie dans les griffes de la Misère"—"Genius in the grasp of Misery."
First degree of Merit Special.

BAYARD, Emile—Paris.—Oil Painting, "En route pour la Boucherie."—"On the road to the Butcher's." Highly Commended.

BERNE-BELLECOUR, E. P.—Paris.—Oil Painting, "La Sieste."—"The Siesta." First degree of Merit.

BERTHON, Nicolas—Paris.—Oil Painting, "Interieur en Auvergne."—"An Interior in Auvergne." Highly Commended.

BEYLE, Pierre Marie—Paris.—Oil Painting, "La dernière étape de Coco"—"The last journey of Coco." Highly Commended.

BISSINGER, Georges—Paris.—Collection of Cameos, Intaglios, and Engraved Gems. First degree of Merit.

BONNEFOY, Henry—Paris.—Oil Painting, "Temps Lourd"—"Sultry Weather." First degree of Merit Special.

CLASSES 400-409.—*Sculpture and Painting.*

BOUQUET, Michel—Paris.—Painting on Porcelain, "Canal Scene."
First degree of Merit.

BUREAU D'ÉTAT DES BEAUX ARTS—Paris.—Collection of Oil Paintings, and other Works of Art. First degree of Merit Special.

CHEVALIER, M'lle.—Paris.—Paintings on Porcelain.
First degree of Merit.
Report—Artistic reproduction of well-known pictures, faithfully executed.

COLLIN, L. J. R.—Paris.—Oil Painting, "Rosine."
First degree of Merit.

COMERRE, Léon François, Academie de France—Rome, Italy.—Oil Painting, "Jésabel dévorée par les chiens"—"Jezebel devoured by the dogs." Highly Commended.

DEFAUX, Alexandre—Paris.—Oil Painting, "Basse Cour."
First degree of Merit.

DELAPLANCHE, Eugène—Paris.—Bronze, "Enfant monté sur une Tortue"—"Child on a Tortoise." First degree of Merit Special.

DELOBBE, François Albert—Paris.—Oil Painting, "Le Retour des Champs"—"The Return from the Fields." Highly Commended.

DOUBLEMARD, A. D.—Paris.—Bronze Group, "Education de Bacchus."
First degree of Merit Special.

DUBUFE, Edouard—Paris.—Oil Painting, "Tête de Femme"—"Woman's Head." Highly Commended.

DUVERNE, Gaspard.—Montceau les Mines (Sâone et Loire)—Artistic Reproductions in Terra-cotta. Highly Commended.

FAÏENCERIES DE GIEN-LOIRET—Enamelled Paintings.
First degree of Merit.
Report—Highly artistic execution and harmonious colouring.

FLOURY, Lucien—Paris.—Water-color, "Les Bords du Cousin près Avallon"—"The Banks of the Cousin, near Avallon (Yonne)."
First degree of Merit.

FOULONGE, Charles A.—Paris.—Water-color, "Souvenir de San Germano." First degree of Merit.

GAUDEFROY, Alphonse—Paris.—Water-color, "Une Flambée."
First degree of Merit.

GAUTIER, Amand.—Paris.—Oil Painting, "Fish Study, Skate."
First degree of Merit.

GUIGNARD, Gaston—Paris.—Oil Painting, "En Bretagne par la neige"—"Snow Scene in Brittany." First degree of Merit.

LANDELLE, Charles—Paris.—Oil Painting, "Isménies, Nymphe de Diane." First degree of Merit.

LANDELLE, Charles—Paris.—Oil Painting, "Femme Copte"—"Coptic Woman." First degree of Merit.

LA VILLETTE, M'me. Elodie—Bicêtre, Paris.—Oil Painting, "Marée montante à Yport"—"Rising tide at Yport." Highly Commended.

LEFÈBVRE, Jules Joseph—Paris.—Oil Painting, "Chloé."
First degree of Merit Special.

LESREL, Adolphe—Paris.—Oil Painting, "Les Amateurs."
First degree of Merit.

LOBRICHON, T.—Paris.—Oil Painting, "Une Couvée"—"A Covey."
Highly Commended.

LOUIS-NOËL, Hubert—Paris.—Marble Statue, "Rebecca."
First degree of Merit Special.

MAIRE, M'lle. Valentine—Paris.—Paintings on Porcelain.
First degree of Merit Special,

MAISIAT, J.—Vignely par Esbly (Seine et Marne).—Oil Painting "Fruits d'espalier et de Verger." Highly Commended.

MANUFACTURE NATIONALE DE BEAUVAIS.—Tapestry.
First degree of Merit Special.

MANUFACTURE NATIONALE DES GOBELINS—Paris.—Tapestry, "La Terre." First degree of Merit Special.

PEULLIER—Paris.—Paintings on Porcelain and Terra-cotta.
Highly Commended.

POMEY, Louis—Paris.—Oil Paintings, "La fête de la Convalescente," and "La Dernière Tentative"—"The Convalescent's Feast" and the "Last Appeal." First degree of Merit Special.

RINGEL, Désiré—Paris.—Bronze Statute, "Un Flûtiste"—"Flute-player."
First degree of Merit Special.

ROUFFIO, Paul—Paris.—Oil Painting, "Odalisque."
Highly Commended.

SANZEL, Felix—Paris.—Marble Statue, "Les Bulles de Savon"—"The Soap-bubbles." Highly Commended.

SCHRYVER, Louis de—Paris.—Oil Painting, "Lilas"—"Lilacs."
Highly Commended.

THIRION, Eugène Romain—Paris.—Oil Painting, "Rebecca à la Fontaine." First degree of Merit Special.

VAURÉAL, Henry de—Paris.—Bronze Statue, "La Petîte Glaneuse"—"The Little Gleaner." First degree of Merit Special.

VAYSON, Paul—Paris.—Oil Painting, "Bourriche de Pensées"—"Basket of Pansies." Highly Commended.

VEYRASSAT, Jules Jacques—Paris.—Oil Painting "Dernières Gerbes"—"The Last Sheaves." First degree of Merit.

VUAGNAT, François—Paris.—Oil Painting, "Bellerive, Lac de Genève."
First degree of Merit.

GERMANY.

CASTNER & CO., A.—Berlin.—Plaster Model for Fountain.
First degree of Merit Special.

ECKENBRECHER, T. von—Düsseldorf.—Oil Painting, "Marine View."
First degree of Merit.

ENS & GREINER—Lauscha, Sachsen-Meiningen.—Paintings on Porcelain. Highly Commended.

ESCHKE, Hermann—Berlin.—Oil Painting, "Sunrise at Whatcombe Bay, Isle of Wight." First degree of Merit Special.

GAISSER—München.—Oil Painting, "Aber ganz unter uns." First degree of Merit.

GESAMMTVORSTAND DER DEUTSCHEN KUNSTGENOSSENSCHAFT—Berlin.—Collection of Paintings and other Works of Art. First degree of Merit Special.

GROB, Conrad—München.—Oil Painting, "Marionetten," Genrebild aus der Schweiz.—"Scene in Switzerland." First degree of Merit.

GÜTERBOCK, L.—Oil Painting, "Erasmus of Rotterdam." Highly Commended.

HORST-HACKER—München.—Oil Painting, "Vierwaldstädtersee bei Brunnen."—"Swiss Landscape near Brunnen." Highly Commended.

HUTH, J.—Berlin.—Oil Painting "Roadstead of Helsingör." Highly Commended.

JUTZ, Carl—Düsseldorf.—Oil Painting, "Thierstück."—"Animals from the Life—An Enemy in Sight." First degree of Merit.

LASCH, Carl—Düsseldorf. — Oil Painting, "Schwarzwälder." — "A Native of the Black Forest." Highly Commended.

LINDENSCHMIDT, W.—München.—Oil Painting, "Venus and Adonis." Highly Commended.

LINNIG, Jun., W.—Weimar.—Oil Painting, "Bei der Kartenschlägerin." —"At the Gipsy Fortune Teller's." Highly Commended.

LOEFEN, Bennewitz von—Berlin.—Oil Painting, "Im Walde."—"In the Woods." First degree of Merit.

LOSSOW, Heinrich—München.—Oil Painting, "Lady and Gentleman on the Balcony." Highly Commended.

MILLER, Ferdinand von—München.—Bronze Statue, "Carib Indian." First degree of Merit.

POSCHINGER, R. von — München. — Oil Painting, "Abend." — "Evening." First degree of Merit.

RUTHS, J. G. V.—Hamburg.—Oil Painting, "Buchenwald."—"Beech Forest." First degree of Merit Special.

STARKENBORGH, J. N. T., von—Dusseldorf.—Oil Painting, "Wood Scene, West Virginia." First degree of Merit.

STEFFECK, C.—Berlin.—Oil Painting, "Stallfreunde."—"Stable-friends." Highly Commended.

TILL, Franz—Dresden.—Paintings on Porcelain. First degree of Merit.

WOLFSOHN, Helena—Dresden.—Painting on Dresden-China. Highly Commended.

Report—Good designs, and well executed.

GREAT BRITAIN AND IRELAND.

ABSOLON, J.—London.—Water-colour Painting, "Madame Desmoulins."
First degree of Merit.

ANSDELL, R.A., Richard—London.—Oil Paintings, "Evening," "Girl and Dogs," "The Anxious Mother," "Sheep."
First degree of Merit.

ANSDELL, R.A., Richard—London.—Oil-painting, "Partridge Shooting."
Highly Commended.

BAUERLE, Carl—London.—Oil Painting, "Happy Children."
First degree of Merit.

BAYLISS, Wyke—London.—Water-colour Drawing, "Interior of St. George's Chapel, Windsor." First degree of Merit

BEAVIS, Richard—London.—Oil Painting, "Bedouin Caravan."
First degree of Merit Special.

BIRCH, C. B.—London.—Bronze, "Retaliation."
First degree of Merit Special.

BRETT, John—London.—Oil Painting "Mount's Bay, Cornwall."
First degree of Merit Special.

BRIERLY, Oswald W.—London.—Water-colour Painting, "Whale-boats off the Cape of Good Hope." First degree of Merit.

BROMLEY, John—London.—Oil Painting, "On the Old Road to Llanwrst." First degree of Merit.

BROMLEY, Wm.—London.—Oil Painting, "Gossip at the Stile."
Highly Commended.

CALTHROP, Claude—London.—Oil Painting, "Meeting of Scotch Jacobites." Highly Commended.

COOKE, R.A., F.R.S., E. W.—Groombridge, Sussex.—Oil Painting, "A Dutch Galliot Aground on a Sand-bank in the Bies-Bosch, Holland."
Highly Commended.

COOPER, R.A., T. Sidney—London.—Oil Painting, "Minster Marshes, East Kent." First degree of Merit.

DIBDIN, T. C.—London.—Water-colour, "The Butter Tower of the Cathedral at Rouen." First degree of Merit.

DICKSEE, J. R.—London.—Oil Painting, "The Daughter of the House."
Highly Commended.

DILLON, Frank—London.—Oil Painting, "Eaves-dropping."
Highly Commended.

DOWLING, Rt.—London.—Oil Painting, "Morning in the Market-place, Cairo." Highly Commended.

ELMORE, R.A., A.—London.—Oil Painting, Scene from Bürger's "Lenore." First degree of Merit.

FAED, R.S.A., J.—London.—Oil Painting, "James IV before the Battle of Flodden." First degree of Merit.

FAHEY, E. H.—London.—Oil Painting, "All Among the Barley."
First degree of Merit.

FONTANA, Giovanni—London.—Sculpture, "Cupid Captured by Venus," "The Prisoner of Love," "La Sonnambula."
First degree of Merit Special.

FRIPP, A. D.—London.—Water-colour Landscape, "The Common."
First degree of Merit.

GILBERT, R.A., Sir John—Blackheath, Kent.—Water-colour Painting, "Louis XIV Transacting Business with his Ministers in the Apartment of Madame de Maintenon." First degree of Merit.

GILBERT, R.A., Sir John—Blackheath, Kent.—Oil Painting, "Doge and Senators of Venice in Council." First degree of Merit.

GOODALL, E. A.—London.—Water-colour Painting, "Near the Pyramid of Sakhara"; "Silk and Calico Bazaar, Cairo."
Two first degrees of Merit.

GOODALL, R.A., F.—Harrow Weald, Herts.—Oil Painting, "Springtime in Egypt." First degree of Merit.

HAAG, Carl—London.—Water-colour Painting, "In the Cloisters of the Stiptskirche at Berchtesgarten, Bavarian Highlands."
First degree of Merit.

HAGHE, Louis—London.—Water-colour Painting, "Rood Loft in the Church of Dixmude, Belgium." First degree of Merit.

HALSE, George—London.—Marble Statuettes, "At the Spring," "That Vigil," "The Angel's Whisper." Highly Commended.

HALSWELLE, A.R.S.A., Keeley—Piccadilly, London.—Oil-painting, "Non Angli, Sed Angeli." First degree of Merit Special.

HARGITT, E.—London.—Oil Painting, "The Carse of Gowrie, Perthshire, Scotland." First degree of Merit.

HARGITT, E.—London.—Water-colour Painting, "Highland Drovers."
First degree of Merit.

HAYES, R.H.A., Edwin—London.—Water-colour Painting, "Dutch Pinks Returning from Sea, Scheveningen Beach, Holland."
First degree of Merit.

HINE, H. G.—London.—Water-colour Painting, "The East Cliff, Hastings, Sussex." First degree of Merit.

HORSLEY, W. C.—London.—Oil Painting, "The Mufti's Solace."
Highly Commended.

JOHNSON, C. E.—London.—Oil Painting, "A Gipsy Encampment."
First degree of Merit.

JOY, A. Bruce—London.—Sculpture, Terra-cotta, "The First Flight."
First degree of Merit Special.

JOY, A. Bruce—London.—Plaster Medallion, "The Provost of Oriel College, Oxford." First degree of Merit Special.

JOY, A. Bruce—London.—Terra-cotta, "The Fairy Tale."
First degree of Merit.

LEWIS, Lennard—London.—Water-colour Painting, "La Maison Des Templiers, Dinan, Brittany." First degree of Merit.

MACULLOCH, James—London.—Water-colour Painting, "Ben-na-Caleach, Skye," "Blaven, from Loch Slapin, Skye." Highly Commended.

MILES, T. R.—London.—Oil Painting, "A Coming Storm." First degree of Merit.

MOGFORD, J.—London.—Oil Painting, "Crossing the Bar, Scarborough." First degree of Merit.

MOGFORD, J.—London.—Water-colour Paintings, "Easton Broad, near Lowestoft, Suffolk," "Cornish Harvesting, near Grangewood." First degree of Merit.

MOLE, J. H.—London.—Water-colour Painting, "Trevillet Mill, near Tintagel, Cornwall." First degree of Merit.

MUTRIE, Miss A. F.—London—Oil Painting, "Evening Primrose." Highly Commended.

MUTRIE, Miss M. D.—London—Oil Painting, "White Lilac." Highly Commended.

O'CONNOR, J.—London.—Oil Painting, "Evening on the Thames at Westminster." Highly Commended.

PERUGINI, C. E.—London.—Oil Painting, "A Modern Bacchante." Highly Commended.

PRINSEP, A.R.A., Val. C.—London.—Oil Painting, "Linen-Gatherers." First degree of Merit.

SEDDON, F.R.I.B.A., J.P.—London.—Water Colour Painting, "Interior of Chapel of St. Peter's Orphanage, Isle of Thanet." First degree of Merit.

STEVENSON, D. W.—Edinburgh.—Sculpture, "Nymph at the Stream." Highly Commended.

TOFT, Peter—London.—Oil Painting, "Bamborough Castle, Northumberland." Highly Commended.

WARREN, E. G.—London.—Water-colour Painting, "A Clearing in the New Forest, Hants." First degree of Merit.

WOOLNER, R.A., T.—London.—Sculpture (bronze) "Alfred Tennyson," and "Charles Dickens." Two First degrees of Merit.

ITALY.

CALVI, Pietro—Milan.—Marble Statue, "Arianna Abbandonata." Highly Commended.

FIACCHI, Enrico—Florence.—Carved Frames. Highly Commended.

FRANCATI & SANTAMARIA—Rome.—Shell Cameos. Honourable Mention.

GAJANI, Egisto—Florence.—Carved Brackets and Frames. Commended.

GAMBERAI, Saul—Florence—Carved Brackets and Frames.
Commended.

ROMANELLI, Ferdinando—Florence.—Carved Album Covers, Brackets and Frames. Commended.

JAPAN.

HIO-CHI-YEN-SHA—Tokio.—Paintings on Porcelain.
Highly Commended.

Report—The subjects are well chosen; the birds, flowers, landscapes, &c., are bold in style, and well executed.

JAPANESE COLLECTIVE EXHIBIT OF BRONZES, &c.—Bronzes and Carvings in Wood and Ivory, &c. First degree of Merit Special.

Report—The moulding and sculpture of natural objects, particularly of animal life, are of unrivalled excellence. The cast and chiselled work in bronze, carving in wood and ivory, and modelling in plastic materials, are worthy of the highest commendation.

KORANSHA—Hizen.—Paintings on Porcelain.
First degree of Merit.

Report—Two handsome vases, 5 feet high, with fine blue tint paintings of birds, &c., artistically executed.

MATSUMOTO HOYEN—Tokio.—Painting on Enamel.
Commended.

Report—Well painted flower vases of fair design and colouring.

MIYAGAWA KOZAN—Ota.—Paintings on Enamel.
First degree of Merit.

Report—Artistic execution; the figures painted in relief, enamelled, &c., are elaborate and tasteful in the highest degree. Pure Japanese art.

NOTOMI KAIJIRO—Tokio.—Paintings on Porcelain.
Highly Commended.

Report—Handsomely painted. Some pictures are very elaborate, and the colouring is good.

TAKAHASHI DOHACHI—Kioto.—Paintings on Porcelain, &c.
Highly Commended.

Report—Good style, some of the figures on the vases are very accurately executed.

WAKI KITEI—Kioto.—Painting on Porcelain.
Honourable Mention.

Report—The designs are all characteristic of Japanese art.

NETHERLANDS.

BERG, S. van den.—The Hague.—Oil Paintings.
Highly Commended.

NEW SOUTH WALES.

BOULTON, E. B.—Walcha.—Water-colour Painting, "Sunset at Aden." Highly Commended.

COHEN, Miss A. F.—Sydney.—Plaque, "Child at Window." Honourable Mention.

COLLINGRIDGE, A.—Sydney.—Oil Painting, "View of Ryde, Parramatta River." First degree of Merit.

COMBES, C.M.G., M.P., Edward—Sydney.—Water-colour Painting, "Ice—a Langham sketch." First degree of Merit.

DEERING, J. W.—Homebush.—Group of Water-colour Paintings, Marine subjects. Highly Commended.

FERRISS, J. H.—Sydney.—Carvings in Wood. Commended.

HENRY, Lucien—Sydney.—Bronze Medallion, "The Empire of the South." Honourable Mention.

HERN, Charles E.—Sydney.—Water-colour Painting, "Govett's Leap Gorge." First degree of Merit Special.

HERN, Charles E.—Sydney.—Water-colour Painting, "On the Dart, Devonshire." First degree of Merit.

MURRAY, Archibald—Sydney.—Carving in Wood, "Royal Coat-of-Arms." Honourable Mention.

PATERSON, Emily S.—Gladesville.—Water-colour Painting, "Australian Flowers and Butterflies." Highly Commended.

ROWAN, Mrs. Ellis—Double Bay.—Water-colour Paintings, "Australian Flowers." First degree of Merit Special.

SIMONETTI, Achille—Sydney.—Sculpture, "Bust of the late Commodore Goodenough, R.N." (marble). First degree of Merit.
"Bust of His Honor Judge Faucett" (plaster). First degree of Merit.
Three Plaster Busts. First degree of Merit.
"Venus of the South." Honourable Mention.

WALKER, Miss A. F.—Concord.—Water-colour Paintings, "Australian Flowers." Highly Commended.

NEW ZEALAND.

GIBB, J.—Christchurch.—Oil Painting, "Godby Heads, Lyttelton."
Highly Commended.

GODFREY, L. J.—New Zealand.—Panel Carving in Oamaru stone.
First degree of Merit.

GULLY, John—Nelson.—Water-colour Painting, "Winter Sunset, Lake Wakatipu." First degree of Merit Special.

GULLY, John—Nelson.—Collection of Water-colour Paintings.
First degree of Merit.

HOYTE, John C.—Dunedin.—Water-colour Painting, "Teremakau Valley, N.Z." Highly Commended.

NEVILLE, Louis — Christchurch. — Oil Painting, "View of Lake Wanaka." Highly Commended.

NEVILLE, Louis—Christchurch.—Water-colour Paintings of New Zealand Scenery. Highly Commended.

RICHMOND, J. C.—Wellington.—Oil Painting, "Lake Rotorua."
First degree of Merit.

QUEENSLAND.

CAPNER, R.—Brisbane.—Silver and Bronze Medals, of which the dies were cut by exhibitor. Highly Commended.

NATIONAL AGRICULTURAL AND INDUSTRIAL ASSOCIATION OF QUEENSLAND—Brisbane.—Silver and Bronze Prize Medals, issued as prizes by the Association. Dies cut in Brisbane by R. Capner. Highly Commended.

SWITZERLAND.

FLUECK J. B.—Fluhberg-Brienz.—Carvings in Wood.
Highly Commended.

Report—The cabinets, clocks, frames, &c., are very neatly carved.

SWISS COLLECTIVE EXHIBIT.—Wood Carvings.
Commended.

TASMANIA.

MOORE, John—Latrobe River.—Oil Painting, "Port Frederick."
Highly Commended.

PIGUENIT, W. C.—Risdon.—Oil Painting, "South Esk River and Ben Lomond." First degree of Merit Special.

PIGUENIT, W. C.—Risdon.—Oil Paintings, "Ben Lomond," "Blue Mountains, N.S.W.," "Huon River—Picnic Hotel."
First degree of Merit.

UNITED STATES.

WEBER, Philip—Philadelphia.—Oil Painting, "Grand Cross, Grand Manon Island, Canada." First degree of Merit.

VICTORIA.

ALTMANN, Ernst A.—Melbourne.—Engraved Dies and Medals.
Highly Commended.

ASHTON, J. R.—Melbourne.—Oil Painting, "A Chip of the Old Block."
Highly Commended.

CALVERT, Samuel—Melbourne.—Water-colour Painting, "Light in Shadow." Highly Commended.

FORD, William—Melbourne.—Oil Painting, "Effect of Light seen near Eltham." Highly Commended.

GUERARD, Eugène von—Melbourne.—Oil Painting, "Milford Sound, New Zealand." First degree of Merit Special.

HULME, Edward—Oxley.—Oil Painting, "Evening Glow."
Highly Commended.

NELSON, J. M.—Melbourne.—Oil Painting, "Valley of the Goulburn, N.S.W." Highly Commended.

REILLY, Henry—Melbourne.—Oil Painting "The Murray River at Corowa." Highly Commended.

STOKES & MARTIN—Melbourne.—Engraved Dies and Medals.
First degree of Merit.

WHITEHEAD Isaac—Melbourne.—Oil Painting, "Milford, New Zealand." First degree of Merit.

CLASSES 410–427.

Engraving, Lithography, Photography, Architectural Designs, &c.

JUDGES.

DE PIOTROWSKI, KENNEDY	Rosedale, New Zealand.
HENRY, LUCIEN	Sydney.
MOONEN, LÉON (Chairman)	Paris, France.
ROSENTHAL, C. M.	Philadelphia, U.S.A.
SIMONETTI, ACHILLE	Sydney.
TAYLER, JOSIAH	Sydney.

SPECIAL SUB-CLASS.

N.S.W. Art Academy's Pupils Work.

BANNISTER, R. D.	Melbourne, Victoria.
MOONEN, LÉON	Paris, France.

GROUP—Engraving, Lithography, Photography, Designs, Mosaics, &c.

CLASSES 410–427.

AUSTRIA.

BÖHM, Anton—Vienna—Engraved Bronze Ornaments.
Commended.

Report—The engraved designs are clear and attractive.

BOGNER, Antonie—Vienna.—Coloured Photographs.
Honourable Mention.

Report—An exhibit of Photographs painted in oil, well coloured, and of pleasing appearance.

BOUCHÉ, Henriette—Vienna.—Coloured Photographs.
Commended.

Report—Painted Photographs of good colour, very novel, and striking in appearance.

CZEIGER S.—Vienna.—Chromo-Lithographs.
Highly Commended.

Report—Exhibits an excellent collection of chromo-lithographs of very good colours, fine conception, and very creditable appearance.

KARAFIAT, F.—Brünn in Mähren.—Engravings.
Highly Commended.

Report—Highly artistic reproductions by copper-plate engraving of pictures by Maclise, Frith, Ward, Stanley, and also Hogarth's complete works (illustrated.)

MÜLLER, Hermann—Meistersdorf-Ullrichsthal in Böhmen.—Engraved and Polished Crystal Glass. First degree of Merit.

Report—Exhibits a splendid collection of engraved crystal glass ornaments of the highest artistic merit; the designs and finish are of great beauty, the execution very creditable and novel in style, showing great progress.

NEUMANN, L. T.—Vienna.—Chromo-lithographs.
Commended.

Report—A fine exhibit, of very good conception, and fine colouring.

REIFFENSTEIN, G.—Vienna.—Chromo-Lithographs.
Honourable Mention.

Report—An exhibit of good conception and colouring.

TRASSLER, Alfred—Troppau in Östreich-Schlesien.—Chromo-Lithographs. Honourable Mention.

Report—Of good conception and fairly well coloured.

BELGIUM.

DAVELUY, V.—Bruges.—Photographic Views in Bruges, Carbon Process.
Commended.

Report—Well taken, but rather faint in finish.

DE BISEAU, A.—Brussels.—Etchings.
Highly Commended.

Report—Excellent perspective and effect.

HALLEY, Jules—Durant.—Photographic Landscapes of the River Meuse, Carbon Process. Commended.

Report—Very fairly executed.

TASSON Joseph—Brussels.—Decorative Designs for Interior of Buildings.
First degree of Merit.

Report—An exhibit of several panels on iron plate, canvas, and leather, of highly artistic merit, fine finish, and good taste; rich and harmonious in colouring, very attractive and durable; the coloured designs of ceiling and panel painting show great progress.

CEYLON.

SKEEN & CO., W. L. H.—Colombo.—Photographs.
First degree of Merit.

Report—This company show a very large and splendid collection of Photographic views, all of them clear, well taken, and exceedingly interesting; the finish very creditable, and of great merit.

FRANCE.

ALLONGE, Auguste—Paris.—Charcoal Drawing "Solitude."
Highly Commended.

Report—A very finely executed charcoal drawing of very good conception and talent.

APPEL, François—Paris.—Chromo-lithographs.
First degree of Merit.

Report—An exhibit of very fine printed pictures, commercial cards, labels, and cards of fine colours and appearance; the specimen of engraving on copper plates are very finely executed.

BEAUVOIS—Paris.—Engraving on Pewter Plates.
Honourable Mention.

Report—Specimens of engraving on pewter plates, title pages for books, &c., of artistic finish and composition.

CLASSES 410-427.—*Engraving, Lithography, Photography, &c.*

BARBANT, Charles—Paris.—Wood Engravings.

Honourable Mention.

Report—Exhibits several fine wood engravings, excellently copied from Originals.

BATAILLE—Paris.—Chromo-lithographs.

Commended.

Report—A fine exhibit of show-cards, labels, cards, &c., printed in fine colours, of good taste and finish.

BITTERLIN FILS, Paul—Paris.—Painted Glass Windows.

Honourable Mention.

Report—A fine exhibit of Ornamental Window (painted), of good execution and coloring, and creditable in finish.

BLOT ET DROUARD—Paris.—French Bronzes.

First degree of Merit.

Report—A very fine exhibit of statuettes, figures, animals, and composite pieces, very artistically modelled, cast and prepared in imitation of ancient, modern, and Florentine art, of great originality and variety of subjects, extremely well designed, and very creditably executed.

BONNEFIN, Charles—Paris.—Drawings.

Honourable Mention.

Report—Exhibits drawing of a waterfall, of fair skill, and promising talent.

BOUQUET, Michel—Paris.—Enamelled Paintings.

First degree of Merit.

BRUNET-DEBAISNES—Paris.—Etchings.

First degree of Merit.

Report—An exhibit of five etchings, two of which are splendid copies of paintings by Constable and Canaletti; they are unsurpassed for composition and very skilfully rendered.

BOSCHER, Gustave—Amiens.—Photographs.

Highly Commended.

Report—Portraits of excellent shades and tints, well posed, and the retouch and printing of artistic merit.

CHAMPOLLION, Eugène A.—Paris.—Etchings.

Highly Commended.

Report—These are of high artistic taste in conception and detail.

CLAUDIN—Paris.—Etchings. Highly Commended.

Report—Etchings on copper, for the illustration of books, of high artistic composition, original and well executed.

COLLECTIVITÉ DES ZINCS D'ART—Paris.—French Bronzes.

First degree of Merit.

Report—A splendid exhibit of zinc casting in great variety in imitation of bronze; some of the figures are 5 feet high, excellently cast and finished, original in design, skilfully worked, and of artistic merit.

COURTRY, Charles Louis—Paris.—Engravings.

Honourable Mention.

Report—Very finely engraved pictures, after J. P. Laurens and Jérôme.

CRISTOFLE ET CIE—Paris.—Cloisonnés and Inlaid Work.

First degree of Merit.

Report—An exhibit of imitation Japanese cloisonné work; while the general execution and style is a most perfect imitation of Japanese cloisone in design, enamelling, &c; the colouring of some of the parts is almost superior in artistic style to anything made by the Japanese, the shading of certain parts is remarkably well executed and deserves high commendation. A most perfect imitation of Japanese inlaid work is here exhibited, which is obtained by a process that partakes of stencil and hand painting, the shades of different alloys being produced by a chemical process similar to that of the Japanese. The style, cutting, and chasing of the whole is most rich and elegant and ranks very high for this speciality.

CRISTOFLE ET CIE—Paris.—Artistic Castings.

First degree of Merit Special.

Report—The finest exhibit of artistic castings of figures, wreaths, &c., in the Garden Palace. The style of Louis XV is very pure, the accessories are carefully cut, and chased, being of bold conception and high artistic taste; the posés are natural and graceful in the extreme and show freedom in the grouping, skilfully developed. In the details of the figures the limbs are symmetrically perfect and the expression of the faces good.

CRISTOFLE ET CIE—Paris.—Engraving on Metal.

Highly Commended.

Report—Specimens of engraving on copper, nickel, and silver plated ware, of artistic skill, workmanship, and elegance; the engravings on plated ware showing elegance of design, high taste, and grace in finish.

DIDIER, Adrien—Paris.—Engraving, "La Poésie."

First degree of Merit.

Report—A splendid engraving after Raphaël, a most perfect copy of high artistic taste and execution.

DUNOD, Pierre Charles—Paris.—Architectural Designs, Steel Engravings. First degree of Merit Special.

Report—An exhibit very artistically executed. In the steel-plate engraving the shades of light and dark are finished in the most remarkable manner, showing high merit.

DUPUY ET FILS—Paris.—Chromo-lithographs.

First degree of Merit.

Report—A splendid exhibit of superior workmanship, excellent colouring, artistic design, and grouping.

DURENNE, Antoine—Paris.—Iron Castings.

First degree of Merit.

Report—Castings of cups, bas-reliefs, medallions, and ornamental designs of artistic merit and high art composition. The figure castings are alike elegant and gracefully modelled and well finished.

FLAMENG, Léopold—Paris.—Engravings.

First degree of Merit.

Report—Exhibits three splendid engravings of high artistic merit in the composition and originality, the first and third being very remarkable and of great beauty.

GOUPIL ET CIE.—Paris.—Engraving on Copper.

First degree of Merit Special.

Report—Reproductions of pictures by very excellent and high-class engraving.

HEDOUIN, Edmond—Paris.—Etchings.

Commended.

Report—Exceedingly well copied and finished.

HENNUYER, Firmin—Paris.—Engravings.

Commended.

Report—Engraving on wood; very useful.

HUTINET, Désiré—Paris.—Chromo-lithographs.

Honourable Mention.

JOURNET ET CIE.—Paris.—Bronzes.

First degree of Merit Special.

Report—Very handsome vases, clocks, &c., ornamented with Algerian onyx, highly artistically finished.

LALANNE, Maxime—Paris.—Aquafortis and Charcoal Drawings.

First degree of Merit.

Report—An exhibit of excellent composition. Great talent is shown in producing tints and shades, the perspective is beautiful, and the whole shows great boldness and progress.

LEFÈVRE ET CIE., Léon—Paris.—Painted Ornamental Windows.

First degree of Merit.

Report—Several painted church windows of the highest artistic merit, the designs and composition being of great beauty, force, and brilliancy, the grouping and attitudes graceful and striking, the colours bright, harmonious and pleasing, the skill displayed in the combinations of the colours and shades praiseworthy and denoting great progress.

LE RAT, E. Paul—Paris.—Etchings.

Honourable Mention.

Report—Exhibits fine etchings of very fair finish.

LEROY LECAIL ET CIE.—Paris.—Chromo-lithographic Printing.

Highly Commended.

Report—Imitation of the English oil-colour printing, well executed and very cheap.

LE VASSEUR (Ancienne Maison Abel Pilon)—Paris.—Artistic Engraving. Highly Commended

Report—Wood engraving representing antique lace.

LORIN, Nicolas—Chartres (Eure et Loire).—Painted Ornamental Window. Highly Commended.

Report—A very large painted glass window, the composition and execution very fine, the colours excellent, the design bold, striking in appearance and very creditable, the colouring of the draperies being especially fine and beautiful.

MATHIEU, H.—Paris.—Painted Ornamental Windows.

First degree of Merit.

Report—An excellent window of modern composition, representing the "Lord's Supper," the grouping of all the figures easy and correct, the colours clear, bright, and very attractive, showing great skill in the combination of lights and shades, the whole work exhibiting very high artistic merit.

MIRIEL, G. E. A.—Brest.—Fusain Drawings.

Commended.

Report—Drawing of "Summer and Winter," of excellent contrast and artistic merit.

MONTEFIORE, E. L.—Paris.—Etchings.

First degree of Merit.

Report—Artistically executed.

PIAULT, Jules—Paris.—Engraving.

Highly Commended.

Report—Artistic designs, cleverly engraved on cutlery.

PICHOT—Paris.—Chromo-lithographs.

Commended.

Report—Labels, boxes, &c., well printed, of good colours and taste.

ROBERT, Charles Jules—Paris.—Wood Engraving.

Highly Commended.

Report—A very fine head of "St. John the Baptist," after Henner, exceedingly well executed.

SOYER, Paul—Paris.—Enamelling.

First degree of Merit.

Report—Antique Limousin enamelling on copper, porcelain, &c., of original pictures of the "Mediæval," "Francis I.," "Henri II.," Renaissance, and other styles, exhibiting originality of conception, artistic design, and excellent workmanship; some of the pieces have been slightly embossed, which gives relief to the enamelling.

TORCHON, Charles—Paris.—Chromo-Typography.

Honourable Mention.

Report—A system of printing in four colours by an ordinary type process, with a view of preventing the imitation of labels, cheques, &c.; very original and of great utility.

GERMANY.

"BAZAR" ACTIENGESELLSCHAFT—Berlin.—Fashion Books.
Commended.

Report—The wood-cuts are very good.

BERLIN PHOTOGRAPH CO.—Berlin.—Photographs.
First degree of Merit.

Report—Photographs of Grützner's pictures, representing scenes from Shakespeare's play of "The Merry Wives of Windsor."

BRUCKMANN'S VERLAG, Fried.—München.—Oleographs.
Commended.

Report—Well printed.

CARSTENS, P. G.—Altona.—Stained Glass.
Commended.

Report—Etchings on glass, exhibiting artistic execution.

CASTNER & CO., A.—Berlin.—Bronze Castings.
Commended.

CHROMO-PYROGRAPHISCHES INSTITUT—München.—Stained Glass.
Highly Commended.

Report—Engraved glass of various colours in the modern Renaissance and Louis XVI. styles; of excellent designs; neatly and sharply executed.

ERNST & KORN—Berlin.—Architectural Designs.
Commended.

FEILNER, Jean Baptiste—Bremen.—Photographs.
Highly Commended.

GILBERS, Georg—Dresden.—Photo-lithographic Architectural Designs.
First degree of Merit.

Report—Very excellent execution.

KAUFMANN, A. & C.—Berlin.—Chromo-lithographs.
Commended.

KIMBEL, M.—Breslau.—Decorative Designs.
Honourable Mention.

Report—Carefully photo-lithographed.

KLIMSCH'S DRUCKEREI (J. Maubach & Co.)—Frankfurt a/M.—Chromo-Lithographs.
Highly Commended.

Report—An exhibit of designs for commercial purposes.

KOCH & BERGFELD—Bremen.—Repoussé Silver Ware.
First degree of Merit.

Report—Repoussé ornaments, excellent in style, and elegant taste.

KÖNIGLICHE KOMMISSION FÜR DIE GEWERBLICHEN FORTBILDUNGS-SCHULEN—Stuttgart.—Plaster Models and Designs.
Highly Commended.

Report—An excellent exhibit.

KÜRTH, August—Leipzig.—Oleographs.
First degree of Merit.

Report—Very artistic in design and execution.

KÜRTH Wwe. F. E.—Berlin.—Silver Centre Pieces.
Highly Commended.

LAUCHHAMMER FOUNDRY—Lauchhammer.—Artistic Castings in iron. Commended.

Report—Well designed and of graceful appearance.

LAUFS & STEUDNER, Nachfolger—Hanau a/M.—Renaissance Silver Ware. Commended.

Report—Silver gilt repoussé work in imitation of Louis XV. and antique styles.

MAYER'SCHE KUNSTANSTALT—München.—Ecclesiastical Statues and Decorations. Highly Commended.

Report—These exhibits are of papier maché, colored and gilt, and well finished.

OBPACHER GEBRÜDER—München.—Chromo-lithographs.
Highly Commended.

Report—The coloring is very good, and the execution in general excellent.

OIDTMANN, Dr. Heinrich—Linnich Reg. Bez. Aachen.—Skyographic Printing on Glass. First degree of Merit.

Report—Excellent composition in designs, and carefully executed.

SCHAARWÄCHTER, J. C.—Berlin.—Photographs.
Highly Commended.

SCHLÖMP, Edwin—Leipzig.—Photograph Engravings.
Honourable Mention.

SCHUSTER, Rudolph (C. G. Lüderitz Kunstverlag)—Berlin.—Engravings and Lithographs. Highly Commended.

Report—A fine collection.

TIEDEMANN, Emil—Bremen.—Water-colour Photographs.
Highly Commended.

TITZE, Adolph—Leipzig.—Chromo-lithographs.
Highly Commended.

Report—Well executed.

TROITZSCH, Otto (Königl: Hof-Kunst-Institut für Oelfarbendruck)—Berlin.—Chromo-Lithographs.
Highly Commended

Report—Reproductions of pictures, good colouring, and excellent style.

WEZEL & NAUMANN—Leipzig.—Chromo-lithographs.
Highly Commended.

Report—Very artistic in design and execution.

WÜRTZBURG, H.—Berlin.—Engravings and Photographs.
Highly Commended.

Report—The engravings are well executed, original, and of good tone.

GREAT BRITAIN AND IRELAND.

AITCHISON, B.A., F.R.I.B.A., George—London.—Architectural Designs. Commended.

ALLEN & CO., Wm. T.—London.—Ornamental Castings.
First Degree of Merit.

Report—Artistic castings (lampadaires) well and gracefully executed in imitation of the Florentine—bronze.

ART UNION OF LONDON—London.—Engravings.
First degree of Merit Special.

Report—Reproduction by copper-plate engravings of the pictures of Maclise, Frith, Ward, and Stanley—the work being done in a highly artistic manner.

BALLIN, A.—Brentford, Middlesex.—Etchings.
First degree of Merit.

Report—Excellent engravings, good subject and composition.

BARLOW, A.R.A., Thomas Oldham—London.—Engravings.
Highly Commended.

Report—Good execution.

BARRY, F.S.A., F.R.I.B.A., Charles—London.—Architectural Designs.
First degree of Merit.

BATES, GILDEA, & WALKER—London.—Artistic Painting on China.
Honourable Mention.

Report—Good subjects and colouring; fair execution.

BOREHAM, A.R.I.B.A., F.—London.—Architectural Designs.
Commended.

BRANDON, F.R.I.B.A., D.—London.—Architectural Designs.
Highly Commended.

BROOKS, F.R.I.B.A., James—London.—Architectural Designs.
Honourable Mention.

BROWN-WESTHEAD, MOORE, & CO., T. C.—Hanley, Staffordshire.—Artistic Casting, in Paste and Porcelain. Commended.

Report—Excellent painting; good colours.

BROWNFIELD & SONS, Wm.—Cobridge, Staffordshire.—Artistic Painting on Porcelain. First degree of Merit Special.

Report—Excellent design and execution.

BROWNRIGG, T. M.—Guildford, Surrey.—Photographs.
Commended.

Report—Two views; very clear for amateur work.

"BUILDER," THE (Newspaper)—London.—Engravings.
Highly Commended.

Report—Excellent architectural and mechanical designs engraved on wood, and highly meritorious.

CAMERON & ELLIOTT—London.—Designs for Decorations.
First degree of Merit.
Report—Very excellent and artistic designs for stained glass.

CAMM BROTHERS—Birmingham.—Stained Glass Windows.
First degree of Merit.
Report—Very excellent designs and careful work.

CAMM BROTHERS—Birmingham.—Painted Tiles.
First degree of Merit.

CAMM BROTHERS—Birmingham.—Oak Reredos.
First degree of Merit.

CANTON, Robert—London.—Chromo-lithographs.
Highly Commended.
Report—Designs and artistic combination of French and German colour printings for valentines, &c.

CHAMPNEYS, Basil—London.—Architectural Designs.
Honourable Mention.

CLARKE, F.R.I.B.A., T. Chatfield—London.—Architectural Designs.
Commended.

CLARKE, E. F. C.—London.—Architectural Designs.
Ccmmended.

COE, Henry E.—London.—Architectural Designs.
First degree of Merit.

COLLINS, SON, & CO., Wm.—Glasgow.—Engravings.
Highly Commended.
Report—Outline engraving of ornamental designs, cheap chromo-lithographic printing and lithographic sketches.

COPELAND & SONS, W. T.—London and Stoke-upon-Trent.—Painting on Porcelain. Commended.
Report—Flowers of good colouring, easy, and graceful.

CRAVEN, DUNNILL, & CO. (Limited)—Ironbridge, Shropshire.—Painting on Tiles. First degree of Merit Special.
Report—Showing excellent figures with good colouring, artistic conception and composition.

DEBENHAM, Edwin—Bournemouth.—Photograph, from life, "Bad News." Commended.

DOULTON & WATTS—London.—Painting on Porcelain, Terra Cotta, Bassi-relievi. First degree of Merit.
Report—Excellent execution.

EVERSHED, A.—London.—Etchings.
Highly Commended.
Report—Very well executed.

FINE ART SOCIETY—London.—Engravings.
First degree of Merit Special.
Report—Reproduction by Copper-plate engraving of the works of Mrs. Butler, Millais, Long, Col. Stuart Wortley, Rivière, Poynter, and Hayden, in a highly artistic manner.

FORD & CO., John—Edinburgh.—Artistic Engraving on Glass.
Commended.

Report—Executed by wheel, and acid.

FRITH & CO., F.—Reigate.—Photographic Views.
Highly Commended.

Report—A large and very interesting collection of Photographic views, very fairly executed and praiseworthy.

"FURNITURE GAZETTE"—London.—Engravings.
Honourable Mention.

Report—Designs on wood excellent and well adapted to the purpose.

GOODMAN, T.—Southend, Essex.—Architectural Designs.
Commended.

"GRAPHIC," Proprietors of the—London.—Engravings and Chromo-lithographs. First degree of Merit Special.

Report—For popularizing art, high class engraving, and chromo-lithography.

HARDY BROTHERS—London.—Silver and Electro-plated Ware.
Commended.

Report—For a very fine show of artistic engraving and repoussé work.

HAYWARD, F.S.A., F.R.I.B.A., C. Foster—London.—Architectural Designs. Highly Commended.

HEATON, BUTLER, & BAYNE—London.—Stained Glass Windows.
Commended.

HEDGES, David—Lytham, Lancashire.—Photographs.
Commended.

Report—Photographs of animals, well taken.

HESELTINE, J. P.—London.—Etchings.
Highly Commended.

Report—Show good composition.

I'ANSON, F.R.I.B.A., E.—London.—Architectural Designs.
Honourable Mention.

JACKSON, T. G.—London.—Architectural Designs.
Commended.

JAMES, SEWARD, & THOMAS—Cardiff.—Architectural Designs.
Commended.

JONES, F.R.I.B.A., Horace—London.—Architectural Designs.
Highly Commended.

Report—Show good conception.

KENRICK & SONS, Archibald—West Bromwich, Staffordshire.—Artistic Castings in Iron, &c. Highly Commended.

Report—These castings are of good composition and careful workmanship, the styles being both mediæval and modern.

LAMONT & HENDERSON—London.—Photographs.
Highly Commended.

Report—Some portraits on enamel are of tolerably good execution.

LEMERE, BEDFORD & CO.—London.—Architectural Photographs.
Highly Commended.

Report—Views taken in England, fair execution.

LOWENSTAM, L.—London.—Etchings.
First degree of Merit.

Report—Excellent aquafortis.

LOW, MARSTON, SEARLE, & RIVINGTON, Sampson—London.—Engraving. First degree of Merit Special.

Report—Reproductions and reductions of Turner's and Landseer's pictures, most remarkable for fineness, accuracy, and good tints. Copper-plate engraving, portraits, &c., well executed.

LYNN, R.H.A., F.R.I.B.A., W. H.—Belfast.—Architectural Design.
Highly Commended.

MACLURE & MACDONALD—London.—Chromo-lithographs.
First degree of Merit.

Report—Excellent execution of printing in oil, good shades.

MACLURE & MACDONALD—London.—Engraving.
First degree of Merit.

Report—Pictures, portraits, and commercial engraving of notes, shares, &c.

MANFIELD, H.—Northampton.—Photographs.
Honourable Mention.

Report—Tolerably well taken, excellent amateur work.

MARION & CO.—London.—Photographs.
First degree of Merit.

Report—Good portraits of English statesmen, very accurately and artistically taken. Photographs on porcelain worthy of commendation.

MARTIN, HALL, & CO. (Limited)—Sheffield.—Silver Ware.
First degree of Merit.

Report—Highly artistic engraving, showing originality, and careful workmanship.

PEARSON, A.R.A., F.S.A., F.R.I.B.A., J. L.—London.—Architectural Designs. Highly Commended

PILOTEL, M. (Care of J. Gosnell & Co.)—London.—Drawings and Etchings on Wood for Newspapers and Theatrical Programmes.
Highly Commended.

Report—Showing great freedom, style, originality, and talent.

PINDER, BOURNE, & CO.—Burslem, Staffordshire.—Artistic Painting on Porcelain. Commended.

Report—For good execution.

ROBINS, F.S.A., F.R.I.B.A., E. C.—London.—Architectural Designs.
Honourable Mention.

ROBINSON, H. P.—Tunbridge Wells.—Photographs.
Highly Commended.

Report—Photographs of Pictures, well executed.

SCOTT, Brilling—London.—Architectural Designs.
Commended.

SCOTT, F.R.I.B.A., J. Oldrid—London.—Architectural Designs.
Highly Commended.

SCOTT, F.R.I.B.A., J. Oldrid—London.—Design for Vestry Hall.
Commended.

Report—Architectural design, original, and carefully prepared.

SEDDON, F.R.I.B.A., J. P.—London.—Architectural Designs.
First degree of Merit.

SHAW & FISHER—Sheffield.—Silver Ware.
Commended.

Report—Artistic engraving, repoussé.

SIMMONS, W. H.—London.—Engravings.
Highly Commended.

Report—Engravings very well executed.

SLINGSBY, Robert—Lincoln.—Photographs.
Highly Commended.

Report—Good execution and well printed.

SMITH, F.R.I.B.A., T. Roger.—London.—Architectural Designs.
First degree of Merit.

SOANE, Harry—London.—Engraving of Coats of Arms, (illuminated.)
Highly Commended.

SORBY, T. C.—London.—Architectural Designs.
Honourable Mention.

SOUTH KENSINGTON MUSEUM—London.—Architectural and Ornamental Designs, Mechanical or Scientific Drawings, Paintings, and Water Colour Drawings. First degree of Merit Special.

Report—Some of these show remarkable talent, and indicate the high standard of the system of instruction.

STORER & SONS, David—Glasgow, London, and Liverpool.—Painting and Indoor Decorations for Houses. Highly Commended.

SULMAN, F.R.I.B.A., J.—London—Architectural Designs.
Commended.

TARRING & WILKINSON—London.—Architectural Designs.
First degree of Merit.

Report—Pen and Ink interior, very free.

TARVER, F.R.I.B.A., E. J.—London.—Architectural Designs.
Commended.

TREVAIL, Sylvanus—Tywardreath, Cornwall.—Architectural Designs.
Commended.

TRUEFITT, F.R.I.B.A., G.—London.—Architectural Designs.
Honourable Mention.

UDAL & SONS, William—Birmingham.—Artistic Castings for Indoor Decoration. Commended.

Report—Fine show of candelabras and artistic castings for indoor decoration, &c.

UNWIN BROS.—London.—Engraving on Copper-plate for commercial purposes, &c. Highly Commended.

Report—Fair average merit—Photo-lithography very carefully executed.

WALKER & HALL—Sheffield.—Silver Ware.

First degree of Merit.

Report—The handsome silver gilt repoussé Communion service shows a very fine bas-relief, and good engraving, though perhaps a little heavy.

WARD & CO., Marcus—London and Belfast.—Lithographic Colored Printing. First degree of Merit Special.

Report—A very large collection of Chromo-lithographic Sunday School cards, of bright clear and harmonious colors, very marketable. Some specimens of steel engravings are very fine and creditable.

WARD & CO., Marcus—London and Belfast.—Engraving.

First degree of Merit.

Report—Artistic, carefully executed, and useful.

WATERHOUSE, A.R.A., F.R.I.B.A., Alfred—London.—Architectural Designs. First degree of Merit.

WATERLOW & SONS (Limited)—London.—Corporate Seal Engraving Die-sinking, &c. First degree of Merit Special.

Report—This is highly commended as a remarkable collection, showing clear, distinct, and sharp lines of high artistic design and execution.

WATERLOW & SONS (Limited)—London.—Commercial Engraving, Bank Notes, &c. First degree of Merit Special.

Report—Highly artistic in every way, showing originality and careful workmanship.

WATERLOW & SONS (Limited)—London.—Chromo-lithographs.

First degree of Merit.

Report—Chromo-lithographs well made.

WEBB & SONS, Thomas—Stourbridge.—Engraving on Glass.

First degree of Merit.

Report—Highly artistic designs, "Scarabean" glass—Indian and Greek ornamentation, produced by the wheel, &c.

WEILLER & CO., Joseph—London.—Photographs.

Highly Commended.

Report—Artistic reproduction in alabaster of well known statuettes, by Canova, &c., combining accuracy, cheapness, and good skill.

WHICHCORD, F.S.A., J.—London.—Architectural Designs.

Honourable Mention.

WHITE, F.R.I.B.A., W. H.—London.—Architectural Designs.

Honourable Mention.

WORTLEY, Lieut.-Col. H. Stuart—London.—Artistic Photographs.

First degree of Merit.

Report—Instantaneous photographs from nature of remarkable execution, and not to be surpassed.

WRIGHT & FLETCHER—Birmingham.—Castings in Bronze.
Commended.

Report—For commercial purposes.

WYATT, F.S.A., F.R.I.B.A., T. H.—London.—Architectural Designs.
First degree of Merit.

YORK, Frederick—London.—Photographs.
Highly Commended.

Report—Transparent Photographs, well taken.

YOUNG, Wm.—London.—Architectural Designs.
Commended.

INDIA.

CURRANEE & CO.—Bombay.—Inlaid Sandal-wood Work-box.
Commended.

GOVERNMENT OF THE NORTH-WEST PROVINCES AND OUDH.—Moradabad Wares of Inlaid Metal Work.
Honourable Mention.

Report—Rather rough, but in accord with the old Indian style.

WATSON & CO.,—Bombay.—Inlaid Metal, Ivory and Sandal-wood Work.
Commended.

ITALY.

BONCINELLI E FIGLI, Giovanni—Florence.—Mosaic Tables, &c.
Highly Commended.

Report—The marbles and glass are very effectively used, the shading is well studied, and the flowers seem very natural.

CORSI, Pietro—Florence.—Mosaic Tables, &c.
Honourable Mention.

Report—An exhibit of mosaics for various purposes, the arrangement of colours in flowers being well-executed.

FALCINI, Andrea—Floren e.—Mosaic Tables, &c.
Honourable Mention.

FRANCOLINI, Tito—Florence.—Mosaic Tables, &c.
Highly Commended.

Report—The posing and costumes of the figures on these tables are very faithfully executed.

MARIOTTI & FANTONI—Florence.—Mosaic Tables.
First degree of Merit.

Report—The tables exhibited contain well arranged groups of flowers composed of lapis lazuli and other precious stones; the shading is good and well jointed, the whole being well treated.

MEYER, Oscar—Florence.—Mosaic Tables, &c.

Highly Commended.

Report—The grouping of the flowers is excellent and exhibits fine work.

SANDRINI, A.—Florence.—Mosaic Tables.

Highly Commended.

Report—The marbles and glass are well chosen and carefully set, and the animals and flowers are well designed.

JAPAN.

GOTO SHOZABURO—Yokohama.—Cloisonné-ware.

First degree of Merit Special.

Report—A splendid exhibit of cloisonne vases and plaques of the highest artistic merit. The designs and execution of the ornamentation are very beautiful, the colours of the enamelling being harmonious and delicate, and the gold burnishing excellent. The large plaque exhibited would be an ornament to any museum as illustrative of the high standard this art has attained in Japan.

INSATSU KIOKU, GOVERNMENT PRINTING OFFICE—Tokio.—Engraved Work. First degree of Merit.

Report—A great variety of bank notes, bond and postage stamps, very finely engraved and coloured, clear and praiseworthy ; also a portrait excellently finished.

ISOGAYA RISANJI—Shidzuoka.—Cabinet Work.

Honourable Mention.

Report—Several Cabinets beautifully inlaid and lacquered, showing to great advantage.

KANAYA GOROSABURO—Kioto.—Bronze-ware.

Honourable Mention.

Report—Several of the hammered bronze ornaments are finely decorated; and the designs are new and attractive.

KANZAN DENSHICHI—Kioto.—Cloisonné-ware.

Commended.

Report—A small collection of Cloisonné-ware on porcelain and copper ; the execution is creditable and carefully decorated, showing skill and patience.

KINKOZAN SOBEI—Kioto.—Cloisonné-ware.

Commended.

Report—The designs of the articles are good and carefully executed, showing new colours in the enamelling.

KIRITSU KOSHO KUWAISHA—Tokio.—Cabinet-ware.

Highly Commended.

Report—Two cabinets very finely carved and lacquered, of pleasing appearance and very tastefully inlaid.

MITSUI BUSSAN KUWAISHA, KIRITSU KOSHO KUWAISHA, & OKURA & Co.—Tokio.—Cloisonné-ware. Highly Commended.

Report—Two large and very elaborately decorated cloisonné vases of great beauty and striking appearance, the ornamentation being creditable, and deserving of praise.

MURAKAMI TORAJIRO—Kioto.—Lacquer specimens.
Highly Commended.

Report—The carving into the solid lacquer shows to great advantage, and seems durable. The even colours are carefully prepared and executed, and the gold decoration shows progress.

NAKAGAWA NOBORI—Tokio.—Engraved Copper Plates.
Honourable mention.

Report—Copper plate engraved by hand, clear and finely executed.

NAKAMURA SEIJIRO—Osaka.—Photographs.
First degree of Merit.

Report—Photographs of very fine execution, clear and carefully printed. The burnishing is striking, and of great excellence, showing progress.

NISHIMURA SOYEMON—Kioto.—Embroidered and dyed silk screens.
Highly Commended.

Report—A large and fine exhibit of silk screens painted in indelible dyes, and beautifully embroidered, is very attractive.

OKURA & Co.—Tokio.—Bronze-ware.
First degree of Merit.

Report—Two large vases and one flower-stand of bronze of splendid workmanship. The ornamentation in gold, silver, and other metals are finished in a masterly manner, and fully entitled to rank as works of art, being very striking in appearance, and praiseworthy. The style of the work is new.

OTA HEISUKE—Kioto.—Dyed and Embroidered Silk Screens.
Commended.

Report—An exhibit of silk screens dyed in indelible colours, the ornaments in embroidery and colour showing to great advantage.

OTA MANKICHI—Tokio.—Lacquer-ware.
First degree of Merit.

Report—A very fine exhibit of 100 different coloured wood lacquers on panels, showing the various stages of the manufacture. All examples are very beautifully decorated and seem to be durable ; the combination of colours is very striking and deserves great praise, showing much progress.

OTA MANKICHI—Tokio.—Bronze-ware.
Highly Commended.

Report—An exhibit of bronze ornaments ; the decorations in gold, silver, and alloy hammered into the body of the vases, are very fine, and artistically executed, the designs being new and attractive.

SAITO ZENBEI—Tokio.—Bronze-ware.

First degree of Merit.

Report—A very large and excellent collection of bronze vases of good shapes,—the workmanship and finish on all the ornaments are very praiseworthy. The engraving and inlaying being of great merit, requiring care, skill, and patience. The embossed and repoussé works are very artistically executed, and the gold ornamentation very fine. A picture in bronze is a marvel of skill, and very striking in appearance.

SASAKI, T. T.—Nagasaki.—Needlework, &c.

First degree of Merit.

Report—A large picture in needlework on blue silk, representing an eagle with partially spread wings, which is very striking and full of life. The immense care and skill devoted to this work is very praiseworthy. The feathers and other decorations are very thoughtfully and artistically executed. The other works exhibited are equally good ; and a picture under glass, with fishes of mother o' pearl, is very attractive and well arranged.

SEIMI KIOKU—Kioto.—(Chemical Laboratory). Cloisonné-ware.

First degree of Merit.

Report—Cloisonné ornaments on copper. The Turquoise and Lapis Lazuli enamelling is excellent, the design of the decorations in gold and enamel being very fine and creditable ; the blue colour in the ornamentation especially showing great merit.

SHIMIDZU ROKU-BEI—Kioto.—Modelling.

Commended.

Report—The figures on the vases are of artistic style, and well coloured.

SHIPPO KAWAISHA—Owari.—Cloisonné-ware.

First degree of Merit.

Report—A large exhibit of ornamental cloisonné-ware on copper and porcelain. The delicate turquoise ground in most of the exhibits is of artistic beauty. The decorations are very fine, and carefully executed, showing great skill and patience. All the objects are very attractive, and the whole exhibit shows great progress.

YOSHIDA YASUBEI & MURAKAMI TORAJIRO—Kioto.—Bronze-ware.

First degree of Merit.

Report—An excellent exhibit of ornaments in bronze. Two large vases beautifully designed show the skill and patience Japanese artists devote to these works. The chiselling of the various decorations is very finely finished, and deserves great praise. The setting exhibits slight defects, but in the general appearance is not of much consequence, and easily remedied. All the other ornaments are equally good, and show progress.

NETHERLANDS.

AMAND & Co.—Amsterdam.—Chromo-Lithographs.

Commended.

Report—These are of very good colour and conception.

LEENDERTZ JAN—Amsterdam.—Chromo-Lithographs.

Commended.

Report—Very fine reproductions of paintings by the old masters, of which the colouring is good, but rather heavy.

NEW CALEDONIA.

HUGHAN J.—Nouméa.—Photographs.

Honourable Mention.

NEW SOUTH WALES.

AMERICAN PERMANENT PHOTOGRAPH CO.—Sydney.—Collection of Photographs.

Honourable Mention.

ASHWIN & FALCONER—Sydney.—Painted Ornamental Windows.

First Degree of Merit.

Report—Show several painted (stained) ornamental glass windows of excellent execution, of very good designs, the colours being bright and harmonious, the grouping easy, expressive, and correct, and the settings substantial and creditable.

BACKHOUSE, Benjamin—Sydney.—Architectural Designs.

Highly Commended.

Report—Designs for public buildings, good execution.

BAYLISS, C.—Sydney.—Photographs.

Commended.

Report—The large view of Sydney is fairly executed.

BENNETT, A.—Sydney.—Engraving. Commended.

Report—Wood engravings for Town and Country Journal, fairly well executed.

BOAKE, B. C.—Sydney.—Portrait Photographs.

Highly Commended.

Report—Well taken and printed, the idea of a child's shadow being very successfully worked out in one of the photographs.

BOARD, G.—Sydney.—Mosaic in Wood.

Honourable Mention.

Report—Very fair work for an amateur.

BUTLER, W. T., Pupil of the Art Academy—Sydney.—Crayon Drawings. Highly Commended.

Report—Studies of Arm and "Two Gladiators," fairly well drawn.

CHARD, Miss E.—Pupil of the Art Academy—Sydney.—Two Crayon Drawings. Two Honourable Mention Awards.

CLASSES 410–427.—*Engraving, Lithography, Photography, &c.*

COLLINGRIDGE, A.—Ryde.—Pen and Ink Sketches, Charcoal Drawings, and Engravings. First degree of Merit.
Report—For originality and good development.

COLLINGRIDGE, G.—Ryde.—Engravings.
First degree of Merit.
Report—Well executed and skilfully toned.

COWLEY, Miss Lydia—Gresford.—Pencil Drawings.
Honourable Mention.
Report—Dog's head in pencil well drawn, the artist worthy of encouragement.

DEGOTARDI, John—Balmain.—Photographs.
Highly Commended.
Report—Heliotype process, very well executed, the negatives being worthy of commendation.

DELARUE, H. F.—Sydney.—Artistic Castings and Chasings in Silver.
Highly Commended.
Report—Fairly modelled and well finished.

ELPHINSTONE, A. L.—Sydney.—Architectural design.
Honourable Mention.

FAIRFAX & SONS, John—Sydney.—Wood Engravings.
Highly Commended.
Report—Wood engravings for "Sydney Mail," fairly well executed.

FAWCETT, Miss F. F., Pupil of the Art Academy.—Sydney.—Crayon Drawings. Commended.

FERRARI, A.—Sydney.—Penknife Carving on paper. "Death of Virginia." Honourable Mention.
Report—More curious than useful; the artist's patience is be to admired.

FISCHER, A., Pupil of the Art Academy.—Sydney.—Crayon Drawings. Highly Commended.
Report—A very fair collection, the drawing from life, entitled "The Young Fossickers," being the best production.

FLAVELLE BROTHERS & ROBERTS.—Sydney—Chasings and Castings in Silver. Highly Commended.
Report—A fine set of mounted Emu Eggs, artistically arranged as a tea service, highly chased and engraved mountings, castings, &c. These articles of Colonial make are the most original in the Exhibition. The exhibits also show some artistically modelled figures cast for centre pieces.

GEYER, H.—Hay.—Photographic Views of the town of Hay.
Honourable Mention.

GIBBS, SHALLARD, & CO.—Sydney.—Photo-Lithographic Designs and reproductions and Photo-engraving. First degree of Merit.
Report—Photo-lithographic designs and reproductions carefully made, showing good taste, the Photo-engraving being also good.

HANSON, Job—Sydney.—Statues and Monuments.

First degree of Merit.

Report—This exhibit consists of four statues "Spring," "Summer," "Autumn," and "Winter," and two monuments, one of marble, the other of red granite. The statues are of pleasing design and well executed, and the monuments of excellent material, beautifully designed and finished.

HATTON & PATCHING—Sydney.—Portrait Photographs.

Highly Commended.

Report—Of artistic position, soft tints and shadows, and well studied, though a little stiff.

HIBBLE, W. G.—Sydney.—Decorations.

Honourable Mention.

Report—The painting and graining are very good imitations of marble and wood.

HOLTERMAN & CO., B. O.—Sydney.—Photograph.

Commended.

Report—Large photograph of Sydney, well printed and joined.

ILLAWARRA DISTRICT COMMITTEE—Wollongong.—Collection of Photographs of District Views. Highly Commended.

JACOBS, John—Sydney.—Architectural Design for City Improvements.

Honourable Mention.

JAUBERT, Léon—Sydney.—Chased battle-axes, maces, &c., Die-sinking.

First degree of Merit Special.

JONES, Evan—Sydney.—Castings in Silver for Table Centre-pieces.

Honourable Mention.

KENNEDY, James M.—Sydney.—Illuminated Address.

Commended.

Report—Well executed.

KERR, William—Sydney.—Castings in Silver.

Commended.

Report—Careful workmanship.

KIRKPATRICK, J.—Sydney.—Architectural Designs for Schools.

Highly Commended.

Report—Well executed, and well adapted to purposes intended.

LEIBINGER, Carl—Newcastle.—Photographs.

Commended.

Report—Enlarged and coloured Photographs fairly done.

LEIGH & CO., S. T.—Sydney.—Engraving, Lithographic Drawing, and Commercial Lithography. Highly Commended.

Report—Good execution and style.

LYON, COTTIER, & CO.—Sydney.—Stained Glass Windows.

First degree of Merit.

Report—Of fine execution, well designed, and creditable to the Colony.

CLASSES 410–427.—*Engraving, Lithography, Photography, &c.*

MAHONY F., Pupil of the Art Academy—Sydney—Crayon Drawings. Highly Commended.

Report—The "ram's head" from nature is of very fair merit.

M'DONALD, William—Tamworth.—Photographic Views of Tamworth. Honourable Mention.

M'LEAN & SON, John—Sydney.—Chasing and Castings of Table Centre-pieces, Church Vessels, &c. Honourable Mention.

M'MINN, Miss A. B., Pupil of the Art Academy—Sydney.—Oil Painting, "View in Burragorang." Honourable Mention.

Report—A fair attempt.

MANDELSON, K. S., Pupil of the Art Academy—Sydney.—Pencil Drawings. Commended.

Report—Promising.

MARKHAM, Miss M., Pupil of the Art Academy—Sydney.—Copy in water-colours, "The Crucifixion." Honourable Mention.

MARSH, L. J.—North Shore.—Crayon Drawings. Honourable Mention.

Report—Fairly executed.

MARSHALL, Miss C., Pupil of the Art Academy—Sydney.—Oil Painting, "The Morning After the Gale." Highly Commended.

Report—A fair essay at copying, worthy of encouragement.

MAYES, Miss E., Pupil of the Art Academy—Sydney.—Paintings and Portraits in Oil. First degree of Merit.

Report—Two portraits in this collection are excellent productions of their kind for tone and life-like appearance. The artist is well worthy of encouragement.

MEYERS, M. E.—Sydney.—Pen and Ink Sketches, &c. Commended.

Report—Show good talent, worthy of encouragement.

MONTEFIORE, E. L.—Sydney.—Etchings in Fusain ; Drawings. Highly Commended.

MONTEFIORE, E. L.—Sydney.—Pen and Ink Sketches. Highly Commended.

Report—Lines bold and sharp, and the conceptions good.

NEWMAN, J. Hubert—Sydney.—Photographs. First degree of Merit.

Report—Portraits and views by autotype process, enlarged pictures, &c., well coloured and finished, the portrait of Lord Loftus being the best in the collection.

PAINE, John—Waterloo.—Photographs of Australian Scenery. First degree of Merit.

Report—Well taken and carefully printed.

PERY, Edmond A. T.—St. Leonards.—Family Relics and Curiosities. Honourable Mention.

Report—A very interesting loan collection.

PULLIN, A. R.—Sydney—Crayon Drawings.

Commended.

Report—Architectural designs, very fairly executed.

REYNOLDS, P. E.—Sydney.—Chromo-lithographs and Engravings.

First degree of Merit.

Report—A fine collection of highly artistic Engravings and Photographs from the pictures of well-known European artists.

RICHARDS, Thomas, GOVERNMENT PRINTER—Sydney.—Photographs. First degree of Merit.

Report—A fine collection of well-taken and well printed Photographs.

RICHARDS, Thomas, GOVERNMENT PRINTER—Sydney.—Specimens of twenty different Photographic processes; also Photo-xylography, or the process of photographing Nature and other subjects on wood for engraving, introduced into New South Wales by the Government Printer, A.D. 1878. *Vide* also p. 310, *ante*.

First degree of Merit Special.

RICHARDS & CO.—Sydney.—Photographs.

Commended.

Report—Of fair execution. This Company has a speciality for enlarging from carte de visite.

RIDDIFORD, John P.—Sydney.—Pen and Ink Sketch.

Commended.

RIISFELDT, Peter Emil—Sydney.—Photographs, Coloured Photographs.

Honourable Mention.

ROBBERDS, Miss E., Pupil of the Art Academy—Sydney.—Crayon Drawings. Highly Commended.

Report—Of the two drawings, portrait of Mozart, and "Clytie," the former is superior.

ROBINSON, Miss M. T., Pupil of the Art Academy—Sydney.—Portraits in Oils, and Drawings. First Degree of Merit.

Report—Good collection, the crayon portrait being evidently taken from life; deserves high commendation.

ROWE, Thomas—Sydney.—Architectural Designs.

First degree of Merit.

Report—For excellence.

RUSHTON, Robert—Sydney.—Painted Panellings.

Honourable Mention.

Report—Imitations of wood fairly executed.

SANDS, John—Sydney.—Illuminating.

Highly Commended.

SAYER, J. W.—Pupil of the Art Academy—Sydney.—Crayon Drawing, "Ajax." Commended.

Report—Study from a Cast.

SCOTT, David—Sydney.—Autotype Photographs.

Commended.

Report—Portraits by the autotype process, some being coloured.

THOMPSON, Herbert S.—Sydney.—Architectural Designs.
Highly Commended.

Report—The design for an Infirmary is good.

TINGCOMBE, Miss, Pupil of the Art Academy—Sydney.—Study in Oils, "Council of War." Commended.

TURNER & HENDERSON—Sydney.—Illuminated Address on Vellum.
Highly Commended.

Report—Good execution.

WALKER & JARRETT—Sydney.—Painted Panellings.
Highly Commended.

Report—Some of the panels are well painted, and imitate wood and marble very fairly.

WALMSLEY, John—Petersham—Collection of twenty Wood Engravings. First degree of Merit.

Report—Views in Paris, &c., well executed.

WILLIAMS, C.—Sydney—Imitation Woods and Marbles.
Highly Commended.

Report—Panels painted and grained in very fair imitation of wood.

WILLIAMS, Percy E., Pupil of the Art Academy—Sydney—Crayon Drawings and Copies in Oils. Highly Commended.

Report—Very fair productions, showing talent.

WINSTON, C. E.—Sydney—Industrial Engraving on Wood.
Honourable Mention.

Report—Well executed.

WOOD, Mrs. A. P.—Goulburn—Drawing.
Commended.

Report—Of very fair execution for an amateur.

NEW ZEALAND.

BARTLETT, R. H.—Auckland—Photographs.
Commended.

Report—A collection of Photographs, portraits, and views deserving encouragement, the poses being very good, but wanting in softness.

BLOCH, T.—Nelson—Photographs.
Commended.

Report—Good collection, of very fair execution and finish.

BOTHAMLEY, A. T.—Wellington—Photographs.
Honourable Mention.

Report—A collection of Photographic views, skilfully taken for an amateur.

BRAGGE, J.—Wellington—Photographs.
Highly Commended.

Report—A collection of Photographic views of New Zealand, very well taken, with a creditable regard to tints and effects of lights and shades.

CLASSES 410–427.—*Engraving, Lithography, Photography, &c.*

BURTON BROS.—Dunedin.—Photographs of New Zealand Scenery, in carbon and silver. Highly Commended,

Report—This collection of Photographic views by the carbon and silver process are skilfully rendered, and deserve great credit.

CHERRILL, N. K.—Christchurch.—Photographs on Ceramic Enamel, Porcelain, &c. Commended.

Report—This style of Photography is evidently in its infancy in New Zealand, and deserves credit.

CLIFFORD & MORRIS—Dunedin.—Photographs.

Commended.

Report—For excellent taste and finish.

COLLIE, Wm.—Napier.—Photographs.

Commended.

Report—A very creditable collection of Photographic views by the wet collodion process, very skilfully taken and carefully printed.

DEVERILL, H.—Wellington.—Photo-lithography.

Honourable Mention.

Report—Very fair specimen of work.

EDWARDS & GREEN—Wellington.—Engravings.

Honourable Mention.

Report—Engravings on cheques, &c., of very useful workmanship.

GORDON, W.—Wanganui.—The Lord's Prayer in Maori, illuminated in Maori tracery, representing ancient Maori carvings.

Honourable Mention.

Report—This exhibit is a curious one.

HART, CAMPBELL, & CO.—Queenstown, Wakatipu.—Photographic Views of Lake Scenery. Commended.

Report—A collection of Photographic views, of good taste and careful finish.

HEMUS & HANNA—Auckland.—Large Photographs.

Highly Commended.

Report—These Photographs are very carefully printed, the poses and shades being good, and the finish creditable.

HISLOP, A. R.—Wellington.—Tapestry Picture, Executed by Mary, Queen of Scots. Honourable Mention.

Report—Curious.

HOLMES, R. T.—Wellington.—Steel Engraving.

First Degree of Merit.

Report—The picture of the "Wayside Reverie" shows originality, high artistic skill, taste, and progress.

LEVES & SCOTT—Dunedin.—Glass Embossing.

Commended.

Report—In the glass embossing the figure is fairly executed, and graceful. The work in the signboard is good, although in the arrangement of the design lightness is wanted.

CLASSES 410–427.—*Engraving, Lithography, Photography, &c.*

"LYTTELTON TIMES"—PROPRIETORS OF THE—Christchurch.—Specimens of Photo-lithography. Honourable Mention.

Report—Useful specimens of commercial engraving, showing good workmanship.

M'CARDELL, J. F.—Christchurch.—Illuminated Calendar, noting the birth and death of musical celebrities. Commended.

Report—The portraits in pen and ink are tolerably well sketched.

MILNE, A.—Wanganui.—Engraving of Racehorses, on glass. Highly Commended.

Report—Exceedingly well done.

PERKINS, W. H.—Greymouth.—Photographs. Honourable Mention.

Report—A collection of views of New Zealand; very fairly executed.

PETERSEN & CO., B.—Christchurch.—Chased Silverware, &c. Highly Commended.

Report—Artistic engraving on claret jug very neatly executed and original.

TRAVERS, F. L. S., Wm. Thos. Locke—Wellington.—Photographs of New Zealand Scenery. First degree of Merit.

Report—Views taken by an amateur; worthy of encouragement.

WRIGG, H. C. W.—Wellington.—Pen and Ink Drawings. First degree of Merit.

WRIGGLESWORTH & BINNS—Wellington.—Photographs. First degree of Merit.

Report—The reflection of lights and shades has been studied with effect, and shows great skill.

QUEENSLAND.

BENNETT, W. T.—Brisbane.—Instantaneous Photographs. Commended.

Report—Very well taken, but indifferently printed.

CLARKE, J. A.—Brisbane.—Etchings. Commended.

Report—Copper-plate etchings, tolerably well executed.

DAINTREE, Mrs. Richard—London.—Photographic Views of Queensland. Highly Commended.

DEFRAINE, W.—Brisbane.—Photographic View of Brisbane. Honourable Mention.

Report—Tolerably good execution.

MURDOCH, J. S.—Brisbane.—Stained Woods. Commended.

NORMAL SCHOOL—Brisbane.—Drawings, &c. Highly Commended.

Report—Very creditable school-work. The pen-and-ink sketch of the "Peacocks" is the best in the collection; the ornamental drawings are also good.

SOUTH AUSTRALIA.

FREEMAN, G.—Adelaide.—Specimens of Instantaneous Photography.
Commended.

Report—Photographs of waves, very cleverly taken, well and skilfully finished.

HOOD, John—Glenelg.—Enlarged Photographs, finished in monochrome.
Highly Commended.

Report—Of very good poses and excellent finish.

KENNEDY, Wm.—Auburn.—Pair of Bullock-horns, engraved with a broken pocket-knife. Honourable Mention.

Report—Bullock-horns with outline engravings; very well executed for an amateur.

SOUTH AUSTRALIAN COMMISSION—Adelaide.—Photographs of South Australian scenery and public buildings. Honourable Mention.

STEINER, Henry—Adelaide.—Engravings on Metal.
Commended.

Report—Artistic engravings on shields; cups, and tea-services of good style and workmanship, commendable for Colonial work.

SWEET, Samuel White—Adelaide.—Photographs.
Commended.

Report—A very creditable collection of seven different series of Photographic views of South Australian scenery. The albumenized enamel softens the tints of several of the pictures, which would otherwise be hard.

WAKE, John—Adelaide.—Plaster Ornaments.
Highly Commended.

Report—Well-made, and suitable for purposes intended.

WATSON, George G.—Adelaide.—Masonic Stone-inlaid Table.
Honourable Mention.

Report—A marble table, with Masonic emblems, artistically made of the different marble stones and malachite of South Australia.

WENDT, Joachim M.—Adelaide.—Engravings on metal.
Commended.

Report—These engravings on metal cups, &c., are of very free designs, and in good taste; workmanship commendable, and execution careful; the "fern" pattern being excellent.

TASMANIA.

ANSON & BROS., J.—Hobart Town.—Photographs of Tasmanian Scenery. Commended.

BRENT, Rose—Hobart Town.—Painted Chess Table.
Honourable Mention.

Report—This work is a chessboard, the squares form Indian ink pictures of creditable execution, well drawn, and the whole finish shows talent.

BURROWES, W.—Launceston.—Photographs.
Honourable Mention.

DOUGHTY, Charles—Hobart Town.—Pencil Drawings.
Honourable Mention.

Report—Fairly well finished.

DOWDELL, Miss—Hobart Town.—Painted Table-top.
Honourable Mention.

Report—A finely-painted table-top, the birds and branches being correctly drawn, well grouped, coloured, and creditable in appearance.

HOPE, Margaret—Hobart Town.—Painted Table-tops.
Honourable Mention.

PATERSON, F.—Hobart Town.—Stereoscopic Views of Scenery, by Dry Process. Honourable Mention.

Report—Well executed.

WATERHOUSE, Miss—Newtown.—Table-Top of Ferns in Spattering.
Honourable Mention.

Report—A very pretty table-top, the fern design coming out very clearly. The whole exhibit is carefully finished, attractive, and original.

UNITED STATES.

AMERICAN WATCH CO.—Waltham, Mass.—Engraving and Enamelling of Watch-cases. First degree of Merit Special.

Report—This Company shows the most superb collection of engraved and enamelled watch-cases at this Exhibition. Every specimen of the engraved cases is noteworthy for the highest artistic design and finish; the execution is clear and beautiful, and very creditable, the enamelling on all the cases, being very fine and harmonious in the colours, shows immense progress. Several colours and shades are new, and of special merit. The whole of the workmanship is of the highest artistic beauty.

BANCROFT & CO., A. L.—San Francisco.—Lithographic Prints.
First degree of Merit.

Report—This firm shows a large and very fine collection of lithographic prints for industrial purposes, all the designs clear, of fine composition, and artistic finish; the colours bright and creditable. The engravings on the stock certificates and letter headings are of high merit, and show great progress.

GORHAM MANUFACTURING CO.—Providence, R. I.—Engraved, Repoussé, and Enamelled Silver-ware.
First degree of Merit Special.

Report—This is the finest collection of engraved silver-ware at this Exhibition; all the engravings are clear, beautiful in design, and well understood in the finish. The repoussé workmanship is especially fine, grand in conception, and of great merit. The Niell's decorations shown are splendid specimens of artistic skill, and very creditable; the enamelling fine and durable. The whole exhibit is of the highest artistic merit.

CLASSES 410-427.—*Engraving, Lithography, Photography, &c.*

LOCKWOOD, H.—New York.—Photo-lithographic Prints.
Highly Commended.

Report—Shows a specimen of Photo-lithography in the shape of a small volume reduced to a quarter the size of the original publication ; very clear, easily read, and showing progress.

MILLER & CO., E.—Meriden, Conn.—Ornamental Bronzed Statuettes.
Highly Commended.

Report—Excellent statuettes, fairly well executed. Shows great progress in American industrial art.

PORTER & COATES—Philadelphia.—Engravings in Books.
First degree of Merit.

Report—Show several books with splendidly-engraved pictures, especially the "Fireside Encyclopædia" and the "Pictures of the American Industries." A high standard of artistic merit is attained, all the plates being clear, excellent in execution, and praiseworthy.

PRANG & CO., L.—Boston, Mass.—Chromo-lithographs.
First degree of merit.

Report—A large and excellent collection of chromo-lithographs of very fine finish, being clear and harmonious in colours.

REED & BARTON—Taunton, Mass.—Silver-plated-ware, Coffee and Tea Services, Epèrgnes, &c. First degree of Merit Special.

Report—Show several specimens with splendid engravings ; the designs and finish of high artistic merit, very elaborate, and striking in appearance. The specimens of repoussé work are very fine, and beautifully executed ; the modelled and chiselled ornaments of animals are very creditable, and truthfully finished ; the designs are new and elegant, showing great progress.

RUSSELL & ERWIN MANUFACTURING CO.—New Britain, Conn.—Ornamental Sand Castings. First degree of Merit.

Report—Show an excellent collection of ornamental castings of very great beauty, the designs of the ornamentations being clear and correct, and showing great progress. The polishing and enamelling very fine, durable, and striking in appearance.

SIMPSON, HALL, MILLER, & CO.—New York.—Silver-plated-ware, Epèrgnes, Tureens, &c., &c. Highly Commended.

Report—For good design and finish in the engraving.

VICTORIA.

ART UNION OF VICTORIA—Melbourne.—Chromo-lithographs.
Highly Commended.

Report—Very creditably done, and useful, inasmuch as they encourage art, and beget a taste among the masses for a superior style of printing.

ATYEO Frederick K.—Melbourne.—Carvings in Marble.
Highly Commended.

Report—Stone carving, inlaid marble, &c. Flowers well and boldly executed.

CLASSES 410-427.—*Engraving, Lithography, Photography, &c.*

BAIRD, James—Melbourne.—Illumination.

Commended.

Report—Of fair colouring and execution.

BELL, John—Sandhurst.—Stained-glass Window.

Commended.

Report—The effect is good, design and workmanship very fair and artistic, and the industry is worthy of encouragement.

BRYANT, Edwin—Melbourne.—Pencil Drawings.

Commended.

Report—These are unpretending in style and tolerably correct.

CAIRE, Nicholas John—Melbourne.—Photographic Views of Victoria.

Honourable Mention.

Report—Well adapted for the purpose intended.

CASELLI, Henry Richard—Ballarat.—Architectural Design in Pencil.

Honourable Mention.

JOHNSTONE, O'SHANNESSY, & CO.—Melbourne.—Photographs.

First degree of Merit.

Report—Excellent photographs, the coloured group of "Mother and Child" being a very fine production.

MURPHY, Edward—Melbourne—Centre-pieces for Ceilings.

Highly Commended.

Report—Artistically modelled.

NETTLETON, Charles—Melbourne.—Photographic Views of Victoria.

Highly Commended.

Report—Good execution; well adapted for the purpose intended.

NIVEN F. W.—Ballarat.—Chromo-lithographs.

Commended.

Report—Labels and cards shown by the exhibitor are of a useful kind for trade, some of them being very skilfully executed.

ROWLAND, John R.—Melbourne.—Engraving and Enamelling.

First degree of Merit.

Report—Enamelled monograms, carefully executed, showing good taste and coloring.

SIMONSENS, Pierre—Melbourne.—Window in Imitation Stained Glass.

Honourable Mention.

Report—"Vitremanie" is a good and cheap substitute for stained glass, consisting of colored figures on paper glued or fastened on to glass, and rendered transparent by some kind of varnish. The subjects on this window are evidently German, and the effect is good.

TAYLOR James—Sandhurst.—Polished Marble Fountain.

Highly Commended.

TURNER Charles—Melbourne.—Lithography.

Commended.

Report—Drawings and music titles show good skill, originality, and are of a useful kind.

LADIES' COURT.

JUDGES.

BAHSE, MORITZ F.	Dresden, Germany.
MOONEN, LÉON (Chairman)	Paris, France.
TUTING, G. C.	Sydney.
BANNISTER, Mrs. J. C.	Melbourne, Victoria.
BOURNE, Miss	St. Leonards, Sydney.
MINCHEN, Mrs. E. A.	Paddington, Sydney.
PAGE, Miss	Sydney.

LADIES' COURT.

THE originator of the idea of establishing a Ladies' Court in the International Exhibition is to be congratulated on its success. It was situated under the Eastern Tower, one of the pleasantest spots in the Garden Palace, and the arrangements, which were excellent, were under the supervision of Mr. John Alger, a member of the Commission.

Everything that conduces to the moral and material well-being of mankind—everything that denotes genius in art, intelligence, science and skill in workmanship—had its place marked in the Exhibition. It was but natural that the handiwork of our women and children should have a place in its turn, to show the degree of merit that appertains to it, and to enable us to note the progress consequent on instruction and education.

As a whole the Ladies' Court formed a very praiseworthy display and showed a very creditable standard, rendering it highly desirable that ladies' work should be encouraged by regular annual exhibitions, which would have the effect of stimulating the exhibitors, and of raising the standard of such work to a degree still higher, and attaining that perfection in graceful conception and artistic taste, which until now has only been found in European countries, where the introduction of systematic female instruction has been so beneficial.

In "Needlework and Underclothing" some excellent specimens have been shown that reflect great credit on the the Fort-street Public School, many of them emanating from pupils mostly of tender age.

In "Wool-work" several exhibits show skill.

In "Wool-work Pictures," however, a great want of judgment has been shown in arranging and blending the colours, most of the pictures being faulty. This often results from too strictly copying the printed patterns, which are usually done in very bright colours so as to show the distinctive clearness of the stitches. There is a predominance of blue in most pictures that is unnatural, and other gaudy colours are used which destroy the effects of the finer tints. The choice of patterns also is often injudicious, and the Judges would suggest a better selection of subjects for embroidery, such as flowers or ornaments, where a better opportunity would be presented for the study of harmony in colouring, tinting, and shading, than in figure embroidery.

In "Application" or "Appliqué" some very excellent work is to be seen. Mrs. Campbell's case is very fine as a whole, and there is also some good work in Mrs. McCoy's case, but the Judges think that the finest exhibit in the Ladies' Court, for original conception, artistic taste and graceful arrangement, worthy of ranking before any other exhibit, is that of Miss Edwards, who takes the highest rank in the Ladies' Court. In this piece of work there is not only a graceful design, but a careful finish, and harmonious and accurate colouring.

In "Crochet-work" there is a praiseworthy scarcity of antimacassars, though quilts and counterpanes are numerous; these, with a few exceptions, are not above ordinary merit—there is a lack of conception or style in the designs; the work is, however, highly useful.

Ladies' Court.

In Fancy Articles, "Fern Arrangements, Wax, and other Ornaments," great ingenuity has been displayed, though in some instances the Judges have often thought that a better use for ladies' spare time could be found in making more useful articles, whether for ornament or for clothing. Some frames in leather flowers in the Tasmanian Court are the best of the kind.

In "Lace-work," however, our young ladies seem to excel, for while a few specimens show defects or neglectful finish, many of them are excellent specimens. Mrs. Campbell and Mrs. Wisby show good specimens of Maltese, Buckinghamshire, and Northampton Laces, while many of the different point laces are very creditably, and in some cases, very artistically made. New Zealand and Tasmania show also excellent work.

The "Macramé-work," which is of a style almost forgotten, has been revived to great advantage; and though some of the exhibits are a little heavy and elaborate in style, the show is very fine.

The "Cabinet Collections." The Judges think it excellent to promote in a certain measure the collection of specimens of Natural History by young people, who are thus stimulated in their desire to acquire knowledge practically.

In "Paintings and Drawings" little originality has been shown. The exhibits are mostly copies of old printed models, familiar to pupils in all French and German Schools. They lack freedom of style, and do not rise above the average merit of ordinary schoolboy efforts. Little better can be said for Oil Paintings; with the exception of one or two painted by Miss Rosa Barnet, most are defective in perspective and colouring, and lack originality.

"Water-colour Drawings" are mostly confined to the representation of Native flowers.

It would be most useful, and would exercise the pupil's eye much more, if drawing from the "round" were more generally practised.

The Judges had the advantage of M. Lucien Henri's advice as Expert on the examination of the pictures, and the conclusion arrived at was that, as a whole, they were a fair exhibit.

L. MOONEN, Chairman.
M. F. BAHSE.

GREAT BRITAIN AND IRELAND.

KNIGHT, Miss—Chelsea.—Hospital Patch-work Quilt, with texts of Scripture in five languages. Honourable Mention.

NEW SOUTH WALES.

ADAMS, Amy—Maitland.—Essay in Chalk and Crayon.
Honourable Mention.

ADAMS, Amy—Maitland.—Fender Stool.
Highly Commended.

Report—Creditable essay, worth encouraging.

ALEXANDER, Mrs. M.—Sydney.—Two Mirrors, the frames worked in imitation Leather.—Carved Wood-work. Highly Commended.

Report—These exhibits show originality, a fair amount of skill and workmanship, and good taste.

ANDREWS, Mary Ann—Kogarah.—Two Shades Paper Flowers.
Commended.

Report—These flowers are well made, having a good appearance, the effect of the leaves being imported.

APTED, Mrs. John—Sydney.—Berlin-wool Pictures.
Honourable Mention.

BANKS, Miss—Ashfield.—Four Wool-work Cushions, Pictures, &c.
Highly Commended.

Report—Of fair design, and carefully executed.

BARLING, Mrs. Alfred—Casino.—One Crochet Counterpane.
Honourable Mention.

Report—Worked with Maltese crosses and stars, being well adapted for its purpose.

BARNET, Rosa—Sydney.—Two Oil Paintings, "The Cumæan Sybil" and "Head after Gainsborough." Highly Commended.

Report—These are copies well executed.

BARR, Marie—Balmain.—Pillow Lace, washed and unwashed.
Highly Commended.

Report—Well made, and of careful design.

BARR, Mrs. James—Balmain.—Pillow and Honiton Lace.
Highly Commended.

Report—Careful work, good design, and tasteful arrangement.

BARRON, Mrs.—Sydney.—Two Crayon Drawings.
Honourable Mention.

Report—Showing spirit, and creditable taste.

BATES, Ada—Sydney.—Wool-work in Frame, "Landing of Charles II at Dover." Honourable Mention.

Report—Fair workmanship.

Ladies' Court.

BATTY, Florence—Balmain.—Berlin Wool-work, "Bolton Abbey in the Olden Time." Highly Commended.

Report—A large picture carefully worked; the colours perhaps are too showy, but the blending of them shows skill.

BERGAN, Ella Louisa.—Granville.—Specimen of Wool-work. Commended.

Report—This is a piece of wool-work in imitation of a parrot, showing fair colouring and good workmanship; the dark ground has the tendency to throw up the coloured feathers of the bird.

BILES, Ellen—Granville.—Wool-work Picture. Honourable Mention.

Report—This award is made more as an encouragement for the child than anything else.

BLAXLAND, Lucy M.—Ryde.—Velvet Cushion in Spatter-work. Honourable Mention.

Report—This is an elegant piece of work, carefully made.

BRADY, Mrs. Thos. James—Spectacle Island, Parramatta River.—One pair Hand-worked Window Curtains, and Antimaccassar. Honourable Mention.

Report—Well adapted for its purpose.

BROWN, Miss B.—Sydney.—Tray, Cloth, and Napkin. Honourable Mention.

Report—Needle embroidery, well made.

BUCHANAN, Hugh—Sydney.—Case of Fancy Fretwork. Commended.

Report—Cleverly done.

BUCHANAN, Miss S.—Maitland.—Essay in Chalk and Crayon. Honourable Mention.

Report—Creditable essay, worth encouraging.

CALVERT, Mrs. J. J.—Marrickville.—Silk Embroidery. Highly Commended.

Report—Fair description, the colours being well chosen; this is the best exhibit of its kind.

CAMPBELL, Miss M.—Branxton—Lace-work. First degree of Merit.

Report—Of excellent design and skilled workmanship.

CAMPBELL, Mrs. Anna Frances—Sydney.—Lace, Embroidery, &c. First degree of Merit Special.

Report—This work is all of a superior class; the designs and workmanship being excellent.

CAREW, Miss—Windsor.—Wool-work Picture, "Cæsar's Tribute." Commended.

Report—For fair workmanship and good material.

CHARTERIS, Diana Elizabeth—Goulburn.—Head and Bust of Child (Crayon in Black and White Chalk). Honourable Mention.

Report—Creditable essay, worthy of encouragement.

Ladies' Court.

CLARSON, Mrs. Caroline—Darlinghurst.—Pair Hand Fire-screens, &c. Honourable Mention.
Report—This would have had better effect if the beads had been finer.

COHEN, Fannie—Sydney.—Tapestry, "Death of Douglas at the Battle of Langside." First degree of Merit.
Report—The picture is well made, and comprises a great deal of work.

COLLINGS, H.—Wollongong.—Pencil Drawing, "Dapto Road." Honourable Mention.
Report—Worthy of encouragement.

COOK, Mary Elizabeth.—Marrickville.—Necklet, Bracelets, &c., made of Seeds. Honourable Mention.
Report—Original, and well made.

COOK, Henry—Sydney.—Transparency, "British Coat of Arms." Commended.
Report—Well adapted for illumination.

COX, Masters A. E. & A. B.—Sydney.—Australian Birds' Eggs. Highly Commended.
Report—This award was given as an encouragement to scientific classifications.

CRAIG, Mary—Redfern.—Seven Pictures. Commended.

DADLEY, Mrs. A.—Sydney.—Plain and Fancy Needlework. Highly Commended.
Report—Of fair workmanship and good material, reflecting great credit on the school.

DALTON, Mrs. M.—Sydney.—Five Flower Pictures. Honourable Mention.
Report—The colours are bright, the arrangement showing moderate taste.

DONNELLY, A.—Sydney.—Wool-work, "Flight into Egypt." Honourable Mention.
Report—Fairly well executed.

DOUBLEDAY, Mrs. Mary.—Paddington.—Imitation Parian Marble-work (wax) Group. Highly Commended.
Report—Nicely and tastefully modelled, showing a fair amount of originality in the arrangement, with good skill.

DREWE, Amelia.—Sydney.—Two Musical Compositions. Commended.
Report—Fair composition for an amateur.

DREWE, Clara A.—Sydney.—Berlin-wool Pictures. Commended.
Report—Of fair colouring and shade; oval frames would have been more suitable than round.

DUMMETT, Mrs. Mary Ann—Parramatta.—Honiton Lace Fall and Old Point Lace. Highly Commended.
Report—Very nicely and tastefully made, of good design.

Ladies' Court.

DUNN, Mary—Parramatta.—Berlin-wool Picture, "Marriage at Cana."
Commended.
Report—Good work for a child of eleven years, and worthy of encouragement.

DURHAM, Mrs. Sarah C.—Woollahra.—A piece of Tapestry "Reception of Cardinal Wolsey at Leicester Abbey."
Diploma given for services in lending.
Report.—A very valuable piece of Tapestry, lent to the Ladies' Court.

EDWARDS, Miss Emily Annette—Nattai.—Velvet Cushion, flowered with Cloth. First degree of Merit Special.
Report—The composition and design show great originality and taste, the wreath of flowers being very tastefully drawn, and the harmonious arrangement of the different shades of colours denotes artistic skill. As a whole this is the best appliqué work in the Court, being original, skilfully worked, and of good material.

FORDE, Helena—Sydney.—Pen and Ink Sketches and Water-colour Drawings. First degree of Merit.
Report—Great boldness of style and neatness in the pen and ink sketches; sharp lines, good shading, and above all good composition in the water-colour drawings.

FORREST, Miss H.—Sydney.—Essay in Chalk and Crayon.
Honourable Mention.
Report—Creditable essay, worthy of encouragement.

FULLER, Dora—Newcastle.—Painting on Wood and Porcelain.
Highly Commended.
Report—Very neatly and gracefully done, especially that on wood.

GIBLIN, Annie W.—Sydney.—Lace-work Fan.
Highly Commended.
Report—Of good design, fair skill, and workmanship.

GICK, Miss N.—Albury.—Lace-work. Honourable Mention.
Report—Showing skilful work.

GORE, Mary, Martha & Wilhelmina—New England.—Bees-wax Model of four Cows. Highly Commended.
Report—The modelling shows a great deal of natural talent, worthy of encouragement.

GRIFFIN, Senr., Mrs. D.—Wollongong.—Artificial (Shell) Flowers.
Highly Commended.
Report—The leaves of this exhibit are imported and of a common quality, but the arrangement of the flowers as a whole is good and original.

GUERIN, Annie—Sydney.—Wool-work, "Our Lord blessing little Children." Commended.
Report—The shades in the expression of faces are very good, and, for a juvenile piece of workmanship, worthy of encouragement.

HATTON, Mrs.—Liverpool.—Patch-work Quilt, 7,000 pieces.
Commended.
Report—This is symmetrically arranged, and hand-sewn.

Ladies' Court.

HAY, Lady—Sydney.—Australian Ferns, and Australian Native Flowers, arranged and mounted as pictures. Highly Commended.
Report—Gracefully and tastefully arranged.

HIGGINS, Miss—Albury.—Two Lace Collars. Commended.
Report—Skilfully worked.

HOLDER, Miss E. S.—Orange.—Three Crayon Drawings. Honourable Mention.
Report—Worthy of encouragement.

HOSKING, Miss—Wollongong.—Cushion with Lace Cover. Honourable Mention.
Report—Of good quality.

HUGHES, Leslie—West Maitland.—Pencil Drawing, "Tasmanian Tiger." Honourable Mention.
Report—Worthy of encouragement.

HUMBERSTONE, Miss L.—Sydney.—Lace Collar. Honourable Mention.
Report—Tastefully worked.

HUNT, Mrs. E.—Ryde.—Wool-work, Point Lace, &c. Highly Commended.
Report—Carefully made, and well finished.

HITCHINS, Mrs. Fortescue—Sydney.—Feather-flowers. Commended.
Report—The shades are not as harmoniously combined as they might be, but the general appearance is sufficiently good to warrant the above award.

JOHNSTON, Mrs.—High School, West Maitland.—Collective Exhibit of Fancy-work done by Pupils of the High School. First degree of Merit Special.
Report—An excellent collection of pupils' work, carefully made, and deserving of great praise.

JOHNSTON, Maria Isabel—West Maitland.—Essay in Chalk and Crayon. Honourable Mention.

KEMISH, Mrs.—Berkeley.—Quilt. Honourable Mention.
Report—Fairly executed.

KENDALL, Mrs.—St. Leonards.—Pair Fancy Silk Curtains. Honourable Mention.

KENYON, Charlotte—Sydney.—Two Wool-work Pictures. Honourable Mention.

KLEIN, Mary Ann—Parramatta.—Wool-work—"Marriage at Cana." Commended.
Report—Good workmanship.

KORFF, The Misses—Sydney.—Lace-work. Highly Commended.
Report—This is a very creditable exhibit of lace, on a cushion of two shades, having a good effect, and well finished.

LAHIFF, Miss—Wollongong.—Shell-flowers and Shells. Commended.
Report—Original and well worked.

LEE, Ada—West Maitland.—Essay in Chalk and Crayon.
Honourable Mention.

Report—Creditable essay, worth encouraging.

LEE, Blanche Maud—Sydney.—Two dressed Dolls, hand-sewn.
Highly Commended.

Report—Very neatly and cleanly made, reflecting great credit on the Fort-street School, where the child was instructed.

LESMOND, Christina M.—Queanbeyan.—Wool-work Picture, "Eli and Samuel." Honourable Mention.

Report—Creditable for shades.

LESMOND, Jane—Queanbeyan.—Wool-work Picture, "St. Patrick."
Commended.

Report—Fairly executed.

LEVY, Ada—Dapto.—Lace Apron and Collar. Commended.

Report—Of good design and fair workmanship.

LOMER, Mrs.—Sydney.—Honiton Lace Cushion. Highly Commended.

Report—Of good design and workmanship.

LUDOWICI, Minnie—Hunter's Hill.—Wool-work Picture.
Honourable Mention.

Report—Of fair workmanship, but wanting harmony in the blending of colours.

LYNCH, Mrs. J. M.—Sydney.—Shells, Native Flowers, in Wax, &c.
First degree of Merit.

Report—A very fine exhibit, showing originality, good skill, and artistic design.

MACAULAY, Miss Christina M.—Darlington.—Crochet Quilt and Counterpane. Highly Commended.

Report—Of good design and workmanship.

MACKENZIE, Maud.—East St. Leonards.—Small Table-top, painted with Flowers and Ferns. Honourable Mention.

Report—Good colouring.

MARR, Miss—Wollongong.—Lace Handkerchief.
Highly Commended.

Report—Carefully made, and well finished.

MARTENS, Rebecca—St. Leonards.—Water-colour Paintings.
Highly Commended.

Report—Great artistic skill.

MILLS, Louise Annie Harland—Ashfield.—Wool-work Picture, "Meeting of Isaac and Rebekah." Commended.

Report—Of good shades, fair workmanship, and good material.

MILSOM, Miss O.—Sydney.—Two Oriental Paintings, and Crayon Sketches. Honourable Mention.

Report—The oriental paintings belong to a class of wretched and useless productions that cannot promote the love of art. The coloured crayon drawing of "Summer" is a fair copy.

Ladies' Court.

MONRO, Miss Mary—Sydney.—Macramé-wool and other Articles of Fancy Work. First degree of Merit Special.
Report—The macramé-work is particularly commended for originality, superior workmanship, tasteful arrangement, and utility.

MONTEFIORE, Amy—Sydney.—Water-colour Drawing. Commended.
Report—Shows creditable efforts.

M'COY, Mrs. B.—Sydney.—Appliqué Work, Roman Embroidery, Wax Flowers, &c. Commended.
Report—Taken as a whole this is a creditable exhibit, but wants regularity.

M'DOUALL, Charlotte—Ulumbarella, Barraba.—Animal Painting. Commended.
Report—Of good colour and fair workmanship.

M'MAHON, Miss A. K.—Sydney.—Counterpane of Crochet-work. Honourable Mention.
Report—Good workmanship and style.

NEILSON, Margaret—West Maitland—Fire-screens. Highly Commended.

NICOLLE, Miss—Lake Illawarra.—Cushion, Honiton Lace Set. Commended.
Report—Well made.

NICHOLLS, Clara B.—Sydney.—Lace-work. First degree of Merit.
Report—Skillfully made, very neatly and carefully worked, and of good design.

PAINE, Mrs.—Sydney.—Quilt in raised work. Honourable Mention.
Report—Of good design.

PARKE, Miss—Fairy Meadow.—Crochet Quilt. Commended.
Report—Well made.

PATTERSON, Miss—Sydney.—Flowers in Water Colours. Highly Commended.
Report—Faithfully delineated.

PENDRAY, Mrs. F.—Quagildrae, Bogan River.—Darned and Netted Quilt. Commended.
Report—Very fairly executed.

PINHEY, Mrs. Havelock—Randwick (late of Victoria).—Paintings,—"Druid Temple" and "Hudson River." Highly Commended.
Report—Fair colouring, and shows promising talent.

REID, Alice—West Maitland.—Fire-screens. Highly Commended.

Ladies' Court.

REID, Alice—West Maitland.—Embroidered Footstool.
Honourable Mention.

RELPH, George—Sydney.—"Illumination of Testimonial to Sir Hercules Robinson." First degree of Merit.

ROBERTSON, Mrs. W. G.—Sydney.—Shell and Seaweed Basket.
Commended.

Report—Tastefully arranged.

ROSS, Florence E.—Sydney.—Crayon Drawing, "Forgotten."
Highly Commended.

Report—Shows skill and due regard for natural effects.

SCOTT, Hannah—Sydney.—Pen and Ink Etching.
First degree of Merit.

Report—This is a neat, delicate, and tasteful drawing.

SECCOMBE, E.—Ulladulla.—Nine Pictures made of Seaweed.
Commended.

Report—Tastefully mounted.

SELLS, Mrs.—Woolloomooloo.—Quilted Silk Counterpane, containing 7,360 pieces. Commended.

Report—This is a well-made counterpane, stitched by a machine, the design being regular.

SHARMAN, Mrs.—Sydney.—Parian Marble-work in Wax (Harp).
Commended.

Report—A fair amount of skill is here shown in the fashioning of the flowers.

SHARP, Edward—Gresford.—Pen and Ink Etching, "Spanish Boy."
Honourable Mention.

Report—Excellent for a beginner.

SMITH, Miss B.—Woolloomooloo.—Crochet Counterpane.
Honourable Mention.

Report—Well made.

SMITH, Miss E. M.—Illawarra.—Shell-flowers and Seaweed.
Honourable Mention.

Report—Prettily arranged.

SMITH, Mrs. W. J.—Sydney.—Flowers worked in Wool.
Commended.

Report—Original, fairly well shaped.

SPRING, Elizabeth—Parramatta.—Crochet Quilt.
Honourable Mention.

Report—Well made.

STARKEY, Miss B.—Sydney.—Wool-work Picture, "Scene from Henry VIII." First degree of Merit.

Report—This is the best wool-worked picture exhibited, for shades and colourings; the blending in the robe of the Cardinal has been specially carefully studied.

STEVENSON, Miss J. M.—Newtown.—Crochet Counterpane.
Commended.

Report—Diamond pattern, regular, and well-made.

SWIFT, Mrs. M.—Sydney.—Knitting.
Commended.

Report—Carefully made and well finished.

TAYLOR, Sarah—Sydney.—Wool-work Picture, " Stag at Bay."
Commended.

Report—A well-worked picture, good shades.

TIBBLE, T.—Marshall Mount.—Cabbage-tree Hat.
Commended.

Report—Well made.

TINDALE, Mary—West Maitland.—Embroidered Footstool.
Highly Commended.

TINDALL, Miss—Sydney.—Crayon Portaits.
Honourable Mention.

TISDALE, Jane—Woollahra.—Point Lace.
Highly Commended.

Report—Very effective pattern, the work being fine and regular.

TOMKINS, Mary—Hunter's Hill.—Crayon Drawing.
Highly Commended.

Report—Skilfully drawn from an original portrait and enlarged, the features being well portrayed.

TOWNSEND, Mrs.—Waterloo.—Crochet Quilt, hand-made.
Honourable Mention.

Report—Simple dahlia pattern, well made.

WALDIE, Mrs.—Redfern.—Parachute Cover, in Tatting.
First degree of Merit.

Report—The fine workmanship displayed in this cover is both faultless and regular, the pattern being very light and graceful.

WALKER, Miss A. F.—Concord.—Flower Pictures, and fifteen Panoramas.
First degree of Merit.

Report—A very large collection, evidently better suited for an album than as pictures; but the delineations are faithful.

WALKER, Misses M. & A.—Concord.—Fern Albums.
Honourable Mention.

Report—Well arranged.

WARNER, Miss E.—Redfern.—Crayon Drawings.
Honourable Mention.

Report—Worthy of encouragement.

WARREN, Florence—Sydney.—Fancy-work, Lace Underclothing, Slippers, &c.
Commended.

Report—The work is good.

WEARNE, Miss M.—Forest Lodge.—Oil Paintings.
Commended.

Report—Shows fair skill and talent, worthy of cultivation.

WEIR, Jessie.—Sydney.—Berlin Wool-work.
Honourable Mention.

Report—Fairly executed.

WHITING, Miss E.—Sydney.—Wood Fret-work.
Commended.

Report—For very good workmanship.

WILSHIRE, Ada—Ashfield.—Museum of Conchology, Entomology, and Botany.—Hand-work (in seeds), Caps, Braclets, &c.
First degree of Merit.

Report—The first is a splendid collection, worthy of encouragement for its scientific merit.

WILSON, Miss L.—Sydney.—Wool-work Cushion, and Picture, "Royal Arms."
Honourable Mention.

Report—The colours used are good, the "Arms" standing out boldly.

WISBY, Mrs. F.—Sydney.—Real Honiton Lace.
First degree of Merit Special.

Report—A very fine exhibit of lace, of very graceful and elegant designs, excellent workmanship, and originality.

WOOLLEY, Mary Margaret—Sydney.—Oil Painting, "Girl of the Rhinelands."
Highly Commended.

Report—Original—of very good posé and colouring.

WRIGHT, Martha—Sydney.—Wool-work.
Commended.

Report—Well made and useful.

NEW ZEALAND.

BEAL, Mary—Dunedin.—Ornamental Work in Seaweed and Shells.
First degree of Merit.

Report—Very elegant, showing great skill and artistic taste.

BEEBY, Mrs.—Queenstown, Otago.—Knitted Counterpane.
Honourable Mention.

Report—Well made.

BINNS, Mrs. George—Wellington.—Imitation Old Point Lace.
Highly Commended.

Report—Very well executed.

BRANDON, Misses—Wellington.—Water-colour Paintings of New Zealand Scenery.
Honourable Mention.

HENRY, Bridget—Dunedin.—Picture in Silk and Worsted Work.
Commended.

Report—Very fairly executed, and worthy of encouragement.

HENRY, Mrs. Lucien—Dunedin.—Silk Cushion, with Cover.
Commended.

Report—Very neatly worked.

MARRIOTT, Mrs. Thomas—Wellington.—Bonnet made from Lace-work. Honourable Mention.

Report—The idea is good and useful, but the trimming has not been taken into consideration.

O'CONNELL, Joanna—Auckland.—Limerick Lace.
Honourable Mention.

Report—Nicely worked.

PIKE, Miss—Dunedin.—Lace Curtain, in Honiton Braid Lace.
Commended.

Report—Creditable workmanship.

WILSON, Anna—Dunedin.—Point Lace.
First degree of Merit.

Report—Very well worked, clear, regular, and careful finish, and excellent designs. This is the best lace-work in the Court.

SOUTH AUSTRALIA.

FIVEASH, Mary Emily—Adelaide.—Flower-painting on White Velvet, &c. Highly Commended.

Report—Carefully made, the leaves being very natural.

GREGORY, E. L.—Adelaide.—Macramé Lace.
Highly Commended.

Report—Very neatly worked, tasteful, elegant, and well made.

HARVEY, Isabella—Adelaide.—Mounted Emu Egg.
Honourable Mention.

Report—Well mounted.

LANDSBERG, Mary—Kapunda.—Wool-work Picture, "Mary, Queen of Scots, resigning the Crown." Highly Commended.

Report—Very fair colouring, well portrayed; one of the best pictures of the kind.

NELSON, Mrs. & Miss—Adelaide.—Seeds made into Necklets, &c.
Honourable Mention.

Report—Tasteful workmanship.

SCHULTZ, Naomi—Adelaide.—Hair-work.
Highly Commended.

Report—Very artistically designed and arranged.

WRATISLAW, Mary J.—Adelaide.—Three Water-colour Paintings, "The Wetterhorn," "Snow Scene," and "Winter Scene."
Commended.

Report—Showing good taste and fair skill.

TASMANIA.

BEEDHAM, Miss H.—Hobart Town.—Point Lace-work.
Honourable Mention.

Report—Well made.

BOOTH, Miss—Hobart Town.—Picture-frame of Cone-work.
Honourable Mention.

Report—Well arranged.

CROW, Misses—Hobart Town.—Picture-frame of Cone-work.
Honourable Mention.

Report—Well arranged.

CROW, Miss—Hobart Town.—Lace Handkerchief.
Honourable Mention.

Report—Well made.

DAWSON, Miss—Clarence Plains.—Leather-work Picture-frames.
First degree of Merit.

Report—Very tastefully and artistically arranged, showing good style and workmanship. These frames are the finest of the kind in the whole Exhibition.

ELLIOTT, Mrs.—Hobart Town.—Cones, Silvered and Gilt.
Honourable Mention.

Report—Fairly made.

FARRER, Misses—Plassy.—Knitted Counterpane.
Honourable Mention.

Report—Of very fair workmanship.

HARRISON, Mrs.—Hobart Town.—Knitted Counterpane in Berlin Wool.
Commended.

Report—Original, and symmetrically worked.

HOOKEY, Mrs.—Hobart Town.—Tasmanian Flowers in Worsted-work
Highly Commended

Report—For originality, lightness, and grace.

HOOKEY, Mrs.—Hobart Town.—Cushion of Velvet with Flowers.
Highly Commended.

Report—For originality, lightness, and grace.

HUXTABLE, Miss—Hobart Town.—Honiton Pillow Lace-work.
Commended.

Report—Well made, and careful workmanship.

MADDOCK, Rosina—Hobart Town.—Maltese Lace, &c.
Commended.

Report—Of good design, skilfully worked, and carefully made.

MADDOCK, Master C. B.—Hobart Town.—Picture-frame of Cone-work.
Honourable Mention.

Report—Well made.

Ladies' Court.

MATHER, Miss E.—Hobart Town.—Flowers and Berries.
Honourable Mention.

Report—Fair execution.

MORRIS, Mrs.—Hobart Town.—Black Veil.
Highly Commended.

Report—This veil, although it seems old, is deserving of credit for good workmanship and careful finish.

PENNY, Miss—Hobart Town.—Appliqué Flowers in Cloth.
Honourable Mention.

Report—Well made.

PERCY, Mrs.—Rokeby.—Knitted Counterpane, &c.
Honourable Mention.

Report—Well made.

PIESSE, Miss—Hobart Town.—Cone-work Picture-frame.
Honourable Mention.

Report—Well made.

PIGUENIT, Miss H. V.—Hobart Town.—Oil Painting, "Tasmanian Flowers in Vase." Honourable Mention.

Report—Creditably painted.

PROPSTING, Miss Ada—Hobart Town.—Lace-work and Crochet Antimacassar. First degree of Merit.

Report—Very neatly and regularly worked, and graceful in design, being the best in the Tasmanian Court.

ROOM, Mrs.—Launceston.—Paper Flowers.
Commended

Report—Among the best in the Court for shape and colouring, being skilfully made.

SHEARER, C. H.—Launceston.—Counterpane and Two Antimacassars.
Honourable Mention.

Report—Creditably worked.

SHERWIN, Miss—Launceston.—Indian Ink Sketches of four Ladies.
Commended.

Report—Very fair execution.

SHERWIN, Herbert—Hobart Town.—A piece of Wool-work.
Honourable Mention.

Report—Well executed.

THORNTON, Mrs. W.—Hobart Town:—Blue-gum Leaves and Flowers, in Berlin Wool. Commended.

Report—Carefully made and worked.

WALPOLE, Mrs.—Franklin.—Knitted Counterpane, &c.
Commended.

Report—Of good effect, and carefully made.

WOODIN, Miss—Hobart Town.—Ferns in a Cone Frame.
Honourable Mention.

Report—Tastefully arranged.

QUEENSLAND.

DE JERSEY, Madame—Brisbane.—Glass Shade of Crêpe Flowers.
Honourable Mention.

Report—Skilfully worked.

MACPHERSON, Mrs.—Brisbane.—Quilt.
Commended.

Report—A box-pattern quilt of velvet, silk, and satin. The combination of colours is tasteful, and the workmanship good.

VICTORIA.

BOOBIER, Nelly—Sandhurst.—Water-colour Paintings on Silk and Satin. Highly Commended.

Report—Very artistic, and skilfully executed.

CLEMENTS, Adelaide.—Sale.—Point and Honiton Lace.
Commended.

Report—Very neatly executed.

FLATOW, Mrs. Joseph—Melbourne.—Basket of Flowers, formed of Seaweed, Coral, and Shells. Honourable Mention.

Report—Very tastefully arranged.

FROST, Robert—Portland.—Ornamental Cuttle-fish Flowers.
Honourable Mention.

Report—The flowers are ungainly, though original and skilfully made.

PATTON, Emily Sophia—Melbourne.—Hand Embroidery, on Silk and Satin. Honourable Mention.

Report—Wanting originality, but the flowers are fairly made.

PEEBLES, Florence J.—Melbourne.—Wax Flowers (two groups).
Commended.

Report—For skilful workmanship and superior arrangement.

SOUTH, Sarah Ann—Ballarat.—Specimens of Fancy Leather-work.
Highly Commended.

Report—For originality and skilful workmanship.

TAYLOR, Mrs. James—Sandhurst.—Group of Wax Flowers.
Commended.

Report—Very creditably made; the arrangement is good, the shapes and hues being natural.

WINDSOR, Kate—Melbourne.—Embroidery.
Honourable Mention.

Report—Tasteful.

DEPARTMENT V.

MACHINERY.

AWARDS NOMENCLATURE.

The Awards in Department V.—Machinery, are thus described in their relative orders of merit:—"First degree of Merit Special"; "First degree of Merit"; "Highly Commended"; "Commended"; "Honourable Mention."

GENERAL REPORT.

Machinery.

THE following description of the machinery in the Exhibition was written by Mr. Norman Selfe, M.I.C.E., at the request of the proprietors of the *Sydney Morning Herald*, and appeared in that journal under the heading "Among the Machinery" between December, 1879, and March, 1880, in a series of twenty-eight articles. It now appears for the first time in a connected and revised form, by permission of the *Herald* proprietors. The author was a judge in three sections of the Machinery Department, in two of which he was Chairman.

Mr. Selfe thus writes of this important department, with which he was so intimately associated:—

If the machinery in the Exhibition does not offer so much attraction to the masses as do the exhibits in the Garden Palace or the contents of the Art Gallery, it is nevertheless, in its relation to the industrial progress of the Colony, probably the most important section of our great fair. In order to develop our acknowledged resources, machinery must be further introduced and employed, and to an extent compared with which our present appliances are insignificant. It, however, already enters into many of the branches of trade and manufacture which are carried on amongst us; and it is not, therefore, surprising to see the care and attention which numbers of visitors give to an examination of the contents of the Machinery Halls, nor the patience with which they listen to the explanation of the attendants in charge, particularly when the machinery is in motion and performing the operations for which it is designed.

A little disappointment may be, and no doubt is, felt by some persons that certain branches of engineering are very poorly represented—such as steam-launch engines, and other machinery much used in the Colony; and other machines, are exhibited for which there is not perhaps at present much demand; but, considering the distance which the exhibits have come, and that the exhibitors themselves could not be expected to know our exact requirements, we may well congratulate ourselves on the admirable display which is made.

There is less machinery shown by local makers than it has been customary to see at our Intercolonial Exhibitions; the great bulk is from British firms, supplemented by contributions from the neighbouring Colonies, the United States, Canada, and the Continent of Europe.

We have no specimens of Corliss engines from America, nor any of the Collman or other types of land engines which have been recently improved to so great an extent in France and Germany, and which made so important a display at Philadelphia and Paris; but we have land engines exhibited by thirteen or

fourteen makers, some of whom each show over half-a-dozen different engines. There are also represented the portable engines of fourteen makers, most of whose names are household words among those who use that class of work, and about a dozen makers send marine, winding, semi-portable, and other engines. Altogether, there are to be seen over sixty steam-engines, without including the locomotives or the steam fire-engines.

As some makers exhibit different kinds of machinery, it will facilitate comparison if we take all the machines of a class together, rather than the whole collection of an exhibitor, and separate them somewhat as follows:—Stationary, Portable, Semi-portable, Traction, Locomotive, Pumping, Winding, and Marine Engines; Fire-engines (steam and hand power); Cranes and Lifts for hand, steam, and hydraulic power; Machinery tools for wood and iron, Gas-engines, Ice-making machinery, Looms, Sugar Mills, and miscellaneous machinery.

STATIONARY ENGINES.

Horizontal Condensing Engines.

There are altogether about thirty stationary engines exhibited, and of that number two only are by colonial firms, the others being nearly all of English or Scotch make. The first to attract attention are four horizontal condensing engines, the largest of which is compound, and is made by the Haslam Foundry and Engineering Co. (Limited), of Derby, for whom Messrs. G. H. Royce, of George-street, Sydney, are the agents. This class of engine has a solid forged crank-shaft, and the sole-plate carries the whole engine, condenser, and air-pump complete, instead of leaving the air-pump to be bedded down separately on the foundations, as is the case in some other similar engines. In order to save length the two cylinders are placed close together on end, and three piston rods are employed, two to the large piston being connected to the guide blocks, and the centre one to the high-pressure cylinder, being in the usual way coupled to the crosshead; this arrangement is very neat, and makes a compact engine. It is fitted with expansion gear, and has an ordinary throttle valve worked by a Porter's governor, the cylinders are lagged in mahogany, with brass hoops, and have a suet lubricator. There are handsome bold looking oil lubricators to the main bearings, with gun-metal covers, and a peculiarly formed lubricator on the strap of the small end for the cross-head. Altogether, this is a fine engine, got up bright, after modern patterns, and with the advantage of being able to carry its fly-wheel on either side. There are very few condensing land engines in the Colony at present; the principal ones are at the Botany Water-works and the Balmain Saw Mills; but users of steam who have water may be induced to employ condensers after seeing how simply those now exhibited are constructed, as compared with the old-fashioned beam condensing engines.

The Haslam Co. show also a smaller horizontal engine of the same general design, which is neither condensing nor compound, but it is fitted with a plain expansion valve, and is a good useful engine.

The next condensing engine is a 20-horse power "Caledonian," by Messrs. Alexander Shanks & Son, of Arbroath and London, and is after the design to which they have given the distinctive name of Caledonian. These engines belong to the same type as the well-known "Soho" engines of Messrs. Tangye, and carry a cranked shaft with bearings on each side, so that the

fly-wheel can be shifted and the engine made right or left handed as desired. The "Caledonian" takes a great departure from the ways of old-fashioned horizontal engines; it can hardly be said to have a sole-plate, as such is usually understood, for the main frame includes, in one casting, foundation, guides, and main bearings, and it is well designed to resist all the strains of working; the cylinder is secured by its front flanges, and overhung in the now common fashion. Messrs. Shanks have fitted up their condensing engine with an expansion valve of the "Meyer" type, worked automatically by a new form of spherical governor. The arrangement of levers, pins, wedges and slides, which works the expansion blocks on the back of the main valve while it is moving, is very ingenious; but, as all this complication is enclosed in the slide casing where it can be acted upon by dirt, the corrosive effects of priming, and such like causes, it is very unsuitable for country districts, where there might not be a man competent to repair it within many miles. There are many simpler forms of automatic expansion gear which might be applied instead. With this exception, the engine deserves commendation for the general proportion and simplicity of construction, which enable it to be manufactured and sold at a low price compared with many other engines. The air-pump in Messrs. Shank's engine is worked direct by an extension of the piston-rod, and the condenser stands on a separate foundation at the same level as the engine. The same makers show, besides the condensing engine, five other horizontal engines, from 6 up to 12-horse power, two of which are fitted with automatic expansion gear, similar to the one above referred to. In all these engines the guides are bored, and the crossbead slides are adjustable for wear; the governors are enclosed in a sphere, some of them being of the co-sine class, while others are arranged according to an invention which we understand is Mr. Shanks's own. The connecting rods have marine style big ends with bolts and the cylinders are cased. Altogether, these Caledonians, with the small exception of the expansion valve arrangements, are engines well adapted for Colonial uses.

The third condensing engine we have to notice is one by Messrs. Marshall, Sons & Co. (Limited), of Gainsborough, England. On coming to Messrs. Marshall's stand, the most inexperienced person notices something in it different to all the other machinery in the Halls,—and it is this: the makers, not content with the design and construction of their machinery, for which they have a deservedly high reputation, have also put an exhibition finish on their goods. It is, we know, an undecided point as to whether articles should be exhibited of ordinary finish and just taken from stock, which some manufacturers pride themselves on doing, or whether, for show purposes, an extra finish of polish, paint, and varnish is desirable; but probably exhibitors themselves are the best judges, for, unless castings are very true and fair, varnish brings out their defects instead of hiding them. The condensing engine by this firm has 11-inch cylinder, with a 22-inch stroke. The crank-shaft has an outer bearing and a polished disc-crank, the main casting or bed-plate being of the modern "Allen" type, now adopted by Tangye and many other makers, with more or less variation. The expansion valve is controlled by Hartnell's patent gear, in which the arrangement of the governor is inverted, and the travel of the expansion valve varied by the movement of a block in a slotted link, no mechanism whatever being enclosed in the slide casing. This engine is a beautiful piece of work, and down to the smallest details, such as lubricators, is of a substantial yet elegant and uniform pattern.

The fly-wheel is in halves so as to be easily removed; the air-pump is worked by an extension of the piston-rod; a separate exhaust branch is provided (opening downwards to drain the water off) which can be used, if it is desired, to work non-condensing, and the main bearing brasses are made in four pieces for accurate adjustment to take up wear. This engine is altogether most carefully designed, and is a fine example of workmanship and finish. There may be something odd-looking about a few of the details; but altogether, we can commend it to the study of young engineers, as the more they examine it the more evidence of care and thought will they find in the design. We were shown an indicator-card taken from a similar engine, and it was very good. Messrs. Marshall do not exhibit any other horizontal engines.

The fourth condensing engine referred to is made by Messrs. Tangye, Brothers, of Birmingham, and exhibited at the lower end of the Machinery Hall in the eastern corner, by their agents, Messrs. Blacket and Davy, of Bathurst-street, Sydney. This condensing engine is after Tangye's now well-known design, having one solid casting forming the sole-plate, main framing, and pedestal, and having also a disc-crank with outer bearing for the shaft. In this last arrangement it resembles Marshall's horizontals, and differs from the Haslam and Caledonian style. The distinguishing feature of the Tangye engine is extreme simplicity of parts, directness of purpose, and solidity of construction. The cylinder is cased with Russian iron over the lagging, and the whole of the engine, which is not bright, is painted plain lead colour. The guides are planed, not bored; the shoes are adjustable on the crosshead with double nuts, and the throttle valve is controlled by the governor known by the name of the firm, and which works with small high-speed pendulums operating a piston valve. The condenser stands at the rear of the engine on a separate foundation, and the air-pump rod is connected to an extension of the piston-rod in such a way as to enable it to be easily disconnected when not required. The arrangement of the exhaust pipe is not quite so neat as in some of the other engines, but that is because it is not designed specially for a condensing engine, and requires no alteration to be used when non-condensing. There is an expansion valve to this engine, non-automatic, and the rods working it pass through and give motion to the feed-pump plunger.

Taking these four representative condensing engines in the order in which they are placed in the Machinery Hall, we may say that the Caledonian represents economy in first cost and general adaptability to various uses, having a shaft on both sides. The Haslam engine, being compound, should be the most economical in fuel, and is a good specimen of substantial honest English engineering work. Marshall's engine shows the most refinement both in design and finish, and is a fine specimen of modern engineering, and, with the exception of some joints to the valve-spindle guide which could be improved, the design seems almost perfection for combining strength and efficiency with elegance of form; this engine has, moreover, the best automatic variable expansion gear in the Exhibition. Tangye's engine is distinguished by its plain and business like appearance, its solidity of construction, and, the absence of complication, combined with easy accessibility to the working parts. These four engines may be studied with advantage, both by those who make engines and those who buy them, and we would commend them to the consideration of the apprentices and engineering students of the Colony.

Messrs. Tangye make another form of horizontal engine, which they call the Soho engine. It is much cheaper per nominal horse-power than the Tangye

engine, and has the shaft extended out on both sides ; the stroke is somewhat shorter, which makes the engine more compact; it can be used vertically if desired, as it is all self-contained, and in the bush it could be bolted to the side of a big tree and still work well. The Soho engine has guides, which are of a novel form and arrangement, the cross head being suspended below them ; the connecting rod and the eccentric rod are of cast steel of an H section, and an extension of the valve-spindle works the feed pump ; the sole-plate is widened out to give a good spread for the main bearings, making the whole one of the most compact and handy horizontal engines for small powers yet introduced ; it is very cheap in its construction, and yet very effective, and even the oilcups are well considered both in their disposition and design. The matter of the lubricators is often overlooked by engine builders as being only a small affair, but as the whole working of the engine depends on a proper and regular supply of oil to the working parts, the due consideration of this point is of the first importance. The Soho engines will probably never be built of very great size, not being designed with such an object, but for small powers up to 10 or 12-horse they are most compact, handy, and cheap at first cost.

The next horizontal engine of importance is one made by Messrs. Robey & Co., of Lincoln, which is exhibited by the agents, Messrs. Drysdale & Roberts, in their separate machinery building. This engine can be seen in motion, as steam is laid on from one of the portables. It is altogether of modern pattern, after the Allen or Corliss type in general appearance, there being no sole-plate, properly so called, but the main frame connecting the cylinder and crankshaft bearing is clear of the foundation, and the engine is supported on extended feet at the cylinder and crank ends. The cylinder of this engine is cased in mahogany cleating, which is reeded and fluted, and banded with brass ; altogether it has a fine handsome appearance, the guides are bored, in the now common fashion, instead of being planed, and the guide slippers are adjustable. The crank shaft is supported by an outer bearing, and has a substantial fly-wheel; and there is an expansion valve at the back of the main valve, which is worked by an adjustable eccentric, but it is not automatic. The other horizontal engines, by Messrs. Robey, are attached to their semi-portables, and will be considered under that head.

A small engine and boiler, called the "Minerva," is to be seen in the basement of the Garden Palace, exhibited by Mr. F. T. Wimble & Co., and is made by Messrs. Furnival, of Manchester. The Minerva has a vertical boiler about 2 feet by 4 feet 6 inches high, and a crank over-head cylinder engine, all set in one square foundation-plate, which plate also contains a water tank. The boiler is of a special construction ; the engine is called $2\frac{1}{2}$ horse-power, and has a 7-inch stroke ; it is bolted down to the sole-plate, where there is a semicircular projection for it ; two very neat frames carry the shaft, which has the disc crank overhanging it at one end and the fly-wheel at the other. The eccentrics and a main pulley, with a pulley for the governor, are all between the bearings ; the governor is of the Tangye type. The connecting-rod has solid ends with brasses and cotters ; the guide-blocks are formed with the cross-head, and large projections to dip in oil-cups for lubrication. The boiler and cylinder are lagged in wood stained a bright colour, and the cylinder has brass hoops. This compact little engine is well adapted to drive printing machinery, or in fact to do any work where small power is required.

The horizontal engines above referred to are of recent design and modern pattern. In the design and construction of machinery there are three things to be considered: 1. Efficiency. 2. Taste. 3. Fashion. That there are fashions in engines as in other things, those who have intelligently watched the results of the shows of the Royal Agricultural Society of England for the last twenty years know full well. It would be out of place here to go into a disquisition on the above three qualities, but it is as well to point out that, although efficiency is of the first and greatest importance, two pieces of machinery might be equally efficient, and yet one of them might exhibit great clumsiness and want of taste in its design and arrangement, or it might be constructed after a fashion which was somewhat out of date. We have been led to make these remarks because the last horizontal engine to consider is of a pattern and design precisely similar to those which were made in the Colony twenty-five to thirty years ago; but it may, nevertheless, be just as good an engine for doing its work as its more modern rivals. Messrs. F. W. Reynolds & Co., of London, have an established reputation for the construction of wood-working machinery, and have sent out many valuable machines; but they also exhibit the horizontal engine just referred to. The distinguishing features about it are the complete sole-plate and high centre for the engine, heavy cylinder flanges, and crosshead clutch, short guide blocks, plain Watt governor with long rod to throttle valve, and the wrought-iron eccentric straps forged with the rods. This engine is set off on a foundation painted to resemble brick. It may be a very good working engine, and it certainly is valuable as affording an opportunity to make a contrast between the present and disappearing fashions, for although engines are still constructed in the Colony in the same or a similar fashion, this is the only one of the sort among the many which are shown at the Exhibition.

A horizontal engine by Messrs. Wright & Edmonds, of Melbourne, is a good, plain and substantial machine, of the pattern adopted by the firm, and has a clipper guide, with bevelled edges, for side steadiment of the crosshead; there is nothing to hold the slipper down, so the engine is only intended to run outwards; the sole-plate is cut away on one side in advance of the guide, and on the shaft side it is continued with an angular pedestal cast on the end; the crank is a balanced disc; the cylinder is lagged in a neatly finished manner; the feed-pump is of cast iron, but the small and trumpery-looking valve chests, screwed on for the suction and delivery, are not calculated to impress purchasers who are strong on feed pumps. The governor is of a parabolic construction, with heavy roller weights, which, as they fly out, roll up on curved arms, and by connecting links to their centres raise the sleeve on the spindle as they rise. The direct connection to the throttle valve is good, but the pulley and weights are heavy, while the rods and links are light. This gives the governor a very shaky appearance, and we are sure Messrs. Wright & Edmonds could find a more substantial governor, and one much more easily made.

VERTICAL ENGINES.

Vertical engines, or those which are generally known as inverted engines—that is with the cylinder above and working to crank below—muster in even greater force than the horizontal ones. They are principally of small powers, and are shown in connection with their boilers, the whole machine being, in many cases, mounted on wheels for easy transport. Messrs. Alexander Shanks & Son, of Arbroath and London, show three plain engines, 4, 5, and 6-horse power, of

their established pattern. These are cheap engines, and do good work. Some of the nuts are rather difficult to get at on the valve-chest, and, with a reconsideration of some of the details, an improvement could easily be made there ; but otherwise they are handy engines, well adapted for country use. The shaft is cranked, as in the Caledonians shown by the same makers, and it extends on both sides of the engine ; the governors are very sensitive, being the pseudostatic governor of Buss. Besides the plain vertical engines and boilers, this firm also exhibit one of their wharf or Whipping Engines (some of which are already at work in Sydney), and a powerful double cylinder winding engine. The larger machine is fitted with two 8-inch cylinders, and has link motion for reversing ; it is well adapted for light mining work. The cylinders in this engine are not vertical, ; but it is mentioned here to complete the notice of Messrs. Shanks' engines. They are all shown together in the upper and western corner of the Machinery Hall, where Messrs. D. & W. Robinson, who are the Sydney agents for the firm, have a quantity of other machinery, which will come under a separate heading.

Near to Messrs. Shanks' engines is the stand of Messrs. Thomas Robinson & Sons, of Rochdale, whose wood-working machinery will be noticed in due course. An inverted engine is shown by the firm as being well suited for driving small saws or joiners' machinery. This engine has a cylinder 8½ inches diameter, with a 12-inch stroke, and is speeded to run 150 revolutions per minute ; the boiler is about 4 feet by 8 feet, and the whole is erected on one sole-plate ; it is generally well finished, and is of a neat appearance ; the frames are somewhat of the steam-hammer type, with planed guides. There is some good work about this engine which would be omitted by most engine builders, notably in the way in which the eccentric rod and strap are dovetailed together ; the governor is of the ordinary Watt description. The connecting-rod appears to have a very large small end, and a very small big end, which gives it a peculiar appearance. To explain this apparent paradox to those who are not acquainted with the technical phrases of an engine shop, we will explain that the crank pin end of a connecting rod is called the big end. Although opinions may differ as to the taste and fashion of Messrs. Robinson & Sons' engine, it appears to be on the whole most efficient, with sound and faithful workmanship. The cylinder is lagged, and altogether, among the great variety of vertical engines on view, it shows out well. One or two peculiarities are worthy of observation, especially by engineering students ; but nevertheless it is, of its class, as well finished and useful an engine as any in the building ; the general contour of the frame is graceful, and it is strong in its proportions, giving evidence that taste has been studied as well as efficiency in its design.

Adjoining the upper corner of Messrs. Robinson & Sons' stand and close to one of the Robey engines, which gives motion to the lines of shafting, there can be seen an engine of very different character to any of the others in the Hall ; it is called Mackenzie's Differential Engine, and is made by Messrs. Stephen Forster & Sons, of Harrington-street, Sydney, for Mr. Mackenzie, of the Grafton Wharf. This engine has an inverted cylinder, carried on four turned wrought iron columns, which support it above the sole-plate ; the piston has a half-trunk extending through the lower cover, and the connecting rod is coupled direct from the piston (inside the trunk) to the crank-pin, by this arrangement dispensing with crosshead piston rods, and guides, the trunk fulfilling all these functions. The diameter of the

cylinder is about 14 inches, the trunk is 10½ inches diameter, and the stroke 12 inches. There is one slide valve worked by an eccentric in the usual way, but the slide valve is of a special construction to effect the distribution of the steam in the following manner—that is to say steam from the boiler is first admitted to the annular space around the trunk on the lower side of the piston. On the piston arriving at the top of the stroke the valve opens a connection by which the steam from below the piston is exhausted to the upper side, thus equalizing the pressure on the two sides of the piston ; but as the upper side is larger than the lower one by the area of the trunk there is a difference of force to press the piston down, and from this fact it derives the name of differential engine. It will be understood that on the up-stroke the upper part of the cylinder is open to the atmosphere, or, in the case of a condensing engine, would be in communication with the condenser. We have been thus particular in describing this engine, because it is a colonial production, and also because it attracts a good deal of attention. It will be seen that it is, in fact, a compound engine, requiring only one cylinder ; the annular or smaller space under the piston being the high-pressure cylinder, and the upper part the low pressure or expansion cylinder, and according as the lower space is reduced or increased so can the grade of expansion be regulated, the same as by making a smaller or larger high-pressure cylinder to an ordinary compound engine. The advantages claimed by the exhibitors are first,—the construction of a compound engine capable of effecting a fourfold, sixfold, or any other desired grade of expansion with one cylinder only ; secondly, the compactness of the arrangement in dispensing with guides, &c., and saving height ; also, doing without the complication of expansion valves. All of these claims are, we consider, fully sustained in the working of the engine itself ; but there are, however, one or two drawbacks which present themselves on an examination into its principles and working, and which are worth consideration. In the first place the engine is only of one-half the power which it would be were it fitted with an ordinary piston-rod, and took a supply of live steam at each end of the cylinder, cut off by the valve to the desired grade of expansion, and the exhaust from both ends opened to the atmosphere or condenser ; for the same reason, assuming the diameter of the cylinder and the trunk to be 14 inches and 10½ inches respectively, an engine of the now common pattern, with small cylinder on the top of the large one, and proportioned to do the same work, would require cylinders of less than 10 inches diameter for the large one, and 7½ inches diameter for the small one ; and it is just a question whether two cylinders, one 10 inches and the other 7½ inches, could not be made and fitted up for less money than the 14-inch engine with 10½-inch trunk. Again, one of the principal points always urged on behalf of the compound engine is the advantage of having two cylinders as heat-traps, whereby the large cylinder is never heated by the live steam from the boiler, and the small engine is never cooled down to exhaust temperature. Whatever value may attach to this consideration it is entirely lost in the differential engine. We believe the exhibitors are making another engine, with a cranked shaft extending from both sides of the sole-plate, which will make the arrangement still more compact. We would suggest that if the cylinder was supported on a circular column, somewhat similar to Marshall's, Ransome's, or the Atlas Company's engines, it would be much stiffer and cheaper to construct than with the wrought iron columns, but if the latter are adhered to, the bosses on the cylinder should be deeper and larger and the stiffness increased at the bottom. The governor

attached to this engine is of a rather peculiar construction, there being two separate joints on the balls or weights for the upper and lower pendulums.

The half-trunk expansion engine was rather extensively introduced into gunboats in the Swedish Navy by Mr. Carlsund, as it had the advantage of keeping the machinery all below the water-line, and it has been revived in different forms on several occasions. The exhibitors deserve credit for their enterprise in bringing such an engine out in Sydney.

Mr. E. S. Hindley, of Bourton, Dorset, whose local agent is Mr. John Sands, of George-street, Sydney, exhibits five of his well-known engines and boilers. Mr. Hindley has adopted a type of engine which is peculiar to himself, the principal feature in which is simplicity of construction and fewness of parts; and this enables it to be manufactured and sold at a very low price per horse power for the various sizes. All classes of customers have to be studied by engine-makers, and these engines make no pretension to rank as rivals to such vertical engines as those on the refined design of Messrs. Marshall & Sons, at the opposite side of the hall; but they have many merits in their own special way which deserve to be noticed, and some points in their design are almost unique. The Hindley engine is complete in itself without attachment to the boiler, and stands on a cast plate, which forms a foundation and connection for both. The boilers are made with vertical tubes coming through the crown of the shell, and the smallest size, of $1\frac{1}{2}$-horse power, has seven of them; a cast iron dome over the upper end of the tubes carries the funnel, and is fitted with a hinged joint, which enables the whole to be turned over for cleaning the tubes. The main frame of the engine has a circular base, and is formed with an H section in the casting, diminishing in depth and breadth from the bottom upwards; the cylinder is bolted to one face of the frame by the flange of the valve casing, the frame itself forming the door, and the one set of bolts connecting the cylinder to its frame. This arrangement saves both fitting and bolts. Engines on the same principle, for driving sugar centrifugals, were made in the Colony a few years back by Mort & Co. The slide valve is worked by a fixed eccentric, and the valve-spindle is prolonged downwards below the joint of the eccentric rod to work the feed-pump, which is bolted to the face of the frame about the centre of its height. The pump thus serves as a guide, and one eccentric does the work. The crank-shaft runs in adjustable bearings, and extends right through the frame from front to back. The crank-pin is fixed in a disc in which two separate holes are bored, and it can be put in either hole according to the direction in which it is required to run, the positions of the holes being so adjusted with regard to the eccentric as to give lead in either direction. This is the first example of such an arrangement as we remember to have met with, and it is preferable to having a movable eccentric. These Hindley engines are made in sizes from 1 to 15-horse power, and are fitted, at a small extra cost, on wheels for moving them about; they have turned fly-wheels and pulleys, and the speed is controlled by a high-speed balanced governor, running horizontally across the top of the cylinder, and driven by a belt which runs up and down the frame. They are suitable for driving agricultural or other machinery, and in first cost are, for the power, perhaps the cheapest engines and boilers in the Exhibition.

Near to the Hindley engines, but higher up, Messrs. F. W. Reynolds & Co., of London, have a vertical engine and boiler on cast iron plate, with wheels for moving it about. There is nothing calling for special remark in the design or construction of this machine; the governor has the centres for suspension of

the pendulums thrown out from the centre of the spindle, in opposition to the general tendency, which is more towards keeping them in to the centre, or, as in some examples, crossing them. The guides of this engine are bored out.

Messrs. William Jones & Sons, of Warrington, Lancashire, have a vertical engine and boiler, which will be found behind Messrs. Marshall's exhibits. It has a cast iron tank, and four wheels for moving it about. The cylinder is bolted to the boiler, but a bracket is first bolted on to carry it; the guides are cast separate, and are secured to two separate brackets which are separately bolted to the boiler; the crank-shaft pedestals are separately bolted to the foundation plate, with which plate the centre of the crank-shaft is certainly not lined out square. It is probably a good useful engine, but the makers have given themselves a deal of trouble to make a great number of small pieces for the sake of bolting them together, when they might have found plenty of modern designs easier to construct and a better job when done. We are not aware that there is any point in this engine which we would recommend for imitation, or from which our rising engineers can gather much to instruct them, though the design of the governor is novel.

Messrs. Marshall have also a vertical engine. We spoke in the highest terms of Marshall's horizontal engine, and we shall have to praise the vertical one too, and point out where efficiency, taste, and fashion are all to be found exemplified.

It was stated in the beginning of this paper that there were fashions in machinery. Those of our readers who know much of the early mills and factories in the Colony are aware that they were nearly all driven by beam engines. It is probable that more than half of the flour mills in the Colony still have engines of that description; but beam engines are not in fashion at the present time; they have been fast going out of use, and we do not think a beam engine has been made in Sydney during the last ten years.

Fifty years ago there was relatively a great deal more importance attached to the appearance of a steam engine than there is now, and no expense was spared in its decoration; most elaborate mouldings, panels with ornament in relief, gothic columns, arches, &c., were all introduced into engine building as well as into other iron work, until engineers' gothic came to be almost a by-word and reproach. All, however, is changed now, for, although to some extent beam engines are still made for such work as driving sugar machinery in the West Indies, they are proportionately very few in number, and the ornaments even on those few have nearly all disappeared under the influence of improved taste. Inverted beam or side-lever engines for paddle steamers are now also out of date, with their elaborate gothic framing and battlemented condensers. For mill and factory purposes the horizontal has supplanted the beam engine, and has long been in fashion as the most popular form of steam engine; but it seems tolerably certain, from the numerous examples around us, that for small powers the vertical engine is fast taking its place for the very good reason that the vertical engines and boilers take up so much less room and require less expensive foundations than either the horizontal or beam form.

In studying the appearance of a modern engine the designer now follows a very different course to what was practised by the engine-maker of the old school. Improved taste leads him to avoid all mouldings, excrescences, or ornaments that would be liable to get filled up with grease or dirt, and which would be more appropriate on a bedstead or other article of domestic furniture than on

a machine whose functions are to convert heat into work; also, instead of constructing his engine with innumerable small castings all bolted and cemented together, the advanced engine designer now aims at fewness of parts, simplicity of construction, and a general smoothness and rounding-off of corners, which gives to the whole machine a distinctive character, and shows that it has not been built up, as it were, bit by bit, and difficulties avoided as they arose, but that the whole design has been carefully thought out and completed before the construction commenced. It is, to a great extent, owing to the increased powers of modern machine tools and the facilities they afford for turning, planing, or otherwise operating on the various parts of a machine, that engine-building has reached its present development.

The foregoing remarks digress somewhat from a simple description of the machinery in the Exhibition, because such an opportunity for study and comparison has never before been afforded to colonial engineers and apprentices, &c. Mechanics and students may there learn valuable lessons in design and construction if they take advantage of the facilities which present themselves for examining the machinery gathered together, and which can be freely and carefully inspected. And such a use of the Exhibition is of far more value to the community than the pleasure which it affords as a mere show or place of entertainment.

Besides the eight or ten vertical engines already alluded to, there are several others manufactured by Messrs. Marshall, and by Ransomes, Sims, & Head. These firms have adopted the system of casting their sole-plate and column in one piece. The column has a long opening in the front and back, and the guides are cast inside. One operation in a lathe enables the guides to be bored and the top of the column faced for the cylinder; half-a-dozen bolts will hold the cylinder in its place, and the main portion of the engine is then complete,—that is to say, two castings take the place of eleven or twelve in an engine such as was before referred to. This columnar type of vertical engine is now becoming common, but there is great diversity of design in the columns themselves, as adopted by different engine builders. Messrs. Marshall & Ransomes have based their idea on the same natural object as Smeaton adopted in his celebrated work—the Eddystone Light-house—the curved trunk of a tree rising from the ground. Smeaton's idea for strength in light-house construction has been adopted by engineers ever since, and the light-house design for vertical engines is sure to be widely followed. To those who have taste, the simple and graceful curve is pleasing, as it combines strength with elegance, which cannot be said of the distorted shapes into which some machine makers twist their framings.

Messrs. Ransomes, Sims, & Head, show their vertical engine in the Machinery Hall in a rather out of the way position, behind two of their portables. It is of 4-horse power, with 6-inch cylinder, and 9 inch stroke; the sole-plate, column, and crank-shaft pedestals are cast in one piece, the guides are bored, and the guide shoes are adjusted by nuts; the crosshead being apparently of malleable cast iron. The cylinder is lagged out to its flanges, and the bolts are kept inside the top of the column, so that the line of the column is continued in the cylinder. The whole appearance is very neat and the crank-shaft extends on both sides; the eccentrics for the pump and valve have cast iron straps, and the rods, which are turned, appear to be secured by a small pin. This engine is fitted with a horizontal high-speed governor on the top of the cylinder, but the joint of the eccentric rod to the valve-spindle is not neat,

as the clutch joint is much larger than the single end, and the connecting rod is bellied in old-fashioned style and does not altogether please the eye, as it appears very slight. The general appearance of the engine is good, and it is a useful article, but is not characterised by a high finish in the workmanship. The boiler is 2 feet 9 inches diameter by 6 feet 6 inches high; it is single riveted, and has a large manhole, which is strapped. There are two lever safety valves, two cross tubes, with cleaning doors, and the water space seems large. The fly-wheel is counter-balanced for the crank and connecting rod; and there is a square elbow on the steam pipe, which looks bad. A drain pipe from the exhaust leads down to a tank in bottom plate. The gauge mountings are good and substantial.

Messrs. Marshall's vertical engine is called 3-horse power, but it is quite as large as some maker's 4-horse engines. The design is similar to Ransome's, but it is proportionately taller and equally, if not more, elegant in outline. The cylinder is $6\frac{1}{4}$ inches in diameter and 10 inches stroke; the boiler is 2 feet 7 inches diameter by 6 feet 6 inches high. The guides are bored, and the cross-head has adjustable slippers; the cylinder, with its casing, continues the line of the frame or column, and the governor lies horizontally in front of the cylinder so as not to be in the way of removing the cover. A cast iron sole-plate carries both boiler and engine, but they are not in the same centre line, the engine being kept to one side to enable the fly-wheel to overhang the sole-plate; the feed-pump is worked off the opposite end of the shaft, and draws from a tank in sole-plate under the engine; the boiler has two cross tubes; and the English price of the whole is £93. There is no doubt that there are engines in the Exhibition which can be sold cheaper than this one, but many persons would prefer to pay a little extra in first cost to have so well finished a piece of work. Although this engine is polished up and the painting is all highly varnished to make it a show engine, Messrs. Marshall put equally good workmanship into all their engines. The joint of the eccentric rod to the valve-spindle could be improved, and if the drain pipe from the exhaust connections to feed-tank was kept close to the boiler, instead of having to go through the base of the column, it would give a further finish to the appearance of the whole. With the exception of these few drawbacks the engine is, without doubt, for its size, the most carefully designed machine in the department. The boiler is double riveted in the longitudinal joints, and the edges of the plates have been planed; the funnel is enlarged upwards to give effect to the blast, after the fashion of some locomotives; the manhole is strapped, and there is a filling plug; the syphon to pressure-gauge is cast in brass, with a small cock in the bend; there is a filling nozzle to the tank in a handy position; and the sole-plate has all round corners, with a damper in front to the ashpit. The castings are very clean and perfect, and this, combined with the care and thought—the brain in fact—that are evidenced in the design, makes the whole an object which has found many admirers.

The Atlas Company, of Hay-street, Sydney, exhibits a vertical engine in connection with a sugar-mill near the lower and eastern corner of the Machinery Hall, of somewhat similar pattern to those just described. This engine is of larger power than any of these, and the column, instead of making one sweep of a curve from top to bottom, is bulged out a short distance from the bottom to make room for the crank or disc, giving the frame somewhat the form of an elongated pear. Where the engine is required to stand on a small base this form is an advantage, but it is not so

elegant or so stiff as if the base were extended out to meet the curve, as in Ransomes' engines. The Atlas Company have made rapid strides during the few years they have been in existence, and their engines sustain their reputation for good substantial work. The cylinder is lagged and the engine painted in a gay colour, which draws attention to it; but we have seen visitors pass and inquire what the engine and machine were for without being able to get satisfaction. It would be a great advantage, especially to non-scientific visitors, if the various machines not in motion had a placard stating for what purpose they were intended. The Atlas Company's engine has a cast single crank, with a counterbalance weight on the back; it is fitted with a governor of an American pattern, and is a very creditable piece of colonial work; the starting gear is an original design of the firm's.

In the Machinery Hall another vertical engine is shown among Mr. Fleming's collection of exhibits. It is made by the Waterous Co., and comes from Canada. This engine has a frame of the pear shape, similar to the Atlas Company's engine, but it is smaller, being only of 4-horse power, and the frame or column has four openings instead of two. For simplicity in casting this frame is made in two halves and bolted together. This saves money in the foundry, but it cannot be said to be as good a job. This engine is fitted with a rocking valve, an arrangement which seems to be coming into use. Other Canadian engines have it, and it may also be seen on Sir William Armstrong & Co.'s hydraulic engines. The Waterous vertical has many features which distinguish it from an English engine at first sight, although several of its American innovations, such as appear in governors, have been already adopted in this Colony. Self-acting lubricators are fitted to the guides, which are of a novel and simple, if not very neat arrangement, an extension of the guide block dipping into a box of oil at every down stroke. The points to specially observe in this engine are the short boiler, with verticular multitubular arrangement, the way in which the pump is worked from the same eye of the eccentric that works the rocking lever of the valve, the spring rod to the pump plunger to save a joint, and the neat arrangement of the sole-plate, with a curb or basin all round to catch any dirt or water, all of which are to a great extent novelties, while many of them are good features. The crank shaft has a disc, and the outer bearing is carried by a pedestal on the sole-plate; the fly-wheel, which is heavy and turned, being overhung.

The many varied exhibits which are shown by Messrs. Blacket & Davy, of Bathurst-street, as agents for Messrs. Tangye Brothers, of Birmingham, form perhaps as interesting a collection as any in the Machinery Hall. Besides the horizontal engines we have before considered, they show also a 3-horse power vertical engine and boiler on wheels, which is of a pattern peculiar to the firm. This engine and boiler are both set on a cast foundation plate, part of which forms a water-tank; there are a pair of large wheels at the boiler end, and a pair of smaller ones with a locking axle at the other end to facilitate travelling. There is nothing special about the boiler, which is fitted up in Tangye's well-known style, but the engine is formed with a frame and sole-plate cast in one piece; this frame extends only up from the back of the sole-plate, curves forward at the top to carry the cylinder, and overhangs the centre of the crank-shaft; the main bearings are formed on each side of the sole-plate, the shaft is cranked in the solid and extends across in front of the frame or column; and as there is no front half

to the frame the shaft can easily be got out, and the whole of the engine is also readily accessible. The guides are of the slipper or single-face kind, formed on the frame, the shoe extending from the back of the crosshead. The connecting and eccentric rods are of cast steel, of H section, similar to those in the Soho engine ; the frame or column is of the hollow box section, which makes it very strong. The governor is of the Tangye pattern ; and the whole forms a very useful and substantial little engine, which many people would prefer to the vertical engine by the same firm, with its double frames and guides. Where so much is good, it might have been possible to construct an exhaust pipe two yards long in less than a dozen pieces, there being actually thirteen, counting flanges. The exhaust branch of this engine also might be on the side the pipe is led, instead of away from it. These little matters are worthy of observation, but they do not seriously detract from the efficiency of the engine.

At the same side of the Machinery Hall, about half way up, there will be found a small vertical engine and boiler, which has come from Paris, exhibited by the firm of Jean François Durenne, of Courbevoie, and it certainly has quite a distinctive appearance from the English or American machinery. This engine is only of small power—about 2 or 3 horse—but it is all very well got up. The boiler is carried by a pair of high wheels of wrought iron, and there is a small cast wheel in front ; the engine is fitted up on one cast iron framing, and bolted to the front of the boiler with the crankshaft upwards ; the shaft extends on both sides, and on the overhung end has a turned fly-wheel and pulley. On the fore-carriage there is a counter shaft, with two pulleys, to take belts from those on the crankshaft, thus giving two speeds. The whole is fitted with a pair of shafts for a horse, made of wrought iron pipe ; the boiler has spring safety valves of the Salter type ; the cylinder is cased in polished wood, and the finish generally is good. If it had been larger it would have been entitled to rank with the portable engines. The boiler seems to be of the " Field" description.

William Foster & Co. (Limited), of Wellington Foundry, Lincoln, England, exhibit a vertical engine and boiler about 3-horse power. The engine is not self-contained, as the cylinder is bolted to the boiler, and the crank-shaft is carried by brackets also projecting from the boiler shell ; the pump is bolted to the side of the boiler ; the guides are turned. There is nothing special to note about this engine, and it is a type that seems to be going out of use ; for although it is of a lighter total weight than when the boiler is used (as in a portable) to connect the crank shaft brackets with the cylinder, still the many advantages which attend, making the engine complete in itself, even at the cost of more weight, seem to be bringing the latter style rapidly into favour. Messrs. Mason Brothers, of Sydney, are the agents for the makers, and the engine is a very useful and well-fitted piece of work.

A small engine, by Proctor & Wallis, of Talbot Engine Works, Tustin-street, London, will be found on the opposite side of the Machinery Hall, in charge of Mr. Jeavons. The Sydney agents are Messrs. J. R. Cattell & Co. This little engine has a very attractive appearance owing to the governor, crankshaft, eccentric straps, pipes, &c., being all nickel-plated. It is considered by many persons that plating on an engine is out of place, and it is looked upon as tinsel and gimcrack. This view would be no doubt true in respect to a large and powerful piece of machinery, but the engine of Messrs. Proctor & Wallis being designed for domestic use, the plating on it is more appropriate. The boiler

is vertical, with a plain fire-box, and the shell is enclosed in an outer casing; the furnace has a wall or lining of cast iron, which causes the fire to rise to the crown and then turn and go down between the lining and the fire-box, then under the bottom of the shell into the outer casing where the chimney is attached near the top; by this means the whole plating of the boiler inside and out is constituted heating surface. The cylinder is set in the top of the boiler, so that it is kept hot by the steam. All the necessary mountings are provided, and the engine is well adapted for the purposes it professes—that is, to furnish power for domestic services, such as to clean the knives, work the washing-machine, rock the baby, churn, drive sewing-machines, and such like work; or even give motion to the light machinery used by dentists, jewellers, and similar trades. Some of our steam-launch builders and owners might learn something from the boiler for very small steamers.

Further up, on the same side of the building, above Messrs. Reynolds' stand, there is another engine very similar to the last. It is called the Economic Engine, and is of 1½-horse power, made by Messrs. John & Edward Hall, of Dartford, Kent, and St. Swithin's Lane, London. The cylinder in this is also set in the top of the boiler, and the fire-box appears to have fireclay blocks instead of cast iron for its false sides; the crankshaft has a disc; the governor is similar to Tangye's and the whole, as its name indicates, is got up without the finish and plating of Proctor's, but it would, be no doubt, a very cheap and handy little engine for any purpose where a small power is required.

In Messrs. Drysdale and Roberts's separate machinery pavilion there will be found three vertical engines, from the well-known firm of Robey & Co. They are of 4, 3, and 2-horse power respectively. These engines are each attached to a square foundation plate, which plate also carries the vertical boiler, and forms a water-tank under the engine, and an ashpit under the boiler, having an ash door or damper under the fire-door. The engine is formed with an A frame which supports the cylinder on the top, and carries the crank-shaft in a pedestal cast in the cross-bar, which is low down for the purpose. This crossbar is set out on one side to give room for the disc; the crankshaft extends across the sole-plate, and the outer bearing is on the opposite side where the fly-wheel, which is turned, is overhung. The frame is of a graceful design, and of a T section, with the corners all rounded. The eccentrics, rods, and joints are very satisfactory in their design and finish. The governor and stop valves are constructed on the top of the side casing. Messrs. Robey make some of their boilers with plain cross tubes, and some on Richardson's patent tubulated principle, of which they are sole manufacturers. These engines, as exhibited, are driven by steam from a larger boiler, so that the merits of Richardson's special construction cannot be seen. The shells are single riveted, and the manholes are strapped. The safety valves have levers and weights, with small padlocks to keep the weights from being taken off. The exhaust is provided with a drain-pipe to the tank, and in the 4-horse power engine this pipe is polished. It is not probable that it was polished when it left Messrs. Robey's works, because however necessary or useful an adjunct a drain-pipe may be it is an object to be kept in the background rather than to be made prominent; but the pipe in question is not particularly straight, which makes it look worse now it is bright, and we may therefore set down the polishing to the misdirected zeal of some of the attendants. If it is asked why notice is taken of these small things if they do not affect the working efficiency of the engine, we reply that it is because there is

no reason why appearance should not be studied in the design of machinery in which there is plenty of scope for the exercise of taste. Dissertations have been written on taste, and of course engine builders and others hold different opinions as to what constitutes taste in machine design; but without at all referring to those builders who add one part to another until they arrive at a complete machine, and who work without a thought of design, or care for appearance, it will perhaps be safe to say, that although the care, thought, and taste embodied in a superior design may not be apparent to every one, still the refined engine designer and the average engineer will see, to a greater or lesser extent, the deficiencies and shortcomings of an inferior production. In these colonies the manufacturing engineers do not get much chance to elaborate, and at the same time simplify the designs of their machines, because the number of engines or other machines produced from one set of patterns is so limited; but large firms in the old country who make engines by the hundred have every opportunity of comparing their works with those of other makers, and improving in details until perfection, as far as possible, is arrived at. English engine makers differ much in the details of their engines, and in many cases where different systems are in practice several are equally good. With regard to governors, there are more than a dozen different descriptions exhibited. They are not all of equal merit, and though not many will be found to prefer an old-fashioned eccentric strap, with lugs thinner than the body, and the centres of the bolts spread as far apart as possible, to a marine strap with close centres of bolts and deep lugs, yet both sorts are still made. By considering such small points, in addition to the diameter and stroke of an engine, we are better able to arrive at a just appreciation of its qualities.

MARINE ENGINES.

In the whole of the Exhibition there are only four marine engines, and they are all intended for driving the screw propeller. No paddle engines are shown. These four screw engines are respectively made by Tangye Brothers, of Birmingham; Mort's Dock Company, Sydney; Alexander Chaplin & Co., London and Glasgow; and A. P. Postlethwaite, Runnymede Engine Works, Egham, Surrey.

Tangye's engines consist of a pair of inverted cylinders, about 8 inches diameter, with a 9-inch stroke. They are fitted up in a very strong and substantial manner, and the workmanship is quite equal to the standard for which the makers have acquired so great a reputation. The design is of the same general pattern as the firm's vertical engine made for stationary purposes, but in this case it consists of two complete and separate engines, which are simply connected by the sole-plate and shaft. These engines, we feel sure, would work well either as land engines or on board a steam-boat; but from their general style, we should infer that steam launches were scarce in Birmingham, and that the experience of the makers in marine work was very limited as compared with their extensive business in stationary and pumping engines. The frames are of a hollow box section, cast in one piece with the sole-plate and the foot of the cylinder; in this case the four frames and two sole-plates with their connecting piece are all in one, and it is a very fine and creditable casting. The frames curve in from the sole-plate, up to the line of the guides, and in again to the cylinder, forming three curves; the size is reduced considerably from the bottom upwards. There is a peculiar rounding

off at the top to enable the circle of the bottom flange to be preserved, and this gives them rather a strangled appearance at their necks, when compared with their massive proportions at the bottom. The two cylinders are quite detached, and are turned with their valve castings towards one another, with two separate doors. The cylinders are cased in Russian iron, and look trim and neat; the steam and exhaust pipes have separate branches. There are two separate crank shafts $2\frac{3}{4}$ inches diameter; they are of the bent description, and are connected with cast-iron couplings in the intermediate space between the engines. The reversing gear is well fitted up; it is of the link motion kind. These engines are well adapted for a heavy vessel, but for a fast steamer or passenger boat it would be better if they took up less room lengthwise, and if the weight also could be somewhat reduced. The guides and crosshead are of a first-class type, similar to the Tangye horizontals; and although the valve spindle guides may be thought clumsy, the character of the work throughout is of that high class for which the firm is celebrated.

Immediately adjoining Messrs. Blacket's stand, and behind the Armstrong guns, will be found the second launch engine. It is a colonial production, from Mort's Dock-works at Balmain. If a special exhibition finish is wrong, this engine—like Messrs. Marshall's before referred to—is a great sinner, for it is highly painted, lined out, and varnished, and the bright work is well polished; but for its special purpose, both in design, workmanship, and finish, it will stand comparison with any of the engines in the Exhibition.

Messrs. Mort's engine is compound non-condensing and inverted cylinder; the diameters of the cylinders are $7\frac{1}{2}$ in. and 14 in., and the stroke is 10 in. Any person accustomed to machinery can see a marine style in it at the first glance, and a steam-boat man feels at home with it at once. The sole-plate has three bearings with plain wrought-iron caps. The crank shaft is forged and slotted, and has two balanced cranks at right angles, with an intermediate bearing. The columns are straight and of a hollow box section, square with rounded corners; the two columns on each side are cast together, forming one stiff frame, with large foot nearly the whole length of sole-plate. The top flange carries the cylinders, and on one side the reversing shaft; the columns on each side incline in from the sole-plate to the cylinders. The guides are projected from the frames; they are about 4 inches wide, and have no flanges for side guidance, as such guidance is not found necessary in most recent practice. The two cylinders are cast in one piece, and have their valve faces turned outwards, where they can be got at for repairs; the edges of the flanges are all bright, and the outside is cased in sheet-iron; the engine is fitted with link motion, and the gear is all finished bright. The guide slippers have large surface and can be lined out; the eccentric straps are of gun-metal, with proper oil-cups. The connecting rod has bolt ends, the top being double with a jaw for cross-head. The piston rod is of steel, and is secured to the crosshead with a nut. The piston rods and valve spindles extend through the top covers, and all have brass domes or casings; a copper intermediate receiver connects the two cylinders.

The solid and substantial-looking main frame, the light moving gear, the plain taper to the connecting rod and its general proportions, the finish of the pumps, and the rounding of corners, absence of projections, &c., give to these little engines a decidedly business-like appearance; and when they are compared with some of the rough work which is to be seen about, the credit of the colony for engine-work will be fully upheld by this specimen of colonial skill.

Messrs. Chaplin & Co. exhibit an engine and boiler of the description which are used so extensively in the launches attached to large steamers. The boiler is of the return tubular kind, and is all cased in mahogany cleading, secured with brass hoops, and has a brass top to the dome. There is a dry back to the combustion chamber, fitted with a cleaning door. If the boiler is not second-hand, the tube-ends and smoke-box being so dirty and knocked about, it looks as if it were so when the smoke-box door is opened. The boiler has a complete set of mountings, including a surface cock.

The engine castings are all made of brass ; the sole-plate and frames, with the bottom of the cylinder, are all cast together, and the guides are bored ; the body of the feed and bilge pumps is formed in the sole-plate ; and the cylinder is cased in mahogany, and hooped with brass. There is link motion reversing gear, with a quadrant on the valve casing.

A brass stern tube and a brass screw 2 feet 3 inches diameter are exhibited with this engine ; the screw has a scimitar form of blade, and is much thrown back, the whole machinery being adapted for an open launch.

Mr. A. P. Postlethwaite exhibits two engines which are of a totally different type to the ordinary run of steam-engines. The last few years have been prolific in bringing forth novelties in engine construction ; for which, among others, Brotherhood's and Willans' three-cylinder engines are popular instances. The former have three cylinders set round one crank at an angle of 120 degrees with one another, of which a small example may be seen on the top of a grinding machine between the stands of Messrs. D. & W. Robertson and Messrs. Reynolds. Messrs. Blacket & Davy have one of Willans' engines near their office door, and also another one on a small crane just outside the Machinery Hall. The Willans' cylinders are all side by side, and work on a three-throw crank.

The leading feature of these engines is that they are only single-acting, and that the connecting rods are always in compression, as the pistons are pushed back by the crank against the exhaust pressure ; thus doing away with the tendency to knock in the bearings, and enabling them to be run at a high speed without noise. Mr. Postlethwaite's engine is on this principle, with the further peculiarity that the crank is in the cylinder itself ; the piston being in reality two separate pistons connected together, one being in each end of the cylinder. The inner heads of the piston are connected to the crank pin, but instead of having connecting rods with pins, they are formed as sectors, and work with a rolling motion on the piston, and thus transmit the power to the crank. Without a very lengthy description it would be impossible to describe all the peculiarities of these engines, but Mr. Jeavons, who is in charge, very kindly explains the mechanism to visitors, and has also a full-size drawing showing the inside of one of the engines.

Mr. Postlethwaite shows a 4-horse engine on a cast-feed water tank with vertical boiler ; the engine has one cylinder and ordinary slide valves ; and the boiler is coated with a special non-conducting substance termed the ' Madera.' The other engine is a double-cylinder engine of 10-horse power, fitted with vibrating valves, which work close to the cylinder somewhat like Corliss valves, and thus save steam ; this engine is admirably adapted for launch purposes, on account of the little room taken up ; the 10-horse engine measures 32 × 38 inches, including fly-wheel. Owing to the shaky nature of the floor it appears the engines cannot be run to their full speed, but the 10-horse engine sometimes makes nearly 400 revolutions a minute.

The pair of oscillating cylinders for a paddle engine exhibited in the nave of the Garden Palace, by the Cockerill Co., of Seraing, near Liège, Belgium, deserve special mention. This firm exhibits a number of photographs showing engines which they have constructed, and also models of steamers. If the whole of their work is of the same high class as the castings exhibited, the firm has well earned its high reputation. As a pure trade exhibit, and specimen of handicraftsmanship in the ironfounder's art, the Belgian cylinders are unequalled probably in the whole Exhibition. The sand, the metal, the core-boxes, and above all the moulder, must all have been exceptionally good. What are facetiously termed rat-holes are sometimes seen in colonial cylinders, but it is impossible to find a pin-hole in the examples under notice. It is not so much the smooth skin as the perfect form and absence of straining in the mould which makes these specimens of ironfoundry so well worthy the examination and imitation of our engine-builders in the Colony.

PORTABLE ENGINES.

Portable engines are exhibited by about thirteen different makers, and many of the time-honoured houses of the old country are well represented. Portable engine construction has now become a most important branch of mechanical engineering—it may be said to be almost altogether of English origin, and, also until quite recently of English growth. The periodical exhibitions of the Royal Agricultural Society of England, and the perfect and reliable way in which the engines at their shows have of late years been tested for the judging, have given such a value to the awards and so stimulated competition and improvement, that recent examples of portable engines have showed, on trial, an economy of fuel superior to that obtained in many condensing engines.

The Royal Agricultural Society has now existed for forty years, and the first portable engine for agricultural purposes was exhibited at their show, at Liverpool, in 1841 ; it was made by Ransomes of Ipswich. At the Derby meeting in 1843 there were six engines shown, three of which were self-propelling. At Northampton, in 1847, the number of exhibitors had increased to over 1,300, and the seven portable engine-makers who competed submitted their engines to certain trials. These trials were, however, not so accurate as those which are now adopted. The £50 prize on this occasion was awarded to Cambridge, who had a diagonal engine on the side of his boiler, with a cylinder 6 inches diameter and 12-inch stroke, and a connecting rod apparently not much more than two cranks long. A drawing of this engine of Cambridge's is reproduced in the report on the Kilburn Show in *Engineering* for the 27th of June last, and is very interesting to any one studying the progress of the portable engine. The engine itself was exhibited at Kilburn, in what was called the Museum of Old Implements. Messrs. Hornsby, who have engines here at Sydney, first exhibited in 1848, and Messrs. Clayton & Shuttleworth in 1849, in which latter years Messrs. Garrett and also Ransomes and May competed, when there were proper trials carried out. Messrs. Garrett's engine took first prize with a consumption of 11·5 lbs. of coal per horse-power per hour, and Clayton & Shuttleworth obtained the second prize with a consumption of 10·78 lbs., but an engine of Mr. Barrett's, also in the competition, used over 25 lbs. It will be useful to note this consumption of fuel, to see what recent improvements have effected. In 1850 the Hornsby engine gained first prize with the consumption reduced

to 7½ lbs. of coal. In 1853 Clayton and Shuttleworth brought the consumption down to about 6½ lbs. In every succeeding show improvements were made. Several new builders came out, entered into the competition, and secured prizes, until in 1872, at Cardiff, Clayton & Shuttleworth again took the first prize with a consumption of only 2·72 lbs. of coal per horse-power per hour. So rapid has been the progress, and so recent the development of the portable engine, that the oldest specimen exhibited in the Museum at Kilburn was only thirty-seven years old. One firm—Messrs. Clayton & Shuttleworth—made and sold two engines in 1842, but up to 1878 they had made and sold 17,000 engines, or an average of 448 per annum, the greatest business being done in 1874, when they made 960 engines.

The portable engine has undergone great changes during the forty years of its existence, and has recently been made self-propelling. Latterly the usefulness of traction engines has so increased that they are being introduced by all the leading makers of portable engines; and when fitted up with windlass gear for ploughing, they become probably the most important machines employed in agriculture,—the portable, traction, and winding engines being all combined in one.

The exhibitors of portable engines proper are Messrs. Clayton & Shuttleworth; Hornsby & Sons; Ransomes, Sims & Head; Marshall & Sons; Garrett & Sons; Ruston, Proctor, & Co.; Robey & Co.; Davey & Paxman; W. Foster; Seekings & Ellery; and Reynolds, of England; the Waterous Co., of Canada; and M'Cormick, of Chicago, U.S.

In examining into the distinctive features of the leading portables, there are points of difference which can be noticed at a glance, but there are also many cases where the various ideas and special forms of construction adopted by the different makers are not so apparent. The representatives of one house will show you with pride the peculiarities and advantages embodied in the design of their engines, while a rival a few yards away will direct your particular attention to the fact that his firm adopts a much better practice. Cylinders may be put at the fire-box or smoke-box end; they may be outside in the air, or in the smoke box, or be enclosed in the steam chest; they may be jacketed or unjacketed. The cylinder and main pedestals may be unconnected by stays other than the boiler, or they may be rigidly connected by solid bolt stays, or have hollow stays with steam inside; or further, the stays may be rigid, and the shaft pedestals be so arranged as to slide on their brackets. All the above different systems are to be seen at the Exhibition, and there have been other varieties. In some cases the pedestal bracket has been fixed and the cylinder moved, to allow free expansion. This plan was adopted by M'Laren, of Leeds, but is not shown here. Again, by different makers the exhaust pipe is placed either outside the boiler, or inside over the tubes. The form of governor, the feed arrangements, and the heating apparatus, differ much in the several examples, and the carriage wheels are of cast-iron, wrought-iron, or of wood.

It must not be supposed that the leading firms always exhibit the best practice. Many reasons operate to induce conservatism in construction. When a certain make of engine is known by a particular form of arrangement or detail, it is often policy to adhere to it, and the trouble and expense of new drawings or templates is saved; and also pride may to some extent prevent one maker from adopting improvements introduced by a rival house. If it is an improvement, and not even patented, a proper pride and respect will induce them to effect the same improvement in a different way if possible.

Passing over the semi-portables of Robey, which drive the various lines of shafting, the highest finished portable engines exhibited in the machinery shed are those of Messrs. Marshall, who show three separate engines, one being a 14-horse power double cylinder, and the others being single engines, of 6 and 8-horse power respectively. Messrs. Marshall make their engines with wrought-iron brackets, instead of cast ones, for the crank shafts, and attach them in a very firm way to the boiler by double riveting. In the large engine the main pedestals work on dove-tail slides on the brackets, and are connected to the cylinders by heavy turned stays; these stays support a motion plate, and carry all the gear of the engine clear of the boiler. By this arrangement the expansion of the boiler when steam is got up does not affect the setting of the valves or strain the engine in any way; if the boiler is (say) 3-16th or a ¼ of an inch longer when hot than when cold, the pedestal slides that distance towards the cylinders on the brackets, and the makers claim this as a very great improvement. The large engine is fitted with Hartnell's governor and automatic expansion; the smaller ones have cross-armed or parabolic governors. The cylinders are all jacketed, having lining bushes of specially hard metal forced in; the valve spindles have guides. The boilers are made with large fire-boxes, and have a mud collector in the bottom of the barrel. There is a filling plug, which has the hole bushed with brass. The undercarriage is of a very strong and neat construction, formed of channel iron. The condensed water or feed heater is taken from the end of exhaust pipe. The connecting rods are made with butts and straps to the large end, the gearing and feed pump are all highly finished, the carriage-wheels have polished brass bosses, and the paint and varnish are all in keeping with the same firm's other engines, as before described. These makers have now arranged their shaft at the smoke-box end of the boiler instead of the fire-box end as formerly. The large engine exhibited in Sydney is said to be exactly similar to the one shown by the firm at Kilburn in June last, where it attracted much attention. The feed pump is bolted to the hornplate or main shaft bracket, and thus saves making any bolt-holes in the boiler. Altogether these engines fully sustain the high reputation of the Gainsborough firm. Mr. Hugo Graepel is the representative of Messrs. Marshall, Sons, & Co., at the Exhibition.

Messrs. Ruston, Proctor & Co., of Lincoln, exhibit a 10-horse double cylinder, and an 8-horse single engine. The special feature of this firm's make is the use of a hollow or tubular stay, which is open to the boiler, and which, it is thus claimed, must expand when steam is raised, the same as the boiler does, and prevent all undue strains. This arrangement is Ruston, Proctor & Co.'s patent. In these engines the main brackets are cast in one piece, and saddle right over the boiler; the cylinders are jacketed, the connecting-rod ends are fitted up with butts and straps. The double engine has link-motion reversing gear, but the single one has Chapman's variable eccentric; one of the engines has a special arrangement of smoke-box, with a water-tank in the bottom to prevent sparks; the carriage-wheels are of wrought-iron. Messrs. Ruston & Proctor do not put their patent stay in double engines under 16-horse power. Their style is not quite so high, perhaps, as some makers, but their price is lower, and the engines are well-finished. The fire-box of these engines can be made larger for burning wood or inferior fuel, at an additional cost of £1 per horse-power.

Messrs. Richard Garrett & Sons, of Leiston, send four of their portable engines, a large double-cylinder winding engine with vertical boiler, and several

specimens of their boiler work, which deserve special attention. Messrs. Garrett have adopted the use of steel very largely for their boilers, and have laid down a very complete plant of hydraulic flanging machinery for the manufacture of them; they are the makers of a special form of corrugated fire-box crown, which enables them to dispense with crown stays; they also corrugate the side of the fire-box in some cases. Messrs. Garrett's engines are distinguished further by their adherence to cast-iron brackets and cast-iron rims to the carriage-wheels, and to the absence of steam jackets and stays; for all which points of difference from other leading makers, they have, no doubt, good and sufficient reasons founded on their long experience in the business.

Garrett's 4-horse engine is the smallest size shown; it is fitted with a spark-arrester of recent design. The next one is an 8-horse, and is convertible into a semi-portable by taking off the wheels and supporting the smoke-box end over circular tank. The 10-horse engine is fitted up with a furnace and door, arranged with a lower set of fire-bars for straw burning, and the 13-horse engine is a semi-portable with wheels and tank similar to the 8-horse one; but it has a cylinder with a new arrangement of casings and doors to get at the valves. The locking body on all these portables is of a special form, stamped and flanged out of plate-iron; the arms of the wheels are of wrought-iron, although the rims are cast. The connecting-rods have solid big-ends with square brasses and double nuts; the fly-wheels are wide for the power of the engine. The feed arrangement has no heating direct from the exhaust, but a three-way connection introduced by the Garretts, and acting on the principle of the lateral induction of fluids, heats the feed water in the tank. In the 8-horse engine the fire-box and its casing are all of steel and corrugated; in the others the corrugated crowns are of Low-moor iron. The barrels of the boilers are all double riveted longitudinally, and the man-holes are strapped; the fire-doors and smoke-box doors are all stamped out of plate-iron, making neat-looking work. The main-shaft bearings are angled, and have only two brasses.

Messrs. Garrett's mining or winding engine has two 6-inch cylinders, working single purchase, with spur gearing about 6 to 1 on to a winding-drum 3 feet 6 inches in diameter. It is fitted with reversing gear and brake, and erected on a sole-plate which forms a tank, and also the body of a trolly, as the whole is mounted on broad wheels, for moving about. The vertical boiler is large—4 feet 2 inches by 8 feet high—and is double riveted. The frame of the which is of a strong and neat design, and the whole seems to be thoroughly well proportioned for its purpose. The other samples of the firm's work include a portable engine fire-box, and a fire-box with two cross tubes for a vertical boiler, which, from their special construction, deserve particular attention from boiler-makers. Mr. T. Hucksted has come out from the Leiston Works with these engines. Messrs. Garrett have departed from the old practice of painting their engines green, and have now come out in a bright black japan with gold lines, which makes their work very conspicuous, without being glaring or gaudy. The smallest of the engines here in Sydney was shown at the Smithfield Show of last year. Messrs. F. Lassetter & Co. (Limited), of Sydney, are the agents for the firm.

Messrs. R. Hornsby & Sons, of Grantham, England, only show one portable engine; but, by those who are versed in the special features of the leading makers, it could be picked out from all the others in the Exhibition a quarter of a mile off. Messrs. Hornsby some years ago adopted the principle of placing the cylinders of their portable engines in the steam chest,

or an extension of the fire-box casing, which acts as a steam chest; and although to some persons it may seem that there are difficulties in the way of getting at some of the parts for repairs, an extended experience enables the builders to confirm the advantages of the arrangement. These engines also have plain turned guide bars, one end of each being carried by the cylinder cover, and the other end by a wrought-iron motion or spectacle plate; these guides are above and below; and the crosshead, which has rather a lumpy appearance, is fitted with hollow slippers, which are adjustable by wedges to take up the wear. The connecting rod is attached to the crosshead block with a jaw, and has a butt and straps to the large end, the round rod running into the square butt with a long easy sweep which is almost peculiar to these makers, and has a tendency to make the end look clumsy when compared with the lightness of the motion plate and guides. The main bearing bracket is a very massive-looking casting, but not heavy, as it is cast hollow. It is curved and washed off in the sweep from the face to the side in a pleasing manner, and is a great improvement on the double-columned architectural bracket which the firm formerly used, and more mechanical looking. In this engine, differing from the practice of most other makers, the plumber block is separate from the bracket, and can be adjusted after the brackets are fixed on the boiler; there are three brasses in the main bearings, and two bolts rise through the cover of the pedestal for their adjustment. There are also double oil boxes on the bearings for insuring proper lubrication.

The eccentric is adjustable, and the gun-metal straps are of a novel section, being hollow in the back, which allows the centres of the bolts to be kept close in; the lugs are deep, and the connection of the rods is made with cotters, forming a much neater job than many of the details eccentrics of around on other engines.

Messrs. Hornsby use stays which extend from the brackets right through the steam chest, and are double-nutted—that is, inside and out of the plates where they pass through; we believe they are put in with the outside nut screwed up first, thus putting the rod into compression while cold, and as, when steam is raised, the conduction from the portion in the steam-chest warms the rest of the stay, a tolerably equable expansion of boiler and stay takes place; and practically, after many years' experience, this arrangement is found to be a good one. The stays are direct and parallel, and do not appear to be at all in the way, as in some forms of portable engines. The governor is of the ordinary type, with a spring to render it higher speeded and sensitive. The carriage wheels are of a very neat construction of wrought-iron, with double angle-irons back to back inside the rims, flat iron arms, and cast-iron hubs, with brass cap boxes. The feed-pump works diagonally in the usual way, but there is a return pipe by which the water, when not going into the boiler, draws from the exhaust into the feed tank, and by an outside pipe the water is conveyed to a retention chest about a foot lower down the barrel than where the pump is fixed. The Spittlegate Iron Works have long been celebrated for their agricultural machinery; and although they show only one engine in the present Exhibition, it fully bears out their reputation for efficiency and good workmanship. Mr. Edward S. Smithurst is Messrs. Hornsby & Sons' representative.

Messrs. Clayton & Shuttleworth have probably the reputation of being the largest makers of portable engines in the world, their engines having taken a leading place, and many first prizes in the great shows and competitions for

years past. Two of this firm's engines are shown in the Machinery Hall, one being an 8-horse single cylinder with adjustable eccentric, and the other a 12-horse double engine with link-motion. The details of these engines have been all carefully thought out and are well proportioned, excepting, perhaps, the big end of the single engine connecting-rod, which looks unnecessarily wide and clumsy, but the collars of the brasses could be made wider if length of bearing or crank-pin was required. The guides are nicely finished, the cross-head seems to be malleable cast, and the governor is of the ordinary type. The cylinder is jacketed, and the steam admitted from the boiler by a separate casting, which has the stop valve in it, and thus keeps a lot of gear out of the boiler; this casting has the horse power plainly shown on it, which will prevent any purchaser from buying an 8-horse engine for a 10-horse one. The under wheels are of wrought-iron, and the fore-carriage is of wood, with single and double shafts; there is a return pipe for the feed, and an arrangement for heating the feed-water. These engines are good, faithfully built machines, and there is no mark of their having been got up specially for exhibition. With regard to stays, these engines have them applied from the brackets to the cylinder, and on one side of the single engine between the fire-box and the bracket.

Messrs. Ransomes, Sims, & Head have two of their portable engines in the Machinery Hall, which are generally of similar construction to those of other English makers, but are a long way short of the finish and workmanship which characterizes some of the engines in the show; the castings of the feed-pump and cylinder are much rougher than good colonial work is turned out, and the general get-up is not of a high class; these are matters, however, which do not immediately affect the working of the engine, and may reduce the price. There are some very good features in these engines, and for bush work, where a better style would not be appreciated, they are well adapted. The cylinder is over the centre of the fire-box, the guide-bars are of cast-iron, the governor is of common type with a spring on the spindle, to increase the sensitiveness. There are stays to the brackets, fitted above the pedestal, which look rather sprawling, and must be removed to lift the shaft out. In the large end of the connecting-rod the bolts are put in through the T head, and the nuts are checked into the fillet or curve on the outer cover plate, which keeps them from turning, the bolts are screwed up by their head, and kept from slacking by a small set screw in the T head, which is not a common practice. The exhaust pipe has a feed heater drain, and is separated into two parts on the top of the barrel of the boiler, to allow room for the crank and big end of the connecting-rod. The bracket for the outer end of the guide-bars is rough, and not particularly well proportioned. The eccentric straps are badly designed, with light lugs and wide centres, and apparently only common black bolts. The fire-doors are large, to admit of inferior fuel. There is a sediment collector under the barrel of the boiler, which is lagged as well as the top portion of the fire-box.

It may be that these engines have not been sent out to compete at the present Exhibition, or that there is no intention that they should compare for finish with others that are shown, but no doubt they are good working machines.

Messrs. Davey, Paxman, & Co., have a portable engine next to Messrs. Fowlers' ploughing engines, which is apparently very carefully proportioned, and though shining in bright green paint, has substantial merits that will bear

looking into. The wheels are all neatly constructed of wrought-iron, the spokes being formed of half-round iron in a similar manner to the patent spring pulleys lately introduced. The cylinder is jacketed, the corners neatly rounded off, and the outer end of the guides is carried on a turned column. There are no stays, the bracket being proportioned of sufficient strength to do without them, and the brasses are made to tighten sideways by a wedge, which is drawn up by a nut on the cap of the pedestal; this cap is notched over the pedestal, to give lateral strength and keep it all together. The governor is of the "Porter" description and has pulleys for two speeds—it looks well. The barrel of the boiler is lagged; there is an induction drain pipe from the exhaust to the return water-pipe. The eccentrics to the pump and the slide valve are of a well-finished pattern, and altogether the engine bears the appearance of having been turned out by a progressive firm. Messrs. Davey, Paxman, & Co. acquired a great reputation a few years back for their vertical boilers.

Messrs. William Foster & Co. (Limited), of the Wellington Foundry, Lincoln, exhibit a portable engine; Messrs. Mason, Brothers, are the local agents for the firm. This engine may be considered a very fair specimen of a good plain ordinary English portable; there are no stays used, and the cylinder does not appear to be jacketed, which are points of simplicity. The main bearing brackets have large feet, and the brasses adjust both sideways and upwards; the connecting rod has butts, straps, and brasses at both ends; the regulator works through the front of the fire-box, the barrel is lagged, there is an induction feed heater on the exhaust, and the eccentric is arranged for reversing. The under-carriage is of wood, the pendulums of the governor work from one centre-pin, and the whole is neatly finished and painted. The engine will burn wood fuel if such is required.

Messrs. F. W. Reynolds & Co., of Southwark, London, exhibit a portable engine, which is a very good specimen of the class, both in design and workmanship; it is much superior in these respects to its horizontal brother alongside, and would almost blush, if such were possible, at the company. It is probable the exhibitor had these engines made in different shops and by different sets of men. Were it not for the name-plates on the portable, it would be taken altogether for another maker's work. This portable engine has a steam tube-cleaner worked by a handle on the front of the boiler; the cylinder, the guides, the eccentrics, &c., are all well designed; the under-carriage is of wood, and the wheels of wrought-iron. The boiler has been proved to eight atmospheres, and altogether the engine is a very good job; it approaches very near, both in design and construction, to the engines of Messrs. Brown & May, of Devizes, which firm, however, are not exhibitors.

Messrs. Robey & Co. exhibit three portable engines, which are to be found in Messrs. Drysdale & Roberts's separate building. There is one 8-horse engine, and two of 12-horse power, one of the latter being provided with double cylinders. These engines bear evidence of that skill and care which characterize the work of their makers, and they have been long known in the Colony. The principal points to note in these engines are the absence of stays, and the jacketed cylinders, also the substantial and finished manner in which all the accessories, such as gauges and the other mountings, are arranged. There is a speciality in the construction of the valve-casings, as the end doors are removable to get at the slides. The regulator works through the fire-box over the fire-door; the gauge-glass has a protecting casing; there is a lock-up safety-valve, and a fusible plug in the fire-box. Not being encumbered with stays, the brackets for the main bearings

are made massive, and have wide feet, which saddle right over the barrel of the boiler. The under-carriage is of wood, and the wheels, which are extra high, are of wrought and cast iron, with round spokes or arms. The front plate of the smoke-box is flanged with a large radius, and finished in a way which adds to the appearance of the engine. The barrel only of these boilers is lagged; the feed return acts as a heater from the exhaust, and the engines throughout are a credit both to the designer and the constructors.

Besides the Robey portables described above, there are several fine specimens of their semi-portable engines driving the shafting of the Machinery Halls, which deserve notice, although they are not exhibited for competition. This kind of engine was first introduced by Messrs. Manning & Wardle, a firm known to many by their locomotives on the New South Wales railways. They showed a semi-portable engine at the Agricultural Show held in Manchester in 1869. The type has been adopted by many of the leading makers besides Messrs. Robey, and has very much to recommend it for compactness and efficiency. Messrs. Fowler have made the latest improvement in their engine of this description, exhibited at Kilburn in June this year, and which has already been before referred to. Fowler's new semi-portable is called the "Yorkshire" engine. It is made to work compound with two cylinders, and has balanced cranks and a channel iron sole-plate. It was run on trial, with $2\frac{1}{2}$ lbs. of coal per indicated horse-power.

It is to be regretted that Messrs. Fowler did not send one of these engines to the Sydney Exhibition, as although their ploughing tackle is a splendid exhibit, there would perhaps be twenty purchasers of semi-portables to one who wanted their ploughing set.

A semi-portable engine is exhibited by Messrs. Seekings & Ellery, of Gloucester, England, for whom Mr. John Plummer is the agent in Sydney. This engine is constructed as an ordinary portable, so far as having the engine proper on the top of the boiler, but the boiler itself is all contained in a cylindrical shell, which has feet attached, to enable it to stand and be bolted down. The construction is very solid and substantial; and as the barrel of the boiler and the cylinder are both lagged with narrow cedar or teak cleating, and secured by brass bands, the whole has a handsome appearance. It is suited for working in a front shop where it is wanted to be seen—such as in a grocery business or the like. The engine is fitted with a governor, and has all the usual mountings. From the facility with which these semi-portables may be put to work, they should commend themselves to many persons requiring small powers.

There is also a semi-portable engine by Messrs. Tangye Brothers, which consists of a "Soho" engine on the top of of a plain tubular boiler, set over a fire, and enclosed in an iron casing. It is called the "Colonial," and is well adapted to the country.

Messrs. M'Cormick, of Chicago, exhibit a portable engine, which has a self-travelling attachment; and is to be seen in the Machinery Hall, near Garrett's stand. If American machinery was to be judged of by this engine as an example, a very poor opinion would be formed of it, for it is one of the roughest jobs in the Exhibition. Many persons here have expressed an opinion that English firms were all behind the American in the construction of edged tools until this present Exhibition taught them better, but it would be unreasonable to say that good portable engines cannot be made in America because the only one to be seen at our Exhibition is not up to the mark. M'Cormack's portable engine is mounted on the top of the boiler, English

fashion, but it has a sole-plate formed of the exhaust pipe, to which the cylinder is bolted at one end, and which carries the main pedestal at the other; the shaft has an overhung disc for a crank, and its outer end is carried in an angular bracket, with patent metal lining. The feed pump is under the cylinder; the plunger, which has the same stroke as the piston, is connected to an arm extended from the cross-head. There is a little steam-chest on the top of the boiler, but it is in the way of the eccentric rod; the rod, therefore, has a set or kink of about 4 inches, to enable it to clear it. The boiler has a fire-box, with a wet bottom, and a door to close the ash-pit; the funnel is fitted with a spark-arrester; the smoke-box door is a clumsy and ill-fitted affair of cast-iron; and the mountings generally are, as compared with engines in the neighbourhood, of an infirm description. The carriage wheels are of wood, and appear to be the best part of the whole affair. To enable the engine to be self-propelling, a diagonal shaft is extended from the engine shaft to a counter-shaft under the barrel of the boiler, which shaft has a pinion to the driving-wheels. A bevel pinion slides on a feather to put the diagonal shaft in motion. There is some brake-gear provided, but it looks like a piece of country blacksmith's work. It is a pity there is not a better American portable in the Exhibition, but this one must not, therefore, be taken as a sample of American engineering, for there are American ploughs and other implements near to it which show more design about them and are infinitely better fitted up and finished.

Mr. Fleming exhibits a Canadian Champion portable engine made by the Waterous Company, which is worthy of a good deal of attention, for, instead of attempting to adapt the English model, the builders have hit out boldly and adopted an entirely novel design of their own, which must command admiration at once, if only for its originality. An examination into the construction of this engine will show that although cast iron is more freely used than in English practice, and although some arrangements may appear very different to what is seen on the best engines around, yet the engine altogether has many sterling qualities, and it appears to be well suited for farmers, or for other use in country districts. The leading features of the Canadian portable are a vertical boiler fitted with vertical tubes, and a large spark-arresting chimney, and also a horizontal engine, the frame or sole-plate of which forms the main connection from the boiler to the fore carriage. The cylinder is close to the boiler, and the crank shaft is over the fore carriage, a driver's seat being fixed just over the crank. The valve is of the rocking description as adopted in the vertical engine of the Waterous Company before described, and is worked by an eccentric in the usual way. The speed is controlled by a governor with three balls fitted on blade springs. The makers claim to have embodied a great number of improvements in its construction to make this engine worthy of the name "champion" which they have given to it; and it may be examined with advantage on account of its wide departure from the forms and arrangements to which we have been accustomed in portable engines.

Before concluding with steam-engines, notice should be made of the heavy intermediate crank for the s.s. "Maitland," exhibited by Mort's Dock Company, and made entirely by them from scrap iron. The Belgian cylinders were mentioned as the finest specimens of engineers' foundry work in the Exhibition. Richard Garrett & Sons, of Leiston Works, Suffolk, have the finest examples of boiler-work flanged by their "Piedbœuf" machinery, and Mort's Dock Company certainly show the finest single piece of engine-forging in the Exhibition.

TRACTION ENGINES.

Messrs. John Fowler & Co., of Leeds, have been among the leading firms in the old country to apply steam-power to ploughing, and they exhibit what is without doubt the most important set of agricultural machinery in the Exhibition. It consists of two traction and winding engines of 16-horse power each, two double-gang ploughs, two scarifiers, and a large waterhole scoop, of a total value of about £3,000. The firm also exhibit a smaller traction engine, which has a windlass gear on its side, and which, on several days of the week, may be seen at work in the grounds. Mr. Edward Combes is the agent for Messrs. Fowler.

The first self-moving engine seen at an agricultural show was made by the firm of Ransomes & Sims. The same firm also built a ploughing-engine for the late Mr. Fowler, which was exhibited at Salisbury in 1857. Messrs. Fowler are now among the leading makers of such machinery, and at Kilburn in July of this year exhibited a compound semi-portable engine, which brought the coal consumption down to 2·55 lbs., the best results ever yet recorded with non-condensing engines.

The ploughing engines of Messrs. Fowler will be found in the south-west corner of the Machinery Hall; the two large engines are alike, and a single description applies to both. On making an examination into their construction, one is at once impressed with the strength and solidity of the various parts, and the massiveness of the wheel gearing. So much trouble attended the early attempts to construct a successful traction engine that, in consequence of the continued breakages, a pitch chain was introduced by Mr. Thomas Aveling, of the firm of Aveling & Porter, of Rochester, and this gentleman perhaps advanced the traction engine to its present perfection more than any other person has done. His firm commenced by connecting the crank shaft of an ordinary portable engine to the driving axle by means of a common pitch chain.

Owing to recent improvements in the manufacture of steel, additional resources are at the command of the engine builder, and in Messrs. Fowler's traction engines the gearing is all of crucible steel. The 16-horse ploughing and traction engine has one cylinder on the top of the boiler at the front end. It is inserted in, and cast in one piece with the steam dome, carrying the safety valves on the top. The guide bars are of angle iron section; the connecting rod and crank shaft are of good portable engine design, but extra strong, the shaft being $3\frac{3}{4}$ inches diameter; this shaft carries on the left hand side a heavy fly-wheel 4 feet 6 inches diameter by 7 inches broad, which is turned and drives a belt if the engine is required to work a portable. Inside the fly wheel there is a bevel pinion, which gives motion to a vertical shaft for driving the ploughing windlass, and on the opposite end of the crank shaft there are the pinions for driving the traction gearing two different speeds. There are two intermediate shafts between the crank and the main driving axle. The main driving wheels are 6 feet 6 inches diameter, by 22 inches broad, the rim being made of two heavy T irons, $8\frac{1}{2}$ inches wide, with a flat bar, $5 \times \frac{5}{8}$, between them, all three rings being connected by heavy straps laid on diagonally and strongly riveted. There are eighteen flat-iron arms forged with T ends, and each riveted to the felloes on rim with four rivets. These driving-wheels run loose on the main axle, and are locked fast by means of pins 3 inches diameter, which can be easily put in or removed

as required. The main spur gear is on the left-hand side ; it is 5 feet in diameter, and 3¼ pitch of crucible steel ; the boss has holes to take the locking pins, and on the right-hand side there is a separate boss for the same purpose. The second motion shaft runs over the top of the firebox, and the third motion shaft with main pinion across the front of firebox near the top, the gearing being 2¼ and 2½-inch pitch; the brackets carrying these shafts are connected together with spectacle plates for the engine motion, and altogether form a most massive and effective piece of work. For driving the windlass the bevel gear is 2-inch pitch, the vertical shaft 3⅓ inches diameter ; the rope, drum, and driving-wheel, with their connections, revolve right under the barrel of the boiler, on a centre-pin strongly attached to the shell ; the barrel or drum is 4½ feet diameter, and takes ten turns on each coil of 2½-inch steel wire rope ; the spur-wheel is 6 feet diameter, 4 inches broad, and 2¼ pitch. To enable the rope to coil fairly on the drum, and prevent slack when running out, special ingenious attachments are provided. In order to give plenty of room for the windlass under the boiler the fore carriage is projected quite clear of the smoke-box ; the front wheels are 4½ feet diameter by 15 inches broad, and have each 12 flat iron arms ; the steering is effected by chains and worm gear, controlled by a diagonal shaft, leading up to the left side of the foot-plate, where there is a powerful hand-wheel.

To make this engine complete it is fitted with link-motion, governor, whistle, lubricator on the cylinder, and all the usual gauges and fittings ; the various levels are all brought up to convenient positions for the driver, who, without moving, can get at the regulator handle, reversing gear, cylinder cocks, and the clutch-handles for the pinions of either windlass or traction-gearing. A feed-pump is placed conveniently right in sight, in an unusual position, over the fire-box, and an injector is also provided at the side of the water-tank. The tender is carried at the rear of the engine, and forms a finish to its appearance. There is a large filling-hopper for the water, with strainer, and the bunkers are level with the foot-plate. A tool-box is provided on the front carriage, and a quantity of plates for attaching to the wheels, as anchors, &c., are carried in the tender. The engine is painted a dark green, black-banded, and lined out with yellow and red, which serves to distinguish the work from other makers ; it also suits its peculiar characteristics of strength and power, and does not make it appear too gay.

As these engines are the finest specimens of their kind which have yet come to the Colony, more length has been given to a description of them. A thorough examination will well repay not only the agriculturist, but also the engineer, the student, and the mechanic. There are many points to notice, such as the plug-holes on fire-box corners, where the bosses are forged on solid, and other details of construction ; the design and workmanship do credit to the firm which has sent them to New South Wales, and it is to be hoped that there will be spirit and enterprise enough among some of our leading agriculturists to keep the whole plant in the Colony.

The smaller engine of Messrs. Fowler is, as was mentioned above, occasionally shown at work in the grounds. It is not specially a ploughing-engine, but it has a drum for a wire rope on one side, which can be used for hauling purposes. The general style and finish of this traction-engine is similar to the larger engines before described. The slide-valves on the ploughing-engines are of the circular form recently introduced with so much success. The valve is the shape of a straw hat, and the body being held in a circular bridle, is

free to revolve on its face should there be more friction on one side than on the other. By this means the faces of both cylinder and valve are kept perfectly true, and much friction avoided. The ports are, of course, curved to correspond with the edges of the valve. Mr. Walter M. Noakes (Messrs. Fowler's representative) has charge of these exhibits.

CRANES, CRANE-ENGINES, AND ELEVATORS.

Next to the steam-engines, the most important exhibits of machinery appear to be the machine tools for working in wood and iron. The former are centres of great attraction to visitors, on account of so many being shown in operation. No single machine has probably had so much attention given to it since the opening of the Exhibition as the Priestman crane and dredger, and the American elevator is perhaps more largely visited than any other portion of the machinery.

Sir William Armstrong & Co., of Newcastle-on-Tyne, have sent out a set of the hydraulic machinery for which they are celebrated. It comprises a pair of direct-acting steam pumps and an accumulator, which supply water to work a portable wharf crane, a portable whip, and a small capstan.

The Armstrong pumps are about 5-horse power, and are fitted on a deep cast iron sole plate or box, which serves as a water tank. The workmanship appears to be first-class, but the general style and taste and the proportion of parts are inferior to the best modern engine practice, arising probably from the fact that there is not the competition in hydraulic work that there is in other branches. The steam cylinders have rocking valves worked by eccentrics, which have very heavy gun-metal straps. The connecting rods are formed of two separate turned rods, which are continuations of the bolts in the brasses. The valves in the pumps are easily accessible, and the brass couplings and connections all appear to be got up in good style.

The accumulator is erected inside a wooden framing about 30 feet high, standing against the end of the Machinery Hall; the ram is about 8 inches diameter and 15 feet stroke. (Armstrong's usual pressure is 700 lbs. to the square inch.) The loading is put inside the round iron casting which rests on the ram; and if the ram is 8 inches in diameter, or say 50 inches area, it would be necesaary to put 35,000 lbs. of loading to give a pressure of 700 lbs. to the inch.

The wharf crane has a pyramidal pedestal, which forms a case for the machinery, and runs on four wheels, and has screws at the angles of the bottom frame to take the weights off the wheels and fix the machine. The jib is of wrought iron, and has a rake of 25 feet, and from the opposite side of the crane post a heavy balance weight is projected. A vertical ram with multiplying sheaves works the lift, and two horizontal rams cause the crane to revolve backwards and forwards, but not continuously round in one direction.

The hydraulic whip has a large hydraulic cylinder with a ram 11 inches diameter, which is carried on an angle iron frame and supported on wheels; a $\frac{7}{8}$ chain is rove over the sheaves on the ram and cylinder, and acts on a barrel about 8 inches diameter; a large flanged wheel or pulley attached to the barrel winds up the whipping rope, when the pressure is put on. An inch or two travel of the ram thus lifts several feet by the rope.

The hydraulic capstan is constructed on the lid of a cast-iron box, which lid has a hinge and carries on its under side two water engines which work

the capstan by bevel gearing; when it is required to examine the machinery, the top plate with capstan-and-all turns up for the purpose. After the water is connected, the valves can be worked by the foot of the attendant acting on a circular plug in a hole of the plate. One of the principal features in this set of hydraulic machinery is the telescopic connections, and the swivel joints with which they are fitted, to enable the pipes to be led to the movable machines. The whole of these machines work on the same principle as the hydraulic cranes at Newcastle, but the machines themselves are new to the Colony, although there is no part that could not be made equally well in Sydney if required. It may not be generally known that there is a very complete set of hydraulic machinery at the sugar-works at Pyrmont, also that at Messrs. Young & Lark's warehouse, off Pitt-street, some hydraulic hoists are at work on the multiplying chain principle, and there are others on the more approved system of direct lifts without chains. An hydraulic lift with a stroke of nearly 80 feet has been made in the Colony, and erected in the new Office of the Department of Public Works, Bridge-street.

Adjoining the Armstrong hydraulic gear, Messrs. Priestman Brothers' crane may be seen at work nearly every day. Mr. Priestman has come out to Sydney with his exhibit, and has appointed Messrs. Blacket and Davy as his agents. The Priestman crane works a large bucket or grab, constructed on what is known as the clam-shell principle. The bucket consists of two quadrants of a cylinder, jointed at the centre to a horizontal shaft or bar, and connected by rods from their outer corners to a cross shaft and blocks; these blocks slide up and down in a guide frame of angle iron, which is connected to the centre or hinge shaft, and the connection of parts is made in such a way that when these cross shafts approach one another the lower lips of the bucket come together and close; but when the upper shaft rises in the frame (from the connecting rods being jointed near to the outer edges of the bucket halves), it causes the quadrants to revolve around the hinge centre and form a nearly half-cylinder with the mouth downwards. The centre part of the lower or hinge shaft has a barrel upon it to which the main or hoisting-chain of the crane is attached; the two ends of this lower shaft outside the barrel have short chains connected to them and to the upper shaft in such a way that when the lower revolves the short chains are wound up on it, the two shafts are drawn together, and the bucket is closed. The second or lowering chain is connected direct to the upper shaft, and, as a consequence, when the weight is thrown on to it the connecting rods are drawn up and the bucket opened. Both the chains are led through openings in the cross bar at the top of the main frame, and this serves to keep the bucket always hanging perpendicular.

Having attempted to describe the construction of the bucket, which is not understood by many who see it at work, the crane itself demands attention. So far as lifting the bucket is concerned it is an ordinary steam crane, with provision for throwing it quickly out of gear; whose special attachment consists of an additional chain, fitted with brake gear, and which, by means of sheaves, lifts a weight sliding in guides. These guides are arranged against the boiler, and the height of the guides and the multiplying power of the sheaves are so proportioned as to allow the descending weight to take in the slack of so much chain as is required for the depth the crane is to work at; or, to put it another way, the bucket in descending must be able to lift the weight, but the weight must be heavy enough to haul in the slack chain when the bucket is lifted.

If the foregoing description is understood, it will be plainly seen that the attendant has only to let go the hoisting chain and apply the brake to the other chain to open the bucket mouth downwards, when it can be lowered on to the material to be lifted. On the lifting gear being started, the hoisting chain is wound up, and causes the barrel to revolve and draw the two shafts of the bucket together until it is closed; when this is effected the barrel can revolve no more, and the bucket is hoisted to the required height. During the hoisting the slack of the second chain is taken in at the same time by the descending weights, the brake is then applied to this second chain, and the hoisting chain and gear let go, when the bucket opens and discharges its contents. This description is given at length, because the whole apparatus has been a great attraction since the opening of the Exhibition. It has shown itself to be of great value for such purposes as deepening channels for navigation, removing mud deposits near wharfs, and discharging cargoes of coal or grain, &c., &c. By substituting for the bucket what is called a grab, that is a bucket formed of strong pointed bars instead of plate iron, ballast or rubble stone can be picked up, and even holes be sunk in the solid earth. It is understood that several orders have been booked for departments of different colonial Governments as well as for contractors and private Companies.

Besides the Priestman crane, which is sent out by the enterprise of Tangye Bros., of Birmingham, Messrs. Blacket & Davy exhibit a small steam crane, worked by a Willans engine, a portable hand crane, and a gauntree or travelling crane; which machines are all of special value to contractors, and form a valuable exhibit.

The same firm also have at their stand, inside the machinery hall, a large and varied show of hoisting tackles, differential blocks, and other lifting gear; and the clip arrangement, by which a common block tackle is enabled to hold its load in any position, deserves particular notice, although it is not quite new.

Mr. Priestman himself is the actual exhibitor of the beautifully constructed working model of his crane just inside the machinery hall, and also exhibits the working model of Sisson and White's continuous chain pile driver alongside it. These models will probably be again referred to when considering the whole of the machine models.

The Whittier Machine Company, of Boston, have sent over from the United States an exhibit which is not only attracting a great many visitors, but is probably, at the present time, about the best-paying feature in the Exhibition. The elevator erected, and at work, in the northern tower of the Garden Palace is the exhibit referred to. Mr. Alonzo C. Seaver (Messrs. Whittier's representative) has come from America with their exhibits; which consist of a goods hoist or lift, for a warehouse, and the passenger elevator.

Elevators or lifts for warehouses have long been in use, but the passenger elevator is a much more recent development of civilization, which from at first being a luxury has now come to be a necessity with the lofty public buildings, business places, and hotels that are erected in large centres of population. During the last two years a great many hoists, worked respectively by gas, steam, and hydraulic power, have been put to work in Sydney, but, with the exception of a lift at the new Public Works Office, they have not been designed specially for passengers; and as a people require to be gradually educated up to an appreciation of the advantages which attend the use of lifts for superseding stairways in large buildings, Messrs. Whittier may be considered public benefactors for setting their elevator to work in Sydney.

The Whittier hoisting machine is called by its makers a "double-screw steam elevator." It is driven by a pair of crank-overhead steam-engines, which have their cranks or disc pins at right angles, and also have keyed on the shaft between the main frames a broad belt pulley or fly-wheel to drive the hoist. The hoisting barrel is of large diameter, and made of cast iron. Attached to the arms of this barrel on one side is a worm-wheel—or gear as our American friends call it—and this worm-wheel is driven by a worm on a counter shaft, which has a pulley to receive motion by the belt from the engine. So far the arrangement is similar to many worm-wheel hoists already erected in Sydney, but the Whittier machine has a second worm-wheel of precisely similar diameter and pitch, which is keyed on to a separate shaft, and driven by a separate worm on the same spindle as the worm for the first wheel. As the wheels, in order to interlock, must have the inclination of their teeth reversed, so, revolving in opposite directions, their driving worms must be respectively right and left-handed; in which way they tend to balance one another, and all end thrust and consequent friction on the worm spindle are avoided. The design is not new to Sydney; it having been arranged for crushing rollers; but it has not before, so far as we are aware, been applied to an elevator in the Colony, and although the double wheel adds to the cost, yet at the same time it adds to the security, and is a valuable improvement.

The hoisting drum is turned with a right and left handed spiral from the centre to the sides, for carrying a double hoisting-rope; the worm-wheels are of gun-metal, the worms are turned out of the solid metal, forged with their spindle, and the rope, which is one of the most noticeable features in the whole affair, is of fine steel wire, extremely flexible for its size and beautifully laid up. It must be understood that the engine (as in all worm-wheel hoists) has to be worked to lower the load just as much as to lift it, there being no such thing as lowering by brakes. The reversing of the engine is effected by shifting a valve contained in the slide valve chamber, which causes the ports to open to the opposite ends of the cylinder. The reversing valve is controlled by a steel wire hand-line, which passes right up through the car, and by this means the motion of the car can be stopped, started, or reversed at the pleasure of the attendant.

To prevent accident the machine is arranged to stop itself both at the top and bottom of the lift. This is managed by a screw, which is cut on the second worm-wheel shaft in the following manner:—The screwed shaft carries a wheel which is not keyed, and which as the screw revolves for lifting or lowering, travels to and fro, and is kept from turning with the screw through gearing into a similar wheel on a shaft below, which lower wheel is made very wide so as to allow for the travel of the upper one; the upper wheel has clutches on its two sides, and on the upper or screwed shaft on each side of this loose wheel there are two corresponding fixed clutches; these clutches are adjustable, and are so set that as the wheel screws along the shaft alternately in opposite directions, it comes into contact with one of them at the top of the lift, and with the reverse one at the bottom. The instant the upper wheel is clutched, it of course revolves, and by this means communicates motion to the lower shaft, stops the engine, and puts on a brake. As a further security against accident there is a loose wheel on the lower shaft gearing into a fast wheel on the screw shaft; which lower wheel has a clutch, with a great number of projections. A corresponding clutch, which slides on a feather, is actuated by a lever; it is instantly put into gear, and gives a motion to the lower

shaft, which stops the machine directly any slack occurs in the hoisting-ropes. For example, if anything should fall across the hatchway it might temporarily stop the descent of the cage, and the ropes would continue unwinding; but through the lever having a cross arm under the barrel, any slackness of the hoisting rope would come directly into contact with it, throw in the clutch, stop the machine, and prevent accidents from this cause.

The whole machine is well proportioned and well fitted up; the ornamental panels on the cylinders, and the fancy painting, indicate its nationality at once. The car is handsomely designed, and is built of ash, bright varnished, and fitted with carpet and seats. There are two balance weights, with separate ropes, as well as two hoisting ropes, and the car is also fitted with safety clips, in case such a contingency as a breakage of both the ropes should occur. This elevator is altogether a much more costly affair than any steam hoist yet erected in the Colony, and it is of course much superior in its appointments. There is nothing, however, about it that could not be made equally well in colonial workshops.

The warehouse hoist is similar in principle to the passenger-elevator, and the machine may be seen alongside; but instead of it having a reversing steam-engine connected direct, the worm-shaft in this case has fast and loose pulleys to take plain and cross belts from a main driving shaft, just as similar hoists are already driven in Sydney; but there is a special arrangement of the belt striking gear, by which the two belts are shifted independently of one another, somewhat similar in effect to the gear on the planing machine, by Sellers, in the machinery shed. A small charge is made for a ride in the Whittier elevator to the top of the tower, where such a magnificent view is to be seen as makes one wish to go yet higher. It is only necessary to add that Mr. Seaver has room on his drums for a 150-feet hoist, if it should be required.

There are probably few places in the world where a more pleasing and varied view can be obtained than from the top of the Exhibition building; and, judging by the way the elevator is patronised, it would have paid well as a speculation to have erected a special staging and lift in the grounds 200 feet high, as was done at Philadelphia.

As the passenger-elevator is worked by a steam-engine, it requires a steam boiler, which is erected outside, yet the Whittier machine can be managed to work with an explosive gas-engine by having a machine similar to the warehouse hoist.

Quite as useful a machine in its way as the last described, and belonging to a higher class of engineering than hoisting machinery, is the combined locomotive and crane exhibited by Messrs. Dubs, of the Glasgow Locomotive Works. Messrs. G. H. Royce & Co., of George-street, Sydney, are the agents for this splendid exhibit, which rendered great service, and was thoroughly tested by moving goods before the Exhibition was opened.

Messrs. Dubs are large makers of locomotives, employing about 1,200 men, and turning out about 100 engines per annum. The engine sent to Sydney is a speciality of the firm, and consists of a four-wheeled outside cylinder tank engine with a radial crane right on the top of the boiler. The crane is constructed with two cheeks of wrought-iron, and revolves on a centre which is saddled over the boiler barrel; the lifting motion is effected by a pair of engines inserted in the back of the crane, and which revolve with it; the steam is supplied by a centre pipe, and the regulating rod is connected through

the centre of this again by a most ingenious arrangement which enables the lifting motion to be controlled from the foot-plate. The radial motion is effected by a small separate engine on the right-hand side, which drives a worm gearing into a large wheel on the crane; this worm shaft is inclined, instead of being perpendicular to the axis of the worm-wheel, and thus enables the worm-wheel to have ordinary square teeth like a spur-wheel. One man can control the whole movements of the crane as well as the engine; and as the crane does not at all prevent the engine from doing regular work, it is necessarily a most useful machine. For loading or unloading goods in workshops, on wharfs, or at bridge-work, it would be of great service, and as an adjunct to a goods station it would be almost invaluable, as it can load waggons and then shunt them in their places. As these cranes are extensively used in the old country, there is no doubt they will be found desirable by the Railway Department here.

The general design and finish of Messrs. Dubs's crane-engine are all of that high class which is characteristic of British locomotive work, and Mr. Royce must feel proud of his exhibit, which, as a machine, is second to nothing in the whole Exhibition. A number of photographs of Messrs. Dubs's engines—including one made for Russia, and weighing, with tender, 74 tons—may be seen at the upper end of the machinery shed.

On the railway line between the machinery sheds there are four rails. The outer ones, 4 feet 8½ inches gauge, carry Mr. Royce's "Dubs" crane-engine last described. Inside these, two other rails carry the South Australian carriage, and a small Belgian locomotive, the latter being only 2 feet gauge.

This Belgian engine is from the works of the Société Anonyme de Couillet, and is in charge of Mr. Lodwidge, the Secretary to the Belgian Commissioner. During the early part of the Exhibition the little engine was shown on a pedestal in the southern nave of the Garden Palace, where it attracted a great deal of attention on account of the high finish of its details. The power is not great, as it is the second smallest sized locomotive the makers build; but it is said to be able to draw 16 tons on a level. This locomotive is a four-wheeled outside-cylinder tank engine, and is fitted with the "Waelshardt's" valve-gearing. Objection is taken to the engine by some visitors because it has no link-motion, but a valve-motion, which is not in use in Sydney, and one not easily understood without explanation; but it is possible that the gearing used may be more suitable for a small engine of this class than link-motion is; at any rate, many hundreds of locomotives on the continent of Europe have the same reversing motion, and the Fairlie engines also work with it. The special point in the valve-gearing on the Belgian engine is that one eccentric or crank-pin drives for both forward and backward motions, it being set at right angles to the crank; and the lead is given by a motion from the cross-head, which is constant, however much the engine may be linked up. This gear is all easily accessible for cleaning, and some of the parts are nickel-plated to preserve them from rust, &c. The mountings are very complete; the tanks are on each side of the boiler; there is an injector for the feed; the head of the chimney and other prominent parts are brass-banded, and altogether the little engine, which is named "Sydney No. 1,"—presumably out of compliment to the Exhibition—is a machine which seems well adapted for small private lines, and it should, from its moderate price, lead to the increased use of steam traction for bush saw-mills, mines, and other of our colonial industries.

STEAM-PUMPS AND FIRE ENGINES.

The most important class of steam-engines after the prime movers are probably the steam-pumps. Direct-acting steam-pumps are of quite modern introduction. The typical pumping-engine was for many years, and is still, perhaps, for water-works and sewerage-works, of the "beam" class; but the increased application of steam to pumping purposes, and the demand for machinery to cost as little and to occupy space as small as possible, led to the direct connection of the pump's piston with that of the engine. Steam-pumps are now made by hundreds and thousands, and of all sizes that are necessary to meet the varied uses and purposes to which they are to be applied; but there is hardly any other purpose for them in which so much skill, design, trial, and experiment have been brought to bear on their construction as in their use for fire-engines.

It is a necessity that a steam fire-engine should be as light as possible, in order that it may easily be drawn to the site of a fire, and it is necessary also that it should be able to raise steam in the least possible time. In America great attention has been given to the construction of steam fire-engines, and a few years back an American fire-engine by the Amoskeag Company was imported to Sydney. The makers, however, who are best known to British communities, and who alone are represented at our Exhibition, are the two London firms of Merryweather—whose agents are Messrs. Mason Brothers, of Sydney; and Messrs. Shand & Mason—represented by Messrs. T. J. Bown & Co., of Sydney. These firms send each one engine; and although they are not of the large and more powerful class, they are representative of each maker's peculiarities. It should be mentioned that steam fire-engines are now made which will give more than an indicated horse-power for each hundredweight of the complete engine. At the celebrated set of fire-engine trials which took place at Middleburg, in Holland, in 1864, Messrs. Shand & Mason obtained a gold medal for an engine which indicated 32½-horse power, and only weighed 32 cwt.

Although Shand & Mason have made steam fire-engines with as many as three steam-cylinders and pumps, the one sent to the Exhibition has only a single engine. The boiler is vertical, and is suspended on the centre line of the after axle, the axle being cranked round in front; gusset brackets from the boiler shell branch off diagonally to the springs to carry the weight; the bottom of the boiler is connected by a flange joint and bolts, so as to be easily removed for cleaning, which cleaning is of the utmost importance, on account of fire-engine boilers having such small water spaces and holding so little water, in order that steam may be quickly raised. The upper half of the boiler is all cased in a polished brass jacket, and with the chimney finished off to give it a polished appearance.

The engine has a single cylinder inverted, working direct to the pump below, the whole being bolted on to the front of the boiler. The cylinder-cover, with four connecting columns, the main bearings, and the pump seem to be all in one casting, and they are of gun-metal. The fly-wheel is worked by a slotted cross link on the pump and piston rods, and there are copper air-vessels fitted to both the suction and delivery sides of the pump. These makers adopted for many years the principle of the bucket and plunge for their pumps, the plunger being half the area of the bucket, to give a double-acting delivery with a single set of valves, but the engine under notice appears to have a double-acting piston pump.

To render the whole fire-engine complete, it is provided with a hose-box, and carries the suctions on brackets at the side; there is a driver's box over the front end; the stoking is performed from the back, and the fire-door opening is clear of the other gear. The carriage-wheels are of wood; there are lamps provided both for the driver on the box and the driver of the engine, and a complete set of mountings, including two spring safety-valves and a whistle. The feed can be taken by a pump or injector, both being fitted, and a separate connection enables water to be taken from the main pump delivery. The whole engine is fully equipped for work, and is painted the orthodox vermilion, lined with gold and varnished. There has been no intimation given of a competitive trial between the two rival engines, but perhaps such will be arranged before the close of the Exhibition.

The engine just described is in the Machinery Hall, but Merryweathers' engine will be found in the machinery department; it deserves a much better position than it has—almost buried up by its surroundings. Messrs. Merryweather were old established makers of fire-engines years before steam was introduced, but they early distinguished themselves by the performance of their steam-engines. Contrary to other makers, they adopted at the outset a horizontal position for their engine and pump, and they still adhere to it. This firm make engines with two pumps, but their present exhibit is single, and has a stroke of 18 inches, there being room for greater length of stroke when the working parts are laid horizontal.

The Merryweather fire-engine is a fine-looking piece of machinery; it appears less complicated than its rival, and more suitable for country towns; there is less gearing, and no crank shaft or fly-wheel, although no less an authority than John Bourne, when describing fire-engines in one of his works, says "All Merryweather's engine wants is a fly-wheel, and the sooner they put it on the better," yet continued experience enables the makers to do without it. Hundreds of effective steam-pumps do well without fly-wheels, and as their engine undoubtedly works well as it is, it is all the better for its simplicity. On one of the air-vessels there is engraved a list of twenty-four medals and prizes which Merryweather's engines have carried off.

Among the principal points to note in the Merryweather fire-engine is the adoption of the "Field" boiler with a conical bottom, the top of the boiler and chimney being all brass cased and polished; the centre of the boiler is a little abaft the centre of the hind wheels; the weight is hung by a solid forging connecting the boiler to the angle-iron frames leading to the fore-carriage, such forging having projections to connect to the springs.

The valves are all under the level of the pump, and all the water can be drained out,—an important point in countries where it would freeze and do damage, but not of such consequence in this climate. The fore-carriage has a forged locking-plate, with cross arms to the springs. There are air-vessels to both suction and delivery. There are four lengths of vulcanized India-rubber suction hose 4 inches in diameter, one 4-inch suction branch, and two 3-inch deliveries. The engine-valve is worked by a twisted or spiral rod, which is caused to revolve by a projection on the cross-head; and all eccentrics or rotary motions are dispensed with. There is a very complete set of mountings and fittings, including both injector and feed pumps connected, and the general appearance impresses the visitor that it has a more solid, substantial, and business-like appearance than the other engine.

A hose-box is attached over the pump and engine, and on the front end is a driver's seat; at the back end there are the necessary coal-boxes, and a grating in front of the door; there is a canvas cistern, and the usual necessary equipment to make the engine complete. If these two engines are of equal cost, it would be most interesting to have them compared, and it is to be hoped that something of the kind will be done before prizes are awarded.*

The most important steam pumps after the fire-engines are the "Blake" pumps and the "specials," the former of which are shown by Mr. H. S. Smith, for Messrs. Gregory, of San Francisco and Sydney, and the latter are to be seen among the Tangye exhibits, at Messrs. Blacket & Davy's stand. The special pumps of Messrs. Tangye are so well known that a description here seems almost unnecessary; but as there are hundreds of people using the special pumps who do not understand how the steam valve is operated, it is therefore well to describe their peculiar construction. In general form the special pumps are similar to many other direct-acting and non-rotative pumps, the steam cylinder and pump barrel being con-axial, and having one rod connecting the steam and water pistons through two stuffing-boxes; at each end of the cylinder there are little piston valves which have a tail that is struck by the main piston at the end of the stroke; these small pistons cover ports having passages leading to a subsidiary cylinder connected with the main valve; as the main piston approaches one end of the cylinder, the space in front of it is, of course, open to the exhaust, and when the small valve is opened an exhaust connection is made to the motive cylinder of the slide valve, and the valve is thus moved. The object of this arrangement is to save the great noise and shock which attended the action of the early types of direct-acting pumps, where the piston, or a projection from the piston-rod, had to shift the slide valve bodily, as it does in some small pumps even yet.

Messrs. Tangye's improvements must have been appreciated by the pump-purchasing public; for, in a recent advertisement of the firm's, it is stated that there are 12,000 special pumps in use, meaning, it is presumed, that they have made and sold that number of them.

Messrs. Tangye make their pumps to work in a vertical as well as horizontal direction, and they also make them with various forms of valves to suit the material to be pumped. The "Holman" patent valves used by the firm have had a great success. At Messrs. Blacket & Davy's stand special pumps may be seen fitted up complete, with a boiler, all on one sole-plate.

The Blake pump is made both in England and America, and has also had an immense success. It is perhaps made in a greater variety of forms than the special pump is. It is applied to mining, hydraulic, and fire-engine purposes, as well as to work lines of oil mains. Messrs. Gregory exhibit two small and two large pumps, made by the Blake Manufacturing Co., New York and Boston.

A noticeable feature about the Blake pumps is the ease with which the different valves and casings can be removed; the striking gear by which the valve for the steam cylinder is worked is in the large pumps made to extend right through the covers, and work the subsidiary valve motion by the intervention of a lever. These pumps have had such an extended use that their efficiency has been established beyond all question.

Another American pump, and one which deserves very particular notice is the "Niagara" pump, which is made by Charles B. Hardwick, of Adam-street, Brooklyn. The "Niagara" is a most efficient pump, and has been known to

* This was done.

pump oil when it was almost as thick as butter; a special feature in the "Niagara" is the arrangement of the four pump-valves in a circular chamber, in such a way that by removing only one nut a cover can be taken off and all the valves taken out and examined. A second point in the "Niagara" is the value of the steam cylinder and the way it is worked. The main slide valve has a small cylinder cast on its back, and the piston is fixed by the rod being continued through both covers of this cylinder, and fitting the ends of the valve casing; small ports and passages are made in the valve face and cylinder face, which admit steam to the ends of the slide cylinder, so that as the piston is fixed the cylinder and with it the main slide valve have to move when they are open. A projection from the piston and pump rods moves a rocking lever which, at each end of the stroke, strikes a stop on a segment; this segment is attached to a rocking shaft, and the rocking shaft passes into the main valve chest through a stuffing box, and has on the inside a finger which works a small subsidiary slide valve. The subsidiary slide valve works alongside the main slide, but has no lap, the consequence is that steam must be turned to one end of the main slide or the other when the little valve opens, the minor ports communicating with the cylinder on the main valve; the pump can be thus run as slowly as desired, for the instant the little valve is touched (and it requires scarcely any power to do so) the stroke reverses. The specimen exhibited appears well got up, it has a cast-iron air-vessel, and is painted a dark chocolate, and lined out in vermilion, which is all very well, but there is a bit of transfer picture work on it such as is now commonly seen on carriages of various sorts, and which is a step lower than any of the English houses appear to have descended to in the decoration of their machinery; the copies of prize medals which are so conspicuous on the portables and other machines are for other purposes than decoration.

Gillett's steam pump may be seen at work close to Messrs. Ruston and Proctor's portable engines. It is a direct-acting plunger pump having the pump below the cylinder, and carries a crank-shaft and fly-wheel underneath all—one of the main bearings being on the bottom of the pump and the other on the main plate. The connecting-rod is formed in a pear-shaped bow, which enables it to surround and keep clear of the arm by which the pump is supported from the main plate. The slide valve is worked by an eccentric in front of the pump and overhung, and a small milled screw enables the slide to be adjusted. The suction-valve is in a separate chest attached to one side of the pump, but the delivery-valve is in the main casting, which acts as an air-vessel, the discharge pipe coming out of the top of it.

Among the splendid collection of engineers' fittings shown by Messrs. Schaffer & Budenberg, and who are represented by Mr. Arthur Wormall, there is a fine little steam-pump, similar to Gillet's last described, but better finished. The connecting rod in this instance is arranged to work in the same centre line as the cylinder and pump, and this is an improvement; both valves are contained in the main column, and the whole is well finished. This engine is carefully bolted and secured to a timber upright; if it could drop from its present position straight through the earth, and come out where it was made, it would then perhaps be the right way upwards; but now, although carefully fixed, it looks upside down, and from the position of the oil-holes it appears as if it would be difficult to lubricate it properly if it was to be set to work.

Messrs. Mort & Co. exhibit a "Grindle" pump of their own manufacture, being licensees of the inventor. This is a rotary pump, after the style of

Root's blowers and other kindred inventions; in it two separate wheels revolve in a chamber, but one makes two turns to the other's one, and the projections interlock and draw the water through. All these kind of pumps can be run at a high speed, and will draw water without a foot valve; for working at a uniform depth it is claimed for them that they are as economical and useful as centrifugal pumps. They can be started without requiring to be charged, but they do not adapt themselves like centrifugals to the varying height of their work, as they pump a certain fixed amount per revolution. Messrs. Mort's pump is driven direct by a small steam-engine, and the whole is erected on one sole-plate; the gear wheels are of gun-metal. This would be a good pump to try against the pulsometer in the grounds if two small and exactly similar boilers were put to work them. The Grindle pump is well finished and tastefully painted.

Messrs. J. & H. Gwynne, of Hammersmith, exhibit some of the centrifugal pumps which have made their name famous world-wide. One of them is worked by a direct-acting inverted cylinder engine, the whole being arranged on one sole plate. Messrs. Gwynne make their direct-driven centrifugal pumps in a great many forms. In some cases the engines are horizontal. They are continually introducing improvements, and one of the latest additions is a small exhaust attachment for enabling the pump to be charged and started without all the trouble of filling up with water above the foot-valve, as is necessary in the ordinary centrifugal pumps. This improvement is to be seen on one of Messrs. Gwynne's pumps alongside the direct-driven one; and the same pump has other peculiarities in being made without a joint on the centre-line, the casting being all in one piece with a centre-door for putting in or removing the vanes. There are two firms of Gwynne & Co., whose pumps are well known in the Colony. The older house of Essex-street, Strand, London, does not appear to be represented. The engine referred to is by J. & H. Gwynne, of the Hammersmith Works, and 89, Cannon-street, London. One special feature in its construction is that the pump is all overhung from the sole-plate, being connected by one side only, so that the other side can be taken off without pulling the affair to pieces; and this improvement will be much appreciated by those who have occasion to use these pumps, whether for sheep-washing, dock, foundation, or other purposes. The cylinder is supported by a massive cast column springing from the foundation, and having slipper guides on its face; the cylinder is overhung, and is further stiffened by a wrought iron turned column in the front. A fly-wheel on the opposite end of the crankshaft enables the pump to be turned by hand for starting.

The steam-pump, which has been latterly the most prominently put before the public by advertising and in other ways, is undoubtedly the invention known as the "pulsometer." Although some of the principles involved in the working of this pump were set forth by Solomon de Caus, a native of Normandy, as far back as 1615, they were not then put to any practical use, but in the "Century of Inventions," published in 1663, the Marquis of Worcester describes a working machine which forced water by the pressure of steam acting directly on its surface; and in 1698 Captain Thomas Savery obtained a patent from William III. for a similar machine. In 1702 Savery published a small work called the "Miner's Friend," in which he gives an account of a machine which is to all intents and purposes the modern pulsometer, with the small but most important difference that the pulsometer is self-acting when once started, whereas in Savery's fire-engine the valves had to be worked by

hand. A description and drawing of Savery's engine will be found in many works on the steam-engine. It was supplanted by the Newcomen, and afterwards by the Watt engine.

The pulsometer is the invention of Mr. C. Henry Hall, of Berlin; Captain Wagemann, of Melbourne, is the Australian representative, and Messrs. Drysdale & Roberts are the Sydney agents. The machine consists of two chambers, each in the shape of a long pear, and placed alongside one another. They are cast in one piece, with an air vessel and the valve chambers. A steam-pipe is connected to the upper or small end of the pear-shaped chambers, where there is a valve which admits the steam into one and the other alternately. In the original form of pulsometer this valve is a ball, and it is a ball-valve which is used in a pulsometer working in the engine-room of the s.s. "Orient" but the pulsometers at the Exhibition have a flat valve, resting on its bottom edge in a V-shaped chest above the necks of the chambers. This valve is faced on both its sides, and the inner faces of the V being also faced, and having a port in them, the valve falls over from one side to the other and alternately opens and closes the passage for the steam to get in the bottles or chambers. Each chamber has at the bottom or large end a valve opening inwards from the suction-pipe, and another one opening outwards to the air-vessel and delivery. When steam is turned into a cold chamber it immediately condenses and pulls over and closes the steam-valve by forming a vacuum; this vacuum causes the water to flow into the chamber through the suction-valve until it is partly full; at the same time the steam has been operating in the other chamber, expelling water, and condensation then taking place, and forming a vacuum at the time the first chamber is charged with water, the steam-valve is caused to fall over and admit the full pressure of steam on to the surface of the water in the charged chamber; this pressure then expels the water through the delivery valves on that side, and the steam becomes again condensed, the action is reversed, and so the machine works continuously and automatically. The great advantage of the pulsometer lies in the fact that no engine whatever is required, and no foundations. They have been worked slung by a chain down a mine, only requiring a boiler and the necessary pipes. It cannot be claimed for them that they are as economical in the consumption of steam as pumps where an expansive engine is used; and there appears to be room for improvement in this direction. For such purposes as pumping out quarries, foundations, sinking wells, emptying sunken ships, and other places, where a plant is required to be got quickly to work as a temporary measure, they appear to have many advantages over other forms of pumps. The alternate pulsation of the ball or valve opening and closing the admission of steam to the chambers, and the consequent filling with water and discharging, give to the machine its very appropriate name, as it measures off a certain quantity of water every pulsation. It must be noted that whatever valve is used for the admission of steam to the necks of the chambers, it must be able to be moved over very easily from one to the other, as it has to be affected by the pulsations caused by the varying pressures in the chambers themselves.

Close to the Clayton & Shuttleworth portables, and now being driven by one of the Postlethwaite engines, there is a Belgian pump of quite a new design; it is called a rotative pump—*à plateau ondule et glissière*—system of Victor Ortmans, and is constructed by Van Goethem, W. Reallier & Cie., Brussels. In external appearance this pump resembles a centrifugal, the inlet

being horizontal and the outlet vertical, and both opening in the centre or joint line, right into the main chamber at right angles with one another. In the intervening space of 90 degrees there is a kind of valve-box, with a cover, which has an arrangement for preventing communication between the suction and delivery direct. The disc revolves so as to carry the water round three-quarters of a circle, from the suction to delivery pipe, and consists of a central boss about one-third of the whole diameter, which fits the casing on each side; and this boss has a web or plate around it, forming the pumping disc, which is waved or corrugated in such a way that it touches one side of the casing in two places, forming a diametral line, and touches the other side in a similar way, but in a line at right angles to that on the opposite side. This curving thus forms four pockets, two on each side, which carry the water round. In the valve-box between the pipes there is a square slide block, which can play from side to side ; and this block is bored to take a circular revolving block, which has a slot embracing the waved web or vane; such block also extending down to the central boss. From the foregoing description it will be understood that, when the pump vane or disc revolves, the circular block oscillates as the waves of the disc pass through it, and the square block at the same time slides to and fro ; but that no water can get back through them. This pump, unlike a centrifugal, delivers a definite quantity of water per revolution, and certainly appears preferable to the majority of the rotary pumps which are brought out. The pulleys seem large for the size of the pump, but only a moderate speed is necessary, as it can be made to deliver water at a much slower relative speed than is required by a centrifugal. Another advantage for many purposes is that the speed and quantity of water can be reduced without danger of losing the water entirely, as is the case with centrifugal pumps, which must have a considerable speed to deliver at all.

The same makers (Van Goethem W. Reallier & Cie.) also exhibit a 36-inch Sugar Centrifugal Pump, and Mr. Clement van der Velde is the agent for both machines. This centrifugal is over-driven by a countershaft, which has a disc working against a leather roller on the basket spindle ; a blade spring pushes the countershaft on end, and puts the driving gear in contact; and a screw and wheel at the other end throws it out and stops it. It is a pity that the driving gear was not made with the true form of cones on bevel wheels, as there must be a great loss, less driving power, and more wear and tear of the leather discs of the pinion with the flat disc and parallel pinion as made. With this exception the machine is of a first-class design, and good workmanship, and it looks both handsome and substantial. The top plate of the casing is bolted on to get out the basket, and is finished with a bold moulding. The castings are good, and the countershaft runs in adjustable bearings.

WOOD-WORKING AND MACHINE TOOLS.

The machine tools at the Exhibition form a large and interesting collection. There has never before been such a variety of them brought together in the Colony, and both iron and wood workers may learn a great deal from their examination. One great disadvantage, however, is attached to the Exhibition in Sydney that would not apply with such force at the larger displays held in Vienna, Philadelphia, or Paris, and it is this : The exhibits are selected and sent by their makers, who may or may not be representative men in their own

countries, and a very superior machine for a particular kind of work might be shown by an exhibitor, say, from Germany, while only a very cheap or inferior one of the same kind would be sent from America, and this would lead a great many persons to the erroneous conclusion that American machines in that line were not good simply because a high-class one was not shown in the Exhibition. As an illustration, there are machine tools for working in iron exhibited by a well-known American maker of accurate and high-priced articles, but no English makers of corresponding position in the same line are exhibitors, although there are plenty of English machines shown which are good in their way, and perhaps better adapted to the general wants in the Colony. Again, on the other hand, there are no English wood-working machines so cheap or so common as some that have come from America. It is therefore necessary to bear in mind that work, both high-class and low, is turned out in all the principal countries where such machines are made, and that without extended experience it will not be safe to make comparisons as to the relative merits of lathes, planing machines, saw benches, &c., as made in different countries, solely upon the specimens now exhibited in Sydney. In the Great Exhibitions at Philadelphia and in Europe, where the collection of machines was so much larger than here, there were better opportunities for classification. Here many leading makers of machine-tools are totally unrepresented. Wood-working machinery occupies a very prominent position as an attraction to the Exhibition on account of so much of it being shown in actual operation, and it thus engages the attention of many persons who are not specially interested but who are drawn by curiosity or otherwise to watch its working. There are between seventy and eighty wood-working machines to be seen, without counting small gear such as saw spindles, lathe heads, mitre cutters, &c., and of this number about thirty are shown in actual operation—sawing, planing, moulding, and so on.

To commence at the actual breaking down of the tree in the bush or forest, we must go to Mr. Fleming's great show of Canadian machinery in the Machinery Hall, as he is the only exhibitor who has a machine for taking timber in the log. His machine is called the "Portable direct-action Steam Saw-mill," and is made by the Waterous Engine Works Company, of Brantford, Ont., Canada, and is of 20-horse power. This make of mill was shown at the Chili Exposition in 1875, and also at the Centennial Exhibition at Philadelphia, in both of which places it gained very high honours and medals. The special features in its construction are the employment of a horizontal engine, with a crankshaft coupled direct to the saw-spindle, the use of friction wheels for the feed and gig-back, and the method of holding the logs and feeding them forward for a fresh cut, in all which points there is a wide departure from the practice general in this Colony, and there is no belting used except for the cone-pulleys of the feed gear.

The Waterous portable saw-mill is driven by a boiler of the locomotive type, and has a very large fire-box to enable sawdust or refuse to be burnt; there are thirty-eight tubes, and an iron funnel, set on the smoke-box; a cast-iron front carries doors for the fire-box and ashpit, and an iron tressel supports the smoke-box end. The engine is fixed alongside the boiler, and all on one timber framing. The diameter of the cylinder is 10 inches, and the stroke 10 inches also; the crank-shaft extends under the barrel of the boiler, and has an outer bearing on the other side, an overhung coupling enables the saw-spindle to be connected direct. As the

engine runs at a very high speed the feed-pump is driven by a belt from a small counter-shaft, which reduces it to a moderate number of strokes per minute. The engine has the circular valve, as before described, on the Waterous portable engine, and is fitted with a governor and regulator valve. The connection to the throttle valve is led to where the sawyer stands, so as to be under his control without moving; the crank-pin is set in a disc, and it is just possible that if this disc was heavier, and counter-balanced for the weight of connecting, &c., the engine would vibrate even less than it does when running full speed. The saw-spindle and feed works are all contained in one cast iron frame, so that it only requires to be bolted down to go to work. The feed and gig-back are worked by one lever, which lever brings a large pulley on the feed-shaft in contact with a small one on the cone speed-shaft for feeding forward, and into contact with an idle roller running against a large pulley on the saw-spindle for the gigback. The forward feed can thus be varied, but the quick return is always the same. The arrangement for dogging the logs is specially deserving of notice, as the log can be brought up to the saw for the last board. The log-seats slide transversely on the carriage, and are worked by a shaft extending fore and aft. This shaft is worked by a ratchet and lever, which has a handle extending right over the log into the sawyer's hand; there are reverse ratchet wheels with pawls to each, and a twist of the handle will drop one or the other of the pawls into gear. By this means the sawyer, when pulling the handle backward or forward, can make the log approach or recede from the saw. A roller is provided for a fence which can be used if boards all of one thickness are wanted, and the face of the log is brought up to this roller fence after every cut, until the whole is sawn into boards; but for varying thicknesses there are inches and divisions cast and marked on the carriages. In this arrangement of saw-mill, the sawyer stands on the opposite side of the saw to what he would with an ordinary bench, he having the saw-spindle, feed-gear, and fence all alongside him, and bringing the log towards him after every cut. Mr. Fleming shows this machine at work with a 52-inch saw fitted with loose teeth, and certainly does some good work. For an example of speed the Waterous Company have a certificate that five logs were sawn into 1,404 feet of 1-inch lumber in 30 minutes with one of these tools. The general practice in this Colony is in opposition to that in America, as here frames are used for breaking down, probably because they are found to suit the colonial timber better; but Mr. Fleming has had one of his mills at work at Kangaloon for some months now, and it is reported to be doing very well on Australian timber. In order to keep the kerf open there is a steel roller wedge in advance of the saw, and the whole machine seems well adapted for its work. The numerous testimonials which the Waterous Company have received show the high appreciation in which their mill is held for the woods of Canada and other places. Mr. Fleming has not been afraid to test it on the hardest of our hard woods during its run in the Exhibition, and it stood the trials well.

Two very ingenious machines for sawing and edging shingles are exhibited near the saw by the same makers. The galvanized iron age of building has nearly driven shingles out of the market, but as in Brisbane there is a reaction setting in again in favour of shingles, the same will probably happen here; and there can be no question that for comfort and health a shingled roof is much better adapted for living under in this climate, and if shingles are made of uniform size and thickness, as is done by the machines under notice, they will

make a much better looking roof for cottage purposes than the iron we are having so much of just now.

Messrs. Thomas Robinson & Son, of Rochdale, whose engine has been already noticed, show some fine specimens of their wood-working machinery, their exhibits being a circular saw-bench, a band-saw, a planing machine, and a set of small grinding stones for setting moulding irons.

The Robinson circular saw bench is of very special construction, and is the first of its kind introduced into the Colony. The table is 6 feet by 3 feet, and the spindle takes a 42-inch saw; there is an ordinary rope feed driven by cone speed pulleys under the table; but the special feature in its construction is a continuous side feed arrangement attached to the fence. The main body of the fence supports a vertical shaft which is driven from the cone speed-shaft under the table by means of worm gear; on the top of this vertical shaft there is a spur-wheel, and a radial arm also works from it carrying an idle wheel on its centre, and a third wheel at the end of the arm; this third wheel is keyed on a short spindle which extends from the arm down to the table, and has a serrated feed-wheel or roller at the bottom. The effect of the above arrangement is that any sized piece of timber up to 14 x 7 can be placed on the table against the fence, and the lever or arm with the serrated feed-wheel can be brought to bear on it, and feed it forward at a speed adjustable from 15 to 60 feet per minute. In order to reduce the friction the face of the fence is fitted with rollers for the timber to run against, and there is a plain roller at each end of the table; the lever carrying the feed-roller is kept up to the fence by a weight, and the fence itself is adjustable by means of a rack to the size of saw that is being run, as well as adjusting for the thickness of the cut. The idle wheel on the feed-arm is only for the purpose of keeping the centres of the vertical spindle and the feed-spindle wide apart without having to use large gear wheels. The saw spindle has lock nuts to take up the end wear of the bearings; the pulleys are 12 by 6½; the belt is shifted by a screw and hand-wheel, and a special arrangement prevents the feed-rollers from coming into contact with the saw. The table, frame, and the brackets for gearing are all cast in one piece, and the work is good and substantial. The whole machine is adapted for cutting square or junk timber. It is not like the last saw described, suitable for breaking down, or for the general run of colonial saw-mill work, but is admirably adapted for jobbing work with Oregon or such like timbers, and should be appreciated by builders, carpenters, or contractors, for whom it is specially suited.

Messrs. Robinson's bandsaw has 36-inch pulleys, and a canting table 42 inches square, with regulating quadrant, and it is perhaps the strongest and most solid-looking machine of its size that is shown; the pulleys are 10 inches in diameter, and the belt is shipped by a wheel and screw to prevent sudden starting and breaking of the saw. There are no flanges to the pulleys; friction rollers take the pressure of the saw; the tension is kept up by a hand-wheel and lever; the main casting is of the box section, and of a pleasing design, and altogether this bandsaw is a first-class tool for the work it is intended to do.

Robinson & Son also show a set of grinders having three stones and three composition wheels, all mounted on one spindle, in a neat frame, fitted with water-tank and brass taps, complete and ready for work. The same firm also have a four-cutter moulding and planing machine, which is a very strong and well fitted up job, and which can, as may be seen by the work actually performed in the Exhibition, turn out first-class work. This planing machine

has all the gear inside the frame, and no overhung table or heads. The special features are the coned ends to cutter block bearings, the canting of top cutter frame to taper work, such as heavy architraves, the arrangement of levers and weights to keep the work in its place, and the method of driving the feed-rollers. The whole of the hand-wheels and screws are handy for the attendant, the counter-shaft is all contained on the one frame, and the frame itself is of strong and modern design. Altogether, it is a first-class little machine, and is a great improvement on machines by the same firm, which are already in Sydney.

Messrs. Robinson & Son claim to be among the largest makers of wood-working machinery in the world, and during the last few years their productions have greatly improved both in general design and efficiency.

Up to within the last few years the wood-working machinery used in the Colony, with the exception of colonial made saw benches and frames, was of English construction. During the last eight or ten years there has been direct communication with America by the Pacific mail service, and the introduction of American machines has been favoured. As they have been shown to be well adapted to the requirements of the Colony, American planing, mortising, and other wood-working machines have been imported in large numbers, especially from the firm of A. J. Fay & Co., of Cincinnati, Ohio.

Wood-working machinery has wonderfully increased in importance and efficiency since the construction of the historic set of block-making machines for Woolwich, under Sir Samuel Bentham and Brunel in the year 1800, and in its development the construction and design have been led by local requirements and ideas to acquire a distinctive character in the leading countries where it is manufactured. Until lately there was no literature, so to speak, relating to wood-working machinery, but the United States Government appointed a special commission to the Vienna Exhibition to report on the machinery there, and a most valuable book was the result; and for the first time the merits and peculiarities of English, American, French, and German machines were compared. Subsequently, at Philadelphia and Paris, there have been very great and important shows of wood-working machines, and the consequence, as might have been expected, has been to destroy many of the distinctive features and assimilate the practice in different countries, many makers since adopting the special excellences which they saw in the principles of rival machines. For instance, English machines have, from the first, been distinguished by their solidity and the quality of the workmanship in their fitting up. The London firm of Powis, James, & Co., it is believed, first introduced the system of casting the framing and table of saw benches and moulders, &c., all in one piece. American machines have, until quite recently, been constructed with very slight and weak frames, and generally in a cheap and common way; but they have often had more refinement and general adaptability in their actual cutting arrangements. In the present Sydney Exhibition there may be seen American tools with all the refinements of their kind, but also constructed on thorough English principles as regards their framing; and the tendency is, no doubt, for the design of the machines to become more uniform in the several countries where they are made.

In England wood-working machines have been mostly used by capitalists and companies, and there was every reason why a strong, substantial, and durable machine should be made. In America, where there is a continual advance of civilization, and the homes of pioneers have to be continually

pushed forward over the primeval prairie and forest, it was necessary that light and cheap machinery should be introduced ; if it only lasted a few years the consequence was not great, for by that time the outpost might have become a city, and a hundred new machines might be working where the original one was set up. There is still a great deal of ignorance and also some prejudice in Sydney as to the relative merits of English and American machinery. For small capitalists, and where a machine may have only temporary employment, no doubt the lighter class is better adapted, but for solidity, permanence, and continued work from year's end to year's end, the more substantial make of machine is the one to use.

Messrs. M'Dowall & Sons, of Walkinshaw Foundry, Johnstone, near Glasgow, have sent out a collection of some ten machines, and Mr. M'Dowall, junior, has come to Sydney with the exhibit. This firm has erected a complete set of shafting, so that the whole of its machines can be actually worked, and it makes the largest show of machinery in motion in the whole Exhibition. Messrs. M'Dowall exhibit a most compact little sawing-machine, and great ingenuity is displayed in getting the whole into so small a compass. It is intended for sawing deals into boards, and is greatly used in the United Kingdom, where so large a proportion of the timber is imported in the form of deals. But the principal pine trade of Sydney is the colonial pine, which comes into port in log or in boards, though there is some business in Oregon and New Brunswick timber done, as well as a little Baltic sometimes, but not enough to make a demand for such a machine as the one under notice. It should, however, be a useful little tool for re-sawing cedar, and making thin stuff.

Casson's patent saw-bench is also a machine that is not specially adapted to the wants of the Colony, but, like the circular bench of Messrs. Robinson before referred to, is more suitable for carpenters, builders, and contractors for re-sawing junk. In Casson's saw the feed is effected by a vertical spindle, having a serrated feed-roller, which works against the side of the timber to be cut, and keeps it against the fence ; this feed is carried on a projecting arm or radial lever, but instead of being attached to the fence, as in Robinson's saw-bench, it projects from a vertical column on the front of the table. A vertical shaft extends up the column, and is driven by gearing from below ; this shaft has on the top a pitch-wheel; the feed roller spindle at the end of the lever also has a pitch-wheel, and a pitch-chain of ingenious construction communicates the motion from one to the other, and also allows the arm to be swung round to take different sizes of timber. The whole is well fitted up, and is a good specimen of machine construction ; but it is too complicated, not fitted for cutting edgings or slabs, and in other ways not particularly well adapted for the general wants of this Colony. It is, nevertheless, a tool that would be very valuable for the work for which it is intended.

The four-cutter planing and moulding machine of Messrs. M'Dowall's fully sustains the high reputation which the makers have attained in this branch of engineering. The samples done in the building show the excellence of the work which it is capable of turning out, and prove it to be a most useful machine, and one well adapted for colonial timbers.

The mortising and boring machine is also a most serviceable and useful tool, strongly built, and adapted to work either hard or soft wood.

The curvilinear moulding machine consists of a cast iron table, having two vertical spindles which project above its surface, and carry cutters suitably

shaped for the moulding that is required ; these heads are rotated in opposite directions at a velocity of about 4,000 revolutions per minute, and produce beautiful work, as the timber can be changed from one head to the other, so that the cut shall always be with the grain of the wood.

The surfacing planer is a machine designed by Messrs. M'Dowall for planing wide work, such as panels. It will operate on boards up to 24 inches wide.

The tenon machine, one of the most useful tools for the joiner, is fitted with all the most recent appliances for cutting the tenon and scribing it to its work.

The bandsaw sent by this firm is considered by many persons to be the finest one in the whole building (and bandsaws are well represented) ; it has large pulleys, is very strong and massive, and yet runs with ease ; a delicate saw, less than $\frac{1}{8}$-inch wide, has been used in it. Since the opening of the Exhibition the bandsaws have been centres of attraction, from the number of curious forms into which blocks of wood are cut, and which are purchased by visitors as mementoes, or for puzzles, &c. In this branch of business M'Dowall's saw has been able to maintain its position.

The same firm have also a small circular saw-bench with an angular fence. A fine large grinding stone, running in a cast-iron trough, and carrying a Water of Ayr setting stone on the end of the spindle ; both the stones are provided with proper rests for holding planeing machine irons while grinding and setting them ; the axle is provided with fast and loose pulleys. A saw sharpening machine completes the list of the firm's exhibits. It works with emery grinding wheels, and has suitable rests and adjustments for holding both circular and mill saws. No saw-mill of any pretension can now afford to be without these machines, and some of our large Sydney mills have two or three of them at work. Instead of the tedious and laborious work of filing down the tooth and gullet, which was customary formerly, the emery wheel (revolving some hundreds of times per minute) now cuts away the steel in a solid stream of sparks at a rate which seems incredible to any one not accustomed to witness the cutting power of emery grinding machines. Messrs. M'Dowall have been established in business between fifty and sixty years, and their machines bear evidence of their experience, and also of honest and faithful workmanship in their construction.

Adjoining M'Dowall's stand, there are some tools sent from Germany, which are not shown in motion. They are all inscribed "Sachsische Stickmaschinenfabrik Kappel bei Chemnitz in Sachsen." Mr. Ernest Schultz, of Castlereagh-street, Sydney, is the representative of the makers. A bandsaw by this firm has 27-inch pulleys with tubular arms, wooden rims, and a peculiar arrangement of rest for steadying the saw that is worthy of notice ; the saw also is steadied under the table ; the frame is of box section, and the table is of iron. The next machine is an 18-inch surface planer, which is a useful little tool, well suited for a pattern shop. A curvilinear moulding machine has a single spindle, but it can be run in both directions with doubled-edged cutters ; the table and legs of this machine are all in one casting, and it is a very attractive and useful tool for frieze-work and the like. A circular saw-bench is fitted with an angling fence, and carries a planing or moulding head on the back end of the spindle, a bracket projecting from the table carries adjustments to enable the tool to be worked as a hand planer or moulder. The German inscription seems to apply to the last machine, as it is intended for fabricating sticks, that is, making chair legs and such like kind of turned work, where great quantities have to be produced all alike ; it is called a gauge or template

lathe. This machine is like an ordinary slide lathe, but the rest carries tool boxes, which rise and fall on a template or pattern cut out in sheet iron, and attached to the bed of the lathe ; the tools are V shaped, and have the cutting edge right over the centre of the revolving piece of timber, instead of in front, as in ordinary lathes. The rest, with the tool boxes, work on dovetail slides on the front of the bed, and is travelled by a screw ; each tool-box is independent in its action, so that one can be set in advance to rough out the pattern, and the following tool can finish. The tool-holder is hinged at the back, and a spring keeps the front down on to the pattern template. In this machine a great quantity of work can be turned out without a skilled turner ; it is suitable for plain work, but it is not intended for a superior class of turnery.

The Sachsische Stickmaschinen-fabrik tools are all well got up, good castings, and workmanship ; they are painted a distinguished colour—green, with black band and red line—and have the name of the firm put on, apparently by a transfer process. They are well worth notice for their peculiarities, and show that good wood-working tools are now made in Germany as well as in England and America.

The great improvement which has recently taken place in engine design has been pointed out, and the engines of Messrs. Marshall, of Gainsborough, Robey, Tangye, and others cited as examples. In machine construction the hollow-box framings, introduced in the first instance by Whitworth, for iron-working tools, have been year by year becoming more common, until now (except for the commoner and cheaper classes of work) their use is all but universal. Perhaps nowhere in the Exhibition is this improvement more conspicious than in the tools manufactured by Messrs. Fay & Co., of Cincinnati, Ohio, and exhibited by Messrs. H. P. Gregory & Co., of Pitt-street, who have the largest collection of wood-working machines in the building, one only of them, the band-saw, however, being shown in actual work.

Messrs. Fay's machines have now for some few years been known in the Colony, and they most unquestionably turn out good work ; but besides perfection in their cutting arrangements they have been more or less distinguished for having their framings made in a number of pieces, with crooked and quasi-ornamental legs painted green and vermillion, and for their stars and mock gilding or bronze. But Messrs. Gregory show eleven of Fay's machines, which are more modest looking in their plain and dignified grey suit, and are conspicuous for the symmetry and strength of their framings, and for having withal a perfect adaptability for the purposes they are intended to accomplish.

First to be noticed among Messrs. Gregory's exhibits are three machines imported expressly for Messrs. Hudson Brothers, of Redfern, which consist of a tenon machine, a borer with two heads, and travelling table adapted for mortising, boring, and routing ; and a cross-graining machine. These are all designed for the heavy work of railway carriage buildings, or " car-work," as it is called in America, and they will make a valuable addition to the extensive plant of the enterprising firm who now construct so much of the rolling stock, which was formerly imported. These machines have all the most recent improvements to adapt them to their work.

The next machine of Fay's is an inside planing machine, to surface 24 inches wide or about 16 inches, with the side beads at work on mouldings or matching. This machine carries its own countershaft, which, according to American practice is at the head instead of the tail end, as in English machines.

A surfacing machine, to plane 24 inches wide for panels and light stuff, has a rising and falling table, and a box-frame quite in the English style, making altogether a beautiful little machine.

We come next, in describing Fay & Co.'s exhibits, to a hand-plane, or variety worker, a very useful combination machine. It is arranged so that the tables before and behind the cutting cylinder are separately adjustable, and can be raised or lowered by screws and hand-wheels. When it is required to be used as an ordinary surfacer the tables are lowered for the thickness of board to be planed, which is then fed in under the knife cylinder; but for handwork the tables are raised so as to be level with the top of the knives, and the work is passed over them. In some cases it is required to reduce the thickness of a piece of timber for a certain portion of its length, under which circumstances the front table can be lowered the necessary distance, and the other be left level with the top of the knife. This machine is all self-contained, and has an English style of frame. A tenon machine is noticeable for the completeness of its appurtenances. It has double copes and double scribing heads, and is adapted for the best class of door and cabinet work, having separate adjustment to all four cutting heads. The dovetailing machine appears at first sight to be a very complicated affair, and is rather difficult to understand, as it is not in motion, and the dovetail cutters are not kept in their places. The dovetails produced in this machine are round, or rather half-round or D-shaped in their end view, and are produced by a revolving cutter, having the outline of the space between them. There are two cutter spindles driven from one countershaft below; the work is held in a frame which has motion both horizontally and vertically, these motions being given by a reversing screw and cam-arrangement, and is also regulated by an appliance like a comb, having the pitch of the dovetails to be cut. Much ingenuity has been expended in attempts to produce dovetailing machines, in many different ways, without meeting with much success, except for special work all of one kind, as tea-chest making and the like. Had Fay's machine been shown at work it would have attracted a good deal of notice.

A very fine four-sided moulder is, perhaps, the most generally useful machine in this collection; it has an overhung table to rise and fall, the top cutter frame only adjusting endways; the top and back-vertical heads are on the main frame, the former having a removable and adjustable outer bearing; the lower cutter is in the table, as well as the front vertical one, and the latter is arranged so that it can be angled. The greatest novelty, however, in the whole machine is the attachment of a pilch-chain to drive the lower feed-roller in the table from the pressure-rollers above; this is done in such a way as not to interfere with the rising and falling of the table itself for different depths of timber.

Fay's mortising-machines are well known in the colony. The specimen shown has the patent adjustable stroke arrangement peculiar to these makers, and also a boring attachment. The special merit in Fay's arrangement is that the bed itself is solid, instead of being raised on a pedal lever, and that the tool, while the machine is running, can be made to descend deeper and deeper into the mortise by an arrangement of levers brought into action by a pedal; these levers operate by diverting the motion of the connecting-rod from the tool-holder. When the attendant's foot is off the pedal the mortising-chisel remains at the top of its stroke, although the crank is running, because the connecting-rod is virtually jointed in two pieces, and the lower half vibrates from the fixed lower centre on the tool-slide.

The bandsaw is distinguished by several special features. Messrs. Fay make their upper pulley very light, the arms being tubular, and the lower pulley has a brake attachment which stops its running when the belt is shifted on to the loose pulley. This machine has been working daily since the opening of the Exhibition, being used for cutting fancy fret puzzles, &c., out of blocks of cedar. The pulleys are 32 inches in diameter, the table is of iron, the tension of the saw is taken up by a lever and weight, and rollers of special hard steel take the back pressure of the saw.

Messrs. Fay's tools form a very instructive exhibit; they are all fitted with the reduced loose pulleys recently come into use, the object of which is to reduce the strain and consequent wear and tear of the belt and loose pulley bush when the machine is not at work. Generally these machines are much in advance of those which formerly came from the same makers, and they serve to show (what was noticed before) that as the machines of different makers are gradually improved so do they approach closer to one another in general design and detail and to one common standard of perfection.

In addition to the fine collection of Fay's tools, Messrs. Gregory & Co. exhibit wood-working machinery by other makers, as well as a miscellaneous assortment of saw-mill and general appliances. There is a small foot-lathe which is deserving of some consideration, as it is a tool that would be most valuable to amateur mechanics. It is called Marsh's cylinder-bed lathe. The bed of this lathe is a cast iron tube, about 4 inches in diameter, and the head and tail stock are both secured to it, the latter having a feather to slide in a key-way and keep it upright; but the stock for the rests clamps the bed, and when slacked it can be turned underneath out of the way. The driving-wheel axle extends through the end frames, and has outside cranks with rods from the treddle. By an ingenious series of devices, it is so arranged that a fret-saw can be attached and be worked from one of the end cranks; a small table can be carried on the rest-holder, and a circular saw be driven. There is also a frame carrying a cutter-head, which can be fixed on the bed and have the cutter spindle driven by means of leading pulleys from the cones on the lathe mandril. This latter attachment is fitted with an edge-moulder, made to run both ways, and by its means the most intricate fretwork can be further ornamented by moulding or chamfering its edges. The machine is thus, besides being a handy lathe, capable of doing much of that fancy wood-work which is generally so attractive to amateurs; and it appears to have been appreciated, for a number of them have been sold since the Exhibition opened.

Close to Marsh's lathe there will be seen one of Boult's carving and moulding machines, which is perhaps capable of doing a greater variety of work than any other machine of any kind in the whole Exhibition. It would be out of place in these notices to enter into all the varieties of work which these machines can perform; they are already in use in the Colony, and their makers devote a whole book to a description of them and their work. Mr. H. S. Smith, Messrs. Gregory's representative, is an expert in describing the action of wood-working machinery, and will soon convince any intending purchaser of its value in the manufacture of furniture, carriages, cars, pianos, organs, dwellings, fences, stairs, desks, churns, chairs, washing machines, trunks, brushes, or in fact any other kind of woodwork.

The Boult machine in its simple form, is a single-headed curvilinear moulding machine, with reversing spindle on a lowering frame, and double-edged

cutters; and as such alone it is capable of doing a great variety of work. By a bracket attachment and second cutter spindle over the work it is enabled, in addition to solid and edge moulding, to carve, sink, or engrave, and also to mould the most delicate scroll or bracket work; this part, like the main cutters, permitting of reverse motion, in order that the tools shall always work cleanly with the grain of the wood. By another attachment, eliptical or other curved work can be moulded, and, by a special frame clamped to the main table, it can be used as a dove tailing machine. It will thus be seen that the uses to which this machine can be put are extremely varied. Much of the rich work seen on American organs and the better class of sewing machine cabinets is done by them. There are several kinds of cutters used with the machine for surface, edge, and rosette moulding respectively; and the great beauty of the work performed by them is shown by some samples of ornamental and moulded sunk panels, having raised centres, which are shown with the machine; these are run in ash and walnut and left just as they come from the tool. Altogether, Boult's machine may be considered a fine illustration of the wonderful powers of modern machine tools in enabling work to be accomplished both accurately and expeditiously, which was hardly possible at all when it had to be done by hand, and then it was only at great labour and expense.

Messrs. Fay's bandsaw setting machine is a most ingenious contrivance. The saw to be set is placed on a stretching frame with two horizontal pullies, as is usual with handsaw sharpeners. The setting apparatus consists of two spring hammers, which strike simultaneously on opposite sides of the saw and on alternate teeth, setting them the required amount at one blow. The hammers are operated by turning a crank-handle and cam, which cam draws back the hammers against the pressure of a spring and lets them go at the right moment. The same motion works a lever and ratchet, which catches the teeth of the saw itself and advances it a distance of two teeth after each double blow.

Messrs. Gregory also have a collection of fret-saws for amateurs, in different styles of the Fleetwood and Dexter machines. These small tools occupy about the same space as a sewing machine, and are now greatly used by amateurs of both sexes for ornamental fancy work. Besides having the usual drilling frame, the Fleetwood saws have an extra attachment for blowing the dust away from the cut to allow the pattern to be clearly seen.

There are several self-acting knife-grinding machines exhibited, which have the ordinary wheel or stone, but Messrs. Gregory show quite a novel description of grinder. In this machine the stone, emery, or composition wheel is of an annular form, like a short piece of pipe about 2 inches thick. This wheel is overhung from a spindle by being chucked at one end, and the tool is ground against the double surface at the other end. The consequence is that the stone wears shorter endways, but never smaller in diameter. The cutting surface is always a plane, and does not, like an ordinary stone, grind more and more hollow as the diameter is reduced. A further advantage of the double cutting surface to the grinding wheel is that it assists in keeping the wheel perfectly true and making it wear evenly, as the knife cannot wear into a soft place in one part of the wheel owing to its bearing against the opposite one side.

The seven-wheeled grinder is a very useful tool in a workshop or factory, and Messrs. Gregory have already sold a great number in the Colony. There

are seven emery wheels of various forms, suitable for different work, clamped on one spindle. The whole is carried on an ornamental iron frame fitted with rests for the tools to be ground, and it carries its own counter-shaft, fitted with fast and loose pulleys.

Besides the complete machines described, Messrs. Gregory have a collection of lathe heads, boring spindles, mitre cutters, and other saw-mill requisites. The saw-spindles have both their bearings in one casting, and are fitted with an ingenious device for centering the saw in case of the hole being larger than the spindle; this is effected by means of three studs which are let into the spindle close to the collar, and which are pushed out equally all round by the conical end of a set screw. This screw works up from the point of the spindle, the spindle being bored and tapped for the purpose. Altogether, Mr. Smith has arranged a fine collection of machines, and had they been in motion they would have formed a great attraction to the visitors generally.

Messrs. S. Worssam & Co., of Oakley Works, Lambeth, have been celebrated as makers of wood-working machinery for many years; and are good representatives of English practice in that branch of engineering; the tools they have sent are of the smaller and less expensive kind, but they are sufficient to show the character of the makers' work. A practised engineer can see at a glance (just as he sees in Marshall's or Robey's engines) that these machines have an air of refinement above their neighbours, the castings alone deserving of notice for their perfection, and the whole of the fitting up is of that substantial and sterling character which characterises high-class machine tools.

Messrs. Worssam show a four-sided outside moulding machine; it is only a small one, adapted for 4-inch mouldings, but it is very complete. To some persons, accustomed to machines spread all over the place, it may appear objectionable from its very compactness, but it will be found to have all the necessary adjustments for doing good work, and that all of them can be easily got at.

The general joiner is a machine adapted for a small establishment rather than for a saw-mill or large joinery works; it is a most complete affair, and consists of a circular saw-bench with bevel fence and rising and falling saw; a planing machine, moulder, tenon cutter, &c., and has appliances to enable it to rebate, chase, or mortise, to work curved or irregular mouldings, bead, groove, mitre, &c.; these are not all done by one spindle, but there are separate heads and feed works, so that several may be done together. The principal characteristics of this machine are that tenons are completed at one operation. Mouldings are struck at an independent table by self-acting feed; timber up to 9 by 3 inches can be planed by feed; mortises can be chased, irregular and curved work be moulded; and, lastly, all these operations can be carried on separately without having to alter the machine. The makers claim that six machines are combined in one, at a very much less cost than the separate machines would come to.

The bandsaw of Worssam's is of small size, but it is a very well finished machine; the pattern or design of the main casting is different to the general style, and if not quite so graceful in outline, is more correct in principle, and has the metal better disposed for strength and solidity; the main casting stops at the slide for the upper pulley, which slide works on the face instead of the side of the frame, as in the common way; the tension is kept up by a lever and weight, and the table cants. This saw has been employed cutting ornamental puzzles and the like during the time the Exhibition has been open,

and on its table may be seen a fine specimen of cutting (the initials of the maker—S.W.), being sawn in ornamental letters out of a solid block of wood, cut in two directions.

The saw-sharpening machine is of the now common description, using an emery wheel; it has vices for both mill and circular saws, and the frame is of a very solid design.

The last machine of Messrs. Worssam's is a hand mortiser, which is well adapted for its intended work. The whole of the machines in this collection have differences in detail from the tools of other makers; and by a careful study of the peculiarities in each case much may be learnt, both by the saw-mill proprietor and the workmen who use them, as well as by the constructive engineer and designer.

Messrs. F. W. Reynolds & Co., of London, are well known as makers of wood-working machines specially adapted for builders and contractors; their speciality does not seem to lie in heavy saw-mill machinery, but rather in those lighter and less powerful appliances which are of more general service.

Messrs. Reynolds show about fourteen machines, the larger-sized ones of which are intended to be driven by power, but the greater number are fitted up to be worked by hand. The first machine to notice is a circular saw-table, with a strong parallel fence, and rope feed-gear; the fence is movable, by hand-wheel and rack, to suit different sizes of saw, and can be turned over out of the way to allow for cross-cutting; this fence has also a fine screw adjustment for the thickness of stuff to be cut, and is provided with a pressure-lever to keep the stuff close up to it. The loose pulley is reduced in diameter, and the spindle is provided with an outer bearing, both features which conduce to the reduction of wear and tear in belts and bushes. The feed-gear has cone pulleys, and the table has rollers at the ends; altogether it is a useful tool and very moderate in price.

Messrs. Reynolds' band-saw is noticeable from the great overhang of the frame and the room under the top pulley. In outline the frame is similar to Worssam's last described, the top pulley carriage working in guides on the overhung end of the frame instead of at the side; the upper pulley is fast on its axle, which runs in two bearings instead of running like a loose pulley on a fixed axle. The pulleys for the saw are all cast iron, and have double curved or S-shaped arms, and the table, which is of cast iron planed all over, has a canting motion.

A smaller circular saw-bench has a rising and falling spindle, which enables it to be used for rebating, or grooving, and makes it very useful in many ways for joiners, or jobbing purposes.

Messrs. Reynolds have been largely instrumental in introducing an arrangement of band-saws having three pulleys; this allows of the use of a longer saw, and is an advantage in many ways. These band-saws are made separate or in combination with a circular saw. The end of the circular saw spindle is fitted to take augers, and a small boring table is attached, fitted with sliding top, made to be driven by power. It comprises a circular saw table, fitted with a rising and falling saw spindle, to enable it to do rebating, tenon, cutting, or grooving, and is provided with a very handy fence; it also combines with the circular saw a complete band-sawing apparatus. The frame of the band-saw is of the form of the letter G, and is bolted to one corner of the circular bench. The upper and lower pulleys are carried at the top and bottom of the bow of the frame, and the small table of the G, which is hung

on a pin, is enabled to cant so that the band-saw can do bevelled work. The saw itself passes around the two pulleys on its own frame, and also round a third one, which is the driving pulley; this last one is carried on to the end of a countershaft attached to the circular table, and has a belt pulley, like the circular spindle, to take the motion from the main countershaft. The main countershaft is carried in brackets cast on the frame of the large table, and has one loose and two fast pulleys; the loose pulley is in the centre and is smaller in diameter, the same as in Fay's and other machines, to reduce the strain on the belt when not working; the fast pulley on one side is attached direct to the driving pulley of one saw, and they run loose together on the countershaft; the other fast pulley is keyed to the countershaft, and drives the pulley for the corresponding saw, which is keyed on the opposite end. By this arrangement either machine can be driven.

The "Imperial" machines are smaller in size, and are made either with a circular saw only, or combined with a band-saw; they are intended for hand-power only, and the speed is got up from the crank-handle by gearing. The frame is of a strong and neat design, with round corners; the band-saw table will cant; there is a handy angling fence, and a simple feed-gear is fitted to them; there is a patented method of regulating the tension of the band-saw, and a rising and falling spindle to the circular saw. Considering what a lot of work these machines will do, the English catalogue price, £22, seems a low figure for one of them.

Another class of machines very largely made by Messrs. Reynolds & Co. are hand-power mortising machines, of which they show seven different varieties, which are patented under the respective names of the "Monarch," "Royal," "Hercules," "Imperial," "Eclipse," "Southwark," and "The London." All of them have some special features, either to adapt them to a particular class of work, or otherwise recommend them, and all are complete on an iron stand. The "Monarch" has four legs, a single tool-slide, connected to the lever by a short link and a sliding bed with rack motion. The "Royal" has, instead of a link connection, a rack cast on the tool box slide and a pinion on the fulcrum of the lever; this gives a more equable motion. The table has a slide motion in two directions; the "Royal" is especially adapted for hard-wood. The "Hercules" is a large machine, about double the price of the last; it is able to take timber up to 12 × 12, and is overhung so far that the back fence can be put back 11 inches behind the tool, so that mortises can be made near the side of a piece of timber without turning it round end for end. The "Imperial" has a bottom frame all cast in one piece, with spreading legs. The tool-slide has a rack on the back, engaged by a segment on the lever axle. A boring attachment is carried on the sliding block, quite independent of the mortising chisel. The special peculiarity of the "Eclipse" machine consists in the use of a toggle-joint action, to communicate the motion of the lever to the tool-slide; the advantage of which is, that the power and pressure on the chisel is increased, as it sinks deeper into the wood, from the well understood action of the straightening of an elbow, toggle, or articulated connecting-rod. Another advantage is that this machine can be set so that the tool will only descend a certain regulated depth. This insures uniformity when blind mortises are required, not penetrating all through the wood. The "Southwark" is a very remarkable machine, and combines several novelties only recently patented. The bed or table is a box-casting, with open panels at the ends, and the stand is of the hollow or box type, giving to the whole a more

modern and solid appearance than any of the machines before mentioned. The tool-slide is very long, and has a fixed pin on the right-hand side, engaging an eye in the lever. The second or fulcrum eye of the lever is held by a jam in a link, the lower end of which link is held by a pin on the table, the link thus forming a vibrating standard. The most important feature, however, of this invention is the arrangement of the tool-holders, which are attached to the left-hand side of the tool-slide, and out of the way of the lever. The tool-holder is like a cross, or the boss of a wheel having sockets for four arms, and it works on a pin, so that it can revolve to or from the workman; it can be locked into either of four positions by a small spring bolt. The four sockets are occupied respectively by the mortising chisel, a core driver, a tenon tool, and a boring auger; but the chisel and auger sockets are in one piece, extending through the cross; they are provided with a mitre wheel, and are made to revolve by a crank handle and second mitre wheel attached. By turning the auger down and locking the cross, the removal of a small spring catch allows the auger to be worked by the handle and holes to be bored; when the chisel is turned down for mortising, the same catch allows the chisel to be reversed and held in position. It will thus be seen that all the operations necessary can be performed by the workman without changing a tool; for when the mortise is made the core driver can be turned down, and the chips be pushed out. "The London," the last of Messrs. Reynolds' mortising machines, is different in appearance to the others, as it has a column-pattern stand with large circular base; it is also distinguished by having two separate levers and tool slides; one of the latter carries the mortising chisel, and the other carries the boring arrangement, or a core driver. By this double tool-slide, and by using a chisel in one and a core driver in the other, the mortises can be cleaned out as fast as they are cut, without having to lay the timber aside and rehandle it, thus saving both time and room.

A horizontal engine of Messrs. Reynolds was referred to as being of rather an antiquated construction, and it is quite clear, as Artemus Ward would say, that horizontal engines are not their *forte;* but to do Messrs. Reynolds justice, it must be said that in the variety and ingenuity of their mortising and boring machines, and also in their small sawing machines, they appear at the Exhibition without a rival.

Messrs. Reynolds have evidently given great attention to the design and construction of the tools they exhibit, and are also able to sell them at reasonable rates, probably from the great numbers which they make. Beside the tools already enumerated, there is the "Comet" hand-power-band-sawing-machine; in this there are three pulleys, the third or driving pulley being a fly-wheel with a crank handle in it for turning it. The whole machine is of very neat design, and would be a valuable tool in a joiner's or patternmaker's shop. The same makers also exhibit the "Universal" machine, for mortising the pulley-heads of venetian blinds; Shute's patent mitre-cutter, the "Crown" malleable iron flooring cramp, and several other small appliances for the carpenter's and joiner's shop; and their stand generally is of interest to a larger number of buyers than the machines of larger and more expensive kind, which are only adapted for saw-mills, or works on a large scale.

Among the outside makers of wood-working machinery—that is, firms who do not make it their speciality—the most conspicuous exhibitors are Messrs. Marshall Sons & Co. of Gainsborough, Messrs. Robey & Co. of Lincoln, and William Foster & Co. of Lincoln; these are all agricultural engineers,

and, as a consequence, great novelties or special adaptation for work cannot be expected from them. The best circular saw bench for colonial mill work has *not* yet been produced, and will probably have to be designed and made in the Colony itself, when some of our own engineers take up the making of wood-working machinery—still the tools shown by these firms are deserving of notice.

Messrs. Marshall show a saw bench 6 feet x 3 feet, and carrying a 42-inch saw ; it is provided with a set of cone-speed feed gear, and a winding drum for a rope feed ; there are rollers at the end of the table, and a fence capable of angling, having a roller, with chain, lever, and weight, for keeping up the work against it. The end of the spindle is fitted for augers, and a small boring-table is attached to the front of the bench. Although the bench is not all cast in one piece, as in some makers' designs, and although the saw spindle would be much improved with an outer bearing, still the whole is well proportioned, and is well adapted for general work ; but the most noticeable point about the machine is the workmanship and finish. Here, as in their engines, Messrs. Marshall have sent to the Colony the best finished work of the kind in the Exhibition. If such has been done with a view to do honour to the Colony, the firm have at the same time honoured themselves, and it is to be hoped will reap their reward in having an increased demand for their goods. It is certain that there was a general opinion in England some years back that anything in the way of machinery was good enough for Australia. Some makers appear to have thought so still, when sending their work out. That illusion, however, together with a good many other ones formerly held at home about these Colonies, will, perhaps, be dispelled as one of the effects of this Exhibition. Messrs. Marshall's saw is provided with a pair of timber carriages to support the ends of the log or baulk, and to run on rails on the mill floor.

A smaller saw bench is fitted up in quite equal style and finish, but has no feed gear or timber carriages. If finish can be carried too far, it is in mock scraping, and there is some scraped work about the fences of these benches, which, if genuine, is unnecessary, and it only serves to remind one of the sham scraping which is sometimes seen on the beds of cheap lathes and other tools.

Messrs. Robey's saw-bench in Drysdale & Roberts' machinery building is even better designed for solidity and general appearance than Marshall's ; the body is all cast in one, and it has rounded corners; a list or band increases the width of the base, and an arched opening in each side gives it lightness. This table is fitted with rope-feed, but the rope barrel is large in diameter and short, and lies against the end of the bench, instead of across it ; this makes it very compact. In order to cross the motion from the cone-gear and reduce the speed, the rope barrel is driven by a worm-wheel and worm; the whole is fitted up in a thoroughly good style, and is very complete.

Messrs. Foster's saw bench is to be seen alongside their portable engine, and is a useful and well got up tool, suitable for farm or jobbing work, but it is much plainer and cheaper than either Robey's or Marshall's. The two side frames are cast separate, and are kept apart at the bottom by wrought-iron stays ; the end of the spindle is fitted for augers, and a small boring table is fitted on the front of the bench ; the back bearing is bracketed out clear of the table, and the pulley, which is double flanged, is overhung. There is no loose pulley to the spindle, so in case of an accident the engine would have to

be stopped in order to stop the saw, as the flanges would prevent the belt being thrown off; this is a mistake, for if the pulley is properly made and wide enough, the flange, especially the outside one, is not wanted at all.

Messrs. Blacket & Davy, of Bathurst-street, and Messrs. Barron, Moxham, of Wynyard-square, exhibit a varied collection of American wood-working machines, from several different makers, including the H. B. Smith Company, First & Pryibil, of New York, Wiley & Russell, Kimball & Kimball, S. A. Woods, C. B. Rodgers & Co., Trump Brothers, &c. These tools are to be noticed principally on account of their lightness and cheap construction, but there are many good points about them that deserve to be recorded.

The H. B. Smith Machine Co., of Smithville, N. J., send four tools—a small moulder, a tenon machine, a mortiser, and a small joiner's circular saw. The moulding-machine works three sides of the timber at once, and has an overhung cutter head, and outside table; the outer vertical cutter is adjustable by two separate screws, so as to angle as desired, and there is an outer and removable bearing to the top head. The machine is provided with a set of feed-rollers consisting of a series of steel pins about 3-16ths of an inch diameter inserted in a boss; these would ensure the timber feeding, but look as if they would mark it deeply. The pressure lever, to keep down the stuff close to the main cutters, is of rather a peculiar form, being angled back so as to throw the weight well out of the way. The pulleys are nicely proportioned, they have S arms, and, like the rest of the machine, are extremely light. The general design is very similar to Fay's, and the counter-shaft, which is all self-contained, is, after American practice, at the head of the machine.

The tenon-machine has long double copes and double scribers, the latter driven from a vertical counter-shaft projected out on a bracket. The American machines generally stand all on one bed, something like a lathe, with the heads at one end; while most English machines have the table separate up from the ground or foundation plate, and drive all the cutters from one counter-shaft. The former plan answers well for light work, and enables a much cheaper machine to be made. In the tool under notice, the bed is cast about 12 inches deep, ornamented with arched openings, and stands on four legs.

The mortising-machine is a very plain tool, but is strong, and looks as if it would be very serviceable; the column is cast of the square-box pattern with open back, and has a bracket about two-thirds up, by which it may be fixed to a wall or post for steadiment. There is a peculiarity about the crank at top—it consists of two discs with a crank-pin between, and has an outer bearing carried by a bracket round the discs. The column or standard is ornamented by having the name of the firm in a curve up each side, the metal being perforated, and the letters forming, as it were, a framing. There are other American wood-working machines, as those by R. Ball & Co., which are thus ornamented, but it is certainly anything but good taste, and it is to be hoped, as the manufacture of machinery in this Colony is extended, that designers and manufacturers will look well around them and select the best models, to work at and improve upon wherever they may be found. The tenon-machine under notice has a joined pedal lever to bring up the work to the tool, so arranged as to be adjustable to suit the foot of the operator; the tool is caused to reverse by a pulley on the tool spindle and a belt from the main shaft overhead.

The above three tools of the H. B. Smith Company are distinguishable by the extreme cheapness of their construction. They are sold at the works first

hand at a price which appears very low even when compared with other tools. They are adapted for beginners in business or tradesmen of small capital, but cannot be compared with the more substantial and high-finished machines of many other makers.

A fourth machine, by the same firm, is a little circular cut-off saw. It has an iron table, with dovetail grooves, to carry fences, which can be adjusted and fixed at any angle. The saw is fitted with rising and falling spindle, and the machine, although small, is adapted for rebating, grooving, cross-graining either square or on an angle, cutting off, &c., and would be a very useful tool in a joiner's shop.

Messrs. Blacket & Davy show some American tools by First & Pryibil, consisting of two band-saws and a double-boring machine. One of the band-saws has its main frame, a box casting, all in one piece, but the other frame only extends to the support for the table, and stands on separate legs bolted to it. The tables are of wood, glued up in strips, and the pulleys are of a different pattern to most other makers, having four arms starting from the boss and opening out to eight at the rim. The tension of the saw in these machines is kept up by a spring in the top casting, and there is a separate screw with handwheel, brought down in a handy position, for canting or setting the angle of the top pulley. These machines have a gun-metal slide box, with an adjustable guide of hard steel to support the back of the saw. The pulleys are of large diameter, and the frame is clear right back to the ascending saw, so as to allow as large work as possible to be got in. They are not intended for heavy work, but for light cutting they are well adapted, and are intended to be cheap machines. The lower pulley is all clear above the floor line.

The same firm of First & Pryibil also have a small double-boring machine, which has a more substantial look than their other machines, the main standard being a box casting with extended flange for a foot. One boring head is driven by belt from counter, and the second is driven from the first by wide spur wheels, machine cut, and of fine pitch. The table rises and falls by screw gear; there are cone pulleys for the speed, all the necessary adjustments are provided, and the machine is well adapted for the purpose intended.

Messrs. Blacket & Davy have another band-saw by the Wiley & Russell Manufacturing Co., also an American machine. This is a light and cheap machine, and has an iron table which is provided with a gauge fence to adjust by a dovetail groove and slide. The top pulley runs on the spindle, but the lower pulley spindle runs in two bearings; the upper one has been drilled for balancing, and has broken in transit. The hardened steel guide for the back of the saw works in a cylindrical hole, so that it can be turned round to prevent it getting grooved. The frame is of very neat design. The saw pulleys are very light, and are without flanges, the lower one being all above the floor, and the loose pulley is reduced in diameter.

Messrs. Barron, Moxham, & Co., of Wynyard-square, exhibit two machines from the S. A. Woods Machine Co., of Boston, U.S., consisting of a 24-inch shop surfacer and a dimension planer. The surfacer is of a very strong and compact design, the main casting or standard being of large size and of a box form, with spreading legs to give it stability. An opening is cast on the front of the standard and fitted with a door, thus converting it into a cupboard, or locker, for keeping all the wrenches and sundries connected with the machine. This tool is intended to do fine panel work, the knives running 4,000 per minute. The feed-rollers are well arranged, and the leading-in ones

are fluted. Provision is made for keeping the carrying-out rollers clean, to prevent them marking the work. This planer is capable of working stuff up to 5 inches thick, and is a first-class machine in many ways. The feed gear is driven by friction, and cone pulleys are dispensed with.

The dimension or combination planer by the same makers is the only machine of the kind in the Exhibition; and although they have been in use in the three or four leading mills in Sydney for some time, it is none the less worthy of notice. The principle of this planing machine is different to ordinary ones, inasmuch as the stuff is fed through on a table, the same as in an iron-planing machine, and is held from the ends instead of being kept down by rollers. This arrangement allows crooked or winding stuff to be surfaced without putting a pressure on it, or springing it out of shape, as is done by feed rollers. For squaring or dressing up such work as door stuff, a great number of pieces can be placed on the table at once, and held fast to it by dogs or wedges, while being passed, with the table, under the knife cylinder. This machine will make work true enough for glueing up right away, and is invaluable for door-making, carriage-building, &c. In the Wood Co.'s machine, better known here as Gray & Wood's, the travelling table is of timber, and is made of a great number of pieces glued together. It is driven by a rack on the under side, and has a quick return motion. The handles for raising and adjusting the knives, and for starting and reversing the machine, are all arranged to be most convenient to the hand of the operator, who, in this machine, starts, stops, and reverses the motion of the table every time a cut is made. If ordinary planing is required, the machine has a set of feed rolls, which swing round like a gate, and are quickly fixed in position, enabling boards to be fed through continuously for surfacing, and that is where it is a "combination" machine. The main bed is of wood, and there is no unnecessary weight of iron about it, the pulleys are balanced and run truly; the knife cylinder carries three blades and runs at a high speed, making very perfect work. These machines are made of different sizes; the one exhibited will work 24 inches wide × 12 feet long.

Another well known American firm, that of C. B. Rodgers & Co., of Norwich, Conn., and New York City, is represented by Messrs. Barron, Moxham, & Co., who show three of their machines, which, unlike all of those hitherto noticed, make their appearance in smart green and varnish. As the whole of the English machines and all the American ones, except those of Rodgers, appear in sober grey, it may be assumed that a distaste for gaudy and meretricious painting on machinery is spreading.

The first machine is a medium-sized moulding and planing machine; it will surface 24 inches wide, or match up to 15 inches; the matcher heads can be quickly dropped below the bed for surfacing wide stuff, and the near side one is adjustable from the end of the machine to suit different widths of boards. The feed rollers are very powerful, and have expansion gearing. The matcher heads are of gun-metal; and matcher clips, pressure bars, with all the conveniences for adjusting to different kinds of works, are provided, including a large wood and steel spring for side pressure, to keep the work to the fence. The small mitre wheels for adjusting the rolls are enclosed in a cap, and the loose wheels of the expansion gear have three separate oil-holes with screw plugs, so that whatever position the machine may stop in, one or other of the holes can be got at for oiling.

Rodgers' pony planer is a very compact machine, being like a surfacer with side heads, and is all contained on a floor space of 4 feet square. It is intended by the makers for small shops, and is made at what they consider a low price for the work it will perform. It is certainly a very useful machine for certain classes of work.

Rodgers' band-saw is in many respects unique, that is, so far as the show of them in the Exhibition is concerned. Some of the features wherein it differs from others are the tubular or cylindrical section of the main frame; the method of carrying the upper pulley carriage, which is by a turned stem working in a bored-out socket on the frame, the hollow stem enclosing a spring, also in the fancy design of the pulley arms, &c. The main casting only comes down sufficiently low to support the table, and the legs are made separate. The table is of wood; the saw-guide works in a slide, and has a light wire cord running over a pulley with a counterbalance, to enable the workmen to adjust it, without having to support the whole weight. The tension of the saw is regulated by a handwheel, and for joiners' work it is a useful machine.

A band-saw in Messrs. Drysdale's shed, on which no maker's name can be seen, and a small one worked by a foot treadle, complete the list of those exhibited, amounting to about a dozen. The last machine is the only one of its kind shown; it is very light, having a frame of $1\frac{1}{2}$-inch wrought gas pipe, and only 12-inch pulleys, but being worked by foot, it would be very handy for many trades, and save a lot of labour cutting out, if it was only garments; for such tools with special blades are now used for tailoring and similar purposes.

The English makers only send four band-saws out of the dozen exhibited, and they are distinguishable by their massiveness and strength, being able to deal with hardwood and heavy pieces of timber; and, although American firms do make large and powerful machines, those sent for exhibition are all more or less adapted for the lighter work of the joiner, cabinetmaker, and such like trades.

It may be interesting to know that the first band-saw was made in 1808, seventy-two years ago; it was constructed and patented by William Newberry, of London, England. This machine is mentioned in the elder Holtzapfel's well known work, but owing probably to the difficulty that was experienced in getting the saws made and tempered, it does not appear to have come into use much for full fifty years. The principal instrument in developing the manufacture of saws has been M. Perin, of Paris, who even to the present time has the leading business in the line, as many of the principal machine-makers are agents for his saws. Since 1860 the band-saw has made great strides, and is now manufactured in an almost endless variety of forms, and for all classes of work, from breaking down the largest trees of the forest or bush, to the most delicate fret-work or tracery ornament on furniture or musical instruments.

In addition to the saw-bench of Robey's, before referred to, Messrs. Drysdale & Roberts show in their separate shed a collection of wood-working tools, which—although not new to the Colony—are by means of the Exhibition brought for the first time under the notice of hundreds of persons to whom they have special interest. The sand-papering machine has a table of sufficient size to carry a door, and this table can be raised or lowered at pleasure; an iron column or frame at the back of the table supports a double-jointed radial arm, at the outer end of which there is a revolving disc about 9 inches

diameter, driven by suitable belts. This disc has its face downwards, and is covered by specially prepared glass or sand paper, which cuts very powerfully when driven at a high speed. The radial and jointed arm allows the papering-disc to be brought over every part of the work to be finished, and it is surprising how quickly the surface of the wood is cut down by the paper. Owing to the dust which is created, both the workman, and also any shop in which these machines might be placed, would soon be smothered, were it not for the application of an exhaust fan. The revolving papering disc is enclosed in a tin or brass casing, which does not come down quite close to the surface of the timber, and this casing is connected to the tubular or hollow arm of the machine, which again is connected to the suction side of a small exhaust fan, placed on the top of the main frame ; a delivery pipe from the fan takes the dust wherever desired (preferably to the ash-pit of a steam boiler), and all inconvenience from dust is got rid of. There have been many different inventions for sand-papering machines, some very expensive, but the exhibit now referred to is of a kind which seems to be very generally adopted as suitable for ordinary work.

Charles Powis, of London, has a combined circular and band saw, to be worked by hand—the band-saw being driven by a third pulley on the circular saw spindle, and having a little separate circular table. The machine can also be used for boring.

The "Prince" foot-mortiser is noticeable for having a large elliptic wooden spring which is not likely to get out of order, and is more compact than the springs often used in these machines.

The "Wurr & Lewis" combined machine is somewhat similar to that of Powis above mentioned, but the present one is adapted for power, or to be driven by hand ; the speed of the saws is increased by spur-gearing. These machines are well adapted for small shops, and for similar purposes as those of Reynolds, described in a previous number of this series.

A band-saw is described in Messrs. Drysdale's catalogue as a good useful tool, and cheap. There is no maker's name on it, and if it is made for cheapness, it cannot be expected to compare with the substantial and well-fitted-up machines by established makers.

A saw-bench with a rising and falling circular saw is a useful machine for joiners and carpenters ; the rising frame is very strong, and is regulated by a hand-wheel in front, working a screw ; the pulley appears rather small for the saw, in fact, nearly all the saw-benches sent to the Colony, by English or American makers, have smaller pulleys than are desirable, for the harder woods of Australia.

A re-sawing machine, to cut at any angle, is described by the exhibitors as "one of the cleverest American working machines introduced into this market," and there is certainly considerable ingenuity exhibited in its design. It is by the well-known American firm of Wetherby, Rugg, & Richardson, of Worcester, Mass. The peculiar features in this machine consist in fitting a circular saw bench, with two pairs of vertical feed-rollers which are adjustable for different thicknesses of plank. The whole frame carrying the feed is made to angle, so that bevel stuff, or weatherboards, can be cut as desired. A vertical spindle and bevel gear communicate motion, and the feed rollers are kept in gear however much they may be adjusted. A lever and weight keep up the pressure.

The swing cut-off saw, the last wood-worker to be noticed in Messrs. Drysdale & Roberts' collection, is sometimes called the pendulum saw. It

consists of a circular saw hung in bearings at the bottom of a swing frame, the frame itself being hung from the counter-shaft overhead. By this arrangement the saw and frame can be swung backwards and forwards pendulum-like, and the driving belt be always the same length. The upper part of the saw is encased in a protecting guard, and a handle is fitted to allow the operator to move the saw backwards or forwards through the work. It is adapted for crosscutting firewood and the like, but, as the saw wears smaller in diameter, it is necessary to raise the table to let the saw go right through the timber to be cut, unless the table is made with a groove for the saw to work it.

Messrs. Drysdale & Roberts have shown their enterprise in erecting a pavilion for themselves. They have also issued a separate catalogue of their own, enumerating 126 exhibits.

A number of the engineers' sundries are identical with what may be seen in every-day use, and need no description, but among the collection of engineers' tools there are several which may be noticed as being different to the machines in general use.

One of Massey's steam-hammers of $1\frac{1}{2}$ cwt. is exhibited, and, it having steam connected from one of the portable engine boilers, is occasionally shown at work; and its usefulness and power are demonstrated to the satisfaction of visitors, to whom the working of a steam-hammer is a novelty; a small working model of a steam-hammer is also a great attraction when being worked, although it is not more than a few inches in height. It may be interesting to know that there is in the Colony a 6-ton hammer at the A. S. N. Co.'s works at Pyrmont, but several 50-ton, and latterly an 80-ton hammer, have been erected in Europe. It is rather a strange circumstance connected with the steam hammer, that its inventor, James Nasmyth, had nothing to do with the construction of the first one, and was not really aware that one had been constructed until brought face to face with it at the Creusot Ironworks in France. According to Smiles, Nasmyth designed a hammer for making paddle-shafts for the Great Britain steamer, which were never required, as the vessel was made for screw propulsion. At a time when Mr. Nasmyth was away from the Paticroft Works, Mr. Schneider, of the Creusot Works, called on a visit, and, among other things shown him by Nasmyth's partner, Mr. Gaskell, was the design for the hammer; this so impressed the Frenchman, that on his return he had one made forthwith, and it was subsequently shown to the inventor on his visit to France. Nasmyth's patent was secured in 1840, but the hammer of the present day is a very much more powerful machine, as steam is now employed to assist the blow instead of the hammer merely falling by gravity.

An American planing machine, by the Putnam Machine Company, of Fitchburg, Mass., attracts notice from it being different in many respects to English tools of the same kind; there is more attempt at ornament, and a want of that severe simplicity which characterises the leading tool-makers of England and America. The entablature is treated as a piece of architecture, in a way that is out of place on a machine. In order to give length to the bed without increasing the base, the V slides are extended at each end on brackets. The handles or levers are similar to those on many American wood machines, being all turned in the lathe, and having the handle counterbalanced by a knob. With all these differences from ordinary practice, the machine is well adapted for light work.

The most novel machine in the collection is perhaps the rotary shearing machine. This is shown at the back of the shed, and is fitted up complete with an engine to itself. It appears to be capable of cutting up to half-inch plate. Instead of reciprocating cutters, there are circular steel discs on the end of two shafts, which cut in a similar manner to the rotary shears used by tinsmiths. The late Mr. Mort had a similar machine made for cutting plates in connection with the manufacture of his freezing machinery, but it was not nearly so powerful as Messrs. Drysdale's machine, or fitted with its own engine.

Another machine which is not yet used in the Colony is to be seen in a portable drilling machine, which is manufactured by Smith & Coventry, of Manchester. It is Thorne's patent, and consists of a small drilling column fitted with universal joints, and driven by an endless rope from a countershaft overhead; the driving pulley is hung like a castor, so that it can swing to lead in any direction, and the slack bight of the driving cord is kept tight by a weight suspended from a sheave running in the loose bight. For drilling work about a boiler shop, or putting holes in large castings that cannot readily be moved, this little tool is invaluable, as it is of such universal application, and it deserves as much attention from engineers as anything in the whole exhibit.

Messrs. Drysdale & Co. also exhibit a very useful shaping machine, and a beautiful little model machine of the same description, which can be worked by hand, and would be a great acquisition to amateur mechanics, or makers of model engines, &c., as it can perform all the work on a small scale that is done on the larger machines.

Taken altogether, the exhibits of engineers' machines are not in such great variety, and do not show the novelty that is displayed in the wood-working machines already referred to. A lathe and a planing-machine, by William Sellers & Co., of Philadelphia, are by far the highest classed machines of the kind in the Exhibition; there are about twenty machines in the south-east corner of the machinery shed, some of which have novel features about them.

To those who are acquainted with the iron trades of the Colony, it is well known that a great increase has taken place in the number of engineers' tools in use among them during the last ten years; before that time (with the exception of a small lathe or so, which could perhaps be purchased from P. N. Russell & Co.) any new machine that might be wanted had to be ordered from the maker. As a contrast, we now see a great number and variety of tools made by Sydney firms. These are sold in numbers, not only to engine-builders, but also to millwrights, wheelwrights, and blacksmiths, for at the present time there are smithies provided with steam hammers, to be seen in many of our country towns.

The consequence of this increase in the use of machine tools, for the rough and plain work of a new country, and also the necessity of having such machines at as low a cost as possible, have rather checked the introduction of the highest class of machine tools. As is the case with many other articles, machines are now made to sell, and it may be that the lower the intrinsic value of the article the more profit is to be made by its sale, and the agent or dealer is not induced to keep the more expensive class of tools in stock.

It is recorded as an historic fact that in Joseph Clements' first planing machine the introduction of a slip of writing paper between the table and the roller had the effect of stopping all the adjacent rollers—such was the

accuracy of its construction. Subsequently Joseph Whitworth invented his machine to measure to the millionth part of an inch, and reduced the production of exact surfaces for machines to a practical art. Whitworth has done more than any other man to bring high-class machine tools to their present perfection, and the firm at Manchester, under his name, still stands at the top of the tree for the production of such machinery.

High-class machines are expensive in first cost, and are perhaps not of particular advantage in producing second-class work; they are adapted for old-established factories, backed up by capital more than for the pushing and enterprising pioneers in a new country. For similar reasons, possibly, as those for the production of the cheaper forms of American wood-working machines, it happens that the highest class of machine tools are rarely introduced into this Colony, and then only when specially imported. Tools from Whitworth, Fairburn, Smith & Coventry, Muir, and other first-class houses have, however, been for years, and are still, in use in Sydney, and fully justify their extra first cost.

William Sellers & Co., of Philadelphia, are looked upon as makers of high-class American tools, and have the reputation of being the Whitworths of America. Mr. Onward Bates, of Fort-street, exhibits two of their machines —a lathe and a planing machine; both of these rather jar at the first glance against the prejudices of a person accustomed to the ordinary design of English tools, but they cannot fail also to impress any one understanding the subject, with the skill and care that is manifested in their design and construction.

Sellers' lathe has 12-inch centres, measured in the way that is customary here (the American system being to measure the diameter of the article which can be taken in, as the swing of the lathe). The headstock of this lathe is triple-geared, there being a slow motion pinion gearing on to a wheel on the face plate, just as in larger lathes; the whole of the gearing appears to be machine cut, as it is perfectly finished. The mandrill of the tail-centre has a novel locking action, which compresses a collar to keep it from shifting. The bed is deep, and under the head it has an iron door to a locker for keeping the sundries. The most novel feature about the lathe is perhaps the variable disc motion to the feed gear. This is rather difficult to describe with accuracy, but it may be explained generally by stating that there is a double disc on one of the spindles of the feed gearing, which drives a double disc on another spindle working the feed shaft, through the intervention of a single disc which runs on a lever. The single disc runs between the double ones, and is gripped at its periphery by them with sufficient force for the friction to make them all move together. As the idle disc or wheel approaches the centre of the driving-discs its speed is, of course, reduced, and on the contrary, as it recedes, and is driven by circles of greater diameter, its speed is increased, at the same time the driven wheel being approached it is driven faster, relatively to the loose or idle one. This loose or idle wheel or disc is easily adjusted in varying positions by a thumbscrew wheel at the end of the lever, and this wheel is milled and handy to the turner's hand; he can thus reduce or increase the rate of his feed with the greatest nicety. There is a very effective steadying frame with triple blocks for turning shafting. Hand-wheels are used on the saddle of the rest instead of handles. There is a general air of refinement about the whole lathe, even the caps to the oil-holes are turned and are a good fit. The machine is too good for country work in this Colony, and the price is much higher than a lower class machine can be supplied for.

Sellers' planing machine is also a very fine tool. The peculiar feature in it is the driving gear. The table has a rack underneath, but instead of its being driven by a pinion, there is a worm or screw on a diagonal shaft, extending across the bed, which engages in it and drives it with a steady motion, without the jumps and vibrations almost inseparable from the ordinary toothed gear. The diagonal screw shaft is driven from a counter shaft at the side by bevel gearing, and this shaft is ranged fore and aft, with the belts across the machine, thus allowing the planer to be ranged in a shop with the lathes, instead of across, as is the usual practice. Another special feature is the belt striking gear. There are cast-iron levers having loops or eyes for shifting the belts, and these levers are operated by cams in such a way that one belt is shifted on to the loose pulley before the other one is put on to the driver or fast one, and thus the squeaking noises and slipping belts common to planing machines are avoided. There is an attachment to lift the tool off the work during the return stroke, and altogether this planing machine is by far the best one in the Exhibition.

Sellers' screwing machine is a fine tool, and has a few points of difference from the general run of such tools, such as will well repay inspection.

Messrs. Barron, Moxham, of Wynyard-square, exhibit a lathe and planing-machine by the Putnam Company, of Fitchburg, Mass. The planer is similar to the one described among Drysdale & Roberts' exhibits. The lathe is characteristically American. The practice in America generally is to use a higher speed and a lighter cut than is customary in Europe, and the lathes are designed with this view. V beds—which have long been out of use in England—are still made by many American toolmakers; and the lathe under notice has a pair of V's on the bed. The bed is ornamentally moulded; the saddle for the rest is peculiar in its arrangements; the handles have balanced knobs, all apparently being of cast-iron; and, as a whole, it is a much wider departure from English design than the superior lathe of Sellers'. It will self-act, surface, slide, and screw-cut—the screw being at the back of the bed.

Near to these lathes Messrs. Cattell & Co., as agents for Thomson, Sterne, & Co., of London and Glasgow, exhibit a fine and varied collection of emery grinding machines, mounted for ordinary and special work, such as grinding twist drills, &c.

Prentice Brothers, of Worcester, Mass., have a small foot lathe, the peculiarity of which is that the treadle works a vertical lever, from which a connecting rod pushes the crank, instead of pulling it in the ordinary way. The object of this arrangement is to get the action of the connecting rod, through a larger portion of the circle, and it also gives less jerk to the foot in turning the bottom centre.

The Wiley & Russell Manufacturing Co. have a hand screwing machine, which can be driven direct or by gearing, in such a way as to enable one man to screw a very large bolt; it is the best machine of its kind shown. Messrs. Blacket & Davy are the agents, and they show also hand-screwing tackle, bolt croppers, and other small workshop sundries of a very useful nature.

In the upper and eastern corner of the Machinery Hall there may be seen a large collection of engineers' tools, by several makers. Messrs. James Macgregor, of 320, George-street, are importers of engineers' tools, and exhibit a collection from Lee & Hunt, of Nottingham, England. These tools are all of the plain and substantial character suited for colonial wants, and such machines are now sold in large quantities. Messrs. Macgregor's exhibit

includes the following tools :—A foot-lathe, 5-inch centres, with back gear, gap-bed, 3-cone belt speed, check, face-plate, rest and steady bracket. The cranks drive from treadle by chains, and there are friction rollers to the crank-shaft. The lathe will self-act, slide, and screw-cut, and is very complete. A smaller lathe, 4½ centres, has a longer bed made in a similar way with a gap, and has a long treadle. A 9-inch gap-lathe to self-act, slide, screw-cut, and surface, is a very strong and useful machine, and specially adapted for the bulk of colonial work. A shaping-machine of the ordinary pattern is a plain and substantial tool. A slotting-machine has a uniform crank motion, geared counter cone speeds, three-motion table, and self-acting feed gear. It is also a very strong and substantial machine throughout; and the tools of these makers are sold at a reasonable price.

Mr. Linley, of Clarence-street, also exhibits a very varied and extensive collection of tools from several makers; the most conspicuous machine perhaps is Beverley's radial drill. This tool is already favourably known in Sydney; the novel features about it comprise a triple-framed crane, of turned bars, for carrying the drill spindle saddle; and the use of spiral gearing, to communicate motion from the radial shaft to the drill spindle. Close observers will notice that the driving pulleys of this machine have arms of an oval section, but, with the long axis of the oval—the opposite way to the customary practice.

Beverley's emery planeing machine is similar to an ordinary planer in many respects, and will take about 15 inches × 12 inches; but instead of having a tool-box there is an emery wheel mounted in a frame, to work on the surface of the material to be planed.

Beverley & Atkins' vertical drill is a useful small machine, the table has a rotary motion, and also a radial one on a frame; the motion being regulated by a screw, work is easily adjusted.

Beverley & Atkins have a lathe for foot, or power, which is of a very novel design. It is a gap lathe, and the headstock overhangs the cast-iron feet or bracket, at that end. A straight shaft extends from end to end under the bed, being carried on the feet brackets, and this shaft has overhung cone pulleys, under those on the mandril, as well as a fly-wheel. The belt can thus be more easily removed or adjusted than it could if the cone was inside the legs in the usual way. A treadle extends the whole length of the bed, and the straight shaft has two eccentrics instead of cranks. These eccentrics are coupled to the treadle by chains and rollers. As an additional means of driving the lathe there are pulleys at the foot end of the long shaft, clear of the bed; these can have a belt from a shop counter-shaft for power, or be driven from a fly-wheel turned by hand, which is attached by a bracket to the end of the bed.

Mr. Linley also shows the following tools by the well-known firm of Scott Brothers :—One gap lathe, to self-act, slide, and screw-cut. A useful vertical drilling machine, on a strong frame, and fitted with a circular table. A small steam hammer; the anvil, block, and framing being all in one casting. A planing machine, marked as sold to the Government, is a very good machine of its kind, but not of the high class that is generally made for Government work. A screwing machine is a strong job; the box casting of the main frame has a door, making a locker for accessories. A small slotting machine is of the ordinary class, and has no special features.

Messrs. Thomas Linley & Sons, of Sheffield, are the makers of the following tools shown in the same collection :—A pillar vertical drilling machine for

hand power, with an extra counter shaft, and bevel gear at right angles, for quick speeds and small holes. It is also fitted with a holding frame, and division plate, for boreing mortise holes in wooden wheel hubs. A small vertical hand-drill, with fly-wheel on the top of the spindle; and an extra counter shaft at right angles to the hand-shaft, to take power. This machine has a table and vyce for holding work to be drilled, which can be slewed out of the way at pleasure.

The Linley bellows and portable forges scarcely require mention, but they are included in the collection, and may be pronounced as very good. A vyce-bench, all of iron, and fitted with a drill attachment, is a very useful and strong appliance for engineering work. With the exception of the American machines by Sellers & Co., it must be confessed that few of the machines just described are any advance on the tools which have been at work in Sydney for years past, except perhaps in the matter of price.

There are several small drills, coppers, and other small appliances, scattered about the Exhibition, but it is believed that all the engineers' tools of any importance have been now described. A foundry machine, for moulding small castings, is exhibited in the Machinery Hall, and a few samples of castings are shown alongside, but there is no description attached; it is made by Mr. F. Dehne, Maschinen Fabrik, ad Halberstadt, Germany, and is deserving of some attention from our iron founders as a labour-saving machine.* From the position in which it is placed, and being mixed up with horse hoes, rakes, and other agricultural implements, not one in a thousand of the persons who see it know for what it is intended. The sample castings made by it are very clean and sharp.

In the Belgian department of the Machinery Hall there is a steam hammer by the Société Anonyme des Forges, Usines, et Fonderies, Gilly, Belgium, which is a strong and substantial machine, and the price quoted is very low for the size; however, it should have had a separate anvil block to be considered a first-class machine. It is marked as sold to the New South Wales Government, and is placed between the machinery and agricultural sheds.

ENGINEERS' FITTINGS.

From engineers' tools to engineers' fittings is an easy transition, and near to the lathes and other machines just described, in the centre of the Machinery-shed, at the top-end, there may be seen a handsome display of gauges and other similar mountings, from the well-known firm of Schaffer & Budenberg. These exhibits are enclosed in an upright ebonized case, and are under the care of Mr. Arthur Wormall, of the British Court, who is now representing the firm in Sydney.

One of the most important instruments is a pressure gauge tester. It consists of a screw and piston for forcing oil into the gauge to be tested, and which is screwed into a suitable socket; and also of a standard pressure gauge. The standard gauge is on the Bourdon principle, and has all its working parts in duplicate, the two hands being concentric; any variations of the two gauges are thus easily perceived, and corrected by taking mean readings of the separate indications. Owing to the number of common and unreliable gauges which are imported into Sydney (often with only the importer's and not the maker's name on them), it is very desirable that a testing machine should be

* Since used by the Atlas Company in making railway chairs for the Government.

at hand, and it is to be hoped that one of our engineering firms will purchase this tester. The work of testing a gauge only occupies a few minutes.

Messrs. Schaffer show gauges on their own and also on the Bourdon principle, the sizes ranging from a large dial 12-inch diameter down to a miniature only ¾-inch, which might make a brooch for an engineer's shirt front. They are made in all conceivable styles and patterns, and some are made with glass backs, and transparent, for indicating by night, the dial being illuminated from behind. Besides steam and vacuum gauges, there are also several varieties of hydraulic gauges, one of which is graduated up to 6 tons, or the enormous pressure of 13,440 lbs. to the inch. Another hydraulic gauge is fitted with an electric tell-tale apparatus. It has an adjustable hand with a stop, which can be set by a manager or superintendent to within as near a limit of the working pressure as desired, such manager alone having access to it by means of a key. The adjustable hand is arranged in electrical communication with one of the wires of an alarm, the circuit to which is closed; and the alarm is only given whenever the registering hand approaches close enough to make contact. Of course wires can be led to any distance, and an apparatus of this kind would effectually prevent any tampering with safety valves, or such like practices, in the night-time, unknown to the manager.

Messrs. Schaffer also show a number of Royles' universal joints for wrought-iron pipe; this is a most ingenious invention, which enables a joint in a pipe to be adjusted instantaneously from a straight line to an angle of 90 degrees. They have also a fine assortment of engine counters, to work by either revolving or reciprocating motion; reducing valves, Buss governors, thermometers for insertion in steam pipes, &c. Besides these, there are a number of valves and injectors, fusible plugs, &c., cut right through, to show the section, in such a way that the internal mechanism can be seen and understood at once. Also, there is a model of Heep's pipe-screwing machine, and a Buss governor, fitted with a piston having small openings working in an oil-cylinder, to steady the motion and render it equable. This fine display was worthy of a place in the main building, and is at a great disadvantage in the bad position where it is now placed.

Messrs. Lewellins & James, of Castle-green, Bristol, have a fine assortment of engineers' brasswork in an open case, which is placed in the Agricultural Hall. Among the small goods there are some very fine water-gauge mountings, made with flanges, and extra strong—a great contrast to the weak and light sets which are so often used for cheapness, and which are, in consequence, always a source of trouble. There are also some fine whistles, lubricators, hydrant, and other cocks. The larger machines include a colliery winding indicator, with alarm gong and double hammer; also several examples of Widmark's patent parabolic governor, the peculiar feature in which is a heavy ball in two halves, joined together at the bottom on to a sleeve on the vertical spindle, such halves being connected at the top of the spindle by short connecting rods attached to lugs on their top surfaces. The effect of the centrifugal action is to cause the ball to split open, as it were, from the top, and in so doing to rise bodily and lift the throttle valve. It is a very elegant contrivance, simple and effective. The English price of governor and throttle valve suitable for an engine from 5 to 10 horse power is only £12 10s., the valve being of the equilibrium piston description.

Messrs. Lewellins & James also exhibit a number of brass pumps, some brewers' plant with mash mixer and sparger, and an emery band finishing

machine. This latter consists of a cast-iron frame with pulleys on each side, over which endless bands of emery or glass cloth are run, to the surface of which bands, brass goods, or other articles to be finished, are applied.

Messrs. John Fell & Co., of Wolverhampton, make a splendid show of engineers and plumbers' fittings, which is to be seen in the basement. Closely adjacent may be seen another show of brasswork, by J. Stone & Co., of Deptford. This includes pumps, fire-engines, and steering gear. The most important object of Stones' exhibit is their new patent ship's pump—resembling the well-known Downton pump in general appearance; but in place of having three buckets in one barrel, as the Downton pump has, there are two buckets only, and the pump is double-acting. This gives a four-fold delivery, with less complication of parts, and forms a most powerful pump or fire-engine, which takes up very little room on the deck of a steamer or sailing-ship. This pump is bright all over in solid brass, and is not only compact and handy to get at the valves, but is a sightly ornament on a ship's deck. Burt, of Dunedin, and Danks, of Melbourne, make fine shows of colonial brass and copper work.

FLOUR-MILL MACHINERY.

Flour-mill machinery forms an important branch of that shown at the Exhibition, and, with the increasing area of land which is now being cultivated for wheat, it will probably very soon be much more required in the Colony than hitherto. There are some very primitive mills scattered about New South Wales, but as district after district cultivated by the early settlers was found to be unsuitable, or was worked out, wheat-growing fell off; and there was nothing to make it worth while keeping the old mills in order, much less keeping them level with modern improvements. The recent extensions of the railway have opened up country having millions of acres suitable for wheat; and the last year or two has witnessed more innovations on the old systems of wheat-grinding and flour-making than have taken place with any other manufactures represented by machinery at the Exhibition.

The ordinary system of grinding wheat between two stones is at the present day identical in principle with that described in Scripture, the only differences being in detail and degree; but latterly the practice of flour-grinding by rollers instead of by millstones has been brought from the experimental stage into actual practice.

At the Kilburn Show of the Royal Agricultural Society, a few months back, the systems of Ganz, of Daverio, and of Wegmann were shown, the latter having rollers of porcelain. The two former systems are now represented in Sydney. In *Engineering's* reports of the Kilburn machines, it is stated that Messrs. Ganz have turned out over 2,000 mills of this type during the last three years; it is therefore certain that they must be rapidly coming into favour.

Messrs. Ganz, of Buda-Pesth, have for some time made the construction of these mills a speciality, and they are doubly represented at the Exhibition, for there is a set of three machines in the German department of the machinery hall, and another set for which Messrs. Drysdale & Roberts are the agents, but the two sets are so similar that one description will apply to both of them.

In the Swiss Court, where nobody would dream of finding such a thing, there may be seen a beautiful little working model of a mill on the Daverio

system, exhibited by Gustav Daverio, of Oberstrauss, near Zürich. It consists of three chilled iron rollers set one over the other, and so arranged that two independent rollings can be given by the three rollers. A most important point in these roller mills is the way to relieve the bearings from the great wear due to the strain, and to adjust the distance apart of the rollers. This is done in Daverio's mill by having the bearings in levers adjusted by screws. This machine has also under the rollers a detacher, for breaking up the small white cakes which fall from the rollers, and increasing the quantity of flour obtained at each rolling.

It must not be supposed that the new system is more simple than the old style of flour-making, as the number of operations to be performed is greatly increased; but the advantages are—the greater yield of fine flour and the production of more marketable articles. In the Swiss Court there will be also seen a show-case with thirty-two divisions, one having wheat, one flour, one semolina, and the other twenty-nine being all occupied with the various intermediate grades of middlings and bran, representing the different stages of a complete system of milling.

Under the Hungarian system flour can be made without stones at all; but the Ganz mills are also largely used in conjunction with ordinary stone-grinding. They are made with both fluted and plain rollers, according to the work to be done. The sets of Ganz machines now shown in Sydney include a horizontal mill with four fluted rollers, being really two pair, a vertical mill with three fluted rollers, and a second vertical mill with three smooth rollers. Messrs. Ganz have secured the use of Mechwart's patent anti-friction adjustable spring-pressure ring for their mills, which enables the pressure to be taken off the bearings and the productive power of the rollers much increased. Mechwart's patent is a most ingenious and effective contrivance. It consists of a pair of steel hoops or rings which encircle flanged rollers on the gudgeons of the top and bottom rollers, and also a third adjustable roller which has a horizontal movement; the line joining the centres of the roll gudgeons is part of a chord of the circle of the ring; and the adjusting roller is on the opposite side of the ring's centre, the three being thus in the form of a triangle. The consequence of this arrangement is that, as the adjusting roller is set back, the grinding centres can be brought closer together and the pressure increased to resist the work of grinding; this relieves the bearings from friction, and the ring runs round with so little friction that no heat is generated.

Another improvement, which is only seen on one pair of mills, is that instead of having ordinary spur-wheels to drive the rollers, Messrs. Ganz have applied wheels wth the teeth *à chevron.* These teeth are angled from the two sides of the wheel and form a point in the centre of the face instead of being straight, and they work with an equable roll and without the noise and vibration inseparable from ordinary gearing. The plan is not new, but it is only improved modern appliances which have enabled these wheels to be made cheap enough to be adopted successfully on a large scale.

By the use of fluted rollers the skin of the wheat can be detached and separated; and altogether it seems certain that, if the roller-mill system in its entirety is not exactly suited to the general wants of the Colony, that it is bound to become largely introduced into the better class of Colonial mills.

Barford & Perkins, of Peterborough, show three or four sizes of corn-grinding mills which are well suited for small farmers and remote country districts, as they will produce grades from domestic flour to pig-feed.

H. Grusou, of Buckau, Magdeburg, Germany, shows in the Agricultural Hall some kibbling-mills on a new principle, the grinding discs being of hard cast-iron; they are deserving of great attention from their simplicity and the ease with which the working parts can be renewed when worn out.

The exhibitors of ordinary horizontal flour-mills are Messrs. Garrett, of Leiston Works, Suffolk, who have a pair of 4-feet stones on an iron hurst; Messrs. Whitmore & Binyon, of London and Wickham Market, Suffolk, who have two pair of 3 feet 6 inch stones; and Messrs. Robey & Co., who also have two pair of the same size. The whole of these mills are of the ordinary class, and there is nothing about them to which to call particular attention.

There is a very good assortment of French burr stones to be seen by English, Belgian, and French makers. L. Dassonville de St. Hubert, in the Belgian department, has a pair; and near the French confectionery factory, Dupetz & Cie. have a pair of 4-feet stones, which seem to have been jointed by diamond machinery, so close and perfect is the workmanship. Besides these, Messrs. R. Dell & Co., in the British section, show two pair of 4-feet French burrs, and the three English mills above-mentioned have all French stones—the single-mill of Garrett's having 4 feet, and the double-mills each 3 feet 6 inch stones.

The Canadian standard mill, with vertical faces, is a great departure from the ordinary system of stone-grinding, and, with its connections, is of great interest to farmers and settlers in this Colony.

The new improved 20-inch standard flouring mill, made by the Waterous Company, of Brantford, Ont., Canada, and exhibited by Mr. Fleming, has proved the most generally attactive exhibit in the flour line, because it has on several occasions been shown in actual work.

The principal novelty in the Canadian mill is the construction and working of the stone gearing and the compactness of the general arrangement.

The stones work with a vertical face and horizontal spindle, quite in opposition to common practice, and the runner, instead of being balanced and hung free, is fixed fast to the spindle. The stones are enclosed in a cast-iron case, which has a joint at the line of the face, and the bed-stone (if it can be so called in this arrangement), is fast fixed in its own half of the box. The spindle extends right through from out to out, and runs in long bearings on the casing, the driving pulley being on the runner side; it is thus impossible for the stones to get out of exactness if they are once truly faced together and the joint of the casing is put together properly. The 20-inch mill is claimed to be able to work up to 1,200 turns per minute, and has actually been worked at from 900 to 1,000 revolutions during the trials in the Exhibition. The feed is a very elegant adaptation of the old damsel and beater principle; a slight eccentric on the shaft gives a vibrating motion to a shaking lever which is hardly perceptible to the eye at 1,000 revolutions per minute, but which brings the feed down the shaken shoot in a steady stream from a circular hopper fixed right over the centre-line of the stones. The bottom casting has two projecting brackets on which the two halves of the case can be turned down in a few minutes and the stones left face upwards for dressing.

Owing to the speed of these stones a great draught is created, and, as the casing is all air-tight, the air is drawn in with the feed and goes out with the meal, which is much cooler than would be expected from the velocity of the stones. A small meal screen with elevator conveys the meal into the silk-dresser, which, unlike the ordinary form, is all enclosed in a cylindrical casing, and stands on wooden legs above the floor. The bolted grades of flour and

middlings are delivered into a long trough at the side of the reel casing, and the bran, by an ingenious contrivance, is turned out of the hollow axle at the tail of the machine.

There is nothing very special about the smutter except that the cylinder is composed of cast-iron segments, and the fan acts as an aspirator or exhaust instead of a blower. Altogether, this Canadian principle seems well adapted for small private mills in remote districts, and the one exhibited has been already sold by Mr. Fleming.

In the British section of the Machinery Halls, Messrs. Whitmore & Binyon have a silk-dressing machine and two smutters. The dresser is without any special novelties, but it is a very good and serviceable machine. The main axle is tubular, and is stayed or trussed with round rods, and instead of a screw creeper in the bottom, there is a belt with wood blades like a California pump. The outside gearing is well finished, and the wood is varnished. The large smutter has a shaking table or joggling screen stuck up on vibrating rods to clean the grain first, and a conical casing connected with the fan surrounds the cylinder. The small smutter has no especial points to notice, but all these exhibitors' machines are good examples of standard English mill practice before the introduction of the recent radical innovations.

Messrs. Wm. R. Dell & Co., of Mark-lane, London, show, besides the stones already mentioned, an "economic" smutter and wheat-cleaner and an "economic" middlings purifier. The smutter is fitted with a shaking separator, having two or more sieves above the feed hopper through which a current of air is continually being drawn by the fan; smut-balls are thus caught by the draught and delivered unbroken without going through the cylinder at all or being broken up by the beaters. This is a great improvement on the old system. The cylinder and beaters are vertical, and as the grain gets to the bottom it is caught in another draught of air which removes all the remaining impurities. The middlings purifier is one of the improved machines of the modern systems of milling; it consists of a series of silk sieves or bolters arranged with a dusting chamber or cylinder over them, into which the middlings enter, and in which they have the soft and fluffy part removed by the action of an exhaust-pan before they fall on to the cloths. The silks are thus freed from the larger portion of the soft dust, and, as a consequence, do not clog up as in ordinary machines. A second fan is used to draw off the air and regulate the currents through the sieves by means of a number of holes which are adjusted by slides. Great advantages are claimed for these machines in doing a large amount of work with litttle wear and tear.

W. R. Dell & Co. also exhibit a working model of Baxter's patent automatic weighing-machine. This is shown at work with seed, and when the upper hopper is charged, it will fill and discharge the measuring drum, and record on a dial the quantity delivered.

At the upper end of the building there is a larger machine of the same kind for actual work, made by Messrs. J. & E. Hall, of Dartford Ironworks, Kent, which will weigh any kind of grain. In the same neighbourhood there are also a number of American machines, including Oliver's bran-duster, the Eureka wheat-brush, Booth's patent zig-zag separator, the Eureka smutter and separator, and a middlings purifier, by Howes, Babcock, & Co., of New York. These are useful machines for the operations they have to perform, but are got up in a rougher and cheaper way than some of the other machinery of the same class.

Nagel & Kaemp's centrifugal silk-dressing machine is shown running in the German Court of the Machinery Hall, and is another novelty. It consists, in reality, of two machines, one placed over the other, each having a cylinder very similar to old-style wire-dressers, but with this difference, that the wood cylinders are made in four quarters, and are bolted to an iron skeleton frame in such a way that they can be easily removed and another cylinder, with different numbers of silk, can be quickly substituted. The upper machine is covered with perforated zinc, and removes the bran at once, thus leaving so much less work for the silk to do in the lower machine; both cylinders are made to revolve slowly when the machine is at work, and, instead of having brushes inside, there are light iron beaters or blades, which are arranged with a rifle twist, and revolve very rapidly; they thus throw the meal against the silk in a regular and equable stream, and also keep up a current of air. It is claimed that one of these small machines will do as much work as an ordinary silk-machine with a very much larger reel and surface of clothing.

SPRING SAFETY VALVES.

Thomas Adams, of the Ant and Bee Works, Manchester, obtained the prize in the great spring safety valve contest a year or two back, and his name has been kept prominently before the engineering world ever since. The great advantages which springs have at sea over dead loads for safety valves, are so great, and so well understood, that within three years of a successful spring-valve having been made, the old style might be said to have been superseded entirely. Mort's Dock & Engineering Co., have been appointed agents for Adams's valves, and they exhibit a collection suitable for land and sea, and for locomotive and stationary boilers respectively. This kind of valves are already largely in use in the Colony, and are made by the leading engineering firms. Under Adams's principle the springs are all spiral, and act by compression.

STONE WORKING MACHINERY.

For working in stone, Messrs. D. & W. Robertson exhibit what they call the duplex stone-moulding machine; it is Hunter's patent, and should be of great interest to builders and contractors in Sydney. Stone dressing and moulding machines have been designed in great variety, but the difficulty has been to get a cheap and simple form of cutting edge that can be easily and quickly renewed. In the machine under notice there is a travelling iron table resembling an engineer's planing machine, but instead of having standards for the tool saddles, all the tools are mounted on a very stiff and strong vertical spindle, which stands up on the working side of the machine, and dresses the stone on the side or vertical face. The cutting tools are like large countersunk-headed nails, and are just inserted into holes in the ends of cast-iron cross-heads on the vertical shaft; the head of the tool is the cutter, the pressure of cutting keeping the tool hard in the holder, and as one part of the circumference of the head is worn, it can be turned round until all is dulled; then it only requires a heat, and setting into a proper tool, to have a new edge. A number of the cross-heads or tool holders are put on the shaft one above the other and secured fast; as they revolve the stone is travelled against them, and all excresences are removed. By using tool-holders of different diameters, mouldings or cornices can be worked. The stone is not finished at one cut,

because it is necessary with most stone to use a finer set of tools to finish the work, when it is elaborate; and a rough strong set will block out a shape from the state it is in as it comes from the quarry. During the course of the Exhibition, a number of steps, sills, cornices, and mouldings have been worked (sometimes of pretty rough stone), and the machine, although somewhat light in the framing, has demonstrated its capabilities to the satisfaction of a great many persons. Messrs. Robertson also show one of Low's patent lathes for brass-finishers. These machines are already in use in Sydney, and are highly appreciated. They are made by Messrs. Low and Duff, of Dundee. The lathe is all contained on one standard, and has two speeds of driving belts, either of which can be put in gear by a friction cone. The tail centre is carried on a bracket which swings round below the rest out of the way when it is not wanted.

WOOL WORKING MACHINERY.

The manufacture of woollen and leather goods must necessarily be of especial interest to the Colonies, for at the present time the larger part of the tweeds and blankets which are used here, and the whole of the broadcloths, and other similar goods are imported, although we supply the raw material to home manufacturers. In a similar way, thousands of pounds worth of leather is imported into the Colony, although hides as well as leather, are exported in abundance. Every patriotic colonist must feel an interest in the improvement of colonial tweeds and such like fabrics, and thousands of persons must have witnessed with pleasure the splendid collection of woollen machinery which has been sent from England, and been shown at work in the Machinery Hall during the course of the Exhibition. Although the manufacture of colonial tweeds was commenced very early in the history of the Colony, for some reason or other it does not appear until recently to have made much headway. There are now, however, several manufactories having modern machinery, and the result of the Exhibition has been already attended with good results; for nearly the whole, if not all, of the valuable machines brought out to the Colony have found purchasers, and it is to be hoped, as a further consequence, that the most fastidious dresser will soon be able to select clothes at his tailor's from colonial fabrics equal to anything that Yorkshire or the West of England mills can produce.

Foremost among the wool working machinery must be placed the exhibits of John Sykes & Sons, of the Turnbridge Machine Works, Huddersfield. They comprise a self-acting teazer, or willow for opening and cleaning wool; a wool-burring machine, for picking out the thorns, thistles, or other vegetable refuse found in wool; a twisting and a doubling frame; and a waste-opening machine. The first machine works 36 inches wide, and cleans and opens the wool by means of a drum set with spikes. The working part is enclosed in gratings, and an exhaust fan removes the dirt and refuse. The wool is fed into the machine on an endless table of mahogany slats, but in order that it may be subjected to the action of the willow or swift for a certain definite time, the motion of the feed table is intermittent, and this is effected by a very ingenious arrangement of gearing. A spur wheel of the feed gearing has a plain segment attached to its rim, which can be made of any length desired, and as this segment comes round in the course of the wheel's revolution it lifts a roller from a brake bed where it reposes and brings it into contact with a vulcanite friction wheel, which in turn gives motion to the feed table, and

brings it forward, more or less, as the attached segment is longer or shorter. After the segment leaves the roller it again stops revolving and falls into its bed, thus preventing any more feed being introduced. A motion connected to the same gearing causes a grating to open and discharge the clean and opened wool as soon as it is finished.

The burring machine is 50 inches wide on the comb, and will clean from 100 to 150 lbs. of wool per hour. It consists of a main drum or cylinder set its full length with a number of fine combs all round, into which combs the wool is set by a brush cylinder, and as it revolves all such stuff as burs, straw, and other vegetable matters are knocked out by fast-revolving blades.

The twisting and doubling frame has fifty spindles on each side, or 100 altogether ; the spindles are of steel and are 12 inches long, and they can be run if required at 6,000 turns per minute. Either side of this machine can be driven separately, and it is adapted for both warp and weft.

The last of Messrs. Sykes' machines for opening the waste of woollen mills is a complicated machine, consisting of a number of drums and rollers that act as in a carding machine. It has two swifts or main cylinders, and these are bored out to make their thickness perfectly parallel, and enable them to run in perfect balance. The teeth in this machine are formed of a wire, which is made like a small narrow saw, less than a quarter of an inch wide. All the cylinders and rollers are turned with spiral grooves, about one-eighth of an inch apart, and this saw-wire is laid in with the teeth outwards, covering them with myriads of sharp points or teeth to comb out and open the waste.

The manufacture of this class of machinery has never been attempted in Sydney, for obvious reasons. In England it is a speciality ; wool working machinery in fact being made by different houses to those which make machines for manufacturing silk or cotton. But nevertheless our engineers and machinists must have examined with pleasure the very substantial way in which the above exhibits are got up, and the very perfect finish of all the parts. The wood-work of the willow is handsomely panelled in fancy woods and polished, and no expense appears to be spared in the general get-up. Messrs. Sykes' counter-shaft overhead deserves notice from its peculiar form of coupling, which acts also as a pulley, and prevents the damage to belts, which generally occurs from contact with the nuts, or bolt-heads of the coupling, whenever a belt gets off its pulley.

In front of the last-mentioned exhibits there are four power looms exhibited ; one, a Jacquard loom by Mr. Vicars of the Tweed Factory, Sussex-street, was for some time by itself, and being shown at work on ordinary tweed, it attracted many visitors. Subsequently two more looms were erected by Messrs. Schofield & Kirk, of Rashcliffe Works, Huddersfield, and these showed at once that they were in many respects an advance upon the former one, which had already done the Colony some service. But the fourth loom, by Robert Taylor & Sons, of Marsden, Yorkshire, appears to take the palm, both for design and workmanship, as well as for its capacity for work. Messrs. Taylor have introduced several improvements into their looms, for some of which they hold patents. The connection of the jacks and hooks is effected without pins, by a peculiar interlocking action very simple, but difficult to describe. A controlling motion lets the shuttle boxes down steadily instead of letting them fall. The box and picking motion are both worked with one set of links ; and the Jacquard needle grates are made in two parts so as to allow for wear being taken up. In addition to these improvements, the loom

can be reversed and run back without any fear of crossing colours. This loom was shown at work on a fine piece of coating in the white, the warp for which was brought from England with it, and it was much finer than the yarns on the other looms. It is to be hoped that improved spinning machinery will also soon be added to our mills, the proprietors of which have already shown great enterprise in purchasing, several of the machines enumerated having been bought for Parramatta. Mr. Ezra Sykes and Mr. Taylor, junior, both came out to the Colony with their machines, and have afforded every information which visitors could desire.

LEATHER-WORKING MACHINERY.

To go from wool to leather is only a short step, for the adjoining exhibit to Messrs. Sykes is that of Messrs. Charles Molinier & Co. (Limited), of St. Mary-Axe, London. This firm has sent out several machines for working on hides, skins, or leather, and Mr. George Harrison has come out with them. This latter gentleman has patented the machines in the Colonies, and on several occasions he showed them in operation at the Exhibition, but owing to the dirt inseparable from such work he also had them shown at work at one of the local tanneries. The special features in these machines are—first, a cylinder or barrel set with knives, which are arranged in a right and left spiral, from the centre to the ends, which knives may be sharp, blunt, or wire-edged, and of brass or steel, according to the operation to be performed on the skin; secondly, a roller covered with india-rubber, revolving in a frame under the knife roller, and acting as a beam, this roller being brought up by the operator's foot on a treadle, and its closeness being regulated by a set screw; thirdly, a clip frame, sliding in front of the machine, to and fro, from the rollers, this clip holding the hide or skin in its grip, while it is pulled back against the action of the knives. The whole operation of the machine is thus:—The skin held in the clip is thrown over the beam or roller, and on being raised into contact with the knife cylinder the spiral action right and left stretches it out and operates on its surface, in the way desired, either in removing wool or flesh, in thicknessing, or in the various operations of setting out, &c. It is understood that a good business has been done with these machines, and that they have shown themselves particularly well adapted to the wants of the Colony.

To find another set of English-made tannery machines, it will be necessary to go to the basement of the Garden Palace, where—mixed up with life-boats, cooking stoves, and patent paint—three machines from Messrs. Huxham & Brown, of Exeter, will be found. The patent spring-carriage butt-roller is a machine that has some very good features, one of which is, that it is all self-contained, and can be set up complete on its own framing without any part being required to fix to joists overhead or separate standards. The main frame is strong and substantial, and the bed, which is zinc-covered, is raised by a double toggle action, and a treadle in front. The roller motion is given by a rack and pinion which is reversed at each end of the stroke by plain and crossed belts as in a planing-machine; this arrangement enables a stroke of any required length to be adjusted, but it can scarcely work so sweetly and quietly as a crank motion. The machine is calculated to roll fifteen butts per hour, and has a brass roller.

Messrs. Ullathorne & Co., of London and Paris, and Lonsdale-street, Melbourne, have a collection of boot and shoemaking machinery, including

sole cutting and rolling, upper pressing and eyelet cutting-machines ; they are strong and serviceable, but not distinguished by any special mechanical merit.

A bark mill to grind from five to seven tons per day is shown by the same makers ; it is made entirely of cast-iron framing, and has a pair of breaking rollers with separate discs to prepare and feed in the bark for further grinding. A tanner's pump is chiefly noticeable for its substantial column standard and the Perroux india-rubber valves which are easily accessible ; the pump is double-acting.

MACHINERY FOR WORKING SUGAR AND FOR DISTILLATION.

Copper made sugar and distilling machinery finds its best representatives from Germany. Ziemann, of Stuttgart, exhibits a small vacuum pan apparatus, which is beautifully got up, and is a good example of coppersmith's work. There is a small steam boiler about 5 feet high, all of copper, and a little model engine to work the pumps. The pan is fitted with all the glasses, gauges, and other appurtenances to render it complete.

Close alongside the last exhibit F. Hallstroen, of Nienburg, has another vacuum pan and apparatus, which appears to be intended for distillation ; the coppersmith work and brass-finishing in this—like the last—is of good style and finish.

Mr. S. S. Griffiths, of Wellington, N.Z., has a large comfit or almond pan, and a small syrup pan, which have been kept at work during the whole course of the Exhibition, manufacturing lollies for the information and delectation, not only of infantile visitors, but also of children of a larger growth. Mr. Griffiths' pan has a wobbling motion—that is, it does not revolve on its own axis, which is inclined from the perpendicular, but the axis is hung in gimbals close under the pan, while its footstep, revolving in a circle, has what is known as a Z-crank motion, and gives the peculiar shaking or wobbling movement to the pan—a motion similar to that of a spun plate when coming to rest. The pan is steam-jacketed by having separate pockets formed on its bottom.

M. Combet, in the French department, has a comfit or almond pan of a smaller size than the last described, but it revolves simply on an inclined axis, with its mouth always pointing one way ; the steam for heating is applied by a copper coil attached outside, which plan is stronger, and less liable to accident than a double bottom or jacket ; for such a jacket has been blown out of shape before this in Sydney. M. Combet's mixing-pan has an arrangement by which the mixing knives can be easily detached and taken out, thus enabling it to be used for mixing creams or boiling syrups, &c., as required. This exhibitor has also a large number of confectionery machines of the ordinary description, as well as some more elaborate and complicated ones. A machine for making whistles in sugar is a most ingenious contrivance, and acts perfectly, but it would require a page to describe its action, and it would not then be understood so well as from an examination of the machine itself.

Close to M. Combet's confectionery plant there may be seen a collection of copper work, including an apparatus for testing the alcohol left in wine or wine refuse. It consists of a small still heated by gas flames, and provided with a rectifying column and all the necessary appurtenances for gauging the quantity and strength of the spirit produced. This apparatus is from the celebrated French house of Savalle, Fils, et Compagnie, and can be shown in operation to persons interested in wine-making or similar industries.

In the corner of the basement at the southern end there is a large copper spirit-still with a rectifying column, shown by the inventor—Mr. E. Meyers. This should be of very great interest to wine-growers, as it is guaranteed to turn out spirit 64 per cent. o.p. in a single running, and certificates are shown from proprietors of stills in the Colony, which Mr. Meyers has supplied. Besides the exhibit is of interest, as it is made in the Colony, and is the principal example of colonial coppersmith's work which is shown in the Exhibition.

Messrs. D. & W. Robertson show a copper pan, steam-jacketed, and swinging on trunnions, which is well adapted for jam-makers; it is made by Messrs. Low & Duff, of Dundee, and may be seen in the machinery shed.

PRINTING MACHINERY.

The printing machines are placed well together in the basement of the Garden Palace. Messrs. Gibbs, Shallard, & Co., of Pitt-street, have the most attractive exhibit of printing plant, as they show two machines at actual work; the first is Messrs. Thomas Furnival & Sons' express double-crown lithographic machine, supplied by the agents of the makers (Messrs. F. T. Wimble & Co. of Hamilton-street, Sydney). This machine is fitted with the new patent rollers, and has been in use several times for colour work—printing the illustrated supplements to the *Illustrated Sydney News*—since it has been in its present place at the top of the Machinery Hall. It is understood that this is the largest lithographic machine in the Colony.

Messrs. Gibbs, Shallard also exhibit two of the "Quadrant" printing machines; one of them, which is occasionally shown in motion, is erected alongside of the large lithographic machine just mentioned, a smaller one is to be seen at the back of the *Graphic* Court. Here also the same exhibitors have an "Empire" machine, worked by foot treadle. All three of these machines are made by J. M. Powell & Sons, of St. Bride's-street, London.

Close to the last machines there may be seen six different sizes of the "Model" printing-press adapted for the trade, the business man, or the amateur; they are made by C. G. Squintani & Co., of Ludgate Circus, London. Messrs. Edwards, Dunlop, & Co. are the agents.

Alongside the last exhibit Mr. John Sands has a "Paragon" litho. machine, which is claimed by the makers to be noiseless. It is made by William Greaves, of the Vincent Machine Works, Leeds, and is specially adapted for colour printing; there are exhibited with it a collection of fancy, Christmas, and other cards, which have been worked on a similar machine.

The proprietors of the *Graphic* exhibit the Bremner demy machine, made by Harrild, of London, together with a set of stereotyping plant.

The Simplissimus machines, by the Birmingham Machinists' Co., have been attended by a gentleman since the opening of the Exhibition, who has worked the same daily, and explained the various operations to visitors. The simplicity of this machine and its action has induced many persons to desire to become their own printers.

Messrs. F. T. Wimble & Co., of Hamilton-street, exhibit in the basement a "Sun" demy machine, by Greenwood & Batty, of Leeds, and a double-crown ditto, by G. W. Notting.

In the machinery hall there are two printing machines from Germany which deserve attention; they are by Ph. Swidersky, of Leipsic, for whom Mr. Oscar

Schultz is the agent. The smaller machine has a foot treadle. In the mechanical fitting up of these machines the work appears to be of a first-class character.

REFRIGERATING MACHINERY.

Owing to the abundance of live stock, and the success of the "Strathleven" shipment of meat, there are at the present moment very few mechanical processes which are engaging as much attention from colonists as those which have for their object the production of artificial cold.

The history of ice-making in New South Wales may be said to commence in the year 1858, when Mr. B. G. Sloper took out a patent for a refrigeration machine worked by the use of the atmosphere only—or what is called an air-machine; but want of means brought his experiments to a close before success was attained.

In 1860, Mr. James Harrison, of Geelong, took out his first New South Wales patent for an ether machine, he having previously patented it in England and Victoria in 1856; and this plan of Harrison's is substantially that now worked by Messrs. Siebe and Gorman in their machine at the Exhibition. It has at various times received many practical improvements at the hands of the makers, so that it is now, as constructed by Siebe and Gorman, a very superior machine for accomplishing its work, to what it was in its original form.

In 1861, Mr. Nicolle, in conjunction with the late Richard Dawson, took out his first patent for freezing by the use of ammonia and similar gases, and subsequently in conjunction with Messrs. Wilkinson and Williams, and the late Mr. Mort, further patents were taken for improvements, until the ammonia machine was brought to its present state of perfection. The Mort-Nicolle machines, while based on the principles of the machines invented by Carré, of Paris, have been by the colonial inventions so improved as to be now probably the most economical producers of cold (measured by the coal or fuel used) that have yet been produced; they also work at a lower pressure of gas than other ammonia machines. This economy has only been accomplished, however, by making a much more complex machine than those working on somewhat similar principles, by Rees Reece, Carré, and other makers of ammonia freezing machines. The exhibits in the machinery shed show that the Fresh Food & Ice Co.'s plant, while being much more powerful, is also much more complicated than the small German one by Vaass and Littmann, Halle a S.

An air machine was patented in New South Wales by Mort & Nicolle, in August, 1868, but being an impracticable scheme it was abandoned. J. D. Postle also took out a patent for an air machine in the same month and year, but nothing seems to have been done to make the machines. In March of the same year Mr. D. Little obtained a patent for the use of an air machine to preserve meat, &c., on board ship, but without detailing the construction of the machine itself.

Bell & Coleman have recently obtained letters patent in the Colony for an improved refrigeration machine; a beautiful little model of which is exhibited in connection with drawings and photographs of the "Strathleven" machinery in the gallery of the New South Wales Court.

Bell & Coleman's machine is, so far as general principles are concerned, not different to Windhausen's, Kirk's, or other machines actually at work, or those of Postle and Little patented in the Colony here, but practically there

are great improvements in the working, by a better system of cooling, and better desiccation of the air to remove the moisture and make it dry. The development of air machines has been greatly retarded by the fact that they require more power, relatively, than either ether or ammonia machines; but on shipboard, in the large steamers of the present day, a few tons of coal more or less is not of so much importance as it was formerly considered to be. The Bell-Coleman machine requires a large quantity of condensing water, which of course can be obtained on shipboard, but there does not appear to be any information at hand at present as to their use at inland stations or depôts. Some improvements have recently been made in the Colony with a view to produce a freezing machine specially suitable for up-country use.

To take the freezing machines in the order of their simplicity, the Siebe & Gorman machine must come first, as having fewer parts, and being more easily understood by a novice. Several of these ether machines are already at work in Sydney, and an additional one has just been erected by Mr. Siebe, who came out with the firm's exhibits.

The action of the ether ice-making machine is based on the principle that ether will boil at a very low temperature—much below the freezing point—if the pressure of the atmosphere is removed from it. In order to carry this into practice, Siebe's machine consists of an exhaust or suction pump driven by a steam engine, which is continually pumping the vapour or gas from a copper vessel, which may be called the ether boiler. This gas on the suction side of the pump is cold, being in tension; but on the delivery side, when its original compression is restored, it is hot, it having in it the heat imparted to it in the boiler. This heated gas is passed through coils of pipe immersed in water in a similar way to the worm of a still, until it is liquefied and cooled. The cool liquid ether is admitted into the boiler by a small regulating cock, where it is again boiled or vapourized, and pumped out; and so the proccss goes on. As far as the ether is concerned, it is simply admitted to the boiler in a liquid state and pumped out in a vapourous or gaseous condition. The boiler in which the ether is boiled or vapourized has a number of tubes running through it, and a current of salt water (or other solution which will not freeze) is passed through these tubes; the consequence is, that the brine is cooled; and it is the heat taken out or abstracted from this brine which boils the ether. Having once obtained a cold medium as this brine or salt water, it can be applied to ice-making, by the use of moulds; or to the cooling of rooms, by circulating it in pipes. As regards the actual manufacture of ice, the Siebe machine makes the clearest ice in the Exhibition; because instead of putting the clean fresh water into moulds and immersing these moulds in the freezing medium, in the same way as is practised in other machines, under Siebe's patent the brine is circulated through metal boxes or moulds which are immersed in fresh water, and the ice is formed on the outer surfaces. A mechanical set of agitators keeps the fresh water in motion, and this agitation has the effect of removing all air-bubbles and making beautifully clear ice.

The ether machine in the Exhibition is calculated to make half a ton of ice per day; but owing to there being no use for the ice, and from the exhibitors having no desire to compete with the regular traders, it has lately only been shown in operation at intervals. It must be understood that the ether machine requires more coal to produce a given quantity of ice than an ammonia machine, but where the cost of the fuel is not a great object it is often preferred on account of its greater simplicity.

The Fresh Food & Ice Company have at great cost, and with an enterprise worthy of the successors of the late Mr. T. S. Mort, erected a very complete ice-making and refrigerating plant. The cold room has been entered by hundreds during the course of the Exhibition, who for the first time in their lives experienced the effects of an atmosphere between the freezing point and zero.

The Company's plant is capable of making one ton of ice per day, or doing the equivalent work in the freezing room. The ice is made in wooden boxes containing moulds full of the fresh water to be frozen, and a solution of chloride of calcium, which is cooled down in the machine to as low as zero if required, is circulated among the moulds until the water is frozen. For keeping the freezing chamber cold, the same cold solution is circulated in pipes which run backwards and forwards on the sides and ceiling of the chamber. This solution abstracts the heat from the chamber and its contents, and is returned, with its temperature raised, to the machine, where it is again reduced.

Freezing machines using ammonia operate first by driving off the ammoniacal gas from the liquid by heat, and then liquefying it by subjecting it to cold and pressure. If it is to be liquefied at the ordinary temperature of the atmosphere a pressure of from 10 to 12 atmospheres is required in the ammonia boiler, and the early ammonia machines in the Colony were worked at even greater pressures than this. When the liquefied ammonia is brought by means of worms or other surfaces into contact with the freezing solution it takes up the heat from such solution, which heat becomes latent in converting the liquefied ammonia into gas again. The weakened liquor from which the gas has been driven has the power of again absorbing the gas driven from it, and such liquor, in the more simple machines, is returned to the boiler again to have the gas driven off.

The great feature in the machine exhibited by the Fresh Food & Ice Company is the fact that it can be worked at a very much less pressure of gas than other ammonia machines, and that it uses much less fuel for the results obtained. Its freezing power may be roughly stated at 6 tons of ice per week, for 2 tons of coal, or 3 pounds of ice per pound of coal, and the pressure on the generator is at most say 75 lbs. to the inch. Under Mr. Mort's improvements, the gas is re-absorbed in two different operations, one being a pressure re-absorber, and the other acting in a partial vacuum. And from this arrangement in combination with a very complete system of exchanges for preventing waste of power, the extreme economy of the Mort system arises.

The ice machine exhibited by Vaass & Littmann, of Halle on the Saale, Germany, has been kept at work during the whole of the Exhibition. It is an ammonia machine, and very much simpler in its construction and action than the Sydney one. It is only of small power, being capable of making 20 lbs. of ice per hour, and it acts on the more direct process above described, there being only six principal parts—(1) the ammonia boiler, (2) the condenser, (3) the gasholder, (4) the ice-former, (5) the absorption vessel, and (6) the pump to return the liquor to the boiler or generator. But this simplicity of action requires a greater pressure in the generator, and as a consequence it works at a pressure of about 150 lbs., or double that of Mort's. It must, nevertheless, from the fewness of parts, and its cheapness, commend itself to many persons. The makers' circulars, which give a full description of the process, with engravings, also give a list of a great many establishments where these ice machines have been erected, some of them having a power up to half a ton of ice per hour.

There can be no doubt but that for the preservation of our meat, fish, and dairy produce, &c., there is a great future in the Colony for refrigerating machinery, and it is to be hoped as an outcome of the exhibition of these rival machines, that an apparatus even better adapted to the special requirements of the Colony will be invented.

ROCK DRILLS.

Although the invention of rock drills, and their introduction into mining and quarry work is of very modern date, their use has already assumed large proportions. The piercing of the Mont Cenis, St. Gothard, and Hoosac tunnels has been greatly dependent upon the use of the power-drill, and these great works have been instrumental in bringing the tool to its present perfection. At the recent Exhibition in Prince Alfred Park, the Australian Diamond Drill Company exhibited their drilling-machines at work, and they have been brought prominently under the notice of Sydney people since that time by the accounts of the prospecting holes, which have been sunk for coal, at Newington, Moore Park, and Mr. Thomas Holt's, Sutherland estate, on the other side of Botany Bay—to a depth of over 2,000 feet. Although the Diamond Drill Company are entered as exhibitors in the N. S. Wales catalogue, it does not appear that they have actually sent any of their machines to the present Exhibition, and it will therefore only be necessary to notice here those power drills which work by concussion, and which alone are represented.

If the diamond drill is entitled to take the first place for sinking or boring deep prospecting holes, the ordinary percussion drill operated by steam or compressed air is more generally used for quarry work, and also for driving and sinking in mining and tunnelling operations. Such drills are already in actual use at the Pyrmont quarries, operated by steam; but in mining work they are almost invariably driven by compressed air. The extended use of power-drills has, during the last few years, been the means of bringing out a great many new inventions in the way of air-compressors.

The Burleigh rock drill and compressor (which drill was the one principally used on the celebrated Hoosac Tunnel), was introduced into Sydney some seven or eight years ago, but it did not then take to any great extent, and is not represented in the present display. There are, however, four different drilling machines shown, of French, English, American, and Victorian design respectively, and there are two compressors, one English, and the other Victorian. The English compressor, known as the "Reliance," is by Hathorn & Co., mining machinery contractors, of Charing Cross, London, for whom Mr. Edward Combes is the agent in Sydney. This machine consists of two steam-engines, which act on the crank pins of a pair of overhung fly-wheels set at right angles, and which have between them a compressing pump worked by a solid forged crank on the main shaft. The whole pump and engines are mounted on a deep cast-iron box or sole-plate, which forms an air reservoir. The inlet valves of the air-pump are in the covers, and have centre spindles; the delivery valves are on the top, and with the cylinder itself are all enclosed in a cold water jacket. This machine is well got up as a piece of engine work, and is occasionally shown in motion; it can pump its receiver up to 80 lbs. pressure in 29 or 30 seconds, with 138 double strokes or revolutions; but it is questionable whether it would be desirable to run it at nearly so high a speed as 280 revolutions per minute in actual work. The whole machine is well

proportioned, and extremely portable. The No. 3 size is stated to be capable of working four drills with an 8-horse boiler, and only to weigh 2 tons altogether.

Mr. R. G. Ford, of the Railway Department of Victoria, exhibits several of his inventions connected with mining; Mr. Michael Ford, of Collins-street, Melbourne, being the agent. In the construction of his compressor Mr. Ford had adopted what is known as the wet system, that is, he uses what is practically a piston of water, in distinction to the dry system, as in the Reliance machine just described, where the water is not actually used within the compressing cylinder itself. There are many arguments used by the partisans of both systems respectively: the wet system has the credit of keeping the machine cooler, and of being easier on the valves; and the dry system of making a more compact machine. Ford's machine consists of a cast-iron inverted syphon or U pipe, one side of which is bored as a cylinder, and fitted with a piston. This cylinder or pump is fitted up on the top of a wooden trestle frame, and on the bottom framing there is a crank-shaft, with a crank and connecting rod, for giving motion to the piston by means of the piston-rod, which projects through a stuffing-box on the corner of the U. The crank shaft has a spur wheel, and is driven by a counter shaft having a pinion, and also fast and loose pulleys, for taking the motion from the engine by a belt. At the top ends of the U pipes there are leather-covered valves opening inwards, as inlets for the air; and these are kept up to their faces by small levers and counterweights. There are also outlet valves opening into a central chamber and the delivery pipe to the reservoir. The two sides of the piston or the two legs of the U are filled with water so far up that when the piston is in mid-stroke there is just one-half of the contents of the cylinder vacant space for air on each side. When the piston descends, the space above the water on its own side fills with air, through the inlet valve, and the air on the opposite side is expelled by the rising water through the outlet. The operation continues as the water alternately rises and falls on each side. A small pipe from the bottom of the reservoir brings water which is delivered through a cock on each inlet valve, and a corresponding quantity of water heated by the compression of the air is delivered with the air at each stroke back into the reservoir. It will thus be seen, that the whole apparatus is kept cool very simply and effectively.

Thus far the machine deserves every commendation, but when the construction is looked into, it seems a pity that such a rough-and-tumble machine should ever have been sent to an Exhibition. The design and construction of the framing, the extreme shortness of the connecting rod, and the general style and finish, leave much to be desired; but it is, nevertheless, a very efficient machine. Although as a mining tool it may only be intended for rough work, it deserves the attention of a good engineering draughtsman just to put it into a little better shape.

Ford's drill is shown at work, the reservoir consisting of an egg-ended boiler having a small quantity of water in the bottom. The drill is mounted, by a ball and socket joint, on to a wooden pillar, which enables it to be jammed in a shaft or a drive, and allows the action of the drill to be directed in any direction as desired. In order to illustrate its action (as there are no holes for it to work in), a wooden framework is set up, and the drill is fixed in this frame, and set to work on one piece of blue stone bedded in the ground, or on to another piece set up in front. It can thus illustrate both vertical and horizontal boring. As run by the attendant at the Exhibition, this Ford drill is by a long way the most rapid in its action of any shown, for it has put down

holes at the rate of six inches per minute in hard bluestone; and the inventors claim that it can run up to 1,500 blows per minute. The exhibit as a whole reflects great credit on the inventor, both for its simplicity and efficiency; and, withal the rather rough construction of the compressor, must be considered one of the most important exhibits in the machinery line.

Mr. R. G. Ford exhibits a horizontal engine for driving his compressor, but as it is made by Wright & Edwards, of Melbourne, it was referred to in connection with the other engines. The same gentleman also shows an exhauster or aspirator, for removing the foul air from drives. This is simply a copper pipe, about six inches diameter, and having a steam jet attached, in a way which makes it into a huge ejector, similar in action to the ejectors now so common in steamers for removing bilge water. This ejector is apparently a very greedy consumer of steam; perhaps it might be worked by utilizing the exhaust of the drills without putting on much back pressure; or, if it was wanted to clear a face after a shot, when the drills were not working, it would be better to use the air than lead steam pipes to any great distance where the steam would be all condensed.

The drill exhibited by Hathorn & Co. in connection with their Reliance compressor is known as the "Eclipse." As shown at work it is only mounted on a tripod, and set to drill holes in a large block of sandstone which can be very rapidly bored. The same drill is, however, mounted by its makers in all sorts of forms; for sinking, driving, or quarry work; and a book giving full particulars and illustrations of both drill and compressor can be obtained from the attendants.

The Ingersoll drill has been known in Sydney for some time, as Mr. Saunders, of Pyrmont, uses them in his extensive quarry operations. Messrs. Gregory & Co., of Pitt-street, Circular Quay, exhibit one of these drills operating on a block of sandstone. The Ingersoll drill, is operated by steam direct, through a flexible hose, and thus no compressor is needed; but for deep pit or tunnelling work this drill is operated by compressed air in the same way as other ones.

One other rock drill is shown by Mr. Durenne, engineer, Paris, whose small portable engine has been before referred to. This drill differs somewhat from the others in several ways; the two ends of the cylinder are held on by two bolts running the whole length from end to end, making them easy of removal; the rotating of the drill is effected entirely by external mechanism; a rocking bar runs the whole length of the machine, and has at the lower end a panel, which engages on a ratchet wheel on the end of the piston rod; the upper end of this bar has a pair of projections, one on each side, forming a T head, and each of these projections rests on a small piston or plunger projecting from the valve chest. As these pistons alternately pushed out by the pressure behind, the rocking of the bar and rotation of the drill is effected. The piston-rod has a round knob which catches a lever on the in stroke, and reverses the valve motion. This drill not being shown in action, it is impossible to say what work it would do compared with the other ones in practice; but it certainly appears more as if it were made for steady continuous work, and that it would not drill at the rapid rate of the other machines of the same sort just described.

There are many machines, in every-day use, which are of great importance in themselves, but which from being generally made in special factories are not ordinarily classed as engineering works.

WEIGHING MACHINES.

The manufacture of weighing-machines is now conducted on such a large scale, and has become such an important section of the machinist's art, that it must be entitled to be considered a branch of mechanical engineering. There are several fine displays of these useful and necessary machines, by leading English and American makers, but the exhibit of Fairbank & Co., of New York, and which is under the care of Mr. G. C. Ewing, in the basement of the Garden Palace, commends itself at once to the practical engineer, from the care which is evidenced in the selection of the most suitable material for the working parts. The pivots and plates are made of a special description of steel in order that the knife edges may be durable, and a number of these parts are shown separately from the machines, and are so hard that they cannot be scratched with a file. The How Scale Co. also exhibit American weighing-machines; and Avery & Co., of Birmingham, and Pooley, of Liverpool, show English ones.

CONCLUDING REMARKS.

All the more important exhibits of machinery at the first Sydney International Exhibition have now been referred to. As far as possible their merits have been reviewed in such a way as to draw attention to those which were specially suitable for the Colony, or to such features of them as might advantageously be imitated by colonial engineers and ironworkers. No attempt has been made to imitate Mr. D. K. Clark's work on the exhibited machinery at the London International Exhibition of 1862, or the American reports on the machinery at the Vienna Exhibition, as both these descriptions had the advantage of illustrations. This review has been written from an entirely independent standpoint, and without the bias of exhibitors' own descriptions; for in only two instances was information sought from exhibitors themselves as to the specialities of their machines.

It may be an advantage to go back and take a general glance at the leading features of the several hundreds of machines, which have now been described, and at the same time briefly review the more prominent ones. Such a course may assist in enabling an opinion to be formed as to the probable effect the Exhibition will have on the machinery and manufactures of the Colony in the future. The Exhibition has no doubt been held during very dull times, so far as the engineering and machine trades are concerned; but it is to be hoped that the worst of this is past, and that with the revival of trade, advantage will be taken to profit by the many lessons which the display of the last six months has enabled those who sought improvement in mechanical knowledge to acquire.

As engine-builders, Messrs. Marshall, Sons, & Co., of Gainsborough are by the merits of their exhibits placed in the first position at the Exhibition. With one exception they show the only engines fitted with automatic expansion, and the recent agricultural shows of the Royal Society of England prove that this attachment is every day becoming more adopted by engineers who keep in the van with their business. Messrs. Marshalls' portable and horizontal engines evidence the greatest skill and taste in their design, the workmanship is first

class, and the external finish of them is superior to anything with which they compete. The vertical 3-horse engine and boiler is perhaps the gem of the whole collection for graceful and effective simplicity ; and in their threshing machine (although as an agricultural implement it was not before noticed) it will be seen that the same skill in design and workmanship places it before all its rival competitors.

Next to Messrs. Marshall the largest show of engines is that of Messrs. Robey & Co., of Lincoln. Their semi-portables driving the machinery are hired for the work by the Commissioners, and are first-class engines. Their horizontal engine is specially deserving of praise, and will no doubt soon be fitted with an automatic instead of an adjustable expansion. Messrs. R. Garrett & Sons, of Leiston Works, Suffolk, occupy the highest position for the superiority of their boiler-makers' work, and their portable engine, with a new design of slide-valve, is a very great improvement, as it has the effect of a double-ported valve, with only three ports, instead of five, on the cylinder face ; the second door to get to the regulator valve is also a great improvement on the ordinary patterns of portable engine cylinders. Messrs Hornsby & Sons, Davey, Paxman, & Co., Ruston, Proctor & Co., Clayton & Shuttleworth, W. Forster & Co., and Brown & May seem to keep their old place with their engines, nothing particular requiring notice; and Messrs. Ransomes, Sims, & Head, from the roughness of the specimens they have sent, seem to have suffered in the estimation of many people.

The Messrs. Shanks' Caledonian engine is a good machine for the price asked, but it must be fitted with a better automatic expansion gear before that portion can be considered fit for colonial use.

Tangye's engines maintain their old reputation without any alterations. The compound engine of the Haslam Engineering Company, now introduced into Sydney for the first time, deserves particular attention from mill-owners and other power-users. Mort's Dock Company, of Sydney, have shown by their small launch engine that they turn out work quite as good as the best English firms, and, although colonial engineering is very scantily represented, it is, in many cases, better than much of the home and foreign work. Evidence is given in many ways that colonial manufacturers have not been slow to profit by experience. They are cosmopolitan in their ideas, and are prepared to adopt an improvement if they see one, wherever it may be found. There is also a tendency to simplicity in colonial machinery as compared with American or Canadian. The strippers being agricultural implements, were not reviewed ; but their construction shows good engineering knowledge and taste ; and in looking at ploughs also it appears to an engineer that there are a great many more inapplicable parts about some of the English implements than there are among the colonial ones. Compare, say, J. & F. Howard, of Bedford, with R. A. Ritchie, of Parramatta, to see how the colonial plough accomplishes work with more simplicity of construction and directness of purpose.

The American windmills have not before been noticed, but it is to be hoped that if any one should take up the manufacture of such mills in this Colony, that a more substantial and less complicated model will be adopted than any of those now shown. Some of these windmills seem expressly adapted to blow to pieces on the slightest provocation or apology for a gale, and have already done so. An Australian mill should have fewer parts, less cast-iron, and be twice as substantial.

The ploughing engines of John Fowler & Co. are an important exhibit, and it is to be hoped (as they have now been put to work) that they will have the effect of inducing improved and extended systems of tillage to be adopted in the Colony.

The hydraulic cranes of Sir William Armstrong & Co. have familiarized the public with that description of machinery. It is not at present so much used in the Colony as it might be, although there are hydraulic lifts and cranes in use both in Sydney and Newcastle.

Priestman's crane with excavating bucket has decidedly been one of the leading features of the Exhibition, and, as it has been worked daily since the opening, thousands of persons have become acquainted with its mode of operation, and it is satisfactory to learn that a machine so well adapted for facilitating many of the operations carried on in the Colony has been appreciated, and that more than half-a-dozen sets have already been ordered for working both on land and in water.

Among wood-working machinery, the Canadian saw-mill deserves most attention. If colonial engineers will copy all the good points of this machine and make as many improvements as may be possible, they should produce a saw which would be a valuable acquisition to the bush mills of the Colony. The work now is done by it both well and quickly. In the general wood-working machines there is little to notice beyond what has been said, for on the whole there is not much that is new. The circular saw benches with side roller feed, which are shown by Robinson & Sons and M'Dowall & Co., are very ingenious, but they are not in accordance with the sawmill notions of the Colony, however much they may be adapted for re-sawing square lumber. For design and quality of castings and workmanship, perhaps Worssam's tools take the first place among the wood-workers. For quality and finish in wood-working machines, Fay & Co., of Cincinatti, still maintain their reputation.

Among the engineers' tools, the lathe and the planing-machine of Sellers & Co., of Philadelphia, are far before any similar machines shown, for no leading maker of the old country is an exhibitor of such work. The price of these machines prejudices many engineers against them, but a Whitworth lathe or planer would cost just as much as these of Sellers & Co.

The American elevator in the northern tower has been a great success, and has, besides, familiarized the public with these great modern conveniences in lofty buildings. There are already many lifts working in the Sydney warehouses which are of course not known of or used by the general public, but they are not nearly so highly finished or so expensive as the Whittier elevator. Some passenger lifts will shortly be in use in the public buildings of the city.

After noticing the small share which New South Wales takes in the machinery display, particular attention is directed to the very important part played by Germany. The guns of Krupp, of Essen, are there to compare with Armstrong's. Piedbœuf, of Düsseldorf, sends tubes which rival the best work of old established English houses; and in railway material, flour-mill machinery, vacuum and distilling apparatus (made of copper), ice machinery, &c., &c., they are well represented. The French machinery is not a large display, but there are the confectionery machines and other copper work; also some machines for kneading, chopping, and mincing, and for sorting iron from brass turnings. The works of Durenne, of Paris, show very creditably both in design and workmanship.

CLASSES 500–585.—*Machinery.*

One result of the Exhibition should be to draw the attention of our engineers to the great room which there is for improvement in their castings. There is one colonial engine shown, in which the inequalities of the thickness of the main castings, are heightened and made prominent by being painted a bright vermilion. Let the Belgian cylinders and cluster of wheels, the best of the German, and many of the English castings be studied, and made a note of for imitation in the future.

The prejudice against steel, as being unreliable for crank shafts and similar works, is fast dying out. The magnificent steel crank of Vickars & Sons, of Sheffield (which has been carefully finished and then deliberately bent and hammered out of shape), shows to what perfection the steel manufacturers have now arrived. Steel is already used in the Colony for boats and boilers, and the iron age seems to be fast departing under the influence of the increasing ascendancy of steel. Although the several displays of iron from the great English houses show wonderfully fine qualities of metal, still where strength combined with lightness is a desideratum iron must make way for that metal which, formerly complex and expensive in its manufacture, is now for many purposes produced more simply than iron itself.

In the leather line the machines exhibited by Charles Molinier & Co., and introduced by Mr. George Harrison, have already been so far appreciated that they are now actually at work in some of the tanneries around Sydney. As labour-saving machines they deserve great consideration from colonial tanners.

The labours of the late Mr. T. S. Mort, if not successful in actually carrying meat to England, were productive of great improvements in the ammonia freezing machines. The one shown by the representatives of his estate is by far the most powerful and economical of those exhibited. Siebe's machine is much simpler in construction, but requires at least twice as much coal to produce a pound of ice. The small German ice machine is specially adapted where only moderate quantites are required.

Shand & Mason's steam fire engines have hitherto been the only English ones known in Sydney, but the Exhibition has brought the much simpler and equally efficient engine of Merryweather into notice, and during a comparative trial which has just taken place, the Merryweather engine did much the more work in proportion to its cost. Among manual fire-engines the brigade engine of Messrs. T. J. Bown, of Sydney, and some small machines by Beduwe, of Belgium, deserve notice for their good workmanship.

In railway machinery, rock drills, washing-machines, and other small matters, New South Wales does not compare with Victoria, and in copper and brass work she is behind New Zealand. There are no model engines in the Exhibition which are of any special merit; but one of the sister Colonies sends a model engine and boiler, which is to be seen in a prominent position, and it shows plainly that the schoolmaster ought to be abroad giving technical instruction where it came from. The best working models of machinery are the exquisitely finished ones of the Armstrong guns, the Priestman crane and bucket, Sisson & White's pile-driver, and the corn mill in the Swiss Court. Schröder, of the Polyt. Arbeits Institut, Darmstadt, has a set of educational engineering models, which are of very great merit, but hardly come under the same head as the others; they have been bought by the Sydney School of Arts Committee, and will no doubt be of great service to the rising engineering youth of the city.

The Hungarian corn-mills of Ganz, of Buda-Pesth, are calculated to alter the old system of milling in this Colony, as they are doing elsewhere. The silk dresser of Nagel and Kaemp, of Hamburg, also deserves special attention from millers. Another German exhibit of great merit is the show of steam-engine governors by Gruson, of Buckau-Magdeburg. There are to be seen in the Exhibition altogether about a dozen different forms of governors, the old simple pendulum governor being almost absent, but the Hartnell governor used on Marshall's engines, and the Cosine governor shown by Gruson, and by Messrs. Shanks, of Arbroath, seem to be the most recent and efficient.

Nickel-plating, for protecting and improving the appearance of machinery, has been used for some time in other countries. Mr. J. Watson, of Pitt-street, has recently imported a dynamo-electric machine and the necessary plant for the process, and he shows specimens of his work in the basement of the Garden Palace. Similar nickel-plated machine-work, from Danks, of Melbourne, is also shown in the Victorian Court.

Stamping and crushing machinery is largely used in the Colony for quartz-crushing. At the present time there are no new orders for machines at Sydney engine-works, owing, perhaps, to the fact that the mining mania of a year or two back has left unused machines in all directions. The same reason may have operated to keep our manufacturers from exhibiting quartz crushing machines. Mr. Rasché has sent up his direct-acting stamper from Victoria, and Messrs. Mather & Platt exhibit a large machine, operated by crank shaft and springs, which is on an entirely different principle to any quartz-crushers at present in use in the Colony.

New South Wales, for various reasons, has not in machinery distinguished herself nearly so much as she might have done, and visitors from other countries can form from her exhibits only a very incorrect opinion of her engineering and mechanical resources. But she has all to gain from the opportunity afforded to examine the machinery from other parts of the world. To those who would expect in Sydney a show of machinery similar to that which was made at Philadelphia or Paris (if there are any persons so unreasonable), it might be disappointing, as the Exhibition cannot be compared for novelties and variety, even with the late Show of the Royal Agricultural Society of England at Kilburn; but considering the distance the goods have been sent, and the enterprise of the exhibitors (often not knowing how their goods would be appreciated, or whether in many instances they were adapted to our wants) it must be admitted on all hands that the Exhibition has already been of almost inestimable value to the Colony. If the machinery that has been shown results in the manufacture of colonial tweeds of improved texture and finish,—in cheapening the cost of sinking mines, and driving tunnels,—in giving our iron and wood-workers improved tools, for operating upon the material they manufacture,—in placing at our disposal improved methods of excavating earth, —in increasing the knowledge of the public, with the operations of ice-making and refrigeration,—and in making them familiar with many mechanical operations which were before as sealed books or mysteries to them,—then the Exhibition will many times over repay its cost. Mistakes may have been made, but *finis coronat opus*, and the beneficial effects of the Sydney Exhibition of 1879 will be felt in the Colony for years to come.

REPORT OF SUPERINTENDENT OF MACHINERY DEPARTMENT.

The Superintendent of the Machinery Department (Mr. J. N. Oxley) reports thereon as follows :—The quantity, variety, and quality of the machinery exhibited within the two halls were on the whole satisfactory, but there were not many objects of recent invention, and in many instances British and Foreign machinery of the most antiquated types was shown. This no doubt arose from ignorance of the extraordinary rapidity with which the Australian Colonies have developed during the last decade.

Taking the several groups, as arranged in the official programme, the first nine classes were represented by five entries ; three of these were quite new to this Colony, and consisted of an air-compresser, rock-drill, and ventilator from Victoria, a gas apparatus from Canada, and one by an English firm, which was not worked owing to its having been allotted a place in the Garden Palace before it was decided to erect separate buildings to be devoted exclusively to this class, as well as to all machinery in motion. For the same reason, many other exhibits which ought to have been shown at work were almost entirely overlooked by the public. The next ten classes were fairly represented ; but with the exception of a Canadian saw-mill and shingler, and an English stone-planting machine, there was nothing new or particularly interesting, excepting the very admirable manner in which the complete English and American saw-mill plants turned out the work put through them. The iron-working tools, none of which were in motion, consisted of the usual display to be seen in any first-class establishment. The only conspicuous exhibit amongst the turning lathes, both for finish and design, was one 12 feet 4¾ inches long, by Wm. Sellers & Co., of Philadelphia, which machine was fitted with an entirely new and most ingenious feed motion, and was no doubt a first-class tool. The lumber saw too, exhibited by W. Fleming, of Sydney, alluded to above, with its shingle attachment for working up the short ends and butts, is so novel and efficient that it is worthy of something more than a passing notice, as its perfect simplicity and compactness render it perhaps the most complete breaking down plant a bush sawyer could desire. The whole of the intermediate gear and saw spindle were dispensed with, and the saw simply screwed on in the usual way to the over-hang of the crank shaft. It was kept going throughout the whole season, breaking down and splitting heavy hardwood to go into joists, scantlings, and boards. Attached to it, and driven off its one working shaft, was a very ingenious machine for working up the short ends and butts into shingles, and this little attachment stood quite close to the starting and reversing handle of the traveller on which the rough timber was carried up to the saw ; and what little attention it required, after having a block of wood given to it to operate upon, was given by the same man who operated the traveller. The shingles, which were wedge pattern, of any required degree of taper, were produced continuously and automatically as long as the timber lasted.

With the exception of Class 522, "machines for the manufacture of woollen goods, carpets, and tapestry," the next group had no exhibitors, and the

wool-working machinery was not very largely represented, the whole display consisting of four power looms, one willow, one doubling frame, one waste opener, and one burring machine. With the exception of two of the looms, each machine was kept at work throughout the season. The wool-burring machine ought to have attracted more attention from wool owners and buyers than it appeared to do. It was not only a highly finished and handsome machine to look at, but it performed the difficult and delicate task of entirely removing the Bathurst burr and grass seeds from the finest samples of merino wool, without in any way injuring the staple.

The only exhibits between Classes 522 and 545 consisted of two or three printing machines, one of which (a lithographic press) was employed as long as the Exhibition remained open, printing some very elaborate and well executed pictures for one of the Sydney illustrated papers.

Messrs. Garrett & Sons' exhibit of corrugated fire-boxes for steam-boilers, and the gas apparatus of Needles' and the Alpha Company were the only new features in Class 546 deserving attention. Class 547 was represented by Sir William Armstrong's admirable exhibit exemplifying the working of hydraulic machinery by means of an accumulator, and by numerous examples of windmills of American design distributed about the Park.

A silent gas-engine, which gave excellent results both with Needles' portable gas apparatus and common city gas, was the sole representative of its class; but the steam power section (Class 548) was represented by an immense number of portable, semiportable, and fixed engines of every class and quality, and at one time as many as twenty fires were lighted every morning. Some of these were exceedingly good, useful, and highly finished examples of the steam engine, and many as useless and unfinished as could well be imagined. Amongst the most highly finished and elegantly designed fixed engines in the department was one high pressure by Robey & Co., and one condenser by Marshall, Sons, & Co., the latter being also fitted with a very efficient and simple automatic expansion gear, in lieu of the common throttle-valve.

Both colonial and foreign exhibitors competed in Class 556, "fire engines, and fire extinguishing apparatus." The exhibits generally were well designed, well finished, and gave good results when tried.

Although special inducements were held out by the Commission, and every facility given to inventors to exhibit in Class 560 "Ice-machines," only three systems were exemplified, and from some unexplained cause no competitive trials took place, nor was any special examination of the different apparatus made by the Judges. Messrs. Mort & Co. (the Fresh Food and Ice Co., of Sydney), the champions of the low pressure ammonia process, entered the field with great spirit and enterprise, and erected at considerable cost a most complete plant to exemplify their process, either as an ice-maker or for freezing provisions in a cold room. The machinery was worked continuously night and day for six months, without any stoppage for repairs or alteration, and gave excellent results. Immediately adjoining this, Messrs. Seibe and Gorman erected their ether machine, which also worked uninterruptedly and without any accident; its construction and fewness of parts being simplicity itself, as indeed is the whole process of making ice by it. The other ice machine was a high pressure ammonia one, built by Vaass and Littman, Halle, Germany. The process was much more complicated than the other one, but very efficient, producing ice almost as soon as the machine was fairly started.

Classes 561 to 568, "Railway plant, rolling-stocks, and apparatus," were all fully represented by Foreign, Colonial, and English exhibitors, except in the matter of locomotives, which were left in the hands of Dubs & Co., Glasgow, and the Société Anonyme de Marcinelle et Couillet, Belgium. Dubs & Co.'s engine was a combined locomotive engine and crane, a speciality of the firm, perfect in every respect. It was lent to the Commission to assist in removing heavy packages, which it did in the most satisfactory manner, picking up and placing weights up to 4 tons in any position along the line of rails within the radius of the crane jib. The Belgian engine was of the smallest type built, intended only for tunnelling and mining work; it was a handy little thing, but not particularly well finished.

The only noticeable exhibit in Class 566, "Station arrangements, &c.," was a turn-table by William Sellers & Co., of Philadelphia, U.S. The arrangement is quite new to this Colony, and if carefully handled and well looked after will be of considerable service, and a great saving of labour to the Railway Department.

A great number of exhibitors entered for Class 569, "Flour-mills," but with two exceptions these exhibits consisted of the usual pair of mill-stones, dressed, set, and erected as they have been almost from time immemorial, and as they are now set and worked without any exception by every millwright in the Colony. As in the matter of the bush saw-mill, so entirely different to all its competitors, the Canadians exhibited through the same firm (Wm. Fleming & Co., of Sydney) a little flour-mill weighing complete less than an ordinary 4-feet runner. The stones, which were hung vertically, were only 18 inches in diameter, the bed stone was cemented into half the case, and the runner, keyed true on to the stone spindle, ran free in the other half; this little pair of stones, when making 1,000 revolutions a minute, ground at the rate of 420 lbs. of wheat per hour, the produce being delivered quite cool, and the quality and quantity of fine flour superior to that generally produced by the old method. The mill was driven by a 6-inch belt off the end of a shaft 250 feet long, by one of the Commissioners' smallest engines, a 12-horse power, without in any way interfering with the many other machines driven off the same shaft. Ganz & Co., Eisengiesserei und Maschinenfabrik, Actiengesellschaft in Ofen, Filiale-Ratibor, exhibited several of their roller-mills, discarding the use of stones altogether. The exhibits were carefully erected, and attached by belts to the Commissioners' shafting; but the agent who had charge of them, although repeatedly asked to exemplify the process practically declined to put the mills in motion.

Class 653, "Machinery and implements used in the tillage of the ground."—In addition to the ordinary exhibits in this Class, which were fully and well represented by British, Foreign, and Colonial makers, Messrs. Fowler & Co., Leeds, sent a complete set of their steam ploughing tackle, which deserves to be specially mentioned, as upon this class of machinery the whole success of cultivation in this Colony depends, rain and sunshine provided of course. This tackle was sent into the country by the Commission to be practically tested in work; but the trial was wholly unofficial, and only intended to enable the exhibitors to show what they could do in the field. The result of the trial was everything that could be wished for, so far as the working of the plant and the quality of the work done went, the cost of performing the several operations too being quite within reason; but the first cost of the machinery, and the fear which so many have of not being able to

manage such complicated apparatus, together with other objections, prevented any business in the way of sales being arranged by the agents of the firm. This really excellent and valuable plant has since been sold and sent to Queensland.

In Class 655, "Harvesting implements," there was an immense display of highly-finished and really good exhibits; but with the exception of a "string-binder" which came in very late, there was nothing that had not long before been seen and worked throughout the Colony.

Class 656, "Threshers, Winnowers, &c.—All the best makers of this class of machinery in the world competed in this section, and the result was a display worthy of Great Britain and her united Colonies. In order to test the combined steam threshing-machines, an unofficial trial was arranged, which took place at Spring Hill, a station on the Great Western Railway between Bathurst and Orange. Without exception, these machines and their attendant engines were the best that had ever been built; and, although failing to take out the black oat with which the bulk of the wheat crops in this Colony abounds, their performance was nearly perfect, and, taking all things into consideration, very equal.

Class 657, "Appliances connected with farm economy."—All the leading makers of England, America, and Victoria competed in this Class. For portable and stationary engines the British builders had no equals, but in some of the smaller exhibits Mr. John Buncle, of Melbourne, Victoria, was before all his competitors.

The only sugar-cane crushing-machine in the Exhibition was a small but very compact and substantial three-roller mill, built by the Atlas Co., of Hay-street, Sydney.

CLASSES 500–509.

Machines, Tools and Apparatus of Mining, Metallurgy, Chemistry, and the Extractive Arts.

JUDGES.

CARTER, GEORGE LORD	Sydney.
CARTER, J. B.	New York, U.S.A.
FRANK, JAMES P. (Chairman)	Balmain, Sydney.
POOLMAN, SAMUEL	Sydney.
WREN, JOSEPH ENOCH	Sydney.

DEPARTMENT V.

MACHINERY.

GROUP—Machines, Tools, and Apparatus of Mining, Metallurgy, Chemistry, and the Extractive Arts.

CLASSES 500–509.

GENERAL REMARKS OF JUDGES ON ROCK-BORING MACHINERY EXHIBITED.

With regard to testing the rock-boring machines, every care was taken to give them a fair trial. Two trials were made; the first on the 25th of March, 1880, with sandstone; and the second on the 3rd April, on Melbourne bluestone; the result of each trial being identical.

CANADA.

SMITH, H. T.—Toronto, Ontario.—Gas-manufacturing Machine.

First degree of Merit.

Report—An interesting exhibit, showing some improvements, which may render it useful for many purposes.

GERMANY.

ZIEMANN, A.—Stuttgart.—Vacuum Apparatus.

First degree of Merit.

Report—This is a complete vacuum apparatus, made of copper, with an air-pump moved by a small steam-engine. The whole exhibit is very well made and constructed, and most useful.

GREAT BRITAIN AND IRELAND.

HATHORN & CO.—London.—Rock Drill.

Commended.

NEW SOUTH WALES.

GIPPS, F. B.—Sydney—Patent Rock Drill (hand-power).
Honourable Mention.

UNITED STATES.

INGERSOLL ROCK DRILL CO.—New York City.—Rock Drill.
Highly Commended.

VICTORIA.

FORD, R. G.—East Brighton.—Patent Rock-boring Machine and Pole.
First degree of Merit Special.

Report—Worked satisfactorily, is well made and constructed, and is a useful tool for mining purposes.

M'GOWAN, Samuel H.—Sandhurst.—Patent Dovetailed "Cam."
First degree of Merit.

Report—Well made, and good design for purpose intended.

WRIGHT & EDWARDS—Melbourne.—Australian Water Auger.
First degree of Merit.

Report—Well made and useful.

CLASSES 510–519.

Machines and Tools for working Metal, Wood, and Stone.

JUDGES.

FRANK, JAMES P.	Balmain, Sydney.
HUDSON, HENRY (of Hudson Brothers) (Chairman)...	Redfern, Sydney.
POOLMAN, SAMUEL	Sydney.
STRUTH, JOHN...	Sydney.

GROUP—Machines and Tools for Working Metal, Wood, and Stone.

CLASSES 510–519.

BELGIUM.

HAMAL-MOUTON—Liège.—Portable Forges.
Commended.

PUISSANT, Hubert—Court St. Etienne.—Wrought-iron Crucible for Mint. Highly Commended.

Report—Workmanship good, and price moderate.

SOCIÉTÉ ANONYME DES FORGES USINES ET FONDERIES—Gilly.—Double-acting Steam Hammer. Commended.

CANADA.

WATEROUS ENGINE WORKS CO.—Brantford, Ontario.—Portable Saw-mill, Shingle-cutting and Dressing Machine. First degree of Merit.

Report—Portable direct acting saw-mill; price £420; including a 48-inch saw; also, a shingle cutting and dressing machine. This is a very cheap and serviceable saw-mill for the bush. The working parts are few and simple, and we recommend the mill for a first-class award for its cheapness and adaptability for the purposes intended.

GERMANY.

SÄCHSISCHE STICKMASCHINENFABRIK—Kappel bei Chemnitz in Sachsen.—Band-saw, Planing and other Machines. Commended.

SCHULTZE, FIMMEN, & CO. (Guss-stahlwerk-Augustfehn)—Augustfehn in Oldenburg.—Cast Steel and Steel Tools. Commended.

SELIG, Jun., & CO., M.—Berlin.—Brushes and Tube Expanders, Pipe-screwing Machines, &c. First degree of Merit.

Report—The exhibit as a whole is very good, and the price moderate.

GREAT BRITAIN AND IRELAND.

ALLDAY & SONS, William—Birmingham.—Fancy Hand Bellows. First degree of Merit.

Report—A very fine collection.

ALLDAY & SONS, William — Birmingham.—Blacksmiths', Boiler-makers', and Riveters' Bellows and Forges. First degree of Merit.

Report—These various exhibits are suited for every description of trade requiring a blast, and are of excellent designs, quality, and workmanship. The materials used in construction are very good.

ALLDAY & SONS, William—Birmingham.—Anvils, Portable Vyce, and Bench. Highly Commended.

Report—These articles are very good, both as regards material and workmanship.

BEVERLEY & ATKINS—Sheffield.—Patent Radial Drilling Machine. Highly Commended.

Report—The radial drilling machine takes in 5 feet. It is a very good description of machine, is of simple design, and very well adapted for the purposes intended. Without doubt this is the very best description of radial drill shown.

BROOKS, John—Lye, near Stourbridge.—Engineers' Vyces, with Brass Spherical Washers. Highly Commended.

Report—These washers are a great improvement.

CORBETT, Thomas—London.—Engineers' Tools, Lathes, Riveting and Iron-shaping Machines. Honourable Mention.

Report—Plain, substantial, and moderate in price.

CROWLEY & CO., John—Sheffield.—Malleable Iron Castings. Commended.

CROWNSHAW, CHAPMAN, & CO.—Sheffield.—Circular and Frame Saws, Planing Machine Irons, Chaff-blades, Files, &c. Highly Commended.

Report—This exhibit is very good. The quality of the steel used appears to be excellent, and the work good.

DANIELL, S. A.—Birmingham.—Stocks, Dies, Ratchet-brace, Pipe-cutters, Screw-jacks. Highly Commended.

Report—For quality and moderate prices.

DAVIS & PRIMROSE—Leith.—Steam Hammers. First degree of Merit.

Report—Steam hammers, 1½ and 3 p., self-acting, with separate anvil block on detached foundation. Deserves First Class Award for design and construction.

GLOVER & CO., M.—Wortley, near Leeds.—Saw-sharpening Machine. Commended.

GREGORY & BRAMALL—Sheffield.—Saw-files and Engineers' Tools. Highly Commended.

Report—We recommend this award for the variety and quality of the tools, and especially for the fine quality of the tool steel exhibited.

HINDLEY, E. S.—Bourton, Dorset.—Combined Band Circular Saw, and Boring Machine. Honourable Mention.

HUXHAM & BROWN—Exeter.—Bark Mill. Commended.

LEE & HUNT—Nottingham.—Centre-gap, Screw-cutting and Surfacing Lathes. First degree of Merit.

Report—This firm exhibits a 9-inch centre-gap lathe, 12-feet bed, screw-cutting and surfacing; also two smaller lathes, an 8-inch slotting machine, and 11-inch shaping machine. For design, good workmanship, and moderate cost, we recommend this exhibit for a First Class Award.

LINLEY & SONS, Thomas—Sheffield.—Linley's Patent "Tuyere" Iron and Water Cistern. Highly Commended.

Report—This exhibit deserves a prize for the invention of providing for the supply of water close to the nose of the "tuyere," thereby preventing it from being burnt off, and also for expansion when the heat is first applied to the "tuyere" iron.

LINLEY & SONS, Thomas—Sheffield.—Wheelwright's Boring and Morticing Machine. Highly Commended.

LINLEY & SONS, Thomas—Sheffield.—Two Circular Double Blast Bellows. Highly Commended.

LINLEY & SONS, Thomas—Sheffield.—Vertical Drilling Machine. Highly Commended.

Report—This exhibit comprises vertical drilling machine, with parallel vyce at one end, and the ordinary table at the other end of a pair of supports, which clip the pillar of the machine and can be turned round the pillar as the operator may require to use either the vyce or the plain table.

LOW & DUFF—Dundee.—Combined Hand Rest and Slide Lathe Highly Commended.

Report—A small, compact, well-made lathe, very useful as a brass finisher's lathe.

MACBRAIR, BBOTHERS & CO.—Sheffield.—Stocks and Dies, Paral lel Vyces, and "Tuyeres," and Engineers' Tools. Highly Commended.

Report—Of good quality, and moderate cost.

MACBRAIR, BROTHERS, & CO.—Sheffield.—Files, Tools, Brass-fittings, &c. Highly Commended.

MARSHALL, SONS, & CO. (Limited)—Gainsborough.—(1) Circular Saw Bench, 36 inches in saw, with Spindle and Boring appliances. (2) Circular Saw Bench, 46 inches in saw, Spindle bushed for Boring. (3) Circular Saw Bench, 24 inches in saw. Commended.

Report—These are all of very good design, workmanship, and material.

CLASSES 510–519.—*Machines and Tools for Working Metal, Wood, and Stone.*

MASSEY, B. & S.—Manchester.—"Massey" Steam Hammer.
Highly Commended.

Report—For design and construction.

MASSEY, B. & S.—Manchester.—Circular Saw for cutting Bar-iron.
Highly Commended.

McDOWALL & SONS, John—Johnstone, near Glasgow.—Wood-working Machinery. First degree of Merit

Report—This exhibit comprises a small deal frame, heavy saw bench with patent continuous feed—four-sided moulding machine—heavy morticing and boring machine combined—a surface planing machine—irregular shaping and moulding machine—tenon-cutting machine, and band-saw machine. The whole of these machines are of good workmanship and design, and well adapted for the several purposes for which they are intended—the circular-saw bench, with Casson's patent continuous feed, being specially deserving of notice for the efficient way in which it feeds the work to the saw. We recommend this exhibit for a First Class Award for good quality of workmanship, variety of machines, and excellence of their designs.

NETTLEFOLDS—Birmingham.—Ratchet-braces, &c.
First degree of Merit.

Report—The screw of the braces is protected. We recommend the above award for protection of wearing parts, combined with moderate cost.

ONIONS, John C. (Limited)—Birmingham.—Portable Forges, Bellows, &c. Highly Commended.

Report—Forges and bellows of every description, good in design.

OSBORN & CO., Samuel—Sheffield.—Steam Hammers, Files, Saws, Spanners, Mower, Chaff-knives, &c. Highly Commended.

Report—The finish of these tools is very good, and the quality of the steel appears to be excellent.

PUTTMAN, G.—Planing Machinery.
Honourable Mention.

REYNOLDS & CO., F. W.—London.—Wood-working Machinery.
Highly Commended.

Report—This exhibit comprises heavy circular saw-bench, saw-bench and band-saw combined—band saw-machine—hand mortising and boring machines—contractor's saw-bench, and a variety of small labour-saving tools. We recommend this exhibit for an award for variety of machines, and lowness of price. Although the machines are not got up in the best manner, the lowness of price will be, with employers of labour, an important consideration.

ROBERTSON, D. & W.—Dundee.—Duplex Stone-moulding Machines—"The Steam Mason." First degree of Merit.

Report—This is a valuable labour-saving machine and does its work well. It is compact and strong, and the price is moderate.

ROBEY & CO.—Lincoln.—Saw Benches, and Wood-working Machinery. Commended.

Report—Very useful and substantial.

ROBINSON & SON, Thomas—Rochdale.—Wood-working Machinery. Highly Commended.

Report—This firm exhibits band saw-machine, circular saw-bench, four sided planing and moulding machine, and tool-grinding machine. These machines are well adapted for the various purposes for which they are designed. The workmanship is good, and we recommend them for First Class Award for general utility, and cheapness of price.

RUSSELL & CO., John (Limited)—London and Birmingham.—Stocks, Dies, Taps, &c. Highly Commended.

SCOTT BROTHERS—Halifax.—Planing Machine, Self-acting Slotting Machine, Self-acting small Steam Hammer, Screw-cutting and Surfacing Lathe, Vertical Drilling Machine, Screwing Machine. Commended.

SMITH & COVENTRY—Salford.—Tool-holders, and Twist Drills. Highly Commended.

STONE & CO., J.—London.—Taps for Gas and Water Pipes. Highly Commended.

TANGYE BROTHERS—Birmingham.—Hydraulic and Screw Bears, and Patent Tool-holders. First degree of Merit.

Report—These exhibits generally are of good designs and workmanship.

TAYLOR BROTHERS—Sheffield.—Circular and Frame Saws. First degree of Merit.

Report—Of all descriptions. A very extensive variety is shown, of very good quality.

THOMSON, STERNE, & CO. (Limited)—Glasgow and London.—Emery Wheels, and Machines. First degree of Merit.

Report—This firm exhibits a large number of emery, grinding, polishing, and sharpening machines, and emery discs on various descriptions of stands, suitable for the work for which they are intended. These emery machines are of good design and workmanship.

TURNER, NAYLOR, & MARPLES (Late SORBY & CO.)—Sheffield.—Stocks, Dies, Ratchets, Iron-blocks, &c. Highly Commended.

Report—This is a very varied exhibit of tools. The general quality appears to be good, and the price exceedingly cheap.

VICKERS, SONS, & CO. (Limited)—Sheffield and London.—Pair Cast-steel Pinions. First degree of Merit.

Report—For quality of steel, and excellence of workmanship.

WILKINSON & SONS, Joshua—Tipton, South Staffordshire, and Dudley, Worcestershire.—Smiths' Tools, Anvils, Anvil-stands, Portable Vyces, &c. Highly Commended.

WORSSAM & CO., Samuel—London.—Wood-working Machinery.
Highly Commended.

Report—An exhibit of wood-working machinery, comprising band-saw machine, four-sided moulding machine, general joiner, saw-sharpening machine, and hand mortising machine. The design and workmanship of these machines are very good ; the machine known as a general joiner being specially adapted for the requirements of an establishment where there is not sufficient work to keep a number of machines constantly employed, but can be made available for a great variety of purposes.

WRIGHT & SONS, Peter—Dudley.—Anvils, Vyces, and Smiths' Tools.
First degree of Merit Special.

Report—This is, in every respect, a magnificent exhibit of anvils, vyces, parallel-vyces, and smiths' tools. The prices are moderate.

NEW SOUTH WALES.

DAVY & SANDS—Pyrmont.—Cutting and Coining-press.
First degree of Merit.

FOY, William—Sydney.—Bellows.
Highly Commended.

MILHAM & SON, R.—Sydney.—Saws and Machine Knives.
Highly Commended.

Report—Of good workmanship and material.

SMITH & SON, William—Sydney.—Tools for Tin and Galvanized Iron Working, and Tinsmith's use. First degree of Merit.

Report—This is a useful exhibit, and we recommend that a first award be given for design and workmanship.

SPEDDING, W.—Mount Keira.—Mining-tools.
Highly Commended.

Report—Well finished.

NEW ZEALAND.

PUBLIC WORKS DEPARTMENT—Port Chalmers.—Variety of Forgings, viz.—4 Wheels, 2 Axles, 7 Buffers, 1 Piston and Rod for Steam Hammer. Made at the Government Works, Port Chalmers.
First degree of Merit.

UNITED STATES.

BATTLE CREEK MACHINERY CO.—Battle Creek, Michigan.—Boult's Carver and Dove-tailing Machine. Highly Commended.

Report—This machine is excellently designed, and will do a greater variety of work than any other machine of the same class exhibited.

CLASSES 510–519.—*Machines and Tools for Working Metal, Wood, and Stone.*

BOSTON BLOWER CO.—Boston, Mass.—Boston Cupola and Forge Blower. Highly Commended.

ENTERPRISE MANUFACTURING CO.—Philadelphia.—Bung-hole Borers. Commended.

FAY & CO., J. A.—Cincinnati, Ohio.—General Wood-working Machinery. First degreee of Merit Special.

Report—This is a most excellent, varied, and valuable collection of wood-working machinery, comprising every description of machine required either for light or heavy work. We recommend that the highest award be given for good workmanship, material, ingenuity, and simplicity of design, and the variety of uses to which most of the machines may be applied, together with moderate cost.

FIRST & PRYIBIL—New York City.—Band-saws, and Boring and Mortising Machine. Honourable Mention.

Report—Band-saws, and boring and mortising machines. These machines are of light construction, combined with good proportion of parts, and very cheap.

RODGERS, C. B.—New York City.—Double-cylinder Planing and Matching Machine ; Surfacing Machine ; Band-saw Machine. Commended.

Report—The design of these machines generally is good, but the workmanship ought to be better.

ROWLEY & HERMANCE—Williamsport, Penn.—Glass-papering Machine. Highly Commended.

Report—This is a valuable labour-saving machine, showing great ingenuity and simplicity of design.

SELLERS & CO., William—Philadelphia.—Screw-cutting Lathe, Planeing Machine, &c. First degree of Merit.

Report—This firm exhibits a 12-inch centre lathe, 12 by 6 bed, treble geared, with friction feed, also a 30-inch planing machine to plane 8 feet long, also screw-cutting and nut-capping machine. The ingenuity and originality of design and the workmanship of these tools are excellent.

SMITH MACHINE CO., H. B.—New Jersey City.—Band-saw, Moulding and Mortising and Tenoning Machines. Commended.

Report—This exhibit comprises band-saw machines, four-sided moulding machine, and mortising and tenoning machines. The very low price at which these machines are offered induce the Judges to recommend that an award be given to the firm. This cheapness is favourable to small capitalists.

TANITE MANUFACTURING CO.—Stroudsburg, Penn.—Seven-wheel Emery Grinder ; 2 Two-wheel Emery Grinders. Highly Commended.

TRUMP BROTHERS' MANUFACTURING CO.—Wilmington, Del.—Dexter Scroll-saw ; Fleetwood Scroll-saw. Commended.

Report—Very compact machines.

CLASSES 510-519.—*Machines and Tools for Working Metal, Wood, and Stone.*

WETHERBY, RUGG, & RICHARDSON—Worcester, Mass.—Re-sawing Machines. Commended.

Report—Very handy machine.

WILEY & RUSSELL MANUFACTURING CO.—Greenfield, Mass.—Hand Screw-making Machine. Honourable Mention.

WOODS MACHINE CO., S. A.—Boston, Mass.—Wood-working Machinery. Highly Commended.

Report—This firm exhibit two machines, a dimension planer and single surfacing machine. These machines are of excellent workmanship, and are very well adapted for the purposes intended, but the prices quoted appear to be high.

VICTORIA.

BUNCLE, John—Melbourne.—Improved Fire-wood Saw Bench. Commended.

Report—A very useful and plain bench.

BUNCLE, John—North Melbourne.—Bark-cutter and Disintegrator. First degree of Merit.

Report—Constructed on an entirely new principle, by which the bark is cut instead of being bruised or ground as in the old method. Simple, effective, and moderate in cost.

BUNCLE, John—North Melbourne.—Tin-presser. First degree of Merit.

Report—For design, workmanship, and adaptibility for the purpose intended.

EVETT, James J.—Emerald Hill.—Arm and Hammer (Gold-beater's Sign), also Gold Leaf. Highly Commended.

GROOM, Benjamin—Brunswick, Melbourne.—Patent Hand Tobacco-cutter. Honourable Mention.

CLASSES 520–528.

Machines and Implements of Spinning, Weaving, Felting, and Paper-making.

JUDGES.

BERGAN, JAMES	Sydney.
LEWIS, CHARLES (Chairman)	Sydney.
SMALE, JOSIAH	Macclesfield, England.

GROUP—Machines and Implements of Spinning, Weaving, Felting, and Paper-making.

CLASSES 520–528.

BELGIUM.

HORSTMANS FRÈRES—Liège.—Cards, &c., for Spinning Mills.
First degree of Merit.

Report—This exhibit is excellent in every respect.

GREAT BRITAIN AND IRELAND.

SCHOFIELD & KIRK—Huddersfield.—Woollen Tweed Power Loom.
Highly Commended.

Report—A three-box loom, having the improved motion of "finding pick" attached.

SCHOFIELD & KIRK—Huddersfield.—Woollen Tweed Power Loom.
Commended.

Report—A three-box loom, recommended for workmanship.

SYKES & SONS, John—Huddersfield.—Self-acting Wool-Teazer or Willow.
First degree of Merit.

Report—A first-class machine, of good design; the whole of the mechanical construction has been performed in a thoroughly workmanlike manner, and the finishing up executed in a style seldom seen.

SYKES & SONS, John—Huddersfield.—Wool-burring Machine.
First degree of Merit.

Report—This machine was minutely examined whilst in operation. All the working parts were highly finished, carefully adjusted and balanced, and the machine performed the work with great accuracy. The bearings are made of very hard metal of extra length, having special arrangements for self-oiling. The firm consider this method of lubricating specially and peculiarly suited to high-speed journals. The Judges have no hesitation in placing the mechanical construction of this machine in the First Class.

SYKES & SONS, John—Huddersfield.—Waste-opening Machine, Double Cylinders.
First degree of Merit.

Report—This is a highly finished machine, complete in design, and its appearance while in operation was simply perfection. Like the rest of the machines exhibited by the above firm, this is highly deserving of a first-class award for its mechanical construction.

SYKES & SONS, John—Huddersfield.—Twisting and Doubling Frame. First degree of Merit.

Report—This machine was seen in operation, performing its work thoroughly; its whole finish, design, and construction being unexceptionally good.

Mr. James Bergan, expert, thus reports on Messrs. Sykes & Sons' exhibits—

Improved Self-acting Teazer or Willow.—This machine is used for preparing wool previous to its being manufactured into cloth. Wool containing dust, seed, dried vegetable matter, or wool having within itself after it has been dyed, dye-dust, will after it has passed through this machine, be found to be open and cleansed of dirt and dust of every kind, except burrs. The chief improvements of this willow are that it is fitted up with an intermittent feed, which can be easily adjusted with change wheels and pulleys for supplying large or small quantities of wool into itself, according to requirement. The principle of the machine is a cylinder, with hard-wood cross bars, and in each lag there are two rows of teeth. Under this cylinder is a grate constructed of wrought iron, the object of which is to allow of dust, &c., to fall through under the machine; there are also three workers or rollers, with spikes or teeth screwed into same; these rollers are fitted up with adjustable fixings, to allow of the spikes in the cylinder and workers being set further into or out of gear according to the requirements of the wool. The fan attached to the back of the machine is separated from the cylinder by another grate, which can readily be removed for the purposes of cleaning. The object of the fan is for exhausting the light dust which will not fall under the machine. The door at the back of the machine for letting out the wool is acted upon by a cam attached to the same shaft that works the feed intermittently. This willow is capable of opening and dusting from 2,000 to 3,000 lbs. of wool per day of ten hours, and its general workmanship is of the highest quality, and the quality of the work produced by it cannot be excelled or surpassed.

Improved Double-action Burring Machine.—This machine is universally used in Great Britain for the purpose of separating burr from wool, and for removing small skins and vegetable matter, making the wool perfectly fit for manufacturing purposes. This machine is acknowledged by all the leading manufacturers of cloth or tweeds at Home and in the Australian Colonies to be the most suitable for freeing the wool from all foreign matter of whatever kind. The machine is 50″ wide on the comb cylinder, and is capable of burring from 1,000 to 1,500 lbs. of wool per day of ten hours, according to the quantity of burrs, &c., the wool may contain. The result of a trial of burry wool in our presence was most satisfactory, and worthy of the highest award. The construction and workmanship of this machine are of the highest order, the working parts being easily got at for repairs or adjustment, and the whole affair is a great credit to the exhibitors.

Improved Hard Waste Opening Machine.—A most useful machine in any tweed factory, and successfully opens hard-twisted threads, healds, and general mill waste, and prepares the same for mixing with wool. The machine is 48″ wide, with 12″ lickerin, 2 swifts 30″ diar., 2 doffers 25″ diar., 2 fancies 13″ diar., fancy strippers 6″ diar., 7 workers on each swift 4″ diar. The cylinders, doffers, and fancies are internally bored, so that they will run steadily and consequently do without balancing; this is a great improvement, on account of there being one uniform thickness of metal in the shell of the different cylinders. The clothing of this machine can easily be replaced, all the

rollers being chased or screw cut, of different pitches, the serrated clothing being milled in on its edge, on which there is a small flange provided for this purpose. In my opinion, this machine, considered in every respect, is decidedly the best of the kind that has ever been introduced into the Australian Colonies.

Twisting or Doubling Frame.—This machine is required in all tweed factories for doubling two, three, or four threads into one, for fancy goods. It is fitted up with double motion to work each side of the frame separately, one side for warping bobbins and the other for weft or shuttle bobbins; the latter side is also provided with an extra set of rings and lifters so that it can be used for warp bobbins. The speed of the spindles can easily be altered from 2,000 to 6,000 revolutions per minute, by means of cone pulleys, according to the quantity of twist required in the yarn. The machine, too, is provided with change wheels to alter the speed of the drawing rollers to anything that may be required between the speeds of the cones, so as to obtain the greatest variety of twist, which can be varied from one turn per inch to fifty. The motion for building the bobbins is of neat, simple, and durable construction; the spindles are of steel, running in brass bushes, and are provided with strap guide for each side, so that the machine can be set in motion or stopped by a person standing at any part of it. The foot of the spindles is provided with brass covers, so as to keep out dirt, grit, &c. The gearing and motions are enclosed within neat cast-iron covers, so as to prevent the possibility of accident. The general finish of this machine is of the highest order and worthy of the highest award.

TAYLOR & SONS, Robert—Marsden, Yorkshire.—Power Loom.

First degree of Merit.

Report—This machine is very neatly designed, well put together, and well-finished. It does not appear to have been specially got up for exhibition, as it is quite devoid of the over-finish too often bestowed on exhibition machinery. The Judges carefully watched it while at work, and its performance appeared to be most accurate; they have no hesitation in saying that it is a first-class machine. Diploma "for services in showing loom in operation" was granted in addition to those decreed for exhibits.

Mr. James Bergan, expert, thus reports on Messrs. Robert Taylor & Sons exhibit—

Improved Power Loom for Weaving all kinds of Fancy Tweeds.—This machine is excellently adapted for weaving all kinds of fancy woollen goods, and is fitted with a double beam motion for weaving worsted or any other class of goods requiring two warps. The loom is 10-quarter wide and has three raising boxes at each end; the Jacquard is made to receive thirty-four jacks. The machine is at present weaving a worsted warp which was brought out from England with it expressly for the Exhibition; it contains eighty shots or picks per inch, and is worked with twenty-four healds and five shuttles. The improved temples and shuttles are notable features in connection with this loom, but its special advantages are that the box and picking motions are worked with one set of links or chains; the lags or links are connected so as to act with great freedom, it being impossible that one can get crossed with another. The controlling motion for lowering the boxes is an excellent arrangement, and a decided improvement on anything of the kind that I have

seen either in England or the Colonies; of this motion I understand the Messrs. Taylor & Sons are the patentees. The boxes work in V-shaped slides, and are adjusted with set screws fastened with lock nuts, rendering their liability to get out of order impossible. The reversing gear is excellent, enabling the weaver to find a broken shot or pick without reversing the loom. The Jacquard grate, the needles of which are made in halves and fitted with a spring so that they adjust themselves as they wear, is a great improvement and deserving of special notice, because it prevents the Jacquard from getting locked or the jacks from breaking. The pickers, swivels, and worms are all made of malleable iron, and not of the ordinary cast-iron, as has hitherto always been used by power loom makers. An improvement in the cloth roller is that it cannot twist on its axle or become untrue by the action of the atmosphere, or the friction caused by working; this specialty will strike any expert who examines the loom. Another improvement in the machine is that the side rack of the Jacquard is so constructed that, in the event of a breakage, it can be immediately replaced without taking the Jacquard to pieces. The loom is without doubt made of the best materials; the design is in every respect good, the finish excellent—indeed it would be impossible to improve upon it. I have seen it working, and never did I see a loom work steadier or more satisfactorily. Certainly it is a great credit to the exhibitors, and, as I think, entitles them to the highest award.

CLASSES 529–537.

Machines, Apparatus and Implements used in Sewing and Making Clothing and Ornamental Objects.

JUDGES.

CARTER, J. B.	New York, U.S.A.
RAMSDEN, RICHARD J.	Sydney.
ROYCE, GEORGE H. (Chairman)	Sydney.

GROUP—Machines, Apparatus, and Implements used in Sewing and Making Clothing, &c.

CLASSES 529–537.

BELGIUM.

TURNER, R. B.—Brussels.—Sewing-machine Fittings
First degree of Merit.

Report—This is a very large collection of fittings and attachments, of the best workmanship and finish. The same firm exhibits a sail-cloth sewing-machine, but unfortunately for the exhibitor the only needle with which it was furnished was broken, and as no other suitable needle was procurable the Judges were unable to see it in operation. It is apparently a strong and well-made machine, especially suited for the purpose intended.

CANADA.

WANZER SEWING-MACHINE CO.—Hamilton, Ontario.—Sewing-machines. Highly Commended.

Report—This is a simple and efficient machine for family work; it possesses some novelty in construction, and in addition will sew equally well either forward or backward, thereby being especially adapted for some kinds of work, such as quilting or double seams. It is a strong and well-made machine, the principal working parts being cased.

GERMANY.

DEUTSCHE NÄHMASCHINENFABRIK (vormals J. Wertheim & Co.)—Frankfurt, a/M.—Sewing Machines.
Commended.

Report—For first-class workmanship.

GRIMME, NATALIS, & CO., COMM: ACTIENGESELLSCHAFT —Braunschweig.—Sewing-machines. Commended.

Report—For first-class workmanship.

GRITZNER & CO.—Durlach in Baden.—Sewing-machines.
Commended.

Report—For first-class workmanship.

KÖHLER & WINSELMANN — Altenburg in Sachsen. — Sewing-machines. Commended.

Report—For first-class workmanship.

NÄHMASCHINENFABRIK-ACTIENGESELLSCHAFT, (vormals Frister & Rossmann)—Berlin.—Sewing-machines.
Commended.

Report—For first-class workmanship.

NOTHMANN GEBRÜDER—Berlin.—Sewing-machines.
Commended.

Report—For first-class workmanship.

PFAFF, G. M.—Kaiserslautern, Rheinpfalz.—Sewing-machines.
Commended.

Report—For first-class workmanship.

SEIDEL & NAUMANN—Dresden.—Sewing-machines.
Commended.

Report—For first-class workmanship.

SÄCHSISCHE STICKMASCHINENFABRIK—Kappel bei Chemnitz in Sachsen.—Knitting-machines. First degree of Merit.

Report—This exhibit is the very best of its kind in the Garden Palace.

STÖWER, Bernhard—Stettin-Grünhof.—Sewing-machines.
Commended.

Report—For first-class workmanship.

GREAT BRITAIN AND IRELAND.

HOWE MACHINE CO. (Limited)—London.—Leather-sewing-machines.
First degree of Merit.

Report—This is a machine especially designed for working up the finished article, and is highly commended for that purpose.

MOLINIER & CO., Charles (Limited)—London.—Machines for Dressing Skins and Leather. First degree of Merit.

Report—This is essentially a labour-saving machine, as the Judges found out when comparing the quantity of work turned out by it with that done by hand-labour (actually performed in our presence), to be three times as much, the same being performed in a highly superior manner, thereby enhancing the market value of the skins so dressed.

ROBINSON, Owen—Kettering, Northamptonshire.—Machines for Making Boots and Shoes. First degree of Merit.

Report—The exhibitor shows a stamper for toe-caps or vamps of boots and shoes. This is an ordinary lever press, fitted with dies of the pattern required, and appears to be a serviceable machine. The eyelet-hole puncher and fastener, by the same exhibitor, is a valuable tool of its kind, as it performs in one operation that which formerly required two machines to effect. This machine is simple in action and entitled to high consideration, having no rival in the Exhibition as a labour-saving machine.

SINGER MANUFACTURING CO.—London and Glasgow.—Sewing Machines. Highly Commended.

Report—A fine collection of the different classes of machines, manufactured and originated by the exhibitors. Their construction is simple and of the highest grade of manufacture, the heavier machines being noticeable on account of their strength and applicability where power is employed, and the work performed within the range of each is unexceptionable. The Judges consider these to be the most reliable of the ordinary class of machines, for their design and construction.

UNITED STATES.

DAVIS SEWING MACHINE CO.—Watertown, N.Y.—Sewing Machines. First degree of Merit Special.

Report—The producers of this machine have departed from the general practice of manufacture, inasmuch as,—(1st.) It places the feed above the work, instead of underneath it, in such an improved manner as to obviate the objections which caused the abandonment of that system as originally produced. (2nd.) The increased range of work which the above arrangement permits, we find to be considerably in excess of that of other systems. (3rd.) The extreme simplicity of its construction, the number of its working parts being greatly reduced in comparison with any other machine, enables the same quality of work to be done, with a consequent decrease of wear and tear. (4th.) The workmanship is of the highest class. This being a complete departure from the ordinary style of sewing-machines, and possessing all the advantages before named, we consider it well deserving of the highest awards.

ENTERPRISE MANUFACTURING CO.—Philadelphia.—Flat Irons (Mrs. Potts'). First degree of Merit Special.

Report—These irons are decidedly the best production in this class that we have ever seen, being simple and ingenious in construction, highly finished, and well adapted to laundry purposes.

CLASSES 538–545.

Machines and Apparatus for Type-setting, Printing, Stamping, Embossing and for Making Books and Paper Working.

JUDGES.

GEORGE, HUGH ... ... Macquarie-st., Sydney.

RICHARDS, THOMAS, Government Printer (Chairman) ... ... Sydney.

WILTON, THOMAS T. ... ... George-st., Sydney.

GROUP—Machines and Apparatus for Type-setting, Printing, Stamping, &c.

CLASSES 538–545.

THE Judges in this group cannot help expressing their regret at the sparseness of exhibits in this most interesting and important department. Though many of the exhibits present features of first-class merit, still the display, as a whole, is of so meagre a character as to fail to convey an appropriate idea of the progress made in late years in the manufacture of appliances used in the printing art, in Europe, America, and in this country; and, moreover, it appears to the Judges that the importance of the Sydney Exhibition has not been fully realized by inventors and manufacturers in this particular class.

BELGIUM.

VANDERBORGHT, A. & B.—Brussels.—Printing-furniture, Types, and Materials. First degree of Merit.

Report—This is a most meritorious exhibit, both the wood and metal types being of excellent design and make.

FRANCE.

ANTOINE, Louis—Paris.—Envelope-folding Machine. First degree of Merit.

Report—This is a very ingenious machine, simple in construction, and effective in execution.

GERMANY.

SWIDERSKY, Ph.—Leipzig.—Printing-machines. Highly Commended.

Report—These machines are well and strongly made, economical, and very useful.

WÖLLMER, Wilhelm—Berlin.—Type-founders' Articles. First degree of Merit.

Report—These articles are of excellent make and finish.

GREAT BRITAIN AND IRELAND.

BIRMINGHAM MACHINISTS' CO.—Birmingham.—"Simplissimus" Self-inking and other Printing-machines. First degree of Merit.

Report—This is a very small machine, of very simple construction, easily managed, not liable to get out of order, and very well adapted to country uses. It makes first-rate impressions, and is eminently suitable for amateurs for small purposes.

CLASSES 538-545.—*Machines and Apparatus for Type-setting, Printing, Stamping, &c.*

CASLON & CO., H. W.—London.—Type.

First degree of Merit.

Report—Parcels of metal and type, showing the several stages of type manufacture, from the raw material to the finished article. It is claimed for this exhibit that, by a patent process, the type comes from the machine in an almost finished state.

COWAN & CO.—Edinburgh.—Printing-machine, for Hand or Steam Power. First degree of Merit Special.

Report—A very excellent machine. For printing in one colour it is equal to any machine shown in competition; but for two colours it is superior to anything that has yet been seen in the Colonies. It is simple in construction, concentrated in action, and exceedingly strong in its wearing parts, while the floor space it occupies is remarkably small. It is self-delivering without "tapes" or "flyers," and works up to a very high rate of speed. The size is double crown, and the price (£225), with several extras and duplicates, is remarkably low. The machine is recommended to the attention of all jobbing printers.

FURNIVAL & CO.—Manchester.—The "Express" Double Royal Lithographic Machine. First degree of Merit.

Report—This is a first-class lithographic machine; it is strongly constructed and highly finished, and from having seen it at work the Judges can speak favourably of its capabilities.

GREAVES, William—Leeds.—Lithographic Colour-printing Machine. First degree of Merit.

Report—This is a first-class lithographic printing machine, and has several minor improvements, viz., rests for the rollers during the operation of cleaning, a break in conjunction with the striking gear, and a fixed gauge for the stones.

GREENWOOD & BATLEY—Leeds.—Demy Folio "Sun" Printing-machine. First degree of Merit,

Report—This machine is one of especial excellence in every respect, being well constructed, of great strength and rapidity of motion, and adapted to produce an even impression throughout.

HARRILD & SON—London.—"Bremner's" Printing-machine (in "The Graphic" Exhibit). First degree of Merit.

Report—A good working machine, well constructed and finished.

HARRILD & SON—London.—Stereotype Apparatus (in "The Graphic" Exhibit.) First degree of Merit.

Report—A small, complete machine, well made and compact.

LANHAM PRINTING ROLLER CO.—London.—"Lanham" Rollers. First degree of Merit.

Report—The Judges desire to call special attention to this exhibit, which is of great importance, particularly in newspaper printing. The rollers are made of a material which is both durable and not subject to climatic influence—a matter of first importance to printers in this country. Nothing better of its kind has as yet been introduced into the Colonies.

CLASSES 538–545.—*Machines and Apparatus for Type-setting, Printing, Stamping, &c.*

LAURENCE, Thomas J.—London.—Box-wood Blocks for Engravers.
First degree of Merit.

Report—An exhibit of closely-grained box-wood, well suited for the display of the wood-engraver's art.

NOTTING, William—London.—Printing-press.
First degree of Merit.

Report—A first-class press, finished in superior style.

POWELL & SON, J. M.—London.—The "Model" Printing Machinery.
Highly Commended.

Report—The quadrant machine in this exhibit is simple in construction, and economically worked.

SQUINTANI & CO., Carlo G.—London.—The "Model" Printing-presses. First degree of Merit.

Report—Very handy machines, and useful for small work.

WATERLOW & SONS (Limited)—London.—Railway Ticket Daters and Paging Machines. Commended.

Report—The railway daters are well made and serviceable; the paging machines are also of good make, and well adapted for the use of printing-offices, being compact and cheap.

ZUCCATO & WOLFF—London.—Typograph.
First degree of Merit.

Report—This is an ingenious, novel, and useful machine, having the merit of great simplicity in the production of the stencil-plate from which the impressions are taken.

ZUCCATO & WOLFF—London.—Papyrograph.
Highly Commended.

Report—Not new, but useful and effective.

JAPAN.

INSATSU KIOKU, Government Printing Office—Tokio.—Printing Types, &c. Honourable Mention.

Report—This exhibit is a very creditable production of Japanese industry.

NEW SOUTH WALES.

GIBBS, SHALLARD, & CO.—Sydney.—Type-writer.
First degree of Merit.

Report—An ingenious contrivance, chiefly useful for commercial correspondence and figure statements.

SOUTH AUSTRALIA.

CRAWFORD—Adelaide.—Registering Gauge. First degree of Merit.

Report—This is a useful and handy invention, which can be applied with great advantage to any machine.

UNITED STATES.

DAUGHADAY & CO., J. W.—Philadelphia.—"Model" Printing-press. First degree of Merit.

Report—This machine is simply and strongly constructed, noiseless and rapid in its motion, and calculated to produce good and clean printing.

FAIRBANKS & CO.—St. Johnsbury, Vt.—Type-writer. First degree of Merit.

Report—An ingenious contrivance, chiefly useful for commercial correspondence and figure statements.

GOLDING & CO.—Boston.—"Pearl" Printing-presses. Commended.

HOE & CO., R.—New York.—Complete "Hoe" Printing-press. First degree of Merit Special.

Report—This is a splendid machine, strongly constructed, and of very fine finish. On account of a novel and excellent arrangement of the inking apparatus, by which the horizontal inking-table is dispensed with (a portion of the cylinder being used in lieu thereof), a great economy of space is secured. The ratchet motion, which works under and over, gives a continuous movement to the cylinder—a novel and decided improvement, and there are also some improvements in the striking gear. The cone-pulleys, hangers, and shafting which go with this machine present many points of excellence. The speed of the machine is stated to be 2,000 per hour; and although the Judges have had no opportunity of testing the correctness of this statement, they have no hesitation in expressing a belief that a rate of speed considerably above the average can be obtained; and also desire to express an opinion in favour of this exhibit receiving some special award, as being one of exceptional merit.

HOE & CO., R.—New York.—Printers' Furniture. Honourable Mention.

Report—Nice collection of minor implements used in printing business.

MACKELLAR, SMITH, & JORDAN—Philadelphia.—Case of Type. First degree of Merit.

Report—Excellent specimens of the type-founder's art, the ornamental brass corners deserving special mention.

PAGE & CO., B.—Norwich, Conn.—Wood Printing Type and Borders. First degree of Merit.

Report—A most excellent exhibit; the types are artistically designed and beautifully cut.

CLASSES 546–560.

Motors and Apparatus for the generation and transmission of Power, Hydraulic and Pneumatic Apparatus—Pumping, Hoisting, and Lifting.

JUDGES.

BUSH, CHARLES, Gas Co.	Sydney.
CHAPMAN, JOHN	Sydney.
LANE, C. J.	Sydney.
LEWIS, CHARLES	Sydney.
MORIARTY, EDWARD ORPEN, Harbours and Rivers Department	Sydney.
NEWTON, F. J.	Watertown, N.Y., U.S.A.
RITCHIE, ROBERT A.	Parramatta, N.S.W.
SELFE, NORMAN, C.E., Architect and Consulting Engineer (Chairman)...	Sydney.

GROUP—Motors and Apparatus for the Generation and Transmission of Power, Hydraulic Apparatus, &c.

CLASSES 546–560.

AUSTRIA.

ARCHLEB, Joseph—Dobruska in Böhmen.—Wooden Cocks or Spigots. First degree of Merit.

Report—All of excellent finish and cheap.

BELGIUM.

BEDUWE, Joseph—Liège.—Manual Fire Engines and Fire Escape. First degree of Merit.

Report—These exhibits are taken collectively, and commended for their superior workmanship and fine finish.

MOUTON, Armand—Liège.—Steel Lifting Rack Jack. First degree of Merit.

Report—A compact machine, the gearing of which works smoothly.

PETRY-CHAUDOIR—Liège.—Model of Steam Boiler. Highly Commended.

Report—This is a perfect boiler, with combination of tubes, represented by a model.

THIRIART ET CIE., C.—Liège.—Manual Fire-pump and Hose. Highly Commended.

Report—This engine has a cistern and a two-wheeled carriage, from which it is removed when put to work.

VAN GOETHEM, W. REALLIER ET CIE.—Molenbeek (St. Jean).—Rotative Double-acting Pump. Highly Commended.

Report—A very ingenious rotary pump, but possesses a great deal of frictional motion in the sliding and oscillating blocks.

VERSE SPELMAN ET BRICHOT—Cureghem, near Brussels.—Crown and Patent Hair Beltings. Two First degrees of Merit.

Report—The hair belting is specially adapted for working in water.

VERSE SPELMAN ET BRICHOT—Cureghem, near Brussels.—Leather Belting. Highly Commended.

CANADA.

SMITH, H. T.—Toronto, Ontario.—Soda-water Machine and Fountain.
First degree of Merit.

SMITH, H. T.—Toronto, Ontario.—Aerated wine and Bottling Machine.
Highly Commended.

Report—An ingenious machine which provides against the waste of gas while charging.

WATEROUS ENGINE WORKS CO.—Brantford, Ontario.—One 8-h.p. Portable Engine with Vertical Boiler and Spark-arrester.
Highly Commended.

Report—Commended as a farm engine for its spark-arrester.

WATEROUS ENGINE WORKS CO.—Brantford, Ontario.—One 4-h.p. Vertical Engine and Boiler. Commended.

Report—It has several novel features.

FRANCE.

DURENNE, Jean François—Courbevoie (Seine).—Small Portable Engine with Vertical Boiler. Highly Commended.

Report—Very ingenious and novel in arrangement of carriage.

GERVOIS—Bordeaux.—Bottling Machines. Commended.

Report—This machine is not complete, but possesses good points of merit.

L'HOSTE, Pierre B.—Paris.—Vats and Funnels for Distillery and Sugar Works. Honourable Mention.

MOHL ET CIE.—Paris.—Hay Press.
First degree of Merit.

Report—This press is well-finished, but the size of the boxes and general construction are not adapted for this country; the award is made on account of the workmanship.

PELOUZE ET AUDOUIN—Paris.—Gas Condensers.
Highly Commended.

GERMANY.

ALLWEILER & CO., G.—Radolfs-Zell.—Centrifugal and other pumps.
First degree of Merit.

Report—Well-made pumps, on a well-known principle.

BOLDT & VOGEL—Hamburg.—Bottle-washing, Filling, and Corking Machine. Highly Commended.

BOLDT & VOGEL—Hamburg.—Wine and Beer Pumps. Commended.

FELTEN & GUILLEAUME—Carlswerk, Mühlheim, a/R.—Wire Ropes. First degree of Merit.

GRETHER & CO.—Freiburg in Baden.—Hose Couplings. First degree of Merit.

Report—This is a very ingenious coupling, and can be depended upon for strength.

GRUSON, H.—Buckau-Magdeburg.—"Cosine" Governor for Steam-engines. First degree of Merit.

Report—The whole exhibit is well finished.

HALL, C. Henry—Berlin.—Pulsometers. Highly Commended.

Report—Very high-priced, but useful in many situations.

KROPFF, Oscar—Nordhausen.—Bottling and Soda-water Machines. First degree of Merit.

KROPFF, Oscar—Nordhausen.—Ice Machines. Highly Commended.

NORDDEUTSCHE EISWERKE ACTIENGESELLSCHAFT—Berlin.—Ice Chests and Ice-cream Machines. First degree of Merit.

PIEDBŒUF & CO., J. P.—Düsseldorf.—Collection of Boiler Tubes and Pipes. First degree of Merit Special.

VAASS & LITTMANN—Halle, a/S.—Ice Machines. First degree of Merit.

Report—This award is given for the compactness and adaptability of this machine for supplying small quantities of ice.

WEISSENBURGER & CO., Hermann—Cannstadt, a/N., in Württemberg.—Automatic Ice Machine. Highly Commended.

GREAT BRITAIN AND IRELAND.

ADAMS, Thomas—Manchester.—Patent Spring Safety-valves for Hand-boilers, Portable Engines, Locomotives, and Marine Boilers. First degree of Merit Special.

Report—This exhibit is worthy of the highest award.

ANCHOR TUBE CO.—Birmingham.—Wrought-iron Tubes and Fittings for Boilers. Highly Commended.

ANDERSON, ABBOTT, & ANDERSON—London.—Patent Woven Belting. First degree of Merit.

Report—This belting having been tried in the Machinery Hall at actual work, is deemed by us worthy of first award for quality and durability.

ARMSTRONG & CO., Sir W. G.—Newcastle-on-Tyne.—Hydraulic Steam Pumps, Accumulator, Movable Wharf Crane, Hydraulic Whip, Hydraulic Capstan. First degree of Merit Special.

Report—We are unanimously of opinion that this exhibit is worthy of the highest award.

BAMFORD & SONS—Uttoxeter.—Pumps.

Commended.

Report—Very ordinary work.

BARNETT, SON, & FOSTER—London.—Beer Engines (complete), with Glass Pump, Plungers, and Syrup Pump. First degree of Merit.

Report—We commend the glass pump, plungers, and syrup pump.

BAYLIE & CO., Eli—Stourbridge.—Chains.

First degree of Merit.

Report—These chains were tested until they became perfectly rigid.

BELL-COLEMAN REFRIGERATION CO.—London.—Brass Model of Bell-Coleman Refrigeration Machine, and Working Drawings of Ship "Strathleven" Freezing Machinery. First degree of Merit Special.

Report—This invention is of very especial value to the Australian Colonies, as by the direct supply of cold dry air it is particularly well adapted for the preservation of meat and other articles of food without the use of any chemical preparation. We recommend that the highest award be given.

BIRD'S PATENT BOTTLE STOPPER CO.—London.—Bottle Stoppers. Honourable Mention.

Report—An ingenious contrivance which can be applied to many kinds of bottles.

BRITISH SYPHON MANUFACTORY (Eugster & Koertgen, Proprietors)—London.—Syphon Filling Machine and Syphon-dosing Machine. First degree of Merit.

CASTLE IRON CO. (NETTLEFOLDS)—Birmingham.—Patent Lubricator and "Parfitt's" Patent Pressure Gauge.

First degree of Merit.

Report—The "Mercury Column" pressure gauge is compact and useful for a standard gauge.

CHAPLIN & CO., Alexander—London and Glasgow.—Portable Hoisting Engine. Commended.

Report—Ordinary plain machine.

CHAPLIN & CO., Alexander—London and Glasgow.—Engine and Boiler for Steam Launch. Commended.

Report—The boiler is logged in mahogany, and the engine is chiefly made of brass. They are of ordinary launch pattern, but have nothing specially worthy of notice.

CLAYTON & SHUTTLEWORTH—Lincoln.—12-horse-power Portable Engine, with 2 cylinders and link motion. Highly Commended.

Report—The maker's ordinary pattern—nothing special.

CROSSLEY BROTHERS—Manchester.—The "Otto" Gas Engine.
First degree of Merit Special.

Report—The general excellence of this engine is now so well known that the Judges consider any remarks unnecessary.

DAVEY, PAXMAN, & CO.—Colchester.—Portable Engine.
Highly Commended.

Report—Commended for workmanship and finish.

DOBSON, Thomas Samuel—Nottingham.—Reticulated Furnace Bars.
Highly Commended.

Report—If this exhibit had been shown in action it would have been more easy to have tested its merits.

FARROW & JACKSON—London.—Beer-engines.
Highly Commended.

FARROW & JACKSON—London.—Cask-stands.
Honourable Mention.

FARROW & JACKSON—London.—Corking, Capsuling, and Bottling Machinery.
First degree of Merit.

FELL & CO., John—Wolverhampton.—Cocks, Valves, &c.
First degree of Merit.

FELL & CO., John—Wolverhampton.—Pumps.
First degree of Merit.

Report—Materials and workmanship good.

FELL & CO., John—Wolverhampton.—Beer-engines.
First degree of Merit.

Report—For workmanship and finish.

FLEMING & SON, Thos.—Halifax.—Leather Beltings.
First degree of Merit.

Report—For finish and get-up.

FLEMING & SON, Thos.—Halifax.—Gauge Glasses with Enamelled Backs.
Highly Commended.

Report—This exhibit is well got up.

FOSTER & CO., Wm. (Limited)—Lincoln.—Portable Engine.
Highly Commended.

Report—Of ordinary design, without stays, fitted with a reversing eccentric and ordinary governor. A good fair specimen of a portable engine.

FOSTER & CO., Wm. (Limited)—Lincoln. — 3-horse-power Vertical Engine and Boiler.
Commended.

Report—The cylinder-guides and pedestal-brackets are attached to the boiler separately. Light engine, of good workmanship.

FURNIVAL & CO., Thomas—Manchester.—"Minerva" Semi-portable Engine, with Vertical Boiler.
Commended.

Report—Boiler cased in stained wooden steadings. Suitable for small printing-offices, and other small power-users.

GANDY, Maurice—Liverpool.—"Gandy's" Patent Cotton Belting.
Highly Commended.

Report—For the general quality of the belting.

GARRETT & SONS, Richard—Leiston, Suffolk.—Vertical Boiler with Fire-bed, and Corrugated Fire-box, with Portable Engine.
First degree of Merit Special.

Report—All these exhibits show first-class workmanship.

GARRETT & SONS, Richard—Leiston, Suffolk.—A Double-cylinder Winding Engine, with large drum and "link" motion.
First degree of Merit.

Report—A very superior portable winding-engine, of good design and finish, especially adapted for prospecting shafts and small mines.

GARRETT & SONS, Richard—Leiston.—Four Portable Engines.
First degree of Merit.

Report—Two engines are convertible into semi-portable with tanks, one being fitted with improved slide-valve, and having a separate door on the cylinder to give access to regular valve. Highly commended for the boiler-making, the improved slide-valve, and the management of regulator.

GWYNNE, John & Henry—London.—Centrifugal Pump for Belt with Self-charging Attachment. First degree of Merit.

Report—Commended for the self-charging connection.

GWYNNE, John & Henry—London.—Centrifugal Pump, with direct-action Engine. First degree of Merit.

Report—Commended for improved construction for enabling disc to be removed.

HALL, John & Edward—London.—"Economic" Engine and Boiler.
Highly Commended.

Report—Useful for small powers. Commended for arrangement of furnace.

HALL, John & Edward—London.—Paint-grinding Machine.
Highly Commended.

HANCOCK INSPIRATOR CO.—London.—Combined Pump and Injector, for feeding Locomotive, Marine, and Stationary Boilers.
First degree of Merit.

Report—Was at work for some time in Machinery Hall, where it was well reported on by the engine-driver, having given no trouble. It is claimed for it that it lifts water 25 feet, will draw in any practicable direction, and work under all pressures without adjustment; that it has absolutely no moving parts, consequently no repairs are needed; is simple in arrangement, and easily managed; that it can be used for lifting alone if required, and will lift and deliver water to boiler at a high temperature, or into tanks, and at a lower steam pressure than any other apparatus; that it is noiseless in operation, and cheap, of excellent design, good work and finish.

HANCOCK INSPIRATOR CO.—London.—Hancock's Inspirators.
First degree of Merit.

HARRIS, George Henry—Birmingham.—Chain Pump for Liquid Manure. Commended.

HASLAM FOUNDRY & ENGINEERING CO. (Limited)—Derby.—Horizontal Compound Engine, with jet condenser and chief acting air-pump, solid forged cranks, shaft and crushing bi-fly wheel, all on one sole plate. First degree of Merit Special.

Report—This is the only compound horizontal engine shown, and it deserves special commendation for its strength and faithful workmanship.

HASLAM FOUNDRY & ENGINEERING CO. (Limited)—Derby.—Horizontal Non-condensing Engine. Highly Commended.

Report—A good and substantial engine.

HATHORN & CO.—London.—The "Reliance" Air-compressing Machine, with Reservoir. First degree of Merit.

Report—Specially commended for combining great power with efficiency, in a small compass; workmanship good.

HINDLEY, E. S.—Bourton, Dorset.—Five Vertical Engines and Boilers, mounted on wheels, from 1½ to 6-h.-p. Commended.

Report—Simple in construction, but workmanship inferior. Adapted for a variety of purposes.

HORNSBY & SONS, R.—Grantham.—Portable Engine, with Cylinder in Steam-chest, and stay to Brackets. Highly Commended.

HUXHAM & BROWN—Exeter.—Tanner's Pump with India-rubber valves. Highly commended.

Report—A compact pump, strong and serviceable.

JENNINGS, George—London.—Fittings, Cocks, Hydrants, Valves, &c. First degree of Merit.

Report—For excellence of quality of material, workmanship, and finish.

JENNINGS, George—London.—Station Pumps, Well Force Pumps, Deep Well Pumps, Brass Force Pumps. First degree of Merit.

Report—For quality of material and workmanship.

JONES & SONS, William—Warrington.—Vertical Boiler, with Engine attached to its side, the crank-shaft bearings on the sole plate. Honourable Mention.

Report—Defective in design, but the governor is of an unusual form.

KENRICK & SONS, Archibald—West Bromwich.—Enamelled Tubes. First degree of Merit.

KERR, PRICE, & CO.—Paisley.—Cotton, Spool, and Crochet Cotton Reeling Machine. First degree of Merit.

Report—This is a very efficient machine, and the workmanship is of a first-class character.

LEY, Francis—Derby.—Patent Differential Pulley Blocks. Highly Commended.

LEWELLYNS & JAMES, AND THE NAILSWORTH FOUNDRY CO.—Bristol.—Lubricators, Cocks, Safety Plugs, Gauge Fittings, Steam Valves, Hydrants, &c. First degree of Merit Special.

Report—This exhibit of brewery plant, brass and copper work, and other fittings, is deserving of the highest award.

LEWELLYNS & JAMES, AND THE NAILSWORTH FOUNDRY CO.—Bristol—Bristol Double-action Pump. Highly commended.

Report—Apparently designed for a special class of work.

LLOYD & LLOYD—Birmingham.—Cocks and small Tubes. Commended.

LLOYD & LLOYD—Birmingham.—Large Wrought-iron Tubes. First degree of Merit Special.

MARSHALL, SONS, & CO. (Limited)—Gainsborough.—For General Exhibit of Engines. First degree of Merit Special.

MARSHALL, SONS, & CO. (Limited)—Gainsborough.—12-horse-power Horizontal Fixed Engine with jet condenser and air pump, worked by an extension of the piston-rod fitted with automatic expansion valve, controlled by Hartnell's Governor. First degree of Merit Special.

MARSHALL, SONS, & CO. (Limited)—Gainsborough.—8-horse-power Non-condensing Engine, with solid forged crank shaft and overhung fly-wheel, requiring no other bearings; fitted with automatic expansion gear. First degree of Merit.

MARSHALL, SONS, & CO. (Limited)—Gainsborough.—6-horse-power Single Cylinder Portable Engine, with wrought-iron main brackets riveted to boiler. First degree of Merit.

MARSHALL, SONS & CO. (Limited)—Gainsborough.—14-horse-power Double Cylinder Portable Engine, having main bearings sliding in dove-tailed seats, which are connected to the cylinders by stays. These stays carry all the motion, guide bars, and link-reversing gear, and allow for the expansion of the boiler, without producing any unequal strains. First degree of Merit.

MARSHALL, SONS, & CO. (Limited)—Gainsborough.—3-horse-power Vertical Engine and Boiler. The engine is complete in itself, on a column of light-house pattern. The boiler is double-riveted, and the base-plate fitted with water tank. First degree of Merit Special.

Report—As a whole, this may be considered one of the first engines in the whole Exhibition, for general design and finish.

General Report—The Judges are of opinion that Marshall, Sons, & Co.'s engines deserve the highest commendation for their general proportions, their elegance and symmetry of design, their arrangements for adjustment, and their workmanship and finish, and they recommend them for the highest award. The automatic expansion gear on the horizontal engines, and the general finish of the 3-horse power vertical engine deserve special notice.

MERRYWEATHER & SONS—London.—Curricle Fire-engine. Highly Commended.

MERRYWEATHER & SONS—London.—Steam Fire-engine. First degree of Merit Special.

Report—Highly commended for simplicity and directness of action.

CLASSES 546-560.—*Motors, Hydraulic Apparatus, &c.*

MERRYWEATHER & SONS—London.—"Universal" Hand-pump and the London Brigade Hand Pump in Pail. Highly Commended.

MONCRIEFF, John—Perth.—Glass Water-Gauge Tubes and Gauge Testing Apparatus up to 1,400-lbs. pressure.
First degree of Merit Special.
Report—The glasses were tested to 1,400-lbs. pressure to the inch without failing.

MÜLLER, H. L.—London and Birmingham.—"Muller's" Patent "Alpha" Gas-making Machine. Highly Commended.

M'DOWALL & SONS, John—Johnstone, Scotland.—Counter-shafting. Commended.
Report—Ordinary work.

M'GREGOR & CO.—Dundee.—Canvas-hose.
First degree of Merit Special.
Report—This exhibit is worthy of special commendation for durability of texture and cheapness.

POSTLETHWAITE, A. P.—Egham, Surrey.—Two Outridge's Box Engines, and Single Cylinder Vertical, and one Dark Cylinder Horizontal.
First degree of Merit.
Report—Commended for high speed, with simplicity, compactness, novelty, and workmanship.

PRIESTMAN BROTHERS—London and Hull.—The "Priestman" Crane, as made by Tangye Brothers, and shown by Working Model.
First degree of Merit Special.
Report—This machine is calculated to be a great acquisition to the Colony, and for the excellence of its design we have decided to recommend the highest award.

PRIESTMAN BROTHERS—London and Hull.—Pile-driving Machine and Lifting Ram (Lisson and White's Patent). Highly Commended.
Report—A pile-driver of great merit for certain kinds of work, of which, however, very little is done in the Colony.

PROCTOR & WALLIS—London.—"Talbot" Engine.
First degree of Merit.
Report—A highly-finished little engine, suitable for domestic use and other purposes where small powers are required.

RANSOMES, SIMS, & HEAD—Ipswich.—Portable Engines fitted with Stays. Commended.
Report—Very rough work—inferior to what would be expected from the reputation the makers have.

RANSOMES, SIMS, & HEAD—Ipswich.—4-horse-power Vertical Engine and Vertical Boiler. Highly Commended.
Report—Generally good design, but rough in workmanship.

REYNOLDS & CO., F. W.—London.—8-horse-power Portable Engine.
Highly Commended.

REYNOLDS & CO., F. W.—London.—12-horse-power Horizontal Engine. Honourable Mention.

Report—A very old-fashioned looking engine, devoid of merit.

REYNOLDS & CO., F. W.—London.—Horizontal Engine and Vertical Boiler. Honourable Mention.

Report—A plain, rough job.

REYNOLDS & CO., F. W.—London.—Counter-shafting.
Commended.

Report—Ordinary work.

ROBERTSON, D. & W.—Dundee.—"Morris" Patent Hose-Coupling.
Highly Commended.

Report—A quickly-connected coupling, but depending on spring clips.

ROBEY & CO.—Lincoln.—12-horse-power Horizontal Engine, with Expansion Valve and other bearings to crank shaft.
First degree of Merit Special.

Report—Highly commended for symmetry and design.

ROBEY & CO.—Lincoln.—16 and 20-horse-power Semi-portable Engine.
First degree of Merit.

Report—This well-known form of engine has shown to advantage during the Exhibition in driving the machinery, for which purpose it was hired by the Commission.

ROBEY & CO.—Lincoln.—20-horse-power and smaller sizes of Portable Engines. Highly Commended.

Report—Good workmanship.

ROBEY & CO.—Lincoln.—Small Vertical Engine and Boiler.
Highly Commended.

Report—Good useful engines. They are detached, and complete on their own frames.

ROBINSON & SON, Thomas—Rochdale.—Inverted Cylinder Engine and Vertical Boiler. First degree of Merit.

Report—One of the most substantial and faithfully-constructed engines of its kind in the Exhibition.

ROBINSON & SON, Thomas—Rochdale.—Counter-shafting.
Highly Commended.

Report—Substantial pedestal brackets.

RUSSELL & CO., John (Limited)—London.—Boiler-tubes.
First degree of Merit.

RUSSELL & CO., John (Limited)—London.—Steam-cocks and Fittings.
Highly Commended.

RUSTON, PROCTOR, & CO.—Lincoln.—Portable Engine, fitted with Steam-heated Stay and Spark-extinguishing Apparatus.
Highly Commended.

Report—The maker's ordinary pattern, with hollow stay for steam, calculated, in our opinion, to do as much harm as good, if carelessly used.

SANDERS & SONS—London.—Beer-engines. Highly Commended.
Report—For good workmanship.

SCHAFFER & BUDENBERG—Manchester.—Injectors and Fittings, Royle's Universal Joint, Black's Patent Water-alarm, Governors, &c. First degree of Merit Special.
Report—We consider this to be an exceedingly valuable exhibit.

SCHAFFER & BUDENBERG—Manchester.—Vacuum and Hydraulic Gauges, and Gauge-testing Apparatus. First degree of Merit Special.

SCHAFFER & BUDENBERG—Manchester.—Engine Fittings, Swivel Joints, Governors, and Improved Indicator. First degree of Merit.
Report—An extremely valuable exhibit. The improved indicator is a valuable instrument.

SCHAFFER & BUDENBERG—Manchester.—"Pearns'" Boiler-feeding Pump. Highly Commended.
Report—Very neat design.

SCHREIBER, F. W.—London.—Spring Capsuling Machines. Highly Commended.

SEEKINGS & ELLERY—Gloucester.—4-horse-power Semi-portable Engine on straight through boiler, logged and steadied with varnished teak. Highly Commended.
Report—Good, useful engine, suitable for a position where it is required as a show. The engine might be more neatly made.

SHAND, MASON, & CO—London.—Patent Steam Fire-engine. First degree of Merit.
Report—A very light and handy engine.

SHANKS & SONS, Alex.—London and Arbroath.—Single and Double Cylinder Hoisting Engines. Highly Commended.
Report—Well adapted for wharf work, and for discharging light packages.

SHANKS & SONS, Alex.—London and Arbroath.—20 horse-power Horizontal Caledonian Engines, with jet condenser and horizontal air-pump connected direct to piston-rod, fitted with an automatic expansion gear operated by a spherical governor. Highly Commended.
Report—This engine has many merits that are overbalanced by excessive complication in some of its parts.

SHANKS & SONS, Alex.—London and Arbroath.—6 and 8 horse-power Caledonian Engines, with and without automatic expansion gear. First degree of Merit.
Report—These are good, plain, and substantial engines, and with the exception of the automatic expansion are all well suited to colonial purposes.

SHANKS & SONS, Alex.—London and Arbroath.—Vertical Engine and Vertical Boiler fitted with "Buss" Governor. Highly Commended.
Report—A strong and compact engine, but has room for improvement in arrangement of details.

SIEBE & GORMAN—London.—Ice-making Machines. First degree of Merit Special.
Report—For production of clear, transparent ice, and simplicity of plant.

SIEBE & GORMAN—London.—Set of Driving-Gear complete, with Double-action Air-pump. First degree of Merit.

SPENCER, John (VULCAN TUBE WORKS)—West Bromwich.—Tubes and Fittings. Commended.

SPENCER, John (VULCAN TUBE WORKS)—West Bromwich.—Wrought Iron Tubes. First degree of Merit.

Report—The application of the "Barff" system for the protection of pipes is of special value.

STONE & CO., J.—Deptford.—Brass Ship's Deck Pump, (Navy Pattern). First degree of Merit.

Report—A very powerful pump, of good design and finish, having two double-acting pistons in the barrel.

STONE & CO., J.—Deptford.—Cocks, Valves, &c. Highly Commended.

SYKES & SONS, John—Huddersfield.—Counter-shafting. Highly Commended.

Report—Commended for couplings.

TANGYE BROTHERS—Birmingham.—Collection of Horizontal "Tangye" Engines, from 2 horse-power upwards. First degree of Merit.

TANGYE BROTHERS—Birmingham.—Collection of "Soho" Horizontal Engines, in several sizes. Highly Commended.

Report—Cheap engines at the price for which they are sold.

TANGYE BROTHERS—Birmingham.—3 horse-power Inverted Cylinder Engine and Vertical Boiler mounted on Wheels. Highly Commended.

Report—A compact, handy engine, but capable of improvement in details.

TANGYE BROTHERS—Birmingham.—A "Soho" Engine mounted on Horizontal Tubular Boiler, and fitted with a brick-lined casing to carry the fire, underneath. Highly Commended.

Report—This semi-portable engine, which the makers term "The Colonist," is well adapted for country districts on account of its simplicity.

TANGYE BROTHERS—Birmingham.—Pair Inverted Cylinder Engines, of 8-inch cylinders, with 10-inch stroke, and fitted with link motion. Commended.

Report—Strong substantial engines, but wanting in design and proportion.

TANGYE BROTHERS—Birmingham.—3-inch Cylinder "Willan's" Patent Engine. Highly Commended.

Report—A compact engine for high speeds direct.

TANGYE BROTHERS—Birmingham.—14 horse-power Horizontal Engine, of the well-known "Tangye" pattern, fitted with a jet condenser and air-pump coupled direct to the piston rod. First degree of Merit.

Report—A substantial engine, simple in design, and having its various parts accessible.

TANGYE BROTHERS—Birmingham.—Differential and other Blocks. First degree of Merit.

TANGYE BROTHERS—Birmingham.—Portable Steam Crane, fitted with "Priestman" Gear and Lifting Bucket. Highly Commended.
Report—This award is given for workmanship. The exhibit is adapted for the ordinary purposes of a steam crane.

TANGYE BROTHERS—Birmingham.—Small Steam Crane, with "Willan's" Engine. Highly Commended.
Report—The design of this crane is ingenious, but the wear and tear of the chain are severe.

TANGYE BROTHERS—Birmingham.—3-ton Portable Hand Crane. Commended.
Report—Work ordinary.

TANGYE BROTHERS—Birmingham.—Small "Goliath" Travelling Crane. Commended.
Report—Work ordinary.

TANGYE BROTHERS—Birmingham.—Crab Winches. Commended.

TANGYE BROTHERS—Birmingham.—Hydraulic Punches, Presses, &c. First degree of Merit.

TANGYE BROTHERS—Birmingham.—Special Pumps, with and without Boilers. First degree of Merit.
Report—These pumps are so well known that it is unnecessary to comment on their construction.

TULLIS & SON, John—Glasgow.—Leather-belting. First degree of Merit.
Report—This exhibit, though not bearing outward finish for exhibition, yet the quality of material and manufacture is good.

TYLOR & SONS, J.—London.—Soda-water Machines. First degree of Merit.
Report—Compact and simple machines.

UDAL & SONS, Wm.—Birmingham.—Exhibit of Gauges. Honourable Mention.
Report—Very ordinary make.

VICKERS, SONS, & CO. (Limited)—London and Sheffield.—Cast-steel Marine Crank-shaft. First degree of Merit Special.
Report—A perfect shaft hammered out of shape shows the high quality of the material.

WALLACE & CO., John—London.—Patent Bearings with Anti-frictional Appliances, known as "Metalline." Highly Commended.
Report—The idea is good; but this exhibit should have been shown at work.

WOOD & CO., Henry—Liverpool.—Chains. First degree of Merit.
Report—Commended for workmanship, but not tested.

NEW SOUTH WALES.

ALDERSON & SONS—Sydney.—Leather Beltings of various descriptions. Highly Commended.

Report—A variety of makes of belts, well got up.

ALDERSON & SONS—Sydney.—Leather Hose, with Tinned Copper Rivets. Highly Commended.

BOWN & CO., Thos. J.—Sydney.—Manual Fire-engine. First degree of Merit.

BOWN & CO., Thos. J.—Sydney.—Brine-pumps for Butchers (two descriptions). Commended.

CHAPMAN & CO.—Sydney.—Counter-shafting and Hangers. First degree of Merit Special.

Report—Specially commended for the design of the hangers.

FRESH FOOD AND ICE CO. (MORT & CO'S.)—Sydney.—Ice-making Machine (Mort & Nicolle's). First degree of Merit Special.

Report—The Judges consider this machine entitled to the highest recognition for its economy in the production of artificial cold.

FORSTER & SONS, S.—Sydney.—Mackenzie's Differential Compound Engine, 5-h.p. Highly Commended.

Report—A Colonial revival of an old invention; clumsy for the power.

HADKINS, Douglas—Sydney.—Ice-chests. Commended.

KNIBBS, J. H.—Sydney.—Copper-fastened Hose. First degree of Merit.

KNIBBS, J. H.—Sydney.—Leather Belting. Highly Commended.

Report—For cementing of belting.

LUDOWICI, J. C.—Sydney.—Leather Belting. Highly Commended.

MARSHALL & CO., Allan A.—Sydney.—Diving-dress. Highly Commended.

MARSHALL & CO., Allan A.—Sydney.—Cocks, Valves, &c. Highly Commended.

MARSHALL & CO., Allan A.—Sydney.—Pump. Highly Commended.

MORTS' DOCK AND ENGINEERING CO. (Limited)—Sydney.—Iron Intermediate Shaft for Oscillating Paddle Engine. First degree of Merit.

Report—A very creditable forging, well finished.

MORT'S DOCK AND ENGINEERING CO.—Sydney.—Pair of High Pressure Compound Launch Engines, fitted with link motion and having Counter-balanced Crank Shaft. First degree of Merit Special.

Report—A carefully designed pair of engines, first-class in workmanship and finish.

MORT'S DOCK & ENGINEERING CO.—Sydney.—The "Grindle" Pump and Engine. Highly Commended.

Report—A compact and powerful rotary steam-pump, working with very little friction; workmanship very fair.

MOYES & DONALD—Newcastle.—Wool Press. Highly Commended.

RADKE, Albert—Sydney.—Leather Belting. Commended.

STEVENS, J.—Sydney.—Corking and Bottling Machines. Highly Commended.

WATSON, Joseph—Sydney.—Beer-engines. Commended.

WATSON, Joseph—Sydney.—Nickel Plating. First degree of Merit.

NEW ZEALAND.

BURT, A. & T.—Dunedin.—Bottling and Corking Machine. Highly Commended.

BURT, A. & T.—Dunedin.—Lead Piping, Hydrants, and Stop-cocks. First degree of Merit.

UNITED STATES.

ALTHOUSE WINDMILL CO.—San Francisco, Cal.—"Althouse" Self-registering Windmill. First degree of Merit.

Report—The best principle of the competing mills, but not substantial enough for Colonial use.

BLAKE MANUFACTURING CO., G. F.—Boston, Mass.—"Blake" Steam Pumps.

Report—Great care exhibited in the design of details.

BOSTON BLOWER CO.—Boston, Mass.—Blowing Fan. First degree of Merit.

Report—A very accurately-constructed blower, running with very little friction, owing to the lightness of the wheel, which is made of sheet steel in a brass frame.

ECLIPSE WINDMILL CO.—Beloit, Wis.—Windmill. First degree of Merit.

Report—Strong, but heavier than other mills of equal power.

HARDICK, C. B.—New York City.—The "Niagara" Steam-pump. First degree of Merit.

HIGGANUM MANUFACTURING CO.—Higganum, Conn.—"Higganum" Windmill. Highly Commended.

KEWANEE MANUFACTURING CO.—Kewanee, Ill.—Windmill. Highly Commended.

PHILADELPHIA NOVELTY CO.—Philadelphia.—Hay-lift. Commended.

RUMSEY & CO.—Seneca Falls, N.Y.—Pumps.
First degree of Merit.

RUMSEY & CO.—Seneca Falls, N.Y.—Portable Fire-engine.
Highly Commended.

Report—This engine has no cistern, and a good deal of cast-iron work in the levers.

SLOUTHOUR OSCILLATING PUMP CO.—Philadelphia.—Cast-iron Oscillating Pumps (various sizes). Highly Commended.

Report—These pumps are a renewal of a well-known form; very powerful for the size and weight.

STOW FLEXIBLE SHAFT CO.—Philadelphia.—Flexible Shafting, Hangers and Belting for same, for iron and wood borings.
First degree of Merit.

Report—Useful for a variety of purposes in small workshops; easily and quickly manipulated; excellent in design, and well made.

WHITTIER MACHINE CO.—Boston, Mass.—Steam Passenger Elevator, with Double Worm-wheel Hoisting Machine and Reversing Double-cylinder Engine. First degree of Merit Special.

Report—This elevator has been carefully examined by the Judges, and its safety arrangements put to the test by severing the connection of the rope while the car was laden with pig-iron. It is specially commended for the good proportion and workmanship of the machinery, for the skill and regard to comfort displayed in the construction of the car, the efficiency of the safety appliances, and the quality of the wire rope. They consider the exhibit worthy of the highest award. This elevator was in great request during the existence of the Exhibition, when having been put up in the Northern Tower of the Garden Palace, it was used by the public for the purpose of ascent to the summit of the Tower.

VICTORIA.

DANKS, John—Melbourne.—Cocks and Fittings.
Highly Commended.

DANKS, John—Melbourne.—Nickel-plated Work.
First degree of Merit.

DANKS, John—Melbourne.—Sluice and Steam Valves.
Highly Commended.

DANKS, John—Melbourne.—Pumps.
Highly Commended.

Report—Very good pumps, but rather rough castings.

FLOOD, Frederick—Melbourne.—Chain Pump.
Honourable Mention.

Report—This exhibit is similar in description to that shown by M'Comas & Co., another Victorian exhibiting firm.

CLASSES 546–560.—*Motors, Hydraulic Apparatus, &c.*

FORD, R. G.—Melbourne.—Foul-air Exhauster.
First degree of Merit.

Report—For efficiency and compactness.

FORD, R. G.—Melbourne.—Air Compressor and Reservoir Pumps, 8 × 24.
First degree of Merit.

Report—Well adapted for slow speed and steady working, but workmanship very rough.

FORD, R. G.—Melbourne.—Horizontal Engine, made by Wright & Edwards, of Melbourne.
Commended.

Report—An ordinary engine.

HUMBLE & NICHOLSON—Geelong.—Lever Wool-press.
Highly Commended.

Report—A simple, ingenious machine, and commended for its system of holding the bale, and cheapness.

LUGTON & SONS, Alex.—Melbourne.—Brine-pumps.
Highly Commended.

M'COMAS & CO., John W.—Melbourne.—Chain Pump.
Commended.

M'ILWRAITH, John—Melbourne.—Lead-piping.
First degree of Merit.

MOURANT, John Timothy—Melbourne.—Wooden Taps.
Highly Commended.

ROBINSON & SONS, J. H.—Melbourne.—Travelling-box Wool-press.
First degree of Merit.

Report—Recommended for its workmanship and finish; very convenient for fitting.

ROBINSON & CO., T.—Melbourne.—"Speedy's" Patent Wool-press.
Commended.

Report—A very cheap, plain, simple machine.

SEYMOUR, Walter E.—Richmond.—Patent Hose-coupling.
Highly Commended.

Report—This coupling depends for its tightness on a leather collar acted on by the pressure of the water, and is held by two clips. The idea is good, but might be worked out better.

WILLIAMS, Price—Melbourne.—"Williams" Patent Wool-press.
First degree of Merit.

Report—Recommended for general effectiveness and mechanical power.

WILLIAMS, Price—Melbourne.—"Travelling-box" Wool-press.
First degree of Merit.

WILLIAMS, Price—Melbourne.—Convertible Wool or Hay Press.
First degree of Merit.

CLASSES 561–568.

Railway Plant, Rolling Stock, and Apparatus.

JUDGES

HUDSON, HENRY (Hudson Bros.) (Chairman) ...	Redfern, Sydney.
JONES, TREVOR, C.E., City Engineer	Sydney.
MORELL, G. A., C.E.	Sydney.
PATTERSON, R. C.	Adelaide, S. Australia

GROUP—Railway Plant, Rolling Stock, &c.

CLASSES 561–568.

BELGIUM.

CAMBIER, Nicholas J.—Mortanwelz.—Bolts and Nuts. Highly Commended.

Report—Excellent material and workmanship.

NICAISE P. & N., SOCIÉTÉ ANONYME DE LA FABRIQUE DE BOULONS DE LA BLANCHISSERRIE.—Marcinelle près Charleroi.—Bolts, Rivets, Spikes, &c. First degree of Merit.

Report—An exhibit of finished engine and rough work, of the highest quality of workmanship and material.

SOCIÉTÉ COCKERILL, La Seraing près Liège.—Pyramid of Steel Tyres, Axles, Springs, and Wheels. First degree of Merit.

Report—This exhibit, taken as a whole, merits a high place for general excellence and utility.

SOCIÉTÉ ANONYME DE MARCINELLE ET COUILLET.—Locomotive and Tender, for narrow gauge. First degree of Merit.

Report—Well and compactly designed, the working parts readily accessible, the workmanship good. The locomotive is well suited for mining purposes.

SOCIÉTÉ ANONYME DES USINES DE LA LOUVIÈRE—Rail Fixtures, Rivets. Highly Commended.

Report—For general excellence of exhibit.

FRANCE.

MARÉ, ET GÉRARD FRÈRES, Joseph—Bogny-Braux (Ardennes). Bolts, Nuts, &c. First degree of Merit.

Report—A very beautiful exhibit.

GERMANY.

BRÜCKMANN, G. L.—Dortmund.—Iron Rails and Apparatus for moving Carriages. Highly Commended.

Report—For simplicity, ingenuity of design, and economy.

EISEN & STAHLWERK OSNABRÜCK-ACTIENGES:—Osnabrück.—Iron Permanent Ways. Highly Commended.

Report—The wrought-iron cross-sleepered system of permanent way is deserving of commendation for the simplicity and efficiency of its fastenings, and for its general excellence of design and suitability for use in badly timbered country.

KRUPP, Friedrich—Essen a/d Ruhr.—Wheels, Axles, &c.
First degree of Merit.

Report—This exhibit has been very carefully prepared, in order no doubt to show the excellent quality of the material used, and is recommended for excellence both of workmanship and material.

UNION ACTIENGES: FÜR BERGBAU-EISEN & STAHL-INDUSTRIE—Dortmund.—Wheels and Axles for Railway Rolling Stock. First degree of Merit.

Report—This is a very beautiful exhibit, of highly finished material and workmanship.

VAN DER ZYPEN & CHARLIER—Deutz-Cöln a/R.—Wheels and Axles for Railways and Tramways. Highly Commended.

Report—This is a very good exhibit, and the wrought-iron axle-boxes are worthy of special notice for originality in design.

GREAT BRITAIN AND IRELAND.

BROWN, BAYLEY, & DIXON (Limited)—London and Sheffield.—Tyres, Axles, Rails, &c. First degree of Merit.

Report—A very fine exhibit of tyres, axles, rails, &c., bent and twisted cold, without a sign of fracture.

BROWN & CO., John (Limited)—Sheffield.—Iron and Steel Materials for Railway, Shipbuilding, and Engineering Purposes.
First degree of Merit Special.

Report—This is an exceedingly valuable and interesting exhibit, showing great general excellence of workmanship and materials.

DUBS & CO.—Glasgow.—Combined Locomotive Engine and Crane.
First degree of Merit.

Report—Very original in design and excellent in workmanship. Deserving of the very highest commendation, as an economical and highly efficient labour-saving appliance.

GOVER, H. C.—London.—Dust and Draught Shield, and Carriage Window.
Highly Commended.

Report—The Judges having had the working of this invention explained to them, consider it an ingenious method of ventilation, and well adapted for use in warm climates.

HADFIELD STEEL FOUNDRY CO.—Sheffield.—Crucible Cast-steel Wheels for Railways, &c. First degree of Merit Special.

Report—A most valuable and varied exhibit of crucible steel castings, consisting of tramway, waggon, and strip wheels, various parts of winding machines, &c., all of which are of excellent materials.

IBBOTSON BROTHERS & CO. (Limited)—Sheffield.—Railway Couplings, Rails, Sleepers, Joints, &c.
First degree of Merit.

Report—The automatic couplings and central buffers are simple and ingenious in design.

M'KENZIE & HOLLAND—Worcester.—Working Models of Railway Station and Junction, illustrating the Interlocking and Working of Points, Signals, and Level Crossing Gates on Railways.

First degree of Merit.

Report—This arrangement of interlocking, &c., has the merit of great efficiency, combined with moderate cost.

MAXWELL, James—Dundee.—Railway Carriage Panel, containing self-acting Lock. Highly Commended.

Report—An automatic fastening, commended for simplicity, effectiveness, and economy.

OSBORN & CO., Samuel—Sheffield.—Crucible Cast-steel Springs, &c.

Highly Commended.

Report—This exhibit shows excellent material.

ROBERTSON, D. & W.—London and Dundee.—Model of Barker's Patent Street Tram Rail and Sleeper, &c.

Highly Commended.

Report—Commended for the ease with which the rails can be renewed, and from the originality of the design for sleepers—the stone-pitching resting on the flanges of the sleeper in such a manner that the pitching cannot become depressed below the rail level.

TANGYE BROS.—Birmingham.—Stroudely's Patent Ramp for re-railing Carriages, &c. Highly Commended.

Report—A very efficient, simple, and economical contrivance.

TURTON BROS. & MATTHEWS—Sheffield.—Springs, Axles, &c.

First degree of Merit.

Report—A fine collection of first-class springs, &c., showing good workmanship and great finish.

VICKERS, SONS, & CO. (Limited)—Sheffield.—Steel Tyres and Axles.

First degree of Merit.

Report—The workmanship and material of these goods are of the very best description.

NEW SOUTH WALES.

BASSETT & SON, D.—Sydney.—Axles, Buffers, &c.

Highly Commended.

Report—These are good forgings, made out of scrap iron.

LEWIS, C.—Sydney.—Railway Distance Signal Post.

Highly Commended.

Report—This is commended for its very good and economical construction, being made in the Colony, from local iron. Price, £24 10s.

SKINNER & CO., J.—Sydney.—Assortment of Brass Castings.

Highly Commended.

Report—These castings, used in railway carriages, are of fair quality.

QUEENSLAND.

LOCOMOTIVE DEPARTMENT, SOUTHERN AND WESTERN RAILWAY—Ipswich.—Railway Carriage. Highly Commended.

Report—A carriage of good workmanship and material, nicely upholstered.

SOUTH AUSTRALIA.

RAILWAY DEPARTMENT OF SOUTH AUSTRALIA—Adelaide.—Railway Carriage. Highly Commended.

Report—A composite carriage, showing good workmanship, and fitted with automatic buffer and couplings.

UNITED STATES.

SELLERS & CO., Wm.—Philadelphia.—Fifty-feet Locomotive Turntable. First degree of Merit Special.

Report—This is a turntable of considerable merit and economy.

VICTORIA.

CAREY, John—Sandhurst.—Model of a Howe Timber Truss Bridge, with a laminated arch truss. First degree of Merit.

Report—This exhibit only claims credit as a model, of which it is an elegant and beautifully made specimen.

RAILWAY DEPARTMENT OF VICTORIA—Melbourne.—Railway Gate for Crossings. Highly Commended.

Report—Light and elegant in design, and economical in construction.

RAILWAY DEPARTMENT OF VICTORIA—Melbourne.—Points, Crossings, &c. Highly Commended.

Report—The points, crossings, &c., are all well made, and the self-acting lever and lamp are of a simple, efficient, and economical character.

RAILWAY DEPARTMENT OF VICTORIA—Melbourne.—Water-tank on Columns. First degree of Merit.

Report—This is a valuable and economical mode of storing and supplying water to locomotives, &c., being commended for simplicity in design and economy in construction.

RAILWAY DEPARTMENT OF VICTORIA—Melbourne.—Wrought-iron Wheels. Highly Commended.

Report—Of excellent workmanship and material as a Colonial product.

WOODS, M.P., Hon. John—Melbourne.—Woods' Patent Hydraulic Automatic Break. First degree of Merit.

Report—This exhibit shows great ingenuity and simplicity of design; its action is instantaneous, both in applying and removing the break, and the mechanical contrivance for making the break continuous and for automatically providing for the safety of any portion of a train, in the event of the breaking of a coupling, is admirable in every respect.

CLASSES 569–576.

Machines used in preparing Agricultural Products.

JUDGES.

COCK, JAMES (Chairman)	Sydney.
POOLMAN, SAMUEL	Sydney.
SELFE, NORMAN, C.E., Architect and Consulting Engineer	Sydney.
VERGÉ, M.	Paris, France.

GROUP—Machinery used in preparing Agricultural Products.

CLASSES 569–576.

BELGIUM.

DASSONVILLE DE ST. HUBERT—Namur.—Mill-stones.
First degree of Merit.

Report—One pair 4-feet mill-stones, faced by diamond machine, furrowed by bills and emery-wheel. The blocks are faced by machinery and well jointed, and the "burr" good but open.

VAN GOETHEM, W. REALLIER, ET CIE.—Brussels.—Centrifugal Sugar-making Machine. First degree of Merit.

Report—A 36-inch machine, over-driven by friction gear. The design and workmanship are good.

CANADA.

WATEROUS ENGINE WORKS CO.—Brantford, Ontario.—Portable Flour-mill. First degree of Merit Special.

Report—Very ingenious, compact, and portable flour-mill complete; consisting of one pair 20-inch vertical bur stones running at a high speed, one smutter, capacious silk-dressing machine, meal-conveyor and elevator; the whole easily driven by 8-horse power portable engine, and capable of doing 7 to 8 bushels per hour, making a good sample of flour. The Judges highly recommend this mill for localities where the population is scarce, the whole being very compact and cheap.

FRANCE.

COMBET, Joseph—Paris.—Confectioner's Machinery.
First degree of Merit.

Report—An exhibit of confectioner's machinery, consisting of a machine for mixing and boiling by steam, of good design and workmanship, a roller Sothé machine, "old design," a cutter and rollers for jujubes, and a machine for pastiles and popcorn, and also an ingenious machine for making lollie whistles.

DUPETY, THÉUREY, GUEUVIN, BOUCHON, ET CIE.—La Ferté sous Jouarre (Seine-et-Marne).—Mill-stones.
First degree of Merit Special.

Report—One pair 4-feet mill-stones, of very superior make and finish, the "burr" being first-class, and faced with a new and patent diamond machine. The blocks are faced by machinery, and finely jointed.

CLASSES 569–576.—*Machines used in Preparing Agricultural Products.*

LECORNU—Paris.—Confectioner's Machinery.

First degree of Merit.

Report—A machine for the manufacture of pan-goods, heated by steam coil, to withstand high pressure.

SAVALLE FILS ET CIE.—Paris.—Diaphanometer.

First degree of Merit.

Report—An apparatus for testing alcohol left in residue, with rectifying column, or alcoholometer, well spoken of by those using it.

GERMANY.

GANZ & CO., EISENGIESSEREI UND MASCHINEN-FABRIK, ACTIENGES: IN OFEN—Ratibor.—Flour Roller Mills.

First degree of Merit Special.

Report—Three pairs roller mills of chilled iron, for the manufacture of flour on the Hungarian system, producing a superior article, but at higher cost than by mill-stones, the system being more expensive and intricate. These mills are fitted with angular gear to work without noise, together with a mechanical design for relieving pressure on the bearings, which is deserving of notice. The design, proportions, and workmanship of these chilled iron roller mills are first-class, and worthy the attention of our colonial millers.

GANZ & CO., EISENGIESSEREI UND MASCHINEN-FABRIK, ACTIENGES: IN OFEN—Ratibor.—Flour Roller Mills.

Highly Commended.

Report—A similar set to the above, but without angular gear, yet precisely the same in all other respects. The remarks made as to the previous exhibits are applicable in this case.

GRUSON, H.—Buckau-Magdeburg.—Spice and Coffee Mills.

First degree of Merit.

Report—Ribbling mills with interchangeable disk of chilled iron, very well designed and finished.

HALLSTROEM, F.—Nienburg, a/d. Saale.—Machines for Distilling, &c.

First degree of Merit.

Report—A universal vacuum apparatus for cooking and distilling, apparently well adapted for the purposes intended. Very well made, of good workmanship, material, and finish.

NAGEL & KAEMP—Hamburg.—Flour-dressing Machine.

First degree of Merit Special.

Report—A centrifugal flour-dressing machine with two cylinders, the upper covered with perforated zinc to remove the bran, the lower with silk gauze for flour; the cylinders are easily and quickly removed. This machine is fitted with internal iron beaters instead of brushes, and it is said to do more work in less space than with the silk reel.

NEUBECKER, A.—Offenbach, a/M.—Milk Refrigerators.
First degree of Merit.

Report—Three milk refrigerators of various sizes; the flat oval shape of the pipes effect a more thorough cooling in less space, the removable sides allowing the apparatus to be well cleaned; all the exposed parts are of the best tinned copper, well made, and of good design and finish.

GREAT BRITAIN AND IRELAND.

DELL & SON, Wm. R.—London.—Mill-stones, Brown and Nutmeg Burr.
Highly Commended.

Report—One pair mill-stones, brown nutmeg burr, fairly well made and jointed, not faced, all hand-work.

DELL & SON, Wm. R.—London.—Mill-stones and White Close Burr.
Commended.

Report—One pair mill-stones, white close dead burr, fairly made.

DELL & SON, Wm. R.—London.—Mill Machinery and Furnishings.
Highly Commended.

Report—As a collection.

GARRETT & SONS, Richard—Leiston, Suffolk.—One pair Burr Mill-stones, on Iron Hursts. Commended.

HALL, John & Edward—Dartford, Kent.—Weighing-machine, with Jacob's Ladder. First degree of Merit.

Report—Weighing and measuring machines for all sorts of grain, self-acting and registering; good design, but roughly finished.

KENRICK & SONS, Archibald—West Bromwich, Staffordshire.—Mills for Grinding Spice, Coffee, &c., First degree of Merit.

Report—Of good design, work and finish.

ROBEY & CO.—Lincoln.—Double Corn-grinding Mill.
First degree of Merit.

Report—Two pair 3½-feet burr mill-stones on iron hursts, worked by counter-gear from line shaft; stones too open for colonial work; good design and finish, and well made.

WHITMORE & BINYON—London.—Portable Corn-mill.
Highly Commended.

Report—Two pair 3½-feet burr mill-stones on iron hursts, driven by counter-gear from line shaft.

WHITMORE & BINYON—London.—Corn-mill Machinery.
Highly Commended.

Report—As a collection of good machinery.

NEW SOUTH WALES.

ATLAS ENGINEERING CO.—Sydney.—Sugar-mill.
First degree of Merit.

Report—Sugar-mill suitable for small growers; good design, but showing inferior workmanship and finish.

MEYER, E. M.—Sydney.—Continuous Still for the production of Spirits from Wort in one Distillation. First degree of Merit Special.

Report—Colonial-made still, of good design and workmanship, which gave great satisfaction on trial, and is well worthy of the attention of wine-growers.

NEW ZEALAND.

BURT, A. & T.—Dunedin.—Refrigerator. First degree of Merit.

Report—This refrigerator, of copper with oval tubes, gives a much larger cooling surface in same space than other refrigerators; design and workmanship good, and well spoken of on trials.

SWITZERLAND.

DAVERIO, Gustav—Zürich.—Roller Mills.

First degree of Merit.

Report—A working model of an improved vertical roller mill with detacher; also a number of samples of work done by a larger mill. This invention is well worthy of notice by colonial millers, appearing to be an improvement on other roller mills.

EGLI & SENNHAUSER—Zürich.—Silk Gauze.

First degree of Merit.

Report—A large and varied exhibit of silk gauze for use in flour-mills, very good and free from dressing.

HOMBERGER GEBRÜDER—Wetzikon.—Silk Gauze.

Highly Commended.

Report—Well made, but too much dressing.

UNITED STATES.

ENTERPRISE MANUFACTURING CO.—Philadelphia.—Mills for Spice, Coffee, &c. Highly Commended.

Report—These are of good design, but wanting in workmanship and finish.

HOWES, BABCOCK, & CO.—New York City.—Flour-mill Machinery.

First degree of Merit.

Report—Awarded for the collection.

VICTORIA.

BUNCLE, John—Melbourne.—Tobacco-cutters.

First degree of Merit.

Report—Two sizes tobacco-cutters, for hand and steam power, of good design and workmanship, and deserving of notice by the trade.

CLASSES 577–585.

Aerial, Pneumatic, and Water Transportation.

JUDGES.

FOX, HENRY T., Captain ... ... Sydney.

HIXSON, FRANCIS, Captain, R.N. (Chairman) ... ... Sydney.

JENKINS, B., Captain ... ... Sydney.

GROUP—Aerial, Pneumatic, and Water Transportation, &c.

CLASSES 577–585.

BELGIUM.

SOCIÉTÉ COCKERILL—Seraing, near Liège.—Models of Mail Steamers. Two Honourable Mention Awards.

Report—These are models of the steamers "Khëdive" and "Egypte," and also of the seven mail steamers running from Ostend to Dover.

FIJI.

FIJIAN NATIVE EXHIBIT.—Collective Exhibit of Models of Single and Double Canoes. Honourable Mention.

Report—An interesting exhibit, exemplifying the different descriptions of native craft.

GREAT BRITAIN AND IRELAND.

ANDERSON, ANDERSON, & CO.—London.—Half Models, Pictures, and Plans of Ships. Highly Commended.

Report—Creditable exhibit.

BERTHON BOAT COMPANY (Limited)—London.—Portable Boats and Canoes. First degree of Merit.

Report—Very ingenious, and apparently useful for the purpose intended.

DENNY & BROTHERS—Dumbarton.—Two Half Models of Steamers. Honourable Mention.

EAST & WEST INDIA DOCK CO.—London.—Model of the East and West India Docks. First degree of Merit.

Report—The arrangements, as shown, for discharging, receiving, and disposing of wool are very complete.

FORRESTT & SON—London.—Coast Life-boat. First degree of Merit.

Report—The usual self-righting boat, used on the coast of the United Kingdom.

CLASSES 577–585.—*Aerial, Pneumatic, and Water Transportation, &c.*

INMAN STEAMSHIP CO. (Limited)—Liverpool.—Model of s.s. "City of Berlin." First degree of Merit.
Report—Model to scale, and very complete in detail of rigging, deck, fittings, &c.

JOHNSON, GREGSON, & CURREY—London.—Block of Ships' Berths, as employed on South Australian and Queensland Emigrant Ships. Highly Commended.
Report—Ingenious and useful for purposes intended.

LONDON AND ST. KATHARINE DOCKS CO.—London.—Model of London and St. Katharine Docks. First degree of Merit.
Report—Very complete model showing all the different basins and conveniences for discharging, storing, and loading cargoes.

LONDON AND ST. KATHARINE DOCKS CO.—London.—Model of the Victoria Docks. First degree of Merit.
Report—Plans and models commended, arrangements for the convenience of shipping evidently most ample and complete.

ORIENT STEAM NAVIGATION CO. (Limited)—London.—Plans and Sections of s.s. "Orient." Highly Commended.

ORIENT STEAM NAVIGATION CO. (Limited)—London.—Model of Steamer "Orient." First degree of Merit Special.
Report—Model to scale, and extremely neat and accurate in details of rigging, deck fittings, &c.

OSWALD, MORDAUNT, & CO.—Southampton.—Half Models of Steamers and Sailing-vessels. Honourable Mention.

STONE & CO., J.—Deptford.—Patent Steering Gear. Highly Commended.

SUTER, HARTMANN, & CO.—London.—Model of Steamship, showing Rahtjen's Anti-fouling Composition, for ships' bottoms. Honourable Mention.

VANSITTART, Mrs. Henrietta—Twickenham.—Curved Pitch-line Screw Propeller, commonly known as the "Lowe-Vansittart" Propeller. Honourable Mention.

NEW SOUTH WALES.

DRENNAN, David—Sydney.—Model of a 10-ton Yacht. First degree of Merit.
Report—Well built and neatly fitted, every detail of a yacht being represented to scale. A highly creditable exhibit.

GEORGE, A.—Sydney.—Model of a Yacht.
Honourable Mention.
Report—Rather clumsily rigged, but commended as the work of a lad.

HARVEY, Robert—Parramatta.—Model of the 81-gun Frigate "Niagara." Highly Commended.
Report—Exceedingly ingenious; nearly all the details of a ship of war worked out with great care, but not made to scale, and model of hull not good.

HARVEY, S.—Parramatta.—Two Models of Steam Launches and Model Engine. Commended.
Report—Ingenious, but rather rough in detail.

HOLDSWORTH, John Edward—Sydney.—Model of Yacht.
Highly Commended.
Report—For neatness of workmanship.

HOSKING, F. T.—Wollongong.—Model of Wollongong Harbour.
Commended.
Report—Commendable as the work of a youth 16 years of age.

KINNEMAN, Ernst—Balmain.—16-feet Pleasure Boat (centre-board).
First degree of Merit Special.
Report—Well built and fastened, and very neatly finished in every respect.

MORT'S DOCK & ENGINEERING CO. (Limited)—Balmain.—Model of A.S.N. Co.'s s.s. "Governor Blackall."
First degree of Merit.
Report—Highly commendable as a colonial production.

REID & BALDOCK—Sydney.—Racing Outrigger, built of Tin.
Highly Commended.
Report—For ingenuity and workmanship.

SAMUEL, C.M.G., Hon. Saul—Sydney.—Full-rigged Model of s.s. "Zealandia." Highly Commended.
Report—Neat model, showing general details.

SELFE, C.E., Norman—Sydney.—Models of N.S.W. Government Torpedo Boats "Acheron" and "Avernus." First degree of Merit.
Report—Very creditable to the designer, the stand being of a novel construction.

STEPHENSON & Co., Mark—Sydney.—Steering Wheel, Oars, Blocks, &c.
First degree of Merit.
Report—Commended for colonial workmanship.

YOUNGER, H.—Sydney.—Waterman's Skiff.
First degree of Merit.
Report—Well built and fastened.

STRAITS SETTLEMENTS.

JOHOR, K.C.S.I, G.C.M.G., H. H., The Maharajah of.—Models of Native Boats. Honourable Mention.

Report—An interesting exhibit, showing the style of vessels used by the Natives in the Straits Settlements.

TASMANIA.

MACQUARIE, L.—Hobart Town.—Whale-boat of Huon Pine. First degree of Merit.

Report—A perfect whale-boat, well built, and fitted complete.

NEW ZEALAND.

GREEN, Henry Thomas—Dunedin.—Collection of Models of Canoes from New Zealand and other islands in the Pacific Ocean. Commended.

Report—Very interesting exhibit as an historical record of the various descriptions of craft used by the natives of the above-mentioned islands prior to their intercourse with Europeans. Highly commended for native skill in models and workmanship.

GREEN—Henry Thomas—Dunedin.—Sculling Outrigger Wager-boat. Highly Commended.

LYTTELTON HARBOUR BOARD—Lyttelton.—Model of Lyttelton Harbour. First degree of Merit.

Report—A neat and accurate model, showing the breakwaters, wharves, railways, &c.

NEW ZEALAND SHIPPING CO.—Christchurch.—Half-models of Ships. Highly Commended

UNION STEAMSHIP CO. OF NEW ZEALAND (Limited)—Dunedin.—Models of s.s. "Rotomahana," and s.s. "Wakatipu." First degree of Merit.

Report—Models to scale, very complete in details of deck-fittings, &c., but not rigged.

UNITED STATES.

DEGRAUW, AYMAR, & CO.—New York City.—Collection of Oars. Highly Commended.

PAGE & SONS, E. W.—New York City.—Collection of Oars. First Degree of Merit.

WATERS & SON, E.—New York City.—Papier-mâché four-oared Outrigger Racing-boat, self-steering. First degree of Merit.
Report—Commended for model and workmanship, and lightness of structure.

VICTORIA.

EDWARDS, JAMES—Melbourne.—Clinker-built Sculling Outrigger. First degree of Merit.
Report—For good model and workmanship.

GREENLAND, W. T.—Melbourne.—Model of a Boat built for the Prince of Wales. Highly Commended.

GREENLAND, W. T.—Melbourne.—Swivel Rowlocks, "1st invention." Highly Commended.

MURRAY, H. R.—Melbourne.—Half Model of Cutter Yacht. Highly Commended.

SMITH & SONS, W. HOWARD—Melbourne.—Model of a Patent Improved Hopper Dredge. Frst degree of Merit.
Report—The original is of 100 nominal horse power, and loads herself in two hours, carrying 800 tons, and being propelled by twin screws.

WATTS, WALTER K.—East Melbourne.—Water-line Models of Yachts, Steam Launches, Torpedo Launches, Sailing and Steam Vessels. Commended.

DEPARTMENT VI.

AGRICULTURE.

AWARDS NOMENCLATURE.

The Awards in Department VI—Agriculture, with the exception of Wool and other Fleeces, Classes 639-640, and of the Live Stock Group, Classes 645-652 inclusive, are thus described in their relative orders of merit:— "First degree of Merit Special"; "First degree of Merit"; "Highly Commended"; "Commended"; "Honourable Mention." There will be given preceding the Wool and Live Stock Classes an explanation of their respective Award Classifications.

GENERAL REPORT.

Agriculture.

THIS department is the one which, less than all others in connection with the Sydney International Exhibition, with the exception of the sister Department VII, on Horticulture, has partaken of an international character; but it will be seen that although the objects shown under it were mainly Australian, other countries exhibited largely in some of the classes. As the Department comprises the results of the pastoral and agricultural interests of Australasia, it will be concluded that a vast preponderance of the exhibits of these Colonies was to be expected,—indeed it will be apparent that without something like an adequate representation of the chief pastoral and agricultural products of Australasia, no International Exhibition held in one of its chief cities could well be considered as complete. It will be recollected that the first proposals for holding an International Exhibition emanated from the Agricultural Society of New South Wales, but the scheme having assumed proportions with which it could not individually cope with any reasonable expectation of success, the Government of the Colony came forward and took the enterprise in hand. But the Agricultural Society had, while the matter remained in its hands, published a programme, which was largely taken up with schedules of prizes for stock, wool, and agricultural produce; and the Commission viewing this fact, and having regard to the importance of the interests involved, adopted the programme in so far as the character of the proposed shows was concerned, and issued a circular fixing dates for carrying out a series of side shows of live stock, to be held during the currency of the International Exhibition. These shows were held accordingly, and proved to be in a high degree successful. They are comprised within the general classification, which was in the main founded on that of the Philadelphia Centennial Exhibition of 1876. In connection with the exhibits of stock and wool, it will be noticed that the nomenclature of the prizes awarded is different from that adopted in connection with the general exhibits displayed within the Garden Palace, the Machinery Halls, and the Art Galleries. The same remark, it will be seen hereafter, is applicable to the awards in Department VII, on Horticulture. As has happened in the case of other Departments, some of the exhibits from their nature occupy a position which is almost undefinable, between agriculture and horticulture. This difficulty is however in a manner set at rest by the schedule of classification. In endeavouring to give a general idea of the character and extent of the representation in the several groups of classes into which Agriculture is divided, it becomes necessary to take these groups *seriatim*, noticing in passing the more salient features of each.

Group of Classes 600 to 603—"Animal Products, Land and Marine, used as Food." The exhibits in this group, shown in the various Courts at the Garden Palace were fairly numerous. Many of the exhibits of this description were

displayed on the basement floor; but the Colonies had the larger number of exhibits of preserved meats of various kinds, New South Wales and Queensland having some excellent samples; Great Britain, the Netherlands, New Zealand, and Victoria had several exhibits in this group, while an exhibitor in the Japanese Court showed preserved salmon and venison. The Commission, at the instance of the Committee on Animal Products, offered a special award of a gold medal for the finest exhibit of machinery for meat-preserving, with products showing the efficacy of the appliances, which it was proposed to supplement by contributions from the pastoral and agricultural interests, with plate worth some hundreds of pounds; but no exhibit worthy of this tempting award was submitted to the Judges. A great part of the land near the coast of New South Wales, southwards from Sydney, and including the districts of Illawarra, Broulee, and Twofold Bay, is taken up by dairy farms and pasturages for dairy cattle. From these the production of cheese and butter is very large—so large that sometimes in the townships of Illawarra, butter in bulk of good quality may be obtained for 4d. per lb. The production of pork, bacon, hams, and eggs is also largely engaged in in the districts referred to. The tinning of Australian meats, butter, &c., appears likely to be in a great measure superseded by the solving of the problem of taking them in bulk and fresh to European markets; and where these articles of food can be purchased cheaply in the local markets, they are scarcely likely to be in great demand in a tinned form.

Group of Classes 604 to 610—"Animal Products, Land and Marine, used as Materials." The leading exhibit in this group is leather, articles made from leather coming under the classification of Manufactures. And here New South Wales is far before any other exhibiting country in the number and general excellence of her exhibits of variously-dressed hides, which include tanned kangaroo skins, from the latter of which an excellent and durable article is made. Messrs. Alderson & Sons, of Sydney, have a general exhibit of leathers, which reflects great credit on that long-established firm. Perhaps the extent of the leather-making industry in Sydney and suburbs, and in the provincial towns of the Colony, is in a measure due to the comparative cheapness of undressed hides in the local market. Austria, Belgium, Germany, New Zealand, and Queensland are each represented by several exhibits. As of special interest to the reader, we will here mention some of the novelties in leathers for which awards were given: Maximilian Grünfeld, of Brünn in Moravia (Austrian Court), received an award for specialities of horse leather; A. S. Wilson, of the Blue Mountains, New South Wales, an award for tanned snake-skins; and Messrs. Alderson & Sons, of Brisbane, Queensland, an award for an exhibit of "dugong" leather, the latter made from the hide of the dugong (family *Manatidæ*), a kind of seal found in Australian waters. We have seen a splendid sole leather made from this hide. In the Fijian and Queensland Courts there were interesting and beautiful exhibits of pearl-shell and corals. In the latter Court a trophy formed of pearl-shells of extraordinary size and brilliancy was one of its special features. The pearl-shell trade from the Queensland coasts to New South Wales ports, from which the shell is in turn shipped to Great Britain, has assumed its present very considerable proportions, almost within the last decade. According to the Statistical Register the export of the shell from New South Wales, which was valued at £70 in 1869, had attained to £58,521 in 1879. The uses for the shell in ornamental manufactures have greatly increased, and the raw

material is likely, owing to the demand, long to maintain a high price. The divers engaged in the pearl-shell fishery on the Australian Coasts are chiefly Kanakas and Malays. A good deal of Australian capital is embarked in the pearl-shell fishery prosecuted along the north-eastern, northern, and north-western coasts of Australia. Opossum furs and rugs were displayed in most of the Australian Courts.

It is a matter for deep regret that the objects comprised within group of Classes 611 and 612—"Fish Culture, and the Apparatus connected therewith and with their capture"—were almost wholly unrepresented by exhibits from the Colonies, or from Europe and the United States. Australian waters (oceanic) swarm with fish, even in the harbours of Port Jackson and Hobson's Bay, which are of excellent quality; but unfortunately fisheries are not prosecuted in anything like a systematic manner, although from time to time steps are taken to alter this state of things. Perhaps the circumstance that this is a great "meat"-producing country, and that beef and mutton are cheap, has something to do with this result; but fisheries under judicious management would pay well. It is a misfortune that no European methods which might serve as guides were shown at the Exhibition. Australian fresh-water fisheries are in comparison unimportant.

Group of Classes 613 to 618—"Arboriculture and Forest Products." This group will be found most fully reported upon by its Judges, who have set forth at length the industrial values of the timbers, barks, resins, gums, &c., which came under their notice. The report on Arboriculture will be found to include a valuable paper from Baron Ferdinand von Mueller, K.C.M.G., of Melbourne, on Salt-bushes (Salsolaceæ), plants which to the pastoralist in Australia are practically invaluable.

Group of Classes 621 and 622—"Pomology, including Fruits of Temperate and Semi-tropical Regions and Tropical Fruits." At several of the exterior shows, as will be seen hereafter on reference to the award lists, inclusive of the general Agricultural Exhibition of March, 1880, and the various Horticultural Shows, Australian fruits were well represented—several individual exhibits of fruits, temperate and semi-tropical, numbering over one hundred varieties. It was not to be expected, owing to their distance, and the perishable nature of fruits, unpreserved, that exhibitors would be other than Colonial; in fact the distance of New Zealand, comparatively small though it be, prevented her from competing, but fruits were shown from nearly all the other Colonies. As there seems every probability of Australian fruits being taken to Europe in bulk, and that they will make an "in" season, so far as certain kinds are concerned, of what in England is, with each recurring year, an "out" season, a few remarks on the subject may not be out of place. The great geographical range from the southern extremity of Tasmania, to the far north of Queensland, involves great divergences of temperature; but these differences often occur within a much more limited area, owing to the existence of elevated tracts of country or table lands, rising 2,000 and even 3,000 feet above the level of the sea. Tasmania produces in great profusion all British fruits, but she cannot cultivate successfully the orange, which grows luxuriantly in New South Wales. In the last-named Colony there also flourish the British fruits referred to. The olive seems very well suited to South Australia, but would thrive in almost any of the Colonies. But, above all, the grape is thoroughly at home in Australia. In Queensland the banana and pine-apple are produced in abundance.

Group of Classes 623 to 627—"Agricultural Products"—Subdivision, Class 623—"Wheat, Oats, Barley, Maize, and other Cereals." The agricultural capabilities of the respective Colonies will be shown by an enumeration of the special awards suggested by the Judges and decreed by the Commission to their individual Governments, for pre-eminence in production—these awards being as follow. The Colony of Fiji—for cotton and other vegetable fibres; that of New South Wales, for Maize and Rye; while New Zealand was recognised in like manner for Barley and Oats, and South Australia for Wheat. Queensland has been found suitable for the cultivation of rice, and samples of this grain are shown.

There is nothing specially worthy of mention under Class 624—"Leguminous Plants, and Esculent Vegetables," or Class 625 "Roots and Tubers," but that the new Colony of Fiji has several exhibits of yams. Class 626—"Tobacco, Hops, Tea, Coffee, Spices, Herbs, and Condiments." The most noticeable exhibits of tobaccos were those of Messrs. Cameron & Co., of Sydney; the Virginia Tobacco Manufacturing Co., of Melbourne; and Th. Williams & Co., of Richmond, Virginia, and Watson & M'Gill, of Petersburgh, Virginia, U.S.A. There were, however, some German exhibits of cigars. Several firms in Sydney showed tobaccos of excellent quality, manufactured in the Colony, chiefly from the imported leaf, but there were some New South Wales exhibits of the article made from leaf grown in the Colony. The leaf grows luxuriantly in New South Wales, the climate being well suited for its cultivation, as it is believed the soil in many districts, is also; but the great difficulty hitherto has been to cure the leaf in such a manner as to produce an article for the market which, in colour and flavour, will equal the best classes of imported tobaccos. New Zealand and Tasmania have each several exhibits of hops, of a quality much esteemed by colonial brewers. The principal exhibits of tea were from India and Japan, China not being a participating Country, but Ceylon and the Straits Settlements also exhibited. Indian teas, it may be stated, seem to be gaining in favour in the Australian market. Coffee and coffee beans are shown from Fiji, New Caledonia and India. Apart from leading British manufacturers of condiments and spices, whose names are as "household words" among Englishmen, there were similar exhibits, generally of good quality, in almost every Foreign and Colonial Court. In Class 627—Seeds and Seed-vessels—there were several noticeable exhibits, which will be found detailed in the special report on that Class. The chief exhibit was that of Vilmorin, Andrieux et Cie., of Paris, the finest by far of its kind in the Exhibition, and of great variety. To it was decreed a gold medal, the only one given to general French exhibits by the Commission of the Exhibition. These exhibits, which attracted a great deal of attention, and were shown the most of the time under the tower at the southern entrance, were afterwards displayed in the General Agricultural Show, in March, 1880.

Group of Classes 629 to 634—"Vegetable products used as food or materials."—The exhibits of flour were numerous, and to be found in nearly the whole of the Colonial Courts. South Australia, as was to be expected, was a very large exhibitor; but only a few samples of her produce of this description were displayed in the Garden Palace, the rest forming part of the General Agricultural Show, this being also the case with some of the best samples of wheat sent from the country districts of New South Wales. Wheat is also an important product of the Colonies of Victoria and New

Zealand, although far short of the extent to which it is produced in South Australia; but the average yield per acre in New Zealand is greater than in any other country in the world. The western districts of New South Wales are important sources from whence supplies of wheat and flour for the Sydney market are drawn. Several Australian exhibits of oats and oatmeal were shown, and their quality is generally very good. The Colonies compete with the United States in the production of corn-flour, the Colonial article, which is well prepared, having in a great measure dislodged the imported. Mr. Munn, of Merimbula, New South Wales, has had a reputation for years past for the production of maizena. There were several excellent English and Continental exhibits of cocoa and chocolate, which comprised the well-known goods of the respective establishments of Fry and Menier, of London. Fiji and Queensland showed the chief samples of arrowroot. The principal exhibits of olive oil came from France, Italy, and South Australia. Nearly the whole of the Australasian Colonies were well represented in preserved fruits, the manufacture of which can only utilize an infinitesimal proportion of the enormous aggregate yield of fruit; and these exhibits were of the best quality. Tasmania is especially famed in the Southern Hemisphere for her manufactures of preserves, for which there is an ever-increasing demand; but both New South Wales and Victoria were well represented by firms whose "brands" are in great requisition in the household. Sugars were largely represented in the New South Wales and Queensland Courts. The New South Wales Sugar-refining Co., of Sydney, which has very extensive business relations in connection with this industry, had a splendid trophy of sugars in all stages of preparation, to the finest crystals, which occupied a prominent position in the eastern transept, opening from the dome. This exhibit was considered such an excellent representative specimen of Colonial industry as to lead the Commission to award to the Company the only gold medal given in New South Wales (apart from the special one given to Mr. Marshall for pale ale). As bearing intimately upon this subject, it may be stated that the sugar-cane is now largely under cultivation in the northern districts of New South Wales and in Queensland. The Clarence and Richmond River Districts have proved well suited for cane cultivation, and the Manning River has also a good reputation. Sorghum has been tried, but only to a limited extent, and scarcely anything has been done to utilise the saccharine matter contained in beets. The sugar plantations in Queensland are worked by Kanakas, who are under engagement to the planters; but the case is different in New South Wales, where the cultivation of sugar-cane is carried on successfully solely with white labour, which we believe is done in no other country. One exhibit of "beet" sugar was shown by the Commercial Board of Brünn, in Moravia. There were several very good exhibits of confectionery shown, many of them being Australian. Two firms displayed in operation in the Machinery Hall the processes in use in sugar-boiling.

Group of Classes 635 to 638 (inclusive)—"Wines, Spirituous, Fermented, and other Drinks." New South Wales was very largely represented in wines, many of which obtained the highest awards which it was in the power of the Judges to recommend. Two exhibitors, Mr. John Wyndham and Mr. James Kelman, of Branxton, each obtained about forty awards for either separate descriptions of wines, or different vintages, and several other vignerons were nearly as well represented by exhibits. The most of these exhibits were from grapes grown in the Hunter River district, others were from Port Macquarie,

still further north ; while some wines of excellent quality were shown, which had been produced, like the well-known vintages of Mr. Fallon, in the vicinity of Albury, near to the Victorian Border. The same remarks as to general excellence will apply to the creditable and numerous exhibits of wines in the South Australian and Victorian Courts. The time is not distant when wine production and its export will form one of the chief industries of the Australian Colonies. The industry has already assumed very considerable proportions, and many Australian wines are rapidly attaining a European reputation. Great Britain and Continental Countries, as was also the case with leading Colonies, had numerous exhibits of cordials and liqueurs. The awards for these and for spirits and fermented drinks will be found set forth in their proper place. The chief award for New South Wales ales, to which ales the special competition was confined, fell to Mr. Marshall, of the Paddington Brewery, Sydney, who received the special gold medal of the Commission, on the recommendation of the Judges. New Zealand and Tasmania had some exhibits of ales, which were pronounced to be of most excellent quality. Some first-class exhibits of ærated water, tonic water, and lemonade were shown in the Colonial Courts. The exhibits of spirits and fermented liquors shown by British, American, and Continental firms, were such as fully sustained their reputation.

Group of Classes 639 to 644 (inclusive)—"Textile Substances of Vegetable or Animal origin." Subdivision, Class 639—"Wool of Sheep in Fleece." The importance of the Australian interest connected with the exhibits in this class will be a sufficient excuse for dwelling thereon. The greater proportion of the wool with which ocean-bound steamers and sailing vessels are freighted for Great Britain is obtained from the merino breed of sheep ; the story of the first introduction of which to Australia by Lieutenant Macarthur is one which no Australian historian could afford to leave untold. Flanagan, in his History of New South Wales, vol. 1, p. 153, says—"He (Lieutenant Macarthur) quitted the military service and commenced his career as grazier—the term 'squatter' was not yet in use—by purchasing as breeders a limited number of sheep recently imported into the Colony. In the year 1803, in consequence of some grievances to which he had been subjected by the local authorities he visited England, laying before the Home Government projects which he had formed for making the Colony a great agricultural and pastoral country. He was called before the Privy Council, and examined as to the details of his scheme. The members of the Council were impressed with the soundness of his views, and the practicability of his projects, which they at once perceived were such as would not only prove beneficial to the Colonial possessions which were springing into existence in Australia, but would eventually tend to promote the honor, the strength, and the wealth of the Empire at large. As a reward for his past services and efforts, and as an encouragement to persevere in the accomplishment of his plans, he received an order for a grant of 10,000 acres of land ; and the King himself (George the Third), foreseeing in the wool-growing project part of an enterprise which was destined to give to England new colonial possessions as rich as those lost during his reign, permitted Mr. Macarthur to purchase a few pure Spanish merinos from his own private flock." Thus is explained the prime origin of an industry which may be said to keep whole fleets in active occupation. Merino sheep and merino wool are still mainly the sheep and wool of Australia ; although other breeds and other descriptions of wool, of which

valuable specimens were exhibited at the sheep and wool shows, are favoured. The export of wool from New South Wales, which in 1822, when that Colony represented practically the whole of Australia, was 172,880 lbs., amounted during 1879 (for New South Wales alone) to 123,710,450 lbs., valued at £6,491,198 ; the total value of wool exports from this Colony alone since 1826, when the value of the export is first recorded, to the end of 1879, having been £88,600,000.

In 1873 (we take the figures from the Statistical Register of the Colony), the export of wool was 31,606,846 lbs., but the total rose in 1875, in the short space of two years, to 87,534,280 lbs., or in that brief period showing an increase of nearly 300 per cent. It must be admitted that the discrepancy between the totals for 1873 and 1875 is somewhat phenomenal ; but each succeeding year shows a wonderful increase over that immediately preceding it. And these are only the figures for one Colony. The fleeces of Australia are proving of more value than its gold. They are truly "golden fleeces." As showing the extension of pastoral occupation, we may mention that the country all round Cooper's Creek, in the far interior, and involving the very spots on which Burke and Wills, the explorers, lay down to die from privation and exhaustion, has been in the possession of squatters and their flocks for years past. In the awards under Class 639, wools will be found carefully divided into fine and coarse. The distinction is drawn between combing and clothing wools, and between greasy and washed. Where the value of the fleece per lb. was known to the Judges, it is given, together with brief reports of the Judges as to the more noticeable features of each exhibit to which an award had been made. The whole of the Australasian Colonies sent exhibits to the wool show, which was opened in the Agricultural Hall on the 22nd of December, 1879. The chief honors, it will be seen, fell to Tasmanian and Victorian wools. The exhibits from the Continent of Europe and America were few. First of all there was a valuable exhibit of merino wool from Rambouillet stud sheep, sent to the Colony by the French Minister for Agriculture ; and there were a few small but fairly representative exhibits from Germany and the United States ; the exhibits from the latter country being shown under the auspices of the Vermont Sheep Breeders Association. Collective exhibits of wools, classified and arranged, were shown by Helmuth Swartze & Co., of London, and W. H. Chard & Co., of Sydney. As a show, the display of wools at the Agricultural Hall was generally admitted to be a thorough success. The samples in many cases were remarkably good ; and they continued to be on view in the Hall until the closing of the Exhibition. The benefits which must have resulted from an inspection of the wools of different countries and colonies shown side by side can scarcely be over-estimated. The experience gained by growers of wool in this manner is sure to have valuable results leading to great improvements in the staple.

Class 641—"Cotton." The majority of the exhibits in this class were shown in the Fijian Court, where they formed quite a special feature, and led the Judges to recommend the award of a special diploma as has already been stated in this report. Queensland and South Australia had also exhibits of cotton, but they were far less important than those of Fiji, the industry in neither of the two first-named Colonies having attained to any magnitude. The exhibits of flax and hemp (Class 642) were unimportant. One sample of native flax from Liverpool Plains, New South Wales, where it is said to grow abundantly, was shown by Mr. W. Bassett.

Class 643—"Silk, in the cocoon, and reeled." The chief exhibits of raw silk were to be found in the Japanese and New South Wales Courts. The Australian climate has been found by experiment to be excellently suited for sericulture. [Remarks bearing upon silk exhibits and the prospects of sericulture in New South Wales will be found in the General Report prefixed to the Department of Manufactures, under the heading of Classes 242 to 249—Silk and Silk Fabrics.]

The catalogue of wools contained between 400 and 500 exhibits. The schedule which had been drawn up by the Committee of the Commission, VIII (on wool and other textile fabrics), comprised champion prizes, carrying a gold medal, first prizes with silver medal, and second prizes which entitled the exhibitor to a bronze medal. There were supplementary awards, where the exhibits only received commendation, and which only carried the Commissioners' Certificate of Award. The arrangements in connection with this important show, as was the case with the live stock, agricultural, and horticultural shows, were in the first instance conducted by Mr. Thomas Dawson, and afterwards by Mr. Gideon S. Lang, who succeeded Mr. Dawson on the latter taking charge of the Garden Palace. Both of these gentlemen had an intimate acquaintance with stock and agricultural matters.

Live Stock Shows.

The importance of the interests represented at the above shows is only second to that of the wool. The various stock shows are herewith detailed, not in the order in which they were held, but in that of the classification of the exhibits.

Class 645—"Horses, Asses, Mules." This show, which was held in the exterior grounds, where stalls had been erected for the accommodation of stock, lasted from the 23rd to the 30th of February, 1880. There were 250 exhibits in all in this class, and the show was without doubt the finest of the kind hitherto held in the Country. The horses were of the best breeds, and the specimens of these breeds were as good as could possibly be got together. The number of horses in the Colony had increased from 6,142 in 1825 to 360,038 in the year 1879. The breeding of horses suited for the Indian market has engaged the attention of several stock-owners in New South Wales for years past; while others have devoted their attention to the development of racers for the turf, the speed of which is sufficiently demonstrated by the "time" of some of the chief races at Randwick. The prizes for horses were on the same basis and with a similar classification to those given for wool.

Class 646—"Horned Cattle." There were two shows of cattle, both of which attracted much attention. The first was of stud cattle, held from the 9th to the 15th of December, 1879, and the second of fat cattle, from the 18th to the 23rd of December, there being in all at both shows 234 exhibits of the very finest description. As had also occurred with the exhibits of horses, New South Wales was the principal prize-taking country in cattle, as she was also by far the largest exhibitor. Some splendid cattle were shown from Victoria. As a source of wealth to the pastoral interest, the rearing of cattle is only second to the breeding of sheep and the growth of wool. There is always to be found a market for the hides, the horns, and the tallow; the most perplexing problem having proved to be how to dispose of the surplus meat; but this problem is one which is being slowly but surely solved. The

number of horned cattle in New South Wales which in 1825 was 134,519, was 2,914,210 in 1879. The natural increase of the herds is sometimes negatived by the prevalence of a drought, which, should it be an extensive and protracted one, will kill in a single season some hundred of thousand head. This accounts in a large measure for the fact that in the years 1875 and 1876 the totals of cattle in the Colony were ahead of the total of 1879—the two intermediate years 1877 and 1879 showing a very marked diminution in their respective figures. The conditions of cattle-breeding are essentially different in these Colonies from what they are in Great Britain. The uniform mildness of the temperature does not demand that they should be housed under cover; and artificial feeding is almost unknown, except in the case of cattle kept for stud purposes. The prize classification for cattle is the same as that adopted for wool and horses, and for sheep, to the show of which latter reference will now be made.

"Sheep"—Class 647. The show of Sheep (with which were combined those of Goats and Alpacas, Class 648, and Swine (Class 649), extended from the 29th of September to the 8th of October. The animals were shown in pens erected in the Agricultural Hall in the Garden Palace grounds. Of sheep alone there were 260 exhibits, representing the flocks of New South Wales, Queensland, and Tasmania. Some of the leading awards were secured by Tasmanian and Queensland sheep, the first-named Colony being in this respect the most successful. Like the wool, the competing sheep were chiefly of the merino breed; France having on view at the show some fine rams from the celebrated Rambouillet breed of fine-woolled sheep. The show was an excellent one, and fairly illustrated the section of the particular live-stock interest which it was intended to represent. The increase in sheep in New South Wales has kept well alongside of her growth in other phases of material prosperity. In 1822 there were 138,755 sheep in the Colony. This number, by the close of 1879, had reached a total of 29,043,392. The same cause which has been referred to as resulting in occasional diminution in the yearly totals of cattle, and showing a falling off instead of an increase—"A bad season"—very sensibly affects sheep returns, and brings trouble to the mind of the squatter, and causes a loss which it takes several good seasons to retrieve. The time will come when the skill of man will more and more obviate the evil exigencies of droughts and similar catastrophes, either by sinking artesian wells, and producing a never-failing supply of water, or by adopting more extensive means for the conservation of the rainfall. But, even with an abundant supply of water from wells and tanks, the pasturage will become scant for want of the necessary rainfall, and therefore the problem of how to prevent droughts, or to completely obviate their effects, may for ever remain unsolved.

CLASSES 600–603.

Animal Products, Land and Marine, used as Food.

JUDGES.

CURTIS, GEORGE S.	Brisbane, Queensland.
PALSER, HENRY P.	York-st., Sydney.
PEATE, THOMAS (Chairman)	George-st., Sydney.
WALKER, J.	Sydney.

DEPARTMENT VI.

AGRICULTURE.

GROUP—Animal Products, Land and Marine (used as Food).

CLASSES 600–603.

AUSTRIA.

BERG, S.—Krakau.—Egg Preserves.

First degree of Merit.

Report—Six exhibits of preserved eggs, well deserving of a special prize, being exceedingly well prepared and in good condition. Is a very novel and interesting exhibit.

BELGIUM.

DELACRE, Charles—Brussels.—Extract of Beef.

First degree of Merit.

Report—A very superior preparation, and reasonable in price.

FRANCE.

BIARDOT, Alphonse—Paris.—Tinned Provisions.

First degree of Merit.

Report—An exhibit in splendid condition, and very well got up.

COLIN, Joseph—Nantes (Loire-Inférieure).—Tinned Provisions.

First degree of Merit.

Report—The sardines exhibited are of very superior quality, the fish and oil being in good condition, and in colour equal to the best sardines usually imported. Mackerel preserved in the same manner as sardines, supply a splendid article of food.

MARÉ, Ch.—Nantes (Loire-Inférieure).—Tinned Meats.

Highly Commended.

Report—Superior quality, nicely got up and in good condition.

GERMANY.

GRADLER & HARTWIG, GOTHAER-WURST AND RAUCH-FLEISCHWAARENFABRIK, Albertsbad-Gotha.–Gotha Sausages in Tins. First degree of Merit.

Report—A very superior exhibit, reasonable in price, and should command a large sale.

GREAT BRITAIN AND IRELAND.

CROSSE & BLACKWELL—London.—Preserved Fruits, Oilmen's Stores, &c. First degree of Merit.

Report—All superior to anything exhibited.

MARSHALL & CO.—Aberdeen.—Tinned Fish.

First degree of Merit.

NELSON, DALE, & CO., George—London.—Gelatine, Gelatine Lozenges, Isinglass, &c. First degree of Merit.

Report—A very superior quality of photographic gelatine, the Firm keeping up their reputation as being the first manufacturers of this class of goods.

ITALY.

ARRIGHETTI, Marco—Florence.—Hams.

First degree of Merit Special.

Report—An exhibit of excellent quality.

JAPAN.

KUWAI TAKUSHI—Yeddo.—Preserved Salmon and Venison.

Two highly Commended Awards.

Report—The salmon is in sound condition and well preserved, but poor in colour and flavour. The venison is well preserved, in good condition and flavour.

NETHERLANDS.

GOULMY, P. V.—s'Hertogenbosch:—Preserved Fish, Soup, and Extract of Beef. First degree of Merit Special.

Report—We consider these exhibits to be the very best of the kind ever seen in this Colony.

HEINCKEN & ZOONEN, Wed. A. G.—Amsterdam.—Gouda and Edam Cheese. First degree of Merit.

Report—A very good exhibit, and in excellent condition.

CLASSES 600–603.—*Animal Products, Land and Marine (used as Food).*

NEW SOUTH WALES.

DARCY, J.—Bega.—Hams.

First degree of Merit.

Report—Very good and new, but not much flavour.

DARCY, J.—Bega.—Bacon.

First degree of Merit.

Report—Very good sample.

JAUNCEY, John—Bega.—Bacon.

Commended.

Report—Very fair, and of good colour.

MEAKER, George—Bega.—Bacon.

Highly Commended.

Report—Very fair bacon, of good flavour.

MILLER, H.—Bega.—Hams.

Highly Commended.

Report—Very fair sample, and of good flavour. [The Judges say with regard to the whole of the exhibits of bacon from the Bega District "that they are of a superior quality to the article usually seen in the Sydney market."]

MORT, EXECUTORS of the late T. S.—Bodalla.—Cheese.

Highly Commended.

Report—Very fair quality of cheese.

ROGERS & SHEPHERD—Bega.—Cheese.

Highly Commended.

Report—Very superior, and of good flavour.

SYDNEY MEAT PRESERVING CO.—Sydney.—Corned Beef, Compressed Beef, Sheeps' Tongues, Corned Mutton, and Spiced Beef.

First degree of Merit.

Report—All these meats are of a very superior quality, being sound, in good order, and well got up.

TOWNS & CO., R.—Sydney.—Compressed, Corned, and Spiced Beef, Sheeps' Tongues.

Highly Commended.

Report—Of good quality.

WOOD, P. H.—Bega.—Cheese.

Commended.

Report—Good sample, good average, fair quality.

WREN, Jun., H.—Bega.—Cheese.

First degree of Merit Special.

Report—Very superior cheese, of good quality and rich flavour.

CLASSES 600–603.—*Animal Products, Land and Marine (used as Food).*

NEW ZEALAND.

BLAKE & SON, Charles—Picton.—Picton Bloaters.

First degree of Merit.

Report—Of very superior qnality, condition, and freshness.

CANDY, C. B.—Christchurch.—Cheese.

Highly Commended.

GEAR, J.—Wellington.—Soups.

First degree of Merit.

Report—A good assortment of soups, all of excellent quality, well flavoured, and of good strength.

GRAHAM, J. A.—Christchurch.—Cheese.

Commended.

KIRKLAND, William—East Taieri.—Cheese.

First degree of Merit.

Report—Very good sample.

KIRKLAND, William—East Taieri.—Cheese. (Another sample.)

Commended.

M'DONALD & MILLER—Dunedin.—Hams.

First degree of Merit.

Report—Of fair quality, but rather fat.

MEIN, W. H.—Christchurch.—Preserved Meats.

First degree of Merit.

Report—All these meats opened in first-class condition equal to the best exhibited, being well cooked, tender, and full-flavoured. The Judges desire to call especial attention to the rissoles, corned mutton, sheeps' tongues, ham, and chicken, as being superior to anything of the kind shown in the Exhibition. These meats can be supplied equally low in price as any in the Sydney market.

SHEEDY, Edward—Dunedin.—Hams.

Highly Commended.

Report—Of fair quality.

WARBURTON, Piers Eliot—Manawatu.—Mutton Hams.

First degree of Merit.

Report—Sound, but very old; they should have been judged before, with other perishable goods.

QUEENSLAND.

ALDER, A.—Brisbane.—Moreton Bay Turtle, in shell.

First degree of Merit.

Report—Splendidly preserved.

CLASSES 600–603.—*Animal Products, Land and Marine (used as Food.)*

BOWEN MUNICIPALITY—Bowen.—Bêche de mer.
First degree of Merit

Report—Best exhibit in its class.

SKINNER, B.—Brisbane.—Turtle Soup.
First degree of Merit

Report—Of very good quality.

SKINNER, B.—Brisbane.—Ox-tongues, Spiced Beef, &c.
First degree of Merit Special.

Report—Very fine quality, and splendidly got up.

WHITEHEAD & CO. (Limited)—Rockhampton.—Luncheon Beef, Roast Sirloins, &c. First degree of Merit Special.

Report—The Judges unanimously considered these to be superior to all other preserved meats in the Exhibition, their close resemblance to recently-killed meat being most remarkable.

WHITEHEAD & CO. (Limited)—Rockhampton.—Extract of Meat (Liebig's process). First degree of Merit.

Report—This is a very superior and palatable extract, dissolving very quickly, and leaving no sediment.

SOUTH AUSTRALIA.

NORTHERN MEAT PRESERVING CO.—Eudunda.—Curried, Roast, and Boiled Rabbit. First degree of Merit.

Report—All of very superior quality.

SWITZERLAND.

NESTLÉ, Henry—Vevay (Switzerland) and London (England).—Milk Food and Condensed Milk. First degree of Merit.

Report—A most excellent exhibit, and superior to anything of its kind in the Exhibition.

TASMANIA.

HEDBERG, O. H.—Hobart Town.—Cheese.
First degree of Merit.

Report—Of good quality, and very saleable.

UNITED STATES.

COOK, J. W. & V.—Clifton, Oregon.—Tinned Salmon.
First degree of Merit.
Report—Of very good quality and well preserved; the best exhibit in its class.

PORTLAND PACKING CO.—Portland, Maine.—Canned Lobster, Poultry, Hams, and Mutton. First degree of Merit.
Report—Well preserved and of good quality.

VICTORIA.

BRYANTS, Edward—Koroit.—Cheese (in tin).
First degree of Merit.
Report—A very superior article, equal to anything imported.

HUTTON, J. & C.—Melbourne.—Hams.
Commended.
Report—Sound, but of no flavour.

KIERATH, Charles—Indigo.—Bacon.
Highly Commended.
Report—Particularly good.

WATSON & PATERSON—Melbourne.—Hams and Bacon.
First degree of Merit.
Report—Very superior to many English imported.

WATSON & PATERSON—Melbourne.—Smoked Rolls, &c.
First degree of Merit.
Report—Excellent colour, and very saleable.

WESTERN MEAT-PRESERVING CO.—Colac.—Game.
First degree of Merit.
Report—Very superior quality—equal to any imported article in its class.

CLASSES 604–610.

Animal Products, Land and Marine, used as Materials.

JUDGES.

DUNN, THOMAS J.	Glebe, Sydney.
PEATE, THOMAS	George-st., Sydney.
PETRIE, ADAM (Chairman)	George-st., Sydney.
RAMSAY, E. P., F.L.S., Australian Museum ...	Sydney.
RICHARDSON, GEORGE	Sydney.
STEPHENS, HENRY	Park-st., Sydney.

GROUP—Animal Products, Land and Marine (used as Materials).

CLASSES 604–610.

AUSTRIA.

FOGES, J.—Vienna.—Leather.

Commended.

Report—The Russian enamelled, and other leathers, are of very fair quality.

GRÜNFELD, Maximilian—Brünn.—Horse Leather.

Honourable Mention.

Report—Boot vamps, soft, fine grain, &c., of good quality.

KRÄTZER, Joseph J.—Vienna.—Finished Leather.

Highly Commended.

Report—These goods are well dressed.

MICHL, Anton—Rehberg, near Krems.—German and Russian Glue.

Commended.

Report—A fine exhibit, of good quality.

WELPONER, Alois—Bozen, und Roveredo (Tyrol).—Calf and Cow Hide.

Honourable Mention.

Report—An exhibit of fair quality.

BELGIUM.

PEEL-LIEBAERT—Courtrai.—Tanned Skins.

Commended.

Report—A very good exhibit of russet calf, suitable for light work.

RASQUIN, Isidore—Liège.—Leather for Belts, Harness, &c.

Commended.

Report—Well manufactured, and suitable for trade purposes.

SOCIÉTÉ ANONYME DES TANNERIES ET MAROQUINERIES—Saventhem, near Brussels.—Tanned Skins and Leather for Hats.

First degree of Merit.

Report—A varied exhibit of tanned and japanned skins, of very superior quality. The coloured japanned leather, for the manufacture of hats, is recommended for its utility and finish.

ZUREE ET CIE., Charles—Ghent.—Dyed Skins.

First degree of Merit.

Report—A good exhibit, and well adapted to colonial requirements. This method of dyeing should be utilized by the colonists in preparing rabbit skins.

FIJI.

FIJIAN NATIVE EXHIBIT—Levuka.—Tortoise-shell.

Highly Commended.

FIJIAN NATIVE EXHIBIT—Levuka.—Pearl-shell.

Highly Commended.

FIJIAN NATIVE EXHIBIT—Levuka.—Collection of Shells.

Commended.

HENNINGS, W.—Loma Loma.—Pearl-shell.

First degree of Merit.

JOHNSTON, Mrs.—Taviuni.—Pearl-shell.

Commended.

SMITH, Hon. J. C.—Levuka.—Collection of Shells.

First degree of Merit.

VICKERY, E—Sydney.—Tortoise-shell (from Fiji).

First degree of Merit.

WATERHOUSE, G. J.—Sydney.—Coral (from Fiji).

First degree of Merit.

WATERHOUSE, G. J.—Sydney.—Collection of Shells from Fiji.

Highly Commended.

FRANCE.

BASSET—Paris.—Prepared Kid for Boots.

First degree of Merit.

Report—A very good exhibit of glove and glaze kid skins. The coloured skins are of excellent quality.

LORRÉ, Prosper—Troyes.—Furs.

First degree of Merit.

Report—A large collection of furs of very good quality.

GERMANY.

ACTIENGESELLSCHAFT FÜR LEDERFABRIKATION (vormals Ignaz Meyer)—München.—White Buff and Leather of various descriptions. Highly Commended.

Report—The white buff is excellent, and the other goods are of good quality.

CLASSES 604-610.—*Animal Products, Land and Marine (used as Materials).*

BECKE & SOHN, C. C.—Mühlhausen, in Thüringen.—Morocco and other Leathers. Commended.

DOERR & REINHART—Worms, a./ R.—Patent Waxed and other Calf-skins. First degree of Merit.
Report—These goods are of excellent quality.

FREUDENBERG, Carl—Weinheim, Baden.—Calf-skins of various descriptions. Highly Commended.
Report—An exhibit of good value and quality.

HEYL, Cornelius—Worms, a./ R.—Leather of various descriptions. Highly Commended.
Report—The whole exhibit is of splendid quality and value.

LOESCH, Carl—Endingen, Baden.—Russet and Waxed Calf-skins. Highly Commended.
Report—An exhibit of good quality.

MAHLER, Jacob, senr.—Flensburg, in Schleswig-Holstein.—Calf and Horse Leathers First degree of Merit.
Report—A very superior and varied exhibit of leathers.

MAYER & DENINGER, Michel—Mainz a./R.—Coloured Morocco and other Leathers. First degree of Merit.
Report—An exhibit of very good quality and value.

SCHEIBE & DATHE—Gera (Reuss).—"Lion Brand" Waxed Calf-skins. Commended.
Report—An exhibit of good quality.

WAELDIN, Huber—Lahr, in Baden.—Black Morocco and other Leathers. Highly Commended.
Report—A fine collection of leather.

WOLFF & CO.—Hoechst a./ Main.—Cleaned Bed-feathers and Downs. Commended.
Report—The downs are of good quality, and the feathers fair.

GREAT BRITAIN AND IRELAND.

EVANS & CO., P. & S.—Bristol.—Leather for Pumps, Sole Leather. First degree of Merit
Report—Large collection, English sole leather of superior quality.

KENT & CO., G. B.—London.—Sponges. First degree of Merit.
Report—A large assortment of sponges, of superior quality.

JAPAN.

INSATSU KIOKU, GOVERNMENT PRINTING OFFICE—Tokio.—Glue. Highly Commended.

Report—A good exhibit.

SHIDZU-OKA-KEN—LOCAL GOVERNMENT OF.—Vegetable Isinglass. Highly Commended.

Report—Very good, but dark.

NEW SOUTH WALES.

ALDERSON & SONS—Sydney.—Leather, Sole, Patent and Enamelled Morocco, Roans, &c. First degree of Merit Special.

Report—All of excellent quality and specially prepared.

ANDERSON, James—Parramatta.—Leather. Highly Commended.

Report—Black harness, superior; cow tweed, medium; kip, very good; brown harness, medium; sole, good.

BEGG, J. E.—Paddington.—Leather. Highly Commended.

Report—Sole, good; kip, fair; bag, medium.

BENNETT, Kenrick, H.—Moolah, Laurencekirk, Booligal.—Opossum and Wallaby Rugs, Australian Spider Silk, Quondongs, Emu Eggs, &c. Commended.

Report—As an interesting exhibit.

BERRY, J. S.—Botany.—Bone-dust, Glue, &c. First degree of Merit.

Report—Fine samples.

BERRY, J. S.—Botany.—Neatsfoot Oil. Highly Commended.

Report—Clear.

BIRDSALL & BAILEY—Waterloo.—Leather. Commended.

Report—Fancy dressed skins and leather, well got up.

CHURCHWOOD, A. G.—Sydney.—Sausage skins. First degree of Merit.

Report—Well preserved.

CLASSES 604-610.—*Animal Products, Land and Marine (used as Materials).*

DAVENPORT & ALCOCK—Sydney.—Leather.

First degree of Merit.

Report—Kangaroo Levant, superior ; coloured and tweed calf, good ; heavy calf tweed and yearling, very good ; light and heavy kip good ; black harness, medium ; hog skins, medium ; enamelled hides, first-class.

EVE, Benjamin—Alexandria.—Bone-dust, Glue, and Neatsfoot Oil.

First degree of Merit.

FORSYTH & SONS, J.—Sydney.—Leather.

Highly Commended.

Report—Sole, very good ; tweed calf, medium ; yearling and calf tweeds, good ; kip medium.

GILLESPIE, C.—Goulburn.—Leather.

Honourable Mention.

Report—Sole suitable for general purposes, tweeds passable, kip medium.

SAMUEL, Hon. Saul—Sydney.—Glue.

First degree of Merit.

Report—A fine sample of glue, well made.

THOMAS, A. E.—Mudgee.—Leather.

Commended.

Report—Calf skins, sole leather, black and brown harness, good.

WATSON, G. C.—Alexandria.—Leather.

Highly Commended.

Report—Levant, goat, enamelled, and calf very good.

WATSON, G. C.—Alexandria.—Japanned Table-cover.

First degree of Merit.

WILSON, A. S.—Blue Mountains.—Tanned Snake-skins.

First degree of Merit.

Report—Well and carefully cured.

WOOD & CO., W. T.—Goulburn.—Leather.

Commended.

Report—Sole inferior, calf good, bag inferior, kip good, horse tweed very good.

YORK & WALSH—Alexandria.—Leather.

Commended.

Report—Fancy dressed skins and leather, well got up.

NEW ZEALAND.

DOWLING, John—Hokitika.—Leather.

Highly Commended.

Report—Brown harness and bridle good, black medium harness, calf fair, tweed good, kip fair, bag leather and sheep-skins good, enamelled goat medium, sheep superior.

HATCH, Joseph—Invercargill.—Seal Oil.
Highly Commended.

Report—Good sound oil.

TYER, Alfred—Nghaurangha, Wellington.—Leather.
Honourable Mention.

Report—Kip and black harness good.

WALTON, Henry—Glen Craigie, Wellington.—Basils.
First degree of Merit.

Report—Black grained, brown tanned, and white.

QUEENSLAND.

ALDERSON & SONS—Brisbane.—Dugong Leather.
Commended.

Report—Good leather.

CRATE, J.—Brisbane.—Vegetable Sponges.
Commended.

Report—Fair sample.

HERON, Mrs.—Bowen.—Coral from the Great Barrier Reef, and Shells.
Highly Commended.

Report—A good collection of coral, containing many varieties.

M'GLYNN, J. & P.—Brisbane—Collection of Tanned Marsupial Skins.
Commended.

Report—These are spare of fur, and are porous.

PARBURY & LAMB—Brisbane.—Pearl-shells.
First degree of Merit.

Report—Fine sample, deserving special mention for the large trophy exhibited.

ROSSITER, E.—Brisbane.—Rugs, Mats, &c.
Commended.

Report—Good, and well got up.

SANDROCK, G. F.—Bowen.—Collection of Coral and Shells.
Highly Commended.

WHICHELLO, S. H.—Toowoomba.—Leather; Skins tanned with hair on.
Two highly Commended Awards.

Report—Very good.

SOUTH AUSTRALIA.

MAURICE, Price—Castambul.—Angora Goat-skins.
Commended.

Report—Good (tanned at exhibitor's farm).

CLASSES 604–610.—*Animal Products, Land and Marine (used as Materials).*

SOUTH AUSTRALIAN COMMISSION—Adelaide.—Furs and Skins.
Commended.

Report—Kangaroo rugs excellent, opossum skins medium.

WILKE & CO., H.—Port Adelaide.—Furs.
Honourable Mention.

Report—Wallaby and opossum furs, of medium quality.

TASMANIA.

ARNETT, Simon—Bothwell.—Furs and Leather.
Commended.

Report—Kip, calf, kangaroo, and wallaby furs, good.

BUTTON, T. L.—Leven.—Tanned Kangaroo Skins.
Honourable Mention.

Report—Kangaroo and imitation kid medium.

UNITED STATES.

CUMMINGS & CO., John—Boston.—Leather and Kid Skins.
First degree of Merit.

Report—Good assortment, well got up, of low price, and suitable to the Colony.

VICTORIA.

BREARLEY BROS.—Melbourne.—Leather.
First degree of Merit.

Report—Sole, kangaroo, calf, harness, and bag leather; good sample, well got up.

WALKER, Frederick—Preston.—Glue.
Commended.

Report—Very fair sample.

CLASSES 613–620.

Arboriculture and Forest Products.

JUDGES.

FARRELL, E.	Sydney.
GRAHAM, JOSEPH	Marrickville, Sydney.
PONDER, W. F. (Chairman)	Sydney.
SHEPHERD, P. L. C.	Sydney.

GENERAL REPORT.

CLASSES 613–620.—Arboriculture and Forest Products.

COMPRISING "Timber and Trunks of Trees, entire, or in transverse or truncated sections, with specimens of Barks, Leaves, Flowers, Seed-vessels, and Seeds; Masts, Spars, Knees, longitudinal Sections of Trees, Railway-ties, Ship-timber, Lumber roughly sawn as planks, Shingles, Laths and Staves, split or sawn. Timber and Lumber prepared in various ways to resist decay and combustion, as by injection of salts of copper and zinc."

In the following Courts there were found to be no exhibits in this Class, viz.: Austria, Belgium, France, Germany, Great Britain, Netherlands, New Caledonia, and Switzerland.

CEYLON.

GOVERNMENT OF CEYLON.

Two fine Specimens of Bamboos, interesting as botanical specimens.

LEECHMAN & Co., G. & W.

Four slabs of cocoa-nut timber and two rafters.—These are very good samples of this timber, and deserve commendation.

MENDIS, A.

This is a magnificently exhibited collection of ninety-six varieties of Ceylon timbers, shown in a handsome satin-wood case. These are shown in small blocks, carefully polished and uniform in size. This is the best described collection in the Exhibition, full information being given regarding the native and botanical names, locality from whence procured, breaking weight, absorbing power, durability, average size of log, and commercial uses. We consider that collections got up in the manner of the present one would be most useful for technical educational purposes.

CLASSES 613–620.—*Arboriculture and Forest Products.*

FIJI.

BARRACK, CAPTAIN, Savu Savu.

Four specimen knees from dilo trees.—An interesting exhibit, half polished ; and, as the finest exhibit of this style of timber, we place it in the First order of Merit.

JOSKE, PAUL, Savu Savu.

Eight very fine specimens of sawn timber, showing planks from the following varieties of wood : Dakua (dammara vitiensis) ; damanu (calophyllum spectabile) ; dambi ; dilo (calophyllum inophyllum) ; vesi (afzelia bijuga) ; assi ; yaka.—As these are very fine samples of these varieties of timber, we class this in the Second order of Merit.

JAPAN.

KUWAI TAKUSHI (Department for the Colonization of the Island of Hokkaido or Yesso.)

A good and most interesting collection of forty-one specimens of different timbers grown in the Northern Island of their territory. These are well-shown samples, and are exhibited to show the result of the labours of their Forest Conservancy Department, the timbers being all of only a few years' growth.—This collection we place in the Second order of Merit.

NEW SOUTH WALES.

AUSTRALIAN AGRICULTURAL Co., Newcastle.

An interesting and instructive collection of 186 specimens, comprising seventy varieties of timber grown on the Port Stephen and Warrah Estates of the Australian Agricultural Co. These are exhibited in blocks and slabs, and are neatly labelled, giving information regarding size and uses of timber.

BENNETT, K. H., Moolah, Laurencekirk, Booligal.

A fine sample of quondong wood—is very finely polished—would be a most valuable timber for economic purposes.

BRYANT, T., Camden.

An extensive collection of 285 specimens of indigenous timbers, well shown in neatly polished blocks, and is a neat interesting exhibit, although the specimens are unnamed, and no information is given regarding them. We are sorry that the scarcity of information given with this collection precludes us from giving it a higher place.

CLARENCE PASTORAL AND AGRICULTURAL SOCIETY, Grafton.

Is a collection of fifty-four varieties of timber, embracing numerous useful and ornamental specimens ; but as no information is given regarding them, and they are of no practical utility for general reference, we cannot do more than commend this collection.

CLASSES 613–620.—*Arboriculture and Forest Products.*

CRAWFORD, A. R., Walcha.

An interesting and instructive collection of nineteen varieties of timber, named and described as follows :—

Local Name.	Botanical Name.	Economic uses.
Red Gum.....	....	This sample is piece of an old slab which had been in a building for thirty-three years ; very suitable for posts for fencing, as it will keep strong and sound in the ground for any number of years. Diameter, 2 to 8 feet.
Forest Oak, or Diamond Oak.	.....	Very tough and elastic for tool-handles, but rots very quickly in the ground. Diameter, 1½ feet.
Forest Oak, or Weeping Oak.	.....	Suitable for shingles, and very lasting in the ground. Diameter, 1 to 2 feet.
		Same description of timber as No. 3.
Forest Mahogany	.....	Suitable for fencing or building purposes. Diameter, 2 to 4 feet.
Yellow Cedar	.....	Light soft wood, very nice tree ; when growing bears handsome flowers 1 foot in length. Diameter, 2 to 4 feet.
Falls Myall	.....	Light, tough, and elastic, scented ; bears a beautiful flower, with delightful perfume. Diameter, 1½ ft.
Yellow-wood ...	.....	Name unknown ; will not burn, being full of an acid. Diameter, 2 feet. NOTE.—The Judges find this statement scarcely correct, as this wood burns readily.
Yellow Blackbeet	.....	Very useful. This sample was taken from a tree 6 feet in diameter.
Common Cedar ...	.....	Diameter, 9 feet.
Yellow Box, or Yellow-jacket	.....	Hard and heavy wood ; used in building and numerous other ways. Diameter, 2½ to 4 feet.
Blue Gum	.....	Very lasting wood. Diameter, 3 to 7 feet.
Stringy-bark	.....	Used for shingling, fencing, and building purposes ; lasts well in the ground ; often grows over 100 feet high, with clear stem. Diameter, 2 to 10 feet.
Hignam	.....	A kind of wattle, used for tool-handles and other purposes. Diameter, 1½ ft.
Cherry-tree	.....	Light and soft wood. Diameter, 1½ foot.
Yellow Scented Wood.	.....	Very hard and heavy ; sends forth a peculiar scent when burning. Diameter, 3 feet.
Geebung.....	.....	Diameter, 1 foot.
Rosewood	.....	Scented wood. Diameter, 2 to 3 feet.
		A scrub wood, name unknown. Diameter, 2½ feet.
Ironwood	....	Very hard and tough, heavy and elastic and very lasting. Diameter, about 3 feet.

These timbers are exhibited in slabs, and evidently great trouble has been taken to give as full and instructive information regarding the exhibit as possible.

Department of Mines of New South Wales.

Shows a most magnificent, extensive, and instructive collection of 320 specimens of the various timbers indigenous to this Colony.

The collection comprises the following specimens, information regarding their economic value being given as far as practicable :—

Local Name.	Botanical Name.	Economic Uses.
Stringy-bark	Eucalyptus obliqua .. Ord. Myrtaceæ.	A large sized tree, attaining a height of 100 to 120 feet, with a straight bole of 70, and having a diameter of 3 to 5 feet. Used for building generally, flooring and fencing. The bark is largely used for covering sheds, huts, &c. Grows very quickly.
Grey Gum	Eucalyptus punctata. Ord. Myrtaceæ.	Height, 100 to 120 feet ; diameter, 4 to 5 feet. Bark of a greyish colour on the outside, which is smooth and falls off annually in very thin layers. Timber hard, makes excellent sleepers.
Peppermint	Eucalyptus piperita.. Ord. Myrtaceæ.	Height, 80 to 100 feet ; diameter, 4 to 5 feet. Generally met with in the Coast Range. Makes excellent and durable posts in fencing, and is also used for rough indoor housework.
Spotted Gum.....	Eucalyptus maculata (Hook). Ord. Myrtaceæ.	Usually a large sized tree remarkable for the spotted character of the bark. One of the best timbers for building, flooring, &c. Splits well for staves and shingles. There is a great demand for this timber. Found plentifully at Shoalhaven and within the Coast Range. One of the strongest trees in the Colony, and useful for wheelwrights.
Bloodwood	Eucalyptus corymbosa. Ord. Myrtaceæ.	Height, 80 to 100 feet ; diameter, 4 to 5 feet. Within the Coast Range. Timber durable in the ground for posts, piles, &c., and is also split up for rails, but not a favourite as sawn timber on account of the many gum veins in the wood.
Red Mahogany ...	Eucalyptus resinifera Ord. Myrtaceæ.	A tree attaining 80 to 120 feet and a diameter of 3 to 4 feet, with a furrowed persistent fibrous bark. Timber, hard, tough, and durable ; much used for building and other purposes. Shoalhaven and Middle Districts.
Tea-tree	Melaleuca linearifolia Ord. Myrtaceæ.	Height, 40 to 50 feet ; diameter, 1½ to 2 feet. Shoalhaven, Southern, and Western Districts. The wood is valuable for piles in swampy ground or in water, where it is almost imperishable. Said also to be useful for turning, and makes first class fuel.
Turpentine-tree..	Syncarpia albino ..... (A. Cunningham). Ord. Myrtaceæ.	One of the largest timber trees, attaining at Shoalhaven to 160 feet in height, with a diameter of 5 feet. Used largely as sleepers, and for piles in fresh and salt water, where it is said to be exempt from the destructive depredations of the Cobra or Teredo. As uprights in buildings it is liable to warp when much exposed. It is a difficult wood to burn—a useful property in buildings.

CLASSES 613–620.—*Arboriculture and Forest Products.*

Local Name.	Botanical Name.	Economic Uses.
Ironbark.....	Eucalyptus sideroxylon (A. Cunningham). Ord. Myrtaceæ.	Height, 100 to 150 feet; diameter, 3 to 5 feet. With a straight even bole, and a hard, persistent, rough, furrowed bark. The timber is of the highest reputation for strength and durability, and is very much used for large beams in stores for heavy goods, poles for bullock drays, railway sleepers, girders and piles for bridges, and other purposes where great strength is required, and is one of the best fuel woods of the Colony for domestic uses, and steam engines. Found plentifully about Shoalhaven, the Coast, and Midland districts. The price is 1s. to 1s. 3d. per running foot, in logs, 25 to 50 feet long, squared to 12 inches, and delivered at any of the various wharves along the south-eastern coast, where a large trade in this respect is being carried on,—the usual output from Moruya Heads alone being 1,000 feet per week. Its average weight is 75 to 78 lbs. per cubic foot when green, and it loses 3 to 5 lbs. in drying within the first 2 years.
Black-butt.....	Eucalyptus pilularis Ord. Myrtaceæ.	A tree attaining 100 to 150 feet, with dark-coloured rough bark at the base, smooth, and falling off upwards, and on the branches. Produces excellent timber for house-carpentry or any purpose where strength and durability are the chief requisites. One old stump at Tomerong now measures 11 feet 3 inches diameter, and a prostrate trunk measures 164 feet in length, including the principal branches.
She-oak	Casuarina suberosa... Ord. Casuarinaceæ.	Height, 50 to 60 feet; diameter, 2 to 2½ feet. Generally found throughout the Coast Range. Wood largely used for implement handles, bullock-yokes, malls, &c.
Woollybutt	Eucalyptus longifolia Ord. Myrtaceæ.	Height, 100 to 120 feet; diameter, 4 to 5 feet; used for building generally and for fencing. General in Midland and Southern Districts.
Apple-tree	Angophora intermedia Ord. Myrtaceæ.	In some situations this tree attains a height of 80 to 100 feet, and a diameter of 3 feet. Timber very variable in quality. When free from gum-veins it is much used for naves of wheels, and cut into boards for various purposes. It burns freely.
Peppermint	Eucalyptus sp? ..... Ord. Myrtaceæ.	A variety of "Eucalyptus Piperita" and of somewhat similar quality.
Swamp Mahogany	Eucalyptus robusta.. Ord. Myrtaceæ.	A moderate sized tree, with rough persistent bark. Wood much used for ship-building and wheel-wrights' work. Grows generally in swampy ground, 70 to 80 feet, and 3 or 4 feet diameter.
Bastard Box	Eucalyptus tereticornis. Ord. Myrtaceæ.	A tree attaining a height of 80 to 100 feet, and a diameter of 3 to 4 feet. With a smooth ash-coloured bark, shedding in thin layers. An excellent timber, much used for plough beams, wheel-wrights' work generally, house and ship building.
Black Apple	Eucalyptus sp. ..... Ord. Myrtaceæ.	Height, 70 to 80 feet; diameter, 2 to 3 feet. Grows in brush forests, Coast Districts.

CLASSES 613–620.—*Arboriculture and Forest Products.*

Local Name.	Botanical Name.	Economic Uses.
Maple	Villaresia Moorei ... (F. von Müller). Ord. Olaceæ.	Height, 60 to 70 feet; diameter, 1½ to 2 feet. A most excellent wood, white in colour and durable. Found at Shoalhaven and brush forests, Middle and Northern Districts.
Cabbage-tree	Livistonia Australis Ord. Palmæ.	Height, 100 to 130 feet; diameter, 1 to 1½ feet. Plentiful about Shoalhaven and Midland Districts. The aboriginals are very fond of the growing centre or heart of the tree, which they eat in a raw or cooked state.
Myrtle	Eugenia myrtifolia .. Ord. Myrtaceæ.	Height, 50 to 60 feet; diameter, 1 to 2 feet. Grows in brush forests and Southern Districts. Wood hard and tough. The aboriginals make boomerangs and shields from it.
	Eugenia sp. ? ..... Ord. Myrtaceæ.	Height, 30 to 40 feet; diameter, 12 to 18 inches. Wood yellowish and soft. Found in Shoalhaven and East Coast Districts.
Black Plum	Cargillia Australis ... (R. Brown). Ord. Ebenaceæ.	Height, 30 to 60 feet; diameter, 1 to 1½ feet. Grows in brush forests, Coast Districts. Wood tough and light. Makes excellent whip handles and other light work.
Tamarind	Diploglottis Cunninghamii Ord. Sapindaceæ.	Height, 60 to 80 feet; diameter, 3 feet. Grows in the brush forests, Coast Districts.
Black Wattle ...	Acacia binervata..... Ord. Leguminosæ.	The black and green wattles are chiefly valued for their bark, which is largely used here, and exported for tanning purposes. The price is usually £4 per ton.
Beech	.....	Good for handles and mauls, &c. Grows in Shoalhaven and Coast Districts.
Beech (Variety)	Gmelina sp. ? ..... Ord. Verbenaceæ.	Height, 60 to 80 feet; diameter, 2 feet. Grows in Shoalhaven and South Coast Districts.
White Gum	Eucalyptus sp. ? ..... Ord. Myrtaceæ.	Height, 80 to 90 feet; diameter, 3 to 4 feet. Not in much repute as sawn timber, but makes very good and durable posts for fencing, and first-rate fire-wood.
Rosewood	Synoum glandulosum. Ord. Meliaceæ.	Height, 50 to 60 feet; diameter, 1½ to 2 feet. Shoalhaven and Southern Districts. A very handsome wood. Used for turnery and furniture.
Beef-wood	Stenocarpus salignus (R. Brown). Ord. Proteaceæ.	A moderate sized tree, attaining a height of 80 to 90 feet. The wood is red coloured, beautifully close in the grain, hard, and splits easily. Valuable for the finer kinds of cooper's work, fancy and veneering purposes, and rather scarce. Grows in the Middle and Southern Districts.
Water Myrtle, or Water Gum.	Tristania neriifolia (R. Brown). Ord. Myrtaceæ.	A fine tree, attaining a height in good situations of 80 to 100 feet, and a diameter of 2 feet, with a lofty cylindrical bole. Timber close-grained and elastic. Valuable for boat-building, but requires to be carefully seasoned. Also used for cogs of wheels in machinery. Grows in the South Coast Districts, in rich deep gullies.
Coachwood, or Leather-jacket.	Ceratopetalum apetalum Ord. Saxifrageæ.	A beautiful tree, with long cylindrical stem, wood soft, light, tough, and close-grained, of agreeable fragrance. Good for joiners and cabinet-work, and in much request for coach-building. Grows in the Middle and Southern Coast Districts.

CLASSES 613–620.—*Arboriculture and Forest Products.*

Local Name.	Botanical Name.	Economic Uses.
Sassafras.....	Doryphera sassafras. Ord. Monimiaceæ.	A beautiful tree, with dense bright green glossy foliage, emitting an agreeable aromatic fragrance. The bark contains an agreeable bitter principle, held in much repute as a tonic by many colonists. Wood used for packing cases and lining rooms, in which latter case it is said that no vermin will harbour therein.
Sycamore	Cryptocarya obovata (R. Brown). Ord. Lauraceæ.	A fine tree, attaining a height of 80 to 100 feet, by 2 to 3 feet diameter, producing a soft white and useful wood ; grows in Illawarra, Shoalhaven, and Southern Districts.
White Cedar.....	Melia australasica ... Ord. Meliaceæ.	Height, 30 to 60 feet ; diameter, 2 feet. Wood soft and easily worked ; splits well for shingles ; not in much demand.
Mountain Ash ...	Elæocarpus longifolia (C. Moore). Ord. Tiliaceæ.	A tree of considerable size, wood close grained, elastic, and easily worked ; used by wheelwrights, and for oars. Locality, Southern Districts.
Sally	Acacia falcata ..... Ord. Leguminosæ.	Height, 40 to 50 feet ; diameter, 1½ feet ; used for yokes, &c. Locality, Middle and Southern Districts.
Box	Eucalyptus sp. ? ..... Ord. Myrtaceæ.	Height, 70 to 80 feet ; diameter, 3 to 4 feet. Grows generally on very high ridges ; timber extremely hard, but very durable. Locality, Shoalhaven, &c.
Cork-tree	Genus ? ..... Ord. Laurineæ.	Height, 50 to 60 feet ; diameter 1½ to 2 feet ; useful for general purposes. Locality, Middle and Southern Districts.
Christmas Bush...	Ceratopetalum gummiferum. Ord. Saxifrageæ.	Grows into a handsome tree, 30 to 40 feet high. About Christmas time covered with beautiful flowers, at first almost white, soon changing to pink, and gradually to a deep crimson colour. The flower-laden branches meet with a ready sale in the Sydney markets for Christmas decorations.
Black-eye Brush Turpentine, or Three-veined Myrtle.	Rhodamnia trinervia (Blume). Ord. Myrtaceæ.	A moderate sized tree ; timber close and hard. Locality, Illawarra and South Coast Districts.
Brush Ash	Acronychia Baueri ... (Schott.) Ord. Rutaceæ.	Height, 50 to 60 feet, by 20 to 30 inches diameter. Excellent for mallet and chisel handles.
Plum-tree	Cargillia sp. ? ..... Ord. Ebenaceæ.	Height, 60 to 80 feet ; diameter, 2 to 3 feet. Locality, Coast Districts generally.
Yellow-wood.....	Acronychia sp. ? ..... Ord. Rutaceæ.	Varieties, 41.
Red Ash, or Leather-jacket, &c.	Alphitonia Excelsa .. (Reisset). Ord. Rhamneæ.	Called in various localities leather-jacket, humbug, &c. A fine tree, attaining a height of 50 to 80 feet. Timber hard when well seasoned, and useful for a variety of purposes. Locality, Illawarra and South Coast.
Fig-tree.....	Ficus rubiginosa..... Ord. Urticeæ.	Height, 60 to 70 feet ; diameter, 3½ feet. Wood, tough and easily worked. Locality, Illawarra and South Coast.
Ribbon Gum	Eucalyptus sp. ? ..... Ord. Myrtaceæ.	Height, 130 feet ; diameter, 4 feet. Timber, used in fencing and sometimes for house carpentry. Locality, Southern Coast Districts.

CLASSES 613-620.—*Arboriculture and Forest Products.*

Local Name.	Botanical Name.	Economic Uses.
Cherry-tree.....	Exocarpus cuppresiformis.	A small handsome tree, dense light green foliage forming an agreeable shade underneath. Wood useful for turning and fancy work. Locality, dry slopes, brush forests generally.
Coach-Wood	Cerotopetalum apetalum. Ord. Saxifrageæ.	Height, 80 to 100 feet; diameter, 2 to 3 feet. Wood soft, light, tough, and durable. Locality, Shoalhaven and Ulladulla.
Southern Ash ...	.....	Height, 90 feet by 2½ feet diameter; used for staves and sawn timber generally. Locality, Ulladulla and Southern Coast Districts.
Forest Spotted Gum.	Eucalyptus sp.? ..... Ord. Myrtaceæ.	Used for housework and bridges. Locality, stony ridges, near Ulladulla.
White or Gully Spotted Gum.	Eucalyptus sp.? ..... Ord. Myrtaceæ.	Grows on rich low land or in gullies, districts of Tomerong and Ulladulla. Height, 130 feet; diameter, 4 feet. A first-class timber for ship-building, and equal to iron-bark for dray purposes and timber carriages.
Lilly Pilly	Eugenia Smithii ..... Ord. Myrtaceæ.	Height, 30 to 40 feet; diameter, 1½ to 2 feet. Forms a beautiful shrub when cut back and allowed to make fresh shoots. Its numerous white or pink berries appear very attractive. The wood makes good axe handles. General throughout the Coast District.
Water Gum	Tristania neriifolia... Ord. Myrtaceæ.	A variety of "Water Myrtle" or "Water Gum" ("Tristania Neriifolia") already described. Used for axe and sledge handles. Grows generally and best near running water.
Black Apple	Achras Australis..... (R. Brown). Ord. Sapotaceæ.	A variety of "Black Apple" "Eucalyptus sp." already described. From Port Hacking, of smaller dimensions.
Light Sycamore ..	Panax elegans ..... Ord. Araliaceæ.	A medium sized tree, 40 to 50 feet high, by 1½ to 2 feet diameter; wood white and soft, and splits readily.
Black Ash	Cupania sp.? .... Ord. Sapindaceæ.	Height, 50 feet; diameter, 2 feet. Wood tough and elastic. Locality, Port Hacking.
Wattle	Acacia decurrens ... Ord. Leguminosæ.	A small, rather ornamental tree, 20 to 30 feet high by 1 foot diameter. The bark is sometimes used for tanning.
Native Ash, of Port Hacking.	Eucalyptus Sieberiana (F. Müller). Ord. Myrtaceæ.	Known about Port Hacking as the native ash; height, 60 to 70 feet by 2 to 2½ feet diameter; bark rough; wood dark coloured, and used by wheelwrights for spokes and naves, and for general purposes.
Cork-tree.....	Genus?..... Ord. Laurineæ.	Grows at Port Hacking to 60 feet high, with a straight barrel 45 feet by 18 inches at base, and very gradually tapering upwards. The bark is very rough, irregular, and deeply furrowed and soft to the feel like cork. The wood, particularly about the junction of the main branches, has a fine grain resembling English maple, and makes beautiful furniture.
Honeysuckle	Banksia serrata..... Ord. Proteaceæ.	This is available wood for boat and ship building purposes, not being liable to split with nailing; is used as knees, &c., and would make good furniture. The wood is of a dark red colour, and takes a good polish.

CLASSES 613–620.—*Arboriculture and Forest Products.*

Local Name.	Botanical Name.	Economic Uses.
Black Oak	Casuarina suberosa.. Ord. Casuarineæ.	Height, 40 to 50 feet, by 1½ to 2 feet diameter. Differs from "she oak" in the grain and colour of the wood. Makes first-class shingles and yokes. Found plentifully about Port Hacking and the Southern Districts.
Native Beech.....	Callicoma serratifolia Ord. Saxifrageæ.	Height, 50 to 60 feet; diameter, 1½ to 2 feet. Bark smooth, nearly white, the wood having a reddish tint. Found plentifully about Port Hacking and Southern Districts.
.....	Elæodendron australe Ord. Celastrineæ.	A small tree, 40 feet by 12 inches diameter. Wood white and fine grained. Locality, Port Hacking.
.....	Myrsine variabilis ... (R. Brown). Ord. Myrsineæ.	A medium sized tree, 45 to 50 feet, by 12 to 15 inches diameter. Bark of a light gray colour; wood yellowish, hard, and tough.
Wild Quince	Nephelium semiglaucum (F. von Müller). Ord. Sapindaceæ.	Tree 40 to 50 feet high; diameter, 12 to 15 inches; bark gray coloured on the outside, ⅛ in. thick; wood white and nicely veined by numerous wavy lines radiating from the centre.
Brush Turpentine	Rhodamnia trinervia (Blume). Ord. Myrtaceæ.	A variety of "black-eye," "brush turpentine," or "three-veined myrtle," "Rhodamnia trinervia," already described, with thicker and softer bark, and grows to a larger size about Illawarra and the adjoining districts, attaining 60 to 70 feet, with a diameter of 2 to 2½ feet. Bark rough and furrowed; wood course grained and of a yellowish colour.
	Eupomatia laurina ... (R. Brown). Ord. Anonaceæ.	A small tree, 35 to 40 feet high, with a barrel of 20 feet by 6 to 8 inches diameter. Wood yellowish and coarse grained.
Brush Myrtle ...	Trochocarpa laurina (R. Brown.) Ord. Epacrideæ.	A medium-sized tree, of 40 to 50 feet high by 1 to 1½ feet diameter. Stem generally crooked; bark ⅜ inch thick, of a reddish colour when cut into, but nearly white outside; wood hard and tough.
Blue Ash	Elæodendron australe. Ord. Celastrineæ.	A fine looking tree, 60 to 70 feet high, and 1 to 2 ft. diameter. Bark white and hard, ⅜ inch thick, slightly ribbed on the outside; wood white, easily split, and very valuable for staves, oars, and shingles.
Brush Cherry ...	Eugenia sp.? ..... Ord. Myrtacæ.	A moderate sized tree, 40 to 50 feet high by 12 to 18 inches diameter. Wood yellow, fine grained, and splits well.
White Boree	Elæocarpus cyaneus Ord. Tiliaceæ.	A rather small tree, 30 to 40 feet high, and 12 to 15 inches diameter. Wood dark coloured inside, with white sapwood, and very tough, makes good handles and poles. Found about Port Hacking and the Southern Districts.
Bangallay	Eucalyptus botryoides. Ord. Myrtaceæ.	Good sized tree, 80 to 90 feet high, with a barrel 60 feet by 3 to 3½ diameter. Bark 1½ to 2 inches thick, the outside soft and spongy, falling off annually. The wood has a reddish tinge, does not split well, but of first quality for ship and boat building.
Cypress Pine	Frenela rhomboidea Ord. Coniferæ.	A handsome pyramidal tree, 40 to 50 feet high, and sometimes 2 to 2½ feet diameter. Found in the Midland and Southern Coast Districts. The wood makes very good furniture.

CLASSES 613–620.—*Arboriculture and Forest Products.*

Local Name.	Botanical Name.	Economic Uses.
Light Wood	Schizomeria ovata ... (D. Don). Ord. Saxifrageæ.	50 to 60 feet high by 1 to 2 feet diameter. Bark smooth, with white spots ; the wood, having a reddish or brownish tint, is used for various purposes.
Christmas Bush or Tree.	Ceratopetalum gummiferum. Ord. Saxifrageæ.	A variety of the Christmas bush—already described. Has a very rough bark ; the wood is fine grained, of a reddish colour, and used by turners for ornamental purposes.
Native Pear	Xylomelum pyriforme (Knight). Ord. Proteaceæ.	Grows 30 to 40 feet high by 1 to 1½ feet diameter. A fine dark, beautifully grained wood. Used in making picture frames and other ornaments. The fruit is woody and pear-shaped. Locality, Middle and Southern Districts.
Tough Beech.....	Cyminosma oblongifolia. (A. Cunningham). Ord. Rutaceæ.	30 to 40 feet high by 9 to 12 inches in diameter of stem. Wood white and tough. Found about Port Hacking and adjacent Districts.
Boree	Acacia sp. ? ..... (A. Cunningham). Ord. Leguminosæ.	Generally a small tree, 30 to 40 feet by 12 to 15 inches diameter ; the stem seldom straight, branches pendant, and graceful ; leaves, silvery white. Wood used for stock-whip handles, pipes, &c., and might possibly be used for veneering purposes. Sap-wood light-coloured ; heart-wood, dark and very hard. Plentiful along the Murrumbidgee and other Western Districts.
Kurriyong	Brachychiton populneum (R. Brown). Ord. Sterculiaceæ.	Grows about 30 feet high, valuable for shelter and ornament. Cattle and sheep are fond of the leaves and branches, and in some dry seasons have existed for long periods almost on nothing else ; in parts of Riverina the trees having been cut down as required for that purpose. Ropes and fishing nets are also made from the bark, which peels off in thin layers.
Bull, or Swamp Oak.	Casuarina equisitifolia. Ord. Casuarineæ.	Height, 50 to 60 feet by 1½ to 2 feet diameter. Found plentifully in the Murrumbidgee and other Western and Southern Districts. Wood coarse-grained, but beautifully marked and very tough.
Yarran or Kaarwan, called by some Boree or Myall.	Acacia sp. ? ..... Ord. Leguminosæ.	Height, 20 to 30 feet. Forms an agreeable shade for cattle and sheep in the Western Districts. Wood very hard, beautifully grained, used for stock-whip handles, turnery, and cabinet work.
Murrumbidgee or Lachlan Pine.	Frenela robusta ..... (A. Cunningham). Ord. Coniferæ.	Height, 60 to 70 feet, diameter, 1½ to 2 feet. This wood is used very generally in Southern and Western Districts, as flooring and weather boards, joists, ceilings, tables, and all sorts of furniture. It is very knotty, but takes a good deal, and shows to advantage.
Jiggo or Emu Tree, native name, Béhreging.	Heterodendron oleæfolium. Ord. Sapindaceæ.	A rather stunted looking tree, with very thick coarse, deeply irregularly indented hard bark, and scraggy looking branches ; very brittle, and leaving numerous dry berries or seeds, of which emus are said to be very fond. Wood light-coloured with black heart ; very hard and heavy ; used in making rollers and rolling-pins, &c.

CLASSES 613-620.—*Arboriculture and Forest Products.*

Local Name.	Botanical Name.	Economic Uses.
Kooba or Native Willow.	Acacia salicina ..... Ord. Leguminosæ.	This wood is also two-coloured, very hard, and heavy. The aboriginals make boomerangs from this wood, and tables, chairs, and other furniture are also made from it.
Kurrawang or Kaariwan.	Acacia doratoxylon (A. Cunningham.) Ord. Leguminosæ.	A variety of hickory wood of a greenish-white colour, hard, tough, and heavy. The aboriginals make boomerangs and spears from it. Furniture is also made from the wood, and cattle and sheep are fond of the branches and leaves. Found plentifully in Murrumbidgee and other Western Districts.
Red Gum	Eucalyptus ..... rostrata (Schleht). Ord. Myrtaceæ.	Height, 80 to 120 feet. Plentiful in the Southern districts. About Wagga Wagga this timber is extensively used as railway sleepers, and may be used for general purposes.
Dark Pine	Frenela glauca ..... Ord. Coniferæ.	Height, 50 to 60 feet; diameter, 2 to 2½ feet. Wood useful for furniture, building, and various purposes.
Light Pine.....	Frenela cupressiformis.	Height, 50 to 60 feet, diameter, 2 to 2½ feet. Wood similar in quality and uses to "Dark Pine," and both are found side by side in the Murrumbidgee.
Yellow Box	Eucalyptus melliodora (A. Cunningham.) Ord. Myrtaceæ.	Height, 60 to 80 feet, diameter, 2 to 3 feet; a moderate sized tree with a smooth bark of a pale colour, scaling off in flakes on the upper part of the tree. Timber hard, tough, and durable. Localities—Murrumbidgee, New England, and Western Districts.
White Box.....	Eucalyptus, sp.?..... Ord. Myrtaceæ.	Height, 80 to 90 feet; diameter, 3 to 3½ feet. From the same locality as "Yellow Box" and the timber is similar, except in colour.
Blackwood, or Black Sally.	Acacia melanoxylon (R. Brown). Ord. Leguminosæ.	A good sized tree, attaining a height of 60 to 80 feet and 2 feet diameter. Wood very dark coloured, except about 1 inch depth of sap wood, which is almost white. Plentiful about Wingecarribee and Southern Districts, and used for fencing, bridges, and various purposes. A most valuable timber for furniture, &c.
Prickly Fig	Elæocarpus holopetalus (F. von Müller). Ord. Tilicaeæ.	A medium sized tree, 50 to 70 feet high, and 15 to 18 inches diameter. Bark grey and smooth, wood very white and close-grained. Locality, Wingecarribee and adjoining districts.
	Quintinia Sieberi ... Ord. Saxifrageæ.	A fine looking tree, 60 to 70 feet high, and 2½ to 3 feet diameter. The seeds of this tree germinate freely on the stems of tree ferns, sometimes 10 or 15 feet from the ground. The roots descend, enter the earth, enlarge in thickness, envelope the stem of the fern (usually Dicksonia antartica), and ultimately squeeze it to death, fixing itself firmly in the earth, and becoming a large tree. The timber is heavy and close-grained, of a yellowish shade, and seems of good quality. The bark is rough, pale-coloured on the outside, and very brittle. Locality, Wingecarribee and neighbourhood.

CLASSES 613–620.—*Arboriculture and Forest Products.*

Local Name.	Botanical Name.	Economic Uses.
	Pittosporum undulatum. Ord. Pittosporeæ.	A moderate sized tree, 40 to 50 feet high, and 10 to 16 inches diameter. Timber close-grained, very white, and valuable for turner's work and wood engraving. Locality, Wingecarribee and Southern Districts.
White Sally	Eucryphia Moorei (F. von Müller). Ord. Saxifrageæ.	A moderate sized tree, 50 to 60 feet high, 2½ to 3 feet diameter. Produces numerous shoots and suckers about the base, all of which grow up very straight and slender. The timber is tough and durable. Locality, Wingecarribee and Coast Range.
Wine-berry, or Feather Wood (aboriginal name Yaralla.)	Polyosma Cunninghamii. Ord. Saxifrageæ.	Known about Wingecarribee as wine-berry or feather wood, and the aboriginal name is Yaralla. Height, 30 to 40 feet, diameter, 9 inches to 15 inches. Wood, yellow, tough, and very hard.
Axe-breaker	Notolea longifolia Ord. Jasmineæ.	A small tree, 20 to 30 feet, by 9 to 15 inches diameter. Locally known as axe-breaker, on account of the remarkable hardness of the wood. Locality, Wingecarribee.
	Acronychia lævis ... Ord. Rutaceæ.	A good-sized tree, 50 to 80 feet high, with a round straight barrel, 18 inches to 2 feet diameter at base ; bark pale coloured ; wood white and durable. Locality, Wingecarribee.
Valley Tree Fern	Dicksonia antartica Ord. Filices.	Common in rich valleys, Illawarra, Shoalhaven, the Clarence, and other districts. Height, 30 to 50 feet, with a diameter of 1 to 3 feet.
Lawyer Vine	Flagellaria Indica ... Ord. Liliaceæ.	A tall, slender, climbing palm, with numerous hooked prickles on the under surface of the leaves. Locality, Clarence and Richmond Districts.
Messmate	Eucalyptus amygdalina. Ord. Myrtaceæ.	A large tree, attaining a height of 150 feet, and 4 to 5 feet diameter, with a persistent fibrous bark, and one of the best hardwood timbers used for house carpentry, &c.
Stringy-bark	Eucalyptus obliqua (Harit). Ord. Myrtaceæ.	Height, 100 to 150 feet, by 4 to 6 feet diameter. The timber of this tree is used for nearly every purpose, such as building, fencing, &c. Locality, general throughout the Colony.
Hickory	Acacia melanoxylon (R. Brown). Ord. Leguminosæ.	Height, 50 to 60 feet ; diameter, 1½ to 2 feet. Locality, Adelong and adjoining districts. The wood has a close grain, and is used by wheelwrights and for bullock yokes, &c.
Bastard Box	Eucalyptus polyanthemus. Ord. Myrtaceæ.	Height, 60 to 70 feet ; diameter, 2 to 3 feet. The timber is not much used, excepting for firewood, on account of its great hardness, but makes good felloes and naves of wheels, &c.
Flooded Gum, or Grey Gum.	Eucalyptus saligna.. Ord. Myrtaceæ.	Usually a large tree of 80 to 120 feet, with a diameter of 3 to 4 feet. Abounds on the low-lying lands of the Myall District, and general throughout the Colony. The timber is in high repute for house and ship building and has proved very durable in both.

CLASSES 613–620.—*Arboriculture and Forest Products.*

Local Name.	Botanical Name.	Economic Uses.
Tallow Wood.....	Eucalyptus microcorys (F. von Müller). Ord. Myrtaceæ.	Height, 100 to 120 feet; diameter, 6 to 8 feet. The very large trees are, however, generally hollow; but as a rule those under 3½ feet are sound. Its local name is derived from the greasy nature of the grain of the wood. One of the best timbers for flooring and other building purposes, as it shrinks but little in drying. Found plentifully on the ridges and mountain slopes of the Myall District, Bullahdeelah.
Slatey Gum	Eucalyptus tereticornis. Ord. Myrtaceæ.	Height, 90 to 100 feet; diameter, 3 to 4 feet. The timber is used for plough-beams, poles, shafts, &c., but not found durable in buildings. A variety of "Eucalyptus tereticornis" from the Hunter district already described.
Forest Oak (non-fruiting variety).	Casuarina torulosa... Ord. Casuarinaceæ.	Height, 50 to 60 feet; diameter, 1½ to 2 feet. Produces shingles of a very superior description. Myall and adjacent districts.
Brush or Bastard Box.	Tristania conferta (R. Brown). Ord. Myrtaceæ.	Height. 80 to 100 feet; diameter, 4 to 5 feet. A very valuable timber on account of its great durability and immunity from white ants. This timber, as ribs of vessels, has been found perfectly sound at the end of 30 years. Found generally within the Northern Coast Range.
Brush Cherry ...	Eugenia myrtifolia... Ord. Myrtaceæ.	Height, 40 to 50 feet; diameter, 12 to 20 inches. A variety of myrtle "Eugenia myrtifolia" already described, from the Myall District. Bears an edible acid fruit.
Red Ash or Leather Jacket.	Alphitonia excelsa ... Ord. Rhamneæ.	Height, 60 to 80 feet; diameter, 2 to 2½ feet. A variety of "Alphitonia excelsa" already described, from Bullahdeelah.
Ironwood or Byong.	Tarrietia argyrodendron. (F. von Müller). Ord. Sterculiaceæ.	Height, 50 to 60 feet; diameter, 2 to 2½ feet. Manning and Macleay Districts, generally near creeks. Useful for piles in water.
Stave-wood.....	Tarrietia actinodendron. Ord. Sterculiaceæ.	As the name indicates, makes first-rate staves. Height, 60 to 90 feet; diameter, 2 to 2½ feet. Bullahdeelah (Myall River) and adjoining districts.
Water Gum	Tristania laurina..... (R. Brown).	Height, 50 to 60 feet; diameter, 20 inches. A tough and durable wood, and generally sound to the centre. From the Myall Districts.
Red Cedar	Cedrela australis..... (F. von Müller). Ord. Meliaceæ.	Height, 100 to 150 feet; diameter 4 to 8 feet. This timber is the best known and perhaps the most valuable in the Colony of New South Wales, is easily worked, and in dry situations very durable. Some trees have been cut on the Richmond yielding 30,000 feet of saleable timber. Locality, Illawarra and northward to the Tweed River.
Beech or White Beech.	Gmelina Leichhardtii (F. von Müller). Ord. Verbenaceæ.	Height, 70 to 80 feet; diameter, 2 to 3 feet. The wood is much prized for the decks of vessels, flooring of verandahs, &c. Of fine white silvery appearance and does not shrink after moderate drying. Locality, Middle and Northern Districts.
	Achras australis ..... (R. Brown). Ord. Sapotaceæ.	A variety of the black apple or plum from West Kempsey, where the wood is used by turners and carvers.

CLASSES 613–620.—*Arboriculture and Forest Products.*

Local Name.	Botanical Name.	Economic Uses.
Tulip Wood	Aphananthe philippenensis. Ord. Urticeæ.	From West Kempsey, under the name of tulip-wood. Used for linings, ceilings, &c.
	Acacia sp. ? ..... Ord. Leguminoseæ.	A variety of hickory found on the Richmond and North Coast district, 40 to 50 feet high by 1½ to 2 feet diameter. Handles for agricultural tools and felloes for buggy wheels, &c.
Lignum Vitæ.....	Acacia sp. ? ..... Ord. Leguminosæ.	Height, 40 to 50 feet; diameter, 15 to 20 inches. Locality, Macleay River. Valuable for making sheaves for pulley blocks, and stone-cutters' mallets, &c.
Red Cedar	Cedrela australis..... (F. von Müller). Ord. Meliaceæ.	A small specimen from West Kempsey. Found generally within the Coast Range, sometimes attaining 150 feet in height by 6 to 12 feet diameter.
	Eucalyptus sp. ? ..... Ord. Myrtaceæ.	A small specimen of flooded gum from the Macleay District, where it is used for boat and ship planking. This timber when full grown is one of the lightest and most valuable hardwoods for general utility in the Colony.
	Eucalyptus sp. ? ..... Ord. Myrtaceæ.	A variety of white iron-bark from West Kempsey. Used as girders for bridges and keels for ships.
Tallow-wood	Eucalyptus microcorys. (F. von Müller.) Ord. Myrtaceæ.	Also, from the neighbourhood of West Kempsey.
Forest Oak.....	Casuarina sp. ?..... Ord. Casuarineæ.	Height, 60 to 80 feet; diameter, 18 to 24 inches. Found generally throughout the Colony. Used for house shingling and other purposes. Takes a good polish.
	Tristania conferta ... (R. Brown.) Ord. Myrtaceæ.	A variety of brush or bastard box "Tristania Conferta" already described, from the Macleay River.
Native Cherry ...	Eugenia sp. ? ..... Ord. Myrtaceæ.	Height, 50 to 60 feet; diameter, 1½ to 2 feet. Locality, Northern brush forests.
		From Port Macquarie. Height, 30 to 60 feet; diameter, 16 to 18 inches.
Beech	Gmelina Leichhardtii (F. von Müller.) Ord. Verbenaceæ.	Height, 80 to 90 feet; diameter, 20 to 24 inches. Locality, county of Macquarie.
Beef-wood	..... Ord. Verbenaceæ.	Height, 70 to 80 feet; diameter, 3 to 4 feet. Locality, brush forest, Richmond River.
Cypress Pine	Frenela rhomboidea Ord. Coniferæ.	Height, 50 to 60 feet; diameter, 18 to 20 inches. Locality, county of Macquarie.
Lignum Vitæ.....	Eugenia sp. ? ..... Ord. Myrtaceæ.	Height, 40 to 50 feet; diameter, 1½ to 2 feet. Locality, Clarence and Richmond Districts.
Pencil Cedar	Podocarpus elata..... (R. Brown.) Ord. Coniferæ.	Height, 80 feet; diameter, 3 feet. Locality, brush forests, Northern Districts.
Rosewood	Synoum glandulosum Ord. Meliaceæ.	Height, 80 to 100 feet; diameter, 3 to 4 feet. Locality, Northern brush forests.
Native Apple.....	Achras sp. ? ..... Sapotaceæ.	Height, 70 to 80 feet; diameter, 2 to 3 feet. Locality, Northern brush forests.
Maiden's Blush or Rosewood.	Dysoxylon sp. ? ..... Ord. Meliaceæ.	Height, 80 to 90 feet; diameter, 2 feet. Locality, Nambuccra.
Yellow Cedar.	Rhus rhodanthema... (F. von Müller.) Ord. Anacardiaceæ.	Height, 70 to 80 feet; diameter, 2 to 3 feet. Locality, Northern Districts.

CLASSES 613–620.—*Arboriculture and Forest Products.*

Local Name.	Botanical Name.	Economic Uses.
Mountain Ash ...	Evodia sp.? ..... Ord. Rutaceæ.	Height, 70 to 80 feet; diameter, 2 to 3 feet. Locality, brush forests, Northern Districts.
Sally Wattle	Acacia sp. ? ..... Ord. Leguminosæ.	Height, 50 to 60 feet; diameter, 2 to 3 feet. Locality, brush forests, Northern Districts.
Hickory	Acacia sp. ? ..... Ord. Leguminosæ.	Height, 50 to 60 feet; diameter, 20 to 24 inches. Locality, Nambuccra District.
		A variety of hickory; 40 to 50 feet high; diameter, 1 to 1½ foot. Locality, Northern brush forests.
Sassafras.....	Doryphora sassafras. Ord. Monimiaceæ.	Height, 70 to 80 feet; diameter, 3 to 4 feet. Locality, Northern Districts.
Stinking-tree.....	Genus ?.....	Height, 70 to 80 feet; diameter, 3 to 4 feet. Locality, Richmond and Northern Districts.
Native Pine	Frenela sp. ?..... Ord. Coniferæ.	Height, 90 feet; diameter, 4 feet. Locality, Northern districts generally.
Turnip-wood.....	Harpullia sp. ? ..... Ord. Sapindaceæ	Height, 80 to 100 feet; diameter, 3 to 4 feet. Locality, middle and Northern Districts.
Iron-wood	Tarrietia actinodendron, (F. von Müller.) Ord. Sterculiaceæ	Height, 40 to 50 feet; by diameter of 15 to 18 inches. Locality, Nambuccra and Northern Districts.
Yellow-wood.....	Genus ?.....	Height, 60 to 80 feet; diameter, 2 to 2½ feet. Locality, Upper Nambuccra.
Butter-wood	Eugenia sp. ?..... Ord. Myrtaceæ,	Height, 70 to 80 feet; diameter, 3 to 4 feet. Locality, Northern Districts.
Swamp Oak	Casuarina sp. ?..... Ord. Casuarineæ.	Height, 50 to 60 feet; diameter, 2 to 2½ feet. Locality, Middle and Northern Districts.
Tea-tree	Melaleuca viridiflora. Ord. Myrtaceæ.	Height, 50 to 60 feet; diameter 2 to 2½ feet. Locality, Middle and Northern Districts.
No name.....	Pittosporum undulatum Ord. Pittosporeæ.	Height, 30 to 40 feet; diameter, 2 to 15 inches. Locality, Upper Macleay.
Iron-wood	Tarrietia argyrodendron. (F. von Müller.) Ord. Sterculiaceæ.	Height, 80 to 100 feet; diameter, 3 to 4 feet. Locality, Northern Districts.
Maiden's Blush...	Sloanea..... Ord. Tiliaceæ.	Height, 70 to 80 feet; diameter, 2 to 3 feet. Locality, Macleay and Northern Districts.
Tipi Lilly	Genus ?.....	Height, 60 to 80 feet; diameter, 2 to 3 feet. Locality, Macleay River and Northern Districts.
	Alphitonia excelsa ... Ord. Rhamneæ.	Height, 90 to 100 feet; diameter, 3½ to 4 feet. Locality, Camden Haven.
Tarkoo	Genus ?.....	Height, 60 to 70 feet; diameter, 2 to 2½ feet. Locality, Camden Haven.
		Height, 60 to 70 feet; diameter, 1½ to 2 feet. Locality, Camden Haven.
Silvery Oak	Stenocarpus salignus (R. Brown.) Ord. Proteaceæ.	Height, 60 to 80 feet; diameter, 2 to 3 feet. Locality, Camden Haven. The Judges consider this a most valuable timber for commercial purposes.
True Rose-wood..	Synoum glandulosum Ord. Meliaceæ.	Height, 60 to 80 feet; diameter, 3 to 4 feet. Locality, Middle and Northern brush forests.
Corkwood	Weinmannia paniculosa. (F. von Müller.) Ord. Saxifrageæ.	Height, 50 to 60 feet; diameter, 1 to 2 feet. Locality, brush forests generally.
Black-heart Myrtle.	Myrtus sp. ?..... Ord. Myrtaceæ.	Height, 50 to 60 feet; diameter, 2 to 2½ feet. Locality, Camden Haven and Macleay Districts.

CLASSES 613–620.—*Arboriculture and Forest Products.*

Local Name.	Botanical Name.	Economic Uses.
	Nephelium leocarpium (F. von Müller). Ord. Sapindaceæ.	Height, 60 to 70 feet; diameter, 12 to 15 inches. Locality, Camden Haven.
Ash (var.)	Dysoxylon sp. ? ..... Ord. Meliaceæ.	Height, 60 to 70 feet; diameter, 2 to 3 feet. Camden and Macleay Districts.
White-bark	Elæocarpus cyaneus. Ord. Tiliaceæ.	Height, 60 to 80 feet; diameter, 2 to 2½ feet. Locality, Camden Haven.
White Cherry ...	Schizomeria ovata ... (D. Don). Ord. Saxifrageæ.	Height, 50 to 60 feet; diameter, 2 to 2½ feet. Locality, Manning and Camden Haven.
Scrub Silky Oak..	Villaresia Moorei ... (F. von Müller). Ord. Olacineæ.	Height, 60 to 70 feet; diameter, 1½ to 2 feet. Locality, Camden Haven and Northern District.
True Sassafras ...	Doryphora Sassafras. Ord. Monimiaceæ.	Height, 60 to 80 feet; diameter, 3 to 4 feet. Locality, brush forests generally.
Pine (var.)	Frenela sp. ?..... Ord. Coniferæ.	Height, 40 to 50 feet; diameter, 20 to 24 inches. Locality, Camden Haven.
Scrub Pencil Cedar.	Sloanea Woollsii..... (F. von Müller). Ord. Tiliaceæ.	Height, 50 to 60 feet; diameter, 1½ to 2 feet. Locality, Macleay and Northern Districts.
Coach-wood or Light-wood.	Ceratopetalum apetalum. Ord. Saxifrageæ.	Height, 140 feet; diameter, 2½ feet. Locality, Macleay and other Northern Districts.
Flindosy Beech...	Genus?	Height, 70 to 80 feet; diameter, 2½ to 3 feet. Locality, Macleay and Camden Haven.
Prickly Tea-tree..	Melaleuca styphelioides. Ord. Myrtaceæ.	Height, 40 to 50 feet; diameter, 1 to 1½ feet. Locality, Northern brush forests.
Scrub Timber ...	Myoperum tenuifolium (Brown). Ord. Myoporinæ.	Height, 30 to 40 feet; diameter, 15 to 18 inches. Locality, Camden Haven.
Mangrove	Avicennia officinalis Ord. Verbenaceæ.	Height, 30 to 40 feet; diameter, 1½ to 2 feet. Locality, salt estuaries, Northern District.
True Swamp Oak	Casuarina equisitifolia Ord. Casuarinæ.	A variety of bull or swamp oak, already described. Height, 50 to 60 feet; diameter, 2 to 3 feet. Locality, Macleay and Northern Districts.
Myall	Acacia homalophylla (A. Cunningham). Ord. Leguminosæ.	Height, 50 to 60 feet; diameter, 1 to 2 feet. Locality, Western and Northern Districts. A dark close-grained wood, well adapted for cabinet-making purposes.
Rosewood	Eremophila sp. ?..... Ord. Myoporinæ.	Height, 40 to 50 feet; diameter, 1½ to 2 feet. Locality, Western Districts. A beautiful wood, dark, hard, and close-grained, and when properly seasoned, is capable of being worked into the best kinds of furniture.
	Casuarina equisitifolia Ord. Casuarinæ.	A variety of forest oak from the Western Districts. Height, 50 to 60 feet by 2 to 3 feet diameter.
	Acacia sp. ? ..... Ord. Leguminosæ.	A variety of boree from Forbes. This tree exudes a fine amber-coloured gum, which by a little preparation is equal to the best liquid gum for office purposes. Plentiful in the Lachlan District.
Currawang.....	Acacia doratoxylon.. (A. Cunningham). Ord. Leguminosæ.	From the county of Forbes; said to be the toughest timber in the Western bush. It can be bent into all kinds of curious shapes, and is much in request for shafts of vehicles.

CLASSES 613–620.—*Arboriculture and Forest Products.*

Local Name.	Botanical Name.	Economic Uses.
Balar	Casuarina sp. ?..... Ord. Casuarinæ.	A variety of oak from the Lachlan District. Height, 30 to 40 feet; diameter, 1½ to 2 feet. Used by wheelwrights, and for fencing.
Dogwood	Geijera parviflora ... Ord. Rutaceæ.	Height, 20 to 30 feet; diameter, 1 to 1½ feet. A hard light-coloured wood, and very close in the grain. Locality, South and Western Districts.
Red Gum	Eucalyptus rostrata.. Ord. Myrtaceæ.	From the county of Forbes. Largely used for rafters, joists, &c., girders in buildings, and specially adapted for jetties and bridges where great strength is required.
	Acacia lunata ..... Ord. Leguminosæ.	Height, 20 to 30 feet; diameter, 1 to 1½ feet. Found near Sydney, and in adjacent districts.
	Bradleia australis ... Ord. Euphorbiaceæ.	From the Sydney Botanical Gardens.
Honeysuckle	Banksia integrifolia.. Ord. Proteaceæ.	Grown in the Sydney Botanic Gardens. Found along the coast district generally. Height, 40 to 60 feet; diameter, 2 to feet. Used for knees of vessels, &c.
Native Plum, or Damson.	Podocarpus spinulosa (Brown). Ord. Coniferæ.	Grown in the Sydney Botanic Gardens. Height, 40 to 50 feet; diameter, 18 to 24 inches.
Swamp Mahogany	Eucalyptus robusta.. Ord. Myrtaceæ.	From the Sydney Botanic Gardens.
Camphor-tree ...	Laurus camphora ... Ord. Laurineæ.	Grown in the Sydney Botanic Gardens, showing a growth of twenty years. Height, in Japan, 50 to 60 feet; diameter, 4 to 5 feet.
	Cupania pseudorhus Ord. Sapindaceæ.	From the Sydney Botanic Gardens. Usual height, 50 to 60 feet; diameter, 2 to 2½ feet. Found in the Northern Districts.
White Box.....	Tristania conferta ... (R. Brown). Ord. Myrtaceæ.	From the Sydney Botanic Gardens. Height, 60 to 70 feet; diameter, 3 feet. General throughout the Colony.
Silky Oak	Grevillea robusta ... (A. Cunningham). Ord. Proteaceæ.	From Sydney Botanic Gardens. A good sized tree, 70 to 80 feet; diameter, 3 to 4 feet. Found within the coast range, Northern Districts. Highly prized for the finer kinds of coopers' work.
Colonial or Moreton Bay Pine.	Araucaria Cunninghamii. Ord. Coniferæ.	This specimen was grown in the Sydney Botanic Gardens, and is found in the Northern Districts 90 to 120 feet in height, and 3 to 4 feet in diameter.
Grey or White Gum.	Eucalyptus sp. ? ..... Ord. Myrtaceæ.	Height, 50 to 60 feet, by 2 to 2½ feet diameter. From Sydney Botanic Gardens.
	Hibiscus Patersoni... Ord. Malvaceæ.	Grown in Sydney Botanic Gardens, and found in brush forests in the Northern Districts. Height, 40 to 50 feet; diameter, 1½ to 2 feet.
True or Negro-head Beech.	Fagus Carronii..... (C. Moore). Ord. Cupuliferæ.	From the Black Forest, Dividing Range, Armidale District. Height, 80 to 100 feet; diameter, 3 to 4 feet.
Leopard Wood ...	Genus?	From the salt-bush country, between the Lachlan and Darling Rivers.
Sandal Wood.....	Santalum sp. ? ..... Ord. Santalaceæ.	From the salt-bush country.
Sandal Wood.....	Santalum sp. ?..... Ord. Santalaceæ.	A variety of the last.
River Tea-tree ...	Calistemon salignus . Ord. Myrtaceæ.	Height, 50 to 60 feet; diameter, 3 to 4 feet. Chiefly in swampy districts.

CLASSES 613-620.—*Arboriculture and Forest Products.*

Local Name.	Botanical Name.	Economic Uses.
Bloodwood.....	Eucalyptus eximea... Ord. Myrtaceæ.	Height, 80 to 100 feet; diameter, 4 to 5 feet. Found within the Coast Range generally. A most valuable timber for the formation of waterworks; instance known in which it has been 35 years under water and no sign of decay visible.
Blue or Grey Gum	Eucalyptus teritecornis. Ord. Myrtaceæ.	From the Clarence District. Is considered to be one of the finest timbers for ship building, and is much used for wheelwrights work. Timber hard and durable; for fencing and girders quite equal to iron-bark; one of the most valuable timbers in the Colony.
Flooded Gum. ...	Eucalyptus rostrata ? Ord. Myrtaceæ.	A tall tree with greyish white bark, smooth, and separating in thin layers. An excellent timber for ship building, house carpentry, and many other purposes.
Rough Iron-bark.	Eucalyptus paniculata. Ord. Myrtaceæ.	A tall tree attaining a height of 150 ft., with a diameter of 3 ft. It has a straight even trunk with rough, hard, persistent, furrowed bark. A most valuable timber, and being very tough, it is held in high esteem for large beams in buildings, stores for heavy goods, poles for bullock drays, railway sleepers, and other purposes where great strength is required.
White Iron-bark..	Eucalyptus crebra ... (F. von Müller). Ord. Myrtaceæ.	A tree of considerable size, producing an excellent timber which is hard, durable, and tough.
	Eucalyptus bicolor (A. Cunningham). Ord. Myrtaceæ.	A fair sized tree, timber redder and closer than the generality of iron-bark, and highly valued for many other purposes.
Tallow-wood	Eucalyptus microcorys. (F. von Müller). Ord. Myrtaceæ.	From the Clarence River, general throughout the Northern Districts, and largely used for building purposes. A most valuable timber for flooring and framing purposes.
River Oak or Swamp Oak.	Cusuarina quadrivalvis. Ord. Casuarineæ.	A moderate sized tree, usually confined to river banks. Timber used for shingles and staves.
Forest Oak.....	Casuarina tenuissima Ord. Casuarineæ.	A moderate sized tree, 60 to 80 ft. high, trunk 2 ft. in diameter. Timber used for shingles and sometimes for cabinet work. General throughout the colony
Water Gum	Tristania laurina. (R. Brown). Ord. Myrtaceæ.	From the Clarence River. Height, 90 to 100 ft.; diameter, 2 to 3 ft. Timber close-grained and elastic. Requires to be carefully seasoned before using. Valuable for boat-building, cogs of machinery wheels, &c.
Grey Box	Eucalyptus saligna. Ord. Myrtaceæ.	From the Richmond River. Height 70 to 80 ft.; diameter, 2 to 4 ft.
Apple-tree	Angophora subvelutina (F. von Müller). Ord. Myrtaceæ	From the Clarence district, found pretty generally throughout the Colony, and chiefly used by wheelwrights.
	Alphitonia excelsa ... Ord. Rhamneæ.	Height, 70 to 80 feet; diameter, 12 to 15 inches. From the Clarence District.
	Cupania sp. ? ..... Ord. Sapindaceæ.	From the Clarence River. Height, 70 to 80 feet; diameter, 14 to 16 inches.
Calool	Sterculia quadrifolia (R. Brown). Ord. Sterculiaceæ.	Known about the Richmond as calool. Height, 60 to 70 feet; diameter, 20 to 24 inches.

CLASSES 613–620.—*Arboriculture and Forest Products.*

Local Name.	Botanical Name.	Economic Uses.
Tchubbum-Tchubbum.	Capparis sp. ? ..... Ord. Sapindaceæ.	Locally known as Tchubbum-Tchubbum. It is found only in thick brushwood within the coast range; the wood is prettily marked. Height, 50 to 60 feet; diameter, 9 to 12 inches.
Meēbūm-Meēbūm	Harpullia sp. ?..... Ord. Sapindaceæ.	Height, 60 to 70 feet; diameter, 12 to 15 inches. Found on the Clarence and Richmond Rivers; the wood has a hard, white, and free grain.
Bōmmĕră-Bōmmĕră.	Helicia glabrifolia.... (F. von Müller) Ord. Proteaceæ.	Height, 130 feet; diameter, 12 to 16 inches. Locality, Clarence and Richmond Districts; resembles silky oak in the grain.
Bōōndĕrōō	Cupania pseudorhus. Ord. Sapindaceæ.	Height, 90 to 100 feet; diameter, 1½ to 2 feet. Locality, Clarence and Richmond Rivers. The aboriginals use the pounded bark to stupify fish in waterholes; hard, pink, close in the grain, and handsome.
Diamond-leaved Laurel, or by the aboriginals Būrrawīngēē.	Pittosporum rhombifolium. (A. Cunningham) Ord. Pittosporaceæ.	The wood has a hard yellowish and fine grain. Height, 70 to 80 feet, by 12 to 15 inches diameter.
Gig-gi	Genus?	A very hard, white, and close grained wood. Height, 80 to 90 feet; diameter, 15 to 18 inches.
Cūrrăyēlbūm.....	Siphonodon australe Ord. Celastrineæ.	Height, 60 to 70 feet; diameter, 15 to 18 inches. Wood hard and yellowish colour. Clarence and Richmond Rivers.
Fchōōnbĕrrēe.....	Panax elegans..... (F. von Müller). Ord. Araliaceæ.	A variety of No. 55; from the Clarence River. The wood has a soft, light, and beautiful grain.
Fchōōciŭm-Fchōōcŭm.	Atherosperma micranthum. Ord. Monimiaceæ.	Height, 90 to 100 feet; diameter, 1½ to 2 feet. Locality, Clarence and Richmond Districts. A handsome tree-timber, yellowish, and close-grained; takes a fine polish and is easily worked.
	Ficus opposita..... Ord. Urticeæ.	A variety of fig-tree. Height, 50 to 60 feet; diameter, 12 inches. Wood soft. Locality, Northern District.
Chindera	Cupania sp. ? ..... Ord. Sapindaceæ.	Height, 120 feet; diameter, 15 to 18 inches. Wood very hard and white. Clarence River.
Burgen-Burgen ...	.....	Height, 80 to 90 feet; diameter, 1½ feet. Clarence District. Wood white and soft.
Goōnyūm-Goōnyŭm.	Genus?	Height, 120 feet; diameter, 2 to 2½ feet. Locality, Clarence District. Wood soft and free; becomes red when cut.
Jīmboway	Myrtus sp. ?..... Ord. Myrtaceæ.	Height, 70 to 80 feet; diameter, 18 to 20 inches; locality, Clarence and Richmond Rivers. A good hard timber, and lasts well in the ground.
Maīl	Aphananthe philippenensis. Ord. Urticeæ.	A hard, close-grained wood, good for turning. Height, 80 to 90 feet; diameter, 15 to 18 inches; locality, Clarence and Richmond Districts.
Stŭnga	Sterculia discolor .... (F. von Müller.) Ord. Sterculiaceæ.	Height, 80 to 90 feet; diameter, 2 to 2½ feet; locality, Clarence and Richmond Districts. Timber white and soft when cut, but becomes hard in drying. Makes good shingles.
Warrel	Croton phebalioides.. (F. von Müeller.) Ord. Sterculiaceæ.	Height, 70 to 75 feet; diameter, 12 to 15 inches; locality, Clarence and Richmond Districts. The timber has a brown, soft, open grain.

CLASSES 613–620.—*Arboriculture and Forest Products.*

Local Name.	Botanical Name.	Economic Uses.
Maīl	Pseudomorus Brunoniana. Ord. Urticeæ.	Height, 70 to 80 feet; diameter, 15 to 18 inches; locality, Clarence and Richmond Districts. Timber hard and close-grained.
Boyung or Iron-wood.	Tarrietia argyrodendron. Ord. Sterculiaceæ.	Height, 100 feet; diameter, 2 to 3 feet; locality, Northern Districts. Timber very hard; used for indoor purposes.
Red Boyung	Tarrietia carronii.... (C. Moore.) Ord. Sterculiaceæ.	Height, 100 to 150 feet; diameter, 2 to 4 feet; locality, brush forests generally.
Ingmunyohn	Cupania sp. ? ..... Ord. Sapindaceæ.	Height, 40 to 50 feet; diameter, 17 to 20 inches; locality, Clarence and Richmond Districts. This timber is often passed off for cedar when required. When fresh cut it smells of onions, and is called by some bog-onion.
Tara.....	Cupania sp. ? ..... Ord. Sapindaceæ.	Height, 20 to 30 feet; diameter, 10 to 12 inches; locality, Clarence and Richmond Districts. Wood white and hard.
Kindal Kindal, or Nut-tree.	Macadamia ternifolia. (F. von Müller.) Ord. Proteaceæ.	Height, 40 to 50 feet; diameter, 1 foot; locality, Clarence and Richmond Districts. Wood red, and close grain. The seeds are edible.
Small-leaved Nut-tree.	Helicia ..... (F. von Müller.) Ord. Proteaceæ.	Height, 40 to 50 feet; diameter, 12 to 15 inches; locality, Clarence and Richmond Districts. Wood similar to that previously mentioned.
Newcum, or Stavewood.	Cryptocarya sp. ? ...	Height, 50 to 60 feet; diameter, 1 to 2 feet; locality, Clarence and Richmond Districts. Timber splits well, and is valued for staves.
Wobbul-wobbul..	Pentaceras australis Ord. Rutaceæ.	Height, 30 to 40 feet; diameter, 10 to 12 inches; locality, Clarence and Richmond Districts.
	Mallotus philippinensis. Ord. Euphorbiaceæ.	Woods, white and soft; free grain. Height, 70 to 80 feet; diameter, 10 to 12 inches; locality, Richmond River.
Pine of Commerce, or Colonial Pine.	Araucaria Cunninghamii. Ord. Coniferæ.	Height, 180 feet; diameter, 2½ to 3 feet. Grows to great perfection on the Clarence River.
	Cargillia sp. ? ..... Ord. Ebenaceæ.	A hard, white, close-grained wood; height, 100 to 110 feet; diameter, 12 to 15 inches; locality, Clarence and Richmond Districts.
White Box.....	Tristania conferta (R. Brown). Ord. Myrtaceæ.	From the Richmond. The aboriginal name is Gĕrāy.
Bastard Peppermint, or Kĭbbĕra.	Tristania suaveolens. Ord. Myrtaceæ.	A large tree, occupying open grounds. Mostly in the Clarence and Richmond Districts. Timber durable and valuable for posts.
Kineyeeul	Eugenia sp. ? ..... Ord. Myrtaceæ.	Height, 80 to 90 feet; diameter, 2 to 3 feet; Clarence and Richmond River Districts. Timber white and hard.
Yil-Yil	Stenocarpus sinuatus. Ord. Proteaceæ.	Height, 80 to 90 feet; diameter, 1 to 2 feet; locality, Clarence and Richmond Rivers. Timber brownish and soft, but durable, and beautifully marked. Used for furniture and turning purposes.
Gūlgī...	Tetranthera sp. ?..... Ord. Laurineæ.	Height, 90 to 100 feet; diameter, 2 to 2½ feet; locality, Clarence and Richmond Rivers. Bears a small black edible fruit. Timber of a reddish colour and soft.

CLASSES 613–620.—*Arboriculture and Forest Products.*

Local Name.	Botanical Name.	Economic Uses.
Bŭnbŭrră	Ehretia ? ..... Ord. Boragineæ.	Height, 80 to 90 feet ; diameter, 2 to 3 feet ; locality, Clarence and Richmond Districts. Wood reddish colour, light and soft.
Kerabin	Echinocarpus australis. Ord. Tiliaceæ.	Height, 90 to 95 feet ; diameter, 2 to 2½ feet ; locality, Clarence and Richmond Rivers. Yellowish, close-grained, and pretty hard ; a variety of maiden's blush.
Cŭlgĕră Cŭlgĕră..	Alphitonia excelsa... Ord. Rhamneæ.	Height, 80 to 90 feet ; diameter, 2 to 3 feet. This is the Cudgery or Native Ash. A magnificent tree, of very general occurrence in the Northern Districts, greatly resembling the English ash in appearance. Timber valuable for coopers' staves and indoor purposes.
Wollum Wollahm	Hymenosporum flavum. (F. von. Müller). Ord. Pittosporaceæ.	Height, 70 to 80 feet ; diameter, 1 to 2 feet ; locality, Clarence and Richmond Rivers. A beautiful evergreen tree, bearing numerous large yellow flowers.
Bŭlbĕră	Flindersia Bennettiana (F. von Müller). Ord. Meliaceæ.	Height, 100 to 120 feet ; diameter, 3 to 4 feet ; locality, Clarence and Richmond Districts. One of the finest of the jungle forest trees. The wood is white and soft, and burns in a green state. Found to be a most useful timber for saddle making.
Bĭnbŭrră...	Gmelina Leichhardtii (F. von Müller). Ord. Verbenaceæ.	Height, 100 to 120 feet ; diameter, 4 to 5 feet ; locality, Clarence River.
Goongum ..... (Native Deal, or Pine).	Podocarpus spinulosa (R. Brown). Ord. Coniferæ.	A large tree, 120 feet high, and 2 to 3 feet diameter ; frequent within the Coast Range. Timber free from knots, soft, close and easily worked, much valued for flooring boards and joiners' and cabinet work.
Cullangun, Blue Beech, or Blue Fig.	Elæocarpus grandis.. (F. von Müller). Ord. Tiliaceæ.	Height, 100 to 120 feet ; diameter, 3 to 4 feet. Timber occasionally used for in-door purposes. Locality, Northern Districts.
Cudgeen or Sour Cherry.	Genus ?	Height, 80 to 90 feet ; diameter, 2 to 3 feet. Wood, white and hard. Clarence and Northern Districts.
Cŭdgĕrў	Flindersia australis (R. Brown). Ord. Meliaceæ.	The Native Ash, called in some localities Humbug and Leather Jacket, &c.
Bogum, Bean-tree, or Moreton Bay Chesnuts.	Castanospermum australe (A. Cunningham). Ord. Leguminosæ.	One of the largest and most beautiful of our Colonial timber trees. It frequently attains a height of 130 feet, and a diameter of 4 to 5 feet. The timber is dark, prettily grained, and not unlike walnut. It is used for furniture, cabinet work, and sometimes for staves.
Dooragan or Brush Bloodwood.	Baloghia lucida ..... Ord. Euphorbiaceæ.	Height, 70 to 80 feet ; diameter, 2 to 2½ feet. Locality, Clarence and Northern Districts. Wood, fine and close grained, and valued for many purposes.
Bōōgīgerēē	Genus ?	Height, 80 to 90 feet ; diameter, 2 to 3 feet. Locality, Clarence and Richmond Districts. Yellowish, hard, and good.
Tyal Dyal	Nephelium hemiglaucum (F. von Müller). Ord. Sapindaceæ.	Height, 70 to 80 feet ; diameter, 2 to 3 feet. Locality, Richmond River and adjoining districts.
Woggan Woggan	Tetranthera sp. ?..... Ord. Laurineæ.	Height, 70 to 80 feet ; diameter, 2 to 3 feet. Locality, Clarence and Richmond. Wood, white and hard.

CLASSES 613–620.—*Arboriculture and Forest Products.*

Local Name.	Botanical Name.	Economic Uses.
Tchumboy or Black Apple.	Achras australis ..... (R. Brown.) Ord. Sapotaceæ.	From the Clarence District.
Dȳgāl or White Cedar.	Melia composita ..... Ord. Meliaceæ.	One of the few deciduous trees of the Colony. Timber soft and easily worked ; occasionally used for shingles.
Chyrēē	Genus?	Height, 70 to 80 feet ; diameter, 2 to 3 feet. Locality, Clarence District. Wood, yellow and very hard.
Muggle-Muggle...	Rhodamnia argentia. Ord. Myrtaceæ.	Height, 80 to 100 feet ; diameter, 3 to 4 feet. Locality, Clarence District. Wood, reddish and hard.
Chum-Chum	Geissois sp. ? ..... Ord. Cunoniaceæ.	Height, 70 to 80 feet ; diameter, 12 to 15 inches. Locality, Clarence and Richmond Districts. Wood, light yellow and soft.
Cobbinmum	Hodgkinsonia sp. ?... Ord. Cunoniaceæ.	Height, 80 to 100 feet ; diameter, 3 to 4 feet. Locality, Clarence and Richmond Districts. Wood, white and soft, with brown heart.
Toonoum or Yellow Tamarind.	Diploglottis Cunninghamii. Ord. Sapindaceæ.	Height, 60 to 70 feet ; diameter, 2 to 3 feet. Locality, Richmond River. Wood white, turning red by exposure ; durable.
Mogum Mogum, or Tulip Wood.	Harpullia pendula ... Ord. Sapindaceæ.	A large tree, confined to the brush forests in the more Northern Districts. The timber is very strong, beautifully marked with different shades, from black to yellow. It takes a good polish, and is much prized for cabinet work.
Goolum-goolohm	Genus?	Height, 40 to 50 feet ; diameter, 1½ to 2 feet ; locality, Richmond and Northern Districts. Known as the prickly tree or satin wood. Wood yellow and rather hard.
Yaarum or Maiden's Blush	Sloania Woollsii (F. von Müller). Ord. Tiliaceæ.	Height, 80 to 100 feet ; diameter, 3 to 5 feet. A variety from the Clarence. Wood soft and of a reddish colour.
Booby-Booby, or White Ash.	Flindersia sp. ? ..... Ord. Meliaceæ.	Height, 70 feet ; diameter, 2 feet ; locality, Clarence and Richmond Districts. Wood white and soft.
Cōōgĕră	Nephelium divaricatum. (F. von Müller). Ord. Sapindaceæ.	Height, 70 to 80 feet ; diameter, 2 feet ; locality, Clarence and Richmond Districts. Timber hard. Sapwood white and yellow heart.
Tchoongera	Genus? Ord. Laurineæ.	Height, 90 to 100 feet ; diameter, 3 feet. Wood reddish and hard. From Clarence and Richmond Districts.
Nuggum-Nuggum	Abizzia Hendersonii. (F. von Müller). Ord. Leguminosæ.	Height, 90 feet ; diameter, 2 to 2½ feet. A tree found sparingly in the more Northern brush forests. Timber hard and beautifully streaked. Judges call special attention to this specimen ; seems to be remarkably tough and very suitable for coach-building purposes.
Kidyi-Kidyi, or Pencil Wood.	Dysoxylon Mülleri. Ord. Meliaceæ.	A large tree, 80 to 100 feet high and 3 feet diameter. Wood of a red colour, soft, and easily split. Used for cabinet and indoor works. Most valuable for economic purposes. Equal to Spanish manogany.
Būllĕrūm or Rosewood.	Dysoxylon Fraseranum. Ord. Meliaceæ.	A tree of great size in the Northern Districts. Timber fragrant, durable ; largely used for various purposes, but chiefly for furniture, cabinet-work, turning, and wood-engraving.

CLASSES 613-620.—*Arboriculture and Forest Products.*

Local Name.	Botanical Name.	Economic Uses.
Tulwong.....	Myrtus sp. ?..... Ord. Myrtaceæ.	Height, 70 feet; diameter, 2 feet; locality, Clarence and Richmond Districts. Wood brittle, yellowish sap, and dark heart.
Long-leaved Nut-tree.	Helicia prælta (F. von Müller). Ord. Proteaceæ.	
Mŭrrāyrēē	Weinmannia sp. ? ... Ord. Saxifrageæ.	Height, 80 feet; diameter, 2 feet; locality, Clarence and Richmond Districts.
	Callicarpa sp. ? ..... Ord. Verbenaceæ.	Height, 80 to 90 feet; diameter, 15 to 18 inches; locality, Clarence and Richmond Districts.
Coolmin	Eugenia sp. ? ..... Ord. Myrtaceæ.	Height, 100 to 120 feet; diameter, 3 to 4 feet; locality, Clarence and Richmond Districts. Wood reddish and hard.
Chōw-wāy	Phyllanthus Ferdinandi. Ord. Euphorbiaceæ.	Height, 50 to 60 feet; diameter, 2 to 2½ feet; locality, Clarence and Richmond Districts. Wood of a reddish colour and hard.
Bullogum, or Sycamore.	Cryptocarya sp. ? ... Ord. Laurineæ.	Height, 90 to 100 feet; diameter, 2½ to 3 feet; locality, Clarence District. Wood light, yellow, and soft.
Chowan or Black Myrtle.	Cargillia pentamera.. (F. von Müller). Ord. Ebenaceæ.	Height, 80 to 90 feet; diameter, 1½ to 2 feet. Locality, Northern Districts. Wood reddish and soft when cut, but very durable.
Bogum Bogum ...	Flindersia Bennettania. (F. von Müller). Ord. Meliaceæ.	A tree of large growth in the Richmond and Tweed Districts. Timber close-grained, durable, and used for staves.
Yellow-wood or Long Jack.	Flindersia Oxleyana. (F. von Müller). Or. Meliaceæ.	Height, 100 feet; diameter, 2½ to 3 feet. Locality, Northern Districts. Wood yellow and hard. Used for fancy work.
Coorung-Coorung or Cypress Pine	Frenela columellaris (F. von Müller). Ord. Coniferæ.	A moderate sized tree with a straight trunk. Wood durable and often used for indoor purposes. Root-stock much valued by cabinet-makers for veneering purposes.
Bummung	Rhodamnia trinervia Ord. Myrtaceæ.	Locality, Northern Districts. Height, 70 to 80 feet; diameter, 20 to 30 inches. Wood red and hard.
Boogogin	Halfordia drupifera..	Height, 90 to 100 feet; diameter, 18 to 24 inches. Locality, Northern Districts. Wood yellow and hard.
Cumgun	Cupania anodonta ... (F. von Müller). Ord. Sapindaceæ.	Height, 80 feet; diameter, 20 to 36 inches. Locality, Northern Districts. Wood white and hard.
Durran	Cupania sp. ? ..... Ord. Sapindaceæ.	Height, 100 to 120 feet; diameter, 3 to 3½ feet. Locality, Clarence and Richmond Districts. Wood yellow with a brown heart, having an offensive smell when fresh cut.
Mīltārȳ-Mīltārȳ ..	Elæocarpus longifolia. (C. Moore.) Ord. Tiliaceæ.	Height, 100 to 110 feet; diameter, 2 to 2½ feet. Locality, Clarence and Richmond Districts. Wood hard; white sapwood and brown heart.
Bungaby.....	Mallotus discolor..... (F. von Müller.) Ord. Euphorbiaceæ.	Height, 100 feet; diameter, 20 to 24 inches. Locality, Northern Districts. Wood white and hard, with a very close grain.
Belbil, or Maple of the South districts.	Villaresia Moorei..... (F. von Müller.) Ord. Oleacineæ.	
Meronguavawn ...	Symplocas sp. ? ..... Ord. Ebenaceæ.	Height, 80 feet; diameter, 20 to 30 inches. Locality, Northern Districts.

CLASSES 613-620.—*Arboriculture and Forest Products.*

Local Name.	Botanical Name.	Economic Uses.
Mărvĕy or Marble Wood.	Olea paniculata..... (R. Brown.) Or. Jasmineæ.	A moderate sized tree, timber close grained, durable, and used for staves. Height, 80 feet; diameter, 30 inches. Locality, Northern Districts.
Munden, or Light Rosewood.	Dysoxylon sp. ? ..... Ord. Meliaceæ.	Height, 80 feet; diameter, 20 to 24 inches. Locality, Northern Districts.
Chundial.....	Genus?	Height, 90 feet; diameter, 20 to 30 inches. Wood yellow and hard. Locality, Northern Districts.
Boobin, or Sassafras.	Doryphora sassafras.. Or. Monimiaceæ.	From the Northern districts. A beautiful tree, with dense, bright-green, glossy foliage, emitting an agreeable aromatic fragrance. The bark containing an agreeable bitter principle, which is held in high repute as a tonic by many colonists. Wood soft and weak, occasionally used for making packing cases and other indoor work. Most valuable.
Kaarin	Myrtus Becklerii ... (F. von Müller.) Ord. Myrtaceæ.	Locality, Northern Districts; height 70 feet; diameter, 3 feet. Wood brownish, with black heart, very hard.
Coobagun	Notolea longifolia ... Ord. Jasmineæ.	From the Clarence District. Height, 65 feet; diameter, 12 inches.
Biggera-biggera...	Bridelia exaltata..... (F. von Müller). Ord. Euphorbiaceæ.	Height, 90 to 100 feet; diameter, 2 to 2½ feet. Locality, Northern Districts. Wood brown and hard.
Chĕreen	Eloeocarpus obovatus Ord. Tiliaceæ.	Height, 80 to 90 feet; diameter, 2 to 2½ feet. Locality, Northern Districts. Wood white and hard.
Chōwwāy	Bradleia sp. ? ..... Ord. Euphorbiaceæ.	Height, 80 feet; diameter, 2 feet. Wood red, hard, and heavy. Locality, Clarence Districts.
Mogum-Mogum, or Yellow Tulip Wood.	Harpullia sp. ? ..... Ord. Sapindaceæ.	Height, 80 feet; diameter, 2 feet. Wood yellow and hard.
	Avicennia officinalis Ord. Verbenaceæ.	Height, 45 feet; diameter, 20 inches. Locality, Salt estuaries in the Northern and other districts.
Prickly-leaved Tea-tree.	Melaleuca stypheliioides. Ord. Myrtaceæ.	Height, 40 to 60 feet; diameter, 18 to 20 inches. Wood brown and hard. General throughout the Colony.
Heelamon Wood	Erythrina sp. ? ..... Ord. Leguminosæ.	Height, 50 to 60 feet; diameter, 2 to 2½ feet. Locality, Northern Districts. Wood very tough. The aboriginals make shields (or heelamons) from the wood of this tree.
Red Wood, or Red Mahogany.	Eucalyptus sp. ?..... Ord. Myrtaceæ.	Height, 90 to 100 feet; diameter, 3 to 3½ feet. Timber red, takes a good polish, adapted to most purposes. Locality, Clarence and Richmond Districts.

CLASSES 613–620.—*Arboriculture and Forest Products.*

Local Name.	Botanical Name.	Economic Uses.
	Genus ?	A fine, hard, smooth-grained timber, 60 feet high by 20 inches diameter. Heavy and durable. Locality, Clarence and Richmond Districts.
Wild Grape and other Native Vines.	.....	.....
Spotted Gum.....	.....	From Bateman's Bay ; used in ship-building.
Woolly-butt	.....	From Bateman's Bay ; used in ship-building and architecture.
Swamp Gum	.....	Of a peculiar spiny nature, from Braidwood.
Grass-tree or Black Bog.	.....	Showing the resin or gum, which abounds in large quantities ; used for coating the bottoms of punts and small boats, said to be a good preservative. Commercial value, £15 per ton.

This collection of Timbers is by far the finest in the Exhibition.

GOWING AND KELLY, Bega.

Neatly arranged exhibit of carefully sawn planks and shingles.

ILLAWARRA DISTRICT COMMITTEE.

This is an artistically arranged trophy, showing the timbers exhibited by a number of gentlemen of the Illawarra district. The exhibits in some cases are named, but give no instructive information.

JONES, W. T., Parramatta.

A well shown collection of 22 specimens of indigenous timber, named, and giving information regarding their economic qualities ; is most valuable for educational purposes.

MUDGEE COMMITTEE FOR SYDNEY INTERNATIONAL EXHIBITION, Mudgee.

Shows good sample of the timbers from the Mudgee District, the section of polished myall being especially good. The following information regarding the timbers of the district are given by the exhibitors, viz. :—

Stringy-bark,	Iron-bark,
Slatey Gum,	Yarvan (polished),
Red Gum,	Myall ,,
Yellow Box,	,, ,,
White Box,	,, ,,

The timbers of the Mudgee district are valuable, useful, and varied, comprising the ordinary varieties of hard-wood suitable for all house and bridge building purposes. The exhibits shown are of the ordinary quality supplied by sawyers. The many large bridges over the Cudgegong and other rivers and creeks are notable examples of the quality and size of the district timbers, some girders being 20 inches square and 50 feet long, without a flaw, or a gum crack. The slatey gum in particular is a superior wood, of a most durable quality, and is in large demand. Myall wood exists in large quantities and of unusual size, logs 2 feet in diameter being procurable. Yarvan, a wood

closely resembling myall, also abounds, and is valuable like myall for ornamental uses, both being used for many purposes for which camphor-wood has had a monopoly. Valuable as an instructive exhibit.

MUNRO, J., Redfern.

This is a most interesting exhibit of bent N. S. Wales timber, principally for coach-building purposes. These are well manipulated samples, and of great commercial utility. The wood used is principally "sally" or hickory, for acute curves, ironbark and spotted gum being used for shafts, and blackwood being used for almost all other purposes of bending. The exhibitor considers the indigenous "sally" quite equal to imported ash for bending purposes.

PARRAMATTA ROAD TRUST COMMISSIONERS, Parramatta.

An interesting exhibit of 23 specimens of old timbers. These are shown to prove the durability of the different specimens of colonial woods; all have been in use from 36 to 60 years. An instructive and suggestive exhibit.

STEWART, W., Sydney.

This is an interesting trophy, comprising a large number of samples of roughly sawn cedar timbers in first stages of manufacture for chairs, tables, pedestals, and the various classes of workmanship used in cabinet-making.

QUEENSLAND.

BOTANIC GARDENS, Brisbane.

This is a most magnificent and extensive collection of 260 varieties of timbers indigenous to the Colony. These are well shown in a most instructive manner, and full information is given regarding their native and botanical names, with the commercial utility of each specimen. The following is a full description of the collection:—

The various collections of timbers indigenous to this Colony, exhibited here and in the various Courts at the Exhibitions in London, Vienna, Philadelphia, and Paris, have excited general admiration, not only by their adaptability for ordinary commercial purposes, but through many of them possessing peculiar qualities suitable to particular climates and situations of country.

The Eucalyptus, in all its many varieties, has found its way to the four quarters of the Globe; and the demand for seed from those countries where its qualities are special, is considerably in excess of the supply. Central Africa will shortly be the scene of its cultivation; and India and the Continent of Europe have both succeeded in its acclimatization. Some of the species are more adapted for swampy grounds; some possess high medicinal qualities; most are useful for building and fencing purposes, and all of them worthy of something better than mere consumption for firewood.

The Red Cedar (*Cedrela Toona*) scrubs are still very extensive in the Colony, especially to the far north, but the wholesale despoilage that is taking place, and is still going on, goes so far to diminish the supply as to make it a grave question whether some more stringent measure should not be at once framed for a system having for its object the conservance of our timber forests generally.

The Moreton Bay Pine scrubs, principally situated along the coast line, are having (to use a Colonial phrase) "their eyes picked out," and, unless there are revised regulations, the cutters will not only take the best of the timber but will make no provision for the future in the way of recuperation. This question generally occupies the attention of the Australian Colonies at the present time.

On a recent tour of inspection, undertaken by the direction of the Government, to Frazer's Island by the Director of the Botanic Gardens, it was found that the Kauri-pine scrubs there had suffered from the same system of reckless indifference referred to above.

The hard-woods in the timber-producing districts of the Colony are not only in great variety but at present, so far as can be estimated, are in full supply. The same remarks however apply to these as to the pine and other soft woods.

The present collection has been made with the view of exhibiting as far as possible the various timber, obtainable over a large extent of country—from the far north to the boundary of the Colony on the south and westward; and from the particulars attached to each sample, as to uses, habitats, &c., it will be seen that Queensland has been particularly favoured in this respect.

Irrespective of an immense home consumption there is a large export trade in cedar and pine logs, exceeding £60,000 per annum.

With a view of initiating a system of forest conservancy in the colony the Government have devoted some 30 acres of ground in the vicinity of Brisbane to a nursery, in which many thousands of plants (30,000 of the cedar tree alone) have been raised, and are now distributed free of charge to those whose attention has been called to this most important matter, and who have exhibited great interest on the subject.

MELIACEÆ.

1. *Cedrela Toona*, Roxb. (Red Cedar.)—Diameter, 24 to 75 inches; height, 100 to 150 feet. This magnificent deciduous tree is found in scrubs along the coast, and occasionally extending inland for a considerable distance. It puts out large branches, the junctions of which, with the stem, furnish those beautiful curled pieces of which the choicest veneers are made. The timber is light, very durable, easily worked, and is largely employed in house joinery and furniture-making; in fact, whenever lightness and durability are required. It is an article of great commercial importance, and is largely exported to the other Colonies. The market value at the present time is from 20s. per hundred superficial feet, according to colour and size.

2. *Flindersia australis*, R. Br. (Flindosa.)—Diameter, 36 to 48 inches; height, 80 to 100 feet. A robust tree of general occurrence in the scrubs on the banks of rivers. The timber is hard, close, and of great strength and durability, and would make excellent timber for railway purposes. It shrinks very little in drying, and does not rust iron. It has long been known to timber merchants as being a very hard timber and difficult to cut with the saw, and for that reason little attention has been paid to procuring it.

3. *Flindersia Oxleyana*, F. M. (Light Yellow-wood.)—Diameter, 24 to 42 inches; height, 80 to 100 feet. This fine tree is found in the same situations as red cedar. The timber is strong, durable, fine-grained, and of good color, used in boat-building, cabinet-work, and for many of the purposes to which cedar is applied. It also possesses dyeing properties. The present market value is from 7s. to 9s. per hundred superficial feet.

4. *Flindersia maculosa*, F. M. (Spotted Tree of the Colonists.)—Diameter, 12 to 18 inches; height, 36 to 40 feet. A middle-sized tree; the trunk spotted by the falling off of the outer bark in patches. Timber used for shingles and staves of tallow casks and pick handles.

5. *Flindersia Bennettiana*, F. M. (Bōgum Bōgum.)—Diameter, 18 to 26 inches; height, 70 to 90 feet. This large tree occurs in most of the coast scrubs; the timber is close-grained, but is seldom used. It splits well; and would be valuable for staves.

6. *Flindersia Schottiana*, F. M.—Diameter, 18 to 30 inches; height, 30 to 60 feet. This moderate-sized tree extends from the boundary of New South Wales to the Daintree River in North Queensland. It is confined generally to forest gullies. The timber is hard, close-grained, and prettily marked.

7. *Owenia venosa*, F. M. (Sour Plum.)—Diameter, 9 to 36 inches; height, 30 to 40 feet. A moderate-sized tree, common in the Brigalow scrubs. Its great strength renders it suitable for many purposes.

8. *Owenia cerasifera*, F. M. (Rose Apple.)—Diameter, 9 to 36 inches; height, 25 to 60 feet. A small but very beautiful tree; timber hard, and of a dark-red colour, finely marked, and takes a very high polish.

9. *Amoora nitidula*, Benth.—Diameter, 18 to 30 inches; height, 70 to 90 feet. A large-sized tree of frequent occurrence in scrubs bordering the coast. Qualities of the timber not much known.

10. *Synoum glandulosum*, A. Juss.—Diameter, 18 to 24 inches; height, 40 to 60 feet. A moderate-sized tree of very general occurrence; timber firm and easily worked.

11. *Dysoxylon Mülleri*, Benth. (Pencil Cedar.)—Diameter, 20 to 40 inches; height, 70 to 80 feet. A large-sized tree, inhabiting the rich alluvial scrubs upon the banks of the rivers in the district of Moreton Bay and Wide Bay. Timber of a rich color, used for cabinet-making and window work. When fresh cut the timber has much the smell of a Swedish turnip. Market value, from 6s. to 6s. 6d. per hundred feet.

12. *Dysoxylon rufum*, Benth. (Bastard Cedar Pencil Wood.)—Diameter, 18 to 24 inches; height, 40 to 50 feet. A slender tree, occurring in many of the scrubs on the coast, and also in the interior. Wood is nicely grained, and used for various purposes, but principally for cabinet work.

13. *Melia composita*, Wild. (White Cedar.)—Diameter, 15 to 24 inches; height, 40 to 50 feet. An elegant deciduous tree, never ranging very far from the coast. Timber soft and easily worked. The timber from a well-matured tree is found to be very durable.

CONIFERÆ.

14. *Araucaria Bidwilli*, Hook. (Bunya Bunya.)—Diameter, 30 to 58 inches; height 100 to 200 feet. A noble tree, inhabiting the scrubs in the district between Brisbane and the Burnett Rivers. In the 20th parallel it grows thickly over a portion of country, in extent about 30 miles long by 12 miles broad. The tree has a very singular appearance; the trunk is quite straight; its bark is thick and smooth; the branches are produced in whorls of six, seven, or eight; they are horizontal, inflexed, and ascending at the extremities. From the style of growth, singular foliage, and peculiar fresh colour, when surrounded with other trees of different habit and greyish tint, it produces a fine effect, from the striking contrast presented by its rigid growth, and fresh green lanceolate leaves. The wood is not only very strong and good, but it is full of beautiful veins, and capable of being polished and worked with the greatest facility. The cones produced on the extreme upper branches, with their apex downwards, are large, measuring 9 to 12 inches in length, and 10 inches in diameter; on coming to maturity they readily shed their seeds, which are 2 to 2½ inches long by 1 inch broad, sweet before being perfectly ripe, and after that they resemble roasted chestnuts in taste. In accordance with regulations issued by the Government, this tree is not allowed to be cut down by those who are licensed to fall timber generally on the Crown lands, the fruit being used as food by the aboriginals. The trees produce some cones every year, but the principal harvest happens only every three years, when the blacks assemble from all quarters to feast on them. The food seems to have a fattening effect, and they eat large quantities of it, after roasting it at a fire. Contrary to their usual habits, they sometimes store up the Bunya nuts, hiding them in a water-hole for a month or two. Here they germinate, and become offensive in taste to a white man's palate, but are considered by the blacks to have then acquired an improved flavour. The taste of the Bunya when fresh has been described as something between a chestnut and a raw potato.

15. *Araucaria Cunninghamii*, Ait. (Moreton Bay Pine.)—Diameter, 36 to 60 inches; height, 150 to 200 feet. This majestic tree is, without exception, the most ornamental and useful tree in Queensland. Its beautiful regular pyramidal form, and the sombre green of its awl-shaped foliage, command general admiration. It covers immense tracks of land along the coast, and in the interior. It overtops all other trees, whether growing on the alluvial banks near rivers, or upon the steep and rugged mountains in the interior. Its branches are produced in whorls from six to eight in number, horizontally, and spreading. The bark is thick and brownish. The timber is an article of great commercial importance, and is used extensively in this colony. The wood is strong and durable when kept dry, but soon decays when exposed to alternate damp and dry weather. When procured from the mountains in the interior it is fine-grained, and is susceptible of a high polish, which excels that of satinwood or bird's eye maple. The resin which it exudes is very remarkable; it has all the transparency and whiteness of crystal, and that portion of it which adheres to the trees hangs from them in the shape of icicles, which are sometimes 3 feet long, and 6 to 12 inches broad. The sawyers receive at the present time 6s. 6d. to 7s. per hundred superficial feet for the timber, some trees yielding as much as 10,000 feet of saleable timber.

16. *Dammara robusta*, Moore. (Kauri or Dundathu Pine.)—Diameter 36 to 72 in.; height, 80 to 130 feet. This huge tree inhabits the alluvial banks on the rivers near the coast in the Wide Bay District; also in the moist and sheltered valleys on Frazer's Island. It has a smooth-barked trunk, of a leaden colour; the branches are produced in whorls from

5 to 10 feet distant, spreading, and of a large size. The wood is fine-grained, free of knots, and easily worked. It is, however, not a plentiful tree. At the present time the sawyers are receiving 7s. 6d. per 100 superficial feet, some trees yielding as much as 25,000 feet.

17. *Frenela Endlicheri*, Parlat. F.M. (Cypress Pine.)—Diameter, 20 to 40 inches; height, 50 to 70 feet. This tree occupies vast tracts along the coast, growing on barren sandy soil. The timber is an article of great importance; it is durable, fine-grained, fragrant, and capable of a high polish; it is used for piles for wharves, and for sheathing punts and boats; it resists the attack of cobra, the teredo navalis, and white ants, and the root is valued by cabinet-makers for veneering purposes. The market value at the present time is 10s. per hundred superficial feet.

18. *Frenela rhomboidea*, Endl. (Cypress Pine.)—Diameter, 12 to 18 inches; height, 40 to 50 feet. A handsome tree, scattered through the Brigalow scrubs and sand ridges in the Darling Downs District. The timber is much used for telegraph posts, and by settlers for building purposes.

19. *Frenela Parlatorei*, F. M. (Mountain Cypress Pine.)—Diameter, 12 to 24 inches; height, 40 to 60 feet; timber much valued for cabinet purposes.

20. *Podocarpus elata*, R. Br. (She-pine.)—Diameter, 20 to 36 inches; height, 50 to 80 feet. A very beautiful tree, trunk rarely cylindrical, timber free from knots, soft, close, easily worked; good for joiners work, and used for spars. It occurs very frequently in the scrubs along the coast. The market value at the present time (in Queensland) is about 7s. per hundred feet, superficial.

CASUARINEÆ.

21. *Casuarina equisetifolia*. (Swamp Oak.)—Diameter, 12 to 24 inches; height, 50 to 70 feet. Found growing in great abundance near salt water marshes and inlets. The wood is coarse-grained and beautifully marked; it is used for purposes where lightness and toughness are required.

22. *Casuarina torulosa*, Ait. (Forest Oak or Beef-wood.)—Diameter, 9 to 18 inches; height, 30 to 40 feet. A small tree occupying large tracts of land in the open forest. The timber is much used for fuel; it is close and prettily marked, and gives handsome veneers.

23. *Casuarina glauca*, Seib. (The River She-oak.)—Diameter, 24 to 36 inches; height, 70 to 90 feet. A robust tree of general occurrence on the borders of rivers and creeks. The timber is strong and tough, used for staves, shingles, &c.

24. *Casuarina Cunninghamiana*, Miq.—(Scrub She-oak.)—Diameter, 6 to 12 inches; height, 20 to 36 feet. A small but handsome tree; timber hard, close, and prettily marked.

RUTACEÆ.

25. *Bosistoa sapindiformis*, F.M.—Diameter, 6 to 12 inches; height, 15 to 20 feet. A small but very handsome tree, abounding in most of the scrubs near the source of the Logan and Albert Rivers. Wood close and light.

26. *Citrus Australis*, Planch. (Native Orange.)—Diameter, 6 to 14 inches; height, 20 to 30 feet. This small and handsome tree grows in abundance on the borders of scrubs, both on the coast and in the interior. The trunk is erect, with many diffused branches, armed with auxiliary straight thorns of about half an inch long. The fruit is about 1½ inches in diameter, almost globular; an agreeable beverage is produced from its acid juice. The wood is hard, close-grained, and of a fine light-yellow colour.

27. *Citrus australasica*, F.M. (Native Lime.)—Diameter, 6 to 10 inches; height, 15 to 20 feet. A low-sized and beautiful tree, growing in the scrubs on the Brisbane and Pine Rivers. The trunk is erect and well diffused, with small branches bearing fruit about 2 inches long, and of an oblong form. The wood is close-grained, hard, and of a yellow colour.

28. *Atalantia glauca*, Hook. (The Native Kumkuat.)—Diameter, 2 to 6 inches; height, 8 to 15 feet. A small tree or shrub, armed with straight or incurved auxiliary spines of a quarter of an inch long upon the branches. The fruit is globular, about half an inch in diameter, and produces an agreeable beverage from its acid juice. The wood is close-grained, and takes a fine polish. Found in great abundance in the Darling Downs and the Maranoa Districts.

29. *Glycosmis pentaphylla*, Corr.—Diameter, 4 to 6 inches; height, 8 to 14 feet. A small tree occurring sparingly in the scrubs at the entrance of the Mary River. Wood, close-grained.

30. *Acronychia Baueri*, Schott.—Diameter, 6 to 12 inches ; height, 16 to 24 feet. Small-sized tree, found in the scrubs bordering the coast. Wood, close-grained, but not used.

31. *Acronychia imperforata*, F.M.—Diameter, 12 to 15 inches ; height, 20 to 30 feet. A handsome shady tree, occurring in the scrubs on the coast. Timber fine-grained, easily wrought, but not much used.

32. *Acronychia laevis*, Forst.—Diameter, 15 to 18 inches; height, 30 to 40 feet. A tall slender tree ; timber not used.

33. *Pentaceras australis*, Hook. (Scrub white Cedar of the colonists.)—Diameter, 12 to 24 inches ; height, 40 to 60 feet. Occurs principally in the scrubs near the coast. The timber is close-grained, tough, and firm.

34. *Zanthoxylum brachyacanthum*, F. M. (Satinwood.)—Diameter, 6 to 12 inches ; height, 20 to 30 feet. Found in small quantities in most of the coast scrubs of Queensland. The timber is close-grained, of a yellow colour, and susceptible of a high polish.

35. *Geijera parviflora*, Lindl.—Diameter, 6 to 12 inches ; height, 20 to 30 feet. Tree occurring in many of the "brigalow" scrubs. Timber hard and close-grained ; it is, however, apt to split in seasoning.

36. *Geijera Muelleri*, Benth. (Balsam-Capivi tree.)—Diameter, 12 to 13 inches; height, 40 to 60 feet. This handsome and glabrous tree is dispersed through the "brigalow" and Araucaria scrubs in the East and West Moreton Districts. The timber is nicely marked, and of agreeable fragrance when green.

37. *Geijera salicifolia*, Schott.—Diameter, 10 to 15 inches ; height, 30 to 40 feet. The long slender drooping branches with their long narrow leaves, have a very beautiful appearance. It occurs in "brigalow" scrubs on the coast, and in the interior ; wood is hard, close-grained, and nicely marked.

38. *Evodia micrococca*, F. M.—Diameter, 10 to 15 inches; height, 20 to 30 feet. A small-sized tree ; met with in the scrubs on the banks of the rivers in the Moreton district.

CELASTRINEÆ.

39. *Celastrus dispermus*, F. M.—Diameter, 3 to 5 inches ; height, 12 to 16 feet. A small-sized glabrous tree of some beauty when not over-crowded with other trees ; wood close-grained, and takes a fine polish.

40. *Siphonodon australe*, Benth.—Diameter, 10 to 24 feet ; height, 40 to 50 feet. A handsome scrub tree of frequent occurrence ; wood close-grained, of a yellowish colour.

41. *Denhamia pittosporoides*, F. M.—Diameter, 6 to 8 inches ; height, 20 to 30 feet. Slender tree found on the borders of scrubs inland ; timber is hard, fine-grained, and takes a good polish.

42. *Denhamia obscura*, Meissn.—Diameter, 3 to 4 inches ; height, 12 to 15 feet. Small tree, found in "brigalow" scrubs near Ipswich ; wood fine grained, and tough.

43. *Elæodendron australe*, Vent.—Diameter, 4 to 12 inches ; height, 20 to 30 feet. Slender-growing glabrous tree ; timber, close-grained, and prettily marked.

RHAMNEÆ.

44. *Alphitonia excelsa*, Reissek. (Mountain or Red Ash).—Diameter, 18 to 24 inches ; height, 45 to 60 feet. This valuable tree is plentiful in the forest and in the scrubs, both on the coast and in the interior. The timber is hard, close-grained, and durable ; takes a high polish, and is suitable for gun-stocks, and a variety of other purposes.

PITTOSPOREÆ.

45. *Pittosporum rhombifolium*, A. Cunn.—Diameter, 6 to 12 inches ; height, 40 to 55 feet. A fine tree with glossy foliage ; found in the scrubs on the Brisbane River. The wood is of a white colour ; not used.

46. *Pittosporum bicolor*, Hook. Diameter, 6 to 12 inches ; height, 20 to 46 feet. Found in open forest ground in West Moreton and Darling Downs Districts. Wood close-grained, of a white color.

CAPPARIDEÆ.

47. *Pittosporum phillyræoides*, D. C.—Diameter, 4 to 6 inches ; height, 20 to 25 feet. Met with in "brigalow" scrubs ; wood close-grained, and of a white color.

48. *Capparis nobilis*, F. M. (Native Pomegranate.)—Diameter, 6 to 14 inches ; height, 20 to 25 feet. A small tree. The timber is hard and close-grained.

49. *Capparis Mitchelli*, Lindl. (Small Native Pomegranate.)—Diameter, 6 to 12 inches; height, 14 to 30 feet. This much-branched small tree is very plentiful in the "brigalow" scrubs in the Darling Downs; wood very hard.

50. *Apophyllum anomalum*, F. M. Diameter, 6 to 16 inches; height, 20 to 30 feet. A shrub or small tree, almost leafless, with cylindrical, often pendulous branches; occurring in the "brigalow" scrubs in the Darling Downs District. Wood very hard.

STERCULIACEÆ.

51. *Sterculia quadrifida*, R. Br. Diameter, 18 to 24 inches; height, 30 to 40 feet. A moderate sized deciduous tree; wood soft and spongy; the bark is used for nets and fishing lines.

52. *Tarrietia argyrodendron*, Benth. (Silver Tree.)—Diameter, 18 to 30 inches; height, 40 to 60 feet. A large tree, growing in great quantities in the scrubs bordering the banks of the river Brisbane; the timber is not much used.

53. *Tarrietia*, Sp., F. M.—Diameter, 18 to 24 inches; height, 60 to 70 feet. Plentiful in the coast scrubs; timber is tough and close-grained, but seldom used.

54. *Commersonia echinata*, Forst.—Diameter, 6 to 12 inches; height, 20 to 30 feet. A tall shrub or small tree, of general occurrence on the banks of rivers. The aboriginals use the fibre of the bark for kangaroo and fishing nets; timber not used.

LINEÆ.

55. *Erythroxylon australe*, F. M.—Diameter, 6 to 12 inches; height, 20 to 30 feet. This shrub or small-sized tree occurs in considerable abundance in the "brigalow" scrub near Ipswich; wood hard, fine-grained; it takes a good polish; can be used for cabinet work.

SAPINDACÆ.

56. *Harpullia pendula*, Planch (Tulip-wood).—Diameter, 14 to 24 inches; height, 50 to 60 feet. Found in some abundance on the alluvial banks of rivers. The timber is close-grained, firm, and beautifully marked, and is much esteemed for cabinet-work.

57. *Cupania xylocarpa*, A. Cunn.—Diameter, 12 to 24 inches; height, 40 to 50 feet. Moderate tree in good situations. Timber close grained and hard, particularly so when dry.

58. *Cupania serrata*, F. M.—Diameter, 8 to 14 inches; height, 20 to 30 feet. Plentiful in the scrubs on the banks of rivers. Timber close-grained.

59. *Cupania anacardioides*, A. Rich.—Diameter, 12 to 18 inches; height, 30 to 40 feet. Slender tree in considerable abundance on the alluvial banks of rivers. Timber seldom used.

60. *Cupania pseudorhus*, A. Rich.—Diameter, 14 to 20 inches; height, 30 to 50 feet. Tree of moderate size; growing in great abundance in the scrubs bordering the coast. Timber fine grained and beautiful.

61. *Cupania semiglauca*, F. M.—Diameter, 10 to 18 inches; height, 30 to 60 feet. Middle-sized tree, wood soft, and as yet of no recognized value.

62. *Diploglottis Cunninghamii*, Hook (Native Tamarind).—Diameter, 12 to 24 inches; height, 40 to 55 feet. Timber seldom used, though compact and durable.

63. *Ratonia pyriformis*, Benth.—Diameter, 10 to 18 inches; height, 30 to 45 feet. Moderate-sized tree; timber firm and close-grained.

64. *Nephelium tomentosum*, F. M.—Diameter, 10 to 15 inches; height, 30 to 40 feet. Small sized tree. Timber not used.

65. *Heterodendron diversifolium*, F. M.—Diameter, 4 to 6 inches; height, 10 to 15 feet. Common in "brigalow" scrubs; wood of a reddish colour. Its great strength renders it fit for pick handles.

66. *Dodonæa triquetra*, (Hop Bush).—Diameter, 3 to 4 inches; height, 10 to 12 feet. Branching shrub; wood hard, close grained.

67. *Atalaya salicifolia*, Blume.—Diameter, 14 to 22 inches; height, 30 to 50 feet. A handsome glabrous, green, or somewhat glaucous tree, occurring in the alluvial scrubs on the coast. Timber close grained, hard, and takes a good polish.

ANACARDIACEÆ.

68. *Rhus rhodanthema*, F. M. (Dark Yellow-wood.)—Diameter, 18 to 24 inches; height, 50 to 70 feet. A picturesque tree, of general occurrence in the scrubs on the banks of rivers; the trunk is of moderate size, covered with a rough scaly bark; the branches

are small and numerous, the leaves are pinnate, the flowers are red. The wood is soft, fine-grained, and beautifully marked, and is much esteemed for cabinet work. At the present time the sawyers are receiving 10s. to 12s. per hundred feet.

69. *Spondias Solandri*, Benth.—Diameter, 24 to 36 inches; height, 40 to 60 feet. A moderate-sized tree of rare occurrence in the coast scrubs. Wood soft when cut, but afterwards becomes hard and tough; not as yet used.

ARALIACEÆ.

70. *Panax elegans*, F.M.—Diameter, 12 to 16 inches; height, 30 to 40 feet. A singular, moderate tree, with magnificent, large, simple, or doubly pinnate leaves, occurring in dense scrubs. Wood light, soft, and of little durability.

RUBIACEÆ.

71. *Sarcocephalus cordatus*, Miq. (Leichhardt's Tree.)—Diameter, 24 to 30 inches; height, 40 to 60 feet. A handsome and beautiful moderate-sized tree, found on the alluvial banks of the Don River, Port Denison, &c., &c. Its wood is soft, close-grained, and takes a good polish; often used for building and other purposes.

72. *Ixora Pavetta*, Rox.—Diameter, 2 to 4 inches; height, 8 to 10 feet. A beautiful flowering shrub found in the borders of scrubs; wood very hard and fine-grained.

73. *Hodgkinsonia ovatiflora*, F. M.—Diameter, 5 to 10 inches; height, 12 to 20 feet. Small slender tree; wood close-grained.

74. *Canthium lucidum*, Hook and Arn.—Diameter, 6 to 12 inches; height, 20 to 30 feet. Small tree; wood hard and close-grained, and takes a good polish.

75. *Canthium oleifolium*, Hook.—Diameter, 5 to 10 inches; height, 25 to 30 feet. In brigalow scrubs, near Ipswich; wood hard, close-grained, and capable of a high polish.

76. *Canthium vaccinii folium*, F.M.—Diameter, 1 to 4 inches; height, 6 to 10 feet; wood, close-grained, used for walking-sticks.

MYRTACEÆ.

77. *Eucalyptus pilularis*, Sm. (Black-butt.)—Diameter, 48 to 96 inches; height, 60 to 80 feet. A large tree, with a dark-coloured rough and somewhat furrowed persistent bark, at least on the trunk and on the main branches; that of the smaller branches smooth and deciduous; furnishes excellent timber for house carpentry, or any purpose where strength and durability are required. Market value, 7s. to 8s. per hundred feet.

78. *Eucalyptus haemastoma*, Sm. (Spotted Gum.)—Diameter, 24 to 28 inches; height, 60 to 120 feet. A very large tree, with a smooth deciduous bark, leaving a spotted or variegated trunk; considered a first-class timber for shipbuilding, and much used for wheelwright's work and other purposes. Market value, from 7s. to 8s. per hundred feet.

79. *Eucalyptus microcorys*, F. M. (Peppermint Tree.)—Diameter, 18 to 36 inches; height, 60 to 80 feet. A tall tree, with a persistent furrowed fibrous bark, occurring in the forest near the Brisbane River; timber strong and durable, used by wheelwrights for naves, felloes, and spokes.

80. *Eucalyptus hemiphloia*, F. M. (Yellow Box.)—Diameter, 20 to 40 inches; height, 50 to 60 feet. A moderate-sized tree, producing an excellent timber, famous for its hardness, toughness, and durability. Market value, from 7s. to 8s. per 100 feet.

81. *Eucalyptus siderophloia*, Benth. (Ironbark.)—Diameter, 20 to 40 inches; height, 70 to 100 feet. A tall tree, with a hard, persistent, rough, and furred back. Occupant of many ridgy, stony, forest lands in East and West Moreton and Darling Downs districts. This timber has the highest reputation for strength and durability, and is used for large beams in building stores for heavy goods, railway sleepers, and other purposes where great strength is required. Market value, 7s. to 8s. per hundred feet.

82. *Eucalyptus maculata*, Hook. (Spotted Gum.)—Diameter, 20 to 36 inches; height, 60 to 80 feet. A lofty tree, with a smooth bark falling off in patches so as to give the trunk a spotted appearance. It is a very valuable timber, highly prized for many purposes on account of its strength and elasticity; used for buggy shafts, cogs of wheels, &c. In bridge building it is used for members under tension, and is found to have the highest constant strength of any of the Queensland timbers. Market value, 7s. to 8s. per hundred feet.

83. *Eucalyptus saligna*, Sm. (Grey Gum.)—Diameter 24 to 40 inches; height, 60 to 90 feet. A tall tree, with a smooth silver-grey shining bark, shedding in thick longitudinal strips. Of frequent occurrence on the forest ridges near the Brisbane river. Useful timber; in good repute for rails in fencing, as it does not readily take fire, and building purposes, being both strong and durable. Market value, from 7s. to 8s. per hundred feet.

84. *Eucalyptus resinifera*, Sm. (Red Mahogany.)—Diameter, 20 to 30 inches; height, 60 to 70 feet. A tall tree, with a rough persistent bark on the trunk, but more or less deciduous on the branches. The timber is much prized for its strength and durability, and is used for piles, as it is said to resist the action of Cobra. Market value, from 7s. to 8s. per hundred feet.

85. *Eucalyptus corymbosa*, Sm. (Blood-wood.)—Diameter, 24 to 30 in.; height, 50 to 60 feet. A fair-sized tree, with a persistent furred bark; timber subject to gum veins, but very durable, principally used for posts; does not readily take fire or suffer much from white ants. Market value, from 7s. per hundred feet.

86. *Eucalyptus botryoides*, Sm. (Blue Gum.)—Diameter, 30 to 50 inches; height, 70 to 100 feet. A lofty spreading tree, with a rough furrowed persistent bark. Of frequent occurrence both upon the coast and in the interior; a valuable timber, hard, tough, and durable. The only timber used for felloes of wheels, and one of the finest timbers for shipbuilding. Market value, 8s. to 9s. per hundred feet.

87. *Eucalyptus tereticornis*, Sm. (Red Gum.)—Diameter, 18 to 36 inches; height, 60 to 90 feet. A fair-sized tree; timber used in fencing, building, plough-beams, poles and shafts of drays, and also in shipbuilding. Market value, from 7s. to 8s. per hundred feet.

88. *Eucalyptus Stuartiana*, F.M. (Turpentine-tree, or Tea-tee of Frazer's Island.)—Diameter, 24 to 40 inches; height, 60 to 90 feet. A tree attaining a considerable elevation; the bark of the branches smooth and deciduous, that of the trunk rough and rigid and somewhat stringy; of common occurrence. Its timber is considered excellent for ship planks, is hard, and is said to be exceedingly durable underground, and is difficult to burn; used for sleepers and many other purposes. Market value, from 8s. to 9s. per hundred feet.

89. *Eucalyptus fibrosa*, F.M. (Stringybark.)—Diameter, 18 to 36 inches; height, 40 to 75 feet. Timber much prized for flooring boards, and of considerable strength and durability. Market value, from 6s. to 7s. per hundred feet.

90. *Eucalyptus tesselaris*, F.M. (Moreton Bay Ash.)—Diameter, 14 to 24 inches; height, 30 to 60 feet. Timber of a brownish colour, not hard but tough; highly spoken of for building purposes in the northern parts of the colony. Market value, from 7s. to 8s. per hundred feet.

91. *Eucalyptus melanophloia*, F.M. (Silver-leaved Ironbark.)—Diameter, 18 to 24 inches; height, 30 to 70 feet. Middle-sized tree, with a blackish, persistent, deeply-furred bark, the foliage more or less glaucous or mealy white; timber used for railway sleepers, and for fencing and other purposes. Market value, from 8s. to 10s. per hundred feet.

92. *Eucalyptus crebra*, F.M. (White narrow-leaved Ironbark).—Diameter, 20 to 36 inches; height, 70 to 90 feet. A fair-sized tree, with a hard, blackish, rough, persistent bark; producing an excellent timber—hard, tough, and durable—valuable for building purposes. Market value, from 8s. to 9s. per hundred feet.

93. *Eucalyptus leptophleba*, F.M.—Diameter, 18 to 36 inches; height, 50 to 80 feet. Moderate-sized or large tree; timber hard and durable.

94. *Eucalyptus citriodora*, Hook (Citron-scented Gum.)—Diameter, 18 to 34 inches; height, 40 to 70 feet. A middle-sized tree with a smooth bark. The foliage emitting a strong odour of citron when rubbed. Timber hard and durable; used for house carpentry.

95. *Eucalyptus acmenioides*, Schau.—Diameter, 18 to 30 inches; height, 40 to 60 feet. Of frequent occurrence in the forest on the coast. Timber heavy, strong, and durable; has been found good for flooring-boards and other purposes.

96. *Eucalyptus Planchomana*, F.M.—Diameter, 18 to 30 inches; height, 50 to 80 feet. A tall tree, producing an excellent timber; valuable for wheelwright and other purposes.

97. *Eucalyptus Baileyana*, F.M.—Diameter, 20 to 30 inches; height, 40 to 70 feet. A moderate-sized tree, with a furred and fibrous Vandyke-brownish coloured bark. Of the quality of the timber hardly anything is known.

98. *Callistemon lanceolatus*, D.C. (Bottle Brush Tree.)—Diameter, 12 to 18 inches; height, 30 to 40 feet. Small tree, growing in or near the beds of rivers; wood, hard and heavy; is used for ship-building, wheelwrights, and many implements, such as mallets, &c.

99. *Callistemon salignus*, D.C. (Broad-leaved Tea-tree.)—Diameter, 18 to 24 inches; height, 40 to 60 feet. Wood, hard and close-grained; very durable underground.

100. *Melaleuca genistifolia*, Sm.—Diameter, 20 to 24 inches; height, 30 to 40 feet. Moderate-sized tree, wood close-grained, hard, and durable.

101. *Melaleuca leucadendron*, Linn. (White Tea-tree.)—Diameter, 24 to 40 inches; height, 40 to 80 feet. Moderate-sized tree, timber hard and close-grained, excellent for posts in damp ground and piles for wharves, and is said to be imperishable underground.

102. *Melaleuca styphelioides*, Sm. (Prickly-leaved Tea-tree.)—Diameter, 4 to 10 inches; height, 20 to 30 feet. Small-sized tree, timber hard, close-grained; stands well in damp situations. It has been said that this timber has never been known to decay.

103. *Melaleuca linariifolia*, Sm.—Diameter, 10 to 14 inches; height, 30 to 40 feet. Small-sized tree; timber hard, close, and durable.

104. *Melaleuca nodosa*. (Tea-tree.)—Diameter, 10 to 20 inches; height, 30 to 40 feet. Small tree, qualities same as 102 and 103.

105. *Tristania conferta*, R. Br. (Box.)—Diameter, 35 to 50 inches; height, 80 to 100 feet. A large spreading tree, with a smooth, brown, deciduous bark, and dense foliage; very generally distributed on open forest ground. The timber is much prized for its strength and durable qualities, Market value, from 8s. to 9s. per hundred feet. Used in ship-building; ribs of vessels from this tree have lasted unimpaired thirty years and more.

106. *Tristania neriifolia*, R.Br.—A small but handsome tree, found along the banks of fresh water streams; timber very close and elastic; used for carpenters' mallets and cogs of wheels in machinery.

107. *Backhousia myrtifolia*, Hook and Harv.—Diameter, 12 to 18 inches; height, 20 to 40 feet; small tree; timber close-grained, and prettily marked.

108. *Backhousia citriodora*, F.M.—Diameter, 6 to 12 inches; height, 20 to 30 feet. Small-sized tree, wood hard and fine-grained; useful for several purposes.

109. *Myrtus acmenioides*, F.M.—Diameter, 12 to 18 inches; height, 30 to 40 feet. Small tree, frequent in the scrubs; timber close-grained; not much used.

110. *Myrtus Hillii*, Benth. (Scrub Ironwood.)—Diameter, 6 to 12 inches; height, 20 to 40 feet. Small-sized tree; wood remarkably hard.

111. *Rhodamnia trinervia*, Blum.—Diameter, 10 to 18 inches; height, 20 to 30 feet. Small tree; wood close-grained and firm.

112. *Rhodomyrtus psidioides*, Benth.—Diameter, 12 to 20 inches; height, 30 to 40 feet. Frequent in the scrubs; wood close-grained; not much known.

113. *Rhodamnia argentea*, Benth.—Diameter, 15 to 22 inches; height, 40 to 60 feet. Found in great abundance in moist low scrubs; wood tough and firm.

114. *Myrtus Bidwillii*, Benth.—Diameter, 6 to 10 inches; height, 15 to 20 feet. Timber, close-grained; not much known.

115. *Eugenia Ventenatii*, Benth.—Diameter, 18 to 20 inches; height, 40 to 60 feet. Of frequent occurrence in moist scrubs; wood close-grained, and of a pinkish hue.

116. *Eugenia Smithii*, Poir. (Lilly Pillies).—Diameter, 12 to 18 inches; height, 30 to 40 feet; wood close, but apt to split in seasoning.

117. *Eugenia grandis*, Wight.—Diameter, 20 to 36 inches; height, 40 to 70 feet. A large and handsome tree; timber, close-grained; not much known.

118. *Eugenia angophoroides*, F.M.—Diameter, 12 to 18 inches; height, 30 to 40 feet. Small-sized tree; timber but little known.

119. *Syncarpia laurifolia*, Ten. (Turpentine-tree of Frazer's Island.)—Diameter, 48 to 96 inches; height, 70 to 100 feet. A magnificent tree, with a rough persistent bark on the trunk, but more or less deciduous on the branches. Timber valuable for piles and posts for timber fences; very durable underground, and said to resist the *tesido navalis* in salt water. Market value, 7s. to 8s. per hundred feet.

120. *Lysicarpus ternifolius*, F.M.—Diameter, 18 to 24 inches; height, 40 to 50 feet. A middle-sized tree, with a soft thick fibrous bark. Timber is hard, heavy, and elastic, prettily marked, used for cabinet work, but more particular for piles, bridges, railway sleepers, &c.

PROTEACEÆ.

121. *Grevillea robusta*, R. Br. (Silky Oak.)—Diameter, 30 to 40 inches; height, 80 to 100 feet. A lofty tree, of frequent occurrence in the scrubs along the coast, and for a considerable distance in the interior. The wood is extensively used for staves for tallow casks and is in much repute for cabinet work. At the present the sawyers are receiving at the rate of 8s. to 9s. per hundred feet.

122. *Grevillea Hilliana*, F.M.—Diameter, 10 to 18 inches; height, 40 to 60 feet. A beautiful tree, found in dense scrubs on the banks of the Logan and Albert Rivers. Wood easily wrought; not used.

123. *Grevillea gibbosa*, R. Br.—Diameter, 8 to 12 inches; height, 20 to 30 feet. A small tree, occurring in the forest ground on the bank of the Don River. Wood fine-grained and nicely marked.

124. *Grevillea polystachya*, R. Br.—Diameter, 12 to 18 inches; height, 30 to 45 feet. A handsome tree; timber strong, durable, prettily marked; used for cabinet work, &c.

125. *Macadamia ternifolia*, F.M. (Queensland Nut.)—Diameter, 3 to 12 inches; height, 30 to 50 feet. A small-sized tree with a very dense foliage. Found in dense, moist scrubs on the banks of rivers; wood firm, fine-grained, and takes a good polish. This tree bears an edible nut of excellent flavour, which is relished by the white colonists as well as by the aborigines. It forms a nutritious article of food to the latter, and, in consequence, the same restriction with regard to this tree, as in the case of *Araucaria Bidwillii* (Bunya Bunya), is made in the licenses issued for cutting timber.

126. *Stenocarpus sinuatus*, Endl. (Tulip-tree.)—Diameter, 18 to 30 inches; height, 40 to 50 feet. A charming, moderate-sized tree, with dense, bright, glossy foliage. It occurs often in scrubs, some distance from the coast. The wood is nicely marked, and would admit of a good polish.

127. *Stenocarpus salignus*, R. Br. (Beef-wood.)—Diameter, 18 to 24 inches; height, 30 to 50 feet. A middle-sized beautiful tree. Timber is red-coloured, close in the grain, hard, and splits easily; valuable for the finer kinds of coopers' work.

128. *Orites excelsa*, R. Br.—Diameter, 6 to 14 inches; height, 30 to 40 feet. Of frequent occurrence in the scrubs bordering the coast. Timber hard, nicely marked, and takes a good polish.

129. *Banksia integrifolia*, Linn. (Beef-wood.)—Diameter, 8 to 12 inches; height, 20 to 30 feet. Occurring on sandy ridges near the coast and for a considerable distance inland.

129A. *Banksia aemula*, R. Br.—Diameter, 9 to 15 inches; height, 20 to 30 feet. Small-sized tree, found on sandy ridges on the coast; wood prettily marked.

130. *Xylomelum pyriforme*, Knight. (Native Pear.)—Diameter, 3 to 6 inches; height, 12 to 18 feet. Small-sized tree, occurring on sandy ridges; wood nicely marked.

RHIZOPHOREÆ.

131. *Bruguiera Rheedii*, Blume. (Mangrove.)—Diameter, 6 to 12 inches; height, 12 to 20 feet. Small tree; timber handsome; bark is astringent and used for tanning purposes.

SANTALACEÆ.

132. *Exocarpus latifolia*, Br. (Broad-leaved Cherry-tree.)—Diameter, 6 to 9 inches; height, 15 to 25 feet. Small tree, of frequent occurrence in scrubs on the coast; the timber is very hard and fragrant; excellent for cabinet-work.

133. *Exocarpus cupressiformis*, Labill. (Cherry-tree.)—Diameter, 4 to 8 inches; height, 10 to 16 feet. Small tree, found sparingly on open forest ground. The wood is close-grained and handsome.

134. *Santalum lanceolatum*, R. Br. (Sandal-wood.)—Diameter, 3 to 6 inches; height, 15 to 25 feet. A small tree, sparingly distributed through the brigalow scrubs. The wood is close-grained, and takes a good polish.

MYOPORINEÆ.

135. *Eremophila Mitchelli*, Benth. (Bastard Sandal-wood.)—Diameter, 6 to 12 inches; height, 20 to 30 feet. Small tree, of frequent occurrence in open forest land in the Darling Downs District. Timber very hard, beautifully grained, and very fragrant; makes handsome veneers for cabinet-work.

136. *Myoporum acuminatum*, (*Var. parviflorum*), R. Br.—Diameter, 4 to 9 inches; height, 12 to 15 feet. Timber soft and light.

137. *Myoporum platycarpum*, R. Br.—Diameter, 12 to 15 inches; height, 15 to 25 feet. A small tree, wood close-grained, not used.

VERBENACEÆ.

138. *Avicennia officinalis*, Linn. (Mangrove.)—Diameter, 19 to 24 inches; height, 20 to 30 feet. Found on salt-water estuaries; timber used for knees of boats, stonemasons' mallets, etc.

139. *Gmelina Leichhardtii*, F.M. (Beech.)—Diameter, 24 to 42 inches ; height, 80 to 120 feet. Found in the scrubs bordering the rivers on the coast. A very useful timber, strong and durable, and easily worked ; it does not expand by damp or contract by dry weather ; much prized for the decks of vessels and the flooring of verandahs.

140. *Vitex lignum-vitae*, A. Cunn. (Lignum Vitæ.)—Diameter, 20 to 24 inches ; height, 50 to 70 feet. A tree of general occurrence in the moist low scrubs bordering the coast. The timber is hard, close-grained, and of a blackish colour, used by cabinet-makers, &c.

MONIMIACEÆ.

141. *Daphnandra micrantha*, Benth.—Diameter, 18 to 30 inches ; height, 60 to 80 feet. Moderate-sized tree, occasionally found in low moist scrubs. Timber quite yellow when fresh, takes a fine polish, and is easily worked.

LAURINEÆ.

142. *Endiandra pubens*, *Meissn.*—Diameter, 19 to 24 inches ; height, 40 to 70 feet. Moderate-sized tree, of general occurrence in the scrubs on the banks of the Brisbane and Albert Rivers. Timber not as yet used.

143. *Tetranthera ferruginea*, R. B.—Diameter, 14 to 20 inches ; height, 30 to 40 feet. Wood close-grained, not used.

144. *Cryptocarya patentinervis*, F. M.—Diameter, 12 to 20 inches ; height, 30 to 40 feet. A small-sized tree ; timber of apparent value, but not used for any purpose.

TILEACEÆ.

145. *Elæocarpus obovatus*, G. Don.—Diameter, 12 to 20 inches ; height, 30 to 40 feet. A tree common in the scrubs on the banks of the Brisbane River ; wood fine-grained, not yet used.

146. *Elæocarpus grandis*, F. M.—Diameter, 24 to 36 inches ; height, 80 to 90 feet. This tree is frequent in the moist low scrubs along the coast, the trunk is erect, the bark smooth, the branches, with their thin, bright-green, glossy foliage, are thinly scattered over its lofty head ; the wood is soft and easily worked ; it is likely to be serviceable for breaks for railway carriages.

CORNACEÆ.

147. *Marlea vitiensis*, Benth. (Musk-tree.)—Diameter, 9 to 12 inches ; height, 20 to 30 feet. A small-sized tree, generally with a gouty trunk ; bark dark-coloured, rough and scaly ; wood bright-yellow, with a fine undulating appearance, black at the centre ; found in moist low scrubs.

JASMINEÆ.

148. *Olea paniculata*, R. Br. (Native Olive.)—Diameter, 18 to 24 inches ; height, 50 to 70 feet. A moderate-sized tree, of frequent occurrence in the scrubs both on the coast and also in the interior ; timber close-grained, hard, and durable.

149. *Notelæa ovata*, R. Br. (Dunga Vunga.)—Diameter, 6 to 12 inches ; height, 20 to 30 feet. A slender tree, found in scrubs ; wood close-grained.

150. *Notelæa longifolia*, Vent.—Diameter, 12 to 18 inches ; height, 30 to 40 feet. A small tree ; timber hard, close-grained.

151. *Notelæa microcarpa*, R. B.—Diameter, 9 to 12 inches ; height, 30 to 45 feet. A tree of frequent occurrence on the border of scrubs on the coast ; wood hard and close-grained.

EUPHORBIACEÆ.

152. *Mallotus claoxyloides*, F. M.—Diameter, 9 to 16 inches ; height, 15 to 30 feet. Occurring both in moist low scrubs and in dry rocky places. Timber white, hard, and close-grained.

153. *Mallotus philippinensis*, F. M.—Diameter, 6 to 14 inches ; height, 30 to 45 feet. Small tree, generally found in rich scrubs. Wood close-grained and very tough.

154. *Mallotus nesophilus*, F. M.—Diameter, 12 to 18 inches ; height, 35 to 45 feet. Of frequent occurrence in low and moist scrubs on the coast. Wood of a uniform white colour, soft and easily worked.

155. *Petalostigma quadriloculare*, F. M. (Crab-tree.)—Diameter, 12 to 18 inches ; height, 40 to 50 feet. Found in great abundance growing on poor sandy soil in the open forest. The timber is hard and fine-grained, and promises to be useful to the cabinet-makers.

156. *Excœcaria agallocha*, Linn. (River Poisonous Tree.)—Diameter, 6 to 18 inches; height, 20 to 30 feet. Found on the estuaries of salt-water creeks and rivers. Produces by incision in the bark an acrid, milky juice, which is so volatile that nobody, however, careful, can gather a quarter of a pint without being affected. The symptoms are an acrid burning sensation in the throat, sore eyes and head-ache; a single drop falling into the eyes it is believed will cause loss of sight. The natives of Eastern Australia, as well as those of New Guinea, Fiji, &c., use this poisonous juice to cure certain ulcerous chronic diseases. Wood light, white, and soft; will answer for carving and marqueterie.

157. *Briedelia exaltata*, F. M.—Diameter, 12 to 18 inches; height, 30 to 45 feet. Not unfrequent in moist low scrubs on the coast. Timber hard and close-grained.

158. *Dissiliaria baloghioides*, F. M. (Teak.)—Diameter, 18 to 20 inches; height, 40 to 60 feet. Moderate-sized tree, found in great abundance in the coast scrubs. Timber hard, close-grained, and durable.

159. *Mallotus discolor*, J. Mull.—Diameter, 12 to 18 inches; height, 35 to 45 feet. Of frequent occurrence in low moist scrubs along the coast. Wood of a uniform white color, soft, and easily worked.

160. *Croton Verreauxii*, Baill (Cascarilla.)—Diameter, 8 to 12 inches; height, 30 to 40 feet. A small-sized tree, bark gray and rough, with a red sap. Wood of a yellowish-white color; wood soft, and of no value; the bark contains an agreeable bitter.

161. *Baloghia lucida*, Endl. (Scrub Blood-wood.)—Diameter, 8 to 16 inches; height, 30 to 40 feet. A small-sized tree, abundant in the coast scrubs; timber not used.

URTICEÆ.

162. *Celtis ingens*, F. M.—Diameter, 6 to 12 inches; height, 25 to 35 feet. A small tree, of frequent occurrence in the coast scrubs. Wood white, soft, and pliable; used for hoops for casks.

163. *Aphananthe philippinensis*, Plan.—Diameter, 4 to 12 inches; height, 20 to 40 feet. This species abounds in moist scrubs. Timber not used.

164. *Laportea photiniphylla*, Widd. (Nettle-tree.)—Diameter, 15 to 24 inches; height, 30 to 50 feet. A beautiful tree; wood soft, spongy; the bark is used for making fishing nets.

165. *Ficus asper*, Forst. (Rough-leaved Fig.)—Diameter, 9 to 18 inches; height, 30 to 45 feet. Timber of no apparent value.

166. *Morus calcar galli*, Cunn. (Cockspur Thorn.)—A rambling thorny climber; duramen or heartwood. Dark-yellow colour, hard, and used in dyeing yellow and brown.

SAPOTACEÆ.

167. *Hormogyne cotinifolia*, D. C.—Diameter, 6 to 9 inches; height, 20 to 30 feet. Small tree, wood close grained.

168. *Chrysophyllum pruniferum*, F.M.—Diameter, 12 to 20 inches; height, 30 to 70 feet. Moderate-sized tree, sparingly distributed over moist low scrubs. Wood of a uniform pale yellow color, close-grained.

169. *Achras Pohlmanniana*, F.M.—Diameter, 8 to 18 inches; height, 20 to 60 feet. Small tree, frequent in moist scrubs. Timber hard and close-grained.

170. *Achras myrsinoides*, A. Cunn.—Diameter, 8 to 12 inches; height, 20 to 35 feet. Small tree, frequent in low moist scrubs. Timber hard and close-grained.

171. *Achras obovata*, F.M.—Diameter, 8 to 12 inches; height, 20 to 35 feet. Small tree, frequent in low moist scrubs. Timber hard and close-grained.

EBENACEÆ.

172. *Cargillia australis*, R. Bv.—Diameter, 6 to 12 inches; height, 30 to 40 feet. Timber very tough and firm, and likely to be used for many purposes.

173. *Maba fasciculosa*, F.M.—Diameter, 18 to 24 inches; height, 60 to 80 feet. Of common occurrence in the scrubs bordering on river banks. Wood tolerably close-grained.

174. *Maba geminata*, R. Br.—Diameter, 9 to 12 inches; height, 50 to 60 feet. Slender tree, found growing in scrubs. Wood soft and tough.

175. *Diospyros hebecarpa*, A. Cunn.—Diameter, 12 to 18 inches; height, 30 to 50 feet. Handsome tree, occurring in moist scrubs on the coast. Timber soft, elastic; used for pick-handles, &c., &c.

CLASSES 613-620.—*Arboriculture and Forest Products.*

SAXIFRAGEÆ.

176. *Ceratopetalum apetalum*, Don. (Coach-wood.)—Diameter, 24 to 36 inches; height, 70 to 90 feet. A beautiful tree, with long cylindrical stem. Wood soft, light, tough, and close-grained, of agreeable fragrance; good for joiners and cabinet work; often in request for coach building.

APOCYNEÆ.

177. *Alstonia constricta*, F.M. (Fever-bark.)—Diameter, 6 to 20 inches; height, 40 to 50 feet. This tree is of frequent occurrence in low moist scrubs, as well as in the dry brigalow scrubs. Bark thick yellow, deeply fissurated, of intense bitterness. It is said that this bark possesses the same properties as quinine.

LEGUMINOSÆ.

178. *Acacia falcata*, Willd.—Diameter, 6 to 12 inches; height, 20 to 30 feet. Small tree; wood hard, and much prized for making stockwhip handles.

179. *Acacia glaucescens*, Willd.—Diameter, 12 to 18 inches; height, 30 to 45 feet. Of frequent occurrence both in the scrubs and in open forest lands; wood close-grained, and prettily marked.

180. *Acacia Cunninghamii*, Hook.—Diameter, 9 to 12 inches; height, 20 to 30 feet. Small-sized tree; wood close-grained, and takes a good polish; found on the banks of the Brisbane.

181. *Acacia salicina*, Lindl.—Diameter, 6 to 12 inches; height, 30 to 40 feet. Found on scrubby land in the Darling Downs District; timber close-grained, and nicely marked.

182. *Acacia implexa*, Benth.—Diameter, 12 to 16 inches; height, 30 to 40 feet. Small tree, found on open forest ground; wood hard, and close-grained.

183. *Acacia harpophylla*, F.M.—Diameter, 12 to 20 inches; height, 40 to 70 feet. A tall erect tree of general occurrence in the Rosewood scrubs; timber hard, heavy, and elastic, of a dark color, giving a strong odour of violets.

184. *Acacia excelsa*, Benth. (Brigalow.)—Diameter, 20 to 30 inches; height, 50 to 80 feet. This species covers immense tracks of rich scrub land; wood hard, close-grained, of a dark color, used for building purposes, fencing, &c.

185. *Acacia doratoxylon*, A. Cunn.—Diameter, 6 to 12 inches; height, 20 to 35 feet. In scrubs and open forest ground; wood hard, and close-grained.

186. *Acacia decurrens* (*var mollis.*), Lindl.—Diameter, 6 to 10 inches; height, 30 to 40 feet. This species is of very frequent occurrence through the Darling Downs.

187. *Acacia pendula*, A. Cunn. (Weeping Myall.)—Diameter, 6 to 12 inches; height, 20 to 35 feet. Small weeping tree, well known for its violet-scented wood, which is hard, close-grained, and beautifully marked; used by cabinet-makers and turners; in high repute for tobacco pipes.

188. *Acacia stenophylla*, A. Cunn. (Ironwood.)—Diameter, 15 to 24 inches; height, 40 to 60 feet. On open forest ground on the Darling Downs. Timber is very hard, heavy, close-grained, dark, beautifully marked, and takes a fine polish.

189. *Acacia neriifolia*, A. Cunn.—Diameter, 6 to 18 inches; height, 40 to 50 feet. Found on the Albert River; the trunk is beautifully streaked with green and white. The duramen is of a light-yellow color, not unlike yellow-wood, but somewhat harder.

190. *Acacia penninervis*, Sieb.—Diameter, 2 to 10 inches; height, 6 to 12 feet. Scattered through open stony ridges.

191. *Acacia macradenia*, Benth. (Myall or Toney.)—Diameter, 2 to 12 inches; height, 30 to 50 feet. In scrubs and open forests; beautiful black, hard, and close-grained wood, taking a very high polish.

192. *Acacia farnesiana*, Willd. (Dead Finish.)—Diameter, 3 to 6 inches; height, 12 to 18 feet. Wood close, heavy, taking a good polish.

193. *Acacia cultriformis*, A. Cunn.—Diameter, 2 to 3 inches; height, 12 to 18 feet. Wood soft, nicely marked.

194. *Acacia linifolia*, Willd.—Diameter, 4 to 6 inches; height, 12 to 18 feet. In more or less open forests; wood soft and elastic; suitable for axe handles.

195. *Acacia fasciculifera*, F.M.—Diameter, 6 to 15 inches; height, 20 to 30 feet. Timber very hard, heavy, tough, and close-grained.

196. *Acacia Gnidium*, Benth.—Diameter, 6 to 12 inches; height, 12 to 25 feet. Wood close-grained, black, hard, and takes a good polish.

197. *Albizzia canescens*, Benth.—Diameter, 15 to 20 inches; height, 30 to 50 feet. A beautiful spreading tree, found in open forests; wood close-grained and tough.

198. *Albizzia pracera*, Benth.—Diameter, 18 to 24 inches ; height, 30 to 60 feet. A very ornamental tree ; timber is close-grained, easily worked, and in use for building purposes.

199. *Albizzia Thozetiana*, F.M.—Diameter, 12 to 30 inches ; height, 40 to 60 feet. A tree of common occurrence in stony scrubs in the Kennedy District. Timber very hard, heavy, tough, and close-grained. May prove useful for gun stocks, &c., &c.

200. *Peltophorum ferrugineum*, Benth.—Diameter, 24 to 30 inches ; height, 40 to 80 feet. A large and handsome tree, in the open forest ground on the banks of Mackay ; the timber is much in request for cabinet-work, &c., &c.

201. *Erythrina vespertilio*, Benth. (Coral-tree.) Diameter, 12 to 15 inches ; height, 30 to 40 feet. Rather frequent both on the coast and in the interior ; a beautiful tree when in flower ; wood soft, and is used by the aborigines for making their shields.

202. *Castanospernum australe*, A. Cunn. (Moreton Bay Chestnut.)—Diameter, 24 to 36 inches ; height, 80 to 90 feet. A magnificent ornamental tree, with large pinnate, green glossy leaves ; of frequent occurrence on the banks of rivers, &c. The timber is dark and prettily grained, not unlike walnut ; occasionally used for cabinet work, for which purpose it seems to be well suited.

203. *Barkleya syringifolia*, F.M.—Height, 40 to 60 feet. A handsome and beautiful tree, with dense bright green glossy foliage ; on fertile banks and flats of rivers ; also on basaltic ridges.

204. *Cassia Brewsteri*, F.M.—Diameter, 3 to 6 inches ; height, 30 to 50 feet. A small tree, of frequent occurrence in the "Brigalow" scrubs ; wood fine-grained.

205. *Galactia tenuiflora*, Willd.—Diameter, 3 to 9 inches ; height, 200 to 300 feet. An immense woody climber, outgrowing the tallest trees in the moist scrubs ; the trunk is often found coiled on the ground like a huge serpent ; the wood is dark-brown, soft, spongy, and pervaded with numerous capillary tubes ; apparently of little durability.

ROSACEÆ.

206. *Parinarium nonda*, F.M. (The Nonda tree of North-east Australia.)—Diameter, 8 to 24 inches ; height, 50 to 60 feet. A very ornamental spreading tree, with pendant, foliage. The aborigines use the esculent drupes as food. Timber is soft, close-grained and easily worked.

COMBRETACEÆ.

207. *Terminalia discolor*, F.M.—Diameter, 3 to 6 inches ; height, 10 to 15 feet. Very plentiful in the scrubs near Rockhampton ; wood close-grained and tough.

208. *Terminalia melanocarpa*, F.M.—Diameter, 6 to 12 inches ; height, 15 to 25 feet. Occurring in the forest land near Port Denison ; timber hard and tough, splitting freely.

MALVACEÆ.

209. *Lagunaria Patersoni*, Don.—Diameter, 18 to 30 inches ; height, 40 to 60 feet. Found on the alluvial river banks of the Don River, Port Denison ; timber white, close-grained, easily worked, and used for building purposes.

TILIACEÆ.

210. *Grewia latifolia*, F. Br.—Diameter, 6 to 8 inches ; height, 10 to 20 feet. Wood hard, close-grained, and takes a good polish.

EPACRIDEÆ.

211. *Trochocarpa laurina*, F.M.—Diameter, 6 to 12 inches ; height, 20 to 30 feet. Very plentiful in the cedar scrubs ; also upon the sandy ridges upon Frazer's and other islands. Wood hard, close-grained, tough ; useful for turning, &c.

212. *Leucopogon lanceolatus*, R. Br.—Diameter, 3 to 6 inches ; height, 12 to 15 feet. Very abundant on Stradbroke and Frazer's Islands ; wood hard, close-grained, and beautifully marked.

URTICEÆ.

213. *Ficus*, sp. ? (Poison-tree.)—Diameter, 12 to 14 inches ; height, 40 to 50 feet. A slender-spreading tree, frequently met with in Brigalow scrubs ; the wood is soft, fine-grained, and elastic ; the juice of it is pure-white and nauseous ; a single drop falling into the eye will injure the sight.

214. *Ficus vesca*, F.M. (Clustered Fig-tree.)—Diameter, 18 to 48 inches ; height, 50 to 80 feet. Found on the alluvial banks of rivers and creeks. The fruit, which is of a

light red colour when ripe, hangs in clusters along the trunk and on some of the largest branches, and is used by the aborigines.

215. *Ficus macrophylla*, Desf. (Moreton Bay Fig.)—Diameter, 36 to 76 inches; height, 50 to 100 feet. A large and magnificent wide-spreading tree; yielding its milk-sap copiously for caoutchouc.

PALMÆ.

216. *Livistonia australis*, Mart. (Cabbage-tree.)—Diameter, 12 to 18 inches; height, 40 to 80 feet. The lofty stem is covered with leaves in a dense mass, orbicular in circumscription when fully out, 3 to 4 feet diameter. The young leaves can be plaited as a material for hats.

217. *Livistonia inermis*, R. Br. (Partridge Wood.)—Diameter, 12 to 15 inches; height, 14 to 40 feet. A beautiful and handsome tree; the outer portion of its trunk is very hard, beautfully marked, and takes a good polish.

218. *Ptychosperma elegans*, Blume. (Bangalow.)—Diameter, 6 to 12 inches; height, 60 to 80 feet. A lofty magnificent feathery-leaved palm tree; its wood is used for rails for fences. It is destined to take here a prominent position in decorative plantations.

PANDANEÆ.

219. *Pandanus pedunculatus*, R. Br. (Screw Pine.)—Diameter, 6 to 12 inches; height, 18 to 30 feet. This singular and stately plant for scenic group planting occurs in great abundance on the coast lands. The fruit is eagerly used by the aborigines.

FILICES OR FERNS.

220. *Alsophila australis*, R. Br. (Tree Fern.)—Diameter, 3 to 9 inches; height, 20 to 50 feet. This beautiful tree is frequent in shaded ravines and permanently damp woods under Mount Lindsay; wood prettily marked.

MYRTACEÆ.

221. *Leptospermum flavescens*, Sm.—Diameter, 8 to 5 inches; height 15 to 20 feet. Frequent about freshwater creeks; wood hard and close-grained.

222. *Eucalyptus platyphylla*, F.M.—Diameter, 12 to 18 inches; height, 40 to 50 feet. A handsome tree, with a light green foilage and smooth white deciduous bark. The timber is dark, close-grained; excellent to put in damp places.

223. *Owenia acidula*, F.M.—Diameter, 12 to 18 inches; height, 30 to 50 feet. A handsome small tree, occurring in the brigalow scrubs near Ipswich; wood close-grained, and nicely marked.

224. *Acacia Bidwilli*, Benth.—Diameter, 10 to 16 inches; height, 20 to 30 feet. A small-sized tree; timber hard, close-grained, and takes a good polish.

225. *Ixora triflora*, R.Br.—Diameter, 6 to 12 inches; height, 20 to 30 feet. Small tree; wood hard, close-grained, and capable of a high polish.

226. *Hibiscus tiliaceus*, Linn.—Diameter, 6 to 8 inches; height, 20 to 50 feet. Of frequent occurrence on the coast; wood soft; the bark is used for nets and fishing lines by the aborigines.

227. *Cadellia pentastylis*, F.M.—Diameter, 6 to 12 inches; height, 30 to 50 feet. Wood hard, close-grained, and used for mauls.

228. *Careya arborea*, Rox.—Diameter, 12 to 20 inches; height, 30 to 50 feet. A very beautiful tree, occurring on the banks of rivers of the northern coast. Wood fine-grained, and nicely marked.

229. *Cryptocarya obovata*, R. Br.—Diameter, 12 to 20 inches; height, 30 to 40 feet. Found in moist and sandy scrubs on the coast; wood soft and tough.

230. *Fusanus acuminatus*, R.Br. (Quandong.)—Diameter, 10 to 14 inches; height, 20 to 30 feet. Timber seldom used.

231. *Eremophila bignoniæfolia*, F.M.—Diameter, 6 to 9 inches; height, 20 to 30 feet. A small tree, sparingly distributed through the brigalow scrubs. The wood is white, close-grained, and takes a good polish.

232. *Eucalyptus rostrata*, Sch. (Flooded gum.)—Diameter, 40 to 48 inches; height, 80 to 100 feet. A majestic tree, inhabiting the rich alluvial flats upon the banks of the rivers, and in such localities has a pillar-like trunk clear of branches for three-fourths of its entire height. The timber is of high repute for strength and durability. The market value at the present time is from 8s. to 9s.

SCANTLINGS.

3 feet long and 3 to 4 inches thick.

233. *Alphitonia excelsa.* (Mountain or red ash.)
234. *Melaleuca leucadendron.* (White tea-tree.)
235. *Sarcocephalus cordatus.* (Leichhardt-tree.)
236. *Melia composita.* (White cedar.)
237. *Grevillea striata.* (Silky oak.)
238. *Araucaria Cunninghamii.* (Moreton Bay pine.)
239. *Frenela Endlicheri.* (Cypress pine.)
240. *Owenia venosa.* (Sour plum.)
241. *Owenia ceresifera.* (Rose apple.)
242. *Eucalyptus corymbosa.* (Bloodwood.)
243. *Eucalyptus melanophloia.* (Silver-leaved ironbark.)
244. *Eucalyptus siderophloia.* (Ironbark.)
245. *Eucalyptus citriodora.* (Citron-scented gum.)
246. *Eucalyptus tereticornis.* (Red gum.)
247. *Eucalyptus botryoides.* (Blue gum.)
248. *Eucalyptus rostrata.* (Flooded gum.)
249. *Flindersia australis.* (Flindosæ.)
250. *Flindersia Oxleyana.* (Light yellow wood.)
251. *Harpullia pendula.* (Tulip wood.)
252. *Podocarpus elata.* (She-pine.)
253. *Cedrela Toona.* (Red cedar.)
254. *Grevillea robusta.* (Silky oak.)
255. *Gmelina Leichhardti.* (Beech.)
256. *Dammara robusta.* (Kauri or Dundathu pine.)

WALKING STICKS.

(*Prepared by W. S. Mackay, Albert-street, Brisbane.*)

257. *Ptychosperma Alexandræ*, F. M. (The Alexandra palm.)—Diameter, 6 to 9 inches; height, 40 to 60 feet. An extremely handsome feathery-leaved palm tree. Its wood is very beautifully marked, and is in much favour for walking sticks.

258. *Kentia Minor* F.M. (Slender walking stick palm.)—Diameter, ¼ to ½ an inch; height, 4 to 6 feet. This species of palm forms elegant tufts, crowned with twelve to sixteen leaves or fronds. The stems are in great repute for walking sticks.

259. *Kentia monostachya*, F.M. (Walking stick palm.)—Diameter, 1 to 1½ inch; height, 6 to 12 feet. The stems have been exported to England for umbrella handles and walking sticks.

260. *Flagellaria indica*, Linn.—A tall glabrous climber, ascending to the tops of large trees; occurring in great abundance in the moist scrubs extending from the southern borders of Queensland to Cape York.

This collection comes next in importance to the New South Wales exhibit of the Department of Mines.

CAREY, J. W., Brisbane.

A neatly arranged trophy of forty slabs of polished timber showing different woods procurable in Queensland. As these are unnamed, and no information given regarding them they are of little practical utility.

GOVERNMENT OF QUEENSLAND.

An artistically arranged and ornamental stand with turned and polished cups and drops illustrating 133 varieties of timber indigenous to the Colony. The lower part of the stand and pillar are of turned beech (Gmelina Leichhardtii). The upper portion and pillar turned from red cedar (Cedrela toona, Rox.) The upper shelf of cypress pine (Frenela Endlicheri, Parlat.) The urn of dark yellow wood (Rhus rhodanthema). This is an interesting and instructive way of exhibiting the different Timbers of the Colony.

A very finely finished and artistically arranged stand of 142 cups, turned and polished, illustrating the varieties of timber indigenous to the Colony. Basement of red cedar (cedrela toona), with mounting of tulip wood (harpullia pendula) ; second shelf, Kauri pine (dammara robusta) ; third shelf, of beech (Gmelina Leichardtii); fourth shelf, of cypress pine (frenela endlicheri); pillars, white wood (ligularia Patersoni) ; fern tree (alsophila australis) ; surbase, Kauri pine (dammara robusta) ; second shelf, red cedar (cedrela toona) ; third shelf, cypress pine (frenela endlicheri); third tier, caarworibra (dissilaria baloghoides); the vase, acacia (harpophylla)—rosewood. This we consider an interesting and instructive way of exhibiting the different Timbers of the Colony, and is calculated to attract general attention.

M'Ghie, Luya, & Co., Brisbane.

This is a splendid specimen, showing a transverse section of the Kauri Pine (*Dammara robusta*). The section is polished, and measures 6 feet in diameter, 12 feet from the ground.

Rockhampton Committee.

This is a collection of 50 varieties of timbers. They are beautifully shown specimens in $\frac{1}{4}$ sections, showing polished surfaces, rough timber and bark.

Sturgess, Henry, Rockhampton.

A neatly arranged trophy to show native timber in the first stages of manufacture. Very creditably shown, but not named.

NEW ZEALAND.

Auckland Harbour Board.

This is a most interesting collection of timbers, showing the durability of different woods when exposed to the action of water. A most instructive exhibit.

Bagnall Bros., Thames.

A good sample-board, of great size, of Kahikatea (Podocarpus dacrydoides), (A. Rich.), the white pine of New Zealand. A very fine tree, 100 to 150 feet high. Trunk, 4 feet diameter. Timber white, tough, soft, and well adapted for indoor work, but will not bear exposure. Abundant throughout the Northern and Middle Islands. When grown on dry soil it is good for the planks of boats, but when from swamps it is almost useless. A variety of this tree known as yellow pine, is largely sawn in Nelson, and considered to be a durable building timber.

Campbell, Dr. L., Kaipara.

Two fine specimens of sawn timber :—1st sample, 10 feet by $4\frac{1}{2}$ feet by 6 inches ; 2nd sample, 16 feet by $4\frac{1}{2}$ feet by 3 inches. These are magnificent specimens of sawn timber.

Colonial Museum, Wellington.

A good and suggestive exhibit of 30 specimens of New Zealand timbers, rough and polished, with 48 specimens, showing the breaking strain of different varieties of woods. The following information has been given regarding them.

The following table gives the results of experiments, extending over a period of some years, made on the strength of the principal timbers of the Colony :—

RESULTS OF EXPERIMENTS ON NEW ZEALAND TIMBERS.

[The dimensions of the specimens experimented on were 1 inch square and 12 inches long.]

No.	No. in Description.	Native Names in Alphabetical Order.	Specific Gravity.	Weight of a Cubic Foot.	Greatest weight carried with unimpaired elasticity.	Transverse Strength.
				lbs.	lbs.	lbs.
1	40	Hinau, or Pokako (*Elæocarpus dentatus*)	·562	33·03	94·0	125·0
2	—	Kahika, supposed white pine	·502	31·28	57·3	77·5
3	7	Kahikatea, white pine (*Podocarpus dacrydoides*)	·488	30·43	57·9	106·0
4	1	Kauri (*Dammara australis*)	·623	38·96	97·0	165·5
5	2	Kawaka	·637	39·69	75·0	120·0
6	20	Kohekohe (*Dysoxylon spectabile*)	·678	42·25	92·0	117·4
7	46	Kowhai (*Sophora tetraptera* var. *grandiflora*)	·884	55·11	98·0	207·5
8	21	Maire, black maire (*Eugenia maire*)	1·159	72·29	193·0	314·2
9	21	Maire (*Eugenia maire*)	·700	49·24	106·0	179·7
10	39	Mako (*Aristotelia racemosa*)	·593	33·62	62·0	122·0
11	—	Manoa (*Dacrydium colensoi*)	·788	49·1	200·0	230·0
12	—	Mangi, or mangeo (*Tetranthera calicaris*)	·621	38·70	109·0	137·8
13	16	Manuka (*Letospermum ericoides*)	·943	59·00	115·0	239·0
14	—	Mapau, red mapau, or red birch (*Myrsine urvillei*)	·991	61·82	92·0	192·4
15	4	Mapau, or tarrata, black mapau (*Pittospermum tenuifolium*).	·955	60·14	125·0	243·0
16	—	Matai (*Podocarpus spicata*)	·787	49·07	133·0	197·2
17	6	Miro (*Podocarpus ferruginea*)	·658	40·79	103·0	190·0
18	—	Puriri (*Vitex littoralis*)	·959	59·5	175·0	223·0
19	17	Rata, or iron wood (*Metrosoideros lucida*)	1·045	65·13	93·0	196·0
20	34	Rewarewa (*Knightia excelsa*)	·785	48·92	93·0	161·0
21	8	Rimu, red pine (*Dacrydium cupressinum*)	·563	36·94	92·8	140·2
22	—	Ruino, supposed red pine	·604	37·63	94·0	163·0
23	30	Taraire (*Nesodaphne taraire*)	·888	55·34	99·6	112·3
24	31	Tawa (*Nesodaphne tawa*)	·761	47·45	142·4	205·5
25	47	Tawiri-kohu-kohu, white mapau, or white birch (*Carpodontos serratus*)	·822	51·24	80·0	177·6
26	44	Titoki (*Alectryon excelsum*)	·916	57·10	116·0	248·0
27	5	Totara (*Podocarpus totara*)	·559	35·17	77·0	133·6
28	12	Nowai, red birch (*Fagus Menziesii*)	·626	38·99	73·6	158·2
29	13	Towai, black birch (*Fagus fusca*)	·780	48·62	108·8	202·5
30	21	Whawhako (see also Maire) (*Eugenia maire*)	·637	39·63	75·0	120·0
31	—	Whau (*Eutetia aborescens*)	·187	11·76	13·0	32·0

The experiments were conducted in the following manner :—A pressure of 50 lbs. was applied for 2 minutes (as measured by a sand-glass) and the sample was then released ; 75 lbs. was then applied for the same time, and then 100 lbs., and so on, increasing by 25 lbs. each time. Each time the sample was released the point on the deflection scale to which it returned was read, and when it came to be notably under the original reading it was allowed to remain unloaded for 2 minutes, to see whether it would in time recover itself. Then the pressure was gradually increased, without being removed, until it broke.

CLASSES 613–620.—*Arboriculture and Forest Products.*

COMMISSION FOR REPRESENTATION OF NEW ZEALAND.

Two magnificent specimens showing transverse sections and slab of Kauri timber, the former 8 ft. in diameter and the latter 16 ft. in height + 5 ft. 6 in. diam.

These are most valuable specimens and show the great size that the Colony can produce. The following information will be most interesting regarding it:—

Order Coniferæ. Genus Dammara (L'Héritier).

Dammara australis (Lambert).

KAURI.—The kauri is the finest forest tree in New Zealand, and attains a height of 120–160 feet. The trunk is sometimes 80–100 feet high before branching, and attains a diameter at the base of 10 to 20 feet.

The timber is in high repute for masts and spars, deck and other planking of vessels, and is largely used for house finishings. There is abundant evidence of its durability for more than 50 years in some of the old mission buildings at the Bay of Islands; the buried logs of an ancient Kauri forest near Papa Kura were excavated and found to be in perfectly sound condition, and were used for sleepers on the Auckland and Waikato Railway. On the Thames gold-field it is used for mine props, struts, and cap pieces. It forms the bulk of the timber exported from New Zealand.

Some of the largest and soundest kauri timber has richly mottled shading, which appears to be an abnormal growth, due to the bark being entangled in the ligneous growth, causing shaded parts, broad and narrow according as the timber is cut relative to their planes. It makes a rich and valuable furniture wood, especially that variety of the timber known as mottled kauri.

The kauri pine occurs only in the North Island, and north of Mercury Bay, and grows best near the sea, on wet clay land. The kauri forests are largely composed of other trees, as well as their characteristic tree.

The turpentine of this tree forms the celebrated kauri gum, which is extensively excavated from the sites of old forests as far south as Taranaki. In 1871 there were exported 5,053 tons, valued at £167,958; in 1875, 2,230 tons, valued at £138,528; and in 1877, 3,632 tons, valued at £118,348.

Dammara australis var. mottled kauri.

This is the finest single specimen of timber in the Exhibition.

HAAST, PROFESSOR JULIUS VON, Ph. D., F.R.S., Director Canterbury Museum

A collection of forty-one varieties of truncated sections of Rough and Polished Timbers, fully named as follows:—

2. Melecytus ramiflorus
3. Pittosporum tenuifolium
4. Olearia ilicifolia
6. Plagianthus betulinus
10. Elæocarpus Hookerianus
11. Pennantia corymbosa
13. Alectryon excelsum (Titoki)
15. Sophora tetraptera
16. Carpodetus serratus
17. Leptospermum ericoides (Manuka)
19. Fuschia excorticata
21. Panex crassifolium (Lancewood)
24. Griselina littoralis
26. Dodonea viscosa
27. Myrsine urvillei
29. Epicarpurus microphyllus
33. Podocarpus ferruginea
39. Libocedrus Bidwilli
40. Phyllocladus alpinus
41. Plagianthus Lyallii
42. Cracophyllum traversii
44. Podocarpus totara
45. Elæocarpus dentatus
46. Fagus fusca
47. Aristotelia racemosa
48. Panax Colensoi
49. Dacrydium Colensoi
50. Weinmannia racemosa
51. Dacrydium cupressimum
52. Panax edgerleyi
53. Pittosporum tenuifolium
54. Panax crassifolium
55. Metrosideros lucida (Rata)
56. Discaria australis
57. Myoporum lœtum
58. Coprosma liniarifolia
59. Fuschia excorticata
60. Panax crassifolium (Lancewood)
61. Epicarpurus microphyllus
62. Pennantia corymbosa
63. Panax Edgerleyi

A most interesting and instructive collection; creditably exhibited.

HOKITIKA COMMITTEE.

An interesting collection of thirty varieties of New Zealand timbers from Westland, in small blocks, partly polished. This is an interesting and instructive collection, carefully named and described.

HOLDSHIP, G., Auckland.

Fine specimen of Kauri timber. (Dammara australis.)

ISAACS, ED., Auckland.

A most interesting exhibit showing the natural secretion of Kauri gum in the native timber. This is of a most instructive character, and shows a layer of gum ½ an inch in thickness, and surrounded by the wood.

POTTS, T. H., Christchurch.

This is a most interesting and instructive exhibit of seed-vessels and seeds of forest trees and plants. This is of a most instructive character.

ROBERTSON & Co., J. W., Queenstown.

Three good specimens of birch totara (Podocarpus totara, A. Cunningham). This is a most useful timber for commercial purposes. It is found as a lofty and spreading tree, 60 to 120 feet high, 4 feet 10 inches diameter. Wood very durable and clean-grained, in appearance like cedar, and works with equal freedom; it is adapted for every kind of carpenters' work. It is used extensively in Wellington for house-building and piles, for marine wharfs and bridges and railway sleepers, &c.; it is one of the most valuable timbers known. The wood when felled during the growing season resists for a longer time the attacks of the teredo worms. It splits easily, and is durable as fencing and shingles. Totara post and rail fences are expected to last 40 or 50 years.

The Maoris made their largest canoes from this tree, and the palisading of their pahs was constructed almost entirely of this wood.

Grows throughout the North and Middle Island upon flat and hilly ground. The timber from trees grown on hills is found to be more durable.

SOUTH AUSTRALIA.

ADELAIDE COMMISSION, Adelaide.

This is an interesting collection of nine varieties of Timbers, comprising specimens of the following woods, with their common designations :—

Iron-bark,	Tecoma,
Paper-bark,	Cypress,
Eucalyptus,	Pine,
Native Ficus,	Red-flowered Cotton-wood.
Lance-wood,	

These timbers are indigenous to the northern territory, and have been well polished to show their economic value, but are unseasoned. No particulars are given to show their commercial usefulness.

DAVENPORT, S., Beaumont.

These are four specimens of Myall-wood, beautifully polished, and well shown. Good specimens of this variety of timber.

SCHOMBURGK, Rd., Ph. D., &c., Director of the Botanic Gardens, Adelaide.

This is an interesting botanical collection of forty-eight specimens of South Australian forest trees. These are exhibited in half sections of trunks, polished. Of this collection the following sixteen alone are named, viz. :—

Local Name.	Botanical Name.	Economic Uses.
Red Gum	Eucalyptus rostrata	Used for fencing posts ; makes good railway sleepers ; very hard and durable.
Mallee	Eucalyptus dumosa	Used for firewood and fencing ; hard and durable.
Peppermint	Eucalyptus odorata	Splendid wood for naves of carriage wheels.
Silver Wattle ...	Acacia dealbata	The bark is valuable for tanning purposes, and is exported in large quantities.
Blackwood.....	Acacia melanoxylon	
Stringy-bark	Eucalyptus obliqua ..	Used for fence rails and shingles.
Cherry-tree	Exocarpus cupressiformis.	
Honeysuckle	Banksia marginata.	
She-oak	Casuarina quadrivalvis.	Used for axe-handles and wheel-spokes.
White Gum	Eucalyptus siderophloia.	
Blue Gum	Eucalyptus viminalis	
Red Gum	.....	Used for post-rails and sleepers ; hard and durable.
Plank	.....	
Black Oak	.....	Used for furniture.
Sandal-wood	Santalum acuminatus	,, ,,
Mulga	.....	

The Judges regret that fuller information has not been given regarding the economic and commercial value of these timbers.

STRAITS SETTLEMENTS.

GUTHRIE & Co., Singapore.

A good exhibit of 17 varieties of Rattans, named and priced as follows :—

1	bundle	Indigairi Loonty,	18s.	per picul	=133⅓ lbs.
1	,,	Siak ,,	38s.	,,	,,
1	,,	Pasir ,,	34s.	,,	,,
1	,,	Pakatau ,,	30s.	,,	,,
1	,,	Kayong ,,	30s.	,,	,,
1	,,	Coton ,,	34s.	,,	,,
1	,,	Banger ,,	30s.	,,	,,
1	,,	Boclanger Segar,	20s.	,,	,,
1	,,	Cotie Sega,	20s.	,,	,,
1	,,	Pahang Sega,	18s.	,,	,,
1	,,	Kuy Loonty Ayer,	18s.	,,	,,
1	,,	Boogis ,,	11s.	,,	,,
1	,,	Sambas ,,	12s.	,,	,,
1	,,	Kang Boey ,,	10s.	,,	,,
1	,,	Pontianac Ayer,	7s.	,,	,,
1	,,	Boondood ,,	11s.	,,	,,
1	,,	Sarawak ,,	11s.	,,	,,

We class this exhibit in the First order of Merit, as it is the finest exhibit of Rattans ever exhibited in the Colony.

PATERSON, SIMONS, & Co., Singapore.

Well-preserved samples of two varieties of Rattans. We commend this exhibit.

TAN TEK GUAN, Malacca.

An interesting collection of 29 specimens of Straits Settlements Timbers. These are well described, and useful information is given regarding the economic value of the different specimens, as follows :—

Local Name.	Economic Value or Uses.
Biliau Bangee	For building houses ; strong and durable.
Marabow	For ordinary use in building houses and making furniture.
Rasuck	Do. do. do. while the Chinese use it for junk masts.
Dewa Daroo	For building purposes.
Tambusoo	For making tubs, &c. ; durable when used in damp soil.
Pannaga	For handles for hoes and axes.
Bladang	For making Chinese coffins ; said to last for 100 years under ground.
Spow	For building houses and bridges.
Brombong	For piles ; durable in damp soil.
Klat	Commonly used for building houses.
Klat Merah	Do. do.
Lanjot.....	Do. do.
Galam Samaga	For building houses.
Madang Tamah.....	For making furniture ; used by the natives.
Madang Parawas ...	For chisel work.
Madang Talor	For building houses.
Madang Teop Teop.	Do.
Lampong Pookat ...	For floating fishing-nets.
Myatoh	For rafters and ordinary use.
Serayah .. , ...	For planks.
Kaymooning	For making fancy boxes ; and the root is used for making handles for krisses.
Ensanna	Valuable for making furniture and boxes.
Poodeak	For building boats ; grows on sea-coast and sandy ground.
Mandang Kayam ...	For making furniture.
Rambay Dahan.....	For building purposes.
Jangot Kalee.....	Do.
Yampadoo	Do.
Laban	For ordinary use, and making handles for carpenters' tools.
Gulotong	For making sandals.

This is a useful collection for reference.

TASMANIA.

COMMISSIONERS FOR SYDNEY INTERNATIONAL EXHIBITION, Launceston.

This is an instructive collection of 28 varieties of Tasmanian Woods, neatly shown, varnished, and named as follows :—

Local Name.	Botanical Name.
Native Willow	Acacia suavolens.
Var. Soporal	Do. longifolia.
Var. Limaria.....	Do. do.
Black Wattle.....	Do. decurrens.
Black Wood, var. A.....	Do. melanoxylon.
Do. var. B.....	Do. do.
Light Wood, var. A.....	Do. do.
Do. var. B.....	Do. do.
Swamp Tea-tree	Melaleuca ericæfolia.
Flowering Tea-tree	Leptosermum linigerum.

Local Name.	Botanical Name.
Peppermint	Eucalyptus amygdalina.
(No name)	Leptospermum myrtifolium.
White Gum	Eucalyptus vinimatis.
Blue Gum	Do. globulus.
She Oak	Casuarina quadrivalvis.
He Oak	Do. suberosa.
Native Cherry	Exocarpus cuprissiformis.
Honeysuckle	Banksia marginata.
Myrtle	Fagus Cunninghamii.
Native Box-tree	Bursaria spinosa.
Bastard Dogwood	Pomaderris apetala.
Native Sandalwood	Alyxia buxifolia.
Iron Wood	Notelæa ligustrina.
Huon Pine, A	Dacrydium Franklini.
Do. B	Do.
(No name)	Ozothamnus rosmarinifolis.
Red Pine	Asterotaxia selaginoides.
Native Cypress	Frenela australis.

MILLS, PETER, Launceston.

This is a beautifully polished sample of Blackwood, prepared for counters. This sample shows the economic value of this variety of timber.

REID, A. M., Leven.

This is an exhibit of two large fléches of Myrtle and Blackwood, measuring as follows :—The myrtle, 7 feet × 2 feet × 10 inches. This specimen has evidently been cut green as it is considerably split. The Black-wood, 8 feet × 20 inches × 10 inches. Good solid timber. The Judges consider these interesting specimens. Also ten specimens of five varieties of Tasmanian woods, showing rough and polished sections of timber, with cards, describing them as follows :—

Local Name.	Botanical Name.
Black-wood	Acacia melanoxylon.
Musk	Eurybia argophylla.
Myrtle	Fagus Cunninghamii.
Stringy-bark	Eucalyptus obliqua.
White Gum	Eucalyptus viminalis.

This exhibit shows care in its arrangement, and is very creditable.

ROYAL SOCIETY OF TASMANIA, Hobart Town.

An interesting collection of twenty-seven varieties of Tasmanian woods. These are most creditably shown, being well polished, having the local and botanical names attached. They are as follows :—

Local Name.	Botanical Name.
Gum, plain	Eucalyptus sp. ?
Gum, figured	Eucalyptus sp. ?
Native Cherry	Exocarpus cupressiformis.
Native Laurel	Anopterus glandulosa.
Celery-topped Pine	Phyllocladus rhomboidalis.
Stringy-bark	Eucalyptus obliqua.
Prickly Wattle	Acacia diffusa.
Silver Wattle	Acacia dealbata.
Musk, plain	Eurybia argophylla.
Musk, figured	Eurybia argophylla.
Myrtle, plain	Fagus Cunninghamii.
Myrtle, figured	Fagus Cunninghamii.
Black-wood, plain	Acacia melanoxylon.

Local Name.	Botanical Name.
Black-wood	Acacia melanoxylon, (root of).
Sassafras	Atherosperma moschata.
Honeysuckle	Banksia australis.
He-Oak	Casuarina suberosa.
She-Oak	Casuarina quadrivalvis.
Tea-tree	Leptospermum.
Ironwood	Rotelœa ligustrina.
Native Bear	Hakea lissosperma.
Dogwood	Bedfordia salicina.
Native Box	Bursaria spinosa.
Peppermint	Eucalyptus amygdalina.
Pink-wood	Croton sp?.
White-wood	Pittosporum bicolor.
Pepper-tree	Tasmania aromatica.

This collection is a most interesting one.

STEPHENS, THOS., Holbrook Place, Hobart Town.

This is a collection of 4 specimens of Tasmanian Woods, well shown, comprising the following varieties :—Iron-bark, Scented Wood, Pencil Cedar, King William Pine.

The Judges consider that this last would be a most valuable timber, if it could be obtained in quantity.

VICTORIA.

GUILFOYLE, W. R., Director Botanic Gardens, Melbourne.

A valuable collection of Australian Woods, being of a most instructive character, and comprising a full and descriptive list of 117 varieties of the various woods of the Australian Colonies. The collection shows great care in its preparation ; and the following is a complete list of the different specimens shown :—

Local Name.	Botanical Name.	Economic Uses.
Black Wattle	Acacia decurrens ... Ord. Leguminosæ.	A handsome tree, of quick growth, attaining in favourable situations a height of 80 feet, with a circumference of stem in many instances proportionately large. It is gregarious in its habits, and often grows in subalpine situations as well as in low-lying lands. Many forms or varieties occur—A. decurrens, var. Mollis, A Mollissima (Willdenow) being that more generally met with in Victoria. The wood even in a green state furnishes excellent fuel. It is also used for staves of casks and rustic work. The bark is extensively used for tanning purposes, yields a dye, and a good writing ink ; and it is gaining a considerable repute medicinally, on account of its astringent properties. Habitat—Victoria, New South Wales, S. Australia, Queensland, and Tasmania.

CLASSES 613–620.—*Arboriculture and Forest Products.*

Local Name.	Botanical Name.	Economic Uses.
Golden Wattle ...	Acacia pycnantha ... Ord. Leguminosæ.	A handsome tree, attaining a height of 30 feet or more, with a smooth reddish brown bark ; young branches often clothed with a rich bloom. It bears a profusion of golden yellow blossoms, and when in full flower presents a brilliant appearance in the landscape. Like A. decurrens, this species is gregarious in habit. It is frequently met with on river banks, but more commonly on knolls, and usually on poor ground. It exudes a transparent gum in large quantities, which is known in commerce as Australian Gum Arabic. The wood is tough and close-grained, the bark affording a first-class tanning material. Habitat—Victoria and South Australia.
Bald Acacia	Acacia retinoides ... Ord. Leguminosæ.	A small glaucous tree, attaining a height of 20 to 25 feet ; chiefly met with in open country and adjacent to water-courses. The wood is prettily grained, tough, and durable. A pale transparent gum exudes from the trunk. The bark is astringent, and valuable for tanning purposes. Habitat—Victoria and South Australia.
Prickly Acacia ...	Acacia armata ..... Ord. Leguminosæ.	A tall prickly shrub, or small tree ; height, 10 to 20 feet. Chiefly met with on stony rises and sandy ridges along portions of the coast, and a considerable distance inland. It is one of the commonest hedge plants in Australia. The wood is beautifully grained, sound, and durable, fit for cabinet work, &c. Habitat—Victoria, N. S. Wales, South Australia, and Western Australia.
Weeping Acacia..	Acacia saligna ..... Ord. Leguminosæ.	A small dense-headed tree with a stout, glabrous trunk and pendulous branches ; height, 10 to 30 feet. Wood prettily grained, and suitable for cabinet-work. Habitat—Western Australia.
Prickly Wattle...	Acacia juniperina ... Ord. Leguminosæ.	A rigid, much-branched shrub ; height, 8 to 12 feet. It forms dense, almost impenetrable scrub, on moist sandy ground on portions of the coast-line, and is commonly found as an underwood in mountain gullies and ravines. The wood is light, white and tough, and much esteemed by splitters for maul handles. This species would form good hedges. Habitat—Victoria, New South Wales, Queensland, and Tasmania.
Coast Acacia	Acacia longifolium, Vert. sophora. (Müeller.) Syn. A. Sophoræ. (Brown.) Ord. Leguminosæ.	A decumbent shrub, very suitable for binding shifting sands. It is found chiefly on barren sandy ridges and rocky declivities along the coast. Wood white, hard, tough, and durable. Habitat—Victoria, New South Wales, South Australia, and Tasmania.
Whorled Acacia..	Acacia verticillata.... Ord. Leguminosæ.	This species closely resembles A. juniperina, already described, in foliage, habit and quantity of wood, and is often confounded with the latter. Habitat—Victoria and Tasmania.

CLASSES 613–620.—*Arboriculture and Forest Products.*

Local Name.	Botanical Name.	Economic Uses.
Silver Wattle ..	Acacia dealbata..... Ord. Leguminosæ.	One of the most beautiful of Australian trees. It is essentially an inhabitant of the banks of rivers and watercourses. Its feathery and glaucious foliage contrast charmingly with the sombre tints of the surrounding vegetation, and when seen overhanging a mountain stream it presents a very pleasing appearance. In favourable situations it attains a height of 100 feet, and is of exceedingly quick growth. It is closely allied to A. decurrens, the common or black-wattle of the colonists, but stills retains characteristic features sufficiently distinct to be classed as a separate species, although some botanists regard it as a mere form of variety of the latter. The wood is highly prized for staves of casks, rustic work, and fuel. The bark is largely used for tanning purposes. A transparent gum issues from the trunk somewhat like gum-arabic. Habitat—Victoria, New South Wales, and Tasmania.
Erect Acacia	Acacia stricta..... Ord. Leguminosæ.	A pretty shrub, attaining a height of from 3 to 8 feet, chiefly met with on the seaboard in sandy soil. Wood of a beautiful texture, sound, and durable. Habitat—Victoria, New South Wales, and Tasmania.
Juniper Wattle ..	Acacia oxycedrus. ... Ord. Leguminosæ.	A rigid, much-branched shrub, attaining a height of from 3 to 8 feet. It is commonly met with on healthy grounds associated with Ecapris impressa. Wood hard and tough. Habitat—Victoria, New South Wales, South Australia, and Tasmania.
Reed-leaved Acacia.	Acacia calimifolia ... Ord. Leguminosæ.	A tall glabrous shrub with smooth greenish bark. It is chiefly found on barren sandy plains in the interior, but is also met with near the coast on some portions of the Australian continent. Wood hard and tough. Habitat—Victoria, New South Wales, and South Australia.
Varnish Wattle...	Acacia verniciflua ... Ord. Leguminosæ.	A tall shrub or small tree, height, 10 to 20 feet ; common on river banks, rocky declivities, and forest gullies. Wood, hard and durable. A resinous gum exudes from the trunk. Habitat—Victoria, New South Wales, South Australia, and Tasmania.
Twisted Acacia ...	Acacia implexa ..... Ord. Leguminosæ.	A medium sized slender tree not unlike A. melanoxylon, the Blackwood, and very often confounded with the latter. Invariably an inhabitant of well watered valleys, banks of rivers, creeks, &c. Wood excellent, of a rich brown colour, very little inferior to Blackwood. Habitat—Victoria, New South Wales, and Queensland.
Sweet-scented Acacia.	Acacia suaveolens ... Ord. Leguminosæ.	A small shrub ; height, 3 to 8 feet. Found chiefly on good ground, but often on steep rocky places along the coast. Habitat—Victoria, New South Wales, Queensland, and Tasmania.

CLASSES 613–620.—*Arboriculture and Forest Products.*

Local Name.	Botanical Name.	Economic Uses.
Blackwood	Acacia melanoxylon. Ord. Leguminosæ.	More commonly known amongst the settlers as Lightwood. A magnificent timber-tree, in some localities attaining a great height. Trees 9 feet in girth are frequently met with in Tasmania and the Bass Ranges, Victoria. The wood is light, cross-grained, and easily worked; the heart-wood is beautifully marked, generally of a rich brown colour, and of a silky lustre when dressed. The kgnarled closely resemble walnut, to which it is not inferior. It is extensively used for furniture, cabinet-work, tallow-casks, and coopers' work in general, for carriages, pianos, &c. For water work it is almost imperishable. Habitat—Victoria, New South Wales, South Australia, and Tasmania. Usually found on rich alluvial soils.
Pointed Acacia ...	Acacia longifolium var. mucronata; Syn., A. mucronata. Ord. Leguminosæ.	A tall, arborescent tree, attaining a height of 15 feet. Wood heavy, dense, and beautifully grained, suitable for fancy cabinet work. Habitat—Victoria and Tasmania.
Moreton Bay Hoop Pine.	Araucaria Cunninghamii. Ord. Coniferæ.	A noble timber-tree of pyramidal form, in favourable situations attaining a height of 200 feet. It is principally met with on rich alluvial soil adjacent to water-courses not very far inland. Wood excellent, fit for building-purposes, &c. Habitat—Queensland and New South Wales.
Bunya Bunya Pine.	Araucaria Bidwilli ... Ord. Coniferæ.	One of the most magnificent trees of the genus, an inhabitant of lofty wooded hills. Height under favourable circumstances, 150 feet. When planted in good soil in Victoria it is of very rapid growth, and luxuriates in the most intense heat of summer. The wood is resinous, of a yellowish colour, hard, close-grained, and very durable. It is much used for building purposes. The nut borne in gigantic cones forms a favourite food of the aborigines. Habitat—Queensland.
Fragrant Myall Wood.	Acacia homalophylla. Ord. Leguminosæ.	On the banks of the Murray River this species grows to a considerable size; the trunk sometimes attains a diameter of 18 inches, and furnishes the most beautiful and fragrant wood of all the acacias. It is in great request for the manufacture of fancy pipes, rulers, stockwhip handles, napkin rings, &c., &c. According to Allan Cunningham it was formerly employed by the natives of New South Wales for spears. Habitat—Victoria and New South Wales.
Native Mangrove	Avicennia officinalis. Ord. Verbenaceæ.	This plant is very plentiful on many parts of our coast; it is found chiefly on mud flats in bays, creeks, and inlets. The wood is exceedingly pretty, tough, and dense; the annulations present an undulated appearance, is very durable in under-ground and water works, and is very suitable for mallets, cabinet work, &c. The sawdust is peculiarly pungent and fœtid. The wood furnishes a superior pot-ash and the bark is rich in tanning. Habitat—sea-coasts of Australia, Tasmania, and New Zealand, Tropical Asia, Africa, and America.

CLASSES 613–620.—*Arboriculture and Forest Products.*

Local Name.	Botanical Name.	Economic Uses.
Victorian Sassafras.	Atherosperma moschata. Ord. Monimiaceæ.	A beautiful tree, leaves glabrous, of a bright green on the upper side, and glaucous underneath. It grows to a great size, the base of the trunk often measuring 7 feet in circumference. It is invariably associated with the native beech or myrtle (Fagus Cunninghamii). The wood is close grained, very tough, easily worked, and much esteemed for shoe-makers' lasts. The bark is very valuable on account of its aromatic and astringent properties, and enters largely into the composition of Colonial sarsaparilla. Habitat—Victoria and Tasmania.
	Achras sp. ?..... Ord. Sapotaceæ.	Habitat—Queensland.
Lirate Daisy Tree.	Asterolearia stellellata. Vert. lirato. Syn. A. liratus. Ord. Compositæ.	A straggling shrub, 8 to 10 feet high, found chiefly on banks of rivers, &c. It bears a profusion of white flowers, and when in full bloom presents a very pleasing appearance. Habitat—Victoria and Tasmania.
Ash Grey, Victorian Salt Bush	Atriplex Cinerea..... Ord. Chenopodiaceæ	A divaricate, usually decumbent shrub, though sometimes growing to a considerable height. It is very plentiful along the sea-shore, growing down to high-water-mark. Wood tough and curiously marked. Habitat—Victoria, New South Wales, South Australia, Queensland, and Tasmania.
Prickly Victorian Box.	Bursaria spinosa..... Ord. Pittosporeæ.	In the neighbourhood of Melbourne this is a graceful tree, 20 to 30 feet in height, in alpine and sub-alpine situations it is a straggling bush. It bears a profusion of white panicled privet-like flowers. The bruised leaves and young twigs emit an odour somewhat like that of wild parsnips. The wood is very white, exceedingly hard, tough, and durable. Habitat—throughout Australia; several forms of this plant occur on the north-east coast.
Coast Honeysuckle.	Banksia integrifolia.. Ord. Proteaceæ.	A beautiful tree when well-grown; the leaves are entirely of a dark glossy green on the surface and silvery grey underneath. In the vicinity of Frankston and Mordialloc (Port Phillip), and on Phillip Island, Western Port Bay, very large and handsome specimens are met with. The wood is dense, heavy, and beautifully grained, suitable for fancy work, but very perishable when exposed to atmospheric influences, but otherwise durable. A valuable tree for coast planting, as it thrives on the most barren sandy places. Habitat—Victoria, New South Wales, and Queensland.
Cotton-wood or Cotton-tree, known in Gippsland as Blanket-tree.	Bedfordia salicina, Syn. Senseis Bedfordia. Ord. Compositæ.	A very remarkable shrub or small tree, in many of our fern gullies, and on the sides of mountains in rich forest soils, often growing to a height of 20 feet or more. The young shoots and leaves are clothed with a close white tomentum, hence the name cotton-tree. In some parts of Gippsland it is known as the blanket-tree. The wood is heavy and emits a fœtid smell when cut. Habitat—Victoria and Tasmania.

CLASSES 613–620.—*Arboriculture and Forest Products.*

Local Name.	Botanical Name.	Economic Uses.
West Australian Coast Honey-suckle.	Banksia littoralis ... Ord. Proteaceæ.	A bushy tree, of slow growth; height, 20 to 40 feet; wood beautifully grained, of a rich brown colour, suitable for cabinet and inlaid work. Habitat—Western Australia, usually on the coast.
Norfolk Island Blood-wood.	Baloghia lucida ..... Ord. Euphorbiaceæ.	A beautiful shrub or small tree; height, 10 to 20 feet. Wood hard, close-grained, of a resinous nature. The tree yields by incision a red sap, which forms an indelible pigment, hence the name blood-wood. The bark yields a brown dye. Habitat—New South Wales, Queensland, Norfolk Island and New Caledonia.
Drooping or Coast She-oak.	Casuarina stricta..... Ord. Casuarineæ.	A graceful tree, with a round undulated head of pendent branches, found chiefly along the coast down to high-water-mark, and clothing steep hills for a considerable distance inland, its presence being considered usually indicative of good ground. The wood is heavy, close-grained, and tough, and is much used for knees of boats, gun-stocks, rustic work, &c. One of the best of our fuel trees. Habitat—Victoria, New South Wales, South Australia, and Tasmania.
Erect She-oak or Beef-wood.	Casuarina suberosa (Otto & Dietrich). Ord. Casuarineæ.	An erect tree of pyramidal form, very quick of growth, foliage dense, of a bright green. Its presence is invariably indicative of good land. The wood of old trees is of a red colour, hence the local name beef-wood. It is beautifully grained, tough, elastic, and durable, suitable for knees of boats, axe-handles, gun-stocks, &c. Habitat—Victoria, New South Wales, Queensland, and Tasmania.
Stunted She-oak..	Casuarina dystila..... (Vent.) Ord. Casuarineæ.	A rigid shrub, attaining a height of from 3 to 8 feet; found chiefly in swampy heath ground. The wood is very tough.
Sharp-pointed Cassinia.	Cassinia aculeata..... (R. Brown.) Ord. Compositæ.	A white-flowered shrub, inhabiting banks of creeks and other watercourses. Wood white and hard. Habitat—Victoria, New South Wales, South Australia, and Tasmania.
Victorian Wood-bine.	Corposma hirtella ... (Labillard.) Ord. Rubiaceæ.	A pretty shrub, 4 to 8 feet high, luxuriating in rich, damp, forest soil, banks of creeks, &c. In sub-alpine situations its clusters of bright scarlet berries and lucid foliage form a very pleasing object in the landscape. The wood is hard, tough, and prettily grained, fit for paper-knives and inlaid work. Habitat—Victoria, New South Wales, and Tasmania.
New South Wales Red Cedar.	Cedrela Toona..... (Roxburgh.) Syn. C. Australis. (F. von Müller.) Ord. Meliaceæ.	A noble timber tree. In the bushlands of New South Wales (north) specimens 150 feet high and 10 feet in diameter are frequently met with. It is commonly known to the colonists as red cedar, and in Indian commerce as "chittagong" wood. The timber is highly prized for furniture, panelling, cabinet-work, &c. The bark is astringent, and has proved a valuable remedial agent in fevers, dysentery, &c. The flowers are used in some parts of India for producing a red dye. Habitat—New South Wales, Queensland, and India.

CLASSES 613–620.—*Arboriculture and Forest Products.*

Local Name.	Botanical Name.	Economic Uses.
Blood-coloured Net-bush.	Calothamnus sanguineus. (Labillard.) Ord. Myrtaceæ.	A tall divaricate shrub of great beauty, usually a coast plant. Wood hard and close-grained. Habitat—Western Australia.
New Zealand Looking-glass bush.	Caprosma lucida..... (Forster.) Ord. Rubiaceæ.	A tall divaricate glabrous small tree or shrub, with smooth pale bark. "Kalamou," "Karamu," and "Karangu" wood, close and prettily grained. Habitat—New Zealand.
Willow Bottle Brush.	Callistemon salignus (De Candolle.) Ord. Myrtaceæ.	A tall shrub or small tree, an inhabitant of river banks; wood very hard, close-grained, and durable. Many forms or varieties of this species occur. Habitat—Victoria, New South Wales, South Australia, Queensland, and Tasmania.
Queensland Kauri Pine.	Dammara robusta.... (C. Moore.) Ord. Coniferæ.	A fine erect timber tree, found in dense forests near the coast, where trees nearly 200 feet high are met with. It is of quick growth, and furnishes excellent timber for building purposes, &c. Habitat—Queensland.
New South Wales Cork-wood.	Duboisia myoporoides (R. Brown.) Ord. Scrophularineæ.	A bushy tree of quick growth; wood very succulent in a green state. When well seasoned, however, it is light and compact, and might be used for wood-carving. Habitat—New South Wales and Queensland.
Victorian Lignum Vitæ.	Dodonæa viscosa. Var. spathulata. (Bentham), Syn. D. Conferta (Dow.) Ord. Sapindaceæ.	A tall shrub or small tree, found along the coast, on barren sandy ridges and rocky declivities. The wood is exceedingly dense, close-grained, and durable, of a very flinty nature, so much so that in cutting it the face of a well-tempered axe is often broken. The heart wood is greenish black, streaked with rose. It is fit for sheaves of ship's blocks, rulers, tree-nails, turnery, inlaid work, and for many other purposes. Habitat—sea-coast of Australia, New Zealand, Tasmania, Islands of the South Pacific, and South America.
Victorian Olive-berry Tree.	Elægnus cyaneus (Aiton.) Ord. Tiliaceæ.	A beautiful leafy tree, attaining in shady gullies and ravines a height of 80 feet. In the vicinity of Melbourne the plant is rather slow of growth. Wood very hard, close-grained, and tough, suitable for axe-handles, shafts, &c. Habitat—Victoria, N. S. Wales, and Queensland.
Native Cherry Tree.	Exocarpus cupressiformis (Labillard.) Ord. Santalaceæ.	One of the most beautiful of indigenous trees. In favourable situations it attains a height of 35 feet or more; diameter of stem, 15 inches to 2 feet. The wood is of a rich brown colour, like most of the Santalaceæ, is very close-grained, but easily worked and very durable, well adapted for cabinet-work, furniture, &c. Habitat—Victoria, N. S. Wales, South Australia, Queensland, and Tasmania.
	Eucalyptus corynocalyx (F. von Müller.) Ord. Myrtaceæ.	A tall shrub or small tree. Wood hard and durable, much used as fuel. Habitat—South Australia.

CLASSES 613–620.—*Arboriculture and Forest Products.*

Local Name.	Botanical Name.	Economic Uses.
Western Gum ...	Eucalyptus occidentalis (Endlicher). Ord. Myrtaceæ.	A slender tree ; height, 30 to 80 feet ; of quick growth ; wood hard, heavy, and durable ; used for posts, fence-rails, fuel, &c. Habitat—Western Australia.
Yeit-tree	Eucalyptus cornuta. (Labillard.) Ord. Myrtaceæ.	A small dense-headed tree, usually with smooth light-coloured bark and glaucous foliage. Wood heavy, close-grained, and sound. Habitat—Western Australia.
Common Blue Gum.	Eucalyptus globulus. (Labillard.) Ord. Myrtaceæ.	Known on the Continent of Europe as the fever-tree. A magnificent timber tree, of amazingly rapid growth. On the Bass Ranges (Victoria) and in Tasmania it attains an enormous height, often running up to a height of nearly 400 feet. The timber is excellent, and is much used for piles, sleepers, spokes of wheels, shafts, for naval architecture, buildings, &c., &c. This tree is now extensively planted in Italy, Algeria, Egypt, California, and many other countries, not only for the value of the wood, but as a preventive of fever. Habitat—Victoria and Tasmania.
Victorian ironbark (Black Mountain Ash of N. S. Wales).	Eucalyptus sideroxylon (A. Cunningham). Ord. Myrtaceæ.	A graceful tree, attaining a height of 100 feet. The timber is excellent, and is employed extensively in wheelwright's work, timbering for mining shafts, &c. Habitat—Victoria, N. S. Wales, and S. Australia.
Messmate	Eucalyptus fissilis (F. von Müller). Ord. Myrtaceæ.	A tree of gigantic size, and of rapid growth, wood in great request for shingles, palings, quartering-battens, fence-rails, and fuel. The bark can be utilized as an admixture in paper-making, and for stuffing mattresses, chairs, &c. Used as a roofing material by the settlers. Habitat—Victoria, N. S. Wales, and Tasmania.
Yellow Box	Eucalyptus melliodora. (A. Cunningham.) Ord. Myrtaceæ.	A medium-sized tree, wood of a yellow colour, exceedingly hard and tough ; used for fuel. Habitat—Victoria and N. S. Wales.
Giant Gum or Stringy Gum of the Mountains.	Eucalyptus Amygdalina (Vent.), regnans (Endlicher.) Ord. Myrtaceæ.	One of the most colossal trees in the universe, rivalling the Wellingtonia gigantea in bulk, and exceeding it in height. In Gippsland trees measuring over 400 feet in height are frequently met with, exceptional specimens running up to 450 feet, and having a diameter of 25 feet at the base, have been discovered. The timber is excellent for buildings, shingles, fence rails, fuel, &c. This species furnishes the largest proportions of oil of any of the Eucalypts. Habitat—Victoria.
Victorian Grey-Box, River Gum of N. S. Wales.	Eucalyptus dealbata. (A. Cunningham). Ord. Myrtaceæ.	A medium sized graceful tree, usually inhabiting banks of creeks, &c. ; wood hard and tough, used for fuel. Habitat, Eastern Australia.
Bastard Box	Eucalyptus polyanthemos. (? Shau). Ord. Myrtaceæ.	A straggling tree. Height, 40 to 80 feet. Wood hard and very tough, used for fuel. Habitat—Victoria, N. S. Wales, Queensland, and North Australia.
Victorian Spotted Gum, or White Gum of Gippsland.	Eucalyptus goniocalyx. (F. von Müller). Ord. Myrtaceæ.	A fine timber tree, an inhabitant of grassy flats, stony rises, and banks of watercourses ; wood used for buildings, posts, rails, fuel, &c. Habitat, Victoria and N. S. Wales.

CLASSES 613–620.—*Arboriculture and Forest Products.*

Local Name.	Botanical Name.	Economic Uses.
Victorian Apple-Tree, Turpentine Gum of N. S. Wales.	Eucalyptus Stuartiana. (F. von Müller). Ord. Myrtaceæ.	A graceful dense glaucous tree. Height, 60 to 100 feet; usually an inhabitant of rich moist gullies and mountain slopes. Wood sound, tough, and durable; used for buildings, posts, fuel, &c. Habitat—Victoria, N. S. Wales, and Tasmania.
Woolly Butt, or Brown Gum of Dandenong.	Eucalyptus longifolia. (Link.) Ord. Myrtaceæ.	A handsome medium-sized tree, usually found near the sea board. Wood hard, sound, tough, and durable; used for fencing, fuel, &c. Habitat—Victoria and N. S. Wales.
Red Stringy-bark of Dandenong.	Eucalyptus obliqua .. (L'Héritier). Ord. Myrtaceæ.	A fine timber tree, attaining a great height in some districts; wood used for shingles, paling fence, rails, buildings, &c. Habitat—Victoria.
Common Stringy-bark.	Eucalyptus obliqua .. (L'Héritier). Ord. Myrtaceæ.	A gigantic straight-stemmed tree, gregarious in habit and constitution, immense forests of it are to be found in the upland districts, where specimens 300 feet in height are often met with. It is one of the most useful and quick-growing indigenous timber trees. The wood is very fissile, and is extensively used for shingles, palings, battens, quartering, fence-rails, and fuel. The establishment of saw-mills in many parts of the country of Victoria has been mainly due to the presence of this tree. The bark is of a very fibrous nature, forms a good paper material, and stripped from the trees in immense sheets, supplies the settlers with roofing for their huts and out-buildings. Habitat—Victoria, South Australia, and Tasmania.
Milk White Gum, or Spurious Iron-bark.	Eucalyptus leucoxylon. (F. von Müller). Ord. Myrtaceæ.	A handsome timber tree, said to be synonymous with E. sideroxylon, the tree iron-bark, although very distinct in appearance. Wood hard, tough, and durable, fit for fence posts, railway sleepers, spokes of wheels, &c. Habitat—Victoria, New South Wales, and South Australia.
Victorian Red Gum. N.S.W. Flooded Gum.	Eucalyptus rostrata (Schlechtendahl.) Ord. Myrtaceæ.	A huge tree, in exceptional instances attaining a height of 100 feet. What this species loses in height it gains in bulk, both of stem and branches, some of the latter being of the dimensions of a good-sized tree, and of such weight as often to snap off from the parent stem without a moment's warning. The tree is invariably met with on banks of streams and damp flats, often standing in water, from which circumstance it is known in some parts of New South Wales as "flooded gum." The timber is very hard and durable, unsurpassed for underground and water-works, for railway sleepers, fence posts, and in fact for all purposes where strength and durability are required. Habitat—Victoria, New South Wales, and South Australia.

CLASSES 613–620.—*Arboriculture and Forest Products.*

Local Name.	Botanical Name.	Economic Uses.
Narrow leaved Peppermint.	Eucalyptus Amygdalina (Labillard). Ord. Myrtaceæ.	A tree, varying much according to soil and situations; in mountainous districts it attains a great size, in low lands, of stunted growth. Many forms or varieties occur, one of which, E. regnans (F. von Müller), has been already described. Its principal economic value is the quantity and quality of the oil afforded by the leaves. The wood is chiefly used for fuel. Habitat—Victoria, New South Wales, and Tasmania.
Karri, or West Australian Blue Gum.	Eucalyptus diversicolor (F. von Müller). Syn. E. colorosa. Ord. Myrtaceæ.	A magnificent timber tree, ranging in height from 100 to 400 feet. It is of quick growth, prefers a rich, alluvial soil, but succeeds moderately well even in the light sandy ground in the vicinity of Melbourne. On banks of rivers it would no doubt form a fine tree. The wood is excellent, assimilates to the Tasmanian Blue Gum (E. globulus) in quality and texture. It is one of the finest of Eucalypts, and might be advantageously employed in street-planting, where a moderate supply of water to the roots could be obtained. Habitat—Western Australia.
Jarrah or Mahogany Gum.	Eucalyptus marginata (Smith). Ord. Myrtaceæ.	The most famed of all the Eucalypts on account of the indestructible nature of its wood; in speaking of which Baron F. von Müller observes, "it is attacked neither by chelura nor Toredo," and is therefore so much sought after for jetties and other structures exposed to sea water; also for any underground work, and is largely exported for railway sleepers. Vessels built of this timber have been enabled to do away with all copper plating. The ship-builders prefer it to either teak or oak. The tree grows chiefly on ironstone ranges. Instances are on record of the stem having attained a growth of 60 feet at 6 feet from the ground, through the formation of buttresses. It is of slow growth at Melbourne, and will never attain to any size, as compared with other species, trees at least a dozen years old being only 12 feet high. Habitat—Western Australia.
Native Cypress ...	Frenela rhomboidea (Endlicher.) Ord. Coniferæ.	A graceful tree of cypress-like appearance and habit, attaining a height of 30 feet or more; it succeeds well in poor sandy soil in dry situations. The wood is light, close-grained, and easily worked, beautifully marked, and is well adapted for household furniture and cabinet-work. Habitat—Victoria, New South Wales, and Queensland.
Oyster Bay Pine..	Frenela rhomboidea (Endlicher.) Vert. Tasmanica. Ord. Coniferæ.	This tree is very similar to the foregoing in almost every respect. The wood may be utilized for the same purposes. Habitat—Tasmania.

CLASSES 613–620.—*Arboriculture and Forest Products.*

Local Name.	Botanical Name.	Economic Uses.
Moreton Bay Fig or Caoutchouc-tree.	Ficus macrophylla ... (Desfontaines.) Ord. Urticeæ.	A magnificent-foliaged tree in northern New South Wales and Queensland, growing to an enormous size. It is generally found in brushlands, on rich alluvial flats, banks of rivers, &c. The milky juice which the bark exudes on incision assimilates closely to that of the true caoutchouc, and from recent experiments conducted at the Melbourne Botanic Gardens to test the properties of this juice, there is great reason to suppose that the product will yet prove of considerable commercial value and importance. Habitat—New South Wales and Queensland.
Victorian Beech or Myrtle-wood.	Fagus Cunninghamii (Hooker.) Ord. Cupuliferæ.	A splendid timber tree, inhabiting moist grounds, glens, and ravines, in sub-alpine situations, where its presence lends quite a different aspect to the Australian landscape to that usually seen. In the neighbourhood of the Black Spur (Victoria), and in many parts of Tasmania it often attains a height of 220 feet, with a circumference of stem sometimes as much as 60 feet, while in alpine situations it is a mere bush. Next to Sydney Red Cedar (Cedrela toona) the timber of this tree is perhaps the most valuable in Australia. Habitat, Victoria and Tasmania.
Silky Oak	Grevillea robusta ... (A. Cunningham.) Ord. Proteaceæ.	A beautiful semi-deciduous tree, of quick growth. In northern New South Wales it attains a height of 100 feet; its deeply rimmed foliage and rich orange yellow flower, borne in comb-shaped trusses, render it a beautiful object when in bloom. The wood is very close-grained, tough, and durable, well adapted for staves of tallow-casks, for which purpose it is extensively used. The tree adapts itself either to dry or damp situations; will succed well in either, but prefers alluvial soil. A pale yellow opaque gum exudes from the trunk. The bark is astringent. Habitat—New South Wales and Queensland.
Needle-leaved Hakea.	Hakea acicularis..... (R. Brown.) Ord. Proteaceæ.	A robust shrub, sometimes assuming the character of a small tree, generally met with on stony declivities, not far from the coast. Wood prettily-grained, sound, and tough. Habitat—New South Wales, Victoria, and Tasmania.
Twine Bush	Hakea flexilis..... (F. von Müller.) Ord. Proteaceæ.	A tall shrub or small tree; height, 12 to 20 feet; usually met with in rather dry situations. Wood hard and tough. Habitat—Victoria and South Australia.
Dagger-leaved Hakea.	Hakea pugioniformis. (Cavanilla.) Ord. Proteaceæ.	A rigid shrub, usually 3 feet high; in exceptional cases it attains to 10 feet. Very suitable for hedges. Wood prettily-grained, light, and tough. Habitat—New South Wales and Tasmania.
Sweet-scented Hakea.	Hakea suaveolens..... (R. Brown.) Ord. Proteaceæ.	A beautiful aborescent shrub; height, 10 to 15 feet. It forms good hedges. Wood very tough, and prettily-marked. The plant will succeed well along the coast. Habitat—Western Australia.

CLASSES 613-620.—*Arboriculture and Forest Products.*

Local Name.	Botanical Name.	Economic Uses.
Willow Hakea....	Hakea saligna ..... (Knight.) Ord. Proteaceæ.	A pretty arborescent shrub ; height, 10 to 15 feet; frequently met with on banks of rivers. Habitat—New South Wales and Queensland.
Cushion-flower....	Hakea laurina..... (R. Brown.) Syn. H. eucalyptoides (F. von Müller.) Ord. Proteaceæ.	A beautiful pendulous tree ; flower very peculiar and pretty, of a globular form ; wood very hard and beautifully-grained. This species grows to a height of 30 feet, being one of the largest of the genus. Habitat—Western Australia.
Hooded Hakea....	Hakea cucullata..... (R. Brown.) Ord. Proteaceæ.	An erect, very much branched tree ; height, 10 to 15 feet ; foliage very singular and ornamental. The plant is most frequently met with on mountain spurs. Wood very prettily marked, hard, and tough. Habitat—Western Australia.
Fan-leaved Hakea	Hakea Baxteri..... (R. Brown.) Ord. Proteaceæ.	A pretty shrub ; height, 8 to 12 feet ; in habit somewhat resembling Hakea cucullata. Wood hard and durable. Habitat—Western Australia.
Scrub Box-wood..	Hymenanthera Banksii. (F. von Müller.) Syn. H. dentata. (R. Brown.) Ord. Violarieæ.	A rigid, much-branched shrub ; height, 10 to 30 feet ; usually met with on stony declivities, banks of creeks, rivers, &c. Suitable for hedge-planting. Wood of a bright yellow colour, exceedingly hard, closely resembling English box in texture and appearance. Habitat—Victoria and New South Wales.
Native Mulberry, or Sweet Holly.	Hedycarya angustifolia. (A. Cunningham.) Syn. H. Cunninghamii. (Tulagne.) Ord. Monimiaceæ.	A beautiful glabrous shrub or small tree, of very ornamental appearance ; it is of quick growth, and is principally met with in shady ravines and fern gullies, luxuriating in rich, damp soils in alpine and sub-alpine situations. The wood is very light, close-grained, and tough. Habitat—Victoria and New South Wales.
Moreton Bay Tulip-wood.	Harpullia pendula ... (Planchon.) Ord. Sapindaceæ.	A fine glabrous tree, of rather slender habit, chiefly found on the banks of streams not far from the coast. Wood beautifully marked, light, sound, tough, and easily worked ; extensively used in cabinet-making. Habitat—New South Wales and Queensland.
Ash-grey Helichrysum.	Helichrysum cinereum. F. von (Müller.) Syn. Ozothamnus Cinereus. (De Candolle.) Ord. Compositæ.	A straggling shrub growing to a height of 10 to 20 feet, frequently met with near water for a considerable distance inland, and also along the coast. Wood, white, of a very horny nature. Habitat—Victoria, New South Wales, and Tasmania.
	Hymenanthera sp. ... Ord. Violarieæ.	A divaricate shrub, probably a variety of H. dentata. Wood very similar in appearance to that species.
Ridge Hakea.....	Hakea corymbosa ... (R. Brown.) Ord. Proteaceæ.	A dense shrub of very singular habit and appearance, chiefly found in stony places, where it seldom exceeds 4 feet in height ; under cultivation however it will reach 8 feet. Wood tough and light. Habitat—Western Australia.

CLASSES 613–620.—*Arboriculture and Forest Products.*

Local Name.	Botanical Name.	Economic Uses.
Yellow-flowered Hymenosporum	Hymenosporum flavum. (Müller.) Ord. Pittosporeæ.	A beautiful slender tree, height 15 to 30 feet, found chiefly in rich alluvial soil on banks of rivers and other watercourses. It bears a profusion of large yellowish Allamanda-like flowers arranged in corymbose panicles. When in full bloom and backed by other vegetation it is an object of exquisite beauty. Habitat—New South Wales and Queensland.
Coast Tea-tree or Sandstay Bush	Leptospermum lævigatum. (F. von Müller.) Syn. Fabricia lævigata. (Gærtner.) Ord. Myrtaceæ.	A tall shrub or small tree, in exceptional instances attaining a height of 30 feet; the foliage is very dense, and of a bluish-green colour. The plant grows in the most barren sandy ridges along the sea-shore, where it forms dense scrub, so much so that the incursion of sea-sand is throughly checked. It forms beautiful evergreen hedges, and will stand cutting-in as well as the common yew. As a shelter plant for coast planting it cannot be surpassed. Habitat—Victoria, New South Wales, and Tasmania.
Light or Woolly Tea-tree.	Leptospermum lanigerum (Smith); Ord. Myrtaceæ.	A tall shrub or small tree; height 8 to 20 feet, frequently met with on banks of small rivulets, creeks, &c., ascending to sub-alpine elevations. The foliage is of a beautiful silver-grey colour, and forms, when contrasted with the surrounding vegetation, a very pleasing object in the landscape. Many forms or varieties of the species occur. The wood is hard, heavy, and durable when unexposed to the atmospheric influences. Habitat — New South Wales, South Australia, and Tasmania.
White Wood, or Cowitch-tree of Norfolk Island.	Lagunaria Patersoni (Don.) Ord. Malvaceæ.	A fine pyramidal tree of compact growth; Height, 30 feet, leaves very coriaceous, of a deep green, and minutely punctured on the surface, clothed underneath with a glaucous scaly substance. It bears a profusion of rose-coloured hibiscus-like flowers, which are succeeded by curious pear-shaped seed-vessels, on a very distinct, persistent calyx. The seeds are surrounded by innumerable minute prickly hairs, the prurient properties of which are very disagreeable. The plant is usually met with near the coast. Wood, white, sound, tough, and durable. The bark furnishes a very beautiful fibre. Habitat—Queensland and Norfolk Island.
Native Holly.....	Lomatia ilicifolia (R. Brown); Syn. L. Fraseri (R. Brown). Ord. Proteaceæ.	A tall shrub in low-lying land, in deep forest glens, and moist gullies, &c. In mountainous districts it assumes the character of a graceful tree, often reaching a height of 60 feet; leaves glabrous, deeply and irregularly serrated, varying in length from 6 to 8 inches. Wood light, beautifully grained, sound, and tough, suitable for cabinet-work. Habitat—Victoria and New South Wales.

CLASSES 613–620.—*Arboriculture and Forest Products.*

Local Name.	Botanical Name.	Economic Uses.
Currant-wood ...	Leucopogon Richii (R. Brown). Ord. Epacrideæ.	A glabrous rigid shrub or small tree ; height, 4 to 15 feet ; very plentiful on the sea-shore, or rocky declivities, steep banks, and sandy ridges. The wood of full-grown plants is of a deep orange colour, inclining to red, hard, dense, close-grained, exceedingly heavy; used for the knees of boats. The tortuous and rough-barked branches are well adapted for rustic work. The berries, which are edible, are in some districts called currants. Habitat—Victoria, New South Wales, Queensland, South and Western Australia, Tasmania, and Chatham Islands.
Bracelet-tree	Melaleuca armillaris (Smith). Ord. Myrtaceæ.	A tall shrub or small tree, chiefly growing on margins of watercourses, in exceptional instances attaining a height of 30 feet. Wood, hard and durable for inside, underground, or water-work ; soon decays when exposed to the atmosphere. Habitat—Victoria, New South Wales, and South Australia.
Crossed-leaved Tea-tree.	Melaleuca decussata (R. Brown). Ord. Myrtaceæ.	A tall shrub or small tree, bushy ; height, 12 to 20 feet ; found chiefly on mountain spurs and rocky declivities. Wood hard and tough. Habitat, Victoria and South Australia.
Common Swamp Tea-tree.	Melaleuca ericifolia (Smith). Ord. Myrtaceæ.	A large shrub or small tree ; height, 15 to 30 feet, found invariably on swampy ground, banks of rivers, &c. It is extensively used by settlers for bush fences, sheep hurdles, &c. The wood is very hard when seasoned, will last a long time under water, or for inside work, such as rafters for huts, &c. The lamellar bark may be utilized in paper-making. Habitat—Victoria, New South Wales, and Tasmania.
Hooked Tea-tree.	Melaleuca uncinata (R. Brown). Order Myrtaceæ.	A tall bushy shrub, found chiefly on river banks. Wood hard and close-grained. Habitat—West Australia.
Victorian Yellow-wood.	Melaleuca squarrosa (Smith). Order Myrtaceæ.	A tall shrub or small tree, sometimes growing to a height of 30 feet or more. It is an inhabitant of swampy flats, and is chiefly found on light sandy ground. The wood is hard, dense, and durable when under water or unexposed to atmospheric influences. Habitat—Victoria, New South Wales, South Australia, and Tasmania.
Mountain-tree, Iron-wood of Philip Island.	Malaleuca Preissiana (Schauer). Ord. Myrtaceæ.	A handsome dense-headed tree, growing to a height of 30 feet. It is most frequently met with on the coast, though sometimes found on banks of rivers for a considerable distance inland, but in a more stunted form. The wood is heavy, white, close-grained, hard, tough, and durable. Unlike most of the species, this species possesses a rough matted bark. Habitat—Victoria, South and West Australia.
Victorian Blue-berry-tree.	Myoporum serratum (R. Brown). Syn. M. insulare (R. Brown). Order Myoporineæ.	A tall straggling shrub, sometimes growing to a height of 20 feet or more, and assuming an erect and arborescent form, chiefly met with along the coast. Wood hard, white, and durable when unexposed. The plant bears pretty blue edible berries, which are highly relished by birds. Habitat—throughout Australia and Tasmania.

CLASSES 613-620.—*Arboriculture and Forest Products.*

Local Name.	Botanical Name.	Economic Uses.
Smooth Victorian Beech.	Myrsine variabilis (R. Brown). Order Myrsineæ.	On the banks of rivers and creeks not far from the coast, a beautiful glabrous shrub, in sub-alpine situations a graceful tree, growing to a height of 30 to 40 feet. Wood sound, durable, tough, beautifully grained, scarcely distinguishable from British oak, &c. Habitat—New South Wales, Victoria, and Queensland.
Cypress Tea-tree	Melaleuca micromera (Schauer). Ord. Myrtaceæ.	A pretty shrub of cypress-like habit and appearance, usually found in poor sandy ground and gravelly localities; wood hard and tough. Habitat—Western Australia.
Hypericum-leaved Tea-tree.	Melaleuca hypericifolia. (Smith.) Ord. Myrtaceæ.	A fine glabrous shrub, height, 8 to 12 feet, flowers of a bright red colour, very like those of callistemon. The plant is usually found growing in swampy localities, but succeeds well in dry situations under cultivation; wood hard and close-grained. Habitat—N. S. Wales and Queensland.
Cunningham's Myoporum.	Myoporum acuminatum. (R. Brown.) Var. angustifolium Syn. M. Cunninghamii (Bentham.) Ord. Myoporineæ.	A tall slender shrub, height, 8 to 10 feet, found on the coast, but chiefly in the interior of N. S. Wales; wood white and tough. Habitat—N. S. Wales and Queensland.
Victorian White Plum Wood.	Notelæa ligustrina... (Vent.) Ord. Jasmineæ.	A tall shrub or small tree, according to situation; in some parts of Gippsland and in the neighbourhood of the Black Spur (Yarra Ranges) trees 40 feet high are frequently met with; it grows chiefly on the banks of creeks and rivers; wood hard, tough, and durable. Habitat—Victoria and Tasmania.
	Oxylobium callistachys. (Bentham.) Syn. Callistachys lanceolatus. (Vent) Ord. Leguminosæ.	A handsome, tall-growing shrub, found growing plentifully along the sea-shore; wood white and sound, not unlike ash in the grain. Habitat—Western Australia.
Native Musk-tree	Olearia argophylla. (Müller.) Syn. Eurybia argophylla. (Capini.) Ord. Compositæ.	A very beautiful shrub or small, much branched tree. In rich damp gullies and ravines it often attains a height of 30 feet. The leaves are ovate-lanceolate, of a deep glossy green above and covered with a close silvery tomentum underneath. The foliage emits a powerful musky odour, which is very perceptible in hot weather and after rain, particularly when the atmosphere is charged with electricity. The wood of the gnarled butt, and the roots of the tree are beautifully mottled, in some instances surpassing bird's-eye maple, and suitable for cabinet work. Habitat—Victoria, N. S. Wales, and Tasmania.
Rusty Helichrysum.	Helichrysum ferrugineum. (Lepin.) Syn. Ozothamnus ferrugineus. (De Candolle.) Ord. Compositæ.	A tall scrubby bush, height, 8 to 12 feet; it is invariably found growing on the margins of rivers and creeks. Habitat—Victoria, N.S. Wales, South Australia, and Tasmania.

CLASSES 613–620.—*Arboriculture and Forest Products.*

Local Name.	Botanical Name.	Economic Uses.
Elderberry Ash, called also Native Mountain Ash.	Panax sambucifolia (Sieber). Ord. Araliaceæ.	A beautiful arborescent shrub, with glaucous pinnate foliage, not unlike the common English Mountain Ash, or rowan tree (Sorbus aucuparia) in appearance. It is found growing principally on the tops and sides of mountains and in most sheltered glens and ravines. The wood is peculiarly prettily streaked, sound and very tough; it is extensively used for axe-handles, &c., by wood-splitters in the bush. Habitat—Victoria, New South Wales, and Tasmania.
Native Hazel.....	Pomaderris apetala. (Labillardiere). Ord. Rhamneæ.	In the lowlands a struggling shrub; in alpine and sub-alpine situations a remarkably graceful tree, often growing to a height of 40 feet. It delights in rich, moist, forest soils, and attains to great perfection in the Macedon, Dandenong, Yarra, and Bass Ranges. The wood is excellent, and of a beautiful satiny texture. Habitat—Victoria, New South Wales, South Australia, and Tasmania.
Victorian Laurel..	Pittosporum undulatum (Ventenat). Order Pittosporeæ.	A magnificent, much branched tree, beautiful at all seasons. Its clusters of deliciously scented flowers will yield a valuable perfume, and the bunches of yellow berries have a charming effect. It is found chiefly on river banks, when it sometimes grows to a height of 60 feet. It is of very quick growth, forms good hedges, a very beautiful and valuable wood, and is altogether the most noble of the genus. Habitat, Victoria and New South Wales.
Weeping Pittosporum.	Pittosporum phillyræoides, (De Candolle) Syn. P. acacioides (A. Cunningham) Ord. Pittosporeæ.	A graceful tree, of pendulous habit; height, 10 to 25 feet. This species varies very much, many forms occurring, which has led to great confusion in the way of synonyms. The wood is heavy, close-grained, sound, and durable. Habitat, throughout Australia, on the coast generally, but often far inland.
Victorian Cheesewood.	Pittosporum bicolor. (Hooker). Ord. Pittosporeæ.	A beautiful smooth-barked tree, leaves rigid, of a deep green on the surface, closed underneath with a close tomentum. It is usually found in moist shady gullies and ravines in upland districts, where it often attains a height of 50 feet. The wood is excellent, and is much esteemed for axe-hanles, billiard cues, &c. Habitat—Victoria and Tasmania.
Dogwood or Mint-tree.	Prostanthera lasianthos. (Labillardiere). Ord. Labiatæ.	A very beautiful shrub or small tree, principally growing on banks of streams, in moist fern gullies, and forest glens—in sub-alpine situations forming dense impenetrable scrubs. The young saplings are used for whip-handles, fishing-rods, &c. Wood white, close-grained, tough, and durable. Habitat—Victoria, N. S. Wales, and Tasmania.

CLASSES 613-620.—*Arboriculture and Forest Products.*

Local Name.	Botanical Name.	Economic Uses.
New Zealand Hedge Laurel. Native name (local) Totara.	Pittosporum eugenioides. (A. Cunningham.) Ord. Pittosporeæ.	A beautiful glabrous, bushy tree; height, 20 to 35 feet; of very quick growth, and used extensively for ornamental hedges. Wood white, soft, and close-grained—not valued for any special purposes. Habitat—New Zealand.
"Colenso's pittosporum."	Pittosporum Colensoi (Hooker). Ord. Pittosporeæ.	A fine glabrous shrub or small tree, much branched, with a bark of a brownish colour. A good hedge plant. Habitat—New Zealand.
Flame-tree	Sterculia acerifolia. (A. Cunningham.) Syn. Brachychiton acerifolium. (F. von Müller.) Ord. Sterculiaceæ.	A very beautiful tree, with deeply lobed, glabrous, prominently nerved leaves, its racemes of scarlet flowers having a fine effect in the landscape. The wood is of too fibry a nature to be of much value. The inner bark of the tree is of the most beautiful lace-like texture, not unlike that of the lime or linden (Tilia curopæa.) It is a fine fibre material, suitable for ropes, matting, &c. A dye is obtained from the seed-vessels. Habitat—Queensland and N. S. Wales.
Fœtid Sterculia...	Sterculia fœtida. (Linn.) Ord. Sterculiaceæ.	A magnificent dense-foliaged timber tree, of symmetrical form, often confounded with "Tarrietia argyrodendron," which it somewhat resembles. The wood is hard, heavy, close-grained, and durable. The bark yields a bast of rich brown colour, suitable for ropes, bagging, &c. Habitat—New South Wales, India, and Malayan Peninsula.
N. S. Wales Turpentine-tree.	Syncarpia laurifolia. Ord. Myrtaceæ.	A tall slender tree, with thick coriaceous leaves, the under side of which is clothed with a glaucous tomentum. Bark soft and fibrous, wood hard, tough, durable, and easily worked. A resinous gum exudes from the trunk and seed-vessels. The tree is usually found on banks of rivers and creeks not far from the coast. Habitat—New South Wales and Queensland.
Gum Myrtle	Tristania conferta. (R. Brown.) Syn. Lophostemon arborescens. (Schott.) Ord. Myrtaceæ.	A beautiful glabrous-foliage timber tree, of ornamental appearance and of quick growth, usually growing near mouths of rivers at their confluence with the sea. It will thrive well in poor sandy soil, but suffers from excessive drought. The wood is very similar in grain and texture to that of the Eucalypts. Habitat—New South Wales, Queensland, and North Australia.
	Melicope ternata. (Forster.) Ord. Rutaceæ.	A small glabrous tree, with very ornamental foliage of a bright green colour, very slow of growth, and attaining a height of 12 to 20 feet. Wood hard and close-grained. The plant is called "Patete Tataka" and "Whara" by the natives. Habitat—New Zealand.

We place this collection of timbers in the first rank, and consider that it is in importance next to that of Queensland.

PERRY, JOHN, Melbourne.

Steam-bent timber—Is a magnificent collection, comprises forty-one samples of steam-bent timber. This collection surpasses any other collection of this class of timber in the Exhibition, and stands in the first order of merit as an article of utility, and, being comparatively a new industry, it opens a large field for extending the commercial enterprise of the Colony.

Class 614.—Ornamental Woods used in decorating and for Furniture, as Veneers of Mahogany, Rosewood, Ebony, Walnut, Maple, Madrona.

AUSTRIA.

GROSSMANN (MAXIMILIAN) & Co., VIENNA.

This is an exhibit of five slabs, and a number of well-cut veneers. The slabs are fine specimens of the value of Hungarian timbers, and are valued at about 21s. per cwt. The veneers are made of oak, and in the rough are valued at 3d. (three-pence) per sheet of 7 feet × 18 inches. As this is an interesting exhibit of considerable commercial utility, we class it in the 2nd order of merit.

FRANCE.

MOONEN, L., Paris and Sydney.

This exhibit consists of a splendid collection of 176 varieties of ornamental timbers from all countries of the world, particulars of which are as follows :—

Common Name.	Botanical Name.	Habitat or Country from whence collected.
Lignum vitæ	.....	Bahia.
Do.	.....	Rio Janeiro.
Do. (false.)		
Yew	Taxus baccata	France.
Do. (spotted.)		
Sandal (red)	Plerocarpus santaligo	Brazil.
Do.	Santalum album	India.
Wild Stock	.....	France.
Sandal Citrin	.....	Brazil.
Wild Cherry	Cerasus avium	France.
Birch	Betula alba	Do.
Vernis	Ailantus glandulosa ?	
Ebony.		
Do.	.....	China.
Do. (false)	.....	Spain.
Snake-wood	.....	San Domingo.
Do. (iron)	.....	Do.
Amaranthus.		
Judas-tree	Cercis siliquastrum	Portugal.
Box	Buxus perennius	France.
Plane-tree	Platanus	Do.
Tulip-wood.		
Violet	Copaifera.	
Citron	Citrus medica	Egypt.

CLASSES 613–620.—*Arboriculture and Forest Products.*

Common Names.	Botanical Names.	Habitat or Country from whence collected.
Cedrat	Citrus.	
Calcedras.		
Mulberry	Morus alba	China.
Cherry	Cerasus vulgaris.	
Elder	Sambucus nigra	England.
Hazel Nut	Corylus Avellana	France.
Apple	Malus communis	Do.
Plum		Do.
Pear	Pyrus communis.	
Do. (dyed).		
Horse Chesnut	Æsculus hippocastanum.	
Polonia	Paulonia imperialis	Japan.
Holly	Ilex aquifolium	Great Britain.
Willow	Salix alba.	
Do.		
Lilac	Syringa vulgaris.	
Acacia.		
Lote	Crataegus.	
Sycamore	Pseudo-platanus.	
Aspen	Populus tremula.	
Poplar	Populus fastigiata	Italy.
Do.		France.
Do.	Populus nigra	America.
Amboyne		Malacca.
Thuja	Thuja articulata	Africa.
Maple (white spotted).		
Do. (grey)		America.
Do. (amber).		
Hornbeam	Carpinus betulus	
Do. (dyed).		
Pine (white)	Picea vulgaris	Norway.
Do.		France.
Do.	Pinus cembra	Switzerland.
Do. (resinous)	Abies excelsa.	
Do. (red).		
Do. (pitch).		
Grisard (? grey poplar).		
Alder	Alnus glutinosa.	
Tilleul	Tilèa Europæa	France.
Elm		Do.
Do.		Do.
Cormier	Sorbus domestica	Do.
Cedar	Abies cedrus	
Do.		Bahama.
Mahogany (veined)	Swietenia mahagoni.	
Do.		
Do. (Mexican).		
Do. (spotted).		
Do. (do. imitation).		
Do. (moiré).		
Rose-wood.		
Do. (dark).		
Do. (moiré).		
Do. (common)		Bahia.
Do.		China.
Do.		Madagascar.
Do.		California.
Rosewood (red)		
Ash	Fraxinus excelsior	France.

CLASSES 613–620.—*Arboriculture and Forest Products.*

Common Names.	Botanical Names.	Habitat or Country from whence collected.
Ash	.....	America.
Do. (weeping)	.....	
Do.	.....	America.
Do.	.....	Japan.
Beech	Fagus sylvatica	
Walnut	Juglans regia	France.
Do. (white)	.....	do.
Do. (grey)	.....	America.
Do.	.....	do.
Do. (red)	.....	do.
Do.	.....	France.
Do.	.....	Asia.
Do.	.....	Black Sea.
Do. (moiré)	.....	America.
Oak	.....	
Do. (white)	Quercus robur.	
Do. (twenty years old)		
Do. (old)		
Do.	.....	America.
Do. (evergreen)	Quercus ilex	Africa.
Do.	.....	America.
Do. (she)	.....	Australia
Do.	.....	Spanish.
Do. (green)	.....	Cayenne.
Juniper	Juniperus communis	France.
Do.	.....	Africa.
Myall	.....	Australia.
Cochineal	Sorbus?	
King-wood	Cæsalpinia	Brazil.
Olive	Olea Europæa	
Do.	.....	Africa.
Thermericq	.....	Norway.
Tamarind	Tamarindus?	Columbia.
Waccapoux	Andira?	China.
Satinet (pink sample)	.....	
Do. (red)	.....	Brazil.
Anjica	.....	do.
Sassafras	Laurus sassafras	
Makrouza	.....	
Quassia amara	.....	Guiana.
Teak	Tecktona grandis	India.
Balata	Mimusops balata	
Grenadille	Passiflora	New Spain.
Camphor	Laurus camph.	Japan.
Courbaril	Hymenæa courbaril	Africa.
Fernambourg	Cæsalpinia echinata	
Indianpalon	Cocos nucifera	
Carbonier	Ceratonia siliqua	
Bagot	.....	
Rose	.....	
Do.	.....	China.
Do.	.....	Brazil.
Tortoiseshell-wood	.....	
Bozephir	.....	
Do. (false)	.....	
Jamarenga	.....	
Partridge-wood	.....	
Lance-wood	.....	Jamaica.
Campeachy (red)	Hæmatoxyl Campechianum	

CLASSES 613–620.—*Arboriculture and Forest Products.*

Common Names.	Botanical Names.	Habitat or Country from whence collected.
Do. (yellow)	.....	
Jeoris	.....	Bahama.
Timbuctoo	.....	
Espernilla	.....	Madagascar.
Santa Lucia	Cerasus.	
San Martin	.....	
Golden-wood	.....	Brazil.
Fox-wood	.....	
Butter-wood	.....	Brazil.
Palm	.....	
Do. (crescent)	.....	
Do. (red)	.....	
Mouron Mouron	.....	Guiana.
Orange	Citrus aurantium.	
Iron-wood	Swartzia tomentosa.	
Calliatour	.....	
Rhopala	.....	Brazil.
Briar	.....	
Mucury	.....	La Plata.
Micoucoulier	Celtis Australis	Spain.
Kauri Pine	.....	New Zealand.
Do. (mottled)	.....	do.
Do. (do.)	.....	do.
Rewa Rewa	.....	do.
Coral	.....	
Quercitron	.....	Cuba.
Amazon	.....	
Minea	.....	New Caledonia.

NOTE.—It would appear that the common names of several of M. Moonen's exhibits are those by which they are generally known in France.

NEW ZEALAND.

BLAIR, W. N., Dunedin.

This is an interesting exhibit of twenty-three specimens of polished woods.

COLONIAL MUSEUM, Wellington.

This is an exhibit of twenty-two samples of finely polished ornamental woods; these are very good specimens, especially the silver pine.

GEORGE, J. C., Taranaki.

This is a collection of twenty-eight specimens of New Zealand ornamental timbers, well polished and instructively shown.

GUTHRIE, R., Dunedin.

This is a neatly shown collection of thirty-one samples of ornamental woods, all commonly named as follows :—Rimu, black pine, white pine, celery pine, silver pine, miro, mottled kauri, kauri, ribbon-wood, totara knot, totara, kowhai, turpentine, rewa rewa, veronica, manuka, pokaka, red mapau, white maple, pepper-tree, broad-leaf burr, broad-leaf, fig-tree, rata, moko, goai, eene eene, red birch, mic-a-mic, black birch, mottled kauri.

HALCOMBE, A. F., Manawatu.

This is a very fine collection of eight slabs of finely polished samples of timbers; also a very finely polished table top, showing totara knot and honeysuckle (rewa rewa).

HORNBY, JNO., Picton.

This is a magnificent exhibit of two planks of red pine (Dacrydium cupressinum); finely polished and most interesting specimens.

JAMES, WM., Wellington.

This is a splendid specimen of totara knot, beautifully polished.

NORRIE, WM., Auckland.

This is a very fine collection of sixteen specimens of veneers of ornamental timbers, showing some splendid samples for economic purposes. These are named as follows :—

7 varieties	Mottled Kauri	1 variety	Mottled Totara
2 ditto	Puriri	1 ditto	Rihikitu
2 ditto	Rewa Rewa	1 ditto	Rimo
1 ditto	Ake Ake	1 diito	Curly Kauri

OTAGO MUSEUM, DUNEDIN.

This is a very finely arranged instructive collection of fifty varieties of the finest ornamental timbers found in New Zealand. The following is a full description of the collection :—

Order Coniferæ. Genus Dammara (L'Héritier).

Dammara australis (Lambert).

The timber of this tree, the Kauri, is described at length under Class 613 (N.Z.), of this general report.

Dammara Australis, var. Mottled Kauri.

Genus Libocedrus (Endl.)

Libocedrus Doniana (Endl).

Kawaka Cypress, Cedar.—This noble tree attains a height of 60–100 feet, and 3–5 feet diameter. Wood reddish, fine-grained and heavy, used by the Maoris for carving, and said to be excellent for planks and spars; grows in the North Island, being abundant in the forests near the Bay of Islands and North of Auckland.

Libocedrus Bidwillii (Hook.)

Pahautea Cedar.—A handsome conical tree, 60–80 feet high, 2–3 feet diameter. In Otago it produces a dark red free-working timber, rather brittle, chiefly adapted for inside work. Found on the central ranges of the North Island, and common throughout the forests of the South Island, growing at altitudes of from 500 to 4,000 feet. This timber has been used for sleepers on the Otago railways of late years, is largely employed in that district for fencing purposes, and is frequently mistaken for totara. In former years it was believed to be suitable only for inside work.

Genus Podocarpus (L'Héritier).

Podocarpus ferruginea (Don.)

Miro, called Bastard Black Pine in Otago.—A large ornamental and useful timber tree, attains a height of 40–60 feet, trunk 2–3 feet diameter. A useful wood, but not so durable as the matai or true black pine wood; reddish, close-grained, and brittle; the cross-section of the timber shows the heart wood star-shaped and irregular. The timber is generally thought to be unfitted for piles and marine works, except when only partially exposed to the influence of sea-water, as shown in the railway embankment at the Bluff Harbour, where it is reported to have been durable. Grows in the North and Middle Island, and in Otago, at altitudes below 1,000 feet.

Podocarpus Totara (A. Cunn.)

Totara.—A lofty and spreading tree, 60 to 120 feet high, 4–10 feet diameter. Wood very durable and clean-grained, in appearance like cedar, and works with equal freedom; it is adapted for every kind of carpenters' work. It is used extensively in Wellington for house building and piles for marine wharves and bridges, and railway sleepers, &c.; it is one of the most valuable timbers known. The wood, when felled during the growing season, resists for a longer time the attacks of teredo worms; it splits freely and is durable as fencing and shingles. Totara post and rail fences are expected to last forty to fifty years. The Maoris made their largest canoes from this tree, and the palisading of their pahs was constructed almost entirely of this wood.

Grows throughout the North and Middle Islands, upon both flat and hilly ground; the timber from trees grown on hills is found to be more durable.

Podocarpus spicata (Br.)

Matai or Ma.—Black pine of Otago. A large tree, 80 feet high, trunk 2–4 feet diameter. Wood yellowish, close-grained and durable; used for a variety of purposes—piles for bridges, wharves, and jetties, bed plates for machinery, millwright's work, flooring, house blocks, railway sleepers, and fencing. Bridges in various parts of the Colony afford proof of its durability. Mr. Buchanan has described a log of matai that he found had been exposed for at least 200 years in a dense damp bush in North-east Valley, Dunedin, as proved by its being enfolded by the roots of three large trees, all Griselinia littoralis, 3 feet 6 inches diameter, with over 300 growth rings. Grows in both North and South Islands, at altitudes under 1,500 feet.

Podocarpus dacrydioides (A. Rich).

Kahikatea.—White pine. A very fine tree, 100–150 feet high, trunk 4 feet diameter. Timber white and tough, soft, and well adapted for indoor work, but will not bear exposure.

Abundant throughout the Northern and Middle Islands; when grown on dry soil it is good for the planks of small boats, but when from swamps it is almost useless. A variety of this tree, known as yellow pine, is largely sawn in Nelson, and considered to be a durable building timber.

Genus, Dacrydium.

Dacrydium cupressinum (Soland.)

Rimu.—Red pine. Tree pyramidal, with weeping branches, trunk 80 feet to 130 feet high, and 2–6 feet diameter.

An ornamental and useful timber; wood red, clear-grained, heavy, and solid, much used for joisting and planking, and general building purposes, from Wellington southward. Its chief drawback is in being liable to decay under the influence of wet. It is largely used in the manufacture of furniture, the old wood being handsomely marked like rosewood, but of a lighter brown hue.

The juice of this pine is agreeable to drink, and was manufactured into spruce beer by Captain Cook.

Grows throughout the Northern and Southern Islands, but is of best quality in the South.

Dacrydium Colensoi (Hook.)

Monoao.—Yellow pine. A very ornamental tree, from 20 to 80 feet high. Wood light and yellow; it is the most durable and strongest timber in New Zealand; posts of this wood have been in use among the Maoris for several hundred years. Grows in Northern and Southern Islands, up to 4,000 feet altitudes. This tree is curious from having two kinds of leaves on the same branches. It is greatly valued for furniture.

Genus Phyllocladus.

Phyllocladus trichomanoides (Don.)

Tanekaha.—Celery-leaved pine. A slender handsome tree, 60 feet high, trunk rarely exceeds 3 feet diameter; wood pale, close-grained, and excellent for planks and spars; resists decay in moist positions in a remarkable manner.

Grows in the North Island, especially in the hilly districts.

Phyllocladus Alpinus (Hook.)

Toa toa.—A small ornamental and densely branched tree, sometimes 2 feet diameter. Bark used for dyeing and making tar. Found in both North and Middle Island.

CLASSES 613–620.—*Arboriculture and Forest Products.*

Order, Cupuliferæ. Genus, Fagus (Linn.)

Fagus Menziesii (Hook.)

Towai.—Red birch (from the colour of the bark). A handsome tree, 80 to 100 feet high, trunk 2–3 feet diameter. The timber is chiefly used in the lake district of the South Island. Durable and adapted for mast-making and oars, and for cabinet and coopers' work.

Grows in the North Island on the mountain-tops, but abundant in the South Island at all altitudes to 3,000 feet.

Fagus fusca (Hook.)

Tawhai, or Tawhai-raie-nui.—Black birch of Auckland and Otago (from colour of bark). Red birch of Wellington and Nelson (from colour of timber). This is a noble tree, from 60–90 feet high, the trunk 5–8 feet in diameter. The timber is excessively tough and hard to cut. It is highly valued in Nelson and Wellington as being both strong and durable in all situations.

It is found from Kaitaia in the North Island to Otago in the South Island, but often locally absent from extensive districts, and grows at all heights up to 3,000 feet altitude.

Fagus Solandri (Hook.)

White birch of Nelson and Otago (from colour of bark). Black-heart birch of Wellington. A lofty, beautiful evergreen tree 100 feet high, trunk 4–5 feet diameter. The heart timber is darker than that of *Fagus fusca*, and is very durable. This wood is well adapted for fencing and bridge piles, and the bark is useful as a tanning material.

This tree occurs only in the southern part of the North Island, but is abundant in the South Island up to three to five thousand feet.

Order, Myrtaceæ.—Genus, Leptospermum (Forst.)

Leptospermum scoparium (Forst.)

Kahikatea.—Tea-tree of Cook. It is ornamental, and useful for fuel and fencing; generally a small scrub, but occasionally 20 feet in height in the south.

Abundant throughout the islands.

Leptospermum ericoides (A. Rich.)

Manuka.—A small tree, 10–80 feet high, highly ornamental, more especially when less than twenty years old. The timber can be had 28-30 feet long, and 14 inches diameter at the butt, and 10 inches at the small end. The wood is hard and dark-coloured, largely used at present for fuel and fencing, axe-handles and sheaves of blocks, and formerly by the natives for spears and paddles.

The old timber, from its dark-coloured markings, might be used with advantage in cabinet-work, and its great durability might recommend if for many other purposes. Highly valued in Otago for jetty and wharf piles, as it resists the marine worm better than any other timber found in the province. It is extensively used for house piles. The lightest coloured wood, called "white manuka," is considered the toughest, and forms an excellent substitute for the "hornbeam" in the cogs of large spur wheels. It is abundant as a scrub, and is found usually on the poorer soils, but is rare as a tree in large tracts to the exclusion of other trees.

Genus, Metrosideros (Br.)

Metrosideros lucida (Menzies.)

Rata.—Iron-wood. A very ornamental tree; attains a height of 30–60 feet, and a diameter of 2–10 feet. The timber of this tree forms a valuable cabinet wood; it is of a dark red colour; splits freely. It has been much used for knees and timbers in shipbuilding, and would probably answer well for cogs and spur wheels.

Grows rarely in the North Island, but is abundant in the South Island, especially on the west coast.

Metrosideros robusta (A. Cunn.)

Rata.—A tall erect tree, 50–60 feet high, diameter of trunk 4 feet, but the descending roots often form a hollow stem 12 feet in diameter. Timber closely resembles the last-named species, and is equally dense and durable, while it can be obtained of much larger dimensions. It is used for ship-building, but for this purpose is inferior to the pohutukawa. On the tramways of the Thames it has been used for sleepers, which are perfectly sound after five years' use. Grows in the North Island; usually found in hilly situations, from Cape Colville southwards.

Metrosideros tomentosa (A. Cunn.)

Pohutukawa.—This tree has numerous massive arms; its height is 30–60 feet; trunk 2–4 feet in diameter.

The timber is specially adapted for the purposes of the ship-builder, and has usually formed the framework of the numerous vessels built in the northern provinces. Grows on rocky coasts, and is almost confined to the province of Auckland.

Order, Meliaceæ. Genus, Dysoxylum (Blum.)

Dysoxylum spectabile (Hook.)

Kohe-kohe.—A large forest tree, 40–50 feet high. Leaves are bitter, and used to make a stomachic infusion ; wood tough, but splits freely, and is considered durable as piles under sea-water. Grows in the North Island.

Genus, Eugenia.

Eugenia Maire (A. Cunn.)

Maire-taw-hake.—A small tree about 40 feet high ; trunk 1–2 feet in diameter. Timber compact, heavy, and durable. Used for mooring-posts and jetty piles on the Waikata, where it has stood well for seven years. It is highly valued for fencing. Common in swampy land in the North Island.

Order, Onagrariæ. Genus, Fuchsia (Linn.)

Fuchsia excorticata (Linn.)

Kohutuhutu. The fruit is called Konini.—A small and ornamental tree 10–30 feet high ; trunk sometimes 3 feet in diameter. It appears to furnish a durable timber. House blocks of this which have been in use in Dunedin for more than twenty years are still sound and good. The wood might be used as dye stuff, if rasped up and bled in the usual way, and, by mixing iron as a mordant, shades of purple may be produced even to a dense black, that makes good writing ink. The juice is astringent and agreeable, and yields a medicinal extract. Its fruit is pleasant, and forms the principal food of the wood pigeon. Grows throughout the islands.

Order, Araliaceæ. Genus, Panax (Linn.)

Panax crassifolium (Dem. and Pland.)

Horoeka, Ivy-tree.—An ornamental, slender, and sparingly-branched tree. It has a singularly graceful appearance in the young state, having long reflexed leaves. The wood is close-grained and tough. Common in forests throughout the islands.

Order, Cornaceæ. Genus, Griselinia (Forst.)

Griselinia littoralis (Raoul.)

Puketea, Broad-leaf.—An erect and thickly-branched bush-tree, 50–60 feet high ; trunk, 3–10 feet in diameter. Wood splits freely, and is valuable for fencing and in ship-building ; some portions make handsome veneers. Grows chiefly in the South Island and near the coasts.

Order, Compositæ. Genus, Olearia (Mauch.)

Olearia avicenniæfolia (Hook.)

Mingi-Mingi. Yellow-wood.—An ornamental shrub tree, flowers numerous, trunk 2 feet diameter. Wood close-grained, with yellow markings, which render it desirable for cabinet-work ; good wood for veneers. Occurs in South Island.

Olearia nitida.

An ornamental shrub tree, 20 feet high and 2 feet diameter. Wood close-grained, with yellow markings ; useful for cabinet-work. Found in the mountainous region of the North Island and throughout the South Island.

Olearia Cunninghamii.

An ornamental shrub tree, 12–20 feet high, with very showy flowers. Found abundantly on west coast of South Island, and not uncommon in North Island.

Order, Ericeæ. Genus, Dacrophyllum (Lab.)

Dacrophyllum longifolium (Br.)

Nei-nei.—An ornamental shrub tree with long grassy leaves. Wood is white, marked with satin-like specks, and is adapted for cabinet-work. Grows in South Island and in Lord Auckland's group and Campbell's Island ; none of the South Island specimens are as large in the foliage as those in Auckland Islands. The tree in the vicinity of Dunedin attains a diameter of 10 to 12 inches.

Order, Verbenaceæ. Genus, Vitex.

Vitex littoralis (A. Cunn.)
Puriri.—A large tree, 50–60 feet high, trunk 20 feet in girth. Wood hard, dark olive brown, much used ; said to be indestructible under all conditions. Grows in the northern parts of the North Island only.

Order, Laurinæ. Genus, Nesodaphne (Hook.)

Nesodaphne tarairi (Hook.)
Tarairi.—A lofty forest tree, 60–80 feet high, with stout branches. Wood white, splits freely, but not much valued. Grows in northern parts of North Island.

Nesodaphne tawa (Hooke.)
Tawa.—A lofty forest tree, 60-70 feet high, with slender branches. The wood is light and soft, and is much used for making butter kegs. Grows in the northern parts of the South Island, and also on the North Island, chiefly on low alluvial grounds ; is commonly found forming large forests in river flats.

Order, Monimiaceæ. Genus, Atherosperma (Lab.)

Atherosperma Novæ-Zealandiæ (Hook.)
Pukatea.—Height, 150 feet, with buttressed trunk 3-7 feet diameter ; the buttresses 15 feet thick at the base ; wood soft and yellowish—used for small boat planks. A variety of this tree has dark-coloured wood that is very lasting in water, and greatly prized by the natives for making canoes. Grows in the North Island, and northern parts of the Middle Island.

Genus, Hedycarya (Forst.)

Hedycarya dentata (Forst.)
Kaiwhiria.—A small evergreen tree, 20–30 feet high ; the wood is finely marked, and suitable for veneering. Grows in the North and South Island, as far south as Akaroa.

Order, Proteaceæ. Genus, Knightia (Br.)

Knightia excelsa (Br.)
Rewarewa.—A lofty slender tree, 100 feet high. Wood handsome, mottled red and brown, used for furniture and shingles, and for fencing, as it splits easily. It is a most valuable veneering wood. Common in the forests of the Northern Island, growing upon the hills in both rich and poor soils.

Order Magnoliaceæ. Genus, Drimys.

Drimys axillaris (Forst.)
Horopito.—Pepper-tree of colonists, and Winter's Bark. A small slender evergreen tree, very handsome. Whole plant aromatic and stimulant, used by the Maoris for various diseases. Wood very ornamental in cabinet-work, making handsome veneers. Grows abundantly in forests throughout the islands. At altitudes of 1,000 feet the foliage becomes dense and reddish-coloured.

Drimys colorata (Raoul).
This is a very distinct species, very common near Dunedin ; it is a very ornamental shrub-tree, with leaves blotched with red.

Order, Violarieæ. Genus, Melicytus (Forst.)

Melicytus ramiflorus (Forst.)
Mahoe, or Hinehine.—A small tree, 20–30 feet high, trunk often angular, and 7 feet in girth. The wood is soft and not in use. Abundant throughout the islands as far south as Otago, leaves greedily eaten by cattle.

Order, Malvaceæ. Genus, Hoheria (A. Cunn.)

Hoheria populnea (A. Cunn.)
Houhere.—Ribbon-wood of Dunedin. An ornamental shrub-tree, 10–30 feet high. Bark fibrous and used for cordage, and affords a demulcent drink. Wood splits freely for shingles, but is not durable. Grows abundantly throughout the islands. Bark used for making a tapa cloth by the natives in olden times.

Order, Tiliacæ. Genus, Aristotelia.

Aristotelia racemosa (Hook).

Mako.—A small handsome tree, 6–20 feet high, quick-growing, with large racemes of reddish nodding flowers. Wood very light, and white in colour, and might be applied to the same purposes as the lime-tree in Britain; it makes good veneers.

Genus, Elæocarpus (Linn.)

Elæocarpus dentatus (Vahl.)

Hinan.—A small tree, about 50 feet high, and 18 inches thick in stem, with brown bark which yields a permanent blue-black dye, used by the Maoris for colouring mats and baskets, and is used for tanning. Wood a yellowish-brown colour and close-grained, very durable for fencing and piles. Common throughout the islands.

Order, Olacineæ. Genus, Pennantia (Forst).

Pennantia corymbosa (Forst).

Kaikomako.—A small, very graceful tree, with white sweet-smeling flowers; height, 20 to 30 feet. Wood used by the natives for kindling fires by friction. Grows on the mountains of the Northern Island, and more abundantly throughout the Middle Island.

Order, Rhamneæ. Genus, Discaria (Hook.)

Discaria Toumatou (Rouil).

Tamata Koro.—"Wild Irishman" of settlers. A bush or small tree with spreading branches; if properly trained would form a handsome hedge that would be stronger than white thorn. The spines were used by the natives for tattooing.

Order, Sapindaceæ. Genus, Dodonea (Linn.)

Dodonea viscosa (Forst).

Ake.—A small tree, 6–12 feet high. Wood very hard, variegated black and white, used for native clubs, abundant in dry woods and forests.

Genus, Alectryon (Gærtner).

Alectryon excelsum (D.C.)

Titoki.—A beautiful tree with large pinnacles of reddish flowers. Trunk, 15–20 feet high, and 12–20 inches diameter. Wood has similar properties to ash, and is used for similar purposes. Its toughness makes it valuable for wheels, coach-building, &c.; the oil of the seeds was used for anointing the person. Grows in the North and Middle Island, and not uncommon in forests.

Order, Coriarieæ. Genus, Coriaria (Linn.)

Coriaria rusifolia (Linn.)

Tupakihi.—Tree tutu. A perennial shrub 10–18 feet high, trunk 6–8 inches diameter The so-called berries (fleshy petals) vary very much in succulence, the less juicy bearing seeds which, according to Colenso, are not poisonous. The juice is purple, and affords a grateful beverage to the natives, and a wine like elderberry wine has been made from them. The seeds and leaves contain a poisonous alkaloid, and produce convulsions, deliriums, and death, and are sometimes fatal to cattle and sheep. Abundant throughout the islands.

Order, Leguminosæ. Genus, Sophora (Linn.)

Sophora tetraptera (Aiton).

Kohwai.—A small or middling-sized tree. It has a splendid appearance, with large pendulous yellow flowers. Wood red; valuable for fencings being highly durable; is also adapted for cabinet-work. It is used for piles in bridges, wharves, &c. Abundant throughout the islands.

Order, Saxifrigeæ. Genus, Carpodetus (Forst).

Carpodetus serratus (Forst).

Tawiri.—White mapau, or white birch (of Auckland). A small tree, 10–30 feet high; trunk unusually slender; branches spreading in a fan-shaped manner, which makes it of very ornamental appearance; flower white, profusely produced. The wood is soft and tough, and might be used in the manufacture of handles for agricultural implements and axe-handles. Grows in the Northern and Southern Islands; frequent by the banks of rivers.

Genus, Weinmannia (Linn.)

Weinmannia racemosa (Forst).

Towhai ; Kamahi.—A large tree ; trunk 2–4 feet diameter, and 50 feet high. Wood close-grained and heavy, but rather brittle ; might be used for plane-making and other joiners' tools, block-cutting for paper and calico printing, besides various kinds of turnery and wood engraving. The bark of this tree is largely used for tanning. The extract of bark is chemically allied to the gum *kino* of commerce, their value being about equal. Grows in the middle and southern parts of the Northern Island and throughout the Southern Island.

Order, Rubiaceæ. Genus, Coprosma (Forst.)

Coprosma linariifolia (Hook).

Karamu.—An ornamental shrub tree ; wood close-grained and yellow ; might be used for turnery. Grows in mountain localities of the North and South Island.

Several other species of this genus grow to a considerable size, and have ornamental timber. It has been proposed to use the berries of one species as a substitute for coffee.

Order, Jasmineæ. Genus, Olia (Linn.)

Olia Cunninghamii (Hook., fil.)

Black Maire.—40–50 feet high, 3–4 feet diameter ; timber close-grained, heavy, and very durable. Much of this very valuable timber is at present destroyed in clearing the land.

Order Santalaceæ. Genus, Santalum (Linn.)

Santalum Cunninghamii. (Hook. fil.)

Maire.—A small tree, 10–15 feet high, 6–8 inches diameter ; wood hard, close-grained, heavy. Used by the natives in the manufacture of war implements. Has been used as a substitute for box by wood-engravers.

This is a magnificent and highly instructive exhibit.

VICTORIA.

Bell Bros., Melbourne.

A large slab of figured black-wood, highly polished, and of the finest quality.

Carter, Joseph, Melbourne.

This is an exhibit of four panels, representing different woods, and two representations of marble. They are well executed imitations.

Kilner & Stewart, Melbourne.

A very fine specimen of carved myrtle wood, intended for front of piano, surmounted by a carved figure representing Fame, in black-wood. This exhibit displays very superior workmanship, and is of a highly artistic character.

Schofield, Wm., Melbourne.

This is an instructive exhibit of fifteen rolls of scale-board for fancy box-making purposes. It is of excellent quality, and well manufactured.

Watts, W. K., Melbourne.

An interesting and ornamental exhibit of two table tops inlaid with a great number of colonial timbers.

Class 615.—Dyewoods, Barks, and Galls, for Colouring and Tanning.

GREAT BRITAIN AND IRELAND.

WHIFFEN, THOS., London.

A collection of cinchona bark, used for the manufacture of sulphate of quinine; comprises seventeen specimens of the most important species—six of these are from the South American forests, and the remainder the produce of cultivation in British India and Java.

YELLOW FLAT BARK, *Cinchona Calisaya* of Peru and Bolivia, was for many years the chief source of quinine. During the last twenty years this supply of bark has gradually fallen off, and it is now very rarely the true flat calisaya is to be obtained. The specimen shown is from a parcel that came to London in 1878, and contains 3·6 per cent. of sulphate quinine, with small quantities of quinidine and cinchonine.

YELLOW QUILL BARK, likewise the produce of *Cinchona Calisaya*, is obtained from the smaller stems and branches. The importation of this variety is still of great importance as a source of quinine. The specimen shown is of very good quality, and yields 4·7 per cent. of sulphate of quinine, the average yield for this bark being from 3 to 4 per cent.

COLUMBIAN BARK, the produce of the *Cinchona lancifolia*, of the province of Columbia in New Granada, was introduced into the London market about twenty-five years since; from that time the importation has greatly increased and the Columbian bark has been for many years the most important for the manufacture of quinine. The yield of this bark varies from 1 per cent. or under to as much as 3½ per cent., the specimen shown yielding 2·8 per cent. of sulphate of quinine, with a little cinchonidine and about ⅓ per cent. cinchonine.

PITAYO BARK is obtained from the *Cinchona Pitayensis*, growing in the district of Popayan, New Granada. This bark was formerly a considerable source of quinine, but the supply has now greatly fallen off. It contains with quinine a large quantity of cinchonine, and is besides the chief source of quinidine. The specimen shown yields 2·5 per cent. of sulphate of quinine, 2 per cent. of alkaloid cinchonine, and ¼ per cent. of alkaloid quinidine.

NEW GRANADA BARK, the produce of *Cinchona cordifolia* of Venezuela, has been imported in large quantities since 1870. The better varieties contain quinine with little other alkaloid, and are therefore in great request for manufacturing purposes. The specimen shown yields 4 per cent. of sulphate of quinine.

CARTHAGENA BARK, the produce of *Cinchona lanceolata* of Ecuador, is likewise an important source of quinine. This bark cantains, besides quinine, a considerable quantity of cinchonidine. The specimen shown is of fine quality, yielding 2·8 per cent. of sulphate of quinine and ·7 per cent. of sulphate of cinchonidine.

INDIAN CROWN BARK, the produce of the *Cinchona officinalis*, cultivated in India and Ceylon, is now becoming a considerable source of quinine. The species was introduced into India by the British Government, and the result has been thoroughly successful. The plant thrives in many localities, and produces a bark very rich in quinine. The specimen shown is from the Neilgherry Hills in Madras, and contains 5·1 per cent. of sulphate of quinine.

INDIAN RENEWED CROWN BARK is, as its name implies, the young bark which has grown over the stem after the original has been stripped off. The *renewed* bark has by the third year become sufficiently developed to be detached from the stem, and is much superior in quality to the original bark from the same tree. The specimen shown yields as much as 6·8 per cent of sulphate of quinine.

INDIAN YELLOW BARK, from the *Cinchona Calisaya Ledgeriana*, cultivated in India, is at present scarcely known as a commercial article, but from the extraordinary richness in quinine of some small parcels which have been imported, and from the success obtained with this variety in Java, it is likely to be of great importance. The specimen shown yields 7·4 per cent. of sulphate of quinine.

JAVAN YELLOW BARK, from the *Cinchona Calisaya Ledgeriana*, which was introduced by the Dutch Government into Java in 1866, has already been produced in considerable quantities. The trees were raised from seed collected by Mr. Charles Ledger, in Bolivia, in 1865, and the climate of Java being well suited for this variety, it grows freely, and produces bark of excellent quality and handsome appearance. The specimen shown yields 7·3 per cent. of sulphate of quinine.

JAVAN CROWN BARK, from the *Cinchona officinalis*, cultivated in Java, is also well suited for the manufacture of Quinine. The plants of this species do not thrive well in the island, and at present only a small quantity of this bark is produced. The specimen shown yields 3·4 per cent. of sulphate of quinine.

INDIAN RED BARK, the produce of the *Cinchona succirubra*, which was introduced by the British Government in 1864, and has been cultivated with great success in various parts of India and Ceylon. It is the most prolific of all the known cinchonas, growing rapidly in most situations and requiring little attention. On this account the propagation of this species has been advanced more rapidly than any other, and large plantations have been formed by private enterprise in addition to those of the British Government. The bark yields a very large amount of alkaloids, of which cinchonidine constitutes about one-half ; together with quinine, cinchonine, and amorphous quinine. The separation of these alkaloids is costly, and it follows that sulphate of quinine cannot be profitably manufactured from many samples of this bark. For this reason the mixed alkaloids were introduced in 1875 under the term "Quinetum," to utilize the valuable alkaloids of the Cinchona succirubra, and at the same time to produce a cheap and (as the result proved) an excellent febrifuge. Five specimens of Red Bark are shown, namely :—

CINCHONA SUCCIRUBRA, from the Neilgherry Hills, Madras—

Yielding sulphate of quinine	1·57	per cent.
,, ,, cinchonidine	3·43	,,
,, alkaloid cinchonine	1·43	,,

RENEWED CINCHONA SUCCIRUBRA, from the same district—

Yielding sulphate of quinine	2·8	per cent.
,, ,, cinchonidine	2·78	,,
,, alkaloid cinchonine	1·43	,,

CINCHONA SUCCIRUBRA, from Dutch Plantation in Java—

Yielding sulphate of quinine	1·43	per cent.
,, ,, cinchonidine	4·3	,,
,, alkaloid cinchonine	1·3	,,

CINCHONA SUCCIRUBRA, from the Island of Borneo, the first import of which came to London in April, 1879—

Yielding sulphate of quinine	1·16	per cent.
,, ,, cinchonidine	2·2	,,
,, alkaloid cinchonine	2·2	,,

CINCHONA SUCCIRUBRA, from Jamaica, West India—

Yielding sulphate of quinine	1·7	per cent.
,, ,, cinchonidine	3·7	,,
,, alkaloid cinchonine	1·4	,,

This is a most interesting exhibit, giving most valuable information regarding this valuable alkaloid.

INDIA.

GOVERNMENT OF MADRAS.

A specimen of chay-root (*Hedyotis umbellata*). A valuable red-dye producing root. We commend this exhibit.

CLASSES 613–620.—*Arboriculture and Forest Products.*

JAPAN.

TSUKUSHI SANJIRO, Osaka.

Several very fine samples of vegetable wax produced by a variety of timber indigenous to Japan. These are beautifully manufactured blocks of a pure white colour, having all the characteristics of a true wax; it melts at a low temperature, and burns freely with low illuminating power and a sharp crackling noise. It is evidently suitable for all the ordinary purposes for which wax is generally used. The common vegetable wax, largely used for making candles, is made from the fruit of Rhus succedanea; the lacquer-tree, Rhus vernicifera, *Urushi*, yields a nearly similar wax, and so also does the wild lacquer-tree, Rhus silvestris, *Yama-urushi*. A kind of vegetable tallow is yielded by the Cinnamomum pedunculatum, *Yabu-nikkei*; and by the puncture of an insect, the Ligustrum ibota, *Ibota*, furnishes a white wax of very good quality, but this is produced only in small quantity.

TSUMSKICHI AMENURONI, Osaka.

This exhibit consists of two good samples of resin from cedar and pine trees, also an amorphous sample of the latter. We commend these specimens.

NEW SOUTH WALES.

ELLIOTT BROS., Sydney.

This is a magnificent exhibit of cork artistically arranged, showing cork in the rough state and all stages of manufacture. The workmanship is of the first quality, and on account of its being a new industry in this Colony, and of the quality of the cork being superior to the imported article, we recommend the giving of a first award.

RUDDER, E. W., Kempsey, Macleay River,

Sends a collection of 215 samples of cloth and silk, dyed with colours extracted from different barks and trees found in the Kempsey District; many of these show fine tints, and seem highly suitable for the requirements of commerce.

QUEENSLAND.

BOTANIC GARDENS, Brisbane.

A very instructive exhibit of seven varieties of barks used for tanning and other purposes.

The following is a full description of this collection :—

Bark of the blue gum (*Eucalyptus botryoides*, Sm.) Used in decoction as a domestic remedy for dysentery.

Bark of the iron-bark (*Eucalyptus siderophlia*, Benth.) Is in great estimation for its tanning qualities, and can be obtained in any quantity.

Mangrove bark (*Brugueria Rheedii*, Blume.) Used for tanning purposes, also as an astringent in medicine.

Green wattle bark (*Acacia mollissima*, Willd.) Used for tanning purposes.

Black wattle bark (*Acacia decurrens*, Willd.) This bark is much prized for tanning purposes, containing from 18 to 33 per cent. of tanin when dry.

Fever bark (*Alstonia constricta*, F.M.) Used in cases of fever and ague, having most of the properties of quinine.

Crab-tree bark (*Petalostigma quadriloculare*, F.M.) Possesses a powerful bitter and qualities somewhat similar to Peruvian bark.

We specially note the sample of *Alstonia constricta*, which evidently has most valuable febrifuge qualities, the bitter principle being very similar to that found in cinchona bark. We should recommend its being analyzed, and the alkaloid it contains being authenticated.

SOUTH AUSTRALIA.

Wilke, H. & Co., Port Adelaide.

This exhibit consists of six samples of two varieties of wattle bark, crushed in different qualities, for ordinary tanning purposes. The percentage of tannin contained in these samples has been found upon special analysis to be very high—a sample from Adelaide containing 27·19 per cent., and another from Port Macdonald yielding 24·34 per cent. of soluble tannin. Mimosa bark is now largely exported from the Colonies, chiefly from Victoria, Adelaide, and Tasmania. The exports have been in 1874, 5,857, 1875, 8,441, 1876, 18,392, 1877, 10,056, 1878, 12,429 tons, representing a value of about £400,000. This is exclusive of large quantities sent to New Zealand.

TASMANIA.

Grubb Bros., Hobart Town.

This exhibit consists of three samples of rough, crushed, and ground wattle bark. No information regarding the exhibit is given. The bark appears to be of good quality.

VICTORIA.

Lawrence, Wm., Melbourne.

Samples of crushed, chopped, and ground wattle bark. No information given regarding the varieties of bark. Of good commercial quality. We class this in the 4th Order of Merit.

Pow, J. K. & Co., Melbourne.

Four samples of tanning substances as follows :—

Extract of	Mimosa bark	containing.....	50	per cent.	of tannin
,,	Valonea	,, from 17 per cent. to	21	,,	,,
,,	Myrobalan	,, ...	18	,,	,,
,,	Powdered Mimosa bark	from 17 per cent. to	25	,,	,,

This is an interesting and instructive exhibit, giving information regarding the quality of the different tannin substances shown.

Class 616.—Gums, Resins, Caoutchouc, Gutta-percha, Vegetable Wax.

FIJI.

Native exhibit.—This is a curious sample of rubber from an indigenous Fijian plant called "Driga-quroqura." This is a rubber of good quality, and evidently valuable for economic purposes. We commend this sample, and recommend the exhibitor to have the properties of this variety thoroughly tested.

FRANCE.

Labrouche, G., Bordeaux.

This exhibit consists of twenty samples of crude and refined specimens of gums, of varieties for commercial purposes.

NEW ZEALAND.

Baker, Jas. E., Wellington.

This is a case containing some very fine specimens of resin from the kauri pine tree ("Dammara Australis"). This is commercially called kauri gum, although it is not a gum, but a true resin. A number of these specimens are finely carved, to show the commercial uses to which this resin can be applied.

Hull, Jun., & Co., Auckland.

This exhibit consists of some very fine samples of kauri resin in crude state, 60lbs. in twelve pieces in ordinary commercial condition.

Labonde, L.

This is an exhibit comprising some beautiful specimens of kauri resin of very fine quality, cut into various artistic crosses and other ornamental forms, to show the uses to which the resin can be applied.

Thames Produce Co. (Limited), Thames.

This is a well arranged and instructive exhibit of kauri resin, showing twenty samples of different quality in crude and semi-manufactured state, from prices ranging from 2d. to 2s. 6d. per lb.

QUEENSLAND.

Botanic Gardens, Brisbane.

An interesting exhibit of gums, resins, and lacs, described as follows :—

Bunya Bunya Gum (*Araucaria Bidwilli*, Hook).

Blood-wood Gum (*Eucalyptus corymbosa*). Contains valuable tanning properties. With the assistance of this gum resin, a collection of photographs were taken by Mr. R. Daintree, illustrative of Queensland.

Cypress Pine Gum (*Frenela Endlicheri*, Parlat.) The exudation from this tree resembles that of the Sandrac pine of the Mediterranean.

Catechu. This is obtained from the *Eucalyptus fibrosa*, F. M. It is a powerful astringent, and is supposed to be very efficacious in cases of diarrhœa.

Grass-tree Gum (*Xanthorrhœa arborea*, R. Br.) Similar if not identical with Benzoin. A spirituous varnish can be manufactured from it, and it has also been used as a dye for calico, and in the manufacture of sealing-wax.

Bottle-tree Gum (*Sterculia rupestris*, Benth.) Exudes freely from the tree, and somewhat resembles Tragacanth.

This is one of the finest exhibits in this Class.

SOUTH AUSTRALIA.

Wilke, H., & Co., Port Adelaide.

This is an interesting exhibit of Yacka Gum (?), in three stages of preparation. The following information has been furnished regarding it :—

It has been found to be the product of the *Xanthorrhœa hastilis*, or Grass-tree of New Holland, and is composed of—

Resin, soluble in cold alcohol	88·59
Moisture and loss by heating under 212°	7·41
Insoluble (stems, bark, &c.)	2·00
Ash left after ignition	2·00
	100·00

Its principal commercial use, so far as it is known at present, is for the manufacture of pieric acid, for which purpose it is better adapted than indigo or carbolic acid, &c., as the product is greater, and of a purer character, being unmixed with the many substances found in the above-named materials. Pieric acid is used by dyers and printers for making a fine yellow dye, and also a beautiful green is produced by the addition of sulph. indigotic acid. This, although called a gum, evidently appears to be a lac, having all the characteristics of this latter substance. We commend this as an instructive and interesting exhibit.

STRAITS SETTLEMENTS.

Government, Selangor.

This exhibit comprises four specimens of resins. The native names are as follows:—Damar Batu, Damar Mata Kuching, Damar Daging, Damar Matee. These are erroneously described as gums, and as arsenious exudations from trees. They are all true resins. The Damar Daging seems to be a soft resin of rich colour that could be utilised commercially. We commend this exhibit.

Guthrie & Co., Singapore.

This is an interesting exhibit of twenty-nine samples, described as gums, catalogued as follows :—Damar Batu Gum, Gum Copal, and Gum Benjamin. Siam Sticklac, Dragon's Blood ; Gutta Percha, Varieties of ; Gutta Soossoo, India-rubber. All the above so-called gums are resins.

Ord, Capt., A. R., Malacca.

An interesting exhibit of three samples of resins from the Kambi Dahoon tree and Seriah tree. We commend this exhibit.

Paterson, Simons & Co., Singapore.

This is a good exhibit of seventeen samples of resins, rubber, and gutta percha. This is a most interesting exhibit.

Tye Sin, F., Penang.

Two samples of rubber and gutta percha. These are of good quality.

VICTORIA.

GUILFOYLE, W. R., Melbourne.

An extensive and instructive collection of vegetable extracts with full information regarding them as follows :—

Local Name.	Botanical Name.	Preparations, &c.
Victorian Sassafras, Victoria ...	Atherosperma moschata, Labill.	Sample, ground bark.
Common Black Wattle, ,, ...	Acacia decurrens, Willd....	,, charcoal from
,, ,, ...	,, ,, ,, ...	,, ink from
,, ,, ...	,, ,, ,, ...	,, crude acetate lime
,, ,, ...	,, ,, ,, ...	,, tannin
,, ,, ...	,, ,, ,, ...	,, dye from bark
,, ,, ...	,, ,, ,, ...	,, gum from
Silver Wattle, ,, ...	,, dealbata, Link	,, ,,
Weeping Acacia, ,, ...	,, saligna, Wendl.. ...	,, crude potash from
,, ,, ...	,, ,, ,, ...	,, crude acetate lime
Willow Acacia, ,, ...	,, salicina, Lindley ...	,, crude potash
Golden Wattle, ,, ...	,, pycnantha.....	,, gum from
Prickly Victorian Box, ,, ...	Bursaria spinosa, Cavanilla	,, charcoal
,, ,, ...	,, ,, ...	,, crude potash
,, ,, ...	,, ,, ...	,, acetate of soda
,, ,, ...	,, ,, ...	,, crude acetate lime
,, ,, ...	,, ,, ...	,, refined acet. lime
,, ,, ...	,, ,, ...	,, crude wood acid
,, ,, ...	,, ,, ...	,, acetate acid
,, ,, ...	,, ,, ...	,, crude tar
Norfolk Island Blood-wood, N. S. Wales and Norfolk.	Baloghia lucida, Endlicher	,, dye from bark
Common Coffee Plant, Abyssinia	Coffea Arabica, Linn.	,, coffee berries
Erect She-Oak.....	Casuarina suberosa, Otto and Dietrich.	,, crude potash
,, ...	,, ,, ...	,, charcoal
Spurious or Peruvian Arrowroot	Canna edulis, Ker.	,, arrowroot from rhizomes
Peruvian Arrowroot, Peru and Brazil.	,, Peruviana	,, ,,
Monterey or Citron Cypress..... California.	Cupressus macrocarpa ..... (Hartwig).	,, resin from
African Button Flower ..... Cape Good Hope.	Diascia tenuifolia (Linn.)...	,, dye from bark
Lemon-scented Gum ..... Queensland.	Eucalyptus citriodora..... (Hook r.)	,, oil from
Messmate, Victoria	Eucalyptus fissilis ..... (Müller.)	,, gum from
Blue Gum, Victoria, &c..... ..	Eucalyptus globulus..... (Labillardière.)	,, crude potash
,, ,, ...	,, ,, ...	,, acetic acid from
,, ,, ...	,, ,, ...	,, pearl ash from
,, ,, ...	,, ,, ...	,, charcoal from
,, ,, ...	,, ,, ...	,, acetate of soda
,, ,, ...	,, ,, ...	,, acetate of lime
,, ,, ...	,, ,, ...	,, crude tar from
Stringy-bark, Victoria	Eucalyptus obliqua..... (L'Héritier.)	,, gum from
Gippsland White Gum	Eucalyptus goniocalyx..... (Müller.)	,, gum from
River Gum of New South Wales New South Wales.	Eucalyptus dealbata..... (A. Cunningham).	,, gum from

CLASSES 613–620.—*Arboriculture and Forest Products.*

Local Name.	Botanical Name.	Preparations, &c.
Narrow-leaved Peppermint ..... Victoria.	Eucalyptus amygdalina ... (Labillardière.)	Sample crude potash
,, ,, ...	,, ,, ...	,, carbonate potash
,, ,, ...	,, ,, ...	,, acetate of soda
,, ,, ...	,, ,, ...	,, acetic acid
,, ,, ...	,, ,, ...	,, charcoal
,, ,, ...	,, ,, ...	,, gum from
,, variety	,, ,, ...	,, gum from
Victorian Flooded Gum, Victoria	Eucalyptus coriacea ..... (A. Cunningham).	,, gum from
Victorian Yellow Box, Victoria	Eucalyptus melliodora..... (A. Cunningham).	,, gum from
Victorian Apple-tree, Victoria...	Eucalyptus Stuartiana..... (L'Héritier.)	,, gum from
Victorian Red Gum, Victoria ...	Eucalyptus rostrata ..... (Schlecht.)	,, gum from
Native Cherry-tree, Victoria ...	Exocarpus cupressiformis.. (Labillardière.)	,, charcoal from
Moreton Bay Fig, Queensland...	Ficus macrophylla ..... (Desfont.)	,, charcoal from
,, ,, ...	,, ,, ...	,, caoutchouc varnish
,, ,, ...	,, ,, ...	,, caoutchouc
,, ,, ...	,, ,, ...	,, caoutchouc, black
,, ,, ...	,, ,, ...	,, colouring matter
,, ,, ...	,, ,, ...	,, caoutchouc vuln
Sheathed Rush, Victoria	Juncus vaginatus..... (R. Brown).	,, lampblack from
Common Olive, Southern Europe and Western Asia.	Olea Europæa (Linn.)	,, oil, two qualities
,, ,,	,, ,,	,, from a plant grown in the Melbourne Botanic Gardens
	Olea, two choice French varieties.	Fruit preserved from
Queensland Grass-cloth tree..... Queensland.	Pipturus argenteus ..... (Weddell.)	Sample colouring extract
,, ,,	,, ,,	,, dye from bark
Victorian Laurel, Victoria	Pittosporum undulatum... (Vent.)	,, oleo-resin from seeds.
Cork Oak, South Europe	Quercus suber (Linn)	,, cork from
Queensland Bitter-bark.....	Supposed to be Chinchona sp. ?	,, bark of
Castor oil Plant, India	Ricinus communis (Linn).	,, oil from
,, ,, ...	,, ,, ...	,, seeds from
Rosemary, S. Europe and Asia..	Rosmarinus officinalis ..... (Linn.)	,, rosemary water
Flame-tree	Sterculia acerifolia ..... (A. Cunningham).	,, colouring extract from seeds
Mountain Grass-tree	Xanthorrhœa arborea ..... (R. Brown).	,, yellow colouring matter
,, ,,	,, ,, ...	chips producing the colouring matter.

Class 618.—Seeds, Nuts, &c., for Food and Ornamental Purposes.

FIJI.

WATERHOUSE, G. J., Sydney.

A good sample of ivory, or corossa nuts (Fijian produce), carved to show commercial utility. We commend this exhibit.

Class 619.—Forestry Illustrations of the Art of Planting, Managing, and Protecting Forests; Statistics.

NEW ZEALAND.

POTTS, T. H., Ohinitaki, Governor's Bay, Christchurch.

Statistical information regarding Forest Seeds, &c., as follows:—

TABLE showing the RELATIVE GROWTHS of CONIFERÆ at Ohinitaki, Canterbury, N.Z.

Species.	Height.							Spread.	Girth.
	1866.	1868.	1869.	1870.	1871.	1872.	1878.	1878.	1878.
	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.
Pinus—									
Austriaca	0 6	1 11	3 8	3 11	6 6	8 0	19 0	14 0	2 7
brutia	....	....	2 0	2 9	3 11	5 6	15 6	12 0	2 5
halepensis	....	3 6	5 10	7 10	8 9	10 0	22 0	20 0	4 4
,,	0 6	3 3	5 4	7 3	9 2	10 2	22 0	16 6	4 1
,,	0 7	3 2	4 10	7 3	8 10	10 7	23 0	22 0	4 3
muricata	....	....	....	2 7	3 11	5 10	19 0	12 0	2 2
Pinaster	....	....	....	13 2	15 8	17 2	30 0	24 6	4 9
pinea	....	3 6	4 6	6 4	7 6	9 1	19 0	15 0	4 6
sylvestris	....	....	....	4 11	7 7	10 6	28 0	19 0	3 6
,,	....	....	3 5	4 1	6 0	7 4	21 0	15 0	2 11
Benthamiana	0 5	1 4	3 2	5 4	7 4	8 10	22 3	14 6	3 11
,,	0 6	1 2	2 10	5 2	7 0	8 5	21 0	13 0	3 8
Canariensis	0 7	1 1	3 6	5 4	7 0	9 10	26 9	9 0	2 10
,,	....	....	....	....	3 10	7 4	22 0	11 0	2 9
insignis	1 1	5 7	7 3	10 9	16 1	20 4	45 9	24 6	6 10
radiata	1 2	5 0	8 0	12 2	16 0	20 9	41 0	27 0	6 2
,,	1 0	6 4	9 6	14 4	19 0	24 10	....	....	7 5
longifolia	0 5	2 0	3 8	5 6	7 2	9 4	18 0	8 0	3 4
,,	0 9	1 6	3 6	5 10	7 7	8 9	26 0	11 0	3 3
macrocarpa	0 7	2 5	4 11	7 7	10 5	13 5	28 0	23 6	4 5
,,	0 7	2 3	4 3	5 11	8 0	10 4	27 0	17 0	4 8
ponderosa	0 9	1 8	3 6	5 5	7 3	9 11	25 3	19 3	4 3
,,	0 7	2 2	4 0	5 3	6 0	8 9	20 0	18 0	4 1
Sabiniana	0 6	1 11	3 11	5 10	7 2	9 10	19 0	19 0	4 1
,,	....	2 0	....	4 8	7 0	9 0	22 0	15 0	3 0
tuberculata	....	.....	0 4	....	2 8	4 2	20 6	17 6	2 4
excelsa	....	.....	4 1	7 0	9 5	10 1	18 6	19 0	3 3
,,	....	3 0	5 3	7 7	8 10	9 7	19 6	17 0	2 10
Lambertiana	....	....	0 3	....	....	....	5 0	5 0	0 11
Strobus	0 3	1 1	2 7	5 0	7 7	9 1	20 3	15 6	2 6
,,	0 2	0 10	2 3	3 4	4 4	6 2	19 0	12 0	2 1
,,	0 2	1 0	2 4	4 9	6 7	8 3	17 0	12 0	1 6
Torreyana	....	....	....	0 4	....	....	6 11	4 0	0 6
Sp. ? Mexico	....	....	....	....	7 0	....	16 9	13 0	1 11
Abies—									
alba	....	....	3 0	3 6	3 10	4 0	7 5	6 3	0 7
excelsa	2 11	5 5	6 0	6 6	7 8	9 0	16 6	10 0	2 1
,,	2 7	4 7	6 6	8 2	10 0	10 4	23 0	12 6	2 6
rubra	....	....	0 8	1 0	....	....	8 0	5 6	0 10
Khutrow	....	0 7	0 8	2 0	2 3	3 6	11 0	8 0	1 11
,,	1 9	1 9	2 3	3 3	4 3	5 4	11 0	11 0	1 9
Douglasi	....	....	....	....	3 2	0 10	14 0	9 6	1 3
Picea—									
balsamea	0 4	0 10	1 7	2 6	4 1	5 10	17 0	10 0	1 0
Nordmanniana	0 2	0 4	0 7	1 1	1 9	2 4	11 3	8 9	1 9
pectinata	0 2	0 5	0 9	1 1	1 5	2 0	5 3	4 3	0 9
Pindrow	0 7	1 3	2 0	3 0	4 2	5 8	18 0	10 0	2 4
Pinsapo	0 7	0 10	1 4	2 3	3 4	5 0	16 0	10 3	2 5
grandis	....	....	....	....	1 3	2 5	12 9	7 6	1 8
Larix europæa	0 3	2 1	4 1	8 0	8 6	10 0	21 9	12 0	2 1
,,	0 3	1 2	2 8	4 10	6 7	7 9	16 6	10 0	1 5
Cedrus—									
Deodara	4 11	6 7	7 11	11 0	13 2	15 10	26 0	31 0	3 10
,,	6 2	11 5	12 6	14 6	16 8	19 6	33 0	29 0	3 8
,,	....	6 6	8 2	8 8	10 6	12 0	20 6	19 0	2 7
,,	2 1	7 3	8 9	11 2	12 7	13 4	25 6	19 6	2 6
Libani	....	....	1 0	1 8	2 2	3 6	6 6	7 6	1 10

CLASSES 613–620.—*Arboriculture and Forest Products.*

Species.	Height.							Spread.	Girth.
	1866.	1868.	1869.	1870.	1871.	1872.	1878.	1878.	1878.
	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.
Araucaria—									
Bidwilli	1 2	1 3	1 8	2 6	3 4	4 3	11 0	13 9	1 5
imbricata	0 7	1 0	1 9	3 2	5 0	6 4	15 6	9 6	2 0
,,	0 7	1 0	1 6	2 5	3 4	4 0	11 9	7 0	1 3
Cunninghamii	....	2 1	3 5	4 6	5 6	6 0	13 6	9 9	1 6
,,	....	....	1 4	1 7	2 2	3 0	7 0	5 6	0 9
excelsa	1 9	4 2	5 1	7 1	8 7	10 4	16 3	7 6	1 0
,,	2 7	4 7	6 6	8 2	10 0	10 1	16 0	16 0	2 1
Cunninghamia lanceolata	3 4	5 9	6 7	7 5	7 10	8 6	14 0	14 0	1 9
,, ,,	1 10	3 5	4 2	5 5	6 1	7 4	16 0	10 0	1 6
,, ,,	3 2	5 8	6 9	7 6	8 0	8 11	18 6	11 0	1 11
Dammara obtusa	1 0	2 0	3 0	3 6	3 7	....	9 0	5 6	0 9
Cupressus—									
funebris	7 0	9 4	10 6	12 0	12 11	13 0	14 6	14 3	2 7
,,	....	....	3 4	6 0	7 4	8 4	12 0	7 4	1 2
Corneyana	....	....	....	....	....	....	17 0	14 0	1 0
Goveniana	1 0	2 3	3 6	5 1	6 2	6 10	15 6	26 0	4 2
,,	....	4 5	5 0	6 1	7 5	8 4	20 0	22 0	4 10
,,	....	3 5	4 6	5 4	6 4	7 0	17 0	23 0	2 11
Knightiana	0 11	6 4	10 4	13 2	15 2	16 9	25 0	30 0	4 10
Lawsoniana	0 8	3 3	5 8	7 8	10 0	10 10	19 0	15 0	2 11
Lusitanica	0 8	5 8	7 10	10 7	12 2	15 3	24 6	33 0	4 6
,,	....	....	....	....	8 6	11 8	27 0	22 0	2 7
Macnabiana	1 6	4 2	5 1	7 0	8 4	9 1	15 9	27 3	4 2
macrocarpa	5 6	11 10	14 10	18 6	20 2	22 9	32 0	30 0	6 8
,,	5 3	11 0	14 6	17 8	20 11	24 10	36 0	33 0	5 0
,,	0 10	6 2	8 7	14 0	14 3	17 1	29 6	34 0	6 10
sempervirens	....	4 11	5 11	8 0	9 3	10 6	19 6	2 0	1 7
Uhdeana	1 3	5 10	8 3	11 3	12 8	14 2	25 2	32 6	4 4
horizontalis	1 6	4 2	5 8	7 8	10 0	11 5	19 6	12 6	3 3
torulosa	1 8	4 2	5 3	7 0	9 0	10 1	16 6	12 0	2 8
,,	....	4 1	....	6 11	8 6	9 3	20 6	13 6	2 9
majestica	0 11	2 2	4 6	6 1	8 6	10 0	22 0	18 0	3 1
Whitleyana	0 7	1 4	4 0	5 11	7 10	9 11	21 0	12 0	3 1
,,	....	....	....	....	....	....	29 0	14 6	3 0
Cryptomeria japonica	10 0	12 7	13 3	15 4	16 9	17 7	26 0	14 6	2 4
,, ,,	6 4	8 8	9 2	10 2	10 10	....	17 3	11 0	2 0
,, ,,	0 9	3 10	6 0	8 2	9 8	10 8	18 9	14 9	2 6
Wellingtonia gigantea	0 3	1 9	4 5	7 4	9 2	10 4	20 0	16 0	6 1
,, ,,	0 3	....	....	2 3	3 1	4 11	15 6	9 0	3 6
,, ,,	....	....	1 2	2 11	4 5	5 9	13 2	9 0	3 2
Sequoia sempervirens	1 10	3 1	....	7 7	9 4	11 6	23 0	23 6	4 6
Thujopsis dolabrata	....	....	0 10	....	1 11	2 6	7 10	6 2	....
Retinospora obtusa	....	....	....	....	....	....	6 9	7 0	0 11
Chamæcyparis sphæroidea	....	2 9	4 0	5 4	6 0	....	13 0	11 0	1 2
,, ,,	1 8	2 10	4 0	5 2	5 6	....	12 0	12 9	1 9
Callitris—									
Gunnii	1 8	3 0	5 0	5 10	7 4	....	11 9	9 6	....
cupressiformis	....	2 10	4 3	6 5	8 2	....	16 6	18 0	2 5
pyramidalis	....	2 6	3 2	5 4	6 6	....	12 0	7 6	....
Libocedrus chilensis	....	2 7	4 1	5 6	6 1	7 10	13 9	11 6	2 0
Thuja gigantea	2 1	5 4	7 0	8 10	11 4	14 5	27 0	26 0	4 10
,,	....	....	9 0	10 2	13 4	15 2	27 0	22 0	3 9
,,	0 5	2 5	4 2	6 0	8 0	....	20 0	21 0	4 1
,,	1 1	3 3	5 4	8 2	10 5	12 4	24 0	17 0	3 2
Wareana	0 7	0 10	1 5	2 1	2 2	....	6 6	4 9	1 9
Biota—									
aurea	1 3	1 8	2 0	2 5	....	....	4 2	4 6	1 6
orientalis	....	....	....	4 0	....	....	10 0	5 0	0 11
meldensis	2 1	2 2	3 0	4 4	5 1	....	9 6	5 0	1 3
Juniperus—									
Hibernica	0 11	....	3 4	....	....	....	9 9	8 0	....
virginiana	....	....	3 10	....	....	....	14 6	23 6	2 8
oxycedrus	....	....	1 11	....	....	....	9 6	7 0	1 8
Cephalotaxus Fortunei	1 6	2 5	2 8	....	3 4	....	6 6	5 6	0 11
Podocarpus—									
Chinensis	1 0	2 7	3 3	3 9	4 5	....	6 6	....	....
nubigena	0 7	0 11	1 5	1 7	1 10	....	3 1	0 9	0 6
spinulosa	1 10	2 3	3 6	4 6	5 2	....	9 6	7 6	0 11

GROUP—Arboriculture and Forest Products.

CLASSES 613–620.

AUSTRIA.

GROSSMANN & CO., Maximilian.—Vienna.—Veneers.
Highly Commended.

CEYLON.

GOVERNMENT OF CEYLON—Ceylon.—Timber.
Honourable Mention.

LEECHMAN & CO.—Ceylon.—Timber.
Honourable Mention.

MENDIS, Adrian—Ceylon.—Timber.
First degree of Merit.

FIJI.

BARRACK, Captain—Suva Suva.—Knees made from Dilo-Tree.
First degree of Merit.

FIJIAN NATIVE EXHIBIT.—India-rubber.
Honourable Mention.

JOSKE, Paul—Suva Suva.—Samples of Timber.
Highly Commended.

WATERHOUSE, G. J.—Sydney.—Ivory or Corossa Nuts, from Fiji.
Honourable Mention.

FRANCE.

LABROUCHE, Gustave—Bordeaux.—Senegal Gums.
Honourable Mention.

MOONEN, Léon—Paris.—Collection of 176 varieties of Ornamental Woods.
First degree of Merit.

Report—This exhibit is an extremely interesting one, showing a great amount of care and observation in its preparation, and contains many rare and beautiful specimens.

GREAT BRITAIN AND IRELAND.

WHIFFEN, Thomas—London.—Pharmaceutical Preparations.
First degree of Merit.

JAPAN.

KUWAI TAKUSHI—Yeddo.—Specimens of Timber.
Highly Commended.

TSUKUSHI SAN JIRO—Osaka.—Gums.
First degree of Merit.

TSUMSKICHI AMENURONI—Osaka.—Gums.
Honourable Mention.

NEW SOUTH WALES.

AUSTRALIAN AGRICULTURAL CO.—Newcastle.—Timber (Colonial).
Highly Commended.

BENNETT, Kenrick H.—Moolah, Laurencekirk, Booligal.—Quondong Timber.
Commended.

BRYANT, Thomas.—Camden.—Colonial Timbers.
Commended.

CLARENCE PASTORAL AND AGRICULTURAL SOCIETY—Grafton.—Collection of Timbers.
Commended.

COMMISSIONERS, PARRAMATTA ROAD TRUST—Parramatta.—Specimens of Iron-bark which have been in use from thirty-six to sixty years.
Highly Commended

CRAWFORD, A. R.—Walcha.—Timbers.
Commended.

DEPARTMENT OF MINES—Sydney.—Timbers of New South Wales.
First degree of Merit.

ELLIOTT BROS.—Sydney.—Cork, Manufactured and Unmanufactured.
First degree of Merit.

GOWRING & KELLY—Bega.—Sawn Timber and Shingles.
Highly Commended.

ILLAWARRA DISTRICT COMMITTEE—Wollongong.—Trophy of Timber.
Honourable Mention.

JONES, Henry T.—Parramatta.—Specimens of Indigenous Timbers.
Commended.

MUDGEE COMMITTEE—Mudgee.—Polished Myall Wood and Slaty Gum.
Commended.

MUNRO, James—Redfern.—Bent Colonial Timber.
Highly Commended.

RUDDER, E. W.—East Kempsey.—Dyed Samples of Cloth and Silk, showing value of Colonial Forest Products for Dyeing purposes.
Commended.

Report—An interesting and instructive exhibit, the value of which would have been greatly increased had information been given to show the plants from which the dyes were procured.

STEWART, W.—Sydney.—Cedar.
First degree of Merit.

NEW ZEALAND.

AUCKLAND HARBOUR BOARD—Auckland.—Specimens of Australian and New Zealand Timber, showing the action of Teredo Navalis.
Highly Commended.

BAGNALL BROS.—Thames.—Sample Board of Kahikatea Pine.
First degree of Merit.

BAKER, James E.—Wellington.—Collection of Kauri Gum.
Highly Commended.

BLAIR, W. N.—Dunedin.—Polished Samples of New Zealand Timbers.
Honourable Mention.

CAMPBELL, Dr. J. L.—Kaipara.—Specimens of Timber.
Highly Commended.

COLONIAL MUSEUM OF NEW ZEALAND—Wellington.—Specimens of Timbers. Honourable Mention.

COLONIAL MUSEUM OF NEW ZEALAND—Wellington.—Sections of Timber, showing breaking strain. First degree of Merit.

Report—This is a most instructive exhibit, the different timbers shown being all indigenous to New Zealand.

FLEMING, George—Nelson.—Collection of Timbers.
Commended.

Report—A good collection with native and botanical names attached.

GEORGE, James C.—Taranaki.—New Zealand Woods.
Honourable Mention.

GUTHRIE, Robert—Dunedin.—Polished samples of New Zealand Timbers.
Honourable Mention.

HAAST Ph.D., F.R.S., Professor Julius von—Director of the Canterbury Museum, Canterbury.—Timbers of Canterbury and Westland.
Commended.

HALCOMBE, A. F.—Fielding, Manawatu. — Native Ornamental Woods. First degree of Merit.

HOKITIKA COMMITTEE—Hokitika.—Specimens of Timber from Westland. Honourable Mention.

HOLDSHIP, G.—Auckland.—Kauri Timbers.
Honourable Mention.

HORNBY, John—Picton.—Planks of Rimu Timber.
Highly Commended.

HULL, Jun., & CO.—Auckland.—Kauri Gum.
Honourable Mention.

ISAACS, Edward—Auckland.—Kauri Timber, showing formation of Gum. Honourable Mention.

JAMES, William—Wellington.—Specimens of Totara Knot, an Ornamental Timber. Honourable Mention.

LABONDE, L.—Gums.
First degree of Merit.

NEW ZEALAND COMMISSION—Wellington.—Specimens of Timber.
First degree of Merit.

Report—This is the finest single specimen of timber in the Exhibition.

NORRIE, Wm.—Auckland.—Ornamental Timbers.
Highly Commended.

OTAGO MUSEUM—Dunedin.—Specimens of Native Timber of Otago.
First degree of Merit.

POTTS, T. H.—Ohinitaki, Christchurch.—Cones of Forest Trees, grown in New Zealand. First degree of Merit.

ROBERTSON & CO., J. W.—Queenstown.—Samples of Birch Totara.
Honourable Mention.

THAMES PRODUCE CO. (Limited)—Thames.—Kauri Gum.
Commended.

QUEENSLAND.

BOTANIC GARDENS—Brisbane.—Collection of Timbers.
First degree of Merit.

BOTANIC GARDENS—Brisbane, Queensland.—Gum Resins.
Highly Commended.

BOTANIC GARDENS—Brisbane.—Barks.
First degree of Merit.

CAREY, J. W.—Brisbane.—Collection of Polished Timbers.
Honourable Mention.

GOVERNMENT OF QUEENSLAND — Brisbane. — Collection of Timbers. Commended.

GOVERNMENT OF QUEENSLAND—Brisbane.—Trees.
Highly Commended.

M'GHIE, LUYA, & CO.—Brisbane.—Cross-section of Kauri Pine, grown at Noosa, Queensland. Highly Commended.

ROCKHAMPTON COMMITTEE — Rockhampton. — Collection of Timbers indigenous to the Rockhampton District. Commended.

STURGESS, Henry—Rockhampton.—Trophy of Turnery Work, to display indigenous Timbers. Honourable Mention.

SOUTH AUSTRALIA.

DAVENPORT, Samuel—Beaumont.—Specimens of Timbers.
Honourable Mention.

SOUTH AUSTRALIAN COMMISSION—Adelaide.—Timbers.
Honourable Mention.

SCHOMBURGK, Ph.D., Richard—Director, Botanic Gardens, Adelaide.—Forest Trees. Commended.

WILKE & CO., H.—Port Adelaide.—Mimosa Bark.
Highly Commended.

WILKE & CO., H.—Port Adelaide.—Yacka Gum.
Honourable Mention.

STRAITS SETTLEMENTS.

GOVERNMENT OF SELANGOR.—Gums.
Honourable Mention.

GUTHRIE & CO.—Singapore.—Gums and Gutta-percha.
First degree of Merit.

JOHOR, K.C.S.I., G.C.M.G., Maharajah of.—Collection of Native Timber. First degree of Merit.

MAGALHAENS, J.—Penang.—Timbers.
Commended.

ORD, A. B.—Malacca.—Resins from Rambi Dahoon Tree.
Honourable Mention.

PATERSON, SIMONS, & CO.—Singapore.—Rattans.
Honourable Mention.

PATERSON, SIMONS, & CO.—Singapore.—Gums.
Highly Commended.

PATERSON, SIMONS, & CO.—Singapore.—Gutta-percha.
Honourable Mention.

TASMANIA.

COMMISSIONERS FOR NORTHERN TASMANIA—Launceston.—Colonial Woods. Honourable Mention.

GRUBB BROS.—Hobart Town.—Wattle Bark for Tanning.
Honourable Mention.

MILLS, Peter—Launceston.—Blackwood for Panels.
First degree of Merit.

ROYAL SOCIETY OF TASMANIA—Hobart Town.—Veneers of Tasmanian Woods. Highly Commended.

STEPHENS, Thomas—Hobart Town.—Polished Woods.
Honourable Mention.

VICTORIA.

BELL BROTHERS—Richmond.—Figured Black-wood.
Highly Commended.

CARTER, Joseph—Melbourne.—Panels in Imitation of Wood.
Highly Commended.

GUILFOYLE, William R.—Director of the Botanic Gardens, Melbourne.—Australian Woods. First degree of Merit.

GUILFOYLE, William R.—Director of the Botanic Gardens, Melbourne.—Gums, Resins, &c. First degree of Merit.

KILNER & STEWART—Melbourne.—Carved Woods.
First degree of Merit.

LAWRENCE, W.—Melbourne.—Wattle Bark.
Honourable Mention.

PERRY, John—Melbourne.—Steam-bent Timber.
First degree of Merit.

POW & CO., J. K.—Melbourne.—Wattle Bark.
Highly Commended.

SCHOFIELD, Wm.—Melbourne.—Scale-board for Box-making.
Highly Commended.

WATTS, W. K.—Melbourne.—Table-tops of Coloured Wood.
Commended.

CLASSES 623–627.

Agricultural Products.

JUDGES.

BARKER, GEORGE WILLIAM (Chairman) ...	Barrack-st., Sydney.
BARKER, WM. C.	Clarence-st., Sydney.
COCK, JAMES	Surry Hills, Sydney.
COOMBE, THOMAS LOARING	Camperdown, Sydney.
DUBOISÉ, A.	Sydney.
HUSTLER, J. D. (ELLIOTT BROTHERS)	Pitt-st., Sydney.
INGLIS, JAMES	Pitt-st., Sydney.
PENFOLD, E. T.	Burwood, Sydney.
PONDER, W. F.	Sydney.
ROSENTHAL, C. M.	Philadelphia, U.S.A.
SEE, JOHN	Randwick, Sydney.

The Judges in this Group of Classes, after having generally dealt with Cereals with Mr. G. W. Barker as Chairman, subdivided themselves into sections—one taking Condiments, another Tobacco and Cigars, and a third Hops and Malt, and so on until their work was finished.

CLASSES 623–627.—Agricultural Products.

TEAS.—We were greatly pleased with the samples of teas exhibited by Ceylon. Taking into consideration the fact that the cultivation of tea has only been recently undertaken in the island, great care and application must have been given to its growth and manufacture to have enabled the exhibitors to bring up the qualities of their crops to the high standard possessed by some of the samples shown. The Cingalese silvery, flowery Pekoes are of the finest quality. We understand that it has been found better to manufacture this variety of tea into Golden Orange Pekoe, which, besides having its appearance to recommend it, is possessed of good liquoring qualities. The Cachar and Darjeeling teas have the finest appearance ; whilst the Assam growths as a rule have the strongest liquors. The finest green teas are exhibited by Madras. The Japanese teas show great care in the manipulation of the leaf, but the liquors are wanting in pungency and briskness, and seem totally devoid of finest Pekoe tips. Queensland shows an interesting exhibit of two tea-plants and two samples of manufactured teas. The former show that the tea-plant will grow in that Colony, but the exhibitor of the teas apparently does not understand their manufacture.

CIGARS.—As the result of our investigations in giving the cigars a fair and impartial test was that we found that no cigars of very great merit were exhibited ; we therefore decided that we could not recommend the first degree of merit to any.

QUEENSLAND GRASSES AND GRASS-SEEDS.—Practically there are only three exhibitors in this Class. Too much praise cannot be given for the excellence and suggestiveness of these collections. They are a most admirable object lesson, and capable of teaching practically what it would take much reading and experiment to acquire. All are worthy of the highest commendation. Without detracting from the excellence of Mr. Way's exhibit, we would draw special attention to the exhibits of Alex. Macpherson and Frederick Turner. That of the former is the most admirable outcome of practical intelligent experiment we have seen. Its value practically is patent to the most casual observer. In some of the stools of rice there may be just the suspicion that these have been specially selected for show, and do not give an adequate idea of an average return ; but the whole collection is eminently practical and suggestive, and entitled to the highest praise, as one of the finest instances of patient application and intelligent experiment in the Exhibition. Nor is the exhibit of Mr. Turner less meritorious. It is more devoted to pastoral purposes, while that of Macpherson is connected with agricultural processes. Turner's exhibit is most unique, and admirably classified and arranged. It would form a most invaluable collection for reference or educational purposes. The two combined exhibit a most complete handbook to the capabilities of this fine Colony in this class of natural productions.

COFFEE BEANS.—We were disappointed with the quality of the Ceylon coffees exhibited. In almost all cases they had a bad colour and undeveloped appearance, which we were inclined to attribute to the crop having been plucked before it had had time to properly ripen. The Indian coffees had almost invariably a dull colour, which was probably attributable to impurities in the water used for washing. We think that if pure water were used, the exhibits would have been more presentable in appearance. Although the quality of the samples from Queensland excluded them from competition with those of other coffee growing districts, yet as the products of a new industry in that Colony, they are worthy of commendation. The best samples of coffee exhibited were grown in Fiji.

GROUP—Agricultural Products.

CLASSES 623–627.

AUSTRIA.

FRANKL BRÜDER—Prague in Böhmen—Red and White Clover and Swedish Timothy. First Degree of Merit.

Report—On examination, the Judges found that one jar having been broken, the seed had deteriorated and gave a bad result, but on testing the other seeds the following results were obtained :—Red Clover, 2% failed, very fine seed and bulky ; White Clover 6% failed, a good, heavy, and pure seed ; Swedish Timothy, 3%, very fine, clean, heavy seed.

HANNA-MALZFABRIK—Kremsier in Mähren.—Malt.
Highly Commended.

Report—A very finely prepared, heated and dried exhibit of malt ; the quality, colour, and fermenting power being good.

KAUFFMANN, M.—Brünn in Mähren.—Malt.
Honourable Mention.

Report—An exhibit of carefully prepared heated malt, with good fermenting power.

NOCZIEZKA & UMGELTNER—Brünn in Mähren.—Malt.
First degree of Merit.

Report—An excellently prepared, heated, and dried malt, of very good quality, fermenting power, and colour.

SZYRBALSKI, Felician—Moravica-Lyski.—Polish Rye.
First Degree of Merit.

Report—Good description of grain.

SZYRBALSKI, Felician—Moravica-Lyski.—Polish Barley.
Highly Commended

Report—Even grain.

BELGIUM.

OLEMANS, Felix—Brussels.—Prepared Mustard.

First degree of Merit.

Report—An exhibit of very fine, well prepared mustard of good flavour and condition.

PLAIDEAU, FILS, ET CIE.—Menin.—Snuff.

Highly Commended.

Report—A fine exhibit of excellent milled snuffs, of great strength and aroma.

VAN DE WALLE—Ghent.—Cigars.

Highly Commended.

Report—A large and varied exhibit of well made cigars, with long fillers, good wrappers, pleasant and free smoking.

CEYLON.

ARMSTRONG, C. S.—Rookwood, Deltota.—Tea (eight varieties).

Honourable Mention.

BANDARANAIKE, C. H. D.—Chocolate Seeds, Areca Nuts.

Honourable Mention.

Report—The chocolate seeds are large and well formed. The areca nuts seem fresh and good. Neither call for any special comment. Being alone in this class they may be commended. There are no data for comparison.

CEYLON COMPANY (Limited).—Tea (six varieties).

Commended.

DASANAYAKE, H. L.—Mudaliyar.—Varieties of Grain.

Honourable Mention.

FERNANDO, G.—Mudaliyar.—Varities of Grain.

Honourable Mention.

GOVERNMENT OF CEYLON—Colombo.—Paddy and other Grains.

Honourable Mention.

KEIR, DUNDAS, & CO.—Tea (four varieties).

First degree of Merit.

Report—Of excellent quality ; the flowery Pekoe tips being extra good, and showing great care in preparation.

MACKWOOD & CO.—Ceylon.—Cherry Coffee.

First degree of Merit.

Report—The " cherry" coffee of this firm is of good quality and well ripened.

PERERA, J. D.—Mohandiram.—Varieties of Grain.

Honourable Mention.

FIJI.

FIJIAN NATIVE EXHIBIT.—Yams, Cultivated and Wild.

First degree of Merit.

Report—Fine large roots—the best the Judges have seen.

FIJIAN NATIVE EXHIBIT.—Turmeric (Curcuma longa).

Highly Commended.

Report—Very rich in colouring matter, and with a rich pronounced scent; a fine specimen, but not so large as may often be seen in India.

McEVOY, G.—Cicia.—Cotton Seed (Sea Island).

Honourable Mention.

M'KISSACK, George—Suva Maca, Taviuni.—Parchment Coffee.

Highly Commended.

Report—Of excellent quality. Careful attention must have been given to its growth so as to produce such a good sample—the industry being a new one in the island.

RYDER BROTHERS—Mango.—Parchment Coffee Berries.

First degree of Merit.

Report—Deserve the highest award for the excellent quality of the coffee berries exhibited by them; and taking into consideration the fact that the growth of coffee is a new industry and in its infancy in Fiji, they deserve special commendation for the perseverance and careful attention they have given to its growth in bringing the quality of their crop up to the high standard of the samples shown by them. Messrs. Ryder Brothers' berries stand first of those shown for all qualities. They are extremely good parchment berries, of excellent colour and weight, well prepared.

RYDER BROTHERS—Mango.—Ninety-day Maize.

First degree of Merit.

Report—First-class seed; best of its kind in the Fijian Court.

ST. JOHN, S. A.—Raki Raki, Viti Levu.—Pea-nuts.

Honourable Mention.

Report—Are cleaner, sounder, and better got up as a sample than other Fijian exhibits of the same nuts. These are often used as a substitute for almonds. The larger kinds are valuable for the oil which they yield on expression.

WATERHOUSE, G. J.—Sydney.—Cayenne Pepper

Commended.

Report—Strong and of good quality.

WATERHOUSE, G. J.—Sydney.—Haricot Beans.

Commended.

Report—Very good, but softish, and not equal to those shown in the New Zealand Court.

FRANCE.

BIARDOT, Alphonse—Paris.—Truffles.

First degree of Merit.

Report—Very finely prepared, fleshy, full-flavoured large truffles, of excellent quality and condition.

BIARDOT, Alphonse—Paris.—Preserved Mushrooms.

Commended.

Report—Very fair preserved mushrooms, of good quality and appearance; also mushrooms preserved in vinegar, making a very good relish.

BIARDOT, Alphonse—Paris.—Preserved Tomatoes.

Honourable Mention.

Report—Pure tomato, without any additional spice; fine flavour and colour.

BONFILS FRÈRES, ET CIE.—Carpentras (Vaucluse).—Truffles.

First degree of Merit.

Report—An exhibit of large sized, finely prepared, full-flavoured, carefully selected truffles, of excellent quality and condition.

COLIN, Joseph—Nantes.—Preserved Mushrooms.

Highly Commended.

Report—Well preserved, of fine flavour and appearance.

GIRAUD FRÈRES—Blidah, Algeria.—"Flinty" Wheat.

First degree of Merit.

Report—Good grain and regular; suitable for this Colony (64 lbs.)

LECOURT—Paris.—Preserved Olives.

Highly Commended.

Report—Well preserved olives, of good flavour, fairly fleshy, but bad colour.

LECOURT—Paris.—Preserved Onions and Gherkins.

Commended.

Report—Both very fairly prepared, of good colour and flavour.

LECOURT—Paris.—Truffles.

Honourable Mention.

Report—Brushed truffles of very fair flavour; fleshy, but small.

VILMORIN, ANDRIEUX, ET CIE.—Paris.—Collection of Seeds.

First degree of Merit Special.

Report—This is the finest seed exhibit in the Garden Palace. The Judges tried the clovers, with the following results:—Red clover, 5 per cent. failed, being better by 2 per cent. than obtained from "Carter's samples," but not so good as the New Zealand and other Colonial seeds, but it must be remembered that the seed had stood a sea voyage and had been kept nearly a year. Of white clover 2 per cent. failed, yet, under the circumstances, this must be pronounced a high standard of excellence. So too, with such seeds as the onion, which are well

known to be most difficult to keep, only 7 per cent. failed, whereas 50 per cent. of these fail in many other instances. Some idea of the variety and excellence of this exhibit may be formed when it is stated that 55 varieties of grass seeds suitable for farming, 12 varieties of admirable mixtures, in bulk, suitable for meadowland and leas; 14 varieties of clovers; and considerably over 300 varieties of bulbs, roots, tubers, garden vegetables, and farming crop seeds were inspected. Over 20 varieties of seeds have been tested, and all come out with a very high average, some of the specialities also, such as the very fine tobacco, mushroom spawn, and rare grass-seeds, stamp this exhibit with a high order of merit, and invest it with a rare interest.

GERMANY.

BAETZ, Hermann—Leipzig.—Cigars.

Commended.

Report—Well made, free-smoking cigars, with good long fillers and wrappers, but wanting in aroma.

BARTH & SOHN, Johann—Nürnberg in Bayern.—Bavarian Hops.

First degree of Merit.

Report—A splended exhibit of several years' crops, that of 1878 being of great merit, possessing a powerful aromatic flavour, very fine colour, in excellent condition, and well prepared.

BRAEMER & FRAENKEL—Leobschütz, ober Schlesien.—Brown Malting Barley. Honourable Mention.

Report—An exhibit of carefully prepared heated and dried malt, of good colour and fermenting power.

COMPAGNIE LAFERME—Dresden.—Cigarettes.

Highly Commended.

Report—A large and varied exhibit of well made and free smoking aromatic cigarettes, in good condition, and of tasteful outward appearance.

EICHHORN & CO.—Speyer, Rheinpfalz.—Cigars.

Honourable Mention

Report—Well made, free-smoking cigars, with very fine wrappers, but wanting in aroma.

FRIEDLÄNDER & CO.—Posen.—White and Red Clover Seed, and Rib Grass. Commended.

Report—One exhibit of rib grass appeared to be old, and on examination with the magnifying glass the germinating power seemed gone. Of assorted clovers there were six samples submitted, which looked rather mixed. The Judges tested them under a glass shade and found the germinating power low.

GEY, August—Zschopau, in Sachsichen Erzgebirge.—Raspberry Vinegar. First degree of Merit.

Report—A splendid exhibit of pure raspberry vinegar, very well prepared, of fine flavour and taste.

HENNINGS, P., Botanical Institute, University of Kiel.—Collection of Seeds and Weeds. First degree of Merit Special.

Report—A very interesting exhibit of 400 varieties of grasses and seeds, collected specially by the German Government, shown in small test glasses. It seems they were exhibited more as specimens, and no comparative test could be instituted owing to their infinitesimal quantity.

HORWITZ, Julius, Cigarettenfabrik "Thessalia"—Dresden.—Cigarettes. Commended.

Report—Well-made and pleasant-smoking cigarettes.

KANN, Junr., Joseph—Nürnberg in Bayern.—Hops. Commended.

Report—Well grown and prepared, good colour and condition with a rich flavour.

LIEFMANN & SÖHNE, R.—Hamburg.—Clover, Timothy, and Trefoil Seeds. First degree of Merit.

Report—An exhibit of eight samples of good general appearance, having a very fair bulk with best germinative power; and on being tested the following results were obtained:—Red clover only 2% failed; white clover 8%, and Alsyke 4%.

MAYER GEBRÜDER—Mannheim a./R.—Cigars. Commended.

Report—A large and good exhibit of very well made free and pleasant smoking cigars, but wanting in aroma.

NEUHÄUSER, L.,—Ludwigshafen, a./R. Rheinpfalz.—Burnt Malt. First degree of Merit.

Report—Carefully prepared roasted malt, of very good quality and fermenting power.

NEUHÄUSER, L.—Ludwigshafen, a./R. Rheinpfalz.—Malt. Highly Commended.

NEUHÄUSER, L.—Ludwigshafen, a./R. Rheinpfalz.—Palatinate Barley. Highly Commended.

POPPE & CO., J. F.—Berlin.—Clover and Grass Seeds. First degree of Merit.

Report—Twenty-four samples of fine, large, clean seeds, well-bulked and fresh looking. The testing resulted as follows:—Red clover, 3% failed; white clover, 20%; and lucerne, 4%. This is one of the best collections shown.

PRZEDECHI, J.—"Fabrik Sultan," Breslau.—Cigarettes. Highly Commended.

Report—These exhibits are well made, aromatic, pleasant-smoking, and in good condition.

REISS, J.—Mannheim a./R.—Cigars. Honourable Mention.

Report—Free-smoking, well-made cigars, with good long fillers and wrappers, but wanting in flavour.

SCHÖTTLER, H. W.—Leipzig.—Cigars.

Commended.

Report—Well-made, free-smoking cigars, with good long fillers and wrappers, but deficient of aroma.

SCHULZE, LADEWIG, BEUTEL, & SOHN—Perleberg.—Prepared Mustard. Commended.

Report—Well prepared, and in fair condition.

GREAT BRITAIN AND IRELAND.

BARRINGER & BROWN—Mansfield, Notts.—Mustard.

Highly Commended.

Report—Well prepared, pure, well ground, and pungent.

BATTY & CO.—London.—Sauces.

First degree of Merit.

Report—This firm shows seven samples of first-class sauces, of excellent flavour and taste, full-bodied, and of superior quality.

BATTY & CO.—London.—Pickles, Chillies, &c.

First degree of Merit.

Report—For an exhibit of nine varieties of pickles, chillies, &c., all very well prepared, and of good colour and condition.

BATTY & CO.—London.—Red and White Table Vinegar.

Highly Commended.

Report—Well prepared, strong, pure, and of good flavour.

BATTY & CO.—London.—Preserved Olives.

Commended.

Report—Large and small sized olives, well preserved, and fleshy, but wanting in flavour.

BATTY & CO.—London.—Mustard.

Honourable Mention.

Report—Of fair quality.

BRANKSTON & CO., T.—London.—Cut Tobaccos.

Commended.

CARTER, BROTHERS—London.—Seeds and Seed Trophy.

First degree of Merit.

Report—This firm has a very fine handsome trophy, and of the seeds tried the result was as follows :—Of red clover, 7 per cent. failed ; of white (two kinds) 5 per cent. failed ; and of lucerne 4 per cent. failed. These seeds seemed to be somewhat mixed. As a seedman's exhibit, Carter Brothers' merits high commendation. It is only fair to say that many of the seeds had deteriorated by keeping. After we had penned this report, Mr. Charles Moore, F.L.S., Director of the Sydney Botanical Gardens, to whom some of the grass seeds exhibited by this firm had been entrusted for trial, wrote as follows :—" I have great pleasure in being able to testify to the excellence of the mixed grass

seeds for lawns, sent to the Sydney International Exhibition by the Messrs. Carter, seedsmen, of High Holborn, London. These were placed at my disposal for experimental purposes, and were sown in various places in the vicinity of the Garden Palace, where in every instance they readily vegetated, thus greatly contributing to the bright appearance, and general beauty of the grounds." This letter of Mr. Moore, it will be seen, applies only to the grass seeds, and bears out our remarks, that at the time of adjudication the seeds in the case had evidently deteriorated by age and exposure.

CROSSE & BLACKWELL—London.—Jams, Jellies, Marmalade, Syrups, &c. First degree of Merit.

CROSSE & BLACKWELL—London.—Preserved Olives.
First degree of Merit.

Report—Excellent, fleshy, well preserved, and of good flavour and condition.

CROSSE & BLACKWELL—London.—Sauces.
First degree of Merit.

Report—Show a collection of twelve samples of first-class sauces, of excellent flavour, full-bodied, and rich in taste. Not quite equal to Batty's.

CROSSE & BLACKWELL—London.—Pickles.
Highly Commended.

Report—Six varieties of pickles, very well assorted, and of good condition. The samples shown did not sustain the reputation of this firm.

DUNN & HEWETT—London.—Essence of Coffee.
First degree of Merit.

Report—A well manufactured extract. As an article of utility this exhibit stands in the first order of merit.

DUNN & HEWETT—London.—Collective Exhibit. Samples of Plantation and Roasted Coffee Beans, and Extract of Coffee.
First degree of Merit.

Report—These exhibits are all of the first quality.

HOGG, SELBY, & CO.—London.—Spices. Ground and unground.
First degree of Merit.

Report—A splendid exhibit, in very good condition.

IMPERIAL CROWN VINEGAR CO.—London.—Table Vinegar.
Commended.

Report—Well prepared, good, strong, and of good flavour.

KEEN, ROBINSON, BELLEVILLE, & CO.—London.—Keen's Mustard. First degree of Merit.

Report—Purely prepared, strong, well ground, and of good flavour.

MACONOCHIE BROTHERS—Lowestoft.—Bloater-paste, &c.
First degree of Merit.

Report—Of the first quality.

ROYAL LONDON CONDIMENT WORKS.—London.—Pickles.
Honourable Mention.

Report—This firm exhibits four varieties of fairly well-prepared Pickles, of good colour.

SPRATT'S PATENT—London.—Meat-Fibrine Dog-cakes.
First degree of Merit.

Report—An excellent biscuit for feeding dogs, and of nourishing quality.

SPRATT'S PATENT—London.—Poultry-meal.
First degree of Merit.

Report—Good samples of a well-prepared food for fowls, of fattening properties.

THORLEY, Joseph—London.—Cattle-food.
First degree of Merit.

Report—Excellent samples of well-manufactured, pure, rich, and wholesome food, in packages.

THORLEY'S (J. W.) CATTLE FOOD CO. (Limited)—London.—Cattle Food. First degree of Merit.

Report—Fine samples of well-manufactured, pure and wholesome food in packages.

INDIA.

BALMER, LAWRIE, & CO.—Calcutta.—Indian Tea (nine varieties).
Highly Commended.

Report.—The Cachar Orange Pekoe is an extra good sample, and the Assam and Darjeeling teas are of extra good quality.

BEG, DUNLOP, & CO., Calcutta.—Indian Tea (eighteen varieties).
First degree of Merit.

Report—This exhibit includes samples of the finest teas produced by gardeners in The Assam, Cachar, Darjeeling, and Kangra Valley Districts. The Cachar samples are especially of excellent quality, particularly the Broken Orange Pekoe.

FAIRLAND'S ESTATE—Coorg District, Madras.—Parchment and Coffee Beans. Commended.

Report—A fairly well-prepared bean.

(*The following Teas were exhibited through the Government of Madras.*)

CURZON ESTATE—Nilagiri Hills.—Tea.
Commended.

GLENDALE ESTATE—Nilagiri Hills.—Tea.
Commended.

GOVERNMENT OF MADRAS—Madras.—Horse-gram.
Commended.

Report—Fair quality.

HOVETON GARDENS ESTATE—Nilagiri Hills.—Tea.
Commended.

LOVEDALE ESTATE—Nilagiri Hills.—Tea.
Commended.

PROSPECT ESTATE—Nilagiri Hills.—Tea.
Commended.

SEAFORTH ESTATE—Nilagiri Hills.—Tea.
Commended.

SPRINGFIELD ESTATE—Nilagiri Hills.—Tea.
Commended.

THIA SHOLA ESTATE—Nilagiri Hills.—Tea.
Commended.

(*The following Teas were exhibited through Williamson, Magor, & Co.*)

BISHNATH TEA CO.—Assam.—Tea.
First degree of Merit.

BOULLI TEA CO.—Assam.—Tea.
First degree of Merit.

CHARDWAR ESTATE—Assam.—Tea.
First degree of Merit.

DUJOO TEA ESTATE—Assam.—Tea.
First degree of Merit.

DUNGOR TEA ESTATE—Assam.—Tea.
First degree of Merit.

EAST INDIA TEA COMPANY—Assam.—Tea.
First degree of Merit.

GOWHATTY TEA ESTATE—Assam.—Tea.
First degree of Merit.

KALABARN TEA ESTATE—Darjiling.—Tea.
First degree of Merit.

KYAL TEA ESTATE—Darjiling.—Tea.
First degree of Merit.

MOABUND ESTATE—Assam.—Tea.
First degree of Merit.

MUGULIGHIR TEA ESTATE—Assam.—Tea.
First degree of Merit.

MUNGLEDGE TEA CO.—Assam.—Tea.
First degree of Merit.

RUNGO VALLEY ESTATE—Tea.
First degree of Merit.

SCOTTISH ASSAM TEA CO.—Assam.—Tea.
First degree of Merit.

SOOM TEA CO.—Darjiling.—Tea.
First degree of Merit.

KIRBY, W. LEE—Brookland's Estate, Madras.—Tea (six varieties).
Highly Commended.

Report—The Pekoe and green teas are of extra good quality.

KOUSANIE TEA COMPANY (Limited) — Kumaon, N. W. Provinces.—Tea (eight varieties). Commended.

Report—The green teas exhibited by this firm are of extra good quality.

LECHLER, J.—Shervaroy District, Madras.—Coffee Beans.
Honourable Mention.

MADRAS, GOVERNMENT OF.—Tea (twenty-three varieties).
Commended.

Report—These teas are from different estates in the Madras Presidency. The teas from the Glendale Estate in particular are of extra good quality, the others being inferior to them.

MADRAS, GOVERNMENT OF.—Leaf Tobacco.
Honourable Mention.

Report—Excellent ordinary cutting tobacco, very marketable.

MULLA KUTTYOOR TEA CONCERN—Kumaon, N. W. Provinces.—Tea (six varieties). Honourable Mention.

Report—The green teas are of extra good quality.

NUJEEB KHAN & CO.—Calcutta.—Chutney.
First degree of Merit.

Report—For an exhibit of eight varieties of chutney, all of good preparation and excellent flavour, and taste very appetising.

NUJEEB KHAN & CO.—Calcutta.—Curry Powder and Paste.
Highly Commended.

Report—Well prepared and of good flavour.

PARRY & CO.—Wynaad District, Madras.—Coffee Beans (nine varieties). Honourable Mention.

Report—A fairly good berry, but irregular in size and colour.

SINGBULLI & MURMAH TEA COMPANY—Darjiling.—Orange Pekoe Tea (four varieties). First degree of Merit.

Report—Of excellent quality.

STANES & CO.—Hallacary Estate, Nilagiri District, Madras.—Coffee Beans (five varieties). Highly Commended.

Report—A well prepared good sound bean, of good weight, but rather dull in colour.

STANES & CO.—Colacumbay Estate, Nilagiri District, Madras.—Coffee Beans (six varieties). Commended.

Report—A fairly well prepared bean, of good quality and aroma.

STEEL & CO., Octavius—Calcutta.—Indian Tea (six varieties).
Honourable Mention.

Report—Good samples of the ordinary commercial varieties, and are exhibited in bulk in neatly made tea-chests.

VENCATACHELLUM, P.—Madras.—Curry Powder and Paste.
First degree of Merit.

Report—All of very good flavour and well prepared.

VENCATACHELLUM, P.—Madras.—Cayenne Pepper.
Highly Commended.

Report—Red and yellow ground cayenne pepper, very strong, pungent, and well prepared.

VENCATACHELLUM, P.—Madras.—Chutney.

Highly Commended.

Report—For an exhibit of eight varieties, all very well prepared, and of good flavour and taste.

VENCATACHELLUM, P.—Madras.—Pickles.

Honourable Mention.

Report—Thirteen varieties of well-prepared pickles, showing considerable care in the manufacture, but not to be compared with European exhibits of a like description.

WILLIAMSON, MAGOR, & CO.—Calcutta.—Indian Tea (thirty-four varieties). First degree of Merit.

Report—This is an excellent collection, and includes samples of all the finest teas produced by Assam and Darjiling Plantations. The samples, especially from the Scottish Assam Co., are throughout of excellent quality.

ITALY.

MIMBELLI, E.—Leghorn.—Tuscan Pease.

First degree of Merit.

Report—A good description of pea.

MIMBELLI, E.—Leghorn.—Maize, White and Brown Tuscan Beans.

Three Highly Commended Awards.

Report—The maize exhibited is the best of its kind in the Italian Court. The "White" and "Brown Tuscan" are excellent garden beans.

JAPAN.

FUKU-OKA-KEN—LOCAL GOVERNMENT OF.—Rice.

Honourable Mention.

JAPANESE GOVERNMENT—Tokio.—Samples of Tea.

Commended.

Report—A very fair collection of twelve samples of teas.

KUWANNO KIOKU—BOARD OF AGRICULTURE—Tokio.—Tea, Rape, and Cucurbita Seeds. Honourable Mention.

Report—In appearance fair-looking, and as a collection deserving of commendation.

KUWAI TAKUSHI—Yeddo.—Wheat.

Honourable Mention.

NOGAKKO—IMPERIAL AGRICULTURAL COLLEGE, Tokio.—Agricultural Products. Honourable Mention.

SAI-ICHIRO KISAIGAWA—Nagasaki.—Cigars.

Honourable Mention.

SHIDZU-OKA-KEN—LOCAL GOVERNMENT OF.—Maize.
Honourable Mention.

SHIDZU-OKA-KEN—LOCAL GOVERNMENT OF.—Rice.
Commended.

Report—A fair sample of undressed rice.

TAKASKA TAHEIJI—Mino.—Rice.
Honourable Mention.

MANILLA.

BAER & SUHM—Manilla.—Manilla Cigars and Cheroots.
Honourable Mention.

NETHERLANDS.

ALMA, Azn, P.—Amsterdam.—Cigars.
Highly Commended.

Report—A large and varied exhibit of well made cigars, with very good long fillers, well rolled, pleasant and free smoking, good aroma. These are the best cigars in the Garden Palace.

DOBBELMANN, Louis—Rotterdam.—Cut Tobacco.
Highly Commended.

Report—A large and varied exhibit of cut tobaccos of excellent flavour, and although the exhibits have been packed months ago they show splendid condition.

GOULMY, P. V.—s'Hertogenbosch.—Tinned Mushrooms.
First degree of Merit.

Report—Of excellent quality, very fine flavour, and appearance.

GOULMY—P. V.—s'Hertogenbosch—Truffles.
Commended.

Report—Finely prepared, full-flavoured, fleshy truffles of good quality and condition.

NEW CALEDONIA.

LAURIE—Canala.—Coffee Beans.
First degree of Merit.

Report—This exhibit stands decidedly first being a well prepared, regular, and well-ripened bean of good colour, excellent quality, and fair weight.

NEW SOUTH WALES.

BOMBALA EXHIBITION SOCIETY—Bombala.—Potatoes.
First degree of Merit special.

Report—A very fine variety called the "Sultan's Red-skinned Flower-ball." Sound to the core, although they had been lying in the Exhibition for months. Of great size.

BOMBALA EXHIBITION SOCIETY—Bombala.—Skinless Oats.
First degree of Merit Special.

Report—Of excellent quality ; specially recommended.

BOMBALA EXHIBITION SOCIETY—Bombala.—Rye Grass Seed.
Commended.

Report—This is inferior to similar seeds shown in other Courts, although a good sound bulky seed.

BOMBALA EXHIBITION SOCIETY—Bombala.—Feed Oats.
Honourable Mention.

Report—Not in good condition.

BOMBALA EXHIBITION SOCIETY—Bombala.—Malting Barley.
Commended.

BOMBALA EXHIBITION SOCIETY—Bombala.—Cape Barley.
Commended.

BOMBALA EXHIBITION SOCIETY—Bombala.—Potato Oats.
Honourable Mention.

BROWN, John—Mudgee.—Maize.
Honourable Mention.

BROWN, W.—Shoalhaven.—Horse-tooth Maize (first sample).
First degree of Merit.

Report—Excellent quality.

BROWN, W.—Shoalhaven.—Horse-tooth Maize (second sample).
Highly Commended.

Report—Good quality.

BUCKHOLTZ, F.—Mudgee.—Wheat, 62¾lbs. to the bushel.
Commended.

BUCKHOLTZ, F.—Mudgee.—Malting Barley.
Commended.

Report—Good colour, fair quality.

BUCKHOLTZ, F.—Mudgee.—Buck Oats.
Highly Commended.

Report—Sound, clean, pure sample.

CAMERON, BROTHERS & CO.—Sydney.—Aromatic Twists and Plug Tobaccos. First degree of Merit Special.

Report—A splendid collection of very fine aromatic twists and plug tobaccos ; all of very good flavour and best quality, with good long fillers, and of fine condition throughout. Also for tasteful and creditable designs in their make. All excellently prepared.

CAMERON, BROTHERS, & CO.—Sydney.—Cut Tobaccos.
First degree of Merit.

Report—Exhibit of very fine cut tobaccos, of excellent flavour and aroma. The quality and condition of the leaf used is unsurpassed in the whole Exhibition.

CAUGHEY, James—Mudgee.—Cob Maize.
Highly Commended.

CLARENCE PASTORAL AND AGRICULTURAL SOCIETY—Grafton.—Maize. Honourable Mention.

COHEN & LEVY—Tamworth.—Club Wheat.
Highly Commended.

COLLINS & ROACH—Sydney.—Raspberry Vinegar.
Highly Commended.

Report—A very good sample of well-prepared raspberry vinegar, of good flavour and taste, but rather highly coloured.

CONLON, Bernard—Freeman's Reach, Hawkesbury River.—Golden Drop Maize. First degree of Merit.

Report—Excellent.

CONLON, Bernard—Freeman's Reach, Hawkesbury River.—Horse-tooth Maize. First degree of Merit.

Report—Excellent.

CONLON, Bernard—Freeman's Reach, Hawkesbury River.—Flint Maize. First degree of Merit.

Report—Excellent.

CONNELL, James—Yass.—Wheat.
Highly Commended.

CONNELL, James—Yass.—Malting Barley.
Commended.

Report—Fair.

CONNELL, James—Yass.—Cape Barley.
Commended.

CONNELL, James—Yass.—Rye.
Commended.

CONNELL, James—Yass.—Potato Oats.
Commended.

Report—Heavy. Badly harvested.

COX, M.L.C., Hon. G. H.—Mudgee.—Cob Maize.
Honourable Mention.

CRESWELL, C. F.—Sydney.—Seeds of Native Trees, Shrubs, Climbers, &c. Highly Commended.

Report—This is a large, neatly arranged, and valuable collection of great variety. It evidences great assiduity, and with the catalogue which accompanies it may be taken as a valuable contribution to the botanical treasures of New South Wales.

CUMBERLAND FRUIT PRESERVING CO.—Marrickville.—Pickles. Honourable Mention.
Report—Show care in preparation, but through bad material do not show to advantage.

DALTON BROS.—Orange.—Wheat. Highly Commended.
Report—Medium ; good milling.

DARCY, J.—Bega.—Large Flint Maize. Commended.
Report—Fair quality.

DARCY, J.—Bega.—Hybrid Maize.
Honourable Mention.
Report—Good of its kind.

DRINKWATER, C.—Tamworth.—Maize.
Honourable Mention.

FAINT, George—Armidale.—Rye.
First degree of Merit.
Report—Pure, excellent sample.

FAINT, George—Armidale.—Long Cob Maize.
Highly Commended.

FILMER, William—West Maitland.—Herbs.
Highly Commended.
Report—Shows a well-assorted exhibit of herbs, very well prepared, in excellent condition, and showing the full characteristic flavour of their kind.

GAWTHORNE, B. H.—Mudgee.—Wheat.
First degree of Merit.
Report—Fine milling—64 lbs. to the bushel.

GEEHAN, James—Freeman's Reach, Hawkesbury River.—Large White Maize. First degree of Merit.
Report—Excellent.

GOSPER, J. T.—Windsor.—Horse-tooth Maize.
First degree of Merit.
Report—Excellent.

GOSPER, J. T.—Windsor.—Flint Maize.
Highly Commended.
Report—Good.

GOWING, D.—Bega.—Maize. Highly Commended.
Report—Good quality.

HADFIELD, T.—Carr's Creek.—Maize.
Highly Commended.

HARPER & CO., R.—Sydney.—Spices.
First degree of Merit.
Report—Twenty-seven varieties of spices, well selected and in very good condition.

HARPER & CO., R.—Sydney.—Ground Pepper.
First degree of Merit.
Report—White and black ground pepper, of excellent quality and flavour.

HARPER & CO., R.—Sydney.—Spices.
First degree of Merit.
Report—This firm has an exhibit of eleven varieties of well-selected and prepared spices of excellent flavour and colour.

HARPER & CO., R.—Sydney.—Ground Coffee.
Highly Commended.
Report—Well manufactured, and of good flavour and quality.

HARPER & CO., R.—Sydney.—Mustard.
Honourable Mention.
Report—Well ground, good, and strong.

HARPER & CO., R.—Sydney.—Dressed Rice.
First degree of Merit.

HAWKESBURY AGRICULTURAL ASSOCIATION.—Windsor.—Maize Trophy. First degree of Merit Special.
Report—This trophy was formed of 83 bushels of maize (in cob) from the Hawkesbury district, built up in conoid form, the maize composing the trophy being of excellent quality.

HOEY, D.—Inverell.—Wheat. Commended.
Report—Fair milling—weight, 63 lbs. to the bushel.

JACK, David—Inverell.—Maize Meal. Highly Commended.

JAUNCEY, John—Bega.—Maize.
Commended.

KIRWAN, John—Freeman's Reach, Hawkesbury River.—Ninety-day Maize. First degree of Merit.
Report—Excellent.

KURTZ, A.—Mudgee.—Skinless Barley.
First degree of Merit Special.
Report—Fine sample.

KURTZ, A.—Mudgee.—Wheat, 62¾lbs. to the bushel.
Commended.

LACKERSTEEN, A. L.—Sydney.—Red Wine Vinegar.
Commended.
Report—A good sample, of good flavour and fairly strong.

LEE, John—Mudgee.—Malting Barley.
Honourable Mention.

MACARTHUR, J. & W.—Camden Park.—French Maize.
Highly Commended.

MACARTHUR, J. & W.—Camden Park.—Short Flint Maize.
Highly Commended.
Report—Good quality.

MACARTHUR, J. & W.—Camden Park.—Long Flint Maize.
Highly Commended.

Report—Good quality.

MACARTHUR, Sir William—Camden Park.—Millet, Sorghum, Canary, and other Seeds. First degree of Merit Special.

Report—This exhibit, containing nineteen varieties, is a most suggestive and valuable one, and deserves warm recognition.

M'COOEY, James—Orange.—Wheat.
Highly Commended.

MOFFAT & CO., W.—Dubbo.—White Velvet Wheat, 60½lbs. to the bushel. Highly Commended.

MONK, D. J.—Sydney.—Malt Vinegar.
First degree of Merit.

Report—Of excellent quality.

MONK, D. J.—Sydney.—White Wine Vinegar.
Highly Commended.

Report—Fairly well prepared, pure, and strong.

MOORE & CO., J.—Armidale.—Wheat, 64¼ lbs. to the bushel.
Highly Commended.

MOORE, J.—Armidale.—Potatoes.
First degree of Merit Special.

Report—This exhibit is a sample of "Breese's Prolific," is admirably suited for cultivation—a splendid vegetable. Shown under great disadvantage, as the tubers had all sprouted and were somewhat shrivelled up.

NEW SOUTH WALES, THE COLONY OF.—For pre-eminence in the production of maize and rye. First degree of Merit Special.

PAGE, Charles—Sydney.—Spices.
First degree of Merit.

Report—This is a large and well-assorted exhibit of spices, in splendid condition.

PAGE, Samuel—Mudgee.—Oats.
Honourable Mention.

Report—Light, but well harvested.

PAGE, Samuel—Mudgee.—Maize.
Honourable Mention.

PERRIN, C. G.—Mudgee.—Cob Maize.
Honourable Mention.

PURVIS & CO., W.—Mudgee.—Wheat.
First degree of Merit.

Report—First-class milling; weight, 64¾ lbs.

RANDALL, Thomas—Mudgee.—Wheat, 63¾lbs. to the bushel.
Highly Commended.

ROUSE, G.—Mudgee.—Wheat, 64lbs. to the bushel.
Highly Commended.

SAYWELL, Thomas—Sydney.—Aromatic Twists and Plug Tobaccos.
Highly Commended.

Report—An exhibit of good sound flavour and condition; fine long fillers and good workmanship.

SAYWELL, Thomas—Sydney.—Cut Tobaccos.
Commended.

Report—A splendid sample of tobacco cut from twist, of excellent flavour and condition.

SAYWELL, Thomas—Sydney.—Cigarettes.
Honourable Mention.

Report—Are made of good tobacco, but labour under the disadvantage of inferior paper having been used in their make.

SAYWELL, Thomas—Sydney.—Cigars.
Honourable Mention.

Report—Fairly well made cigars, with good fillers for smoking, but wanting in aroma.

SMALLWOOD, D. J.—Caddai.—Ninety-day Maize.
Highly Commended.

Report—Good.

TAMWORTH EXHIBITION COMMITTEE—Tamworth.—Wheat.
Commended.

TAMWORTH EXHIBITION COMMITTEE—Tamworth.—Maize.
Commended.

TAYLOR, D.—Illawarra District.—Flint Maize.
First degree of Merit.

Report—Excellent quality.

WINTER, Mark—West Maitland.—Pickles, and Preserves, and Dried Fruits.
Commended.

Report—This is a well assorted exhibit of pickles, of very creditable appearance, in good condition, but owing to the use of inferior vinegar they are wanting in flavour. Also a well assorted exhibit of fruits preserved in water, of fine appearance, but little flavour. Mr. Winter also shows dried apples, quinces, and peaches, which are very well preserved, and are of good flavour and taste.

WOLFE & GORRICK—West Maitland.—Twist Tobaccos, manufactured from leaf grown in New South Wales.
Honourable Mention.

WOLFE & GORRICK—West Maitland.—Colonial Leaf Tobacco.
Highly Commended.

Report—Colonial grown tobaccos, of very good quality and body. They are deserving of the above award.

WOODS & MARKBY—Inverell.—Wheat.
Commended.

WOOD, P. H.—Bega.—Maize.
Honourable Mention.

WREN, John—Mudgee.—Malting Barley. Honourable Mention.
Report—Of fair quality.

WREN & SONS—Bega.—Large Yellow Maize.
First degree of Merit.
Report—Excellent quality.

WREN & SONS—Bega.—Red Hogan Maize.
Highly Commended.
Report—Good quality.

WREN & SONS—Bega.—Fancy Corn.
First degree of Merit Special.

NEW ZEALAND.

ANDREW, Richard—Waimea West, Nelson.—Hops.
Highly Commended.
Report—A very fine sample of well-grown hops, with fine aromatic flavour, good colour and condition.

ARKELL, John—Blenheim, Marlborough.—Malt.
Commended.

BANKS, S. H.—Christchurch.—Pease, Rye, Rape, Beans.
Honourable Mention.
Report—A good exhibit, comprising eight samples of a fair quality throughout. The Prussian blue pease were the best of their kind in the Court.

BANKS, S. H.—Christchurch.—Pearl Barley.
Honourable Mention.
Report—Sound, good colour.

BANKS, S. H.—Christchurch.—Tartarian Oats. Commended.
Report—Good.

BOLTON, Joseph—Waimea West, Nelson.—Pearl Wheat, 63½ lbs. to the bushel. Commended.

BOLTON, Joseph—Waimea West, Nelson.—Oats.
Commended.

CREASE, E. H.—Wellington.—Ground Ginger and Mixed Spices.
Honourable Mention.
Report—Well prepared and ground, and of good quality.

CUNNINGHAM & CO., P.—Christchurch.—Velvet-chaff Wheat, 64¾ lbs. to the bushel. Highly Commended.

CUNNINGHAM & CO., P.—Christchurch.—Tuscan Wheat, 64½ lbs. to the bushel. Highly Commended.

CUNNINGHAM & CO., P.—Christchurch.—Red-chaff Wheat, 62¾ lbs. to the bushel. Highly Commended.

CUNNINGHAM & CO., P.—Christchurch.—Danish Oats (seed).
Highly Commended.

CUNNINGHAM & CO., P.—Christchurch.—Chevalier Barley.
Highly Commended.

CUNNINGHAM & CO., P.—Christchurch.—Velvet-chaff Wheat, 63½ lbs. to the bushel. Commended.

CUNNINGHAM & CO., P.—Christchurch.—Hunter's White Wheat, 59½ lbs. to the bushel. Commended.

CUNNINGHAM & CO., P.—Christchurch.—Pearl Wheat, 60½ lbs. to the bushel. Commended.

CUNNINGHAM & CO., P.—Christchurch.—Hunter's White Wheat, 61 lbs. to the bushel. Honourable Mention.

CUNNINGHAM & CO., P.—Christchurch.—Red-straw Wheat, 64 lbs. to the bushel. First degree of Merit.

CUNNINGHAM & CO., A.—Christchurch.—White Pearl Wheat, 61¼ lbs. to the bushel. First degree of Merit.

CUNNINGHAM & CO., P.—Christchurch.—Canadian Oats.
Highly Commended.

Report—Good.

CUNNINGHAM & CO., P.—Christchurch.—Flat-head Barley.
Highly Commended.

Report—Good grain, but not good colour.

CUNNINGHAM & CO., P.—Christchurch.—Tartarian Oats.
First degree of Merit.

Report—Very good seed.

CUNNINGHAM & CO., P.—Christchurch.—Tuscan Wheat.
Commended.

Report—Clean, good, serviceable wheat, 62½ lbs. to the bushel.

CUNNINGHAM & CO., P.—Christchurch.—Tartarian Oats (second sample). Honourable Mention.

Report—Fair seed oats.

CUNNINGHAM & CO., P.—Christchurch.—Rye-grass, Field Pease, Pease, and Beans. Commended.

Report—The pease and beans are of excellent quality, full, round, heavy, and fresh looking. Of a sample of rye-grass seed experimented upon, 12 per cent. failed to germinate.

DIXON, George—Wellington.—Raspberry Vinegar.
First degree of Merit.

Report—A fine, excellently prepared collection, rich, strong, of good colour, and fine flavour.

DIXON, George—Wellington.—Orange Bitters.
Commended.

DODSON, Henry—Blenheim.—Malt.
First degree of Merit.

DRANSFIELD, Joe—Wellington.—Grass Seeds.

First degree of Merit.

Report—A very fine collection of grass seeds, eminently deserving of high commendation. Most suitable for a farming and pastoral country. On experimenting with this rye-grass seed, 26 per cent. failed.

DUNCAN & SON—Christchurch.—Grass Seeds.

First degree of Merit.

Report—A very fine exhibit; the rye-grass especially good both in bulk and appearance. All the seeds of a very high quality. On experimenting, 18 per cent. failed to germinate.

EYLES, Mrs.—Richmond, Nelson.—Cocks-foot Grass Seeds.

Honourable Mention.

Report—A very good sample of grass seeds, worthy of praise, but not equal to Duncan & Son's.

FELL, BROTHERS, & CO.—Blenheim.—Malting Barley.

Highly Commended.

Report—Full grain, but not good colour.

FERAUD, Jean Désiré—Clyde, Vincent County.—Raspberry Vinegar.

Commended.

Report—Well prepared, of good quality, but slightly fermented.

GIFFORD, Isaac—Spring Creek, Marlborough.—Barley.

Honourable Mention.

GRAY, FLEMING, & CO.—Invercargill.—Barley.

Commended.

GRAY, FLEMING, & CO.—Invercargill.—Wheat, 64½ lbs. to the bushel.

Commended.

GREGG & CO., Wm.—Dunedin.—Mixed Coffee (three samples).

Honourable Mention.

HARLEY & SONS—Nelson.—Malt.

Highly Commended.

HARLEY & SONS—Nelson.—Malting Barley.

First degree of Merit Special.

Report—Excellent, and deserving of special notice.

HARLEY, Thomas H.—Nelson.—Hops.

Commended.

Report—Well grown and prepared hops, of good colour, rich flavour, and fine condition.

HAYNES, Charles—Palmerston, Dunedin.—Perennial Rye-grass Seed.

Highly Commended.

HOLDAWAY BROTHERS—Nelson.—Spring Wheat.

Honourable Mention.

Report—Large grain, well matured, fair milling quality.

KEMPTHORNE, PROSSER, & CO.—Dunedin.—Raspberry Vinegar.

Commended.

Report—Well flavoured, but rather strongly fortified with alcohol.

M'BRIDGE, Francis—Wakatipu.—Milling Wheat, 63½ lbs. to the bushel.
Commended.

M'GILL, Peter—Tokomairiro.—White Velvet Wheat, 61 lbs. to the bushel.
Honourable Mention.

M'GILL, Peter—Tokomairiro.—Red-straw Wheat, 64 lbs. to the bushel.
Honourable Mention.

M'GILL, Peter—Tokomairiro.—Oats.
Honourable Mention.

M'GILL, Peter—Tokomairiro, Otago.—Tuscan Wheat.
First degree of Merit.

Report—Pure uniform sample, excellent quality.

MARSHALL & COPELAND.—Malt.
Highly Commended.

MEEK, J. & T.—Oamaru.—Tuscan Wheat, 65 lbs. to the bushel.
Highly Commended.

MEEK, J. & T.—Oamaru.—Purple-straw Wheat, 64½ lbs. to the bushel.
Highly Commended.

MEEK, J. & T.—Oamaru.—Red-straw Wheat, 66 lbs. to the bushel.
Highly Commended.

MEEK, J. & T.—Oamaru.—White Velvet Wheat, 65¼ lbs. to the bushel.
Commended.

MEEK, J. & T.—Oamaru.—"Short" Oats.
First degree of Merit.

Report—Prime feed.

MEEK, J. & T.—Oamaru.—Danish Oats.
Highly Commended.

Report—Good seed.

MEEK, J. & T.—Oamaru.—Black Tartarian Oats.
First degree of Merit.

Report—Very good seed.

MOFFETT, W.—Invercargill.—Raspberry Vinegar.
Honourable Mention.

Report—Fairly well prepared raspberry vinegar, of good flavour.

MURRAY, DALGLEISH, & CO.—Invercargill.—Oats.
Honourable Mention.

NEW ZEALAND LOAN & MERCANTILE AGENCY CO.—Oamaru.—White Velvet Wheat, 65½ lbs. to the bushel.
Highly Commended.

NEW ZEALAND LOAN & MERCANTILE AGENCY CO.—Oamaru.—White Tuscan Wheat, 66 lbs. to the bushel.
Highly Commended.

Report—Fine milling wheat.

NEW ZEALAND LOAN & MERCANTILE AGENCY CO.—Oamaru.—Red-straw Wheat, 64½ lbs. to the bushel.
Highly Commended.

NEW ZEALAND LOAN & MERCANTILE AGENCY CO.—Oamaru.—Canadian Oats.
Highly Commended.

NEW ZEALAND LOAN & MERCANTILE AGENCY CO.—**Oamaru.**—White Velvet Wheat, 66 lbs. to the bushel. First degree of Merit.

NEW ZEALAND LOAN & MERCANTILE AGENCY CO.—**Oamaru.**—White Velvet Wheat, 65¼ lbs. to the bushel. Commended.

NEW ZEALAND LOAN & MERCANTILE AGENCY CO.—**Oamaru.**—Chevalier Barley Commended.

NEW ZEALAND LOAN & MERCANTILE AGENCY CO.—**Oamaru.**—White Velvet Wheat (seed), 63 lbs. to the bushel. Honourable Mention.

NEW ZEALAND LOAN & MERCANTILE AGENCY CO.—**Oamaru.**—Danish Oats (seed). Honourable Mention.

NEW ZEALAND, THE COLONY OF.—For pre-eminence in the production of Malting Barley and Oats. First degree of Merit Special.

NEW ZEALAND LOAN & MERCANTILE AGENCY CO.—**Oamaru.**—White Tuscan Wheat. Highly Commended.
Report—Fine milling; 66 lbs. to the bushel.

NEW ZEALAND LOAN & MERCANTILE AGENCY CO.—**Oamaru.**—Chevalier Barley. Honourable Mention
Report—Fair.

NEW ZEALAND LOAN AND MERCANTILE AGENCY CO.—**Oamaru.**—Barley Oats. Commended.
Report—Fair feed.

NEW ZEALAND LOAN AND MERCANTILE AGENCY CO.—**Oamaru.**—Potato Oats. Honourable Mention.
Report—Fair.

O'CONNOR, Patrick—Nelson.—Pearl Wheat, 62¼ lbs. to the bushel. Commended.

REDWOOD, BROTHERS—Blenheim, Marlborough.—Feed Oats. Commended.

ROYSE, STEAD, & CO.—Wairoa, Hawke's Bay.—White Wheat, 63½ lbs. to the bushel. First degree of Merit.

ROYSE, STEAD, & CO.—Wairoa, Hawke's Bay.—White Velvet Wheat, 63½ lbs to the bushel. Commended.

ROYSE, STEAD, & CO.—Wairoa, Hawke's Bay.—Canadian Feed Oats. Commended.

ROYSE, STEAD, & CO.—Wairoa, Hawke's Bay.—Malting Barley. Commended.

ROYSE, STEAD, & CO.—Wairoa, Hawke's Bay.—Purple-straw Wheat, 64½ lbs. to the bushel. First degree of Merit.

ROYSE, STEAD, & CO.—Wairoa, Hawke's Bay.—Short Tartarian Oats. Honourable Mention.

ROYSE, STEAD, & CO.—Wairoa, Hawke's Bay.—Long Tartarian Oats. Highly Commended.
Report—Good.

RUSSELL, W. R.—Karamu, Hawke's Bay.—Rye Grass Seed. Commended.

STRANG, David—Invercargill.—White and Black Ground Pepper. Commended.
Report—Well prepared and with good flavour.

STRANG, David—Invercargill.—Ground Coffee. Commended.
Report—Well manufactured and of fair quality.

SURMAN & CO.—Invercargill.—Malt. Commended.
Report—A well prepared heated malt of good quality and colour, and fair fermenting power.

TOMBS, William—Papanui, Christchurch.—Hunter's White Wheat, 65¼ lbs. to the bushel. Highly Commended.

TRENT BROTHERS—Christchurch.—Ground Pepper. Highly Commended.
Report—White and black ground pepper, both well prepared and of good flavour.

TRENT BROTHERS—Christchurch.—Chicory. First degree of Merit.

VILE, Job—Masterton.—Tuscan Wheat, 63 lbs. to the bushel. Highly Commended.

VILE, Job—Masterton.—Black Tartarian Oats. Commended.
Report—Fair.

WHITE, William—Kaikora, Hawke's Bay.—Wheat, 64 lbs. to the bushel. Highly Commended.

WIGLEY, Hon. T. H.—Opuka Station, County Geraldine.—Red-chaff Wheat, 63½ lbs. to the bushel. Commended.

WITTY, James W.—Wairoa, Hawke's Bay.—Hops. Honourable Mention.
Report—Unpressed hops, grown from Tasmanian seed, of good aroma and fine colour and condition.

QUEENSLAND.

ACHESON & ALLEN—Rockhampton.—Chutneys. Commended.
Report—Three well prepared varieties of chutney.

BATTEN, Charles—Nerang Creek.—Red Cob Maize. Highly Commended.

BATTEN, Charles—Nerang Creek.—Rye. Honourable Mention.

BOREHAM, G. H.—Brisbane.—Tomato Sauce.
Highly Commended.
Report—Very finely prepared and pure, of full flavour and good colour.

BOTANICAL GARDENS—Brisbane.—Cayenne Pepper.
First degree of Merit.
Report—Sample of a pure-ground, very strong, pungent cayenne pepper, of good flavour and colour.

BOTANICAL GARDENS—Brisbane.—Prepared Coffee Beans.
Highly Commended.
Report—A fairly good specimen of prepared beans.

CORTEN, Charles Gustave — Rockhampton. — Queensland Leaf Tobaccos. Commended.
Report—These tobaccos, from the Glenora Plantation, near Rockhampton, are of fine body. The leaf is well grown and aromatic, and well cured.

COWLEY, Cornelius—Warwick.—Red Wheat.
Commended.
Report—Good milling, weight 65¼ lbs. to the bushel.

DONALD, M.—Meringandan Road, near Toowoomba.—Yellow Maize.
Honourable Mention.

DUNTNEY, Charles—Rosewood.—Large Yellow Maize.
Commended.
Report—Fair quality.

DYER, T. S.—Laidley.—Yellow Maize.
Commended.

ECKHART, George—Warwick.—White Wheat.
Highly Commended.
Report—Choice good milling, 65 lbs. to the bushel.

FREE, Addison—Warwick.—White Wheat, 65½ lbs. to the bushel.
Commended.

GORDON, J.—Glen Gordon, Bowen.—Yellow Maize.
Highly Commended.

HAYES, W. & C.—Warwick.—Maize.
Commended.

HAYES, W. & C.—Warwick.—White Lammas Wheat, 65 lbs. to the bushel. Highly Commended.
Report—Slightly pinched.

HOCKER, J. H.—Brisbane.—Leaf Tobaccos.
Highly Commended.
Report—Shows samples of very good tobaccos, of good body. The leaves are very well developed, and promise well for the production of this article in the district, if only proper attention be shown.

HORWITZ & CO., J.—Swan Creek, Warwick.—Red Wheat, 65½ lbs. to the bushel. Commended.

JONES, A.—Rockhampton.—Queensland Leaf Tobacco.
Honourable Mention.

Report—Of good body and richness of quality.

KATES, M.P., Francis—Allora.—White Wheat, 63½ lbs. to the bushel.
Commended.

Report—Irregular grain; damp.

KELLY, J.—Allora.—Maize.
Commended.

MACPHERSON, Alex.—Brisbane.—Rice.
First degree of Merit Special.

Report—Very excellent collection of dressed and undressed rice, deserving of special prize.

MACPHERSON, Alexander—Brisbane.—Seeds of Indigenous Grasses.
First degree of Merit

M'PHEE, John—Glen Nevis.—Malting Barley.
Highly Commended.

Report—Good colour, fair sample.

NEILSON, R. D.—Brisbane.—Maize.
Highly Commended.

O'REILLY & PIGOTT—Warwick.—Red Wheat.
Honourable Mention.

Report—Medium quality milling wheat, 66 lbs. to the bushel.

REID, G. M.—Don River, Bowen.—Yellow Maize.
First degree of Merit.

STRONG, James—Rocky Waterholes.—Yellow Maize.
Honourable Mention.

Report—Irregular grain.

TULLOCH, W.—Warwick.—White Talavera Wheat.
Honourable Mention.

TULLOCH, W.—Warwick.—White Wheat.
First degree of Merit.

Report—Grain and condition good, 64 lbs. to the bushel.

TURNER, Frederick—Brisbane.—One hundred varieties of seeds of Queensland Indigenous Fodder Grasses; dried.
First degree of Merit.

WAY, E.—Toowoomba.—Seeds of Indigenous Grasses.
Commended.

WALKER, B. F.—Toowoomba.—Lammas Wheat, 60 lbs. to the bushel.
Honourable Mention.

Report—Damp and inferior.

WALKER, B. F.—Toowoomba.—Malting Barley.
Commended.

WILLIAMS, Alfred—Eight-mile Plains, near Brisbane.—Coffee Beans.
Honourable Mention.

Report—A fairly grown sample, but colour inferior.

WILSON, J. T.—Darling Downs.—White Wheat, 65¼ lbs. to the bushel.
Highly Commended.

SOUTH AUSTRALIA.

ANGAS, J. H.—Angaston.—Tuscan Wheat.
First degree of Merit.
Report—Prime quality, 66 lbs. to the bushel.

COWAN & CO., James—Adelaide.—Wheat, 64½ lbs. to the bushel.
Highly Commended.
Report—Fair milling sample.

CRAFTER, Henry P.—Millicent.—Wheat, 63¾ lbs. to the bushel.
Commended.
Report—Coarse skin wheat.

HAMMER, John—Adelaide.—Sauces.
Honourable Mention.
Report—Three samples of well prepared sauces of good quality and flavour.

MARTIN, AMSBERG, MITCHELL, & CO.—Kent Town.—Sauces.
Highly Commended.
Report—This firm shows nine samples of very well prepared, full-bodied, and rich sauces.

RIGGS, John—Gawler.—Purple Straw Wheat.
Honourable Mention.
Report—Good milling, 65 lbs. to the bushel.

RIGGS, John—Gawler.—Nonpariel Wheat.
Highly Commended.
Report—Fine, milling wheat, 64¼ lbs. to the bushel.

SOUTH AUSTRALIA—THE COLONY OF.—For pre-eminence in the porduction of Wheat.
First degree of Merit Special.

THYER, Joseph—Jamestown.—Wheat, 66¾ lbs to the bushel.
Highly Commended.
Report—Very good quality.

THYER, Joseph—Jamestown.—Wheat.
Two Highly Commended Awards.
Report—Very good quality; 66¾ lbs. to the bushel.

VENNING, W. J.—Crystal Brook.—Wheat.
First degree of Merit Special.
Report—Very prime quality, not to be surpassed; weight, 66½ lbs.

VENNING, W. J.—Crystal Brook.—Wheat (another sample).
Commended.
Report—Good quality.

STRAITS SETTLEMENTS.

GUTHRIE & CO.—Singapore.—Spices.

Highly Commended.

Report—Thirty varieties of spices, well assorted, and in good condition.

HARDOUIN, C.—Penang.—Bulk Tea.

Honourable Mention.

Report—An excellent sample.

TAN TEK GUAN—Malacca.—Yam Roots and Root of Akar Toola Plant. Honourable Mention.

Report—Yams not equal to the Fijian.

TASMANIA.

BROCK, William—Green Ponds.—Wheat, 65½ lbs. to the bushel.

Honourable Mention.

Report—Mixed sample ; fair quality.

DEGRAVES, C. & J.—Cascades.—Pale Malt.

Highly Commended.

DOSSITER BROTHERS—Hobart Town.—Wheat, 66¾ lbs. to the bushel.

Commended.

Report—Good quality.

EDGINTON, T.—Launceston.—Grey Pease.

First degree of Merit.

Report—Prime quality.

EDGINTON, T.—Launceston.—Grey Tares.

Commended.

Report—Fair quality.

EDGINTON, T.—Launceston.—Grass Seeds.

Commended.

Report—The grey peas in this exhibit are the best we have as yet seen. The grass seeds are decidedly lighter than those of New Zealand. The tares and beans are good, but still not up to the samples shown in the New Zealand Court. A very creditable exhibit, and deserving of commendation.

EDGINTON, T.—Launceston.—Horse Beans.

Honourable Mention.

Report—Imperfect quality.

EDGINTON, T.—Launceston.—Golden Tares.

Highly Commended.

GIBSON, William—Hobart Town.—Wheat.

Highly Commended.

Report—Very good quality ; 66½ lbs. to the bushel.

GRACIE, William—Hobart Town.—Hops.

Highly Commended.

Report—Very fine well-grown hops, with aromatic flavour, and in good condition and colour.

GRACIE, William—Hobart Town.—Pale Malt.

Highly Commended.

GRACIE, William—Hobart Town.—English Barley.

Honourable Mention.

JAMES, Henry J.—Hobart Town.—Malt.

First degree of Merit.

JENKINS, R. C.—Carlton.—Cape Barley.

First degree of Merit.

Report—Excellent quality.

JENKINS, R. C.—Carlton.—English Vetches.

First degree of Merit.

Report—Excellent quality.

JENKINS, R. C.—Carlton.—Tick Beans.

Commended.

Report—Imperfect quality.

JENKINS, R. C.—Carlton.—White Pease.

First degree of Merit.

Report—Excellent quality.

KEEN, James—Kingston.—Sauce.

Honourable Mention.

Report—Samples of fair, well-prepared sauce ; flavour good, but rather hot.

MARSHALL, Edward—Sorell.—Wheat.

Honourable Mention.

Report—Good milling, 64½ lbs. to the bushel.

MARSHALL, Edward—Sorell.—Pease.

Highly Commended.

Report—Good quality.

MONDS, F. W.—Carrick.—Wheat, 66 lbs. to the bushel.

Honourable Mention.

PEARCE, H. H.—Cambridge.—Goldsmith's Prolific Wheat, 63 lbs. to the bushel.

Commended.

Report—Fair quality.

PERCY, Mrs. E.—Rokeby.—English Barley.

First degree of Merit.

Report—Good quality ; brlght colour.

PERCY, Mrs. E.—Rokeby.—Fulton's Pedigree Wheat, 64 lbs. to the bushel.

Commended.

Report—Mixed sample.

PITT, T. & G.—Green Ponds.—Wheat.

First degree of Merit.

Report—Excellent quality ; 66¼ lbs. to the bushel.

RITCHIE, David—Launceston.—Split Pease.

First degree of Merit.

Report—First-class quality.

RITCHIE, David—Launceston.—Pearl Barley.

Honourable Mention.

SMITH, Caleb J. L.—Deloraine.—Oats.

Honourable Mention.

Report—Medium quality.

TASMANIA, THE COLONY OF.—For pre-eminence in the production of Cape Barley.

THIRKELL, Geo. F.—Darlington Park.—Oats.

Commended.

Report—Medium quality.

WALKER, Emma J.—Hobart Town.—Malt.

First degree of Merit.

UNITED STATES.

COLEMAN, W. T.—San Francisco, Cal.—Chevalier Barley.

Highly Commended.

Report—Good colour.

COLEMAN, W. T.—San Francisco, Cal.—Bright Brewing Barley.

Honourable Mention.

Report—Imperfect.

GUITTARD & CO., E.—San Francisco, Cal.—Spices.

Highly Commended.

Report—Six varieties of well prepared spices, of excellent flavour and condition.

GUITTARD & CO., E.—San Francisco, Cal.—Mustard.

Commended.

Report—Well ground, good, strong, and very marketable.

GUITTARD & CO., E.—San Francisco, Cal.—Ground Pepper.

Honourable Mention.

Report—Ground "Penang" pepper, of good quality and flavour.

KIMBALL & CO., W. S.—Rochester, N. Y.—Cut Chewing Tobacco.

First degree of Merit.

Report—Sample of excellent cut chewing tobacco of very fine flavour, strength, and condition.

KIMBALL & CO., W. S.—Rochester, N. Y.—Cigarettes.

First degree of Merit.

Report—A large and varied exhibit of well made, aromatic, and free-smoking cigarettes, in excellent condition and tasteful outward packing.

LOWERY & CO.—San Francisco, Cal.—Wheat (proper).
Honourable Mention.

Report—Medium quality, 61¼ lbs. to the bushel.

LOWERY & CO.—San Francisco, Cal.—Beans (nine varieties).
First degree of Merit.

Report—All very prime.

LOWERY & CO.—San Francisco, Cal.—Buckwheat.
Highly Commended.

Report—Indifferent quality.

LOWERY & CO.—San Francisco, Cal.—Surprise Oats.
Highly Commended.

Report—Good feed oats.

LOWERY & CO.—San Francisco, Cal.—Seed Oats.
Commended.

Report—Prime seed for hay purposes.

LOWERY & CO.—San Francisco, Cal.—Seed Barley.
Commended.

THURBER, H. K. & F. B.—New York City.—Pickled Green Chillies.
Commended.

Report—Of good quality and fine colour.

WATSON & M'GILL.—Petersburgh, Va.—Aromatic Twist and Plug Tobaccos. Commended.

Report—Of good sound flavour, fine condition and workmanship.

WILLIAMS, Thos. C.—Richmond, Va.—Aromatic Twist Tobaccos.
First degree of Merit Special.

Report—A splendid exhibit of manufactured aromatic twist tobaccos of excellent flavour, with good long fillers, of fine condition throughout. We find the quality of these tobaccos to be the best aromatic twists shown in the Exhibition.

VICTORIA.

BARRETT, W.—Ballarat.—Worcestershire Sauce.
Honourable Mention.

Report—Of very good flavour and body.

BENCRAFT & CO., G.—Melbourne.—Pearl Barley.
Commended.

BOOBIER, W. J.—Sandhurst.—Collection of Wheat.
First degree of Merit.

BROWNE, Montague—Sandhurst.—Tomato Sauce.
Honourable Mention.

Report—Samples of good, sound, flavouring sauce; rather sweet; good colour.

CANE, H.—Melbourne.—Malt Vinegar.

First degree of Merit.

Report—A fine sample very well prepared, of good flavour, strong, and pure.

CHARLESWORTH, Jonathan—Marong.—White Tuscan Wheat, 63¼ lbs. to the bushel. Honourable Mention.

EVERARD, F. W.—Kingston.—Tomato Sauce.

Commended.

Report—Well prepared, of rich flavour, and good taste and colour.

HOOD & CO., J.—Melbourne.—Barley.

Highly Commended.

Report—Good quality.

HOOD & CO., J.—Melbourne.—Malt.

First degree of Merit.

Report—Sample of a carefully prepared, dried, heated malt, of good colour and fermenting power.

HORSHAM AND WIMMERA AGRICULTURAL SOCIETY—Horsham.—Wheat. Highly Commended.

Report—Good quality, 65¼ lbs. to the bushel.

IRVING & CO., J. L.—Melbourne.—Maize.

Honourable Mention.

IRVING & CO., J. L.—Melbourne.—Wheat.

Commended.

Report—Good milling, 65½ lbs. to the bushel.

IRVING & CO., J. L.—Melbourne.—Wheat (second sample).

Honorable Mention.

Report—Fair milling, 63¾ lbs. to the bushel.

IRVING & CO.—Melbourne.—Oats (grey seed).

First degree of Merit.

IRVING & CO., J. L.—Melbourne.—Oats (brown seed).

First degree of Merit.

Report—Very prime quality.

KELLAND, T. D.—Sandhurst.—Wine Vinegar.

First degree of Merit.

Report—Well prepared, of good flavour, pure, and strong.

LYON, George—Beechworth.—Raspberry Vinegar.

First degree of Merit.

Report—A splendid sample, very well prepared, and of excellent taste and flavour.

M'CLEAN & SON—Bridgewater-on-Loddon.—Raspberry Vinegar.

Highly Commended.

Report—A fine sample of well prepared, pure raspberry vinegar, of good flavour and taste.

M'KENZIE & CO., J. F.—Melbourne.—Ground Coffee.
First degree of Merit.
Report—A well manufactured specimen of good ground coffee, well roasted, of good quality, aroma, and fine flavour.

M'KENZIE & CO., J. F.—Melbourne.—Mustard.
Highly Commended.
Report—Well prepared, well ground, strong, and pure.

M'KENZIE & CO, J. F.—Melbourne.—Mixed Spices.
Commended.
Report—Well prepared, well got up, and in good condition.

M'KENZIE & CO., J. F.—Melbourne.—Curry Powder.
Commended.
Report—Well prepared, and of good flavour.

M'KENZIE & CO., J. F.—Melbourne.—Cayenne Pepper.
Honourable Mention.
Report—Sample of fairly well prepared cayenne pepper, of good quality.

M'KENZIE & CO., J. F.—Melbourne.—Brose-meal.
Highly Commended.

M'KENZIE & CO., J. F.—Melbourne.—Oatmeal and Cocoa.
Two Highly Commended Awards.

MAXWELL, Daniel—Cohuna.—Wheat.
First degree of Merit.
Report—Splendid quality, 65 lbs. to the bushel.

MITCHELL, Peter—Romsey.—Malting Barley.
First degree of Merit.
Report—Uniform prime quality.

NICHOLLS & CO., R. W.—Ballarat.—129 varieties of Agricultural, Vegetable, Tree, Shrub, and Flower Seeds, grown in Ballarat district.
Highly Commended.
Report—A very comprehensive collection of seeds, seemingly all of good quality, but so shown as to preclude handling and comparison. The tree seeds of English varieties are specially valuable and suggestive, if they have been, as they profess to be, raised in Victoria. They show that arboriculture has there been intelligently and systematically experimented on. As such they are deserving of high commendation. From the mere appearance of the garden and field seeds we should not think them inferior to their French and English rivals.

ORIENTAL TEA COMPANY—Melbourne.—Mixed Packed Teas.
Highly Commended.
Report—These teas are neatly and carefully got up, and supply a public want.

ROWBOTTOM, E. S.—Melbourne.—Barley.

Commended.

Report—Fair quality.

STRINGER & CO.—Melbourne.—Sauces.

Commended.

Report—Exhibit of eight samples of very well prepared, full-bodied, and flavoury sauces.

VICTORIA PRESERVING COMPANY "RED CROSS"—Melbourne.—Sauces. First degree of Merit.

Report—Seven samples of sauces, of excellent quality, rich, full-bodied, and appetising. Not quite equal either to Batty & Co.'s or Crosse & Blackwell's exhibits.

VICTORIA PRESERVING COMPANY "RED CROSS"—Melbourne.—Spiced Vinegar. First degree of Merit.

Report—Very well prepared, pure, strong, and of good colour, having the characteristic flavours well adapted.

VICTORIA PRESERVING COMPANY "RED CROSS"—Melbourne.—Preserves and Pickles, &c. Highly Commended.

Report—This Company exhibits twenty-two different kinds of very good preparations, and of good colour. This collection had a better appearance than any other exhibit of the kind shown. Through an inferior vinegar which the Company uses, the standard of the goods did not come up to the first degree.

VIRGINIA TOBACCO MANUFACTURING CO. (Limited)—Melbourne.—Snuff. First degree of Merit.

Report—Exhibit of very fine, well milled snuff, of great strength and aroma.

VIRGINIA TOBACCO MANUFACTURING CO. (Limited)—Melbourne.—Aromatic Twists, and Plug Tobaccos.

Honourable Mention.

Report—Of very good flavour and condition.

WINN, J. C.—Richmond.—Malt.

Highly Commended.

ZORN, Edward—Oakleigh.—Tomato Sauces.

First degree of Merit.

Report—Excellently prepared and pure, of very fine taste, flavour, and colour.

CLASSES 629–634.

Vegetable Products used as Food or Materials.

JUDGES.

COCK, JAMES (Chairman)...	Surry Hills, Sydney.
BARKER, GEORGE WILLIAM	Barrack-st., Sydney.
HANKS, J. G.	George-st., Sydney.
NICHOLSON, W.	Sydney.
PALSER, HENRY P.	York-st., Sydney.
PEMELL, JAMES E.	Randwick, Sydney.
WARNER, W.	Sydney.

GROUP—Vegetable Products used as Food or Materials.

CLASSES 629–634.

AUSTRIA.

KAMMEL & CO., Carl—Grusbach in Mähren.—Beet Sugar.
First degree of Merit.

Report—Quality good ; loaf extra fine.

PUTZKER, M.—Brünn in Mähren.—Beet Sugar.
First degree of Merit.

Report—Quality good ; loaf extra fine.

RIPKA, Joseph Max—Brünn in Mähren.—Beet Sugar.
First degree of Merit.

Report—Quality goad ; loaf extra fine.

ROSSAUER, T.—Brünn in Mähren.—Beet Sugar.
First degree of Merit.

Report—Quality good ; loaf extra fine.

STEINER, Julius—Brünn in Mähren.—Beet Sugar.
First degree of Merit.

Report—Quality good ; loaf extra fine.

SCHREIBER, Gottfried—Graz.—Biscuits, Tea-cakes, &c.
First degree of Merit.

Report—The sweet biscuits are of superior quality, and very suitable for dessert table.

BELGIUM.

BENTRIDDER, J. F. de—Vilvorde.—Semolina, Vermicelli, Macaroni, and Starch.
Highly Commended.

CASSIERS, M. T.—Antwerp.—Chicory.
First degree of Merit.

DELACRE, Charles—Brussels.—Chocolate and Cocoa.
Highly Commended.

JOUVENEAU, A.—Tournai.—Chocolates.
First degree of Merit.

Report—The quality is very good, and the price low.

STAES SPROELANTS—Termonde.—Colza, Radish, and Flax Seed Oils.
First degree of Merit.

CEYLON.

LEECHMAN & CO.—Ceylon.—Copra and Cocoa-nut.
Commended.

FIJI.

FIJIAN NATIVE EXHIBIT.—Arrowroot.
Highly Commended.

Report—Very strong.

HENNINGS, F.—Mokagai.—Cocoa-nut Kernel, dried whole.
First degree of Merit.

HUNTER, Walter—Ososo, Taviuni.—Raw Sugar.
Commended.

Report—Fair brown.

LEEFE, Hon. B. B.—Nananu.—Arrowroot.
Highly Commended.

Report—Rather salt.

LEEFE, Hon. B. B.—Nananu.—Preserved Bananas, in boxes.
First degree of Merit.

LEVICK, H.—Loma Loma.—Copra.
First degree of Merit.

Report—Very fine.

McEVOY, G.—Cicia.—Copra.
Honourable Mention.

McPHERSON, E.—Loma Loma.—Arrowroot in Packets.
First degree of Merit.

MOREY, C. J.—Levuka.—Preserved Bananas, in Boxes.
Commended.

REWA PLANTATION CO.—Rewa.—Raw Sugar.
Highly Commended.

Report—Good.

REWA PLANTATION CO.—Rewa.—Sugar (Brewers' Crystals).
First degree of Merit.

Report—Very fine.

RYDER BROS.—Mango.—Preserved Bananas, in Leaves.
Highly Commended.

RYDER BROS.—Mango.—Copra.
Commended.

THURSTON, Hon. J. B.—Levuka.—Copra.
Highly Commended.

VOLNER, F.—Savu Savu.—Copra.
Commended.

FRANCE.

BESSÈDE FILS—Marseille.—Olive Oil.

Highly Commended.

Report—A very fine collection, but through the action of the sun, the oil has deteriorated in quality.

BIARDOT, Alphonse—Paris.—Preserved Vegetables and Fruits.

First degree of Merit.

BIARDOT, Alphonse—Paris.—Chocolate.

Highly Commended.

CHENU, P.—Paris.—Confectionery.

First degree of Merit.

COLIN, Joseph—Nantes.—Preserved Fruits and Vegetables in Tins.

First degree of Merit.

COMBET, Joseph—Paris.—Confectionery.

Highly Commended.

DESCHAMPS—Paris.—Vienna Biscuits and Hungarian Spice Cakes.

Commended.

DUFOURCET, Charles—Paris.—Grape Sugar.

First degree of Merit.

GIRAUD FRERES—Blidah, Algeria.—Flour.

Commended.

Report—Flour of soft wheat, of fair quality.

LAUTIER FILS—Grasse.—Olive Oil.

First degree of Merit.

LAVIE ET CIE., Pierre—Constantine, Algeria.—Semolina.

First degree of Merit.

Report—Ten varieties of semolina for soup purposes, of very good quality, and well manufactured.

LECOURT—Paris.—Preserved Fruits and Vegetables.

First degree of Merit.

MARÉ, Ch.—Nantes (Loire-Inférieure).—Tinned Vegetables.

Highly Commended.

PREVET ET CIE., Charles—Paris.—Preserved Vegetables, Desiccated.

First degree of Merit.

Report—A very creditable exhibit.

RAVEL ET CIE., Jules—Nice.—Olive Oil.

Commended.

SAINT-BLANCARD, Gérard—Bordeaux.—French Plums.

Highly Commended.

GERMANY.

BARTSCH, Max—Breslau.—Macaroni and Sago.
First degree of Merit.

DOMMERICH & CO.—Buckau-Magdeburg.—Chicory.
Highly Commended.

GEY, August—Zschopau in Sachsischen-Erzegebirge.—Preserved Fruits, Jams, and Jellies. Highly Commended.

NÄGELI, Dr. W.—München und Mittersendling.—Preserved Fruits and Vegetables. First degree of Merit.
Report—A very fine exhibit, deserving special notice.

NORTH, Ferdinand—Erfurt.—Vermicelli and Macaroni.
First degree of Merit.

SCHÖRKE, Alexander—Görlitz.—Pea Sausages and Cakes of Pease, Lentils and Beans. Two Honourable Mentions.
Report—These goods are especially useful for persons travelling.

STÄRKE-ZUCKERFABRIK ACTIENGESELLSCHAFT—vormals C. A. KOHLMANN & CO.—Frankfurt a/O.—Starch, Sugar, and Syrup, for colouring. First degree of Merit.
Report—A very fine exhibit or trophy, worthy of special notice.

GREAT BRITAIN AND IRELAND.

BATTY & CO.—London.—Jams and Jellies.
First degree of Merit.

CALLARD & BOWSER—London.—Confectionery, Butter-Scotch.
Highly Commended.

CARR & CO.—Carlisle.—Biscuits.
First degree of Merit.

CORBETT, M.P., John—Bromsgrove, Worcestershire.—Salt.
First degree of Merit.
Report—Very fine exhibit.

DUNN & HEWETT—London.—Cocoa and Chocolate.
First degree of Merit.

DUNN & HEWETT—London.—Sherbet.
First degree of Merit.
Report—A most excellent preparation.

FRY & SONS, J. S.—London.—Cocoa and Chocolate.
First degree of Merit.
Report—Very superior collection of fancy chocolates.

KEILLER & SON, James—Dundee.—Confectionery.
First degree of Merit.

MENIER, Emile—London.—Chocolate and Cocoa.
Highly Commended.

RECKITT & SONS, Isaac—Hull and London.—Starch, Blues, and Black Leads.
First degree of Merit.

SPARAGNAPANE & CO., G.—London.—Wedding Cake Ornaments.
First degree of Merit.

Report—A very fine exhibit.

INDIA.

NUJEEB KHAN, & CO.—Calcutta.—Preserves.
First degree of Merit.

ROSA SUGAR FACTORY—Shajhanpore.—Loaf Sugar.
First degree of Merit.

Report—Fine sample, but price too high for the Australian market.

ROSA SUGAR FACTORY—Shajhanpore.—Crystal Sugar.
First degree of Merit.

Report—Two very fine samples.

VENCATACHELLUM, P.—Madras.—Jams and Jellies.
Commended.

ITALY.

ARRIGHETTI, Marco—Florence.—Macaroni.
First degree of Merit.

ARRIGHETTI, Marco—Florence.—Olive Oil.
First degree of Merit.

CIOFI, Leopoldo—Florence.—Linseed Oil.
First degree of Merit.

Report—A splendid exhibit, well prepared and refined.

CIRIO, Francesco—Turin and Naples.—Preserved Fruits and Vegetables.
First degree of Merit.

GIULI, A.—Pisa.—Olive Oil.
First degree of Merit.

LLOYD, AMORUSO, & CO.—Bari.—Olive Oil (for machinery).
First degree of Merit.

LLOYD, AMORUSO, & CO.—Bari.—Olive Oil (as food).
Highly Commended.

MIMBELLI, E.—Olive Oil.
Commended.

OTT, Cesare.—Leghorn.—Olive Oil.
First degree of Merit.

ROBERTSON BROS.—Leghorn.—Macaroni and Vernmicelli.
First degree of Merit.

ROBERTSON BROS.—Leghorn.—Candied Fruits.
Highly Commended.

ROBERTSON BROS.—Leghorn.—Olive Oil.
Highly Commended.

JAPAN.

SAKAI GOICHI—Osaka.—Sugar-candy.

First degree of Merit.

NEW CALEDONIA.

HOFF, Charles—Nouméa.—Lime-juice.

First degree of Merit.

Report—An exhibit of very good quality.

NEW SOUTH WALES.

ARNOTT, Wm.—Newcastle.—Biscuits.

Highly Commended.

BARRETT, HAYTER, & CO.—Burrawang.—Corn Meal.

First degree of Merit.

Report—Well manufactured and very good.

BARRETT, HAYTER, & CO.—Burrawang.—Oatmeal.

First degree of Merit.

Report—Fine, coarse, and medium, all being very good.

BIDDELL BROTHERS—Sydney.—Confectionery.

First degree of Merit.

Report—Very creditable show of confectionery.

BRITTEN & BOLTON—Tamworth.—Flour.

Commended.

Report—Fine, strong, of good colour, and well made.

BROWNING, George—Sydney.—Jams and Preserves.

Highly Commended.

Report—Very well got up, creditable exhibit, the tins being labelled by a new process.

COLE & SON, W.—Tomago.—Arrowroot.

First degree of Merit.

COLONIAL SUGAR-REFINING CO.—Sydney.—Collection of Sugars.

First degree of Merit Special.

Report—This collection consists of fourteen varieties in loaf, pulverized, and crystals, of every grade of refined and raw sugars, which are of very fine quality, and being manufactured from cane grown in the Colony are deserving of special notice. The trophy as an exhibit is exceedingly well got up.

CONOLLY, William—Goulburn.—Flour.

First degree of Merit.

Report—First-class flour, equal in make to South Australian, of good colour, but not quite so strong.

CLASSES 629–634.—*Vegetable Products used as Food or Materials.*

CRIPPS, J. F.—Sydney.—Trophy of Confectionery.
Highly Commended.

Report—Very creditable show.

DE JOSSELIN, Henri—Sydney.—Confectionery.
Highly Commended.

DE JOSSELIN, Henri—Sydney.—Fruits in Syrup.
First degree of Merit.

Report—Very fine.

DICKSON & SON—Mudgee.—Flour.
Highly Commended.

Report—Good, strong, bright, and well made.

ENNEVER & APPLETON—Sydney.—Confectionery, Boiled, Panned, and French.
Commended.

FAINT, George—Armidale.—Rye Flour.
First degree of Merit.

Report—Superior flour, made from the giant rye.

FOX, G.—Goulburn.—Jams and Fruits.
First degree of Merit.

FREESTON, J.—Sydney.—Jams and Canned Fruits.
First degree of Merit.

GIRAUD, L.—Sydney.—Confectionery, English and French.
First degree of Merit.

Report—Splendid collection.

GIRAUD, L.—Sydney.—Marmalade.
Highly Commended.

HARDIE, J.—Sydney.—Biscuits.
First degree of Merit.

Report—A very creditable exhibit, of excellent quality.

HARPER & CO., R.—Sydney.—Trophy of Manufactured and Unmanufactured vegetable products.
First degree of Merit Special.

HARPER & CO., R.—Sydney.—Brose Meal.
First degree of Merit.

Report—Well manufactured.

HARPER & CO., R.—Sydney.—Chicory (Root and Ground).
First degree of Merit.

HARPER & CO., R.—Sydney.—Cocoa, in Beans.
First degree of Merit.

HARPER & CO., R.—Sydney.—Vegetable Products used as Food.
First degree of Merit Special.

HARPER & CO., R.—Sydney.—Groats.
Commended.

Report—Fair sample.

CLASSES 629-634.—*Vegetable Products used as Food or Materials.*

HARPER & CO., R.—Sydney.—Collection of Colonial Manufactured Cocoas and Chocolates. First degree of Merit.

Report—This Firm deserves special notice as being the first manufacturers of this class of goods in the Colony, having imported labour and machinery for the purpose. The goods, which are well and tastily got up, show their quality to be equal to any imported.

HARPER & CO., R.—Sydney.—Oatmeal.

Highly Commended.

Report—Medium ground ; very good.

HARPER & CO., R.—Sydney.—Patent Meal.

First degree of Merit.

Report—Fair sample of patent meal.

HARPER & CO., R.—Sydney.—Corn Meal.

First degree of Merit.

Report—Well manufactured, and very good.

INGREY & MATHISON—Grenfell.—Flour.

First degree of Merit.

Report—First-class flour, equal in make to South Australian ; of good colour, but not quite so strong.

KENDALL & SONS—Sydney.—Biscuits.

Highly Commended.

LACKERSTEEN, A. L.—Sydney.—Jams and Preserved Fruits.

First degree of Merit.

Report—Equal to the best imported.

LAWRIE, Alexander Thomson—Rawden Vale.—Arrowroot.

Highly Commended.

MAITLAND EXHIBITION COMMITTEE — Maitland.—Preserved Fruits and Jellies. Commended.

MOSS, H.—Nowra.—Arrowroot.

Highly Commended.

Report—A sample of arrowroot, made from the native Bunawang, of excellent quality.

MUNN'S MAIZENA CO.—Merimbula.—Maizena.

First degree of Merit.

Report—This firm was the first to introduce this industry into Australia.

MUNN'S MAIZENA CO.—Merimbula.—Starch.

Highly Commended.

NEALE, Miss—Parramatta.—Preserved Fruits and Jams.

Commended.

PANTER & PARRY—Sydney.—Self-raising Flour.

First degree of Merit.

Report—Very good

RYAN & DENMEADE—Sydney.—Confectionery.

Commended.

SCOTT & MULLALY—Cootamundra.—Flour.

First degree of Merit.

Report—First-class flour, equal in make to South Australian, of as good colour, but not quite so strong.

SHARPE & CO.—Ballina.—Arrowroot.

Highly Commended.

SIM & CO., J. N.—Forbes.—Flour.

Honourable Mention.

Report—Fine, strong, of fair colour, and well made.

TURNER, S.—Sydney.—Self-raising Flour.

Highly Commended.

Report—Fairly good.

WADE & CO., John.—Sydney.—Starch and Corn-flour.

First degree of Merit.

NEW ZEALAND.

BINNIE, J.—Dunedin.—Biscuits.

Commended.

BUTEL & CO., Peter—Arrowtown, Southland.—Flour.

Commended.

Report—Well manufactured and looks well, but mixes short and dark in the dough.

GILMOUR, Robert—Lake Hayes, Arrow Flat.—Oatmeal.

First degree of Merit.

Report—Medium and coarse; very good.

GRANT, O. D.—Thames—Biscuits.

Highly Commended.

GRAY, FLEMING, & CO.—Invercargill.—Oatmeal.

Commended.

Report—Find ground, good.

GRIFFITHS, S. S.—Wellington.—Confectionery.

First degree of Merit.

GRIFFITHS, S. S.—Wellington.—Biscuits.

Highly Commended.

HUDSON & IRVINE—Dunedin.—Oatmeal.

Commended.

Report—Fair medium ground.

KING & CO.—Gisborne.—Flour.

Highly Commended.

Report—Well manufactured, and looks well, but mixes short and dark in the dough.

LAMB, John—Auckland.—Biscuits.

Commended.

M'GILL, Peter—Tokomairiro, Otago.—Groats.

First degree of Merit.

Report—Very good coarse groats.

M'GILL, Peter—Otago.—Flour.

First degree of Merit.

Report—Well manufactured and looks well, but mixes short and dark in the dough.

M'GILL, Peter—Otago.—Oatmeal.

Highly Commended.

Report—Fine, and very well made.

MOIR & CO.—Christchurch.—Oatmeal.

First degree of Merit.

Report—Fine, medium, and coarse; very good.

NEWBURY, P. J.—Dunedin.—Biscuits.

Honourable Mention.

RENTON, J. C.—Dunedin.—Biscuits.

Highly Commended.

ROYSE, STEAD, & CO.—Dunedin.—Flour.

First degree of Merit.

Report—Well manufactured, and looks well, but mixes short and dark in the dough.

ROYSE, STEAD, & CO.—Dunedin.—Oatmeal.

Honourable Mention.

Report—Fair medium ground.

TRENT BROS.—Christchurch.—Chicory.

First degree of Merit.

WATERS, E.—Auckland.—Confectionery.

Highly Commended.

WOOD, W. D.—Christchurch.—Flour.

Honourable Mention.

Report—Well manufactured, and looks well, but mixes short and dark in the dough.

QUEENSLAND.

ACHESON & ALLEN—Rockhampton.—Rosella and Guava Jelly.

First degree of Merit.

Report—Very good.

AMHERST, M.P., F. F.—Mackay.—Sugar, "V. P."

First degree of Merit.

AMHERST, M.P., F. F.—Mackay.—Sugar, "V. P."

Commended.

BAKER, Thomas—Maryborough.—Arrowroot.

Highly Commended.

BAKER, Thomas—Maryborough.—Starches.

Highly Commended.

BOTANICAL GARDENS—Brisbane.—Thirty Varieties of very fine Samples of Sugar.

Commended.

CANNY & MORETON—Maryborough.—Sugar, "Vacuum Pan."

Highly Commended.

CLASSES 629-634.—*Vegetable Products used as Food or Materials.*

CANNY & MORETON—Maryborough.—Sugar, "Vacuum Pan."
First degree of Merit.

CASTLES, Wm.—Pimpama.—Arrowroot (bulk & packets).
Highly Commended.

COWLEY, Lewis J.—Herbert River.—Sugar, "Open Pan."
First degree of Merit.

COWLEY, Alfred S.—Herbert River.—Sugar, "Open Pan."
Honourable Mention.

DUVAL, Lionel—Mackay.—Sugar, "Vacuum Pan."
Honourable Mention.

DUVAL, Lionel—Mackay.—Sugar.
Commended.

GARTSIDE, MUIR, & BLACK—Albert River.—Sugar, "Open Pan."
First degree of Merit.

HAYES, W. & C.—Warwick.—Flour.
First degree of Merit.

Report—Fine, bright, strong, and well made.

HORWITZ & CO., J.—Warwick.—Corn-meal.
First degree of Merit.

Report—Fine dressed and very good.

HORWITZ & CO., J.—Warwick.—Flour.
Highly Commended.

Report—Fine, bright, strong, and well made.

HORWITZ & CO., J.—Warwick—Flour.
Commended.

Report—Strong, of fair colour, and well made.

KATES, M.P., Francis—Allora.—Corn Meal.
Highly Commended.

Report—Coarse dressed, very good.

KATES, M.P., Francis—Allora.—Flour.
Honourable Mention.

Report—Strong, and well made, but dark.

KING, G. Maitland—Mackay.—Sugar, "Open Pan."
Highly Commended.

MACDONALD, John—St. Helena.—Trophy of Sugar-canes.
Highly Commended.

M'CREADY, Robt.—Pimpama.—Arrowroot.
First degree of Merit.

Report—Very fine.

M'CREADY, Hugh—Mackay.—Sugar, "Vacuum Pan."
Highly Commended.

MUIR, Robert—Nerang Creek.—Sugar, "Open Pan."
Commended.

MUNE, W.—Beenleigh.—Sugar, "Vacuum Pan."
Highly Commended.

NEAME & CO.—Dungeness, Herbert River.—Giant Sugar-cane.
Highly Commended

Report—Very good.

NORRIS, C. A. M.—Nerang Creek.—Counter Sugar.
Commended.

SKINNER, B.—Brisbane.—Collection of Fruits in Syrup.
First degree of Merit.
Report—Very well preserved, having a good natural flavour.

SKINNER, B.—Brisbane.—Collection of Jams, Jellies, &c.
Highly Commended.
Report—Fairly well made—spoilt by using dark sugar.

WILSON & CO., F. W.—Brisbane.—Biscuits.
Commended.

SOUTH AUSTRALIA.

BARNARD, G. L.—Walkerville.—Olive Oil.
Commended.

CHANCE, W. A.—Unley.—Jams and Tinned Fruits.
Highly Commended.

COWAN & CO., James—Adelaide.—Flour.
First degree of Merit.
Report—Good, strong, good-coloured, and well-manufactured flour. The same remark applies to all the South Australian flours shown.

DAVENPORT, Samuel—Beaumont.—Olive Oil.
First degree of Merit.
Report—A very fine and well prepared oil, of good body and colour.

DUFFIELD & CO., W.—Gawler.—Flour.
First degree of Merit.
Report—Good, strong, good-coloured, and well-manufactured flour.

GALT, Peter—Kapunda.—Flour.
Highly Commended.
Report—Good, strong, good-coloured, and well-manufactured flour.

HARDY, Thomas—Bankside.—Dried Fruits.
First degree of Merit.
Report—All very fine ; deserving of very great praise.

HARRISON & CO., W. C.—Port Adelaide.—Roller-Mill Flour.
First degree of Merit.
Report—This flour (not a sample of their ordinary make) is made on the Hungarian system, showing what can be done by an improved system of manufacture.

HOWELL, JOHN—Adelaide.—Olive Oil.
Highly Commended.

IRVIN & MILLER.—Adelaide.—Confectionery.
First degree of Merit.

KIMBER, Charles—Clare.—Sultana Raisins.
Highly Commended.

KIMBER & DREW—Kadina.—Flour. Commended.
Report—Good, strong, good-coloured, and well-manufactured flour.

KNEESE & STONEMAN—Crystal Brook.—Flour.
Honourable Mention.
Report—Good, strong, good-coloured, and well-manufactured flour.

M'EWIN & SON, G.—Glen Ewin.—Jams.
First degree of Merit.

ROBSON, T. B.—Paynehan.—Raisins, Muscatels.
First degree of Merit.

TERRY, W. D.—Belair.—Marmalade.
Commended.

STRAITS SETTLEMENTS.

BASTIANI, J.—Singapore.—Preserved Fruits in Syrup and in Juice.
First degree of Merit.
Report—Very nice article.

BROWN & CO.—Penang.—Brewing Crystal Sugar.
First degree of Merit.

BROWN & CO.—Penang.—Soft White Sugar.
Commended.

FAVRE & CO.—Singapore.—Pine-apple Syrup.
Highly Commended.
Report—Good saleable preparation.

FAVRE & CO.—Singapore.—Preserved Fruits in Tins and Bottles.
Highly Commended.

FAVRE & CO.—Singapore.—Pine-apple in Dry Sugar.
Highly Commended.

GILFILLAN, WOOD, & CO.—Singapore.—Tapioca and Sago.
Commended.

GUTHRIE & CO.—Singapore.—Tapioca and Sago.
Commended.

MORNAY, H. De—Penang.—Tapioca.
First degree of Merit.
Report—Fine quality.

ONDERNEMING—Sumatra.—Samples of Gambier.
Honourable Mention.

PENANG PLANTATION CO.—Penang.—Tapioca.
First degree of Merit.
Report—Extra fine quality.

PENANG SUGAR ESTATES CO. (Limited)—Penang.—Sugar.
Highly Commended.

TAN HOON GUAN—Malacca.—Tapioca.
Commended.

WESTERHOUT, J. E.—Malacca.—Durian Jelly, &c.
Highly Commended.

WESTERHOUT, J. E.—Malacca.—Tapioca.
Highly Commended.

TASMANIA.

ARNOLD, G.—Hobart Town.—Biscuits.
Commended.

DOSSITER BROS.—Hobart Town.—Flour.
Highly Commended.

Report—Fair colour, well made, but weak.

GIBSON, W.—Hobart Town.—Flour.
First degree of Merit.

Report—Good colour, well made, but weak.

HAYWOOD, C. D.—Hobart Town.—Biscuits.
Commended.

HICKMAN, G.—Kangaroo Valley.—Jams.
First degree of Merit.

MONDS, T. W.—Carrick.—Oatmeal.
First degree of Merit.

Report—Good, well-manufactured coarse meal, in good condition.

MONDS, T. W.—Carrick.—Flour.
Commended.

Report—Make and colour fair, but very weak.

PEACOCK, G.—Hobart Town.—Jams, Jellies, and Tinned Fruits.
Highly Commended.

RITCHIE, David—Launceston.—Groats.
Highly Commended.

Report—Very good coarse and fine groats.

RITCHIE, David—Launceston.—Oatmeal.
Commended.

Report—Good, well-manufactured coarse meal, in good condition.

SCOTT, R.—Leith Mills.—Oatmeal.
Highly Commended.

Report—Good, well-manufactured coarse meal, in good condition.

WALKER, Mrs. E. J.—Hobart Town.—Flour.
Honourable Mention.

UNITED STATES.

GUITTARD & CO., E.—San Francisco, Cal.—Superfine Vanilla Chocolate.
First degree of Merit.

GUITTARD & CO., E.—San Francisco, Cal.—Breakfast Cocoa.
Highly Commended.

KINGSFORD & CO., T.—Oswego, N.Y.—Corn Flour.
Highly Commended.

KINGSFORD & CO., T.—Oswego, N.Y.—Corn Starch.
First degree of Merit.

KRAFT & CO., J. G.—Baltimore, M'd.—Tinned Fruits and Tomatoes.
First degree of Merit.

MORNINGSTAR & CO., Chas.—New York City.—Corn Flour.
First degree of Merit.

MORNINGSTAR & CO., Chas.—New York City.—Corn Starch.
Highly Commended.

PORTLAND PACKING CO.—Portland, Maine.—Canned Corn and Blueberries. First degree of Merit.

THURBER, H. K. & F. B.—New York City.—Canned Fruits and Vegetables. First degree of Merit.
Report—Very fine, and especially well got up.

THURBER, H. K. & F. B.—New York City.—Syrups and Honey.
First degree of Merit.

THURBER, H. K. & F. B.—New York.—Prepared Oatmeal.
First degree of Merit.
Report—Very fine sample.

WILSON & CO., W. J.—Philadelphia.—Biscuits and Crackers.
First degree of Merit.
Report—A very fine assortment of biscuits.

VICTORIA.

BENCRAFT & CO., G.—Melbourne.—Pease-meal.
First degree of Merit.
Report—Well manufactured.

BENCRAFT & CO., G.—Melbourne.—Brose-meal.
First degree of Merit.
Report—Well manufactured.

BENCRAFT & CO., G.—Melbourne.—Flour.
Honourable Mention.
Report—Fair colour, but weak and overground.

BENCRAFT & CO., G.—Melbourne.—Groats. First degree of Merit.
Report—Tinned groats, finely ground.

BENCRAFT & CO., G.—Melbourne.—Oatmeal.
First degree of Merit.
Report—Very good sample of coarse meal.

DANELLI, S.—Melbourne.—Macaroni.
Highly Commended.

FRY & CO., James—Ballarat.—Flour.
First degree of Merit.
Report—Very fine, strong, of good colour, and well made.

CLASSES 629-634.—*Vegetable Products used as Food or Materials.*

FRY & CO., James —Donald.—Flour.
Highly Commended.

Report—Fine, strong, of good colour, and well made.

FRY & CO., James—St. Arnaud.—Flour.
Commended.

Report—Fair colour, but weak and overground.

GUEST & CO., T. B.—Melbourne.—Assorted Biscuits and Trophy.
Highly Commended.

Report—Very good.

KENSINGTON MAIZENA & STARCH CO.—Melbourne.—Maizena and Starch. Highly Commended.

LEZZA, S.—Melbourne.—Confectionery.
Highly Commended.

Report—Very fine collection of confectionery, deserving great credit.

McKENZIE & CO., J. F.—Melbourne.—Oatmeal.
Highly Commended.

Report—Good coarse meal, well made.

McKENZIE & CO., J. F.—Melbourne.—Oatmeal (another sample).
Commended.

Report—Fairly good.

McKENZIE & CO., J. F.—Melbourne.—Flake Cocoa.
Highly Commended.

STRACHAN, Thomas—Axedale.—Dried Fruits.
First degree of Merit.

Report—Very creditable.

SWALLOW & ARIELL—Melbourne.—Biscuits and Bride Cakes.
First degree of Merit.

Report—Very fine.

SWALLOW & ARIELL—Melbourne.—Biscuits assorted, and Cakes.
First degree of Merit.

Report—Very fine assortment.

VICTORIA PRESERVING CO.—Melbourne.—"Red Cross" Jams, Jellies, and Bottled Fruits. First degree of Merit.

VICTORIA PRESERVING CO.—Melbourne.—Tomatoes in Tins and Bottles. First degree of Merit.

VICTORIA SUGAR CO.—Melbourne.—Twelve samples of Sugar.
First degree of Merit.

Report—Of very good quality.

WALKER & SON, J. H.—Melbourne.—Assorted Biscuits.
Commended.

WARE, W. R.—Baringhup.—Dried Fruits.
Highly Commended.

CLASSES 635, 637, and 638.

Wines, Spirituous, Fermented, and other Drinks.

JUDGES.

BASSETT, WILLIAM	Sydney.
COOPER, POPE A.	Brisbane, Queensland.
GRAVES, H. WARDEN	Taunton, Mass., U.S.A.
JOUBERT, JULES	George-st., Sydney.
MOORE, CHARLES, F.G.S., F.L.S. (Chairman)	Sydney.
PACHTEN, A.	Melbourne, Victoria.
PARROT, A., Consul for Switzerland	Hunter-st., Sydney.
ROSENTHAL, C. M.	Philadelphia, U.S.A.
SAHL, CARL LUDWIG, Consul for the German Empire	Sydney.
SKARRATT, CHARLES C.	Sydney.

CLASS 636.

Ale, Porter, and other Beverages made from Cereals.

JUDGES

BUTCHER, ROBERT	George-st., Sydney.
DISHER, WILLIAM JOHN	Wellington, New Zealand.
GRAVES, H. WARDEN	Taunton, Mass., U.S.A.
MACHEN, MONTAGUE SAMUEL ...	Gresham-st., Sydney.
PALMER, BENJAMIN	Upper William-st., Sydney.
SPARKE, WILLIAM E. (WALFORD & SPARKE) (Chairman)	Sydney.

CLASSES 635-638.—Wines, Spirituous, Fermented, and other Drinks.

FOREIGN AND BRITISH WINES.

"*Vina probantur odore, sapore, nitore, colore.*"

Amongst the many interesting products exhibited in the Garden Palace wine, for many reasons, should rank as one of the highest. First, because the production of a beverage containing a moderate percentage of alcohol has a moral influence on the people of the country wherein it is made and consumed. Second, because it is likely to become one of the most hopeful sources of our national prosperity. Statistical returns show that upwards of thirty million gallons of wines and spirits are imported annually into Great Britain, and the Australian Colonies should ere long enter into competition with the countries which now supply their mother land. Reports of the daily increasing spread of vine diseases throughout Europe must necessarily lead our people to pay every possible attention to the cultivation of a plant which thrives so well and yields such bountiful crops, more particularly in New South Wales, Victoria, and South Australia, which by a happy combination of climate, soil, and seasons are pre-eminently well adapted for the production of almost every species of wine, from the most delicate "Claret" of France, or "Hock" of Germany, to the warm, full-bodied "Xèrès" and "Oporto" of Southern Europe, and even the sweet "Tokay" and "Constantia" of Hungary and the Cape. Australian wines vary in alcholic strength from 18° to 39°. This International Exhibition of 1879 has afforded us an opportunity of judging side by side the wines of all countries, and never before in the Southern Hemisphere have we seen the products of the vineyards of France, Germany, Hungary, Austria, Italy, and Japan in competition with those of Australasia. In an educational point of view this contest will prove one of the most interesting and valuable; its results will doubtless be felt hereafter and have a most beneficial effect on an industry which although as yet in its infancy has nevertheless made gigantic strides within the last ten years.

Many will remember the number and quality of the wines submitted to the jury at the first Intercolonial Exhibition, held in Sydney in 1869, when by a strange coincidence the chairman and reporter of the present jury acted in similar capacities in 1869. They both express their opinion as to the remarkable development the wine industry has achieved in the last decade. The local shows and the annual Intercolonial Exhibitions which brought together the vignerons of the Colonies naturally excited amongst them a wholesome spirit of emulation, and this has brought their wines to their present condition, in many instances bordering almost on perfection. Two facts which have come within the knowledge of the Judges will show the educational benefit of international contests, and these have reference more particularly to the Colony of South Australia. In an official report made in London in 1874 on the wines of that Colony we find the following remark:—"For instance, the samples of Madeira were empty—wines without character and promising no future." This censure, emanating from Signor A. A. De Aginar (Royal

Portuguese Commissioner), J. B. Schiefner (Commissioner for Hungary), H. C. Blackburn, &c., &c., &c., has evidently had the desired effect, for amongst the wines exhibited at the Garden Palace we find some samples of excellent Madeira "full-bodied" and having all the characteristics of that wine, and "in every respect most promising." South Australia several years ago challenged the sister Colonies in an annual wine contest, and New South Wales carried the palm for wines under 21 per cent. of alcoholic strength (proof spirit) in 1872–73–74. In looking over the schedule of wines exhibited by our western neighbour it will be seen that on *this* occasion South Australia shows samples as low as 22 per cent., as per official report furnished by the South Australian Commission. Those wines have a character of their own perfectly distinct from the light wines of the Upper Yarra or the Valley of the Hunter, but excellent of their kind, and classed accordingly. These are undeniably the results of education arrived at by Exhibitions and friendly competition. This applies not only to wines but to all other objects exhibited. The wines liqueurs, spirits, and bitters submitted to us were with very few exceptions most creditable alike to the countries whence they came, and to the producers. Having to adjudicate on some thousands of samples we classed the exhibits into twelve distinct groups as under :—

1. Australian (light and full-bodied).
2. French.
3. German.
4. Austrian and Hungarian.
5. Italian.
6. Spanish and Portuguese.
7. Sparkling wines (all nations).
8. Brandies.
9. Whiskies.
10. Gin, and White Spirits.
11. Rum.
12. Liqueurs.

Judges were set apart for each group, three to form a quorum, the instructions from the Commission being to classify the wines, and append to them numbers ranging from one to four in each separate section. The wines, spirits, liqueurs, and bitters were brought into the Judges' room in wine-glasses bearing a distinguishing number only. A list of wines, &c., to be judged on each day, containing besides the distinguishing number above mentioned, the nationality, age, name of grape, strength, and where obtainable, quantity for sale, and price. We commenced our duties on the 22nd January with the examination of German wines, and concluded with New South Wales wines on the 24th March, 1880, after holding fifty-one meetings. Respecting the French white wines, with the exception of four exhibits, they are in bad condition, and we regret that some of the brands for which France is so famous were not shown. The red wines from the same country as a whole are much superior to the white, but the majority of the wines submitted are "harsh," heavy, and deficient in bouquet.

For the Judges,
JULES JOUBERT.

COLONIAL WINES.

In bringing forward the second part of our report on wines, which embraces all the exhibits from the Australasian Colonies, we have much pleasure in stating that, as a whole, that section deserves the highest praise. In order to do justice to the wines sent for competition we desired that each Colony be

separated, and further, that in each instance the wines be submitted according to their respective kind. With a view to illustrate this report an application was made to the Registrar General of this Colony, who has kindly furnished us with the following table showing the acreage under vines, with the quantity of wine produced in the Australasian Colonies, in the year ending 31st March, 1879 :—

VINEYARDS.

RETURN showing the acreage under vines, with the quantity of wine produced in the Australasian Colonies, in the year ending 31st March, 1879.

Colony.	Total acreage under vines.	Wine produced. Gallons.	Brandy. Manufactured. Gallons.	Average yield of wine per acre. Gallons.
New South Wales	4,237	684,733	2,540	*161·60
Victoria	4,419	410,333	1,561	92·85
South Australia	4,297	458,303	.....	106·65
Queensland	605	64,407	.....	106·45
Western Australia	.....	No information.		.....
New Zealand	.....	Do.		.....

* The acreage returned for wine-making was 3,024 acres, which gives an average yield of 226·43 gallons per acre.

NOTE.—Victoria :—The above figures are for the year ending 31 March, 1878. The produce of the crop of 1879 is collected the year following (1880). The Colonies competing are South Australia, Victoria, Queensland, New Zealand, New South Wales, and Tasmania.—The wines submitted are perfectly distinct in character ; the climate and soil of Victoria and New South Wales, more particularly as regards the Upper Yarra in the former, and the Valley of the Hunter in the latter, produce wines assimilating to those of Bourgogne and Bordeaux ; whereas those from the Murray, and South Australia will become fair substitutes for Spanish, Portuguese, Madeira, and Cape wines, not only on the markets of the Southern Hemisphere but also in Europe, where, owing to the prevalence of diseases against which all remedies have hitherto failed, the vineyards are gradually dying out. The exhibits from Queensland are few, and generally, as far as wines are concerned, inferior to those of the Southern Colonies. On the other hand distilled spirits, more particularly "Rum," are of excellent quality. New Zealand and Tasmania excel in wines, liqueurs, and syrups extracted from fruits (other than the grape). One of the features which we are most anxious to draw particular attention to is the low price of some of the wines exhibited, for in many instances excellent ports and sherries in the South Australian Court are quoted at 3s. 6d. and 4s. per gallon, whilst among the New South Wales table wines there are both reds and whites at 2s., and as low as 1s. 7d., per gallon. In several instances these low-priced wines have taken the highest awards.

In concluding our report we wish to record our high sense of satisfaction at the excellent condition of the wines exhibited, and the first-rate get-up of the bottling. Whilst exertions are being made to extend the export trade of the Colonies in sending shipments of meat, &c., to Europe, we are of opinion that some of the cheap wines should be sent to France where they would be readily taken up for blending purposes. This would realize the prediction of Lieut. Shortland, which we find in the report published in London in 1789 ("Governor Phillip's voyage to Australia"). "In a climate so favourable to the growth of the vine it may doubtless be carried on to any degree of perfection. Should no other articles of commerce divert the attention of the settlers from this point, the wines of New South Wales may perhaps hereafter be sought with avidity, and become an indispensable part of the luxuries of European tables." Several samples of brandy made in New South Wales, Victoria, and South Australia were submitted and examined with great care, but we were unable to award them any classification, and we are of opinion that more care will have to be paid to the manufacture of that article to make it palatable.

Sydney, March, 1880.

For the Judges,
JULES JOUBERT.

GROUP—Wines, Spirituous, Fermented, and other Drinks.

CLASSES 635–638.

AUSTRIA.

ABELES, Heinrich—Vienna.—Tokay, Ruster Naturwein, and Vischontaer.
Two First degrees of Merit.

Report—These wines are full-bodied, in perfect condition; bouquet, colour, and flavour very good.

ABELES, Heinrich—Vienna.—Menescher.
Commended.

ABELES, Heinrich—Vienna.—Tokay.
Highly Commended.

Report—A wine of good colour, and very rich, strong body.

ARCHLEB, Joseph—Dobruska in Böhmen.—Crême Stomachique.
First degree of Merit Special.

Report—An excellent liqueur, of good bouquet and delicious taste.

ARCHLEB, Joseph—Dobruska in Böhmen.—Liqueurs.
Two First degrees of Merit.

Report—Excellent liqueurs, of very good taste.

DREHER, Anton—Klein-Schwechat & Vienna.—Bottled Lager Beer.
First degree of Merit.

Report—Pale, sparkling, amber-coloured beer, strongly hopped, light body, and excellent quality.

HELLER, Moriz—Vienna.—Tokay and Klosterneuberger.
Two First degrees of Merit.

HELLER, Moriz—Vienna.—Portauer.
Commended.

HELLER, Moriz—Vienna.—Kirchner, Neszmeyer, and Gumpolds.
Two Honourable Mentions.

HELLER, Moriz—Vienna.—Mareberger.
Highly Commended.

KLEINOSCHEG BRÜDER—Graz.—Claret.
Honourable Mention.

KLEINOSCHEG BRÜDER—Graz.—Hock and Champagne.
Two Highly Commended Awards.

Report—Hock of good body, and excellent bouquet.

KLEINOSCHEG BRÜDER—Graz.—Champagne and White Muscat.
Two First degrees of Merit.

Report—The champagne is an excellent wine of splendid condition and bouquet. The white muscat is an excellent wine of very fine bouquet, taste, and condition.

KLEINOSCHEG BRÜDER—Graz.—Red Burgundy.
Commended.

Report—A good wine, of sound condition and aroma.

LORENZ, Dr. Ritter, Dojmi von Delupis—Lissa.—Vino Margherita.
First degree of Merit.

LORENZ, Dr. Ritter, Dojm von Delupis—Lissa.—Rakia Brandy.
Honourable Mention.

LUXARDO, Givolamo—Zara.—Maraschino.
First degree of Merit Special.

MILLICICH, Luca—Zara.—Maraschino.
First degree of Merit Special.

MAYER, Samuel—Arad.—Treber Brantwein.
Honourable Mention.

MAYER, Samuel—Arad.—Carbinet.
First degree of Merit.

MAYER, Samuel—Arad.—Maynonadi.
Commended.

MAYER, Samuel—Arad.—Slibowitz '62 and Menescher.
Two Highly Commended Awards.

PALUGYAY & SÖHNE, J.—Pressburg in Ungaru.—Château Palugyay.
Highly Commended.

PALUGYAY & SÖHNE, J.—Pressburg in Ungaru.—Tokay.
Commended.

PALUGYAY & SÖHNE, J.—Pressburg in Ungaru.—Tokay and Château Palugyay.
Two Honourable Mentions.

POKORNY, Franz—Agram in Croatien.—Liqueurs.
Three First degrees of Merit.

POKORNY, Franz—Agram in Croatien.—Liqueurs.
Two Commended Awards.

POKORNY, Franz—Agram in Croatien.—Visiyenac.
Highly Commended.

SCHADN, Johann—Vienna.—Vöslauer Bordeaux and Stinkenbrunner.
Two Highly Commended Awards.

SCHADN, Johann—Vienna.—Vöslauer Auslese.
First degree of Merit.

SCHADN, Johann—Vienna.—Schobesberger.
Commended.

SCHADN, Johann—Vienna.—Gumpolds-Kirchner.
Honourable Mention.

SCHLUMBERGER, R.—Vöslau & Vienna.—Vöslauer.
Honourable Mention.

SPITZER & SÖHNE, F.—Vienna.—Hungarian Wines.
Two Highly Commended Awards.

SPITZER & SÖHNE, F.—Vienna.—Bakator.
First degree of Merit.

SPITZER & SÖHNE, F.—Vienna.—Tokay.
Commended.

TOMMASICH, Francesco—Capo d'Istria.—Morcato.
Highly Commended.

TOMMASICH, Francesco—Capo d'Istria.—Refosco.
Commended.

BELGIUM.

BREECKPOT, G. V. M.—Malines.—Elixir de Malines.
First degree of Merit.

BULCKE, V.—Ostend.—"Bitter Bulcke" Liqueur.
Commended.

CUVELIER ET FILS, J. B.—Brussels.—Curaçoa and Anisette de Hollande.
Two Highly Commended Awards.

DECLERCQ, Albert—Antwerp.—"Declercq" Elixir.
First degree of Merit.

SCHMIDT, Emile—Brussels.—Amer Belge.
First degree of Merit.

VAN DER BRUGGHEN, C.—Brussels.—Amer Léopold & Liqueur de Lokeren.
Two Highly Commended Awards.

VANDENBERGH ET CIE.—Antwerp.—Geneva.
First degree of Merit Special.

VANDERSCHRICK FRÈRES—Brussels.—Curaçoa.
Commended.

VANDERSCHRICK FRÈRES—Brussels.—Delices des Gueux.
First degree of Merit.

CAPE OF GOOD HOPE.

BÖSENBERG, S.—Cape of Good Hope.—Cape Brandy.
Highly Commended.

Report—A very fair brandy.

FIJI.

REWA PLANTATION CO.—Rewa.—White Rum, /79.
Honourable Mention.

REWA PLANTATION CO.—Rewa.—White Rum.
Commended.

REWA PLANTATION CO.—Rewa.—Coloured Rum, /79.
Highly Commended.

REWA PLANTATION CO.—Rewa.—Coloured Rum, flavoured with pine-apple and chadoc.
First degree of Merit.

Report—The whole of the exhibits very creditable.

FRANCE.

ADET SEWARD, & CO.—Bordeaux.—Cognac, /48.
Highly Commended.

Report—Very promising brandy.

ADET SEWARD, & CO.—Bordeaux.—Claret Vergniaud, /69.
Highly Commended.

ADET SEWARD, & CO.—Bordeaux.—Claret Vergniaud.
Commended.

AUDIBERT ET DELAS—Tournon.—Hermitage, /70.
Highly Commended.

AUDIBERT ET DELAS—Tournon.—White Hermitage, /69.
First degree of Merit.

Report—Very good wine, in splendid condition.

BEAUCOURT, Fortuné—Château de la Bégorce, Gironde.—Clarets.
Two Commended Awards.

BESSÈDE FILS—Marseille.—Eucalypsinthe and Anisette.
Two First Degrees of Merit.

BESSÈDE FILS—Marseille.—Menthe.
Honourable Mention.

BESSÈDE FILS—Marseille.—Curaçoa.
Highly Commended.

BIGNON, Louis—Château de la Hournique, Gironde.—Claret.
Commended.

BOCHIROL—Sarras (Ardéche).—Gastro Isthenique.
Commended.

BOCHIROL—Sarras (Ardéche).—Crême Stomachique.
First Degree of Merit Special.

BOCQUET, Léonce—Beaune (Côte d'Or).—Burgundy.
First Degree of Merit.

Report—Excellent burgundy.

BOURAN FRÈRES, ET CIE.—Bordeaux.—St. Julien and Haut Sauterne.
Two First Degrees of Merit.

Report—Sauterne in good condition and bouquet, sound body ; St. Julien in excellent condition and good body.

BURGANT, GUITARD, ET CIE.—Mauzé (Deux Sévres).—Brandy, "one star."
Highly Commended.

BRENOT-BARTHEL ET CIE., VEUVE—Dijon.—Burgundy.
Honourable Mention.

BRENOT-BARTHEL ET CIE., VEUVE—Dijon.—Chambertin.
Commended.

BRENOT-BARTHEL ET CIE., VEUVE—Dijon.—Bomanil.
Highly Commended.

BRENOT-BARTHEL ET CIE., VEUVE—Dijon.—Musigny.
First Degree of Merit.

BLANQUI FILS—Nice.—Orange Bitter.
Honourable Mention.

BLANQUI FILS—Nice.—Curaçoa de Nice.
Commended.

CHARMAY ET CIE.—Carte Blanche.
Commended.

CHARMAY ET CIE.—Carte Blanche.
Honourable Mention.

CHAUMEL—Aiguillon-Sur-Lot.—Curaçoa.
Highly Commended.

CHAUMEL—Aiguillon-Sur-Lot.—Ambroisie.
First Degree of Merit.

DARVIOT—Pommard.—Pommard and Beaune.
Two Commended Awards.

DAVERNE, Gustave—Montrouge.—Anisette.
Highly Commended.

DELIZY ET DOISTEAU FILS—Pantin (Seine).—Liqueurs.
Five First Degrees of Merit.

Report—All excellent liqueurs.

DELIZY ET DOISTEAU FILS—Pantin (Seine).—Liqueurs.
Five highly Commended Awards.

DELIZY ET DOISTEAU FILS—Pantin (Seine).—Anisette.
Commended.

DELIZY ET DOISTEAU FILS—Pantin (Seine)—Liqueurs.
Two Honourable Mentions.

DETANG ET CIE.—Beaune (Côte d'Or).—Petite Chartreuse.
Highly Commended.

DETANG ET CIE.—Beaune (Côte d'Or).—Prunelle de Bourgogne.
First Degree of Merit.

DUQUÉNEL—Clos des Cheminées près Mirabeau.—Cognac du Mainegon, '76.
Highly Commended.

DUBOIS JEUNE, ET CAGNION—Blanzac.—Brandy, "three-star," '67, and Champagne Brandy, '58.
Two First Degrees of Merit.

DUBOIS JEUNE, ET CAGNION—Blanzac.—Fine Champagne Brandy, 1809.
Highly Commended.

DITELY, Edouard—Paris.—Grenache, '74.
Highly Commended.

Report—A good sweet wine, fine bouquet and condition.

FLAMBERT, Paul.—Champagne.
First Degree of Merit.

GALLAND, NEVEU—Vienne (Isère).—Maraschino.
First degree of Merit.

IRROY, Ernest—Reims (Marne).—Champagne.
Highly Commended.

JAUBERT, François—Ponteilla, Canton De Thuir, Perpignan, Pyrénées Oriental.—Grenache, '78.
First degree of Merit.

Report—An excellent dessert wine of very fine bouquet and condition.

JAUBERT, François—Ponteilla Canton De Thuir, Perpignan, Pyrénées Oriental.—Malvoisie.
Highly Commended.
Report—A good dessert wine of fine bouquet and condition.

LACAUX FRÈRES—Limoges.—Bitter Sec.
Highly Commended.

LACAUX FRÈRES—Limoges.—Cocoa Liqueur.
Honourable Mention.

LORRAIN, J.—Varrains (Maine et Loire).—Champagne Carte d'Or, '76. Commended.

LORRAIN, J.—Varrains (Maine et Loire).—Champagne Carte Rose, '76. Highly Commended.

LORRAIN J.—Varrains (Maine et Loire).—Champagne Carte Bleue, '76. First degree of Merit.
Report—An excellent champagne, in very good condition.

LUZET—Luxeuil (Haute Saône).—Kirschwasser.
Honourable Mention.

MAUPETIT, A.—Limoges.—Maupetit Grand.
Highly Commended.

MAUPETIT, A.—Limoges.—Curaçoa Blanc.
Commended.

MAUPETIT, A.—Limoges.—Noyau and Anisette.
Two First degrees of Merit.

MEUKOW ET CIE., A. C.—Cognac-Charente.—Fine Champagne Brandies. Five First degrees of Merit.
Report—These brandies are of very good quality, and when they attain age will be very superior.

MEUKOW ET CIE., A. C.—Cognac-Charente.—Brandies.
Three Highly Commended Awards.
Report—Most promising pure white spirit.

MEUKOW ET CIE., A. C.—Cognac-Charente.—Brandy, 1874.
Commended.

MOULTON ET CIE.—Cognac-Charente.—Brandies, "Six Star."
Commended.

MOULTON ET CIE.—Cognac-Charente.—Brandy, "Two Star."
Honourable Mention.

MANUEL ET CIE.—Reims (Marne).—Royal Champagne.
Two First degrees of Merit.

OLLIVIER PÈRE ET FILS.—Libourne (Gironde).—Château Mont-labert. First degree of Merit.

OLLIVIER PÈRE ET FILS.—Libourne (Gironde).—Ile du Carney, 1875. Highly Commended.

PERRIER FILS ET CIE., J.—Châlons sur Marne.—Champagne.
Highly Commended.

PERRIER FILS ET CIE., J.—Châlons sur Marne.—Champagne Carte Blanche '65. Commended.

PERRIER FILS ET CIE., J.—Châlons sur Marne.—Bouzy Carbinet, '74. First degree of Merit.

PERRIER FILS ET CIE., J.—Châlons sur Marne.—Sillery Sec. Honourable Mention.

RÉGNIER, JULES—Dijon.—Burgundy Wines. Four Honourable Mentions.

REVILLON-CLERJAUD—Chives près Cognac.—St. Emilion, 1872. Honourable Mention.

Report—In good condition, and good bouquet.

REVILLON-CLERJAUD—Chives près Cognac.—Brandy, 1858. Commended.

ROBIN, JULES—Cognac.—Brandy. First degree of Merit.

ROEDERER-SCHERB, A.—Reims (Marne).—Champagne, 1874. Highly Commended.

ROEDERER-SCHERB, A.—Reims (Maine).—Champagnes. Three First degrees of Merit.

THOREAU ET FILS.—Saumur (Maine et Loire).—Champagnes. Two Highly Commended Awards.

Report—In very good condition.

VICHY, DE.—Ivry sur Seine.—Martréine. Commended.

VICHY, DE.—Ivry sur Seine.—Cassis and White Double Anisette. Two Highly Commended Awards.

Report—The "Cassis" is a very fine black currant Liqueur.

VICHY, DE.—Ivry sur Seine.—Double Orange Curaçoa. First degree of Merit.

YVON ET GABORIAU—Cognac-Charente.—Brandies. Three First degrees of Merit.

YVON ET GABORIAU—Cognac-Charente.—Brandies. Four Highly Commended Awards.

GERMANY.

THE Judges desire to record their opinion that the German Beers are of a superior description, and reflect great credit on the brewers and bottlers.

ACKERMANN, Junr., Louis—Berlin.—Kräuter Magen Bitter, and Magen Elixir. Two Highly Commended Awards.

ACKERMANN, Junr., Louis—Berlin.—Citron Liqueur. Commended.

ACKERMANN, Junr., Louis—Berlin.—Getreide Kümmel. Honourable Mention.

BANK FÜR SPRIT & PRODUKTENHANDEL—Berlin.—Wine Spirit. First Degree of Merit.

BAEVENROTH, C. F.—Stettin.—Lemonade, Raspberry and Cherry Syrups, Wine Liqueur. Three First Degrees of Merit.

CLASSES 635-638.—*Wines, Spirituous, Fermented, and other Drinks.*

BAEVENROTH, C. F.—Stettin.—Essence of Rum.
Honourable Mention.

BERLINER BRAUEREI GESELLSCHAFT "TIVOLI"—Berlin.—Bottled Lager Beer. Highly Commended.
Report—Very pale, sparkling amber-coloured beer, fine hop flavour, and of good quality.

CRON, Johann—Neustadt, a/H.—Deidesheimer Riesling and Gewürgtraminer Ausbruch. Two Commended Awards.

CRON, Johann—Neustadt, a/H.—Forster Ungeheuer and Forster Kirchenstück Auslese. Two Highly Commended Awards.

CRON, Johann—Neustadt, a/H.—Deidesheimer Grain.
Honourable Mention.

CRON, Johann—Neustadt, a/H.—Ruppertsberger Auslese.
First Degree of Merit.

DIETRICH & CO.—Rüdesheim, a/R.—Moselle Wines.
Commended.

DIETRICH & CO.—Rüdesheim, a/R.—Moselle Wines.
Honourable Mention.

DOMEIER & BODEN—Einbeck, Hannover.—Bottled Lager Beer.
Highly Commended.
Report—Very rich dark colour, full body, very fine quality.

DRESDENER FELSENKELLER BRAUEREI—Dresden.—(J. Groener, Berlin).—Märzen Beer. First degree of Merit.
Report—Pale sparkling beer, of amber colour, and excellent quality.

DRESDENER FELSENKELLER BRAUEREI—Dresden.—(J. Groener, Berlin).—Lager Beer. Highly Commended.
Report—Very dark, bright colour, full body, and pleasant hop flavour.

DROUVEN & CO., Jacob—Coblenz, a/R.—Stomach Liqueur.
Highly Commended.

ELSASSER SÖHNE, M.—Bruchsal in Baden.—Cherry and Plum Brandy, Bilberry Spirit. Three Honourable Mentions.

ELSASSER SÖHNE, M.—Bruchsal in Baden.—Pine Apple Punch.
Commended.

FLENSBURGER ACTIEN BRAUEREI GESSELLCHAFT—Flensburg.—Lager Beer. First degree of Merit.
Report—Rich, dark, full body, mild hop flavour, first-class quality.

FROOST, J. von—Wiesbaden (Nassau).—Wine Liqueur.
Honourable Mention.

GRUBER & REEB—Strassburg, Elsass.—Bock Ale.
First degree of Merit.
Report—Very fine amber-coloured beer, with full hop flavour.

HOCHHEIMER ACTIENGES: ZUR BEREITUNG MOUSSIRENDER WEINE (Vormals Burgeff & Co.)—Hochheim.—Sparkling Hock. Two First degrees of Merit.

HOMMEL, Charles—Rappoltsweiler, Elsass.—Hock.
Commended.

KANTOROWICZ, Hartwig—Posen und Berlin.—Litthauer Stomach Bitters. Highly Commended.

KEHRMANN, Friedrich—Coblenz.—Hock.
Highly Commended.

KELLER, Kilian—Mainz, a/R.—Rheinischer Cognac.
Honourable Mention.

KRUG, Oscar—Erfurt.—Ingber Liqueur.
Honourable Mention.

KUPFERBERG & CO., C. A.—Mainz, a/R.—Hock and Braumberger.
Two First degrees of Merit.

KÜAS & CO., Max Isar—Berlin.—Liqueur Chartreuse.
First degree of Merit.

KÜAS & CO., Max Isar — Berlin. — Benedictine and Malakhoff Liqueurs. Two Commended Awards.

LABROISSE, Carl—Neustadt, a/H.—Forster Kirchenstück Auslese.
Honourable Mention.

LABROISSE, Carl—Neustadt, a/H.—Deidesheimer Kieselberg.
First degree of Merit.

LAPPE, Th.—Neudietendorf, Thüringen.—Aromatic Stomach Bitters.
Highly Commended.

LOBENSTEIN, Carl — (Carl Bornmüller) — Arnstadt. — Aromatic Stomach Bitters. Highly Commended.

MACHOLL GEBRÜDER (UTZSCHNEIDERSCHE SPIRITUS LIQUEUR & ESSIG-FABRIK)—München.—Getreide Kümmel.
First degree of Merit.

MACHOLL GEBRÜDER (UTZSCHNEIDERSCHE SPIRITUS LIQUEUR & ESSIG-FABRIK)—München.—Mabz-Essig Spirit.
First degree of Merit Special.

MACHOLL GEBRÜDER (UTZSCHNEIDERSCHE SPIRITUS LIQUEUR & ESSIG-FABRIK)—München.—Gebreide Kümmel.
Highly Commended.

MEYER & COBLENZ—Bingen, a/R.—Steinberger Carbinet and Scharlachberger. Two Commended Awards.

MEYER & COBLENZ—Bingen, a/R.—Rhine and Moselle Wines.
Six Highly Commended Awards.

MEYER & COBLENZ—Bingen, a/R.—Rhine and Moselle Wines.
Three Honourable Mentions.

MEYER & COBLENZ—Bingen, a/R.—Schloss Johannisberger and Schloss and Vollrathser and Scharzhofberger Auslese.
Three First degrees of Merit.

MÜLLER, Andreas—Bremen.—Lager Beer.
Commended.

Report—Bright sparkling amber-coloured beer, full body.

NAUMANN, Franz—Delitzsch.—Gebreide Kümmel and Curaçoa.
Two Commended Awards.

NAUMANN, Franz—Delitzsch.—Ingber Liqueur.
Commended.

OPPMANN, J.—Würzburg in Bayern.—Sparkling Wines.
Two First Degrees of Merit.

OPPMANN, J.—Würzburg in Bayern.—Sparkling Wines.
Highly Commended.

OPPMANN, J.—Würzburg in Bayern.—Sparkling Wines.
Commended.

POSENERSPRIT-ACTIENGESELLSCHAFT, Posen.—Refined Wine Spirit. Commended.

RAUTERT, August—Mainz, a/R.—Lager Beer.
First degree of Merit.

Report—Fine sparkling amber-coloured beer, well hopped, and very fair body.

SILIGMÜLLER, F. A.—Würzburg in Bayern.—Sparkling "Franken-weine." First degree of Merit.

SILIGMÜLLER, F. A.—Würzburg in Bayern.—Sparkling "Franken-weine." Highly Commended.

SÖHNLEIN & CO.—Schierstein RHEINGAUER SCHAUMWEIN-FABRIK.—Schloss Johannisberger "Rheingold."
First degree of Merit.

STENGEL, William—Leipzig.—Rectified Spirits, 68 per cent.
Honourable Mention.

TECKER-GAYEN, Jan—Altona.—Aromatic Schiedam Schnapps and Geneva. Two First degrees of Merit.

UNDERBERG-ALBRECHT, H.—Rheinberg, a/N.R.—Boonekamp of Maag-bitter. First degree of Merit.

Report—An excellent bitter of fine aroma and flavour.

WINKELHAUSEN, H. A. — Stargardt (West Preussen). —West-pressischer Kräuter Bitter. Commended.

WERNER, Hermann—Cottbus.—Wine Spirits 96 per cent., and Old Corn Brandy. Two Highly Commended Awards.

GREAT BRITAIN AND IRELAND.

AITKEN & CO., J.—Falkirk.—British Beer.
First degree of Merit.

Report—Bright sparkling amber, full body, fine hop flavour.

ANGLO-BAVARIAN BREWERY CO.—Shepton Mallet. — Beer (Bottled by G. Smith). First degree of Merit.

Report—Exceedingly pale, sparkling amber, light body.

CLASSES 635–638.—*Wines, Spirituous, Fermented, and other Drinks.*

BERNARD & CO.—Leith.—Ginger Wine.
First Degree of Merit.

Report—A delicious cordial.

BERNARD & CO.—Leith.—"Encore" Whiskey.
Highly Commended.

BERNARD & CO.—Leith.—Old Tom.
Highly Commended.

BERNARD & CO.—Leith.—Lime-juice Cordial.
Commended.

BEWLEY & DRAPER—Dublin.—Soda-water.
First degree of Merit.

BEWLEY & DRAPER—Dublin.—Kali.
Highly Commended.

CANTRELL & COCHRANE—Dublin and Belfast.—Ginger-ale.
First degree of Merit.

CANTRELL & COCHRANE—Dublin and Belfast.—Lemonade.
Highly Commended.

CANTRELL & COCHRANE—Dublin and Belfast.—Kali.
Commended.

CORK DISTILLERY CO.—Cork.—Old Irish Whiskey.
First Degree of Merit.

CORK DISTILLERY CO.—Cork.—Cork Whiskey (bulk).
Highly Commended.

CORRY & CO., William—Belfast.—Lithia Water.
Highly Commended.

CORRY & CO., William—Belfast.—Aerated Sarsaparilla.
Highly Commended.

CORRY & CO., William—Belfast.—Ginger-ale.
Highly Commended.

CORRY & CO., William—Belfast.—Cromac Seltzer Water.
Commended.

DUNVILLE & CO.—Belfast.—Old Irish Whiskey.
Highly Commended.

FORD & SONS, W.—Leith.—"Collie Blend" Whiskey (bulk).
First Degree of Merit.

FOSTER & SONS, M. B.—London.—Bottled Stout (Guinness').
Highly Commended.

Report—Good colour, full body, fair hop bitter, and good quality.

GREENLEES BROTHERS—London.—"Lorne" Highland Whiskey (bulk).
Commended.

HOPKINS & CO., John—London.—Old Scotch Whiskey.
Highly Commended.

INNES & GRIEVE—Edinburgh.—Highland Malt Whiskey C.
First Degree of Merit.

INNES & GRIEVE—Edinburgh.—Highland Malt Whiskey D.
First Degree of Merit Special.

MARRIAN & CO., Thomas—Sheffield.—British Beer.
Highly Commended.

Report—Bright sparkling amber, very full body, fine hop flavour, and first-class quality.

MAYO, Patrick—Dublin.—Royal Irish Whiskey.
Highly Commended.

MOLINE & CO., Sparks—London.—Bottled Stout (Guinness').
First degree of Merit Special.

Report—Good colour, full body, good hop aroma.

PAINE & CO.—St. Neot's, Huntingdonshire.—Bottled Pale Ale.
Highly Commended.

Report—Very pale sparkling amber, good hop flavour, fair body, and excellent quality.

ROSE & CO. L.—London and Leith.—Lime-juice cordial.
Commended.

ROSE & CO., L.—London and Leith.—Rosina Cordial.
Highly Commended.

SIEGERT & SONS, Dr. J. G. B.—London.—Angostura Bitters.
First degree of Merit.

TECKER GAYEN, Jan—London.—Geneva.
First degree of Merit.

TECKER GAYEN, Jan—London.—Schiedam Schnapps.
First degree of Merit.

THOMSON & CO., A. G.—Glasgow.—Royal Blend Whiskey (yellow capsule).
Highly Commended.

THOMSON & CO., A. G.—Glasgow.—Royal Blend Whiskey (white capsule).
Highly Commended.

THOMSON & CO., D. J.—Leith.—Raspberry Balm.
First Degree of Merit.

THOMSON & CO., D. J.—Leith.—Ginger Wine.
First Degree of Merit.

THOMSON & CO., D. J.—Leith.—Lime-juice Cordial.
Commended.

VAUGHAN-JONES, E.—London.—Old Jamaica Rum.
First Degree of Merit Special.

Report—Excellent quality.

VAUGHAN-JONES, E.—London.—Cherry Brandy.
First Degree of Merit.

VAUGHAN-JONES, E.—London.—Old Tom.
First Degree of Merit.

VAUGHAN-JONES, E.—London.—Campbelltown Malt Whiskey.
Highly Commended.

WALKER & SONS, JOHN—Kilmarnock, N.B.—Old Highland Whiskey (bulk).
First degree of Merit Special.

WALKER & SONS, JOHN—Kilmarnock, N.B.—Old Highland Whiskey (flask).
Commended.

WARREN, G. J.—London.—Bottled Stout (Guinness').
First degree of Merit Special.

Report—Well bottled; excellent quality.

ITALY.

ARRIGHETTI, Marco—Florence.—Vino Rosso.
Honourable Mention.

ARRIGHETTI, Marco—Florence.—Vino Sancto '69.
Highly Commended.

BERGIA, Conjugi—Turin.—Vermouth.
Commended.

BRANCA FRATELLI—Milan.—Fernet Branca, and Crema Banana.
Two First degrees of Merit.

BRANCA FRATELLI—Milan.—Elixir Coca.
Highly Commended.

COMPAGNIA VINICOLA SICILIANA—Palermo.—Marsala des Princes.
First degree of Merit.

COMPAGNIA VINICOLA SICILIANA—Palermo.—Muscat de Syracuse.
Highly Commended.

GIGLIOLI, A.—Leghorn.—Vermouth.
Honourable Mention.

PIEMONTINI, Santi—Florence.—Vino Santo.
Commended.

ROSSI, Carlo—Verona.—Quinto de Valpantena, Red.
Commended.

SOCIETÀ ENOLOGICA—Verona.—Vino Rosso.
Honourable Mention.

JAPAN.

JAPANESE COMMISSION.—Liqueur.
Highly Commended.

Report—This highly scented production could not justly be compared with any other exhibit, but the Judges award as above.

NETHERLANDS.

BOLS, Erven Lucas—Amsterdam.—Liqueurs.
Five Highly Commended Awards.

BOLS, Erven Lucas—Amsterdam.—Liqueurs.
Two Commended Awards.

BOLS, Erven Lucas—Amsterdam.—Curaçoa and Anisette.
Two first degrees of Merit Special.

BOLS, Erven Lucas—Amsterdam.—Russische Kummel.
First degree of Merit.

BOLS, Erven Lucas—Amsterdam.—Anisette and Stoughton Bitters.
Two first degrees of Merit.

FOCKINK, Wynand—Amsterdam.—Liqueurs.
Two Highly Commended Awards.

FOCKINK, Wynand—Amsterdam.—Liqueurs.
Two first degrees of Merit.

FOCKINK, Wynand—Amsterdam.—Liqueurs.
Three Commended Awards.

FOCKINK, Wynand—Amsterdam.—Liqueurs.
Two Honourable Mentions.

GIST & SPIRITUS FABRICK DE NEDERLANDSCHE—Delft.—Spirits of Wine, from Australian maize. First degree of Merit Special.

HENKES, J. H.—Delfshaven, near Rotterdam.—Geneva.
Highly Commended.

KIDERLEN, E.—Delfshaven, near Rotterdam.—Geneva.
Highly Commended.

RADEMAKERS & CO., P.—Delfshaven, near Rotterdam.—Double-distilled Gin. First degree of Merit Special.

VAN ZUYLECKOM, LEVELT, & CO.—Amsterdam.—Liqueurs.
Three Commended Awards.

VAN ZUYLECKOM, LEVELT, & CO.—Amsterdam.—Liqueurs and Bitters. Two Honourable Mentions.

VAN ZUYLECKOM, LEVELT, & CO.—Amsterdam.—Liqueurs and Bitters. Four Highly Commended Awards.

NEW SOUTH WALES.

BAMBACH, Anton—Eelah, Hunter River.—Madeira, 1876 (full).
First degree of Merit.

BAMBACH, Anton—Eelah, Hunter River.—Madeira, 1877 (full).
Highly Commended.

BAMBACH, Anton—Eelah, Hunter River.—Reisling, 1875 (full).
Commended.

Report—An excellent cheap dinner wine.

BARKER, Mrs. Katherine H.—Bringelly.—Verdeilho, 1872.
Highly Commended.

BARKER, Mrs. Katherine H.—Bringelly.—Verdeilho, 1874.
Commended.

BARKER, Mrs. Katherine H.—Bringelly.—Hermitage, 1873 (full).
Honourable Mention.

BARRETT & CO.—Sydney.—Cloves.
Highly Commended.

BARRETT & CO.—Sydney.—Peppermint.
Commended.

BARRETT & CO.—Sydney.—Raspberry Vinegar.
Commended.

BARRETT & CO.—Sydney.—Lemonade.
First degree of Merit.

BARRETT & CO.—Sydney.—Gingerbeer.
First degree of Merit.

BARRETT & CO.—Sydney.—Aerated Waters.
First degree of Merit.

BARRETT & CO.—Sydney.—Tonic Water.
Highly Commended.

BARRETT & CO.—Sydney.—Soda Water.
Highly Commended.

BEARD, G.—Sydney.—Lithia Water.
Highly Commended.

BEARD, G.—Sydney.—Ginger Brandy.
Highly Commended.

BEARD, G.—Sydney.—Lime Juice Cordial.
Highly Commended.

BEARD, G.—Sydney.—Rum Shrub.
Highly Commended.

BEARD, G.—Sydney.—Sarsaparilla.
Highly Commended.

BEARD, G.—Sydney.—Alpine Bitters.
Commended.

BEARD, G.—Sydney.—Noyeau.
Commended.

BEARD, G.—Sydney.—Orange Quinine Wine.
Commended.

BEARD, G.—Sydney.—Orange Bitters.
Commended.

BEARD, G.—Sydney.—Ginger Wine.
Honourable Mention.

BEARD, G.—Sydney.—Lemon Syrup.
Honourable Mention.

BEARD, G.—Sydney.—Peach Wine.
Honourable Mention.

BEARD, G.—Sydney.—Potass Water.
Highly Commended.

BEARD, G.—Sydney.—Soda Water.
Highly Commended.

BEARD, G.—Sydney.—Tonic Water.
Honourable Mention.

BOUFFIER, Frank J.—Sydney.—Pineau, 1877 (dry).
First degree of Merit.

BOUFFIER, Frank J.—Sydney.—Hermitage, 1877 (dry).
Highly Commended.

BOUFFIER, Frank J.—Sydney.—Hermitage, 1876 (dry).
Commended.

BOYDELL, R. B.—Gresford.—Verdeilho, 1877 (full).
First degree of Merit.

BRECHT, Carl—Denman.—Pineau, 1877 (light).
First degree of Merit.

BRECHT Carl—Denman.—Hermitage, 1877 (full).
Highly Commended.

BRECHT, Carl—Denman.—Hermitage, 1877 (full).
Commended.

BRECHT, Carl—Denman.—Madeira, 1877 (full).
Commended.

BRECHT, Carl—Denman.—Reisling, 1877 (full).
Commended.

BRECHT, Carl—Denman.—Reisling and Muscat, 1876.
Commended.

BUCKHOLTZ, F., Jun.—Mudgee.—Verdeilho, 1876 (sweet, full).
Highly Commended,

BUCKHOLTZ, F., Jun.—Mudgee.—Muscatel, 1872 (full, sweet).
First degree of Merit.

BURROWS & GLEESON—Waverley.—Strong Ale.
First degree of Merit.

Report—Dark amber, full body, good hop flavour, excellent quality.

BURROWS & GLEESON—Waverley.—Bulk Porter.
First degree of Merit.

Report—Bright, clear, full flavour, full body. The best of the samples shown.

CARMICHAEL, G. T. & J. B.—Porphyry, Seaham.—Reisling, 1869 (dry).
First degree of Merit.

CARMICHAEL, G. T. & J. B.—Porphyry, Seaham.—Reisling, 1876 (dry).
First degree of Merit.

CARMICHAEL, G. T. & J. B.—Porphyry, Seaham.—Reisling and Verdeilho, 1877.
Highly Commended.

CARMICHAEL, G. T. & J. B.—Porphyry, Seaham.—Reisling, 1876 (dry).
Highly Commended.

CARMICHAEL, G. T. & J. B.—Porphyry, Seaham.—Reisling, 1872 (dry).
Highly Commended.

CARMICHAEL, G. T. & J. B.—Porphyry, Seaham.—Verdeilho. 1875 (dry.)
Highly Commended.

CHRISTIAN, W. M.—Hinton.—Pale Brandy.
Commended.

Report—A very fair sample.

CHRISTIAN, W. M.—Hinton.—Sherry (full).
Commended.

CHRISTIAN, W. M.—Hinton.—Hermitage, Reisling, and Pineau.
First degree of Merit.

Report—A good table wine.

CHRISTIAN, W. M.—Hinton.—Port (full).
Highly Commended.

CHRISTIAN, M. S.—Hinton.—Sherry (full).
Commended.

CHRISTIAN, M. S.—Hinton.—Port (sweet).
Highly Commended.

COLLINS & ROACH—Sydney.—Lemon Syrup.
Highly Commended.

COLLINS & ROACH—Sydney.—Ginger Wine.
Highly Commended.

COLLINS & ROACH—Sydney.—Soda Water.
First degree of Merit.

COLONIAL SUGAR REFINING CO.—Sydney.—Dark Rum.
Honourable Mention.

COOPER, Theophilus—Anvil Creek.—Hermitage, 1876 (full).
Honourable Mention.

DAVIES & CO., Arthur E.—Lochinvar.—Reisling, 1877 (full).
First degree of Merit.

DAVIES & CO., Arthur E.—Lochinvar.—Reisling, 1877 (full).
Commended.

Report—An excellent cheap dinner wine.

DAVIES & CO., Arthur E.—Lochinvar.—Hermitage, 1876 (full).
Highly Commended.

DAVIES & CO., Arthur E.—Lochinvar.—Tolle Blanc, 1876 (full).
Highly Commended.

DAVIES & CO., Arthur E.—Lochinvar.—Shiraz, 1877 (dry).
Highly Commended.

DAVIES & CO., Arthur E.—Lochinvar.—Tokay, 1877 (full).
Highly Commended.

DAVIES & CO., Arthur E.—Lochinvar.—Verdot, 1876 (full).
Commended.

DAVIES & CO., Arthur E.—Lochinvar.—Verdot, 1879 (full sweet).
Commended.

DOYLE, James F.—Lochinvar.—Lambruscat, 1876.
First degree of Merit.

DOYLE, James F.—Lochinvar,—Burgundy, 1875 (dry).
Highly Commended.

DOYLE, J. F.—Lochinvar.—Shiraz, 1876 (light).
Highly Commended.

DOYLE, J. F.—Lochinvar.—Verdeilho and Shiraz.
Highly Commended.

DOYLE, J. F.—Lochinvar.—Verdeilho, 1877 (light).
Commended.

DOYLE, James F.—Lochinvar.—Hermitage, 1876 (dry).
Commended.

ELLIOTT BROS.—Sydney.—Wine Spirit.
First degree of Merit.

FALLON, J. T.—Albury.—Carbinet, 1871 (dry).
First degree of Merit.

FALLON, J. T.—Albury.—Carbinet, 1868 (dry).
First degree of Merit.

FALLON, J. T.—Albury.—No. 1 Champagne, 1874 (dry).
First degree of Merit.

Report—The manufacture and get up of this wine are very creditable, but the wine used as a basis is inferior.

FALLON, J. T.—Albury.—Hermitage, 1872 (dry).
First degree of Merit.

FALLON, J. T.—Albury.—Muscatel, 1868.
First degree of Merit.

FALLON, J. T.—Albury.—Reisling, 1875 (dry).
First degree of Merit.

FALLON, J. T.—Albury.—Shiraz and Carbinet.
First degree of Merit.

FALLON, J. T.—Albury.—Shiraz, 1872 (dry and full).
First degree of Merit.

FALLON, J. T.—Albury.—Tokay, 1872 (light and dry).
First degree of Merit.

FALLON, J. T.—Albury.—Verdeilho, 1872 (light).
First degree of Merit.

FALLON, J. T.—Albury.—Carbinet, 1872 (medium, dry).
Highly Commended.

FALLON, J. T.—Albury.—Shiraz and Carbinet (full).
Highly Commended.

FENN, John Joseph—Port Macquarie.—Isabella, 1878.
Commended.

FITZGERALD & PRENDERGAST—Sydney.—Running Ale.
First degree of Merit.

Report—Amber colour, rather cloudy, full body, very fine hop flavour, excellent quality.

FORSAITH, Mrs. Elizabeth M.—Parramatta.—Rich Orange Wine, 1879.
First degree of Merit.

FRANKLAND, G. J.—Paterson.—Hermitage, 1876 (full).
Highly Commended.

GLENNIE, John—Gresford.—Verdeilho, 1875 (light).
First degree of Merit.

GLENNIE, John—Gresford.—Verdeilho, 1876 and 1877 (full).
Highly Commended.

GLENNIE, John—Gresford.—Verdeilho, 1876 (medium).
First degree of Merit.

GLENNIE, John—Gresford.—Hermitage, 1878.
Commended.

GOW, John—Mulgrave.—Tokay, 1877 (dry).
Highly Commended.

GREER, E.—Mulgrave.—Malaga, 1875 (sweet).
First degree of Merit.

GREER, E.—Albury.—Carbinet, 1874 (full).
Highly Commended.

GREER, E.—Albury.—Shiraz, 1875 (full).
Highly Commended.

GREER, E.—Albury.—Burgundy, 1874 (full).
Commended.

HARBOTTLE, BIDDULPH, & ALSOP—Sydney.—Pineau, Shiraz, and Grenache.
First degree of Merit

Report—A good table wine.

HARBOTTLE, BIDDULPH, & ALSOP—Sydney.—Verdeilho, 1877 (full). First degree of Merit.

HARBOTTLE, BIDDULPH, & ALSOP—Sydney.—Verdeilho and White Shiraz, 1876. Highly Commended.

HARBOTTLE, BIDDULPH, & ALSOP—Sydney.—Muscatel, 1875 (sweet). Highly Commended.

HARTMANN, Philip—Blandford.—Madeira, 1875 (dry). Highly Commended.

HENFREY & CO.—Sydney.—Lemonade. Highly Commended.

HENFREY & CO.—Sydney.—Tonic Water. Commended.

HENFREY & CO.—Sydney.—Sodawater. Honourable Mention.

HENFREY & CO.—Sydney.—Rich Orange Wine (Tonic). Highly Commended.

HENFREY & CO.—Sydney.—Noyeau. Highly Commended.

HENFREY & CO.—Sydney.—Rum Shrub. Highly Commended.

HOLMES, J. B.—Hunter River.—Hermitage (sweet). Highly Commended.

HUME & PEGRUM—Sydney.—Rich Orange Wine (syrup). First degree of Merit.

HUME & PEGRUM—Sydney.—Rich Orange Wine. First degree of Merit.

HUME & PEGRUM—Sydney.—Cordial Limes. Highly Commended.

HUME & PEGRUM—Sydney.—"Dr. Conquest" Bitter. Highly Commended.

HUME & PEGRUM—Sydney.—Jargonelle Pear Syrup. Highly Commended.

HUME & PEGRUM—Sydney.—Orange Bitter. Highly Commended.

HUME & PEGRUM—Sydney.—Pine Apple Syrup. Highly Commended.

HUME & PEGRUM—Sydney.—Cloves. Commended.

HUME & PEGRUM—Sydney.—Rum Punch. Commended.

HUME & PEGRUM—Sydney.—Sarsaparilla. Commended.

HUME & PEGRUM—Sydney.—"Sensation" Bitter. Commended.

HUME & PEGRUM—Sydney.—Aromatic Tonic. Honourable Mention.

HUME & PEGRUM—Sydney.—Ginger Brandy. Honourable Mention.

HUME & PEGRUM—Sydney.—Peach Wine.
Honourable Mention.

HUME & PEGRUM—Sydney.—"Stoughton" Bitters.
Honourable Mention.

HUME & PEGRUM—Sydney.—Cordials and Ærated Waters.
Four first Degrees of Merit, five Highly Commended, four Commended, and four Honourable Mention Awards.

JACK, David—Inverell.—Madeira, Pineau, and Reisling.
Highly Commended.

Report—Madeira, fair.

JONES, James—Sydney.—Madeira, 1856 (dry and full).
First degree of Merit.

JONES, James—Sydney.—Foreign Wines, matured in the Colony.
Honourable Mention.

KELMAN, James—Branxton.—Blanquette, 1873.
First degree of Merit.

KELMAN, James—Branxton.—Verdot, 1874.
First degree of Merit.

KELMAN, James—Branxton.—Shiraz and Blanquette.
First degree of Merit.

KELMAN, James—Branxton.—Verdeilho, 1878 (dry).
First degree of Merit.

KELMAN, James—Branxton.—Burgundy, 1876 (dry).
First degree of Merit.

KELMAN, James—Branxton.—Verdeilho, 1869 (light and dry).
First degree of Merit.

KELMAN, James—Branxton.—Tokay, 1878 (dry).
First degree of Merit.

KELMAN, James—Branxton.—Reisling, 1877 (dry).
First degree of Merit.

KELMAN, James—Branxton.—Pineau and White Hermitage.
First degree of Merit.

KELMAN, James—Branxton.—Pineau and White Hermitage, 1870.
First degree of Merit.

KELMAN, James—Branxton.—Hermitage, 1876 (dry).
First degree of Merit.

KELMAN, James—Branxton.—Hermitage, 1874–6–7 (dry).
First degree of Merit.

KELMAN, James—Branxton.—Hermitage, 1869 (dry).
First degree of Merit.

KELMAN, James—Branxton.—Verdeilho, and White Hermitage, 1877.
Highly Commended.

KELMAN, James—Branxton.—Verdeilho, 1875 (dry).
Highly Commended.

KELMAN, James—Branxton.—Shiraz and Reisling.
Highly Commended.

KELMAN, James—Branxton.—Shiraz and Pineau.
Highly Commended.

KELMAN, James—Branxton.—Reisling, 1876 (dry).
Highly Commended.

KELMAN, James—Branxton.—Verdeilho, 1876 (dry).
Highly Commended.

KELMAN, James—Branxton.—Verdeilho and Reisling.
Highly Commended.

KELMAN, James—Branxton.—Pineau and Verdeilho.
Highly Commended.

KELMAN, James—Branxton.—Hermitage, 1875 (dry).
Highly Commended.

KELMAN, James—Branxton.—Hermitage, 1876 (dry).
Highly Commended.

KELMAN, James—Branxton.—Hermitage, 1874 and 1876 (dry).
Highly Commended.

KELMAN, James—Branxton.—Hermitage, 1877 (dry).
Highly Commended.

KELMAN, James—Branxton.—Hermitage, 1877 (dry).
Highly Commended.

KELMAN, James—Branxton.—Shiraz and Blanquette.
Commended.

KELMAN, James—Branxton.—Verdeilho and Pineau.
Commended.

KELMAN, James—Branxton.—Verdeilho, 1875 (dry).
Commended.

KELMAN, James—Branxton.—Hermitage and Reisling, 1875.
Commended.

KELMAN, James—Branxton.—White Hermitage and Reisling, 1877.
Commended.

KELMAN, James—Branxton.—Hermitage, 1869 (dry).
Honourable Mention.

KELMAN, James—Branxton.—Shiraz, Reisling, and White Hermitage, 1876.
Honourable Mention.

LINDEMAN, H. J.—Cawarra, Paterson.—Burgundy, 1875 (full).
First degree of Merit.

LINDEMAN, H. J.—Cawarra, Paterson.—Cawarra Claret, 1875 (dry).
Highly Commended.

LINDEMAN, H. J.—Cawarra, Paterson.—Lachrymæ Christi, 1874 (sweet).
Highly Commended.

LINDEMAN, H. J.—Cawarra, Paterson.—Muscatel, 1874 (full).
Highly Commended.

LODER, Andrew—Willow Tree.—Hermitage, 1873 (dry).
Commended.

LODER, Andrew—Willow Tree.—Hermitage, 1877 (full).
Honourable Mention.

MACARTHUR, J. & W.—Camden Park.—Muscatel, 1877 (sweet).
First degree of Merit.

MACARTHUR, J. & W.—Camden Park, Camden.—Reisling, 1867 (dry).
First degree of Merit.

MACARTHUR, J. & W.—Camden Park, Camden.—Muscatel, 1852, 1853 (sweet).
First degree of Merit.

MACARTHUR, J. & W.—Camden Park, Camden.—Muscatel, 1855 (sweet). First degree of Merit.

MACARTHUR, J. & W.—Camden Park, Camden.—Muscatel, 1867 (sweet). Highly Commended.

MACARTHUR, J. & W.—Camden Park, Camden.—Reisling. Highly Commended.

MACARTHUR, J. & W.—Camden Park, Camden.—Muscatel, 1876 (sweet). Highly Commended.

MACARTHUR, J. & W.—Camden Park, Camden.—Reisling, 1871 (dry). Commended.

M'KAY, M.D., Charles—Rooty Hill.—Burgundy, 1876 (dry). Highly Commended.

M'KAY, M.D., Charles—Rooty Hill.—Lambruscat, 1876. Commended.

M'KAY, M.D., Charles—Rooty Hill.—Hermitage, 1877 (dry). Honourable Mention.

MARSHALL, Joseph—Sydney.—Pale Ale. First degree of Merit Special.

MARSHALL, Joseph—Paddington.—Bottled strong Ale. First degree of Merit.

Report—Exceedingly pale sparkling amber, full body, mild hop aroma; particularly recommended.

MARSHALL, Joseph—Paddington.—Bottled Stout. First degree of Merit.

Report—Very full body, well up, and of excellent flavour and splendid condition.

MARSHALL, Joseph—Paddington.—Running Ale. Highly Commended.

Report—Light pale amber, cloudy, mild, bitter, and nice flavour.

Special Recommendation: In accordance with the decision of the Commission that a gold medal be awarded for the best pale ale brewed in the Colony, we unanimously recommend that this be given to Joseph Marshall for his exhibit of pale stock ale.

MARSHALL, Joseph—Paddington.—Stock Ale. First degree of Merit Special.

Report—Pale, sparkling, full hop flavour, sound, and of good keeping qualities.

MARSHALL, Joseph—Paddington.—Stock Ale. (Second sample.) Highly Commended.

Report—Very pale, sparkling, full flavour.

MEYER, S. A.—Corowa.—Shiraz, 1877 (sweet). Highly Commended.

MEYER, S. A.—Corowa.—Carbinet, 1877 (sweet). Commended.

MEYER, S. A.—Corowa.—Reisling, 1877 (sweet). Commended.

MILNE & CO.—West Maitland.—Mild Ale.
First degree of Merit.
Report—Amber colour, good hop flavour, clear good body.

MUNRO, Alexander—Singleton.—Hermitage. 1877 (dry).
First degree of Merit.

MUNRO, Alexander—Singleton.—Hock, 1875 (dry).
First degree of Merit.

MUNRO, Alexander—Singleton.—Pineau, 1878 (full).
First degree of Merit.

MUNRO, Alexander—Singleton.—Verdot, 1876 (dry).
First degree of Merit.

MUNRO, Alexander—Singleton.—Claret, 1876 (dry).
First degree of Merit.

MUNRO, Alexander—Singleton.—Verdeilho, 1877 (full).
First degree of Merit.

MUNRO, Alexander—Singleton.—Verdeilho, 1878.
First degree of Merit.

MUNRO, Alexander—Singleton.—Reisling, 1878 (full).
Highly Commended.

MUNRO, Alexander—Singleton.—Reisling, 1878 (full).
Highly Commended.

MUNRO, Alexander—Singleton.—Lambruscat, 1878.
Highly Commended.

MUNRO, Alexander—Singleton.—Pineau, 1877 (dry).
Highly Commended.

MUNRO, Alexander—Singleton.—Port, 1876 (sweet).
Highly Commended.

MUNRO, Alexander—Singleton.—Hermitage, 1876 (dry).
Highly Commended.

MUNRO, Alexander—Singleton.—Hermitage, 1877 (full).
Highly Commended.

MUNRO, Alexander—Singleton.—Reisling (sweet).
Honourable Mention.

MUNRO, Alexander—Singleton.—Verdot, 1877 (sweet).
Commended.

OGILVIE, Hon. E. D.—Yulgilbar, Grafton.—Yulgilbar, 1875 (dry).
First degree of Merit.
Report—Made from the Madeira grape.

OGILVIE, Hon. E. D.—Yulgilbar, Grafton.—Yulgilbar, 1875 (dry).
First degree of Merit.
Report—Shepherd's Reisling grape predominates in this wine.

PRENDERGAST, WOOD, & CO.—Newcastle.—Stock Ale.
Commended.
Report—Pale amber, full flavour, bright, sound.

STARKEY, John—Sydney.—Cordials and Ærated Waters.
Two first degrees of Merit, one Highly Commended, and two Commended Awards.

STARKEY, John—Sydney.—Lime Juice Cordial.
First degree of Merit Special.

Report—Real Lime Juice.

STARKEY, John—Sydney.—Ginger Brandy.
First degree of Merit.

STARKEY, John—Sydney.—Peppermint.
Highly Commended.

STARKEY, John—Sydney.—Lemon Syrup.
Commended.

STARKEY, John—Sydney.—Sarsaparilla.
Commended.

STARKEY, John—Sydney.—Quinine Champagne (still).
Honourable Mention.

STARKEY, John—Sydney.—Orange Bitter.
Honourable Mention.

STARKEY, John—Sydney.—Ginger Wine.
Honourable Mention.

STEPHEN, G. H. & CO.—Sydney.—Hock, 1875 (light and dry).
First degree of Merit.

Report—A fine Hock.

STEPHEN & CO., G. H.—Sydney.—Verdeilho, 1874 (Sweet, full).
First degree of Merit.

STEPHEN & CO., G. H.—Sydney.—Claret, 1875 (light and dry).
Highly Commended.

STEPHEN & CO., G. H.—Sydney.—Muscat, 1875 (sweet).
Highly Commended.

STEPHEN & CO., G. H.—Sydney.—Malbec, 1879 (dry).
Highly Commended.

Report—A very promising wine.

STEPHEN & CO., G. H.—Sydney.—Reisling, 1876 (full and sweet).
Highly Commended.

STEPHEN & CO., G. H.—Sydney.—Reisling, 1878 (sweet).
Commended.

TAYLER & CO., W.—Sydney.—Sarsaparilla and Quinetum Wine.
First Degree of Merit.

TERRIER, Philibert—Lochinvar.—Maderia, 1875 (light).
First degree of Merit.

TERRIER, Philibert—Lochinvar.—Vin de Liqueur (full).
Highly Commended.

TERRIER, Philibert—Lochinvar.—Lambruscat, 1875 (light).
Highly Commended.

TERRIER, Philibert—Lochinvar.—Lambruscat, 1876 (full).
Commended.

TERRIER, Philibert—Lochinvar.—Claret, 1872, 1875 (light).
Commended.

TERRIER, Philibert—Lochinvar.—Hermitage (light).
Commended.

TOOHEY, J. T. & J.—Sydney.—Running Porter.
First degree of Merit.

Report—Nice brown colour, full flavour, well hopped and clear.

TOOHEY, J. T. & J.—Sydney.—Running Ale.

Highly Commended.

Report—Sparkling amber, full body, fine hop flavour.

TOOHEY, J. T. & J.—Sydney.—Strong Pale Ale, Bottled.

Highly Commended.

Report—Dark amber, very full body, fair flavour.

TOOTH & CO.—Sydney.—Stock Ale.

Commended.

Report—Pale amber ale, very good flavour, slightly casky, but for which defect the exhibit would have been placed in a better position.

WATSON & YOUNG—Albury.—Cordials and Ærated Waters.

Two Highly Commended, one Commended, and one Honourable Mention Awards.

WILKINSON, J. A.—Sydney.—Shiraz, 1874 (dry, medium).

Highly Commended.

WILKINSON, J. A.—Sydney.—Shiraz, 1876 (dry).

Highly Commended.

WILKINSON, J. A.—Sydney.—Hermitage, 1879 (dry and full).

Commended.

WILKINSON, J. A.—Sydney.—Verdeilho, 1878 (dry, full).

Honourable Mention.

Report—Very promising young wine.

WILKINSON, J. A.—Sydney.—Verdeilho, 1879 (dry, full).

Honourable Mention.

Report—Very promising young wine.

WYNDHAM, John—Branxton.—For Collective Exhibit of Wines.

First degree of Merit Special.

WYNDHAM, John—Branxton.—Reisling, 1879 (dry).

First degree of Merit.

Report—Admirable wine.

WYNDHAM, John—Branxton.—Reisling, 1879 (dry and full).

First degree of Merit.

Report—Admirable wine.

WYNDHAM, John—Branxton.—Reisling, 1872 (dry and light.)

First degree of Merit.

WYNDHAM, John—Branxton.—Reisling, 1877 (dry and full).

First degree of Merit.

Report—Admirable wine.

WYNDHAM, John—Branxton.—Burgundy, 1876 (dry).

First degree of Merit.

WYNDHAM, John—Branxton.—Madeira, 1877 (dry and full).

First degree of Merit Special.

WYNDHAM, John—Branxton.—Pedro Ximenes, 1879 (dry).

First degree of Merit.

WYNDHAM, John—Branxton.—White Shiraz and Pedro Ximenes.

First degree of Merit.

CLASSES 635-638.—*Wines, Spirituous, Fermented, and other Drinks.*

WYNDHAM, John—Branxton.—Shiraz, 1876, 1878 (dry and light).
First degree of Merit.

WYNDHAM, John—Branxton.—Burgundy, 1877 (dry).
First degree of Merit.

WYNDHAM, John—Branxton.—Verdot, 1876 (light and dry).
First degree of Merit.

WYNDHAM, John—Branxton.—Verdot, 1876 (dry and rich).
First degree of Merit.

WYNDHAM, John—Branxton.—Hermitage, 1879 (dry and light).
First degree of Merit.

Report—A most remarkable wine, considering the price at which it is quoted.

WYNDHAM, John—Branxton.—Pineau, 1877 (dry and full).
Highly Commended.

WYNDHAM, John—Branxton.—Pineau, 1877 (full).
Highly Commended.

WYNDHAM, John—Branxton.—Hermitage, 1877 (dry and full).
Highly Commended.

WYNDHAM, John—Branxton.—Hermitage, 1878 (dry and rich).
Highly Commended.

WYNDHAM, John—Branxton.—Madeira, 1876 (dry and full).
Highly Commended.

WYNDHAM, John—Branxton.—Madeira, 1878 (dry and full).
Highly Commended.

WYNDHAM, John—Branxton.—White Pineau and Shiraz, 1877.
Highly Commended.

WYNDHAM, John—Branxton.—White Pineau and Shiraz.
Highly Commended.

WYNDHAM, John—Branxton.—Shiraz, 1872 (dry and light).
Highly Commended.

WYNDHAM, John—Branxton.—Pineau, 1872 (dry and light).
Highly Commended.

WYNDHAM, John—Branxton.—Reisling, 1876 (dry and light).
Highly Commended.

WYNDHAM, John—Branxton.—Verdot and Black Spanish.
Highly Commended.

WYNDHAM, John—Branxton.—Malbec, 1877 (dry and rich).
Highly Commended.

WYNDHAM, John—Branxton.—Burgundy, 1869 (dry).
Highly Commended.

Report—A remarkable wine, taking into consideration the low price quoted.

WYNDHAM, John—Branxton.—Burgundy, 1878 (dry).
Highly Commended.

WYNDHAM, John—Branxton.—Verdot, 1865 (dry)
Highly Commended.

WYNDHAM, John—Branxton.—Verdot, 1879 (dry and light.)
Highly Commended.

Report—More of a Burgundy than a Claret. The Verdots taken as a whole are the best exhibited.

WYNDHAM, John—Branxton.—White Pineau and Shiraz.
Commended.

WYNDHAM, John—Branxton.—Shiraz, 1879 (dry).
Commended.

Report—A very promising wine.

WYNDHAM, John—Branxton.—Pineau, 1873 (dry and light).
Commended.

WYNDHAM, John—Branxton.—Pineau, 1875 (dry and light).
Commended.

WYNDHAM, John—Branxton.—Reisling, 1879 (dry).
Commended.

Report—Very promising.

WYNDHAM, John—Branxton.—Black Spanish, 1877 (dry).
Commended.

WYNDHAM, John—Branxton.—Hermitage and Black Spanish.
Commended.

WYNDHAM, John—Branxton.—Verdot, Hermitage, and Black Spanish.
Commended.

WYNDHAM, John—Branxton.—Hermitage, 1878.
Commended.

WYNDHAM, John—Branxton.—Pineau, 1879 (dry and full).
Honourable Mention.

Report—A very promising wine.

WYNDHAM, John—Branxton.—Black Spanish, 1877 (dry).
Honourable Mention.

WYNDHAM, John—Branxton.—Madeira, 1867 (dry and full).
Honourable Mention.

NEW ZEALAND.

BROWN, CAMPBELL, & CO.—Thames.—Mild Ale.
Highly Commended.

Report—Light amber colour, full hop flavour; very slightly hard, but of excellent quality.

CRAWFORD, W. F.—Gisborne.—Bottled Stout.
First degree of Merit.

Report—Brown colour, good stout, pleasant flavour.

DIXON, George—Wellington.—Pale Orange Bitters.
Commended.

EHRENFRIED BOTHERS—Thames.—Bottled Stout.
Highly Commended.

Report—Soft mild brown stout, fine condition, good body.

FERAUD, Jean Désiré—Clyde.—Peppermint.
First degree of Merit.

FERAUD, Jean Désiré—Clyde.—Ginger Wine.
Highly Commended.

FERAUD, Jean Désiré—Clyde.—Lemon Syrup.
First degree of Merit.

Report—Well prepared.

FERAUD, Jean Désiré—Clyde.—Lime Juice.
Highly Commended.

FERAUD, Jean Désiré—Clyde.—Burgundy.
Commended.

FERAUD, Jean Désiré—Clyde.—Constantia.
First degree of Merit.

FERAUD, Jean Désiré—Clyde.—Cherry Brandy.
Highly Commended.

FERAUD, Jean Désiré—Clyde.—Cherry Brandy (another sample).
Honourable Mention.

FERAUD, Jean Désiré—Clyde.—Aniseed Liqueur.
Honourable Mention.

GOMEZ, Joseph—Rangitikei.—Cloves.
Commended.

JOEL, Maurice—Dunedin.—Mild Ale.
First degree of Merit.

Report—Very pale amber, fine hop flavour, sound, good body, excellent quality.

KEMPTHORNE, PROSSER, & CO.—Dunedin.—Cherry Brandy.
First degree of Merit.

KEMPTHORNE, PROSSER, & CO.—Dunedin.—Cloves.
Honourable Mention.

LATHAM & CO., E.—Running Ale.
First degree of Merit.

LATHAM & CO., E.—Stock Ale.
Commended.

MARTIN, John Tice—Invercargill.—Pale Ale.
First degree of Merit.

Report—Exceedingly pale, mild hop bitter, light body, clear and bright, very good quality, thoroughly sound.

MOFFETT, W.—Invercargill.—Ginger Brandy.
First degree of Merit.

MOFFETT, W.—Invercargill.—Peppermint.
Highly Commended.

MOFFETT, W.—Clyde.—Stomach Bitter.
Highly Commended.

MOFFETT, W.—Invercargill.—Lemon Syrup.
Commended.

O'MEARA, Morgan—Wakatipu.—Wakatipu Cordial, 1877 (full & sweet).
Commended.

PASCOE & CO.—Wellington.—Pale Ale.
Highly Commended.

Report—Bright sparkling ale, mild hop flavour, fair body, and good quality.

SMITH, James—Nelson.—Charrade, 1876.
First degree of Merit.

SMITH, James—Nelson.—Charrade, 1877.
Highly Commended.

SMITH, James—Nelson.—Charrade, 1878.
Commended.

SMITH, James—Nelson.—Charrade, 1877.
Commended.

SPEIGHT & CO., James—Dunedin.—Strong Ale.
Highly Commended.

Report—Light amber, rather cloudy, mild hop flavour, fair body.

TAYLER, Mrs. J. M.—Queenstown.—Fruit Wine, 1874.
Highly Commended.

VINCENT & CO.—Christchurch.—Strong Ale.
First degree of Merit.

Report—Bright amber colour, fine flavour, well hopped, and good body.

WENDEL, J.—Auckland.—Grape Wine.
Honourable Mention.

WENDEL, J.—Auckland.—Quinine Wine.
Honourable Mention.

WILSON & CO., James—Dunedin.—Pale Ale.
Highly Commended.

Report—Bright amber, very light, hop aroma, full body.

QUEENSLAND.

BERTHEAU, C. Z.—Bundaberg.—Golden Water.
Highly Commended.

Report—A very fair liqueur.

BERTHEAU, C. Z.—Bundaberg.—Aniseed Cordial.
Commended.

BERTHEAU, C. Z.—Bundaberg.—Curaçoa.
Honourable Mention.

BERTHEAU, C. Z.—Bundaberg.—Liqueur Hygienic.
Honourable Mention.

CARMICHAEL, L.—Brisbane.—Orange Bitters.
Highly Commended.

CHUBB, C. F.—Ipswich.—Malmesbury Wine.
Commended.

COATES, J. P.—Brisbane.—Sarsparilla.
Commended.

COATES, J. P.—Brisbane.—Quinine Tonic Wine.
Commended.

COATES, J. P.—Brisbane.—Lemonade.
Honourable Mention.

COATES, J. P.—Brisbane.—Orange Bitters.
Commended.

COULDERY, W. H.—Beenleigh.—Rum.
Highly Commended.

DARK & STALKER—Brisbane.—Ginger Beer.

Honourable Mention.

Report—A bright gaseous beer somewhat wanting in flavour.

FITZGERALD, QUINLAN, & CO.—Brisbane.—Bulk Ale.

First degree of Merit.

Report—Pale amber ale, full body, fine hop flavour, perfectly bright and clear, and of very superior quality.

FITZGERALD, QUINLAN, & CO.—Brisbane.—Bottled Ale.

First degree of Merit.

Report—Bright sparkling amber, full body, fine hop aroma ; a little sharp, but very fine ale.

FITZGERALD, QUINLAN, & CO.—Brisbane.—Porter.

First degree of Merit.

Report—Good bright colour ; rather sharp, but good body and quality.

FITZGERALD, QUINLAN, & CO.—Brisbane.—Bottled Stout.

First degree of Merit.

Report—Very full body and good flavour.

HEWITT & CO.—Mackay.—Rum (bulk).

First degree of Merit.

HEWITT & CO.—Mackay.—Rum.

Commended.

IRWIN BROTHERS—Ipswich.—Verdeilho 1877 (sweet).

First degree of Merit.

Report—A very fair wine in good condition.

KIRCHER, Jacob—Warwick.—Verdeilho 1877 (dry).

Highly Commended.

MILTON DISTILLERY CO.—Brisbane.—White Spirit.

First degree of Merit.

MILTON DISTILLERY CO.—Brisbane.—Rum.

Commended.

MILTON DISTILLERY CO.—Brisbane.—Geneva.

Commended.

RAFF, George—Caboolture.—Rum 1869.

First degree of Merit.

RAFF, George—Caboolture.—Rum 1875.

Highly Commended.

SOUTH AUSTRALIA.

AULD, Patrick—Auldana.—Muscatel 1876 (dry).

First degree of Merit.

AULD, Patrick—Auldana.—Auldana Ruby 1873 (dark and light).

First degree of Merit.

AULD, Patrick—Auldana.—Blended Reisling 1874 (full).

First degree of Merit.

AULD, Patrick—Auldana.—Reisling 1870 (full).

Highly Commended.

CLASSES 635–638.—*Wines, Spirituous, Fermented, and other Drinks.*

AULD, Patrick—Auldana.—Muscatel 1876 (dry).
Highly Commended.

AULD, Patrick—Auldana.—Blended Reisling 1875 (dry).
Commended.

Report—A very fair table wine, of pleasant taste.

AULD, Patrick—Auldana.—Blended Reisling 1874 (dry).
Highly Commended.

Report—A very fair table wine, of pleasant taste.

BICKFORD & SONS, A. M.—Adelaide.—Canadian Bitters.
First degree of Merit.

BICKFORD & SONS, A. M.—Adelaide.—Boonekamp Bitters.
Highly Commended.

BICKFORD & SONS, A. M.—Adelaide.—Sarsaparilla.
Highly Commended.

BICKFORD & SONS, A. M.—Adelaide.—Raspberry Vinegar.
Highly Commended.

BICKFORD & SONS, A. M.—Adelaide.—Lime-juice Cordial.
Commended.

Report—A very pure clean-tasted lime-juice.

BICKFORD & SONS, A. M.—Adelaide.—Curaçoa.
Commended.

BICKFORD & SONS, A. M.—Adelaide.—Peppermint.
Commended.

BONNEY, Charles—Burnside.—Verdeilho 1867 (full).
Highly Commended.

DAVENPORT, Samuel—Beaumont.—Shiraz 1868 (full).
First degree of Merit.

DAVENPORT, Samuel—Beaumont.—Chateau Beaumont 1872 and 1873 (Full).
Highly Commended.

ELDER, Sir Thomas—Birksgate.—Sherry 1870 (full).
Highly Commended.

ELDER, Sir Thomas—Birksgate.—Frontignac 1873.
Commended.

ELDER, Sir Thomas—Birksgate.—Frontignac 1873 (sweet).
Commended.

ELDER, Sir Thomas—Birksgate.—Madeira 1873 (full).
Highly Commended.

FAULDING & CO., F. H.—Barossa.—Sparkling 1872 (dry).
Commended.

GILBERT, Joseph—Barossa Ranges.—Reisling 1869 (dry).
First degree of Merit special.

GILBERT, Joseph—Barossa Ranges.—Reisling 1867 (dry).
Honourable Mention.

GILBERT, Joseph—Barossa Ranges.—Reisling 1872 (dry).
Commended.

GILBERT, Joseph—Barossa Ranges.—Carbinet 1868 (dark and light).
Highly Commended.

GILBERT, Joseph—Barossa Ranges.—Carbinet 1869 (dark and light).
Highly Commended.

CLASSES 635–638.—*Wines, Spirituous, Fermented, and other Drinks.*

GILBERT, Joseph—Barossa Ranges.—Carbinet 1869 (dark and light).
First degree of Merit special.

GILLARD, Joseph—Norwood.—Constantia (sweet).
Highly Commended.

GILLARD, Joseph—Norwood.—Port (full).
Highly Commended.

GILLARD, Joseph—Norwood.—Mataro, 1867 (sweet).
Commended.

HALL & SONS, G.—Norwood.—Peppermint.
Highly Commended.

HALL & SONS, G.—Norwood.—Ginger Wine.
Highly Commended.

HALL & SONS, G.—Norwood.—Cloves.
Highly Commended.

HALL & SONS, G.—Norwood.—Lime-juice.
Highly Commended.

HALL & SONS, G.—Norwood.—Orange Bitters.
Commended.

HALL & SONS, G.—Norwood.—Lemonade.
First degree of Merit.

HALL & SONS, G.—Norwood.—Seltzer Water.
First degree of Merit.

HALL & SONS, G.—Norwood.—Sarsaparilla.
First degree of Merit.

HALL & SONS, G.—Norwood.—Ginger Ale.
First degree of Merit.

HALL & SONS, G.—Norwood.—Tonic Water.
First degree of Merit.

HALL & SONS, G.—Norwood.—Soda Water.
Highly Commended.

HARDY Thomas—Monalta.—Muscatel, 1876 (sweet).
First degree of Merit.

HARDY Thomas—Monalta.—Oomoo (full).
Highly Commended.

Report—A very good table wine.

HARDY Thomas—Monalta.—Highercombe, 1871 (dry).
Highly Commended.

HARDY, Thomas—Monalta.—Donzelhino, 1873 (full).
Highly Commended.

HARDY, Thomas—Monalta.—Shiraz, 1873 (full).
Highly Commended.

HARDY, Thomas—Monalta.—Sauvignon, 1877 (dry).
Highly Commended.

HARDY, Thomas—Monalta.—Highercombe, 1873 (dry).
Honourable Mention.

HOLBROOK, J. D.—West Torrens.—Sherry (full).
First degree of Merit.

HOLBROOK J. D.—West Torrens.—Mataro, 1876 (sweet).
Highly Commended.

HOLBROOK J. D.—West Torrens.—Port (full).
Highly Commended.

CLASSES 635-638.—*Wines, Spirituous, Fermented, and other Drinks.*

HOLBROOK, J. D.—West Torrens.—"Cup" Wine, 1870 (full).
Commended.

IND, G. F.—Paradise.—Shiraz and Mataro, 1872 (full).
First degree of Merit.

IND, G. F.—Paradise.—Grenache, 1872 (full).
Highly Commended.

JACOB, William—Morooroo.—Carbinet, 1875 (dark and light).
First degree of Merit.

JACOB, William—Morooroo.—Frontignac (full).
First degree of Merit.

JACOB, William—Morooroo.—Reisling, 1875 (dry).
Highly Commended.

JACOB, William—Morooroo.—Verdeilho, 1873 (sweet).
Commended.

KAINES, J. H.—Adelaide Plains.—Shiraz, 1873 (full).
First degree of Merit.

KAINES, J. H.—Adelaide Plains.—Tokay.
First degree of Merit.

KAINES, J. H.—Adelaide Plains.—Verdeilho, 1871 (full).
First degree of Merit.

MARTIN, AMSBERG, MITCHELL, & CO.—Kent Town.—Ginger Wine.
Highly Commended.

MARTIN, AMSBERG, MITCHELL, & CO.—Kent Town.—Orange Wine.
First degree of Merit.

MARTIN, AMSBERG, MITCHELL, & CO.—Kent Town.– Pine Apple Cordial.
Honourable Mention.

MARTIN, AMSBERG, MITCHELL, & CO.—Kent Town.—Raspberry Vinegar.
Highly Commended.

MARTIN, AMSBERG, & CO.—Quinine Champagne Liqueur.
Commended.

MARTIN, AMSBERG, & CO.—Italian Curaçoa.
Honourable Mention.

NITSCHKE & CO., W.—Hackney.—Pure Grape Spirit.
First degree of Merit.

NITSCHKE & CO., W.—Hackney.—Spirits of Wine.
Commended.

NITSCHKE & CO., W.—Hackney.—Kümmel Liqueur.
Honorable Mention.

PENFOLD & CO.—East Torrens.—Grenache, 1874.
First degree of Merit.

Report—Good conditioned sound wine ; an excellent tonic for invalids.

PENFOLD & CO.—East Torrens.—Frontignac, 1874 (full).
First degree of Merit.

PENFOLD & CO.—East Torrens.—Tokay (full).
Highly Commended.

PENFOLD & CO.—East Torrens.—Muscadine (sweet).
Commended.

PENFOLD & CO.—East Torrens.—Mataro, 1874–75 (dark and light).
Honourable Mention.

SALTER & SONS—**Angaston.**—Sherry (full).
First degree of Merit.

SALTER & SONS—**Angaston.**—Shiraz.
Highly Commended.

SALTER & SONS—**Angaston.**—Shiraz (full).
Highly Commended.

SALTER & SONS—**Angaston.**—Port (full).
Highly Commended.

SOUTH AUSTRALIAN UNITED VINEYARD ASSOCIATION.—
Adelaide.—Sherry (dry and full). First degree of Merit.
Report—An excellent clean Sherry, of good body, taste, and fine condition.

SOUTH AUSTRALIAN UNITED VINEYARD ASSOCIATION.—
Adelaide.—Red Muscat, 1872 (full). First degree of Merit.

SOUTH AUSTRALIAN UNITED VINEYARD ASSOCIATION.—
Adelaide.—Muscadine (sweet). First degree of Merit.

SOUTH AUSTRALIAN UNITED VINEYARD ASSOCIATION—
Adelaide.—Port (full). Highly Commended.

SOUTH AUSTRALIAN UNITED VINEYARD ASSOCIATION—
Adelaide.—Burgundy, 1872 (dark and light). Commended.

SOUTH AUSTRALIAN UNITED VINEYARD ASSOCIATION—
Adelaide.—Reisling, 1872 (dry). Highly Commended.

SOUTH AUSTRALIAN UNITED VINEYARD ASSOCIATION—
Adelaide.—Reisling, 1873 (dry). First degree of Merit.

SEPPELT B.—**Seppeltsfield.**—Port (full).
First degree of Merit.

SEPPELT B.—**Seppeltsfield.**—Rosolio Liqueur.
First degree of Merit.

SEPPELT B.—**Seppeltsfield.**—Spirits of Wine.
Highly Commended.

SEPPELT B.—**Seppeltsfield.**—Peppermint.
Commended.

SEPPELT, B.—**Seppeltsfield.**—Raspberry Vinegar.
Highly Commended.

SEPPELT W.—**Seppeltsfield.**—Blanquette, 1876 (dry).
Highly Commended.

SEPPELT W.—**Seppeltsfield.**—Sherry (full).
Commended.

SMITH & SON—**Angaston.**—Port, 1871 (full).
Commended.

SMITH & SON—**Angaston.**—Sherry (full).
Highly Commended.

SMITH & SON—**Angaston.**—Verdeilho (full).
Highly Commended.

Report—A dessert wine.

SMITH & SON—**Angaston.**—Frontignac, 1869 (sweet).
Highly Commended.

SMITH & SON—Angaston.—Constantia.
Highly Commended.

SMITH & SON—Angaston.—Port, 1871 (full).
Highly Commended.

SMITH & SON—Angaston.—Port, 1871 (full).
Commended.

SMITH & SON—Angaston.—Port, 1875 (full).
First degree of Merit.

Report—Excellent wine.

SMITH & SON—Angaston.—Rushette, 1877 (dry).
Commended.

WHITE, Eliza—Fullarton.—Pomard, 1870 (dark and light).
Highly Commended.

WHITE, Eliza—Fullarton.—Shiraz (full).
Commended.

WHITE, Eliza—Fullarton.—Port, 1870, 1873 (full).
First degree of Merit.

STRAITS SETTLEMENTS.

BROWN & CO.—Penang.—White Rum.
Honourable Mention.

PENANG SUGAR ESTATES CO. (Limited)—Penang.—Old Rum.
Commended.

SWITZERLAND.

DENNLER, August F.—Interlaken.—Alpenkräuter-Magenbitter.
First degree of Merit.

DENNLER, August F.—Interlaken.—Iron-Bitter.
Highly Commended.

TASMANIA.

DEGRAVES, C. & J.—Hobart Town.—Light Pale Ale.
Commended.

Report—Exceedingly pale amber, slightly cloudy, mild hop bitter, full flavour.

DEGRAVES, C. & J.—Hobart Town.—Strong Ale.
First degree of Merit.

Report—Bright amber, very full body, mild hop flavour.

GRACIE W.—Hobart Town.—Amber Light Ale.
Highly Commended.

Report—Bright amber, fine hop flavour, good body.

JAMES, Henry J.—Hobart Town.—Light Pale Ale.
First degree of Merit.

Report—Bright amber, mild hop flavour, and excellent quality.

JAMES, H. J.—Hobart Town.—Porter. First degree of Merit.

Report—Good dark bright colour, medium body, sound.

KELLY & GORDON—Hobart Town.—Soda-water.
Highly Commended.

KELLY & GORDON—Hobart Town.—Lemonade.
Highly Commended.

KELLY & GORDON—Hobart Town.—Ginger Ale.
Honourable Mention.

KELLY & GORDON—Hobart Town.—Sarsaparilla.
Highly Commended.

MARSDEN, Thomas—Hobart Town.—Bottled Pale Ale ("Degraves'").
First degree of Merit.

Report—Exceedingly pale amber, sparkling and highly hopped, light body.

MARSDEN, Thomas—Hobart Town.—Peppermint.
Highly Commended.

MITCHELL, J. C.—Hobart Town.—Bottled Pale Ale ("Degraves'").
First degree of Merit.

Report—Bright, sparkling amber, mild hop aroma, full body, well up.

WEAVER & CO.—Hobart Town.—Raspberry Vinegar.
First degree of Merit.

WEAVER & CO.—Hobart Town.—Orange Bitters.
First degree of Merit.

WEAVER & CO.—Hobart Town.—Quinine Champagne.
Highly Commended.

WEAVER & CO.—Hobart Town.—Aromatic Bitters.
Commended.

WEAVER & CO.—Hobart Town.—Ginger Brandy.
Honourable Mention.

UNITED STATES.

BECHTELS, George—New York City.—Lager beer, "Excelsior" brand, (bottled by Mittelsdorf). First degree of Merit.

Report—Dark amber, very full flavour, nice hop aroma.

GIBSON, SON, & Co., John—Philadelphia.—Cabinet Gin, 1879.
First degree of Merit.

GIBSON, SON, & Co., John—Philadelphia.—Bourbon Whiskey, 1878.
Highly Commended.

ILER & Co., WILLOW SPRINGS DISTILLERY Co.—Omaha, Nebraska.—East India Bitters. Highly Commended.

ILER & Co., WILLOW SPRINGS DISTILLERY Co.—Omaha, Nebraska.—Pure Deodorised Alcohol. Highly Commended.

ILER & Co., WILLOW SPRINGS DISTILLERY Co.—Omaha, Nebraska.—Extra Triple Refined Cologne Spirit. First degree of Merit.

ILER & Co., WILLOW SPRINGS DISTILLERY Co.—Omaha, Nebraska.—Golden Sheaf Rye Whiskey, 1878. First degree of Merit.

ILER & Co., WILLOW SPRINGS DISTILLERY Co.—Omaha, Nebraska.—Bourbon Whiskey, 1879. Commended.

WEISS & Co., George A.—Chicago, Ill.—Bottled Lager Beer.
Highly Commended.

Report—Sparkling amber, full hop flavour; good body.

VICTORIA.

ADAMSON, Travers—Sunbury.—Red Hermitage, 1876, dry.
Honourable Mention.

AITKEN, Thos.—Melbourne.—Running Ale.
Highly Commended.

Report—Very pale, light body, cloudy, fair hop bitter.

AUSTRALIAN DISTILLERY Co.—Melbourne.—Malt Whiskey.
Highly Commended.

AUSTRALIAN DISTILLERY Co.—Melbourne.—Spirits of Wine, 62 per cent.
Commended.

AUSTRALIAN DISTILLERY Co.—Melbourne.—White Spirit.
Highly Commended.

AUSTRALIAN DISTILLERY Co.—Melbourne.—Gin.
Highly Commended.

AUSTRALIAN DISTILLERY Co.—Melbourne.—Cordials.
Highly Commended.

BOSISTO, M.P., Joseph—Richmond.—Eucalypto Liqueur.
First degree of Merit.

BRACHÉ, C.—Melbourne.—Port.
Highly Commended.

Report—A very fair port, of excellent taste and body.

BRACHÉ, C.—Melbourne.—Reisling, 1877 (dry).
Highly Commended.

BRACHÉ, C.—Melbourne.—Reisling, 1875 (full).
Highly Commended.

BRACHÉ, C.—Melbourne.—White Hermitage, 1875 (dry and light).
Highly Commended.

BRENSING, E.—Nagambie.—Burgundy, 1877 (dry).
Commended.

Report—Although so-called, the Judges do not consider this a true Burgundy.

BRUHN, Albert—Strathfieldsaye.—Carbinet.
First degree of Merit.

BRUHN, Albert—Strathfieldsaye.—Verdeilho.
Highly Commended.

BRUHN, Albert—Strathfieldsaye.—Reisling, 1878 (light, dry).
First degree of Merit.

BRUHN, Albert—Strathfieldsaye.—Verdeilho, 1875 (full).
First degree of Merit.

BRUHN, Albert—Strathfieldsaye.—Verdeilho, 1875 (full and dry).
Highly Commended.

BRUHN, Albert—Strathfieldsaye.—Pedro Ximenes, 1875 (full).
Highly Commended.

CALDWELL & Co.—Melbourne.—White Muscat (full).
Honourable Mention.

CALDWELL & Co.—Melbourne.—Shiraz (full).
First degree of Merit.

CAUGHEY, A. & R.—Melbourne.—Gouais, 1877 (dry).
Highly Commended.

CAUGHEY, A. & R.—Melbourne.—Tokay, 1877 (sweet).
Honourable Mention.

CAUGHEY, A. & R.—Melbourne.—Shiraz, 1874 (sweet).
First degree of Merit.

DARGENT, A.—Collingwood.—Champagne, Crème de Bouizy, 1878.
Highly Commended.

Report—A very creditable wine.

DARGENT, A.—Melbourne.—Champagne, 1877, "Perle d'Australie."
Highly Commended.

Report—A very creditable wine.

DARGENT, A.—Melbourne.—Champagne, 1877, "Carte Blanche."
First degree of Merit.

Report—A very creditable wine. With more care in the manufacture the wines of this exhibitor would prove a profitable industry.

DAVIES, John—Melbourne.—Ngarveno, 1875 (dry).
First degree of Merit.

Report—A very pure wine, of excellent bouquet and condition.

DAVIES, John—Melbourne.—Ngarveno, 1876 (dry).
Highly Commended.

DAVIES, J.—Melbourne—Ngarveno, 1875 (dry). Highly Commended.

Report—A good sound table wine, of pleasant taste.

DAVIES J.—Melbourne.—Ngarveno, 1876 (dry). Commended.

DE CASTELLA & ROWAN—Melbourne.—White Chasselas (full).
First degree of Merit.

DE CASTELLA & ROWAN—Melbourne.—White Hermitage, 1877 (dry).
First degree of Merit Special.

DE CASTELLA & ROWAN—Melbourne.—Sauvignon, 1875 (dry).
First degree of Merit.

FISCHER, August—Sandhurst.—Verdeilho, 1874 (full).
Honourable Mention.

FISCHER, August—Sandhurst.—White Chasselas, light and dry, 1878.
First degree of Merit.

FITZGERALD & PERRINS—Castlemaine.—Stock Ale.
Highly Commended.

Report—Clear amber colour, sound, good hop flavour, fair quality.

GOOCH, H. M.—Melbourne.—Claret, 1874 (dry).
Highly Commended.

GOOCH, H. M.—Melbourne.—Pedro Ximenes, 1877 (sweet).
Highly Commended.

GROSSE, Frederick—Strathfieldsaye.—Pedro Ximenes, 1878 (full, sweet). First degree of Merit.

GROSSE, F.—Strathfieldsaye.—Carbinet, 1878 (full).
Highly Commended.

CLASSES 635-638.—*Wines, Spirituous, Fermented, and other Drinks.*

GROSSE, F.—Strathfieldsaye.—Tokay, 1878 (light).
Commended.

GROSSE, F.—Strathfieldsaye.—Verdeilho, 1878 (full).
Commended.

GROSSE, F.—Strathfieldsaye.—White Madeira, 1878 (light).
Commended.

JOHNSTON, J. S.—Melbourne.—Reisling, 1875 (dry).
Commended.

JOHNSTON, J. S.—Melbourne.—Reisling, 1872 (dry).
First degree of Merit.

JOHNSTON, J. S.—Melbourne.—Red Hermitage, 1870 (dry).
Commended.

KAHLAND, J.—Sandhurst.—Carbinet, 1877 (full).
Highly Commended.

KAHLAND, J.—Sandhurst.—Red Hermitage, 1877 (dry).
Highly Commended.

KAHLAND, J.—Sandhurst.—Verdeilho, 1876 (full).
Highly Commended.

KAHLAND, J.—Sandhurst.—Burgundy (dry).
Commended.

LATHAM & Co., E.—Melbourne.—Running Pale Ale.
First degree of Merit.

Report—Exceedingly pale, bright, fair hop bitter, and good quality.

LATHAM & Co., E.—Melbourne.—Stock Ale. Commended.

Report—Pale amber, clear, and sound, very light.

M'CLEAN & SONS, E.—Bridgewater-on-Loddon.—Ginger Brandy.
Highly Commended.

M'CLEAN & SONS, E.—Bridgewater-on-Loddon.—Lime-juice.
Highly Commended.

M'CLEAN & SONS, E.—Bridgewater-on-Loddon.—Parfait Amour.
Highly Commended.

M'CLEAN & SONS, E.—Bridgewater-on-Loddon.—Lemon Syrup.
Commended.

M'CLEAN & SONS, E.—Bridgewater-on-Loddon.—Rum Punch.
Highly Commended.

M'CLEAN & SONS, E.—Bridgewater-on-Loddon.—Raspberry, Eau d'argent, Aromatic Quinine Bitters. Three First degrees of Merit.

M'CLEAN & SONS, E.—Bridgewater-on-Loddon.—Queen's Cordial, Mulberry, Citronelle, Peppermint. Four Highly Commended Awards.

M'BRIDE & MARTIN—Melbourne.—Light Stock Ale.
First degree of Merit.

Report—Very pale amber, clear, sound, fair hop bitter.

MACKIEHAN, John—Penshurst.—White Chasselas (dry, light), 1873.
Commended.

PEARCE, Joseph—Wahgunyah.—Shiraz, 1878 (dry, full).
First degree of Merit.

PEARCE, Joseph—Wahgunyah.—Pedro Ximenes, 1878 (full).
Commended.

POHL, Carl—Strathfieldsaye.—Verdeilho, 1873 (full).
First degree of Merit.

POHL, Carl—Strathfieldsaye.—White Carbinet, 1875 (full).
Highly Commended.

POHL, Carl—Strathfieldsaye.—Reisling, 1873 (dry).
Commended.

POHL, Carl—Strathfieldsaye.—Verdeilho, 1875 (full).
Commended.

RITCHIE BROTHERS—Murghebolne.—Red Hermitage, 1877 (full).
Highly Commended.

SANDRIDGE DISTILLERY CO.—Melbourne.—Alcohol, 67%.
Highly Commended.

SCHRÖDER, E.—Castlemaine.—Burgundy, 1877 (dry).
First degree of Merit.

SCHRÖDER, E.—Castlemaine.—Mataro, 1877 (dry).
Highly Commended.

Report—A first-class wine, for blending purposes.

SCHRÖDER, E.—Castlemaine.—White Chasselas, dry, 1876.
Highly Commended.

SMITH, George S.—Wahgunyah.—Constantia, 1873.
First degree of Merit.

Report—A pleasant dessert wine, in good condition.

SMITH, George S.—Wahgunyah.—Pedro Ximenes (dry).
First degree of Merit.

SMITH, George S.—Wahgunyah.—Verdeilho, 1874 (dry).
First degree of Merit.

SMITH, George S.—Wahgunyah.—Amontillado (dry).
Highly Commended.

SMITH, George S.—Wahgunyah.—Sauvignon, 1874 (dry).
Highly Commended.

SMITH, George S.—Wahgunyah.—Shiraz, 1874 (sweet).
Highly Commended.

TROUETTE & BLAMPIED—Great Western.—Burgundy, 1876 (full).
Highly Commended.

TROUETTE & BLAMPIED—Great Western.—Burgundy, 1875 (full).
Highly Commended.

TROUETTE & BLAMPIED—Great Western.—Reisling, 1875 (dry).
Highly Commended.

TROUETTE & BLAMPIED—Great Western.—Hock, 1875 (dry).
Honourable Mention.

WARRENHEIP DISTILLERY CO.—Ballarat.—Gin.
First degree of Merit.

Report—Excellent spirit.

WARRENHEIP DISTILLERY CO.—Ballarat.—Rectified Wine Spirit.
First degree of Merit.

WILSON, A. S.—Ivanhoe.—White Ivanhoe, 1874 (dry).
Highly Commended.

WILSON, A. S.—Ivanhoe.—Red Hermitage, 1875 (dry).
Commended.

WOOD & SON, J.—Collingwood.—Strong Stock Ale.
First degree of Merit.

Report—Pale amber colour, full body, fine hop flavour.

CLASSES 639–644.

Textile Substances of Vegetable or Animal origin (other than Wool).

JUDGES.

FORSYTH, ARCHIBALD, Rope Factory... ...	Bourke-st., Sydney.
HOOTON, JOHN	Paddington, Sydney.
POPE, JOHN	Sydney.
ROSENTHAL, C. M.	Philadelphia, U.S.A.
SMALE, JOSIAH (Chairman)	Macclesfield, England

CLASS 639.

Wool.

JUDGES.

CHARD, W. H.	Sydney.
DE SAVIGNON, F.	Paris, France.
EBSWORTH, FREDERICK	Sydney.
FEIN, OTTO	Sydney.
HAIGH, LEWIS	Sydney.
HAMMOND, THOMAS W.	Junee, N.S.W.
LEES, JOSEPH...	Sydney.
LETHBRIDGE, GEORGE L....	Singleton, N.S.W.
SCOTT, W. R.	Sydney.
THORPE, THOMAS	Goonoo Goonoo, N.S.W.
VICARS, JOHN	Sussex-st., Sydney.
WHITFIELD, P. B.	Sydney.

AWARDS NOMENCLATURE.

The Awards in Class 639—Wool, are thus described in their relative orders of merit:—Champion Prize, carrying Gold Medal; First Prize, Silver Medal; Second Prize, Bronze Medal; while Diplomas were issued marking the "Highly Commended" and "Commended" recommendations of the Judges.

GROUP.—Textile Substances of Vegetable or Animal Origin.

CLASSES 639 to 644.

NOTE.—The prices of Wools merely indicate, in the estimation of the Judges, the relative values of the different exhibits.

BELGIUM.

TAULEZ-BOTTELIER—Bruges.—Flax.

First degree of Merit.

Report—A good collection of six samples of flax in various stages of preparation.

CEYLON.

LEECHMAN & CO., G. & W.—Ceylon.—Fine Coir Fibre.

Highly Commended.

Report—Very good sample.

LEECHMAN & CO., G. & W.—Bristles.

Highly Commended.

Report—Very good sample of bristles; very fine and strong.

FIJI.

BOEHM, L.—Kanathea.—Sea Island Cotton, ginned.

Highly Commended.

Report—Of very good quality.

COLONY OF FIJI.—For pre-eminence in the production of Cotton and Vegetable Fibres.

Report—Taking into consideration the general excellence of the exhibit in this section shown by Fiji, particularly the splendid specimens of cotton, we think a special mention should be awarded.

LEEFE, Hon. R. B.—Nananu.—Angora Hair.

Highly Commended.

Report—Of very good quality.

MASON, J. E.—Taviuni.—Sea Island Cotton, ginned.
First degree of Merit.

Report—Of excellent quality.

McEVOY, G.—Cicia.—Sea Island Cotton, ginned.
Honourable Mention.

Report—Of good quality.

M'EVOY, G.—Cicia.—Cotton in seed (unginned).
Highly Commended.

Report—Very good specimen of unginned sea island cotton.

McEVOY & KESALL—Cicia.—Sea Island Cotton, ginned.
Commended.

Report—Of good quality.

RAMBI PLANTATION CO.—Rambi.—Coir Fibre.
First degree of Merit.

Report—A very good sample, fine and strong, and of good colour.

RAMBI PLANTATION CO.—Rambi.—Coir Bristles.
Highly Commended.

Report—Very good exhibit; the bristles fine, and strong.

RYDER BROTHERS.—Mango.—Cotton in Seed and ginned.
First degree of Merit.

Report—Very fine specimen of Sea Island cotton.

THURSTON, Hon. J. B.—Levuka.—Cotton in Seed.
Highly Commended.

Report—Good specimen of unginned kidney cotton.

THURSTON, Hon. J. B.—Levuka.—Kidney Cotton.
First degree of Merit.

Report—Of excellent quality.

FRANCE.

DELATTRE PÈRE ET FILS, Jules—Orignies-les-Douai (Nord).—Combing Wool. First degree of Merit.

Report—A most superior description of combing wool.

GILBERT, Victor—Wideville (Seine-et-Oise).—Washed Wool. Growth, 388 days; bred by exhibitor; rams, 2 years and 10 months; Ewes, 3 years and 5 years; 4 months exposed to sea air on voyage; shepherded, paddocked, and housed. Commended.

MINISTRE DE L' AGRICULTURE ET DU COMMERCE—Paris,—Bergerie Nationale De Rambouillet.—Collection of Wools. Growth, 471 days; bred at Stud Farm of Rambouillet; Rambouillet Merino; grown at Rambouillet, at sea, and in Sydney; ewes, 2 years and 10 months; rams, 24, 34, and 46 months; 4 months exposed to sea air; shepherded, paddocked, and housed. Highly Commended.

Report—A highly instructive and interesting exhibit.

GERMANY.

DYHRENFURTH, L. R.—Jacobsdorf-Kostenblut, in Schlesien.—Wool in Fleeces. Highly Commended.

Report—These fleeces from Rambouillet Merinos, washed in pond, are quite sound in staple and of very good quality. Superior clothing.

DYHRENFURTH, L. R.—Jacobsdorf-Kostenblut, in Schlesien.—Wool in Grease and Washed. Commended.

Report—These samples of ewes' wool are of good staple, and commended as useful clothing wool.

MENS, R., Von—Carlsdorf-Jordansmühl, in Schlesien.—Unwashed Wool. First degree of Merit Special.

Report—These specimens from ewes of the pure Merino blood are very superior in condition as well for combing as clothing.

MÜLLER, Richard—Hohenlandin, bei Angermünde.—Wool in Fleeces. Commended.

Report—Good strong combing, though a little coarse.

GREAT BRITAIN AND IRELAND.

SCHWARTZE & CO., Helmuth—London.—Type Samples of Foreign Wools (exhibited through F. and E. A. Ebsworth, Woolbrokers of Sydney). Diploma with medal given for services in exhibiting.

Report—A highly instructive exhibit. The wools are highly commended.

INDIA.

MADRAS, THE GOVERNMENT OF—Madras.—Aloe Fibre. Highly Commended.

Report—A good sample.

MADRAS, THE GOVERNMENT OF—Madras.—Fine Hemp. Highly Commended.

Report—A fair sample.

NEW SOUTH WALES.

AUSTRALIAN AGRICULTURAL CO. — Warrah, Liverpool Plains.—Fine Combing Merino Wool in grease. Six ewe hoggets fleeces, unskirted. Growth, 361 days ; brand, H over G ; bred by exhibitors, by Mudgee rams, chiefly Cox's; grown at Warrah ; age, 361 days ; shepherded and housed at night, no artificial feeding ; weight, 47 lbs. 12 ozs. Price, 11½d. per lb. Commended.

Report—Good, deep, long, light, and even.

BETTINGTON, James B.—Brindley Park, Merriwa.—Bale washed Clothing ; Merino Wool. Ewes fleeces, skirted. Growth, 360 days ; brand, EC over B ; bred by exhibitor, from Brindley Park bred sheep on both sides, Merino ; grown at Brindley Park ; spout-washed, hot-water soak, soft soap and caustic soda ; aged ; paddocked. Price, 2s. per lb. Second Prize.

Report—Contains a few seeds ; but a good wool, and well washed.

BETTINGTON, James B.—Brindley Park, Merriwa.—Fine Combing Merino Wool, washed. Six rams fleeces, unskirted. Growth, 395 days ; brand, WR ; bred by exhibitor, from station sheep ; grown at Brindley Park ; spout-washed, hot water soaked, soap and soda ; age, 2 and 3 years paddocked. Price, 2s. 4d. per lb. ; weight, 51 lbs. 12 ozs. Second Prize.

Report—Close, super combing, well grown, dense, and deep.

BUSBY, A. & W.—Cassilis.—Fine Combing Wool, in grease. Six rams fleeces, unskirted. Growth, 367 days ; brand, ALIX ; bred by exhibitors, from stock in possession of exhibitors for years ; grown at Cassilis ; aged ; paddocked. Weight, 64 lbs. ; price, 13½d. per lb. Highly Commended.

Report—Very nice, even, combing wool.

BUSBY, A. & W.—Cassilis.—Fine Combing Merino Wool, in grease. Six ewes fleeces, unskirted. Growth, 367 days ; brand, I over AX over L ; bred by exhibitor, from stock in possession of exhibitor for years ; grown at Cassilis ; aged ; paddocked ; never housed or artificially fed. Weight, 48 lbs. 8 ozs. Price, 13d. per lb. Commended.

Report—A nice, desirable fine combing wool.

CHAPPELL, John R.—Dundee, New England.—Bale of Scoured Merino Wool. (Test : Excellence of scouring and condition.) Growth, 365 days ; brand, E in diamond ; bred by exhibitor, from Merino rams and ewes ; grown at Dundee ; washed by spouts in perforated boxes, soap only ; age, 3 and 4 years ; shepherded. Highly Commended.

Report—Good colour, but yolky.

CHAPPELL, John R.—Dundee, New England.—Bale of Fellmongered Merino Wool. Growth, about 200 days ; brand, F in diamond ; bred by exhibitor from Merino rams and ewes ; grown at Dundee ; fellmongered and scoured in the ordinary way, with soft soap only ; age, 4 and 5 years, wethers ; shepherded. Second prize.

Report—Good colour and condition, but a little yolky.

CHARD & CO., W. H.—Sydney.—Collective Exhibit of Wool Samples 260 in number, washed and unwashed.

Report—An interesting and instructive exhibit. Awarded a certificate and bronze medal for services in showing this exhibit.

CLIVE & HAMILTON—Collaroy, Merriwa.—Clothing Merino Wool in grease. Six ewe-hoggets fleeces, unskirted; first shearing. Growth, 12 months; brand, CB; bred by C. F. Clive from pure-bred Collaroy Merinos; grown at Collaroy; age, 12 months; paddocked. Weight, 31 lbs. 12 ozs. First Prize.

Report—Good quality, light and fine.

CLIVE & HAMILTON—Collaroy, Merriwa.—Fine Combing Merino Wool, in grease. Six ewe-hoggets fleeces, unskirted. Growth, 13 months; brand, HC; bred by C. F. Clive from pure-bred Collaroy Merinos; grown at Collaroy; age, 13 months, shepherded and housed. Weight, 59 lbs. 8 ozs.; price, 11½d. per lb. First Prize.

Report—Good strong combing, very even, and very useful.

CLIVE & HAMILTON—Collaroy, Merriwa.—Fine Combing Merino Wool, in grease. Six ram hoggets fleeces, unskirted. Growth, 395 days; brand, OU; bred by C. F. Clive, from pure-bred Collaroy Merinos; grown at Collaroy; age, 1 year 1 month; paddocked. Weight, 68 lbs.; price, 11d. per lb. Second Prize.

Report—A fair, good, useful combing.

CLIVE & HAMILTON—Collaroy, Merriwa.—Fine Combing Merino Wool, washed. Six ewe-hoggets fleeces, unskirted. Growth, 13 months; brand, RB; bred by C. F. Clive, from Collaroy Merino; grown at Collaroy; washed in hot water with soap and caustic soda; age, 13 months; paddocked. Price, 2s. 9d. per lb.; weight, 28lbs. 4oz. First Prize.

Report—Deep, good, even combing, very desirable.

CLIVE & HAMILTON—Collaroy, Merriwa.—Fine Combing Merino Wool, washed. Six ram hoggets fleeces, unskirted. Growth, 13½ months; brand, HB; bred by C. F. Clive, pure station rams, grown at Collaroy; washed in hot water, soap, and soda; age, 13½ months; paddocked. Price, 2s. 8d. per lb.; weight, 29lbs. 12oz. Second Prize.

Report—Very good combing.

CROZIER, Wm.—Moorna, Lower Murray River.—Bale of Merino Combing Wool, in grease, skirted. Growth, 360 days; brand, FGM; bred by exhibitor, out of Moorna selected stud flock originally formed from half-bred Rambouillet ewes and Crawford rams; grown at Moorna; age, 4-tooth; paddocked. Price, 1s. per lb. Second Prize.

Report—A good useful combing wool.

CLASSES 639–644.—*Textile Substances of Vegetable or Animal Origin.*

DANGAR BROTHERS—Gostwyck, Uralla.—Bale washed Clothing Merino Wool. Ewes fleeces, skirted. Growth, 365 days; brand NOF; bred by exhibitors, from Gostwyck ewes, Saxon Merinos; grown at Gostwyck; washed in hot-water soak, high-pressure spouts, soap made on station; age, 2 to 4 years; paddocked. Price, 2s. 2d. per lb.

First Prize.

Report—Fine, free, good, useful wool.

DANGAR BROTHERS—Gostwyck, Uralla.—Commercial bales of wool. 3 bales; brand, DR over G; Nos. 444, 445, 446; bred by exhibitor from Gostwyck bred ewes by Collaroy rams; grown at Gostwyck; washed in hot water soak; high pressure-spouts; soap made on station; age, various; paddocked. Highly Commended.

Report—A bright, fine, sound, even, well grown wool, free from faults, burs, &c.

DANGAR BROTHERS—Gostwyck, Uralla.—Bale washed Combing Merino Wool. Ewes fleeces, skirted. Growth, 369 days; brand, TIO; bred by exhibitors, from Saxon Merinos, from Gostwyck-bred ewes by Collaroy rams; grown at Gostwyck; hot-water soak, high-pressure spouts, soap made on station; age, 2-year ewes; paddocked. Price, 2s. 6d. per lb. Commended.

Report—A very fine free wool.

FREMLIN A. R.—Botany.—Bale of scoured Merino Wool. Test, excellence of scouring and condition. Growth, about 12 months; brand, OO conjoined; breeder unknown; washed in a 6-foot tank, good pressure, very little common soda, hot water; young sheep; exact age unknown.

Second Prize.

Report—Good colour, but a little yolky.

HAY, G. D.—Binda.—Six Fleeces, Angora Wool. Growth, about 365 days; brand, INSTAR OMNIUM; bred by exhibitor from Angora buck and does, bred by Zions, Faithfield, near Sydney; grown at Woodhill; age, about 3 years; turned at large among rocks. Commended.

JENKINS, R. L.—Nepean Towers.—Wool in Grease, other than Merino. Six ewes' fleeces, unskirted. Growth, 365 to 375 days; brand, CDL; bred by Thos. Gibson, Eskvale, Tasmania, from the flocks of Messrs. Stubbins, Burgess, Stone, and Sandy, England; grown, 6 months Tasmania and 6 months Nepean Towers; age, 1 to 3 years; paddocked. Weight, 61 lbs. Second Prize.

Report—Good staple and lustre.

LAMB, J. de V. & ROBERTS, P.—Mudgee.—Fine Combing Merino Wool, in grease. Six rams' fleeces, unskirted. Growth, 367 days; brand, SPES, No. 1; bred by exhibitors from Silesian Merino in-bred for generations; grown at Murroo; age, various; partly shepherded and housed. Weight, 94 lbs. 8 ozs.; price, 9d. per lb. Commended.

Report—Very heavy and kempy, but evenly and deeply grown.

CLASSES 639-644.—*Textile Substances of Vegetable or Animal Origin.*

LEARMONTH, T. & S.—Groongal.—Fine Combing Merino Wool, washed. Six ewes' fleeces, unskirted. Growth, 366 days ; brand, GM ; bred by exhibitor, from Ercildoune pure flock ; grown at Groongal Station, near Hay ; washed in hot water and soft soap ; age, over 2 years ; paddocked.
Commended.

Report—For its excellent condition.

LOWE, A. H.—Dynevor, Denison Town.—Six Fleeces Angora Wool.
Honourable Mention.

M'DONALD, John M. L.—Wallabadah.—Clothing Merino Wool, in grease. Six ewes' fleeces, unskirted. Growth, 367 days ; brand, 1NT ; bred by exhibitor from Wallabadah stud flock, descended from stud ewes and rams of C. C. Cox, Mudgee ; grown at Wallabadah Station ; age, 2 to 4 years ; paddocked. Weight, 34 lbs. 4 ozs. First Prize.

Report—Excellent exhibit ; in good condition.

M'DONALD, John M. L.—Wallabadah.—Clothing Merino Wool, in grease. Six ewes' hoggets fleeces, unskirted ; first shearing. Growth, 13 months ; brand, ACE ; bred by exhibitors from Wallabadah stud flock, descended from stud ewes and rams of C. C. Cox, Mudgee ; grown at Wallabadah ; age, 13 months ; paddocked, Weight, 36½ lbs.
Highly Commended.

Report—Fair quality.

McFARLANE, BROTHERS—Deniliquin.—Fine Combing Merino Wool, in grease. Six rams' fleeces, unskirted. Growth, 354 days ; brand, B over H ; bred by exhibitor, from Victorian rams and Tasmanian ewes ; grown at Barooga, Murray River ; aged ; paddocked.
Commended.

Report—A fine combing wool, well grown.

PEEL RIVER LAND & MINERAL CO. (Limited)—Goonoo Goonoo.—Fine Combing Merino Wool, washed. Six ewe hoggets' fleeces, unskirted. Growth, 396 days ; brand, STU ; bred by exhibitors, from exhibitors' flock ; grown at Goonoo Goonoo ; washed in hot soak, soft soap and spouted ; age, 396 days ; paddocked, natural grasses. Weight, 28 lbs. 10½ ozs. Commended.

Report—Fine combing, but rather tender and uneven.

ROUSE, George—Biraganbil.—Fine Combing Merino Wool, washed. Six ewes' fleeces, unskirted. Growth, 369 days ; brand, AZD ; bred by exhibitor, originally from sheep by N. P. Bayly and E. K. Cox ; grown at Biraganbil ; washed in hot water soak with English soft soap ; spouted with cold water ; age, 2 and 3 years ; shepherded. Price, 3s. 2d. per lb. ; weight, 26 lbs. 12 ozs.
Special Prize.

Report—Superior extra fine combing, well grown, soft, and elastic. Recommended for special prize for fineness.

CLASSES 639-644.—*Textile Substances of Vegetable or Animal Origin.*

ROUSE, George—Mudgee.—Fine Combing Merino Wool, in grease. Six ewe hoggets' fleeces, unskirted. Growth, 12 months ; brand, AZC ; bred by exhibitor, from sheep originally purchased from C. C. Cox ; grown at Mudgee ; age, 12 months ; housed in wet weather; at other times paddocked. Weight, 50 lbs. 1 oz. ; price, 14d. per lb. Second Prize.
Report—Superior fine combing, very even, and otherwise very good.

ROUSE, George—Mudgee.—Fine Combing Merino Wool, in grease. Six ram's hoggets fleeces, unskirted. Growth, 12 months ; brand, AZA ; bred by exhibitor, from sheep originally purchased from N. P. Bayly and C. C. Cox ; grown at Mudgee ; age, about 12 months ; housed when wet, at other times in paddock. Weight, 49 lbs. 8 ozs. ; price, 1s. per lb. Highly Commended.
Report—A very fine, good, and even combing wool.

SAMUEL, C.M.G., Saul—Sydney.—Bale of Fellmongered Merino Wool. Brand, F in oblong ; scoured with soft soap ; no chemicals. First Prize.
Report—Light good colour, splendid condition.

SAMUEL, C.M.G., Saul—Sydney.—Bale of Scoured Merino Wool. (Test : Excellence of scouring and condition.) Brand, D in diamond ; scoured with soft soap ; no chemicals. First Prize.
Report—Good colour, and very light in condition.

WHITE, J. F., & H. C.—Belltrees, Scone.—Strong Combing Merino Wool, in grease. Six ewe hoggets' fleeces, unskirted. Growth, 13 months ; brand, B ; bred by exhibitors, from station ewes by N. P. Bayly's ram ; age, 13 months ; paddocked only. Weight, 60 lbs. Highly Commended.
Report—Good quality and condition, and length.

WILLS-ALLEN, T. P.—Gunnible, Liverpool Plains.—Wool in grease, other than Merino. Six rams' fleeces, unskirted. Growth, 376 days ; brand, AW ; bred by exhibitor, from pure Lincoln rams from ewes having a strain of Lincoln blood ; grown at Gunnible, Liverpool Plains ; age, 2 and 3 years ; paddocked. Weight, 75 lbs. 8 ozs. First Prize.
Report—Tender and irregular.

WILLS-ALLEN, T. P.—Gunnible, Liverpool Plains.—Wool washed, other than Merino. Six ewe-hoggets' fleeces, unskirted. Growth, 13½ months ; brand, EW ; bred by exhibitor, from Lincoln and Merino crossed ; grown at Gunnible ; warm soak and spout-washed, soft soap ; age 13 and 13½ months ; paddocked. Weight, 42 lbs. 12 ozs. Commended.
Report—Fair staple and condition.

YORK & WALSH—Waterloo.—Bale of Fellmongered Merino Wool. Growth, 10 months ; brand, B ; bred by J. Brown ; grown at Cannonbar, Duck Creek ; washed with hot water, common soap ; age, 3 to 4 years ; paddocked. Commended.
Report—A really good wool, but yolky.

NEW ZEALAND.

BAKER & ALLISON—Wangaehu-Wanganui.—Wool in grease, other than Merino. Six rams' fleeces, unskirted. Growth, about 340 days; brand, a key; bred by exhibitors, by imported rams from Thonardi flock, Lincolnshire, and from ewes bred by exhibitors from ewes imported from Vesey and Dudding's; grown at Wangaehu; 2 years; paddocked.

Highly Commended.

Report—Good strong lustrous wool.

BEVAN, junr., Thos.—Waikawa, Foxton.—Flax.

Highly Commended.

Report—Maori dressed, well cleaned, fair quality.

FULTON, Charles—Blenheim, Marlborough.—Flax.

Commended.

Report—Of fair quality.

M'NICOL, D.—Auckland.—Wool in grease, other than Merino. Six ram-hoggets' fleeces, unskirted. Growth, 400 to 420 days; brand, DMN over O; bred by exhibitor, by Lincoln rams, the progeny of imported rams, out of provincial-bred Lincoln ewes; grown at Auckland; about 13½ months; paddocked. Weight, 82 lbs. 8 ozs.

Commended.

Report—Sound and bright.

OWEN & LETHBRIDGE—Wangaehu-Wanganui.—Wool in grease, other than Merino; Six ram-hoggets' fleeces, unskirted. Growth, 15 months; brand, ⚹; bred by exhibitors, from five American Merino rams, out of pure-bred Lincoln ewes; grown at Ruatangala Station; age, 15 months; paddocked. Highly Commended.

Report—Fine, cross-bred, very good condition.

REED, Charles—Ashburton, Canterbury.—Wool in grease, other than Merino. Six ewe-hoggets' fleeces, unskirted. Growth, 382 days; brand, 6 musical sharps; bred by exhibitor from English Lincolns; grown at Westerfield Station, New Zealand; paddocked. Weight, 58 lbs.

First Prize.

Report—Deep, well grown, sound, good centre.

ROBERTSON, Alexander—Nelson.—Hemp.

First degree of Merit.

Report—Very strong; dressed by Maoris.

TANCRED, Clement W.—Canterbury.—Wool in grease, other than Merino. Six ewe-hoggets' fleeces, unskirted. Growth, 13 months; brand, CT over W in diamond; bred by exhibitor, from ewes out of Mr. M'Lean's flock at Auckland, by rams imported from Thorpe, Stafford; grown at Canterbury; age, 13 months; paddocked. Commended.

Report—For lustre and strength.

CLASSES 639-644.—*Textile Substances of Vegetable or Animal Origin.*

WALLACE, James—Hillside, Papatoitoi, Auckland.—Wool in grease, other than Merino. Six ewes' fleeces, unskirted. Growth, 1 year and 10 days; brand, JW over I in diamond; bred by exhibitor, from imported Lincoln rams and Colonial ewes; grown at Hillside; age, full-mouthed; paddocked. Weight, 88 lbs. First Prize.

Report—A splendid staple, bright colour, good lustre.

WATT, W. H.—Wangamia.—Wool in grease, other than Merino. Six ewes' fleeces, unskirted. Growth, 350 days; brand, anchor 3; bred by exhibitor, from imported Leicester rams out of Leicester ewes bred on station; grown at Westmore Station; age, 6-tooth; paddocked. Highly Commended.

WATT, W. H.—Wangamia.—Wool in grease, other than Merino. Six ram-hoggets' fleeces, unskirted. Growth, 14 months; brand, anchor 2; bred by exhibitor, by imported Leicester rams, out of Colonial-bred Leicester ewes; grown at Westmore station; age, 14 months; paddocked. Highly Commended.

WATT, W. H.—Wangamia.—Wool in grease, other than Merino. Six rams' fleeces, unskirted. Growth, 360 days; brand, anchor 1; bred by exhibitor, by imported Leicester rams, out of Colonial-bred Leicester ewes; grown at Westmore Station; age, 6-tooth; paddocked. Highly Commended.

WATT, W. H.—Wangamia.—Wool in grease, other than Merino. Six ewe-hoggets' fleeces, unskirted. Growth, 14 months; brand, anchor 4; bred by exhibitor, from imported Leicester rams, out of Leicester ewes bred on station; grown at Westmore Station; age, 14 months; paddocked. Commended.

Report—For lustre and strength.

WATT, W. H.—Wangamia.—Washed Wool, other than Merino. Six rams' fleeces, unskirted. Growth, 360 days; brand, anchor 5; bred by exhibitor, from imported Leicester rams, out of Leicester ewes bred on station; grown at Westmore Station; washed by swimming through sheep-wash; age, 6-tooth; paddocked. Highly Commended.

WATT, W. H.—Wangamia.—Washed Wool, other than Merino. Six ewes' fleeces, unskirted. Growth, 350 days; brand, anchor 7; bred by exhibitor, from imported Leicester rams, out of Leicester ewes bred on station; grown at Westmore Station; washed by swimming through sheep-wash; age, 6-tooth; paddocked. Highly Commended.

Report—For great centre and strength; the same remark is applicable to the whole of Watt's exhibits.

WATT, W. H.—Wangamia.—Washed Wool, other than Merino. Six rams' hoggets fleeces, unskirted. Growth, 14 months; brand, anchor 6; bred by exhibitor from imported Leicester rams, out of Leicester ewes bred on station; grown at Westmore Station; washed by swimming through sheep-wash; age, 14 months; paddocked. Highly Commended.

WATT, W. H.—Wangamia.—Washed Wool, other than Merino. Six ewes' hoggets fleeces, unskirted. Growth, 14 months ; brand, anchor 8 ; bred by exhibitor, from imported Leicester rams,out of Leicester ewes, bred on station ; grown at Westmore Station ; washed by swimming through sheep-wash ; age, 14 months ; paddocked. Highly Commended.

QUEENSLAND.

BELL & SONS—Jimbour.—Strong Combing Merino Wool in grease. Six ewes' fleeces, unskirted. Growth, 364 days ; brand, A ; bred by exhibitor ; pure Jimbour ; grown at Jimbour ; age, 2 years ; shepherded, paddocked, and housed ; weight, 56 lbs. Commended.
Report—Fuzzy on the back ; good wool ; fair quality.

BELL & SONS—Jimbour.—Strong Combing Merino Wool, in grease. Six rams' fleeces, unskirted. Growth of wool, 380 days ; brand, AAA ; bred by exhibitors ; crossed between Spanish merino and Jimbour ; grown at Jimbour ; age, 2 to 4 years ; shepherded, paddocked, and housed. Weight, 89 lbs. 12 ozs. ; price, 11d. per lb. Commended.
Report—Sound, good staple and condition.

BOTANIC GARDENS—Brisbane.—Irish Flax.
Highly Commended.
Report—A good sample, of fair quality and fairly dressed.

CRIBB & FOOTE—Ipswich.—Cotton (ginned).
Commended.

FISHER, C. B.—Headington Hill, Darling Downs.—Strong Combing Merino Wool, in grease, Six ewes' hoggets fleeces, unskirted. Growth, 395 days ; brand LZ ; bred by exhibitor ; by Fisher rams out of Fisher ewes ; grown at Headington Hill ; age, 15 months ; housed for seven months. Weight, 50 lbs. 12 ozs. Second Prize.
Report—Good quality and condition, and length.

FISHER, C. B.—Headington Hill, Darling Downs.—Strong Combing Merino Wool, in grease. Six ewes' fleeces, unskirted. Growth, 395 days ; brand, JX ; bred by exhibitor ; Fisher blood on both sides ; grown at Headington Hill ; age, 2 years ; housed 9 months previously in lucerne paddock. Weight, 65 lbs. 8 ozs. Highly Commended.
Report—Superior length, strength, and condition.

GORE & CO.—Yandilla.—Strong Combing Merino Wool, washed. Six ewes' hoggets fleeces, unskirted. Growth, 365 days ; brand, ⊖ ; bred by exhibitors, from in-bred pure Australian merino ; originally by rams of Learmonth and Thos. Shaw, junr., of Victoria, classed for twenty-one years by John Shaw, sen. ; grown at Yandilla ; washed with cold water rain soak, and spouted with 9 ft. pressure ; age, 365 days ; padocked ; fed on natural grasses. Weight, 24 lbs. 4 ozs. Second Prize.
Report—Good long wool, but badly washed.

CLASSES 639–644.—*Textile Substances of Vegetable or Animal Origin.*

GUNN, Donald—Pikedale.—Clothing Merino Wool, washed. Six rams' fleeces, unskirted. Growth, 350 days ; brand, REITH ; bred by exhibitor, from Negretti type Saxon merino, imported by exhibitor ; grown at Pikedale ; washed in hot soak with soda and soap, high-pressure spouts ; age, 3 to 5 years ; paddocked, natural grasses ; weight, 27 lbs. 8 ozs. First Prize.

Report—A very fine clothing wool of good quality.

GUNN, Donald—Pikedale.—Clothing Merino Wool, washed. Six rams' fleeces, unskirted. Growth, 350 days ; brand, BULAUNBI ; bred by exhibitor, from Negretti type Saxon merino, imported by exhibitor, grown at Pikedale ; washed in hot soak with soda and soap, high pressure spouts ; age, 3 to 5 years ; paddocked, natural grasses. Weight, 18 lbs. 12 ozs. Second Prize.

Report—Very fine clothing wool.

GUNN, Donald—Pikedale.—Clothing Merino Wool, washed. Six ewes' fleeces, unskirted. Growth, 350 days ; brand, BOOLA ; bred by exhibitor, from Negretti type Saxon merino, imported by exhibitor, grown at Pikedale ; hot soak with soda and soap, high-pressure spouts ; age, 3 to 5 years ; paddocked, natural grasses. Weight, 22 lbs. 4 ozs. Second Prize.

Report—Fair quality, medium fine.

HODGSON & RAMSAY—Eton Vale, Darling Downs.—Clothing Merino Wool, in grease. Six ram hoggets fleeces, unskirted. (First shearing.) Growth, 422 days ; brand, 1 in diamond ; bred by exhibitors, by the progeny of imported Steiger rams ; grown on Eton Vale Run ; hoggets paddocked. Weight, 51 lbs. 12 ozs. Highly Commended.

Report—A good, useful, clothing wool.

JENKINS, M.R.C.S.L., R. L.—Callandoon.—Clothing Merino Wool, washed. Six ewes' fleeces, unskirted. Growth, 350 to 360 days; brand, NPX ; bred by exhibitor, from Callandoon ewes, by Callandoon and Jimbour rams ; grown at Callandoon ; cold soak 3 minutes, sweat-shed 3 hours, under side spouts 2½ minutes ; age, 2 to 7 years ; paddocked ; shorn 4th day after washing. Weight, 18 lbs. First Prize

Report—Very fine, light superior quality.

JENKINS, M.R.C.S.L., R. L.—Callandoon.—Clothing Merino Wool, washed. Six ewe hoggets' fleeces, unskirted. Growth, 411 days ; brand, PQR over X6 ; bred by exhibitor, from Callandoon ewes, by Callandoon and Jimbour bred rams ; grown at Callandoon ; cold soak 3 minutes, sweat-shed 3 hours, under side spout 2½ minutes ; age, 411 days ; paddocked. Weight, 17 lbs. Commended.

Report—Good staple and condition.

LOW, J. & W.—Welltown.—Strong Combing Merino Wool, washed. Six ewe hogget's fleeces, unskirted. Growth, 326 days ; brand, XIL ; bred by exhibitors ; grown at Welltown ; ordinary hand-washed ; age, 326 days ; shepherded. Weight, 19 lbs. First Prize.

Report—Good strong wool, light in character.

CLASSES 639–644.—*Textile Substances of Vegetable or Animal Origin.*

MACANSH, J. D.—Canning Downs, Warwick.—Strong Combing Merino Wool, washed. 6 ewes' fleeces, unskirted. Growth, 364 days; brand, CWS; bred by exhibitor, from his own flocks of Australian Merinos, in which there has been no admixture of blood for many years; grown at Canning Downs; washed in hot water, soft soap, and a small quantity of Canadian grey ash, and spouted with cold water; age, over 3 years; paddocked. Weight, 31 lbs. First Prize.

Report—Good washed staple, strong wool.

MACANSH, J. D.—Canning Downs, Warwick.—Strong Combing Merino Wool, in grease. Six ewes' fleeces, unskirted. Growth, 375 days; brand, BP; bred by exhibitor, from his own flocks of Australian Merinos, in which there has been no admixture of blood from other flocks for many years; grown at Canning Downs; age, 2 and 3 years; paddocked. Weight, 71 lbs. 8 ozs. Highly Commended.

Report—Good sound staple.

MACPHERSON, Alex.—Brisbane.—Jute, Rosella, Side Retusa, and other Fibres. First degre e of Merit Special.

Report—A splendid exhibit, deserving of special mention.

MACPHERSON, Alex.—Brisbane.—Collection of Jute.
First degree of Merit.

SIMPSON, G. M.—Bon Accord, Dalby.—Fine Combing Merino Wool, in grease. Six ram hoggets' fleeces, unskirted. Growth, 344 days; brand, BIA over 5; bred by exhibitor, descended from ewes purchased from Messrs. Gore & Co. by ram purchased from D. Taylor, Tasmania; age, 344 days; paddocked. Weight, 39 lbs.; price, 1s. per lb. Commended.

Report—Very fine, good combing, light.

SOUTH AUSTRALIA.

CHAMBER OF COMMERCE—Adelaide.—Kidney Cotton (unginned).
First degree of Merit.

Report—A good sample.

MAURICE, Price—Castambul.—Angora Fleece Wool.
First degree of Merit.

Report—A very good sample.

PITTS, E. W.—The Levels, Dry Creek.—Strong Combing Merino Wool, in grease. 6 rams' fleeces, unskirted. Growth of wool, 374 days; brand, IR; bred by C. B. Fisher and exhibitor; bred from C. B. Fisher's stock, which came originally from New South Wales; grown at The Levels; age, 5 sheep 2 years, one 3 years; paddocked and housed. Weight, 151 lbs. First Prize Special.

Report—Inasmuch as this exhibit surpasses anything in its class in point of money value we recommend that a special prize be given for the same.

CLASSES 639-644.—*Textile Substances of Vegetable or Animal Origin.*

PITTS, E. W.—The Levels, Dry Creek.—Strong Combing Merino Wool, in grease. Six ewe hogget's fleeces, unskirted. Bred by exhibitor, from exhibitor's pure flocks ; grown at The Levels ; hoggets. Weight, 52 lbs. First Prize.

Report—Splendid quality, and sound, good staple.

PITTS, E. W.—The Levels, Dry Creek.—Strong Combing Merino Wool, in grease. Six ewes' fleeces, unskirted. Growth, 370 days ; brand, IE ; bred by exhibitor, from C. B. Fisher's stock, which came originally from New South Wales ; grown at The Levels ; age, three 2 years, two 1 year, one 3 years ; paddocked and housed. Weight, 85 lbs. Second Prize.

Report—Good sound combing wool, splendid quality.

SOUTH AUSTRALIAN COMMISSION—Adelaide.—Kidney Cotton (unginned). Commended.

Report—A fair sample.

TASMANIA.

GIBSON & SON, Wm.—Scone.—Bale of Combing Merino Wool, in grease. Ewes fleeces, skirted. Growth of wool, 400 days ; brand, YX ; bred by exhibitors ; pure Tasmanian Merinos, originals imported ; grown at Scone ; aged, 400 days ; bush run. Price, 1s. 4d. per lb. First and Champion Prizes.

Report—Superior condition and staple ; lustres very fine ; free.

GIBSON & SON, Wm.—Scone.—Fine Combing Merino Wool, in grease; Six ewes' fleeces, unskirted. Growth, 360 days ; brand, DC ; bred by exhibitors, from pure Tasmanian Merinos ; originals imported over 40 years ago ; grown at Scone ; age, 2 and 4-tooth ; paddocked ; never housed. Weight, 59 lbs. 8 ozs ; price, 16½d. per lb. First and Champion Prizes.

Report—A grand and beautiful combing wool, nearly perfection.

GIBSON & SON, Wm.—Scone.—Bale Washed Combing Merino Wool. Ewes fleeces, skirted. Growth, 410 days ; brand RQ ; bred by exhibitors, from pure Merino, descended from original importations ; grown at Scone ; soaked in hot water (soap and soda), then spouted ; age, 415 days ; paddocked. Price, 4s. 6d. per lb. First Prize.

Report—Silky soft ; splendid condition ; superior fine.

GIBSON, & SON, Wm.—Scone.—Bale of Combing Merino Wool, in grease, skirted. Growth of wool, 420 days ; branded YX ; bred by exhibitors ; pure Merinos, from originals, imported from Spain ; grown at Scone ; aged, 420 days ; young ewes ; bush run, never housed. Price, 14½d. per lb. First Prize.

Report—Very superior combing wool.

CLASSES 639-644.—*Textile Substances of Vegetable or Animal Origin.*

GIBSON & SON, Wm.—Scone.—Fine Combing Merino Wool, in grease. Six rams' fleeces, unskirted. Growth, 330 days; brand, BA; bred by exhibitors, from pure Tasmanian Merino originals, imported over 40 years since; grown at Scone; age, 2, 4, and 6-tooth; paddocked. Weight, 86 lbs. 8 ozs. Price, 13d. per lb. Second Prize.

Report—Good combing Merino wool, of fine, deep, silky quality; a very good wool all round.

KEACH, G. W.—Kiswick, Ross.—Fine Combing Merino Wool, in grease. Six ewes' fleeces, unskirted. Growth, 364 days; brand, CHI; bred by exhibitor, from pure Merinos; grown at Chiswick; paddocked. Weight, 58 lbs.; price, 13½d. Highly Commended.

Report—Extra superfine, good combing.

KERMODE, W. A.—Mona Vale, Ross.—Commercial Bale of Wool. Growth, lambs, 6 months; brand, FT; bred by exhibitor, from rams and ewes imported in 1827 from Germany; grown at Mona Vale; hot water, soft soap; age, 6 months; paddocked.

Silver Medal (conjointly with next exhibit).

Report—A very beautiful lambs' wool.

KERMODE, W. A.—Mona Vale, Ross.—Commercial Bale of Wool. Growth, 365 days; brand, H; bred by exhibitor, from rams and ewes imported in 1827 from Germany; grown at Ross; age, various; paddocked.

Silver Medal (conjointly with lambs' wool exhibit).

KERMODE, W. A.—Mona Vale, Ross.—Fine Combing Merino Wool, in grease. Six ewes' fleeces, unskirted. Growth, 370 days; brand, BY; bred by exhibitor, from rams and ewes imported in 1827, from Germany; grown at Mona Vale. Age, 2, 4, 6, and 8-tooth; paddocked. Weight, 49 lbs. Price, 16d. per lb. Second Prize.

Report—Extra superior combing—all that can be desired. We strongly recommend that a second prize be also given to this exhibit, as we had great difficulty in deciding to whom this prize as offered by Schedule should go.

KERMODE, W. A.—Mona Vale, Ross.—Merino Rams' Fleece. Weight, 16 lbs. Very Highly Commended,

Report—A magnificent fleece; excellent length of staple, sound as a shell, and from all appearance would make an excellent colour. A fleece of very high character.

KERMODE, W. A.—Mona Vale, Ross.—Fine Combing Merino Wool, washed. Six rams' fleeces, unskirted. Growth, 379 days; brand, CX; bred by exhibitor, from German rams and ewes, imported, 1827, grown at Mona Vale, hot water washed, soft soap; age, 4, 6, and 8-tooth; paddocked. Weight, 23 lbs. 4 ozs. Price, 3s. 3d. per lb.

Very Highly Commended.

Report—Extra superior, and a grand wool in all respects.

CLASSES 639-644.—*Textile Substances of Vegetable or Animal Origin.*

KERMODE, W. A.—Mona Vale, Ross.—Commercial Bale of Wool. Growth, 375 days ; brand, H ; bred by exhibitor, from rams and ewes imported in 1827 from Germany ; grown at Mona Vale ; age, 4-tooth ; paddocked. Commended.

KERMODE, W. A.—Mona Vale, Ross.—Commercial Bale of Wool. Growth, various ; brand, WAK ; bred by exhibitor, from exhibitor's flock, kept pure from foreign blood for fifty years ; grown at Mona Vale ; age, various ; shepherded and paddocked. Commended.

KERMODE, W. A.—Mona Vale, Ross.—Six Fleeces ; greasy wool. Commended.

KERMODE, W. A.—Mona Vale, Ross.—Six Fleeces ; washed wool. Highly Commended. Silver Medal.

PARRAMORE, George—Ross.—Strong Combing Merino Wool, in grease. Six rams' fleeces, unskirted. Growth of wool, 366 days ; brand, WT ; bred by exhibitor ; pure Merino, from sheep imported from Germany to Tasmania in 1823, from Elector of Saxony's flock ; grown at Wetmore ; age, 4-tooth ; paddocked. Weight, 72 lbs. Price, 13d. per lb. Second Prize.

Report—Superior quality, bright and free.

PARRAMORE, Thomas—Ross.—Fine Combing Merino Wool, washed. Six ewes' fleeces, unskirted. Growth, 395 days ; brand, PB ; bred by exhibitor, from sheep imported in 1823, from Elector of Saxony's flock (see history) ; grown at Beaufront ; soaked in water 110° and high pressure jets acting all over body, washed with soft soap and small quantity of potash ; age, 4 and 6-tooth ; paddocked. Price, 2s. 11d. per lb. ; weight, 30 lbs. 8 ozs. First Prize.

Report—Grand combing, deep and very desirable.

PARRAMORE, Thomas—Ross.—Strong Combing Merino Wool, in grease. Six ewes' fleeces, unskirted. Growth, 364 days ; brand, BT ; bred by exhibitor, from pure Merino sheep imported to Tasmania from Germany in 1823, from the Elector of Saxony's flock ; grown at Beaufront ; age, 4-tooth ewes ; paddocked, natural grasses. Weight, 64 lbs. First Prize.

Report—Superior quality and condition, a good combing.

UNITED STATES.

ELLSWORTH, M. J.—Cornwall, Addison Co., Vt.—Wool Exhibit (shown in the collection of the Vermont Sheep Breeders' Association). Growth, 368 days ; brand, 11 ; bred by M. J. Ellsworth, Cornwall, Addison County, Vermont, U.S.A., and improved from Merinos imported from Spain 1802 and 1810, unmixed with other blood ; grown at Cornwall, Addison County, Vermont, U.S.A. ; age, 3 years, ewes ; pasture-fed to December 1st, housed after. Highly Commended Special.

ELLSWORTH, M. J.—Cornwall, Addison Co., Vt.—Wool Exhibit (shown in the collection of the Vermont Sheep Breeders' Association). Growth, 368 days ; brand, 12 ; bred by M. J. Ellsworth, Cornwall, Addison County, Vermont, U.S.A., and improved from Merinos imported from Spain 1802 and 1810, unmixed with other blood ; grown at Cornwall, Addison County, Vermont, U.S.A. ; age, 3 years, ewe ; pasture-fed to December 1st, housed after. Highly Commended Special.

LUSK, S. B.—Batavia, Genesee, N.Y.—American Merino Combing Wool. Ewes' fleeces. Average weight of fleece, 17 lbs. 5 ozs. ; paddock and fodder-fed. Commended.

Report—A good sound combing wool, of medium quality.

MARTIN, P. & G. F. RUSH—Munroe Co., N.Y.—American Merino Combing Wool. Ewes' fleeces. Average weight of fleece, 13 lbs. ; paddocked and fodder-fed. Second Prize.

Report—A good combing wool, but lacking quality.

PIERPONT, D. O.—Allen's Hill, Ontario Co., N.Y.—American Combing Merino Wool. Average weight of fleece, 11 lbs. ; paddock and fodder-fed. Commended.

Report—A good useful combing wool.

RAY BROTHERS—Horneye, Ontario Co., N.Y.—American Merino Wool. Ewes' fleeces. 350 days growth ; average weight of fleece, 14¾ lbs. ; paddock and fodder-fed. First Prize.

TOWNSEND, Albert—Pavilion Center, Genesee, N.Y.—American Combing Merino Wool. Ewes' fleeces. Average weight of fleece, 13 lbs. ; paddocked and fodder-fed. Commended.

Report—A good sound combing wool of medium quality.

VANDERCOOK, W. C.—Cherry Hill, Winnebay, Ill.—Spanish Merino Wool. Ewes' fleeces, 355 days growth ; average weight of fleece, 10 lbs. 3 ozs. ; paddocked and fodder-fed. Commended.

Report—Good sound combing wool.

VERMONT MERINO SHEEP BREEDERS' ASSOCIATION.—Middleburg, Vt.—Twenty-four exhibits of Merino Wools, Forming Collective Exhibit from the Association First Prize.
Silver Medal for general excellence of the Exhibits.

Report—Good, strong, useful, combing wool.

VICTORIA.

BUCHANAN, A.—Titanga, Lismore.—Commercial Bale of Wool. Growth, 384 days ; brand, TITANGA, Mount Elephant ; bred by exhibitor ; bred from exhibitor's breed of pure Merinos ; grown at Lismore, Victoria ; 20 and 21 months ewes ; paddocked. Highly Commended.

Report—A good sound fine combing wool ; light condition ; free from seed, and in good saleable condition.

CLASSES 639-644.—*Textile Substances of Vegetable or Animal Origin.*

BUCHANAN, A.—Titanga, Lismore. — Commercial Bale of Wool. Growth, 377 days ; brand, TITANGA, Mount Elephant ; bred by exhibitor ; bred from exhibitor's breed of pure Merinos ; grown at Lismore, Victoria ; age, 2½ years wethers; paddocked. Commended.

Report—A good combing wool, free from seed and burr.

CUMMING, Thos. F.—Darlington.—Fine Combing Merino Wool, in grease. Six rams' fleeces, unskirted. Growth, 372 days ; brand, AB ; bred by exhibitor ; sires, Sir Thomas Nugget 2nd and Sir John ; dams, Stoney Point ewes ; grown at Darlington ; age, 2, 3, and 4 years ; paddocked. Weight, 76 lbs. 12 ozs.; price, 15d. per lb.

First and Champion Prizes.

Report—A splendid combing wool, really beautiful in every respect, approaching almost to perfection.

CUMMING, Thos. F.—Darlington.—Fine Combing Merino Wool, in grease. Six ewes' fleeces, unskirted. Growth, 372 days ; brand, CD ; bred by exhibitor ; sires, Sir Thomas Nugget 2nd, and Sir John ; grown at Stoney Point ; age, 2, 3, and 4 years. Weight, 57 lbs. ; price, 15d. per lb. Second Prize.

Report—Very superior combing, beautiful, but slightly uneven.

CUMMING, Thos. F.—Darlington.—Fine Combing Merino Wool, in grease. Six ewes' fleeces, unskirted. Growth, 379 days ; brand, IJ ; bred by exhibitor, from Stoney Point rams out of Stoney Point ewes ; grown at Stoney Point ; age, 2, 3, and 4 years ; paddocked. Weight, 54 lbs. 12 ozs. ; price, 15d. per lb. Highly Commended.

Report—Superior combing, of beautiful quality.

CUMMING, Thos. F.—Darlington.—Strong Combing Merino Wool, in grease. Six rams' fleeces, unskirted. Growth of wool, 372 days ; brand, PF ; bred by exhibitor ; sires, Sir Thomas Nugget 2nd Sir John ; grown at Stoney Point ; age, 2, 3, and 4 years ; paddocked and housed. Weight, 64 lbs. First Prize.

Report—In splendid condition ; a superior combing wool.

CUMMING, Thos. F.—Darlington.—Bale of Combing Merino Wool in grease. Ewes' fleeces, skirted. Brand, STR ; bred by exhibitor ; sire, Stoney Point rams from Stoney Point ewes ; grown at Stoney Point ; age, 2, 3, and 4 years ; paddock-fed. Highly Commended.

Report—A superior bale of deep grown, good combing wool.

CURRIE, John L.—Larra Derrinallum.—Bale of Combing Merino Wool, in grease. Ewes' fleeces, skirted. Growth, 362 days ; brand, LMB ; bred by exhibitor ; Australian Merino, by Camden (from Spanish) Merino ; grown at Larra ; age, 1½ year ; paddocked. Price, 1s. 3d. per lb. Second Prize.

Report—Superior condition, staple, very fine and free.

CLASSES 639–644.—*Textile Substances of Vegetable or Animal Origin.*

GREEVES, Edward G.—Barryalloak, Skipton.—Bale of Combing Merino Wool, in grease. Ewes' fleeces, skirted. Growth of wool, 363 days; brand, EX over GG; bred by exhibitor, from exhibitor's pure stud flock; grown at Skipton, Victoria; age, half 2-toothed, and half 4-toothed ewes; paddock-fed. Price, 14½d. per lb. Highly Commended.
Report—Very good condition, and staple, light, and fine.

M'INTYRE, Peter—Beaufort.—Bale of Washed Combing Merino Wool, Ewes' fleeces, skirted. Growth, 370 days; brand, CBA; bred by exhibitor, from the Ercildoune Australian Merino; grown at Beaufort; washed with hot water, little soap; aged, 4-toothed ewes; paddocked. Price, 4s. 2d. per lb. Second Prize.

RUSSELL, Philip—Carngham.—Fine Combing Merino Wool, washed. Six ram hoggets' fleece, unskirted. Growth, 13½ months; brand, E; bred by exhibitor, from his own ewes, by J. L. Currie's rams, grown at Carngham; washed in hot water and Kelsall's blue-mottled soap; age, 13½ months. Weight, 32 lbs. 12 ozs. First Prize.
Report—Superior, grand combing.

RUSSELL, Philip—Carngham.—Fine Combing Merino Wool, in grease. Six ram hoggets' fleeces, unskirted. Brand, G; bred by exhibitor, from his own ewes, by a ram bought from Mr. Currie; grown at Carngham Station; age, 1 year 1 month; paddocked; fed on natural grasses, only excepting a few weeks in February. Weight, 46 lbs. 8 ozs. Price, 13½d. First Prize.
Report—Very fine and even combing wool, and of soft and deep fibre.

RUSSELL, Philip—Carngham.—Fine Combing Merino Wool, washed. Six rams' fleeces, unskirted. Growth, 365 days; brand, A; bred by exhibitor, from station-bred ewes by Currie ram; grown at Carngham Station; washed in hot water and Kelsall's blue mottled soap; age, 3, 2, and 3, 4-tooth; housed 6 months. Price, 2s. 11d. per lb. Weight, 38 lbs. 8 ozs. First Prize.
Report—A grand combing wool, good in all respects, and highly desirable.

RUSSELL, Philip—Carngham.—Fine Combing Merino Wool, in grease. Six ewe hoggets' fleeces, unskirted. Brand, F; bred by exhibitor, from home stud flock, partly got by ram bought from Mr. Currie; grown at Carngham Station; age, about 13 months; paddocked; fed on natural grasses. Weight, 47 lbs. 12 ozs. Price, 13½d. per lb. Second Prize.
Report—Good strong, deep combing, light, and very desirable.

RUSSELL, Philip—Carngham.—Fine Combing Merino Wool, washed. Six ewe hoggets' fleeces, unskirted. Brand, C; bred by exhibitor, by selection from his own stud flock, and a few of them got by a ram bought of Mr. Currie; grown at Carngham Station; washed in hot water and Kelsall's mottled soap; age, about 1 year 1 month; paddocked; fed on natural grasses only. Weight, 26 lbs. 8 ozs. Second Prize.
Report—Deep, good, nice combing, but rather uneven.

CLASSES 639–644.—*Textile Substances of Vegetable or Animal Origin.*

RUSSELL, Philip—Carngham.—Fine Combing Merino Wool, washed. Six ewes' fleeces, unskirted. Growth, 366 days; brand, B; bred by exhibitor, from own flock, except 1 fleece 2-tooth, by J. L. Currie's ram Long Tail; grown at Carngham Station; washed in hot water and Kelsall's mottled soap; aged, 2 and 4-tooth; housed for about 6 months. Price, 2s. 10d. per lb. Weight, 30 lbs. 8 ozs. Second Prize.
Report—Grand super-combing, very good in every way.

RUSSELL, Philip—Carngham.—Bale Washed Combing Merino Wool. Ewes' fleeces, skirted. Growth, 377 days; brand, D; bred by exhibitor, from his own stud and general flocks; grown at Carngham Station; washed in hot water with Kelsall's blue-mottled soap; age, from 18 months to 2 years and upwards; paddocked. Price, 3s. 9d. per lb.
Highly Commended.

TRONSON & RUTHERFORD—Melbourne.—Woollen Flocks (four samples.) Honourable Mention.
Report—Of fair quality.

WILSON, John—Gala, Lismore.—Fine Combing Merino Wool, in grease. Six ewes' fleeces, unskirted. Growth, 343 days. Brand, TAROOK; bred by exhibitor, from Merinos on station; grown at Gala; age, 8-tooth ewes; paddocked. Weight, 37 lbs. Price, 15d. per lb.
Commended.
Report—Good combing, but rather open, and not very fine.

WILSON, John—Gala, Lismore.—Bale of Combing Merino Wool, in grease. Ewes' fleeces, skirted. Growth, 363 days; brand, MOONYIL; bred by exhibitor; Merinos on station; grown at Gala, Lismore; age, 6-tooth; paddocked. Commended.
Report—Grand staple and condition, fine and free.

WILSON, John—Gala, Lismore.—Commercial Bale of Wool. Growth, 365 days; brand, Mount Elephant, over No. 34; bred by exhibitor, from Merinos on station; grown at Gala, Lismore; mixed ages; paddocked.
Commended.
Report—A good, sound, fine combined wool, light condition; free from seed, and in good saleable condition.

WILSON, John—Gala, Lismore.—Fine Combing Merino Wool, in grease. Six rams fleeces, unskirted. Growth, 364 days; brand, WOOMOOMJA; bred by exhibitor, from Merinos on station; grown at Gala, Lismore; age, 6 and 8-tooth; paddocked. Price, 14d. per lb. Weight, 44 lbs. 8 ozs. Commended.
Report—A nice combing wool; very even; of stout staple; very desirable.

CLASS 645.—Horses.

JUDGES.

AIREY, H.	Brigade Office, Sydney.
BADGERY, F. D.	Sutton Forest, N.S.W.
DAVIS, W.	Goulburn, N.S.W.
DOWLING, VINCENT	Rylstone, N.S.W.
GORDON, P. R.	Brisbane, Queensland.
LLOYD, CHARLES M.	Urana, N.S.W.
M'KELLAR, ALEXANDER	Goulburn, N.S.W.
SHAW, JOHN	Wallerawang, N.S.W.
SUTTON, PETER	Sydney.
TAIT, JOHN	Sydney.
WESTON, FRANK J.	South Creek, N.S.W.
WOODS, JOHN	Sydney.

STEWARDS.

Draught Horses—

BEDWELL, CRAWFORD ... Calder House, Redfern, Sydney.

Coaching and Miscellaneous Horses—

BRUCE, ALEXANDER, Chief Inspector of Stock... ... Sydney.

Blood Horses—

HARNETT, LAURENCE JOSEPH ... ... Sydney.

ATTENDING MEMBER OF COMMISSION.

COX, Hon. GEORGE H., M.L.C. ... ... Sydney.

AWARDS NOMENCLATURE.

The Awards in Class 645—Horses, Asses, and Mules are thus described in their relative orders of merit:—Champion Prize, carrying Gold Medal; First Prize, Silver Medal; Second Prize, Bronze Medal; while diplomas were issued marking the "Highly Commended" and "Commended" recommendations of the Judges.

Horses, Asses, and Mules.

CLASS 645.

GREAT BRITAIN AND IRELAND.

BRUCE, R.—Great Smeaton, Yorkshire.—Heavy Draught Mare. Four years old and over. Age, eight years; breeder not known. *Maggie*, bay with white face; by Lord Lyon; dam, Sall.
First and Champion Prizes.

NEW SOUTH WALES.

AIREY, H. P.—Newtown.—Pony, 12 hands and under. Age, five years. *Fidget*, bay; unknown. Second Prize.

AIREY, H. P.—Newtown.—Hackney, up to 14 stone. Aged. *Marmion*, grey. Commended.

AXAM, Charles—Charcoal, Illawarra.—Blood Stallion, three years old and under four years. Age, three years; foaled November 26, 1876; bred by John O'Neil, Berkely. *Young Captivator*, dark bay; by Captivator (imp.); dam, The Maid. Second Prize.

BOND, E. M.—Albury.—Arab Stallion. Age, about twelve years; white gray; known only as an imported Arab. Second Prize.

BONTHORNE, John M.—East Maitland.—Heavy Draught Filly, three years old and under four years. Age, three years; bred by Mr. Thompson. *Miss Addis*, brown; by Burton (imp.); dam, Miss Hamilton.
Commended.

BRAY, A. L.—Concord.—Coaching Mare, any age. Age, seven years; breeder unknown; dark bay; by Lord of Lynne. Second Prize.

BROWN, F.—St. Aubins, Scone.—Blood Stallion, two years old and under three years. Age, one year eight months twenty-five days. *Marionette*, light bay; by Eastly (imp.); dam, Model. Second Prize.

BROWN, F.—St. Aubins, Scone.—Arab Mare, three years old and over. Age, four years nine months fifteen days. *Ida*, light bay; by Ameer (imp.); dam, Model. Highly Commended.

BROWN, John—Eatanswill, Clarence River.—Blood Filly, three years old and under four years. Age, three years; bred by Barnes & Smith. *Prairie Bird*, brown; by Yattendon out of Juanita. Second Prize.

BROWN, John—Singleton.—Active Farm Stallion, four years old and over. Age, eleven years. *Rob Roy* (imp.), grey; sire, Wanderer; his dam by Waverley. Highly Commended.

CLASS 645.—*Horses, Asses, and Mules.*

BRUNKER, Jas. N.—West Maitland.—Blood Filly, three years old and under four years. Age, three years; bred by exhibitor. *Maribyrnong Filly*, brown; by Mr. A. Towns' Maribyrnong; dam, Nimblefoot. First Prize.

BRUNKER, James N.—West Maitland.—Hackney, up to 14 stone. Age, nine years; bred by exhibitor. *Comet*, brown; by Comet; dam, Arab mare. Second Prize.

CLARK, Hugh—Armidale.—Coaching Stallion, any age. Age, three years; bred by exhibitor. *Defiance*, dark bay; by Greyskin; dam, Jessie (a coaching mare). Commended.

CLEEVE, I. K.—Blacktown.—Trotting Stallion, any age. Age, two years six months; bred by exhibitor. *Union Jack*, dark iron grey; sire, Union (imp. American trotter); dam, Agnes. Highly Commended.

COOK, Thomas—Scone.—Hackney, up to 14 stone. Age, ten years; bred by exhibitor. *Warwick*, bay gelding; by Young Warwick; dam by Admiral (imp.). Highly Commended.

COOK, Thomas—Scone.—Hackney, up to 14 stone. Age, six years; bred by exhibitor. *Volunteer*, chesnut; gelding by Volunteer; dam Lucy. First Prize.

COX, M.L.C., HON. G. H.—Mudgee.—Arab Stallion, any age. Aged; white. Pedigree unknown, imported by P. Osborne, Esq. Commended.

DANGAR, A. A.—Baroona, Singleton.—Arab Stallion, two years old and under three years. Age, two years; bred by exhibitor. *Djeem*, dark brown, by Alif (imported Arab); dam, Jemima. First Prize.

DANGAR, A. A.—Baroona, Singleton.—Arab Stallion, two years old and under three years. Age, one year and seven months; bred by W. J. Dangar. Dark brown, by Alif (imported Arab); dam, Zuleika. Second Prize.

DANGAR, A. A.—Baroona, Singleton.—Arab Mare, three years old and over. Age, two years and nine months five days; bred by exhibitor. *Celerity*, chesnut; by Farhân (imported Arab); dam, Queen of Clubs. First Prize.

DANGAR, A. A.—Baroona, Singleton.—Arab Mare, three years old and over. Age, two years nine months six days; bred by exhibitor. *Sweetlips*, bay; by Shanghai (imported Arab); dam, Spoilt Child (imported). Second Prize.

DANGAR, A. A.—Baroona, Singleton.—Arab Stallion, any age. Age, seventeen years; bred by Sheik Mejwellel Mesrab. *Farhân* (imported), bay, by Dalmian-Kehailet el Johar, bred by the Anarjee Arabs. Highly Commended.

DANGAR, W. J.—Neotsfield, Singleton.—Arab Stallion, any age. Age, seven years. *Alif*, brown. First Prize.

DAWSON, Wm. B.—Paddington.—Hackney, up to 11 stone. Aged. *Charlie*, bright brown. Highly Commended.

CLASS 645.—*Horses, Asses. and Mules.*

DENGATE, F. J.—Camden.—Pony, 12 hands and under. Age, nine years ; bred by late John Tickner. *Don*, bright chesnut ; by the imported pony Chilian ; dam, Zoe. Highly Commended.

DENT, William—Penrith.—Blood Filly, one year old and under two years. Foaled October 25th, 1878 ; bred by exhibitor. *Signet*, dark brown ; Signet by Yattendon. First Prize.

DENT, William—Penrith.—Blood Filly, one year old and under two years. Foaled in November, 1878 ; bred by exhibitor. *Tablet*, dappled brown ; Yabyett by Tamerlane. Second Prize.

DIGHT, Arthur—Richmond.—Pair of Ponies, under 14 hands, tried in harness. Age, four years ; bred by exhibitor. *Vixen* and *Dolly Varden*, brown bays ; dam, by Exmoor pony ; sire, blood horse. First Prize.

DIGHT, Arthur—Richmond.—Horse for Single Harness. Age, six years ; bred by exhibitor. ——, brown with grey hairs ; dam, by Dr. Syntax ; sire by Maribyrong. Highly Commended.

DIGHT, Arthur—Richmond.—Heavy Draught Filly, two years old, and under three years. Age, two years ; bred by exhibitor. *Maggie*, roan ; by Muir Lad ; dam, Waxwork. Commended.

DIGHT, Arthur—Richmond.—Heavy Draught Filly, two years old, and under three years. Age, two years ; bred by exhibitor. *Lassie*, bay ; by Muir Lad ; dam, Waxwork. Commended.

DONKIN, J. B.—Forbes.—Pair of Carriage Horses. *Gaylad*, bred by Mr. Dangar, eight years. *Lancer*, by Mr. Rouse, six years. Second Prize.

DOUGLAS, Walter—Goulburn.—Farm Filly, one year old, and under two years. Age, eight and a-half months ; bred by exhibitor. *Alice*, dark grey ; by Honest Tom (imported) ; dam, Alice Grey (imported from U.S.) First Prize.

DOUGLAS, Walter—Goulburn.—Heavy Draught Stallion, three years old, and under four years. Age, two years eight months ; bred by exhibitor. *Lord Clyde*, chestnut ; by Scotchman (imported) ; dam, Jean. Second Prize.

DOWLING, Vincent—Rylstone.—Hunter, tried over leaps, carrying 12 stone. Aged ; bred by exhibitor. *Surcingle*, dark brown ; by Zamil ; dam, Silver Tail. Commended.

DUMARESQ, W. A.—Scone.—Blood Stallion, three years old, and under four years. Age, two years nine months twenty days. *Marmion*, chestnut ; by Talisman ; dam, Matilda. First Prize.

DURHAM, W. & C.—Singleton.—Heavy Draught Stallion, two years old and under three years. Age, two years ; bred by A. Town, Richmond. *Hobart Villa*, bay ; by Muir Lad (imported) ; dam, Blossom. Second Prize.

GIBSON, A. F.—Goulburn.—Trotting Stallion, any age. Age, seven years ; bred in America. *Geo. M. Patchen*, roanish brown ; by Geo. M. Patchen ; dam, a Fisher mare. Second Prize.

CLASS 645.—*Horses, Asses, and Mules.*

GLASEBROOK, James—Double Bay.—Mule, "Jinny," light brown. First Prize.

GRAHAM, J. & R.—Woodville.—Heavy Draught Stallion, four years old and over. Age, four years. *King Richard* (imp.), black; by Black Prince. Commended.

HARNETT, L. J.—Marrickville.—Trotting Mare, any age. Age, ten years. *Elegance*, chestnut, with foal at foot by the imp. American trotter San José Patchen; by Cossack. First Prize.

HAYTER, James—Camden Park.—Active Farm Stallion, four years old and over. Age, four years; bred by exhibitor. *Champion Tom*, bay; sire, Honest Tom, imp.; dam, Darling. Commended.

HELY, John F.—Woollahra.—Pony, 12 hands and under. Age, five years; bred by T. S. Mort. *Commodore*, dark brown; imported by Mr. T. S. Mort. Commended.

HINDMARSH, G. & N.—Kiama.—Coaching Horse Stallion, any age. Age, five years two months; bred by Geo. Holmes, Beverly, England. *Duke of Cleveland*, bright bay; see English Stud Book. First Prize.

HOLLAND, Thomas—Cornwallis, near Windsor.—Heavy Draught Filly, three years old and under four years. Age, 2 years eleven months; bred by exhibitor. *Gipsy Lass*, black; Muir Lad (imp.); dam, Loo. Second Prize.

HOLLAND, Thomas—Cornwallis, near Windsor.—Heavy Draught Filly, two years old and under three years. Age, one year and eleven months; bred by exhibitor. *Britannia*, bay; by Muir Lad (imp.); dam, Polly. Second Prize.

HOUGH, A. S.—Richmond.—Heavy Draught Stallion, one year old and under two years. Age, nine months; bred by exhibitor. *Young Muir Lad*, bay; by Muir Lad (imp.); dam, Bally. Second Prize.

HUGHES, E.—Douglas Park.—Lady's Hackney. Age, six years; Mr. Lysaght. *Hero*, bay horse; by Trump Card; dam unknown. Second Prize.

ICELY, Thomas Rothery—Carcoar.—Hackney, up to 11 stone. Aged; breeder unknown. *Manchester*, black; pedigree unknown. First Prize.

KINSHELA, M.—Parramatta.—Active Farm Stallion, four years old and over. Age, 8 years; bred by Jas. Thompson. *Lincoln*, dark bay; by True Britain (imp.); dam by Drayman (imp.) Commended.

LAMB, Walter—Rooty Hill.—Trotting Stallion, any age. Age, about eight years; bred in California. *San José Patchen*, chestnut; by George M. Patchen, junior; dam, a Belmont mare. Highly Commended.

LARKIN, E.—Appin.—Active Farm Stallion, four years old and over. Age, ten years; bred by H. Cook, Esq., Lincolnshire, England. *Honest Tom*, bay; by Champion of England; dam, by Honest Tom. First Prize.

CLASS 645.—*Horses, Asses, and Mules.*

LEE, John—Kelso.—Blood Stallion, four years old and over. Age, eight years; bred by George Lee, Kelso. *Kingsborough*, bay; by Kingston (imp.); dam, Sappho. Second Prize.

LEE, Thomas—Bathurst.—Blood Mare, four years old and over. Age seven years; bred by exhibitor. *Jessamine*, brown; by Yattendon; dam, Lilla. Second Prize.

LEE, Thomas—Bathurst.—Blood Stallion, one year old and under two years. Foaled September 15, 1878; bred by exhibitor, brown; by Maribyrnong; dam, Jessamine. Highly Commended.

LEE, Thomas—Bathurst.—Pony, over 12 and under 14 hands. Age, eighteen years; bred by exhibitor. *Pepper*, chestnut; by Saladin; dam, Creamy. Highly Commended.

MACHARDY, Ronald—Woollahra.—Pony over 12 and under 14 hands. Age, seven years; breeder unknown. *Prince*, black; pedigree unknown. Highly Commended.

MARKS, M.L.C., Hon. John—Darling Point.—Pony over 12 and under 14 hands. Aged; bred by Geo. Loder, Esq. *Tom*, chestnut; pedigree unknown. First Prize.

MUNRO, A. & W.—Moree.—Blood Stallion, one year old, and under two years. Age, one year nine months; bred by exhibitor. *Lucifer*, chestnut; by Lothair; dam, Countess. Second Prize.

M'CARTHY, James—Penrith.—Heavy draught filly, two years old and under three years. Age, one year eight months; bred by A. Town. *Muir Lass*, dark bay; by Muir Lad; dam, Lucy. First Prize.

M'MULLEN, F. M.—Morton Park.—Heavy Draught Stallion, one year old and under two years. Age, one year; bred by J. C. Allen, England, black; by Honest Tom, from Bess; landed here in foal in November, 1877. First Prize.

ONUS, J.—Richmond.—Heavy Draught Stallion, four years old and over. Age, ten years; bred by R. Glew, England. *Young King Tom*, bright bay; by Old Brown Tom; dam, Blossom. Highly Commended.

ONUS, J.—Richmond.—Farm Filly, two years old and under three years. Age, one year ten months; bred by Wm. Smith, Richmond. *Maggie*, bay; by Young King Tom (imp.); dam, Bonnie. First Prize.

PRENDERGAST, W.—Pitt Town.—Heavy Draught Stallion, two years old and under three years. Age, two years, bred by exhibitor; bay; by King Tom (imp.); dam, Blossom. Highly Commended.

PURCELL, John—Castlereagh.—Active Farm Stallion, four years old and over. Age, four years; bred by exhibitor; dapple brown; by W. Lamb's Lincoln; dam by the imported horse Shakespeare. Commended.

RICHARDS, Benjamin—Windsor.—Blood Stallion, two years old and under three years. Age, two years; bred by George S. Hall. Bay colt; by Yattendon; dam, Lorelette. First Prize.

CLASS 645.—*Horses, Asses, and Mules.*

RICHARDS, Benjamin—Windsor.—Blood mare, four years old and over. Age, four years; bred by exhibitor. Brown mare; by Maribyrnong; dam, Miss Magnus. Highly Commended.

RIDGE, R. C.—Windsor.—Heavy Draught Stallion, two years old, and under three years. Age, one year eight months sixteen days; bred by exhibitor. *Peter*, brown; by Davie (imp.); dam by Young Drayman. Commended.

ROTTON, Henry—Bathurst.—Coaching Stallion, any age. Age, seven years; bred by Mr. M'Kirby, Yorkshire, England. *Roseberry*, bay; by Young Michael; dam, by Wonderful. Second Prize.

ROTTON, Henry—Bathurst.—Heavy Draught Stallion, four years old and over. Age, six years; bred by Mr. John Taylor, Lancashire, England. *Thunderbolt*, bay; by Honest Tom; dam, by William the Conqueror. Commended.

ROUSE, E. S.—Rouse Hill.—Horse for single harness. Age, fourteen years; bred by Messrs. R. & E. Rouse. *Game-boy*, bay; by Yorkshire Hero (imp.) out of a Jackey mare. First Prize.

ROUSE, R.—Mudgee.—Hackney up to 11 stone. Aged; bred by Mr. M'Reynold, Mudgee. Oracle, bay gelding; by Sir Henry; dam, Remembrance. Second Prize.

ROWE, Edwin—Darlinghurst.—Pair of Ponies, under 14 hands; tried in harness. Ages, seven and six years respectively; breeders, Mr. W. Davis and the late Judge Cheeke. *Stella*, chestnut mare; by Don Juan; dam, Welsh pony. *Josephine*, light bay mare; by Kingston; dam, Nan Fan. Second Prize.

RUTHERFORD, James—Bathurst.—Trotting Stallion, any age. Age, four years; bred by L. Herr, Frankfort, Kentucky, U.S.A. *Premier*, dappled grey; by Mambrino Patchen; dam, Bessie Bedlam. First Prize.

RUTHERFORD, James—Bathurst.—Stallion Ass. Age, seven years; bred by Mr. Allison, Frankfort, Kentucky, U.S.A. *Napoleon III*, brown, by Napoleon II. First Prize.

RUTHERFORD, James—Bathurst.—Four-in-hand Team; four bays. Second Prize.

SMART, A. F.—Moree.—Hunter; tried over leaps, carrying 12 stone. Age, seven years. *Bundah*, bay gelding. First Prize.

SMITH, E.—Ginninderra.—Heavy Draught Stallion. Three years old and under four years. Foaled, 28th October, 1876. *Lincoln's Model*, dark bay; by Royal Lincoln; dam, Gipsy. Highly Commended.

STEWART, Thos., jun.—Redfern.—Blood Stallion, four years old and over. Age, eleven years; bred by Chas. Reynolds. *Priam*, bay; by New Warrior; dam, Poppett. Highly Commended.

SUTTOR, F. B. & W. S.—Bathurst.—Heavy Draught Filly, one year old and under two years. Age, eight months one day; bred by exhibitor. *Flower 3rd*, bay; by Atlas; dam, Flower 2nd. First Prize.

CLASS 645.—*Horses, Asses, and Mules.*

SUTTOR, F. B. & W. S.—Bathurst.—Heavy Draught Stallion, three years old and under four years. Age, two years nine months; bred by C. B. Fisher, Victoria. *Robin's Emperor*, bay; by Rantin' Robin (imp.); dam, Bella 2nd. First Prize.

SUTTOR, F. B. & W. S.—Bathurst.—Active Farm Stallion, four years old and over. Aged; bred in Scotland. *Jack's the Laird*, dark brown; by Prince of Wales; dam, Jess. Second Prize.

SUTTOR, F. B. & W. S.—Bathurst.—Coach Stallion, any age. Aged; unknown (imp.) *Yorkshire Hero*, bay; imported. Highly Commended.

SUTTOR, F. W.—Campbelltown.—Heavy Draught Stallion, two years old and under three years. Age, one year, eight months, twelve days; bred by C. B. Fisher, Melbourne. *Darling's Robin*, dark brown; by Rantin Robin (imp.); dam, Darling (imp.) First Prize.

SUTTOR, F. W.—Campbelltown.—Heavy Draught Filly, two years old and under three years. Age, one year nine months seven days; bred by C. B. Fisher, Melbourne. *Young Nancy 3rd*, dark brown; by Rantin' Robin (imp.); dam, Young Nancy. Highly Commended.

SUTTOR, Geo. & Herbert—Bathurst.—Blood Stallion, four years old and over. Age, 5 years; bred by C. B. Fisher, Victoria. *Artist*, bay; by Fireworks; dam, Art Union. Commended.

TAYLOR, James—St. Leonards.—Pair of Carriage Horses. Age, six years; breeder unknown. *Juan*, brown; pedigree unknown; and *Tim*, brown. Age, ten years; breeder and pedigree unknown. First Prize.

TERRY, Edward—Ryde.—Hunter, tried over leaps, carrying 12 stone. Aged. *Pygmalion*, bay gelding; pedigree unknown. Second Prize

TERRY, Edward—Ryde.—Four-in-Hand Team. Aged; bred by R. Rouse. *Yorick*, bay gelding; by imported coaching-horse Yorkshire Hero, out of a Beverly mare. Age, eight years; bred by R. Rouse. *Yorkey*, bay gelding; by imported coaching-horse Yorkshire Hero, out of a Beverly mare. Age, seven years; bred by F. R. L. Rossi. *Feu de Joie*, bay horse; by Tralbie (*vide* Stud Book); dam, Fleur de Lis. Age, six years; bred by F. R. L. Rossi. *Pomme de Terre*; by Tralbie (*vide* Stud Book); dam, Fleur de Lis. First Prize and Champion Silver Cup; value, £10 10s.

TERRY, Ethel Maud—Ryde.—Lady's Hackney. Age, five years; bred by F. R. L. Rossi. *Master Orville*, b. h.; by Orville (*vide* Stud Book); dam, Miss Pyrrhus. First Prize.

THORNE, H.—Sydney.—Hackney up to 11 stone. Aged; bred by Mr F. Flanigan, Illawarra. *Darkie*, black gelding; by Cossack; dam by Molyneaux. Commended.

TOWN, Andrew—Richmond.—Blood Mare. Four years old and over. Aged; bred by Wm. Petty, Victoria. *Égalité*, bay; by Angler, out of Tricolor. First, and Champion Prizes.

CLASS 645.—*Horses, Asses, and Mules.*

TOWN, Andrew—Richmond—Blood Stallion; four years old and over. Age, seventeen years; bred by H. Fisher, Melbourne. *Maribyrnong*, brown; by Fisherman (imp.); dam, Rose de Florence (imp.)
First and Champion Prizes.

TOWN, Andrew—Richmond—Blood Stallion; one year old and under two years. Age, one year; bred by exhibitor. Chestnut colt; by Tim Whiffler; dam, Young Ludia. First Prize.

TOWN, Andrew—Richmond—Farm Filly; three years old and under four years. Age, three years; bred by H. Powell. Grey; by Muir Lad; dam by Conqueror. First Prize.

TOWN, Andrew—Richmond—Heavy Draught Filly; three years old and under four years. Age, three years; bred by Wentworth. *Australian Maggie*, bay; by Muir Lad (imp.); dam, Glasgow Maggie (imp.)
First Prize.

TOWN, Andrew—Richmond.—Farm Filly; one year old and under two years. Age, one year; bred by exhibitor. Bay or brown filly; by Muir Lad; dam by Drayman. Second Prize.

TOWN, Andrew—Richmond—Heavy Draught Stallion; four years old and over. Age, eight years; bred by Mr. Mather, in Scotland. *Muir Lad*, brown; by Pride of Scotland; dam, Jess. First, and Champion Prizes.

TOWN, Andrew—Richmond—Heavy Draught Stallion; four years old and over. Age, six years; bred by Mr. Riddle, Scotland. *Davie*, brown; by Grand Duke; dam, Perfection. Second Prize.

TOWN, Andrew—Richmond—Heavy draught Mare; four years old and over. Age, four years; bred by Mr. M'Culloch, Victoria. *Victorian Maggie*, bay; by Champion of Scotland (imp.); dam, Glasgow Maggie (imp.)
Highly Commended.

TOWN, Andrew—Richmond—Heavy Draught Mare; four years old and over. Aged; bred by Mr. Galbraith, Scotland. *Strathblane Mary*, bay; imported from Scotland. Second Prize.

UNDERWOOD, E.—Quirindi.—Heavy Draught Stallion; one year old and under two years. Age, 1 year; bred by A. Town. *David*, bay; by Davie (imp.); dam, by Pride of Scotland (imp.) Highly Commended.

WELLS, George—Glebe.—Pony over twelve and under 14 hands. Age, nine years; bred by B. C. Rodd, Esq. *Toddo*, dark brown; by a thorough-bred stallion; dam, a thorough-bred mare. Second Prize.

WEST, M.D., Arthur Annesley—Glebe.—Horse for single harness. Aged. *Duke*, by a "Misty Morn" colt, out of a well-bred stock mare.
Second Prize.

WILLIAMS, Thomas—Robertson.—Coaching Stallion, any age. Age, one year nine months; bred by exhibitor. *Earl of Cleveland*, dapple bay; by Duke of Cleveland (imp.); dam, Juno (imp.) Special Prize.

WOODHOUSE, Mrs. E. H.—Campbelltown.—Pony, 12 hands and under. Age, five years; bred by Sir Thos. D. Acland, Devonshire, England. *Sir Thomas*, silver brown; pure Exmoor, bred from pure Exmoor stock for 300 years. First Prize.

CLASSES 646, 647.

Stud Cattle, Fat Cattle, and Fat Sheep.

JUDGES.

BADGERY, A. D.	Sydney.
BADGERY, JOHN A.	Moss Vale, N.S.W.
BELL, HENRY	Sydney.
COX, Hon. GEORGE H., M.L.C.	Sydney.
DANGAR, W. J.	Neotsfield, Singleton, N.S.W.
DEVLIN, M. H.	Sydney.
DOWLING, VINCENT	Rylstone, N.S.W.
GARDINER, JOHN A.	Wellington, New Zealand.
LODER, GEORGE	Singleton, N.S.W.
LOWE, ROBERT	Mudgee, N.S.W.
MAIR, GEORGE	Wagga Wagga, N.S.W.
M'CONNELL, JAMES H.	Cressbrook, Queensland.
M'ELHONE, JOHN, M.P.	Sydney.
PAYNE, WILLIAM	Auckland, New Zealand.
SULLIVAN, THOMAS	Sydney.
WOODHOUSE, E. B.	Mount Gilead, Campbelltown N.S.W.
WYNDHAM, R.	Branxton, N.S.W.

STEWARDS.

BRUCE, ALEXANDER, Chief Inspector of Stock	Sydney.
HARNETT, LAURENCE JOSEPH	Sydney.

AWARDS NOMENCLATURE.

The Awards in Classes 646 and 647—Stud Cattle and Fat Cattle and Sheep, and in Classes 647 and 648—Sheep, Angora Goats and Alpacas, are thus described in their relative orders of merit:—Champion Prize, carrying Gold Medal; First Prize, Silver Medal; Second Prize, Bronze Medal; while diplomas were issued marking the "Highly Commended" and "Commended" recommendations of the Judges.

Stud Cattle, Fat Cattle, and Sheep.

CLASSES 646, 647.

GREAT BRITAIN AND IRELAND.

CARVOSSO, D. B.—Master of Ship "Hawkesbury" from London.—Durham Bull; two years old and under three years. Age, two years ten months; bred by J. W. Blundell. *Lord Janicula*, roan; by 32nd Duke of Oxford, bred by the Duke of Devonshire; got by the famous 5th Duke of Witherby; dam, Janicula, by Earl Stafford (31,084).
Highly Commended.

YEO, T.—Devon.—Devon Bull; three years old and over. Age, six years; bred by the late James Davey, Devon, England. *Tempter* (imp.) (1,225), P.H.B., by Duke of Flitton 4th (827), out of Temptress 2nd (3,070).
First and Champion Prizes.

YEO, T.—Devon.—Devon Heifer Calf; six months old and under twelve months. Age, nine months; bred by exhibitors. *Duchess of Dennington 2nd*, by Tempter (Imp.), from Duchess of Dennington (imp.) First Prize.

YEO, T.—Devon.—Devon Cow; three years old and over. Age, three years four months; bred by Mrs. Langdon, Devon, England. *Cherry 10th* (4,221), red, by Duke of Flitton 10th (1,047), from Cherry 5th (3,264). First and Champion Prizes.

YEO, T.—Devon.—Devon Cow; three years old and over. Age, four years ten months; bred by exhibitor. *Duchess of Dennington* (1,047), by Harry (1,117), from Tulip. Highly Commended.

NEW SOUTH WALES.

ANTILL, J. Macquarie—Jarvisfield, Picton.—Ayrshire Bull; three years old and over. Age, six years one month; bred by John Grant, Seafield, Victoria. *Dunlop*, red and white, by Tam O'Shanter; dam, Lady of the Lake (imp.) First Prize.

ANTILL, J. Macquarie—Jarvisfield, Picton.—Ayrshire Cow; three years old and over. Age, nine years five months; bred by Mrs. J. M'Nab, Tullarmarnia, Victoria. *Sally*, red and white, by Rob Roy; dam, Spot, g.d. Mag. Second Prize.

BAIRD, Thomas—Dundulimal, Dubbo.—Pen of five fat Durham Oxen, uniform breed. Age, four years and five years; bred by exhibiter; by Lee and Todhunter bulls; Durhams. Grass-fed in paddock.
Highly Commended.

Report.—Breed and quality very good.

CLASSES 646, 647.—*Stud Cattle, Fat Cattle, and Fat Sheep.*

BOOTH, John—Prospect.—Farmer's Cow; three years old and over. Nine years; bred by exhibitor. *Pet*, red and white, by Imperial Purple; dam, Pet, by pure Icely bull. Second Prize.

CHAFFEY, Wm. A.—Rockview, Cockburn River, Moonby.—Hereford Bull; three years old and over. Age, seven years three months; bred by George Loder, Abbey Green, Singleton. *Lawsuit*, red with white face, by Oxford Lad (imp.); dam, Maude (imp.) Commended.

CHRISTIAN, J. B.—Mount Pleasant, Hinton.—Durham Bull, three years old and over. Age, three years five months twenty-one days, bred by exhibitor. *Prince Imperial*, roan and white, by Badminton; dam, Princess Purple 5th, by Imperial Purple. Second Prize.

CLARK, BROTHERS—Gullendaddy.—Pen of Five Fat Cows, uniform breed. First Prize.

COOK, Thomas—Scone.—Fat Durham Ox, over four years old. Age, nine years; bred by exhibitor. *Spot*, red and white; fed on lucerne, pumpkins, turnips, &c.; bred from station herd.
First and Champion Prizes.

Report—This exhibit, and that shown in the same class by Mr. Thomas Hungerford, are considered by the Judges to be the two best Durhams ever exhibited in Sydney.

COX, M.L.C., Hon. George H.—Mudgee.—Pen of Five Fat Cows. Age, various; bred by exhibitor and J. D. Cox, Mudgee. Pure Herefords, grass fed. Highly Commended.

COX, M.L.C., Hon. George H.—Mudgee.—Fat Hereford Cow, over four years old. Age, four years nine months; bred by F. Reynolds, Tocal; red with white face; by Royal Head; dam, Purity; fed on grass; pure bred. Second Prize.

COX, John H.—Muswellbrook.—Fat Hereford Cow, over four years old. Age, over four years; bred by exhibitor; red with white face; fed on natural grasses. Commended.

DANGAR, A. A.—Baroona, Singleton.—Hereford Heifer, one year old and under two years. Age, one year eleven months eight days; bred by exhibitor. *Minerva 13th*, red with white face, by Pearl Diver (imp.) (4,009); dam, Minerva 5th, by Old Garibaldi (imp.), g. d. Minerva (imp.)
Second Prize.

DANGAR, A. A.—Baroona, Singleton.—Durham Bull, one year old and under two years. Age, one year nine months twenty-one days; bred by exhibitor. *Hawkestone*, light roan; sire, Blenheim (365); dam, Carrie Knightly (imp.), by Captain Knightly (25,716); 2nd d., Cordelia.
Highly Commended.

DANGAR, A. A.—Baroona, Singleton.—Hereford Heifer Calf, six months old and under twelve months. Age, eleven months twenty days; bred by exhibitor. *Minerva 15th*, red with white face, by St. Clair Lad (154); dam, Minerva 4th, by Prince of Wales (imp.), (4,059), g. d. Minerva 2nd. Highly Commended.

CLASSES 646, 647.—*Stud Cattle, Fat Cattle, and Fat Sheep.*

DANGAR, A. A.—Baroona, Singleton.—Durham Heifer, two years old and under three years. Age, two years three months seventeen days; bred by exhibitor. *Lady Walnut 3rd*, light roan, by Blenheim (365); dam, Lady Walnut (imp.), by Duke of Kingscote (25,981).
Commended.

DANGAR, A. A.—Baroona, Singleton.—Hereford Cow, three years old and over. Age, four years four months; bred by exhibitor. *Minerva 9th*, red with white face, by Pearl Diver (imp.) (4,009); dam, Minerva (imp.) by Lancet (3,201). First Prize.

DANGAR, A. A.—Baroona, Singleton.—Hereford Cow, three years old and over. Age, three years eleven months seven days; bred by exhibitor. *Minerva 10th*, red with white face, by Pearl Diver (imp.), (4,009); dam, Minerva 3rd, by Prince of Wales (imp.), (4,059); second dam, Minerva (imp.) Second Prize.

DANGAR, A. A.—Baroona, Singleton.—Hereford Heifer, two years old and under three years. Age, two years; bred by exhibitor. *Minerva 12th*; red with white face, by St. Clair Lad, 154; dam, Minerva 3rd, by Prince of Wales (imp.) (4,059); g. d. Minerva (imp.) Second Prize.

DANGAR, A. A.—Baroona, Singleton.—Hereford Bull Calf, six months old and under twelve months. Age, nine months eight days; bred by exhibitor. *Ashby*, red with white face, by Pearl Diver (imp.) (4,009); dam, Minerva 5th, by Old Garibaldi (imp.); g. d. Minerva (imp.)
Commended.

DANGAR, W. J.—Neotsfield, Singleton.—Fat Durham Ox, under four years old. Age, about three years; bred by exhibitor; roan, by pure shorthorn, from well-bred cow; fed on natural grasses mixed with prairie, and lucerne. Second Prize.

DANGAR, W. J.—Neotsfield, Singleton.—Fat Durham Cow, over four years old. Age, about five years; bred by exhibitor; roan; pure bred; fed on natural grasses mixed with prairie and lucerne. Second Prize.

DANGAR, W. J.—Neotsfield, Singleton.—Durham Cow, three years old and over. Age, four years nine months; bred by exhibitor. *Countess 12th*, roan, by Baroona (12); dam, Countess 6th, by Littlebury (imp.); g. d. Countess 4th, by Sinecure. Second Prize.

DOUGLAS, Walter—Goulburn.—Durham Heifer Calf, six months old and under twelve months. Age, ten months four days; bred by exhibitor. *Native Rose 1st*, roan; by Triple's Genevra, by Duke of Brunswick (25,937); dam by Stanley (671); g. d. by Earl of Carlisle (21,639).
Highly Commended.

DOYLE, Junr., John F.—Fat Devon Ox, over four years old. Age, four years; bred by exhibitor; red; by Red Rover, from a Devon cow; paddocked. First Prize.

DOYLE Junr., John F.—Fat Devon Ox, under four years old. Age, three years eleven months; bred by exhibitor; red; by Red Rover, from a Devon cow; paddocked. First Prize.

CLASSES 646, 647.—*Stud Cattle, Fat Cattle, and Fat Sheep.*

DOYLE, Junr., John F.—Muswellbrook.—Fat cross-bred Ox, under four years old. Age, three years, months ; bred by Jno. F. Doyle, Dartmouth ; red roan, by imported bull, from a half-bred Devon and Durham cow ; paddocked. First Prize.

DOYLE, Junr., John F.—Muswellbrook.—Fat Devon Cow, under four years old. First Prize.

DOYLE, Junr., John F.—Muswellbrook.—Fat Devon Ox, under four years old. Age, four years ; bred by exhibitor ; red ; by Red Rover from a Devon cow ; paddocked. Second Prize.

DUMARESQ, W. A.—St. Aubins, Scone.—Durham Bull, three years old and over. Age, three years seven months ; bred by Robertson Bros., Colac, Victoria. *24th Duke of Derrimut*, rich roan ; sire, Oxford Cherry Duke (32,016) ; dam, 7th Duchess of Derrimut, by Duke of Brunswick (25,937) ; g. d. White Duchess, by Royal Butterfly 6th. Highly Commended.

DUMARESQ, W. A.—St. Aubins, Scone.—Durham Bull Calf, six months old and under twelve months. Age, nine months eleven days ; bred by exhibitor. *Alphonso*, rich roan ; sire, Bolingbroke ; dam, Lady Augusta, by Victoria's Theodore ; g. d. Empress Augusta, by Shylock (imp.) Second Prize.

DUMARESQ, W. A.—St. Aubin's, Scone.—Durham Heifer, one year old and under two years. Age, one year eleven months twenty-one days ; bred by exhibitor. *Lady Eleanor*, red with little white ; sire, Manfred ; dam, Esmeralda, by Victoria's Theodore, g. d. Queen of Beauty, by Duke of Richmond. Highly Commended.

EMANUEL, S.—Goulburn.—Durham Heifer, two years old and under three years. Age, two years six months twelve days ; bred by exhibitor. *Brunswick's Princess Purple*, red with little white ; sire, Young Brunswick (715), by the Duke of Brunswick (25,937) ; dam, Princess Purple 27th by Imperial Purple 24th ; g. d. Princess Purple 10th. Second Prize.

HARRIS, Wm.—North Annandale, Petersham.—Alderney Bull, two years old and under three years. Under two years ; bred by J. E. Pemell, jun., Randwick. *Nonpareil*, silver dun, black points, by Melbourne, from Argus (imported dam Bella, bred by the late Hon. E. S. Wilson, Melbourne), by pure Alderney bull, from imported stock, from Prima Donna (imp.) First Prize.

HARRIS, Wm.—North Annandale, Petersham.—Alderney Cow, three years old and over. Three years and one month ; bred by Hon. J. G. Francis, Melbourne. *Milkmaid*, fawn, direct from pure stock, imported by Hon. E. S. Wilson, Melbourne. First Prize.

HARRIS, Wm.—North Annandale, Petersham.—Alderney Heifer, two years old and under three years. Under two years ; bred by James Pemell, jun., Randwick. *Dairy Maid*, fawn, by Melbourne ; dam, Milkmaid, by pure Alderney bull imported, from Argus (imp.) Second Prize.

CLASSES 646-647.—*Stud Cattle, Fat Cattle, and Fat Sheep.*

HOSKISSON, Samuel—Windsor.—Durham Bull, two years old and under three years. Age, two years seven months three days; bred by R. M'Dougal, Arundel, Victoria. *General Gourko*, white; by Field Marshal Booth (28,595); dam, Galatea, by Robin Hood (29,803); g. d. Gazelle, by Prince of the Purple (20,580). Second Prize.

HOSKISSON, Samuel—Windsor.—Durham Cow, three years old and over. Age, ten years two months twenty-nine days; bred by L. C. Crisp, Alnwick, England. *Red Duchess 9th*, roan, by Prowler (22,662); dam, Duchess, by Woldiston (19,163); g. d. Duchess, by Ronald (8,507). Commended.

HUNGERFORD, Thomas—Denman.—Fat cross-bred Ox, over four years old. Age, six years; bred by exhibitor. Light roan, by pure Durham bull, out of cross-bred cow; fed on grass and lucerne. Second Prize.

HUNGERFORD, Thomas—Denman.—Fat Durham Ox, over four years old. Age, six years; bred by exhibitor; rich roan, pure Durham; fed on grass and lucerne. Second Prize.

ICELY, T. Rothery—Carcoar.—Pen of five fat Durham Oxen. Uniform breed. Age, various; bred by exhibitor and others; from Short-horned cattle; paddocked. First Prize.

JENKINS, M.R.C.S.L., R. L.—Nepean Towers.—Durham Bull, three years old and over. Age, four years six months; bred by exhibitor. *Victoria's 3rd Theodore*, red, by Theodore (imp.), (30,145); dam, Princess Victoria, by 7th Duke of Oxford; g.d. Princess Alice, by Noble Arthur (imp.) (16,621). (See Herd Book, vol. iv, p. 290.) First and Champion Prizes.

JENKINS, M.R.C.S.L., R. L.—Nepean Towers.—Durham Heifer, one year old, and under two years. Age, one year twenty-one days; bred by exhibitor. *Heartsease 3rd*, roan; sire, Theodore 6th (294); dam, Heartsease 2nd, by Royal Butterfly 6th (imp.), (18,757), g.d. Heartsease, by Noble Arthur (imp.), (16,621). See Herd Book, vol. i, page 87. Commended.

JENKINS, M.R.C.S.L., R.L.—Nepean Towers.—Durham Heifer Calf, six months old, and under twelve months. Age, eight months seven days; bred by exhibitor. *Princess Theodore 4th*, red; sire, Victoria's 3rd Theodore; dam, Princess Theodore 2nd, by Theodore (imp.), (30,145), g.d. Princess Theodore. Herd Book, vol. ii, page 290. Commended.

NOTE.—In addition to the prize-taking competitive exhibits described, it may be mentioned that Dr. R. L. Jenkins, of Nepean Towers, exhibited 16 head of superior Durham cattle, which were entered as non-competitive.

JENKINS, M.R.C.S.L., R. L.—Nepean Towers.—Durham Heifer Calf, six months old, and under twelve months. Age, eleven months twenty-three days; bred by exhibitor. *Princess Beatrice 2nd*, roan; sire, Victoria's 3rd, Theodore (697); dam, Princess Beatrice 1st, by Theodore (imp.) (30,145), g. d. Princess Beatrice, by Noble Arthur 2nd, (184). See H. B., vol. i, page 172. First Prize.

CLASSES 646–647.—*Stud Cattle, Fat Cattle, and Fat Sheep.*

JUNOR, J. T.—Morpeth.—Hereford Heifer, two years old, and under three years. Age, two years six months nineteen days; bred by exhibitor. *Perfection*, red with white face, by Conqueror, by Royal Head (imp.); dam, Princess, by Prince Charlie; g.d. Lady, by Young Oscar.
First and Champion Prizes.

JUNOR, J. T.—Morpeth.—Hereford Heifer, one year old, and under two years. Age, one year three months twenty-eight days; bred by exhibitor. *Rose*, red with white face, by Birthday; dam, Moss Rose, by Sir Hercules, g.d. by Reginald (imp.) First Prize.

JUNOR, J. T.—Morpeth.—Hereford Heifer Calf, six months old, and under twelve months. Age, nine months; bred by exhibitor. *Bella*, red with white face, by Brandon; dam, Princess, by Prince Charlie, g.d. Lady, by Young Oscar. Second Prize.

JUNOR, J. T.—Morpeth.—Hereford Heifer, one year old, and under two years. Age, one year two months three days; bred by exhibitor. *Ida*, red with white face, by Birthday; dam, Phoebe, by Belmore, g.d. Lady Elizabeth, by the Captain (imp.) Commended.

JUNOR, J. Y.—Berry Park, Morpeth.—Hereford Bull, two years old, and under three years. Age, two years five months. *Liberty*, red with white face; sire, Sir Hercules, by Garibaldi (imp.); dam, White Foot, by Morpeth (imp.); g.d. by The Duke (imp.) Second Prize.

LODER, Andrew—Colley Creek, Willow Tree.—Durham Cow, three years old and over. Age, nine years twenty-four days. *Celia Thorndale* (imp.), red with a little white, by Lord Alexander, 2nd (29,060); dam, Celia, by Sir Charles (20,811); g.d. Cicely, by Royal Oak (16,873).
Highly Commended.

LODER, George—Abbey Green, Singleton.—Hereford Bull. Three years old and over. Age, six years two months; bred by exhibitor. *St. Clair Lad*, red with white face; sire, Oxford Lad (imp.); dam, Dowager 2nd; g.d. Dowager (imp.) First and Champion Prizes.

LODER, George—Abbey Green, Singleton.—Fat Hereford Cow; over four years old. First Prize.

LODER, George—Abbey Green, Singleton.—Hereford Heifer Calf, six months old, and under 12 months. Age, eleven months fourteen days; bred by exhibitor. *Nellie;* sire, St. Clair Lad, by Oxford Lad (imp.); dam, Little Nell, by Sir Hercules, by Garibaldi (imp.) First Prize.

LODER, George—Abbey Green, Singleton.—Fat Hereford Ox, over four years old. Highly Commended.

LODER, George—Abbey Green, Singleton.—Hereford Bull, two years old, and under three years. Age two years six months; bred by G. Loder, Esq., Singleton. *Normanby*, red with white face, by St. Clair Lad, by Oxford Lad; dam, Fattirine, g.d. Fattie.
Highly Commended.

CLASSES 646-647.—*Stud Cattle, Fat Cattle, and Fat Sheep.*

MANNING, John Edye—Ryde.—Farmer's Cow, three years old and over. Eight years; breeder unknown. White and red; pedigree unknown. First Prize.

MANNING, Arthur B.—Ryde.—Dairy Cow, any age, giving the greatest quantity of, and the richest, milk (either with, or without calf). Age, eight years; breeder unknown; white and red; pedigree unknown. Second Prize.

M'MINN, Samuel—Cecil Plains, Liverpool.—Dairy Cow, giving the greatest quantity, and the richest milk. Age, seven years; bred by Mr. O'Donnell, Mount Hunter. *Buttercup*, strawberry; Durham bred. First Prize.

NOWLAN, John—Eelah, West Maitland.—Hereford Bull, one year old and under two years. Age, one year five months twenty-six days; bred by exhibitor. *Prince of Wales*, red with white face; sire The Prince, by Prince of Wales (imp.); dam, Treasure, by Pearl Diver (imp.), g. d. Sybella (imp.) First Prize.

NOWLAN, John—Eelah, West Maitland.—Hereford Bull, two years old and under three years. Age, two years six months ten days; bred by exhibitor. *Patron*, red with white face; sire, Pearl Diver (4,009); dam, Galatea 2nd, by Oscar; g.d. Galatea, by Garibaldi. First Prize.

NOWLAN, John—Eelah, West Maitland.—Hereford Bull, three years and over. Age, four years two months eight days; bred by exhibitor. *Pearl Diver 5th* red with white face; sire, Pearl Driver (4,009); dam, Leonora 2nd (imp.) Second Prize.

NOWLAN, John—Eelah, West Maitland.—Hereford Bull, three years old and over. Age, three years five months eighteen days; bred by exhibitor. *Prince Leopold*, red with white face; sire, Pearl Diver (4,009); dam, Leonora 3rd; g. d. Leonora 2nd (imp.) Highly Commended.

NOWLAN, John—Eelah, West Maitland.—Hereford Bull, two years old and under three years. Age, two years four months nineteen days; bred by exhibitor. *Pacha*, red with white face; sire, Pearl Diver 3rd; dam, Princess, by Pearl Diver (imp.), g. d. Fanny (imp.) Highly Commended.

PEATE, T. L.—Landsdowne, Liverpool.—Ayrshire Cow, two years old and over. Age, eight years; bred by Messrs. McNab, Oakbank; yellow and white, by Rob Roy 2nd, out of Katie 1st, by Rob Roy 1st; g. d. Mollie 1st, by Rob Roy. First Prize.

PEATE, T. L.—Landsdowne, Liverpool.—Ayrshire Bull, three years old and over. Age, five years; bred by Mr. McDonald, Geelong; Rival of Drumlanrig, bred from pure imported stock. Second Prize.

PEMELL, James E.—Randwick.—Alderney Bull, three years old and over. Age, seven years; bred by the late Hon. E. S. Wilson, Melbourne. *Melbourne*, out of the imported cow Argus, by pure Alderney bull. First Prize.

PEMELL, James E.—Randwick.—Alderney Heifer, two years old and under three years. Age, three years; bred by the Hon. J. G. Francis, Melbourne. Colour fawn, bred from stock (imp.), by the late Hon. E. S. Wilson. First Prize.

WHITE, Edward—Martindale, Denman.—Fat Durham Cow, over four years old. Age, six years four months twenty days; bred by exhibitor. *Snowflake*, white pure-bred; fed on natural grasses only. First Prize Special.

Report—The best fat cow on the ground.

WHITE, Edward—Martindale, Denman.—Fat Durham Ox, under four years old. Age, three years six months; bred by exhibitor. *Perfection*, roan; by Border Chief (imp.); out of a short-horn cow; fed in lucerne paddock. First Prize.

WHITE, Edward—Martindale, Denman.—Fat cross-bred Ox, over four years old. Age, five years; bred by Hon. James White, Rose Bay, Sydney; red and white, Hereford and Durham, lucerne paddock; pedigree not known. First Prize.

WHITE, Edward—Martindale, Denman.—Fat Hereford Ox, over four years old. Age, five years; bred by Hon. James White, Rose Bay, Sydney; red with white face; fed in lucerne paddock; pedigree not known. First Prize.

WHITE, Edward—Martindale, Denman.—Fat Hereford Ox, over four years old. Age, five years four months; bred by Hon. James White, Rose Bay, Sydney; red with white face; fed in lucerne paddock; pedigree unknown. Second Prize.

WHITE, Edward—Martindale, Denman.—Fat Durham Ox, over four years old. Age, five years; bred by Hon. James White, Rose Bay, Sydney. *Goliah*, roan; fed in lucerne paddocks. Highly Commended.

WHITE, H. C.—Glenalvon, Murrurundi.—Devon Bull, two years old and under three years. Age, two years two months; bred by exhibitor. *Slyboots*, red, by Sunflower, by Sweet William; dam, Crafty 5th, by Prince Christian Victor (imp.), g. d. Crafty 3rd (imp.), by Leviathan. First Prize.

WHITE, H. C.—Glenalvon, Murrurundi.—Devon Heifer, two years old and under three years. Age, two years two months; bred by exhibitor. *Buttercup 6th*, red, by Sun Flower; dam, Buttercup 3rd, by Prince Christian Victor (imp.), g. d. Buttercup 2nd (imp.), by Marquis. First Prize.

WHITE, H. C.—Glenalvon, Murrurundi.—Devon Cow, three years and over. Age, three years one month; bred by exhibitor. *Young Beauty 2nd*, red, by Prince Christian Victor (imp.); dam, Young Beauty (imp.), by Wicked Bill (855), g. d. Beauty, by Napoleon (464). Second Prize.

WOODHOUSE, E. B.—Mount Gilead, Campbelltown.—Two Durham Cows, with Calves at Foot. Miss Fox (imp.), age five years eleven months four days; bred by J. Outhwaite, Yorkshire, England; white, one of a pair; sire, Royal Windsor (29,890); dam, Sylvia, by Champion (23529), &c., &c., and her white bull calf Hypericon, aged eight months ten days. (2), Peeress 7th (imp.), age, five years ten months twelve days; bred by T. Wilson, Northumberland, England; roan; sire, Waterloo Hero (30,275); dam Peeress 5th, by Beverley Butterfly (28,021), and her red and white bull calf Peeress Oxford, age, 7 months 6 days. First Prize.

WOODHOUSE, E. B.—Mount Gilead, Campbelltown.—Durham Cow, three years old and over. Age, five years eleven months four days ; bred by J. Outhwaite, Yorkshire, England. *Miss Fox* (imp.), white ; sire, Royal Windsor (29,890) ; dam, Sylvia, by Champion (23,529).
First Prize.

WOODHOUSE, E. B.—Mount Gilead, Campbelltown.—Durham Heifer Calf, six months old, and under twelve months. Age, eleven months twenty-seven days ; bred by exhibitor. *Lucy 5th*, rich roan ; sire, Imperial Purple 9th (120); dam, Lucy 4th, by Imperial Purple 9th (120.)
Second Prize.

WYNDHAM, Reginald—Leconfield, Branxton.—Devon Cows with calves at foot. (1st), *Princess Beatrice*, age, eight years one month ; bred by Wm. Smith, Exeter, England ; all red, by Pennsylvania ; dam, Beeswing (3,112), by Prince Alfred, g. d. Gentle (2,725). (2), *Mary*, age, three years nine months twenty-seven days ; bred by exhibitor ; all red (imp.), by Prince of Wales (imp.) ; dam, Maud, by Emigrant (imp.)
First Prize.

WYNDHAM, Reginald—Leconfield, Branxton.—Devon Bull, three years old and over. Age, three years two months eight days ; bred by exhibitor. *Prince William*, all red, by Prince of Wales (imp.) ; dam, Sunshine, by Emigrant (imp.), g. d. Daisy Shamrock (imp.) Second Prize.

YEO, G. C.—Mulgrave.—Devon Bull, two years old and under three years. two years four months eighteen day ; bred by H. Beard, Marcellan. *Boyne*, red, by Zemindar 3rd (imp.), from Milkmaid, by Duke of Flitton.
Second Prize.

NEW ZEALAND.

M'LEAN & CO.—Auckland.—Durham Bull, three years old and over. Age, four years ten days ; bred by exhibitors. *Duke of Newcastle*, roan, by 9th Colonel Tregunter, out of Countess of Taunton. Commended.

VICTORIA.

FISHER, C. B.—Flemington.—Durham Bull, two years old and under three years. Two years eight months nine days ; bred by exhibitor. *Agamemnon's Prince*, red and white, by Agamemnon (imp.) ; dam, Pink 16th (imp.), by Royal Benedict (27,348). First Prize.

FISHER, C. B.—Flemington.—Durham Bull, one year old and under two years. Age, one year nine months fifteen days ; bred by C. B. Fisher. *Agamemnon's 8th Earl*, roan and white ; by Agamemnon (imp.) ; dam, Fancy 8th, by Oxford. First Prize.

FISHER, C. B.—Flemington.—Durham Heifer, two years old and under three years. Age, two years nine months three days ; bred by C. B. Fisher. *Cassandra*, red and white, by Agamemnon (imp.) ; dam, Miss Frederick (imp.), by Golden Crescent. First Prize.

CLASSES 646-647.—*Stud Cattle, Fat Cattle, and Fat Sheep.*

FISHER, C. B.—Flemington.—Durham Heifer, one year old and under two years. Age, one year nine months twenty-seven days; bred by C. B. Fisher. *Agamemnon's Baroness 2nd*, roan, by Agamemnon (imp.); dam, Grace, by Oxford. Second Prize.

HOOD, R.—Merang, Hexham.—Durham Bull, one year old and under two years. Age, one year nine months twenty days; bred by Robertson Bros., Colac. *5th Duke of Colac*, red, by Oxford's Cherry Duke (32,016). Commended.

M'DOUGALL, Robt.—Arundel, Keilor.—Durham Bull, one year old and under two years. Age, one year eight months six days; bred by exhibitor. *Apollo*, roan, sire, Major Booth (26,790); dam, Aldinga, by Field-Marshal Booth (28,595); g. d., Alhambra, by Count of the Empire (21,497). Second Prize.

M'DOUGALL, Robt.—Arundel, Keilor.—Durham Bull Calf, six months old and under twelve months. Age, eight months three days; bred by exhibitor. *King Robert*, rich roan, sire, King Tom (521 N.S.W. H.B); dam, Rosanna, by Field-Marshal Booth (28,595); g. d., Roxanna, by Count of the Empire (21,497). First Prize.

M'DOUGALL, Robt.—Arundel, Keilor.—Durham Bull Calf, six months old and under twelve months. Age, eleven months twenty-six days; bred by exhibitor. *Prince Patrick*, roan, sire King Tom (521 N.S.W. H.B.); dam, Prosperity, by Field-Marshal Booth (28,595); g. d., Precocity, by Count of the Empire (21,497). Commended.

ROBERTSON BROTHERS—Colac.—Durham Heifer, two years old and under three. Age, two years three days; bred by exhibitors. *27th Duchess of Derrimut*, roan, by General Earl; dam, white Summerton, by Frederick the Great (imp.); g. d., Roan Summerton (imp.), C.H.B., vol. xiii, page 271. Highly Commended.

ROBERTSON BROTHERS—Colac.—Durham Heifer, one year old and under two years. Age, one year ten months nineteen days; bred by exhibitors. *6th Countess of Colac*, roan, by Oxford Cherry Duke (32,016); dam, Fanny 7th, by the Beau; g. d., Fanny (imp.), by Marmaduke (14,897). First and Champion Prizes.

CLASSES 647, 648.

Sheep, Angora Goats, and Alpacas.

JUDGES.

ALLEN, WILLIAM	Brisbane, Queensland.
DE SAVIGNON, F.	Paris, France.
FINDLAY, WILLIAM S.	Adelaide, South Australia.
HAMMOND, THOMAS W.	Junee, N.S.W.
HAWKINS, THOMAS J.	Bathurst, N.S.W.
LAMB, JOHN De V.	Mudgee, N.S.W.
LETHBRIDGE, GEORGE L.	Singleton, N.S.W.
MASSEY, CHARLES A.	Gundaroo, N.S.W.
ROBERTS, P.	Mudgee, N.S.W.
SHAW, JONATHAN	Melbourne, Victoria.
SHAW, THOMAS	Melbourne, Victoria.
SIMSON, COLIN W., M.P.	Hay, N.S.W.
SMITH, Hon. JOHN, M.L.C....	Molong, N.S.W.
WALLACE, D. J.	Melbourne, Victoria.
YEO, GEORGE S., Sub-Inspector of Stock ...	Sydney.

ATTENDING MEMBERS OF COMMISSION.

COX, Hon. GEORGE H., M.L.C....	Sydney.
TREBECK, PROSPER NICHOLAS	Sydney.

JUDGES OF SHEEP-SHEARING.

DANGAR, A. A.	Baroona, Singleton, N.S.W
FINDLAY, W. S.	Adelaide, South Australia.
HIGGINS, R. G.	Potts's Point, Sydney

AWARDS.—The First Prize consisted of a Silver Medal, and the Second of a Bronze. The winner of the chief prize received in addition some valuable subscription prizes.

CLASS 649.—Swine.

JUDGES.

DE SAVIGNON, F. ... ... Paris, France.

HARDING, H. ... ... Sydney.

LEE, THOMAS ... ... Bathurst, N.S.W.

AWARDS NOMENCLATURE.

The Awards in Class 649—Swine are thus described in their relative orders of merit:—First Prize, Silver Medal; Second Prize, Bronze Medal.

CLASSES 647–648–649.—*Land Animals—Sheep; Goats and Alpacas; Swine.*

GROUP—Land Animals—Sheep; Goats and Alpacas; Swine.

CLASSES, 647–648–649.

The exhibits in Sub-class 106 (as per Live Stock Schedule), "Merino ewes of any age, fine combing wool," were really very good; but those in sub-class 110, for "Rams two years old, heavy combing wool," were inferior in quality, this being also the case with Sub-class 111, "Two ram hoggets, heavy combing wool."

NOTE.—The ages of all sheep are computed up to August 23rd, 1879.

FRANCE.

GILBERT, Victor—Videville, near Trappes, Seine-et-Oise.—Merino Ewe; any age. Fine combing wool. Age, three years seven months; wool, 388 days; bred by exhibitor; shepherded and housed. Special Prize.
Report—For size and quantity of wool.

GILBERT, Victor—Videville, near Trappes, Seine-et-Oise.—Merino Ram; two years old. Fine combing wool. Age, one year nine months; wool, 360 days; bred by exhibitor; housed. Special Prize.
Report—For frame and quantity of wool.

MINISTRE DE L'AGRICULTURE ET DU COMMERCE—Paris, Bergerie Nationale de Rambouillet.—Merino Ewe; any age. Fine combing wool. Age, two years nine months; wool, 471 days; bred at National Sheep Stud Farm, Rambouillet; shepherded. Special Prize.
Report—For size and quantity of wool.

MINISTRE DE L'AGRICULTURE ET DU COMMERCE—Paris, Bergerie Nationale de Rambouillet.—Merino Ram; two years old. Fine combing wool. Age, one year ten months; wool, 471 days; bred at National Sheep Stud Farm, Rambouillet; paddocked.
First Prize Special.
Report—For frame and quantity of wool. [A gold medal was awarded by the Commission to the Minister for his services in sending out by "Le Rhin," under the care of M. le Capitaine Mathieu, Commissaire-General for France, so valuable an exhibit of Rambouillet sheep.]

MINISTRE DE L'AGRICULTURE ET DU COMMERCE—Paris, Bergerie Nationale de Rambouillet.—Merino Ewe; any age. Heavy combing wool. Age, two years, eight months seventeen days; wool, 471 days; bred at National Sheep Stud Farm, Rambouillet; shepherded.
Special Prize.

NEW SOUTH WALES.

ADKINS, Mrs.—Waterloo.—Angora Goat; buck; any age; white. Wool, eleven months. Age, three years; bred from an imported pair.
Second Prize.

CLASSES 647-648-649.—*Land Animals—Sheep ; Goats and Alpacas ; Swine.*

BOWMAN, Ernest M.—Singleton.—Merino Ram ; two years old ; clothing wool. Age, three years ; wool, 346 days ; bred by Mrs. G. P. Bowman ; paddocked and housed. First Prize.

BRADLEY, Walter—Randwick.—Angora Goat ; doe ; any age ; white. Age, eight months ; wool, 8 months ; bred by Colin Ross, Inverell. First Prize.

BRADLEY, Walter—Randwick.—Angora Goat, buck ; any age ; white ; unshorn. Eight months old ; bred by Colin Ross, Inverell. First Prize.

CLIFT BROTHERS—Breeza.—Five Fat Wethers, Leicestershire, Lincolnshire, and Cotswold. Age, four years ; bred by exhibitors ; paddocked ; natural grasses only. Second Prize.

CLIFT BROTHERS—Breeza.—Five Fat Wethers, Leicestershire, Lincolnshire, and Cotswold. Age, four years ; bred by exhibitors ; paddocked ; natural grasses only. First Prize.

CUNNINGHAM, A. J.—Queanbeyan.—Merino Ram, any age ; fine combing wool. Two years eleven months ; wool, 333 days ; bred by exhibitor ; paddocked and housed. Very Highly Commended.

Report—Arrived too late to be judged in its proper place ; but we consider the exhibit to be worthy of the mention above given.

DANGAR, GEDYE, & CO.—Sydney.—Coarse-woolled Lincoln Ram, any age. Age, three years six months ; wool, 488 days ; bred in England ; paddocked and housed. First Prize.

DANGAR, GEDYE, & CO.—Sydney.—Coarse-woolled Lincoln Ram, any age. Age, three years six months ; wool, 488 days ; bred in England ; paddocked and housed. Second Prize.

DANGAR, W. J.—Neotsfield, Singleton.—Pen of five Fat Wethers, Southdown or Shropshire. Southdowns. Age, about two years ; bred by exhibitor ; paddocked. Second Prize.

DANGAR, W. J.—Neotsfield, Singleton.—Pen of five Fat Wethers, Southdown or Shropshire. Shropshire. Age, about two years ; bred by exhibitor ; paddocked. First Prize.

V. DAVIS—Sydney.—Sheep Shearing. Highly commended.

DOWLING, Vincent—Rylstone.—Merino Ewe, two years old, fine Combing Wool. Age, two years ; wool, 367 days ; bred by Dr. Cox ; paddocked and housed. Special Prize.

DWYER, D.—Blandford.—Sheep Shearing. Commended.

GIBB & SON, James—Wallendbeen.—Merino Ewe, two years old ; fine Combing Wool. Age, two years ; wool, 324 days ; bred by Jas. Gibson, Tasmania ; paddocked and housed. Highly Commended.

GIBBES, Augustus—Yarralumla, Queanbeyan.—Coarse-woolled Ram, other than Lincoln, Leicester, Cotswold, Southdown, or Shropshire. Age, one year eleven months ; wool, 277 days ; bred by Arthur Brathwaite ; paddocked. First Prize.

CLASSES 647-648-649.—*Land Animals—Sheep ; Goats and Alpacas ; Swine.*

GERMAN, John—Macdonald Town.—Boar, any age, long-bodied breed, Black ; age, one year seven months ; bred by Mr. Ruthven, Port Macquarie ; improved Berkshire ; fed on slops. Second Prize.

HOLT, Alfred Wm.—Marulan.—Alpaca, male ; any age. Black and brown ; aged ; from imported stock. First Prize.

HOLT, Alfred Wm.—Marulan.—Alpaca, female ; any age. Black and brown ; aged ; from imported stock. First Prize.

ICELY, T. Rothery—Carcoar.—Pen five Fat Wethers (other than Leicestershire, Lincolnshire, Cotswold, Southdown, or Shropshire.) Age, one year and eight months ; bred by exhibitor ; paddocked. Second Prize.

ICELY, T. Rothery—Carcoar.—Pen five Fat Wethers (other than Leicestershire, Lincolnshire, Cotswold, Southdown, or Shropshire.) Age, one year and eight months ; bred by exhibitor ; paddocked. Highly Commended.

ICELY, T. Rothery—Carcoar.—Pens five Fat Ewes (extra exhibits.) Age, one year and nine months ; bred by exhibitor ; paddocked. Two Commended Awards.

ICELY, T. Rothery—Carcoar.—Pen five Fat Ewes (extra exhibits.) Age, one year and nine months ; bred by exhibitor ; paddocked. Highly Commended.

JENKINS, R. L.—Nepean Towers.—Coarse-woolled Leicester Ram, any age. Age, twelve months ten days ; 375 days ; bred by Thos. Gibson, Tasmania ; paddocked. Second Prize.

JENKINS, R. L.—Nepean Towers.—Coarse-woolled Leicester Ewe, any age. Age, two years in September ; wool, 290 days ; bred by Thos. Gibson, Esk Vale, Tasmania ; paddocked. Second Prize.

JENKINS, M.R.C.S.L., R. L.—Nepean Towers.—Coarse-woolled Leicester Ewe, any age, Age, under twelve months ; never shorn ; bred by exhibitor ; paddocked. Highly Commended.

JENKINS, R. L.—Nepean Towers.—Boar, any age ; medium breed. Pure white, "*Prince Albert*" ; under two years ; bred by R. L. Jenkins ; paddocked, excepting for three weeks ; bred from pigs imported in 1860 direct from late Prince Albert's stables, Windsor. First Prize.

KNOX, Thos. F.—Sydney.—Merino Ewe, two years old ; fine combing wool. Age, two years four months ; wool, 315 days ; bred by D. Taylor, Tasmania ; paddocked. Highly Commended.

LAMB, J. de V. & ROBERTS, P.—Muroo, Mudgee.—Merino Ram, any age ; clothing wool. Aged ; wool, 324 days ; bred by exhibitors ; paddocked and housed. First and Champion Prizes.

LAMB, J. de V. & ROBERTS, P.—Muroo, Mudgee.—Merino Ram, any age ; clothing wool. Aged ; wool, 324 days ; bred by exhibitors ; paddocked and housed. Second Prize.

LAMB, J. de V. & ROBERTS, P.—Muroo, Mudgee.—Merino Ewe, any age. Fine combing wool. Age, sixteen months ; shorn between 14th October and 1st November ; wool, 305 days ; bred by James Gibson, Tasmania ; paddocked and housed. Second Prize.

CLASSES 647-648-649.—*Land Animals—Sheep; Goats and Alpacas; Swine.*

LAMB, J. de V. & ROBERTS, P.—Muroo, Mudgee.—Merino Ewe, any age. Fine combing wool. Age, sixteen months; shorn between 14th October and 1st November; wool 305 days; bred by David Taylor, Tasmania; paddocked. Highly Commended.

LAMB, J. de V. & ROBERTS, P.—Muroo, Mudgee.—Merino Ewe, two years old. Fine combing wool. Age, two years four months; wool, 315 days; bred by D. Taylor, Tasmania; paddocked. Highly Commended.

LAMB, J. de V. & ROBERTS, P.—Muroo, Mudgee.—Merino Ewe, two years old. Fine combing wool. Age, two years four months; wool, 315 days; bred by D. Taylor, Tasmania; paddocked. Special Prize.

LAMB, J de V. & ROBERTS, P.—Muroo, Mudgee.—Merino Ewe, two years old. Clothing wool. Age, two years four months; wool, 313 days; bred by D. Taylor, Tasmania; paddocked. Commended.

LAMB, J. de V. & ROBERTS, P.—Muroo, Mudgee.—Merino Ewe, two years old. Clothing wool. Age, two years four months; wool 313 days; bred by Jas. Gibson, Tasmania; paddocked and housed. Highly Commended,

LAMB, J de V. & ROBERTS, P.—Muroo, Mudgee.—Merino Ewe, any age. Clothing wool. Age, one year four months; wool, 313 days; bred by Jas. Gibson, Tasmania; paddocked and housed. Highly Commended.

LAMB, J. de V. & ROBERTS, P.—Muroo, Mudgee.—Merino Ewe, any age. Clothing wool. Age, one year four months; wool, 313 days; bred by D. Taylor, Tasmania; paddocked and housed. Highly Commended.

LAMB, J. de V. & ROBERTS, P.—Muroo, Mudgee.—Merino Ram, any age. Fine combing wool. Age, full mouth; wool, 324 days; bred by exhibitors; shepherded and housed. Commended.

LEE, James—Molong.—Merino Ewe, two years old. Fine combing wool. Age, two years; wool, 289 days; bred by exhibitor; paddocked. Highly Commended.

LEE, James—Molong.—Merino Ewe, any age. Fine combing wool. Age, two years; wool, 289 days; bred by exhibitor; paddocked and housed. Highly Commended.

MANNING, Leonard—Ryde.—Fat Pig, Long-bodied. Black and White crossed Berkshire and Essex. Age, one year two months; bred by Mr. Wright, Pennant Hills; fed on slops and milk. Second Prize.

MUDIE, Frederick—Sydney.—Sheep-shearing. Highly Commended.

OSBORNE, P. H.—Bungendore.—Two Merino Ewe hoggets. Fine combing wool. Age, 407 days; bred by Exhibitor; paddocked and housed. Second Prize.

OSBORNE, P. H.—Bungendore.—Two Merino Ewe hoggets. Fine combing wool. Age, 467 days; bred by exhibitor; paddocked and housed. First Prize.

OSBORNE, P. H.—Bungendore.—Two Merino Ram hoggets. Fine combing wool. Age, 407 days; bred by exhibitor; paddocked and housed. First Prize.

CLASSES 647-648-649.—*Land Animals—Sheep; Goats and Alpacas; Swine.*

OSBORNE, P. H.—Bungendore.—Two Merino Ram hoggets. Fine combing wool. Age, 407 days; bred by exhibitor; paddocked and housed. Second Prize.

PEARSE, Thos. S.—Spring Grove, Orange.—Coarse-woolled Lincoln Ram, any age. Age, two years four days; wool, 305 days; bred by exhibitor; paddocked. First Prize.

PEARSE, Thos. S.—Spring Grove, Orange.—Coarse-woolled Lincoln Ram, any age. Age, one year one day; wool, 366 days; bred by exhibitor; paddocked. Second Prize.

PEEL RIVER LAND AND MINERAL CO.—Goonoo Goonoo.—Merino Ewe, any age; fine combing wool. Age, three years one month six days; wool, 347 days; bred by exhibitor; paddocked. Highly Commended.

PEEL RIVER LAND AND MINERAL CO.—Goonoo Goonoo.—Merino Ram, any age; fine combing wool. Age, four years one month; wool, 362 days; bred by exhibitor; paddocked. Highly Commended.

PEMELL, James E.—Randwick.—Sow, any age; medium breed. White; age, two years five months; bred by Lord Ellesmere; fed on meal. Second Prize.

PEMELL, James E.—Randwick.—Sow, any age; small breed. White; age, fourteen months; bred by exhibitor; fed on meal. First Prize.

PEMELL, James E.—Randwick.—Sow, any age; small breed. White; age, sixteen months; bred by exhibitor; fed on meal. Second Prize.

PEMELL, James E.—Randwick.—Boar, any age; long-bodied breed. Black; age, one year nine months; bred by Mr. J. Kent, Bagmore, England; fed on meal. First Prize.

PEMELL, James E.—Randwick.—Fat Pig, long-bodied. Black and white; age, fourteen months; bred by exhibitor; fed on meal. First Prize.

PEMELL, James E.—Randwick.—Sow, any age; medium breed. White; age, two years five months; bred by Lord Ellesmere; fed on meal. Highly Commended.

PEMELL, James E.—Randwick.—Sow, in milk, with litter of Pigs; medium breed. White; age, eighteen months; bred by Mr. Graham, Morpeth; fed on meal. First Prize.

PEMELL, James E.—Randwick.—Fat Pig, medium breed. White; age, two years six months; bred by Duke of Manchester; fed on meal. First Prize.

PEMELL, James E.—Randwick.—Boar, any age; small breed. White; age, eight months; bred by exhibitor; fed on meal. First Prize.

PEMELL, James E.—Randwick.—Boar, any age; small breed. White. age, fourteen months; bred by exhibitor; fed on meal. Second Prize.

PEMELL, James E.—Randwick.—Sow, long-bodied; in milk, with litter of pigs. Black and white; age, about three years; bred by G. Hill, Sydney; fed on meal. Second Prize.

CLASSES 647-648-649.—*Land Animals—Sheep; Goats and Alpacas; Swine.*

PEMELL, James E.—Randwick.—Sow, any age; long-bodied breed. Black with white; age, two years; bred by exhibitor; fed on meal. Second Prize.

PEMELL, James E.—Randwick.—Sow, long-bodied; in milk, with litter of pigs. Black and white; age, about three years; bred by Mr. Allan, Bega; fed on meal. First Prize.

SALTING, Messrs.—Cunningham Plains.—Two Merino Ram hoggets, fine combing wool. Age, fourteen months; bred by exhibitor; paddocked. Highly Commended.

SHORT, T. W.—Bathurst.—Sheep-shearing. First Prize.

Remarks.—Apart from the diploma and silver medal of the Commission, the winner of the first prize carried off two prizes offered for competition by private firms, viz.:—Cheque for £3 3s. from S. Hoffnung & Co., on behalf of Messrs. Turner, Naylor, & Co., of Sheffield; and silver Waltham watch from Messrs. F. Lassetter & Co. (Limited), of Sydney.

TODD, Henry—Darlington.—Sow, any age, medium breed. Black; age, two years; bred by exhibitor; fed on slops. First Prize.

WHITE, Edward—Martindale, Denman.—Pen 5 Fat Wethers (other than Leceistershire, Lincolnshire, Cotswold, Southdown, or Shropshire). Age, three years; bred by exhibitor; paddocked. First Prize.

WOODHOUSE, E. B.—Mount Gilead, Campbelltown.—Sow, any age; Long-bodied Breed. *Rose;* black; age, eleven months; bred by Lord Fitzhardinge, Berkley Castle, Gloucestershire, England; improved Berkshire; fed on ship's refuse, grain, &c. First Prize.

WOODHOUSE, Mrs. E. H.—Rockwood.—Campbelltown.—Coarse-woolled Southdown Ram; any age. Never shorn; bred by Colonel Kingscote, Gloucestershire, England. First Prize.

WOODHOUSE, Mrs. E. H.—Rockwood, Campbelltown.—Coarse-woolled Southdown Ewe; any age. Never shorn; bred by Colonel Kingscote, Gloucestershire, England. First Prize.

QUEENSLAND.

ALLEN, William—Whyambah.—Merino Ram, any age. Heavy combing wool. Age, 4 years; wool, 373 days; bred by C. B. Fisher; paddocked and housed. Highly Commended.

BELL & SONS—Jimbour.—Merino Ram, any age. Heavy combing wool. Age, four years; wool, 374 days; bred by exhibitor; shepherded, paddocked, and housed. First and Champion Prizes.

BELL & SONS—Jimbour.—Merino Ewe, two years old. Heavy combing wool. Age, two years; wool, 374 days; bred by exhibitor; shepherded, paddocked, and housed. Second Prize.

BELL & SONS—Jimbour.—Two Merino Ram-hoggets. Heavy combing wool. Age, eleven months and three days; bred by exhibitors; shepherded, paddocked, and housed. Second Prize.

CLASSES 647-649.—*Land Animals—Sheep ; Goats and Alpacas ; Swine.*

BELL & SONS—Jimbour.—Two Merino Ewe-hoggets. Heavy combing wool. Age, eleven months three days ; bred by exhibitors ; shepherded, paddocked, and housed. Second Prize.

BELL & SONS—Jimbour.—Merino Ram, any age. Fine combing wool. Age, four years ; 374 days ; paddocked and housed. Second Prize.

BELL & SONS—Jimbour.—Merino Ewe, any age. Heavy combing wool. Age, three years ; wool, 374 days ; bred by exhibitors ; shepherded, paddocked, and housed. Commended.

BELL & SONS—Jimbour.—Merino Ewe, any age. Heavy combing wool. Age two years ; wool, 374 days ; bred by exhibitors ; shepherded, paddocked, and housed. Highly Commended.

FISHER, C. B.—Headington Hill.—Merino Ewe, two years old. Heavy combing wool. Age, one year eleven months ; wool, 374 days ; bred by exhibitor ; paddocked and housed. First and Champion Prizes.

FISHER, C. B.—Headington Hill.—Two Merino Ewe-hoggets. Heavy combing wool. Age, thirteen months ; bred by exhibitor ; paddocked and housed. First Prize.

FISHER, C. B.—Headington Hill.—Merino Ewe, any age. Heavy combing wool. Age, three years ; wool, 373 days ; bred by exhibitor ; paddocked and housed. First Prize.

FISHER, C. B.—Headington Hill.—Merino Ewe, any age. Heavy combing wool. Age, three years ; wool, 373 days ; bred by exhibitor ; paddocked and housed. Second Prize.

FISHER, C. B.—Headington Hill.—Merino Ram, any age. Heavy combing wool. Age, two years two months ; wool, 388 days ; bred by exhibitors ; paddocked and housed. Second Prize.

MARSHALL & SLADE—Glengallan.—Merino Ram, two years old. Fine combing wool. Age, two years eleven months fifteen days ; wool, 318 days ; bred by exhibitors ; paddocked and housed. Highly Commended.
Report—Apparently over age.

MARSHALL & SLADE—Glengallan.—Merino Ram, two years old. Fine combing wool. Age, two years eleven months fifteen days ; wool, 318 days ; bred by exhibitor ; paddocked and housed. Highly Commended.

SIMPSON, G. Morris—Bon Accord, Dalby.—Two Merino Ewe-hoggets. Heavy combing wool. Age, 335 days ; bred by exhibitor ; paddocked and housed. Commended.

WRIGHT, William—Warwick.—Sheep-shearing.
Second Prize.

SOUTH AUSTRALIA.

PITTS, E. W.—The Levels, Dry Creek.—Merino Ram, two years old. Heavy combing wool. Age, two years five months ; wool, 339 days ; bred by exhibitor ; paddocked and housed. Commended.

PITTS, E. W.—The Levels, Dry Creek.—Merino Ram, any age. Heavy combing wool. Age, three years six months ; wool, 339 days ; bred by C. B. Fisher ; paddocked and housed. Commended.

SANDERS & CO., James—Canowie.—Merino Ram, two years old. Heavy combing wool. Age, two years three months fourteen days ; wool, 338 days ; bred by exhibitors ; housed. Second Prize.

SANDERS & CO., James—Canowie.—Merino Ewe, two years old. Heavy combing wool. Age, two years three months ; wool, 338 days ; bred by exhibitors ; housed. Commended.

TASMANIA.

GIBSON, James—Bellevue, Cleveland.—Merino Ram, two years old ; fine combing wool. Age, two years three months ; wool, 313 days ; bred by exhibitor ; paddocked and housed. First and Champion Prizes.

GIBSON, James—Bellevue, Cleveland.—Merino Ram, any age ; fine combing wool. Age, two years three months ; wool, 315 days ; bred by exhibitor ; paddocked and housed. First Prize.

GIBSON, James—Bellevue, Cleveland.—Merino Ram, any age ; fine combing wool. Age, two years three months ; wool, 313 days ; bred by exhibitor ; paddocked and housed. Highly Commended.

GIBSON, James—Bellevue, Cleveland.—Merino Ram, two years old ; fine combing wool. Age, two years three months ; wool, 313 days ; bred by exhibitor ; paddocked and housed. Second Prize.

GIBSON, Thomas—Esk Vale.—Leicester Ram, any age ; coarse-woolled Sheep. Age, 351 days ; wool, 351 days ; bred by exhibitor ; paddocked and housed. First Prize.

GIBSON, Thomas—Esk Vale.—Leicester Ewe, any age ; coarse-woolled Sheep. Age, 351 days ; wool, 351 days ; bred by exhibitor ; paddocked and housed. First Prize.

TAYLOR, D.—St. Johnston.—Merino Ewe, any age ; fine combing wool. Age, one year three months ; wool, 309 days ; bred by exhibitor ; shepherded, paddocked, and housed. Highly Commended.

TAYLOR, D.—St. Johnston.—Merino Ewe, any age ; fine combing wool. Age, one year three months ; wool, 309 days ; bred by exhibitor ; shepherded, paddocked, and housed. First and Champion Prizes.

TAYLOR, D.—St. Johnston.—Merino Ewe, two years old ; fine combing wool. Age, 2 years ; wool, 309 days ; bred by exhibitor ; shepherded and housed. First Prize.

TAYLOR, D.—St. Johnston.—Merino Ewe, 2 years old ; fine combing wool. Age, two years ; wool, 309 days ; bred by exhibitor ; shepherded and housed. Second Prize.

CLASS 650.

Poultry and Pigeons, &c.

JUDGES.

BARNETT, JOHN	Glebe, Sydney.
BRADLEY, WALTER, SEN.	Randwick, Sydney.
CADELL, THOMAS, JUN.	North Shore, Sydney.
CRANE, T.	York-st., Sydney.
FRANK, W. J.	Sydney.
GRAY, HENRY	Sydney.
HALLS, EDWARD	York-st., Sydney.
HYAM, S. H.	Sydney.
KELLICK, JAMES	Surry Hills, Sydney.
MARR, W. G. (ELLIS & Co.)	George-st., Sydney.
PEMELL, J. E.	Randwick, Sydney.
THOMPSON, T. (A. THOMPSON & Co.)	Pitt-st., Sydney.
THORNE, JAMES	Lower Pitt-st., Sydney.
WRIGHT, JOHN	Surry Hills, Sydney.

STEWARDS.

BEDWELL, C. R....	Calder House, Redfern, Sydney.
LORD, HERBERT	Lands Office, Sydney.
LORD, GEO. LEE	Sydney.
MARKLOVE, R. (BRIGHT BROS.)	Pitt-st., Sydney.

AWARDS NOMENCLATURE.

The Awards in Class 650—Poultry, Pigeons, &c., are thus described in their relative orders of merit:—First Prize (Small Silver Medal); Second Prize (Bronze Medal.)

Poultry, Pigeons, &c.

CLASS 650.

NEW SOUTH WALES.

ABBOTT, W. G.—Sydney.—Pair of Amoy Geese.
First Prize.

ABBOTT, W. G.—Sydney.—Pair of Amoy Geese.
Second Prize.

BEATTIE, W.—Sydney.—Cock Almond Pigeon.
First and Special Prizes.

Report—The Judges consider this bird the best in the Exhibition, of Pigeons.

BEATTIE, W.—Sydney.—Pair of Almond Pigeons.
First Prize.

BEATTIE, W.—Sydney.—Carrier Pigeons, other than black or dun.
First Prize.

BEATTIE, W.—Sydney.—Pair of Dun Carrier Pigeons.
First Prize.

BEATTIE, W.—Sydney.—Pair of Black Carrier Pigeons.
First Prize.

BEATTIE, W.—Sydney.—Pair of Dragoons (other than Blue or White.)
First Prize.

BEATTIE, W.—Sydney.—Pigeons: Hen Almonds.
First Prize.

BEATTIE, W.—Sydney.—Black Carrier Pigeon (Hen).
First Prize.

BEATTIE, W.—Sydney.—Pair of long-faced Antwerp Pigeons (mealy).
First Prize.

BEATTIE, W.—Sydney.—Pair of Tumbler Pigeons (short-faced), other than mottled. First Prize.

BEATTIE, W.—Sydney.—Cock Almond Pigeon.
Second Prize.

BEATTIE, W.—Sydney.—Pair of Almond Pigeons.
Second Prize.

BEATTIE, W.—Sydney.—Pair of long-faced Antwerp Pigeons (Blue Chequered). Second Prize.

BENNETT, Kenrick H.—Moolah, Laurencekirk, Booligal.—Bilbahs.
First Prize.

BENNETT, Kenrick H.—Moolah, Laurencekirk, Booligal.—Mallee Hens. First Prize.

BRADLEY, Junr., W.—Randwick.—White Dragoon Pigeon (Hen).
First Prize.

CLASS 650.—*Poultry, Pigeons, &c.*

BRADLEY, Junr., W.—Randwick.—Cinnamon Cochin-China Cock. First Prize.

BRADLEY, Junr., W.—Randwick.—Pair Ducks, other than Aylesbury, Rouens, Buenos Ayres, Muscovy, Cayugas, or cross-bred. First Prize.

BRADLEY, Junr., W.—Randwick.—Black-red British Game Cock. First Prize.

BRADLEY, Junr., W.—Randwick.—Pair of long-faced Beards (Pigeons). First Prize.

BRADLEY, Junr., W.—Randwick.—Coop of Black-red British Game Fowls. Second Prize.

BRADLEY, Junr., W.—Randwick.—Pair of Rouen Ducks. Second Prize.

BUNTING, H.—Waterloo.—Wonga Wonga Pigeons. First Prize.

BUNTING, H.—Waterloo.—Bronzewing Pigeons. First Prize.

BUNTING, H.—Waterloo.—Cock Hamburg (any variety). First Prize.

BUNTING, H.—Waterloo.—Coop of Pheasant Fowls (other than gold or silver). First Prize.

BUNTING, H.—Waterloo.—Coop of Silver-pencilled Hamburgs. First Prize.

BUNTING, H.—Waterloo.—Coop of Golden-pencilled Hamburgs. First Prize.

BUNTING, H.—Waterloo.—Coop of Silver Pheasant Fowls. First Prize.

BUNTING, H.—Waterloo.—Pair of long-faced Tumbler Pigeons. First Prize.

BUNTING, H.—Waterloo.—Pair of long-faced Tumbler Pigeons. Second Prize.

BUNTING, H.—Waterloo.—Pair of black Bald Heads (Pigeons). Second Prize.

BUNTING, H.—Waterloo.—Pair of Bald Head Pigeons (other than black). Second Prize.

BUNTING, H.—Waterloo.—Pair of Birmingham Roller Pigeons. Second Prize.

BUNTING, H.—Waterloo.—Pair of Buenos Ayres Ducks. Second Prize.

BUNTING, R.—Waterloo.—Pair of Bald Head Pigeons (other than black). First Prize.

BUNTING, R.—Waterloo.—Pair Ducks, other than Aylesbury, Rouens, Buenos Ayres, Muscovy, Cayugas, or cross-bred. Second Prize.

BUNTING, R.—Waterloo.—Pair of Long-faced Beard Pigeons. Second Prize.

BUZACOTT, E.—Sydney.—Pair of White Fantail Pigeons. Second Prize.

CADELL, H.—St. Leonards.—Blue Dragoon Pigeon (Cock). First Prize.

CADELL, H.—St. Leonards.—Blue Dragoon Pigeon (Hen).
First Prize.

CADELL, H.—St. Leonards.—Pair of Short-faced (mealy) Antwerp Pigeons. Second Prize.

CADELL, H.—North Shore.—Pair of Antwerp Pigeons Long-faced other than Blue checquered and mealy. Second Prize.

CLARKE, H.—Paddington.—White Cochin China Cock.
Second Prize.

DEAN, J. S.—Sydney.—Cock Canary, Norwich, Clear Yellow.
First Prize.

DEAN, J. S.—Sydney.—Cock Canary, Norwich, yellow-necked.
First Prize.

DEAN, J. S.—Sydney.—Hen Canary, Norwich, clear yellow.
First Prize.

DEAN, J. S.—Sydney.—For the best Canary exhibited. Clear yellow Cock. Norwich. First Prize, Special.

DOWNE, A.—St. Leonards.—Pair of Muscovy Ducks.
First Prize.

EMANUEL, Mrs. S.—Goulburn.—Best pair Hens (any variety).
First Prize.

EMANUEL, Mrs. S.—Goulburn.—Pair Brahma Hens, any colour.
First Prize.

EMANUEL, Mrs. S.—Goulburn.—Coop of Dark Brahmapootras.
First Prize.

EMANUEL, Mrs. S.—Goulburn.—Coop of Dark Brahmapootras.
Second Prize.

EMANUEL, Mrs. S.—Goulburn.—Pair of Brahma Hens, any colour.
Second Prize.

EMANUEL, Mrs. S.—Goulburn.—Coop of Houdans.
Second Prize.

FRANCIS, T.—Marrickville.—Colonial Game (Hen-feather), Cock.
Second Prize.

GILCHRIST, T.—Sydney.—Pigeons: Hen Almonds.
Second Prize.

GRAY, A. J.—Sydney.—Coop of Duckwing Bantams.
First Prize.

GRAY, A. J.—Sydney.—Dun Carrier Pigeon—Hen.
First Prize.

GRAY, A. J.—Sydney.—Black Carrier Pigeon—Cock.
First Prize.

GRAY, A. J.—Sydney.—Pair of Red Jacobin Pigeons.
First Prize.

GRAY, A. J.—Sydney.—Pair Blue Pouter Pigeons.
First Prize.

GRAY, A. J.—Sydney.—Rabbits, French Buck.
First Prize.

GRAY, A. J.—Sydney.—Rabbits, Lop-eared Does.
First and Second Prizes.

CLASS 650.—*Poultry, Pigeons, &c.*

GRAY, A. J.—Sydney.—Rabbits, Lop-eared Bucks.
First and Second Prizes.

GRAY, A. J.—Sydney.—Dun Carrier Pigeon—Cock.
Second Prize.

GRAY, A. J.—Sydney.—Coop of Black-red Bantams.
Second Prize.

GRAY, A. J.—Sydney.—Rabbits, French Doe.
Second Prize.

GRAY, A. J.—Sydney.—White Dragoon Pigeon—Cock.
Second Prize.

GRAY, A. J.—Sydney.—White Dragoon Pigeon—Hen.
Second Prize.

GRAY, H.—Sydney.—Bantam Cock, Black-red or other colour.
First Prize.

GRUNSELL, T.—Goulburn.—Coop of white-crested black Polish fowls.
Second Prize.

HAMILTON, G.—Sydney.—Pair of Antwerp Pigeons, other than blue chequered or mealy. First Prize.

HAMILTON, G.—Sydney.—Pair of Dutch Roller Pigeons.
First Prize.

HAMILTON, G.—Sydney.—Coop of silver-spangled Polish Fowls.
First Prize.

HAMILTON, G.—Sydney.—Coop of Leghorns.
First Prize.

HAMILTON, G.—Sydney.—Coop of silver spangled Hamburghs.
First Prize.

HAMILTON, G.—Sydney.—Coop of Frizzled Fowls.
First Prize.

HAMILTON, G.—Sydney.—Cock, Hamburgh, any variety.
Second Prize.

HARRISON, George C.—Cook's River.—Pigeon Race from Binalong to Sydney, 208 miles. First Prize (Large Silver Medal).

HORDERN, S.—Sydney.—Pair of Dragoons, other than blue or white.
Second Prize.

HORDERN, S.—Sydney.—Blue Dragoon Pigeon, Cock.
Second Prize.

HORDERN, S.—Sydney.—Pair of Long-faced Antwerp Pigeons, Mealy.
Second Prize.

HORDERN, S.—Sydney.—Pair of White Dragoon Pigeons.
Second Prize.

HUNT, J. J.—Redfern.—Canary-mule Gold-finch.
First Prize.

HUNT, J. J.—Redfern.—Cock Canary, crested, clear body, dark crown.
First Prize.

JONES, J.—Redfern.—Coop of Golden-spangled Hamburghs.
First Prize.

JONES, J.—Redfern.—Coop of Golden-spangled Hamburghs.
Second Prize.

JONES, J.—Redfern.—Coop of Golden-spangled Polish Fowls.
Second Prize.

KELLICK, J.—Sydney.—Pair of Short-faced Beard Pigeons.
First Prize.

LORD, G. Lee—Sydney.—Turkeys, cock and hen.
First Prize.

LORD, G. Lee—Sydney.—Coloured Dorking Cock.
First Prize.

LORD, G. Lee—Sydney.—Pair Dorking Hens, any colour.
First Prize.

LORD, G. Lee—Sydney.—Pair of Rouen Ducks.
First Prize.

LORD, G. Lee—Sydney.—Pair of Cross-bred Ducks.
First Prize.

LORD, G. Lee—Sydney.—Coop of Coloured Dorkings. First Prize.
Report—A very grand pair of birds.

LORD, G. Lee—Sydney.—Coop of Silver-grey Dorkings.
First Prize.

LORD, G. Lee—Sydney.—Coop of Silver-grey Dorkings.
Second Prize.

LORD, G. Lee—Sydney.—Silver-grey Dorking Cock.
Second Prize.

LORD, G. Lee—Sydney.—Pair Dorking Hens, any colour.
Second Prize.

MARKLOVE, R.—Sydney.—Black Cochin-China Cock.
Second Prize.

MESSENT, J. W.—Redfern.—Pair of English Owl Pigeons.
First Prize.

MESSENT, J. W.—Redfern.—Pair of Blue Dragoon Pigeons.
First and Second Prizes.

MESSENT, J. W.—Redfern.—Pair of Short-faced Beard Pigeons.
Second Prize.

MESSENT, J. W.—Redfern.—Best exhibit of Three Pairs of Pigeons.
Second Prize.

MESSENT, J. W.—Redfern.—Blue Dragoon Pigeon, Hen.
Second Prize.

MURPHY, F.—Sydney.—Pair of Archangel Pigeons.
First Prize.

MURPHY, F.—Sydney.—Rabbits, French Doe.
First Prize.

MURPHY, F.—Sydney.—Pair of Buenos Ayres Ducks.
First Prize.

MURPHY, F.—Sydney.—Pair of Cayuga Ducks.
First Prize.

MURPHY, F.—Sydney.—Pair of Cross-bred Ducks.
Second Prize.

M'KEOWN, W. H.—Sydney.—Coop of Black Spanish Fowls.
First Prize.

NANCARROW, M.—Ryde.—Coop of Silver-spangled Hamburghs.
Second Prize.

NANCARROW, M.—Ryde.—Coop of Golden-Pencilled Hamburghs.
Second Prize.

CLASS 650.—*Poultry, Pigeons, &c.*

OLLIFFE, J. B.—Sydney.—Pair of Short-faced (mealy) Antwerp Pigeons. First Prize.

OLLIFFE, J. B.—Sydney.—Pair of Short-faced Antwerp Pigeons, other than Mealy or Blue Chequered. First and Second Prizes.

OVERALL, J.—Redfern.—Hen, Canary, Norwich, Clear Mealy. First Prize.

OVERALL, J.—Redfern.—Hen, Canary, Crested, Variegated; any Colour. First Prize.

OVERALL, J.—Redfern.—Cock Canary, Cinnamon. First Prize.

OVERALL, J.—Redfern.—Hen Canary, Norwich; mealy ticked. First Prize.

OVERALL, J.—Redfern.—Cock Canary, Crested, clear body, dark crown. Second Prize.

PATRICK, M.—Sydney.—Pair of Muscovy Ducks. Second Prize.

PEATE, T. L.—Cabramatta.—Pair of Aylesbury Ducks. First Prize.

PEATE, T. L.—Cabramatta.—Dark Brahmapootra Cock. First Prize.

PEMELL, J. E.—Randwick.—Coop of Houdans. First Prize.

PEMELL, J. E.—Randwick.—Coop of British Duckwing Fowls. First Prize.

PEMELL, J. E.—Randwick.—Coop of Black Cochin-China Fowls. First Prize.

PEMELL, J. E.—Randwick.—Coop of Light Brahma-pootras. First Prize.

PEMELL, J. E.—Randwick.—Coop Cinnamon Cochin-China Fowls. First Prize.

PEMELL, J. E.—Randwick.—Buff Cochin-China Cock. First Prize.

PEMELL, J. E.—Randwick.—Coop of Buff Cochin-China Fowls. First Prize.

PEMELL, J. E.—Randwick.—Light Brahmapootra Cock. First Prize.

PEMELL, J. E.—Randwick.—Pair Cochin-China Hens, any colour. First Prize.

Report—A grand pair of birds.

PEMELL, J. E.—Randwick.—Pair of Geese, other than Toulouse or Amoy. First Prize.

PEMELL, J. E.—Randwick.—Coop of Golden-spangled Polish Fowls. First Prize.

PEMELL, J. E.—Randwick.—Coop of Bantams, spangled or laced. First Prize.

PEMELL, J. E.—Randwick.—Pair of Bantam Hens. First Prize.

PEMELL, J. E.—Randwick.—Silver-grey Dorking Cock. First Prize.

PEMELL, J. E.—Randwick.—Pair Spanish Hens. First Prize.

CLASS 650.—*Poultry, Pigeons, &c.*

PEMELL, J. E.—Randwick.—Black Cochin-China Cock.
First Prize.

PEMELL, J. E.—Randwick.—Pair of Toulouse Geese.
First Prize.

PEMELL, J. E.—Randwick.—Pair of Toulouse Geese.
Second Prize.

PEMELL, J. E.—Randwick.—Best Pair of Hens (any variety.)
Second Prize.

PEMELL, J. E.—Randwick.—Coop of Malays.
Second Prize.

PEMELL, J. E.—Randwick.—Malay Cock.
Second Prize.

PEMELL, J. E.—Randwick.—Coloured Dorking Cock.
Second Prize.

PEMELL, J. E.—Randwick.—Coop of Silver-spangled Polish Fowls.
Second Prize.

PEMELL, J. E.—Randwick.—Light Brahmapootra Cock.
Second Prize.

PEMELL, J. E.—Randwick.—Coop of Light Brahmapootras.
Second Prize.

PEMELL, J. E.—Randwick.—Coop of Buff Cochin-China Fowls.
Second Prize.

PEMELL, J. E.—Randwick.—Buff Cochin-China Cock.
Second Prize.

PEMELL, J. E.—Randwick.—Coop of Cinnamon Cochin-China Fowls.
Second Prize.

PEMELL, J. E.—Randwick.—Cinnamon Cochin-China Cock.
Second Prize.

PEMELL, J. E.—Randwick.—Dark Brahmapootra Cock.
Second Prize.

PEMELL, James E.—Sydney.—The winner of most First Prizes in Poultry.
Special Prize.

POPE, W.—Sydney.—Bald-head Pigeon, Cock (any colour.)
First Prize.

POPE, W.—Sydney.—Bald-head Pigeon, Cock (any colour.)
Second Prize.

SMITH, G. H. R.—Woollahra.—Pair of White Fantail Pigeons.
First Prize.

SMITH, G. H. R.—Woollahra.—Poultry: Coop of Bantams, black red.
First Prize.

SULLIVAN, T. S. & H. E.—Petersham.—Pair White Pouter Pigeons.
First Prize.

SULLIVAN, T. S. & H. E.—Petersham.—Pair of Pouter Pigeons other than blue or white.
First Prize.

SULLIVAN, T. S. & H. E.—Petersham.—Pair of Black Bald-head Pigeons.
First Prize.

SULLIVAN, T. S. & H. E.—Petersham.—Pair of Black Barb Pigeons.
First Prize.

SULLIVAN, T. S. & H. E.—Petersham.—Pair of White Barb Pigeons.
First Prize.

SULLIVAN, T. S. & H. E.—Petersham.—Pair of White Dragoon Pigeons. First Prize.

SULLIVAN, T. S. & H. E.—Petersham.—Pair of Long-faced Antwerp Pigeons, blue chequer. First Prize.

SULLIVAN, T. S. & H. E.—Petersham.—Pair of Trumpeter Pigeons. First Prize.

SULLIVAN, T. S. & H. E.—Petersham.—White Dragoon Pigeon, Cock. First Prize.

SULLIVAN, T. S. & H. E.—Petersham.—Pair of Turbit Pigeons (other than red or yellow). First Prize.

SULLIVAN, T. S. & H. E.—Petersham.—Pair of Red and Yellow Turbit Pigeons. First Prize.

SULLIVAN, T. S. & H. E.—Petersham.—Pair of Barb Pigeons (other than black or white). First Prize.

SULLIVAN, T. S. & H. E.—Petersham.—Pairs of Runt Pigeons. First and Second Prizes.

SULLIVAN, T. S. & H. E.—Petersham.—Pairs of "Priest" Pigeons. First and Second Prizes.

SULLIVAN, T. S. & H. E.—Petersham.—Pairs of "Magpie" Pigeons. First and Second Prizes.

SULLIVAN, T. S. & H. E.—Petersham.—Pair of "Swallow" Pigeons. First Prize.

SULLIVAN, T. S. & H. E.—Petersham.—Pair of Short-faced and Blue-chequered Antwerp Pigeons. First Prize.

SULLIVAN, T. S. & H. E.—Petersham.—Dun Carrier Pigeon, Cock. First Prize.

SULLIVAN, T. S. & H. E.—Petersham.—Best exhibit of Three Pairs of Pigeons. First Prize.

SULLIVAN, T. S. & H. E.—Petersham.—Pair of African Owl Pigeons. First Prize.

SULLIVAN, T. S. & H. E.—Petersham.—Pairs of "Jacobin" Pigeons (other than red or black). First and Second Prizes.

SULLIVAN, T. S. &. H. E.—Petersham.—Pairs of Black "Jacobin" Pigeons. First and Second Prizes.

SULLIVAN, T. S. & H. E.—Petersham.—Black Carrier Pigeon, hen. Second Prize.

SULLIVAN, T. S. & H. E.—Petersham.—Pair of Black Carrier Pigeons. Second Prize.

SULLIVAN, T. S. & H. E.—Petersham.—Pair of English Owl Pigeons. Second Prize.

SULLIVAN, T. S. & H. E.—Petersham.—Pair of Barb Pigeons (other than black or white). Second Prize.

SULLIVAN, T. S. & H. E.—Petersham.—Pair of Tumbler Pigeons, short-faced (other than mottled). Second Prize.

SULLIVAN, T. S. & H. E.—Petersham.—Pair of Turbit Pigeons (other than red or yellow). Second Prize.

CLASS 650.—*Poultry, Pigeons, &c.*

SULLIVAN, T. S. & H. E.—Petersham.—Pair of Red and Yellow Turbit Pigeons. Second Prize.

SULLIVAN, T. S. & H. E.—Petersham.—Pair of Red "Jacobin" Pigeons. Second Prize.

SULLIVAN, T. S. & H. E.—Petersham.—Pair of Trumpeter Pigeons. Second Prize.

SULLIVAN, T. S. & H. E.—Petersham.—Pair of Dutch Roller Pigeons. Second Prize.

SULLIVAN, T. S. & H. E.—Petersham.—Black Carrier Pigeon, Cock. Second Prize.

SULLIVAN, T. S. & H. E.—Petersham.—Pair of Pouter Pigeons (other than blue or white). Second Prize.

SULLIVAN, T. S. & H. E.—Petersham.—Pair of White Pouter Pigeons. Second Prize.

SULLIVAN, T. S. & H. E.—Petersham.—British Duckwing Fowls, Cock. Second Prize.

SULLIVAN, T. S. & H. E.—Petersham.—Pair of "Archangel" Pigeons. Second Prize.

SULLIVAN, T. S. & H. E.—Petersham.—Pair of Black Barb Pigeons. Second Prize.

THORN, E.—Castle, near Parramatta.—Coop of White Dorkings. Second Prize.

THORN, E.—Castle, near Parramatta.—White Dorking Cock. Second Prize.

TUNKS, W. H.—Ryde.—Coop of Black-red Colonial Game. Second Prize.

TYE, Thomas—Newtown.—Coop of Black-red Bantams. First Prize.

TYE, Thomas—Newtown.—Coop of Colonial Game (other than black-red or white). First Prize.

TYE, Thomas—Newtown.—Colonial Game Cock (other than black-red or white). First Prize.

TYE, Thomas—Newtown.—Coop of Black-red Colonial Game. First Prize.

TYE, Thomas—Newtown.—Colonial Game, Black-red, Cock. Second Prize.

TYE, Thomas—Newtown.—Coop of Colonial Game (other than black-red or white). Second Prize.

TYE, Thomas.—Colonial Game Cock, other than black-red, or white. Second Prize.

WAGSTAFF, Capt.—Ship "La Hogue," from London.—Exhibit of Ravens. First Prize.

WALES, G.—Sydney.—Pair of Bantam Hens. Second Prize.

WARBURTON, G. E.—Glebe.—Pair of Aylesbury Ducks. Second Prize.

WARRINGTON, John—Burwood.—Coop of White Cochin-China Fowls. First Prize.

WARRINGTON, John—Burwood.—White Cochin-China Cock.
First Prize.

WARRINGTON, John—Burwood.—Coop of White Cochin-China Fowls.
Second Prize.

WELCH, W. P.—Woollahra.—Pair of White Barb Pigeons.
Second Prize.

WILDRIDGE, J.—St. Leonards.—Coop of Black Cochin-China Fowls.
Second Prize.

WILLCOCKS, W.—Redfern.—Pair of Birmingham Roller Pigeons.
First Prize.

WILLIAMS, J.—Glebe.—Pair of short-faced and blue chequered Antwerp Pigeons. Second Prize.

WRIGHT, John—Sydney.—Pigeon Race from Binalong to Sydney, 208 miles. Second Prize (Bronze Medal.)

QUEENSLAND.

RUDDLE, W.—Brisbane.—Pair Cochin-China Hens, any colour.
Second Prize.

Report—Very fine pair.

TASMANIA.

JENKINS, R. C.—Hobart Town.—White Dorking Cock.
First Prize.

JENKINS, R. C.—Hobart Town.—Coop of White Dorkings.
First Prize.

MOORE, Joshua—Hobart Town.—Coop of black-red British Game Fowls.
First Prize.

MOORE, Joshua—Hobart Town.—British Duckwing Cock.
First Prize.

MOORE, Joshua—Hobart Town.—Coop of British Duckwings.
Second Prize.

MOORE, Joshua—Hobart Town.—Coop of Duckwing Poultry other than British. Second Prize.

MOORE, Joshua—Hobart Town.—Duckwing Poultry other than British, Cocks. First and Second Prizes.

MOORE, Joshua—Hobart Town.—Black-red British Game Cock.
Second Prize.

MOORE, Jun., J.—Hobart Town.—Coop of Duckwing Bantams.
Second Prize.

MOORE, Jun., J.—Hobart Town.—Bantam Cock, Black-red, or other colour. Second Prize.

SMITH, John—Hobart Town.—Coop of white-crested black Polish Fowls
First Prize.

SMITH, John—Hobart Town.—Black Spanish Cock.
First Prize.

SMITH, John—Hobart Town.—Coop of black Spanish Fowls.
Second Prize.

CLASSES 651 and 652.

Dogs, Cats, and Wild Animals.

JUDGES.

BRISTOWE, E. H. C. ... ... Sydney.

EVANS, GEORGE T. ... ... Sydney.

MORGAN, WILLIAM, JUN. ... ... Sydney.

STEPHEN, ERNEST F., Solicitor ... ... Sydney.

STEWARD.

HOLBOROW, DANIEL ... ...Ashfield, Sydney.

AWARDS NOMENCLATURE.

The Awards in Classes 651 and 652—Dogs, Cats, and Wild Animals, are thus described:—First Prize (Bronze Medal); Second Prize (Diploma).

Dogs, Cats, and Wild Animals.
CLASSES 651 and 652.

GREAT BRITAIN AND IRELAND.

WAGSTAFF, Capt., Master of ship "La Hogue," from London.—Mastiff Dog. Highly Commended.

NEW SOUTH WALES.

ALLPRESS, J. B.—Redfern.—Broken-haired Terrier Dog, "Jack." First Prize.

ALLPRESS, J. B.—Redfern.—Slut, "Jessie." First Prize.

ALLPRESS, J. B.—Redfern.—Broken-haired Toy Terrier Dog, under 8 lbs., "Stumpy." First Prize.

ALLPRESS, J. B.—Redfern.—Skye Terrier Dog, "Toby." First Prize.

ALLPRESS, J. B.—Redfern.—Broken-haired Terrier Slut, "Muz." First Prize.

ALLPRESS, J. B.—Redfern.—Broken-haired Terrier Slut, "Vic." Second Prize.

ALLPRESS, J. B.—Redfern.—Toy Terrier, "Lily." Second Prize.

ASHWORTH, A.—Redfern.—Smooth Terrier Dog (other than black and tan.) First Prize.

ASHWORTH, John—Redfern.—Smooth Black and Tan Terrier Dog, "Prinnie." Second Prize.

BAYNES, R. B.—Paddington.—Pointer Dog, "Regent." First Prize.

BAYNES, R. B.—Paddington.—Pointer Slut, "Duchess." Second Prize.

BILLYARD, W. W.—Parramatta.—Pug Dog, "Romeo." First Prize.

BLAIR, T.—Paddington.—Skye Terrier Slut, "Jessie." Second Prize.

BRAY, Alfred L.—Concord.—Kangaroo Slut, "Jinny." First Prize.

Report—Wrongly entered; not rough, but deserving first prize as fine-haired slut.

BROWN, W. W.—Sydney.—Greyhound Dog, "Hawthornden." First Prize.

BROWN, W. W.—Sydney.—Greyhound Slut, "Brindisi." First Prize.

BUNTING, H.—Waterloo.—Toy Terrier, "Tip."
First Prize.

CANNON, Manes—Waverley.—Sheep Slut, "Midge."
First Prize.

CANNON, Manes—Waverley.—Cattle Slut, "Fairy."
First Prize.

CAREY, Thomas—Sydney.—Broken-haired Toy Terrier Dog, under 8 lbs. "Sank." Second Prize.

CASTLE, J. D.—Waverley.—Large-sized Spaniel Slut, "Floss."
First Prize.

CASTLE, J. D.—Waverley.—Retriever Slut (other than black), "Juno."
First Prize.

CATTELL & CO., J. R.—Sydney.—Bull Dog.
First Prize.

CONNELLAN, M. J.—Sydney.—Retriever Dog (other than black), "Robinson Crusoe." First Prize.

COPLAND, R.—Sydney.—Bull Terrier Dog, "Spider."
First Prize.

COPLAND, R.—Sydney.—Bull Terrier Slut, "Polly."
First Prize.

CRIPPS, J. F.—Sydney.—Newfoundland Slut, "Gyp."
First Prize.

DEAS-THOMSON, Eglantine Julia—Sydney.—Smooth-haired Toy Terrier Dog, under 7 lbs., "Bijou." First Prize.

DENNIS, R.—Sydney.—Italian Greyhound Dog, "Pompey."
First Prize.

DILLING, John—Sydney.—Rough Kangaroo Dog, "Spring."
First Prize.

DODDS, Thomas H.—Sydney.—Skye Terrier Dog, "Tiny."
Second Prize.

ELDRED, George—Wagga Wagga.—Mastiff Dog, "Splodger."
Second Prize.

FEWINGS, Frederick—Little Coogee.—Staghound and Kangaroo Dogs and Sluts (non-competitive). Special Prize.

FORSTER, G. G.—Sydney.—Setter Dog, "Fritz."
First Prize.

GANNON, F.—Cook's River.—Pointer Slut, "Empress."
First Prize.

GANNON, F.—St. Peter's, Cook's River.—Spaniel Slut, under 20 lbs., "Juno." First Prize.

GARRAN, Mrs. Andrew—Sydney.—Sheep Dog, "Colin."
First Prize.

GEORGESON, W.—Sydney.—Domestic Cat, male, "Jack."
Second Prize.

GIBSON, P. L.—Paddington.—Bull-terrier Dog, "Bully."
Second Prize.

GIFFIN, Ada—Paddington.—French Poodle Dog, "Donald."
First Prize.

CLASSES 651, 652.—*Dogs, Cats, and Wild Animals.*

GLENN, James—Waterloo.—Black Curly Retriever Dog, "Jim."
First Prize.

GLENN, James—Waterloo.—Setter Dog, "Rake."
Second Prize.

GLENN, James—Waterloo.—Setter Slut, "Quail."
First Prize.

GOODMAN, A. C.—Sydney.—Smooth-haired Toy Terrier Slut, under 7 lbs.
First Prize.

GOODMAN, F. W.—Sydney—Smooth Black and Tan Terrier Slut.
First Prize.

GOODMAN, F. N.—Sydney.—Smooth-haired Toy Terrier Dog, under 7 lbs.
Second Prize.

GRAY, A. J.—Sydney.—Smooth-haired Terrier Slut, under 7 lbs., "Dot."
Second Prize.

GRAY, Mrs. A. J.—Sydney.—Domestic Cat, female, "Tabby."
First Prize.

GREENWAY, A.—Sydney.—Bull Terrier Slut, "Judy."
Second Prize.

HALLORAN, W. J.—Burwood.—Large-sized Spaniel Slut, "Nell."
Second Prize.

HARDSTAFF, George—Paddington.—Black Curly Retriever Slut, "Vixen."
Second Prize.

HARPER, John—Paddington.—Dog "Mogo."
First Prize.

HOLT, F. S. E.—The Warren, Tempe.—Smooth Black and Tan Terrier Dog, "Chance."
First Prize.

JONES, George C.—Chippendale, near Sydney.—Domestic Cat, male, "Toby."
First Prize.

KEATING, J. T.—Paddington.—Newfoundland Dog, "Bob."
First Prize.

KETO, Samuel—Chippendale, Sydney.—Black Curly Retriever Slut, "Lizzie."
First Prize.

KILGOUR, William—Double Bay.—Mastiff Slut, "Zoe."
First Prize.

LAMB, W. H.—Woodstock, Rooty Hill.—Greyhound Slut, "Calleroo."
Second Prize.

MACKANESS, James, St. Leonards.—Foxhounds (coupled.)
First Prize.

MITCHELL, F. W. M.—Glebe.—Large-sized Spaniel Dog, "Rover."
Second Prize.

MURPHY, F.—Sydney.—Smooth Terrier Slut (other than black and tan), "Florence."
First Prize.

MURPHY, F.—Sydney.—Smooth Terrier Dog (other than black and tan), "Pretty Boy."
Second Prize.

MURPHY, F.—Sydney.—Smooth Terrier Slut (other than black and tan), "Puss."
Second Prize.

McCULLOCH, M.P., A. H.—Darling Point.—Skye Terrier Slut, "Tiny."
First Prize.

McDONALD, A. H.—Sydney.—Staghound Slut, "Brenda."
First Prize.

MACLEAN, A—Darling Point.—Retriever Dog (other than black), "Hector."
Second Prize.

McMINN, John—Sydney.—Newfoundland Dog, "Sailor."
Second Prize.

PATON, H. O.—Sydney.—Smooth Black and Tan Terrier Slut.
Second Prize.

PEDLEY, P. R.—Sydney.—Broken-haired Terrier Dog, "Punch."
Second Prize.

ROSE, William—St. Leonards.—Large-sized Spaniel Dog, "Duke."
First Prize.

ROWLEY, G. B.—Sydney.—St. Bernard, rough-coated, "Leo."
Second Prize.

RUDD, F. W.—Sydney.—Smooth Kangaroo Dog, "Traveller."
First Prize.

SMITH, G. H. R.—Woollahra.—Pointer Dog, "Shot."
Second Prize.

SOPER, R. W.—Sydney.—Cattle Dog, "Wallace."
First Prize.

STEPHEN, E. F.—Sydney.—Pug Slut, "Judy."
First Prize.

STEPHEN, E. F.—Sydney.—Smooth-haired Fox Terrier Dog, "Timour."
First Prize.

STEPHEN, E. F.—Sydney.—Smooth-haired Fox Terrier Dog, "Tartar.'
Second Prize.

STEPHEN, E. F.—Sydney.—Smooth-haired Fox Terrier Slut "Teazle."
First Prize.

STEPHEN, E. F.—Sydney.—Smooth-haired Fox Terrier Slut, "Gill."
Second Prize.

STUART, F.—Sydney.—Sheep Dog, "Collie."
Second Prize.

THORNE, W. A.—Sydney.—Mastiff Slut, "Juno."
Second Prize.

TIERNEY, Mrs.—Sydney.—Italian Greyhound Dog, "Duke."
Second Prize.

WANT, G. F.—Sydney.—Mastiff Dog, "Turk."
First Prize.

WARD, F.—St. Leonards.—Smooth Kangaroo Dog, "Newington."
Second Prize.

WEST, E. A. S.—Paddington.—Setter Slut, "Flirt."
Second Prize.

WEST, W. C.—Sydney.—Retriever Slut (other than black), "Jess."
Second Prize.

WHYTE, John—Redfern.—Cattle Dog, "Rover."
Second Prize.

WOODS, George—Chippendale, Sydney.—Black Curly Retriever Dog, "Darkie."
Second Prize.

WOOLCOTT, A. H.—St. Leonards.—Dog "Spinnaker."
Second Prize.

CLASSES 653–658.

Machines, Implements, and Processes of Manufacture.

JUDGES.

COCKS, JAMES (Chairman)	Surry Hills, Sydney.
JONES, TREVOR J., C.E., City Engineer	Sydney.
POOLMAN, SAMUEL	Sydney.
ROYCE, GEORGE H.	Sydney.

GROUP—Machines, Implements, and Processes of Manufacture.

CLASSES 653–658.

GENERAL REPORT ON VICTORIAN AND SOUTH AUSTRALIAN "STRIPPERS AND REAPERS."

THESE make a great saving of labour at harvesting, but can only be used in this Colony (New South Wales) in the drier parts, and where the straw is of no marketable value.

CANADA.

CRAWFORD & CO.—London, Ontario.—Combined Reaper and Mower. Highly Commended.

ELLIOTT & SON, John—London, Ontario.—Combined Reaper and Mower. First degree of Merit.

MAXWELL, David—Paris, Ontario.—Steam-power Chaff-cutter. Highly Commended.

Report—Of large capacity, simple in design, fair workmanship and finish.

SAWYER & CO., L. D.—Hamilton, Ontario.—Threshing-machine and Harvester. First degree of Merit.

WATSON, John—Ayr, Ontario.—Horse and Steam Chaff-cutter. Highly Commended.

WISNER & SON, J. O.—Brantford, Ontario.—"Empire" Grain-drill. Commended.

Report—Light, and roughly made, but useful.

GREAT BRITAIN AND IRELAND.

GARRETT & SONS, Richard—Leiston, Suffolk.—Straw-elevator and Straw-stacker, to pitch 30 feet. First degree of Merit.

Report—Very good in design, workmanship, material, and finish.

GARFITT & SONS, Thomas—Highfields, Sheffield.—Scythes, Sickles, Chaff-cutting Knives, &c. First degree of Merit.

Report—Of excellent material, and of a very useful character, combining lightness with strength.

HUTTON & CO.—Highlane, near Sheffield.—Scythes, Hay-knives, Sickles, &c. First degree of Merit.

Report—Of excellent make.

DENMARK.

HANSEN, C.—Copenhagen.—Essence of Rennet and Cheese-colouring.
First degree of Merit.

Report—These are used at Bodalla and other extensive cheese factories. These are economical and safe tc use, and well worthy notice of Colonial dairy-farmers.

FRANCE.

MARESCHAL, Jules—Paris.—Meat-chopping Machine.
Highly Commended.

Report—This machine, with circular-revolving bowl and knives, is of good design and workmanship.

SÉNAMAUD ET CIE.—Bordeaux.—Food-cutting and Mixing Machines.
Highly Commended.

Report—These machines are of good design and workmanship.

VOITELLIER, Gustave—Mantes (Seine-et-Oise).—Artificial Incubator.
Honourable Mention.

Report—A very ingenious, but not very novel invention.

GERMANY.

ACTIENGESELLSCHAFT FÜR DEN BAU LANDWIRTHSCHAFTLICHER MASCHINEN, &c., H. F. Eckert—Berlin.—Broad-cast Sower. First degree of Merit.

Report—This exhibit is of good design, well-made and finished.

ACTIENGESELLSCHAFT FÜR DEN BAU LANDWIRTHSCHAFTLICHER MASCHINEN, &c., H. F. Eckert—Berlin.—Harrows, and Single Double, and Ridging Ploughs.
Highly Commended.

Report—This collection of harrows, and single as well as double three and four furrow ploughs, &c., are of good design and workmanship.

BORCHERS & NENTWICH—Prenzlau i. U.M.—Sausage and Mincing-machines. First degree of Merit.

Report—These machines are porcelain-lined, and very well manufactured.

BREUER, SCHUHMACHER, & CO., L. W. ("Kalker Werkzeugmaschinenfabrik"—Kalk bei Köln, a/R.—Hand Grain-cleaners.
Highly Commended.

Report—These machines are of very fair design and good workmanship.

DEHNE, Fr.—Halberstadt.—Grain-drill.
First degree of Merit.

Report—Of very good design, well-made and finished.

HERBERTS, F. A.—Köln, a/R.—Lawn Mowers.
Highly Commended.

Report—These mowers are of good design, and work very well.

MAYER & CO.—Kalk-Köln, a/R.—Seed-Screens for Hand, Horse, and Steam-power. First degree of Merit.

Report—These rotary screens for removing oats, barley, and cockle from wheat have interchangeable sieves fitted with fans to suit special purposes, and are especially useful for cleaning wheat for seed. They are well designed and excellently finished.

MAYFARTH & CO., Ph.—Frankfurt, a/M.—Hand and Horse-power Threshing-machines. Highly Commended.

Report—These machines are provided with straw-shaker, and are of good design and workmanship.

MAYFARTH & CO., Ph.—Frankfurt, a/M.—Horse-power Gear, Hand and Horse-power Chaff-cutters. Two Commended Awards.

Report—The horse-power gear is of strong construction and well made. The chaff-cutters, transportable on wheels, are of good design, and very fairly made.

GREAT BRITAIN AND IRELAND.

BALL & SON, Wm.—Rothwell, Northamptonshire.—Ploughs, Scarifiers, Harrows, and Horse-shoes. Honourable Mention.

BARFORD & PERKINS—Peterborough.—Steaming Apparatus for Cooking Cattle Food. First degree of Merit.

Report—Very compact, well designed, and finished.

BARFORD & PERKINS—Peterborough.—Water-Ballast and Wrought and Cast Iron Rollers. First degree of Merit.

Report—For hand or horse-power.

BARNARD & LAKE—Raine, Essex.—Horse, Hoe, and Turnip-cutter.
Honourable Mention.

BAYLISS, JONES, & BAYLISS—Wolverhampton. — Ornamental Iron Work. First degree of Merit.

Report—Ornamental entrance-gates, iron hurdles, and iron fencings, very good in design; well made and finished.

BAYLISS, JONES, & BAYLISS—Wolverhampton.—Chain Harrow.
Highly Commended.

Report—Fair make.

BRISTOL WAGGON WORKS CO. (Limited)—Bristol.—Broad-cast Sowers. Honourable Mention.

Report—For hand and horse-power. Fair work, design, and finish.

CLASSES 653-658.—*Machines, Implements, and Processes of Manufacture.*

CLARKE, Wm.—London.—Horse-Clipping and Sheep-Shearing Machine.
First degree of Merit.

Report—This machine can manipulate four horses at once by manual power. The machine is very good in design, work, and finish, and well worthy notice of horse-keepers; very simply arranged, and easily worked.—[N.B.—No opinion is given as to its adaptability for shearing sheep.]

COLEMAN & MORTON—Chelmsford.—Cultivators (Patent) adjustable. First degree of Merit.

Report—Good work, design, and finish.

COLEMAN & MORTON—Chelmsford.—Adjustable Rotary Screen.
First degree of Merit.

Report—For separating into various grades all kinds of grain—fitted with fan if required. Very simple and effective arrangement for instantly changing gauge of screen. First-class work, design, and finish.

CORBETT & PEELE—Shrewsbury.—Cheese-press.
First degree of Merit.

Report—Very well made, of good design, work, and finish, and very compact.

CORBETT & PEELE—Shrewsbury.—Winnower and Elevator.
First degree of Merit.

Report—Winnower and elevator, with weighing-machine attached, very ingeniously arranged and compact; good design, work, and finish.

CORBETT & PEELE—Shrewsbury.—Turnip-Drill, Broadcast Sower.
Highly Commended.

Report—One ridge "Turnip" drill, one barrow; broadcast sower for clover and small seeds. Both well made, of good design and finish.

CORBETT & PEELE—Shrewsbury.—Chaff-cutters (hand power) and Oil-Cake Crushers. Commended.

CORBETT & PEELE—Shrewsbury.—Ploughs, Horse-hoes.
Commended.

CORBETT & PEELE—Shrewsbury.—Section Rollers.
Honourable Mention.

CROWLEY & CO., John—Sheffield.—Chaff-cutters.
First degree of Merit.

Report—For hand, horse, and steam-power, fitted with patent safety reversing-gear and hand feed; good design and finish.

CROWLEY & CO., John—Sheffield.—Lawn-mowers.
Highly Commended.

Report—Fair work, design, and finish.

DENTON, Henry—Wolverhampton.—Clod Crushers, Rollers and Harrows. Highly Commended.

Report—Of fair make, design, and workmanship.

EVESON & SONS, Thos.—Stourbridge.—Agricultural Implements and Tools. Commended.

Report—Spades, shovels, anvils, hammers, vyces, picks, and chains, of fair make, material, and finish.

FOSTER & CO. (Limited), Wm.—Lincoln.—Threshing Machine.
Commended.

Report—Substantial, compact, and useful machine.

FOWLER & CO., John—Leeds.—Steam-Ploughs and Cultivators, collective exhibit of. First degree of Merit Special.

Report—The collective exhibit of this firm comprises: One six-furrow patent balance plough with rigid iron frame, so arranged that the shape of the plough and mould-board can be varied to suit any circumstances the land may require; by using short mould-boards or digger "breasts" a tillage can be effected equal, if not superior, to spare husbandry. One three-furrow "Cuban" plough, especially adapted for cultivation of new land, constructed to take a 16-inch furrow 10 to 16 inches in depth. The plough will not clog in clayey or dirty land, and by a patent arrangement, should the wheels come in contact with stumps or rough places, it is not thrown out of furrow. One Eleven-Tyne Turning Cultivator. Has a strong wrought-iron frame, carrying five to eleven steel tynes; is carried on three wheels, the front being the steering wheel. The tynes are adjustable. One three-tyne extra strong "grubber" or "knifer." Has steel tynes and wrought-iron points. Is valuable on stiff clay or stumpy land. The subsoil can be stirred and aerated without disturbing the surface.

FOWLER & Co., John—Leeds.—Excavating Scoop.
First degree of Merit Special.

Report—Is worked between two steam ploughing-engines, and scoops up soil at any point within line of ropes, taking about $2\frac{1}{2}$ tons at a lift; carries it any distance required and deposits coutents instantly. All its movements are self-acting and fully under control. The excavator is well adapted for dam-making and similar work.

FOWLER & CO., John—Leeds.—Slip Traction Engine.
First degree of Merit Special.

Report—Can take a load of 20 tons up a gradient of 1 in 25 and travel at the rate of 3 miles an hour. It is fitted with compensating gear for turning sharp curves, fast and slow speed, friction brake and screw steerage worked by driver from foot-plate fitted with fly-wheel and sensative governor to adapt it as a fixed engine for driving threshing machines, saw-mill, or similar work. The engine carries its own fuel and water, and is fully under control. It is well adapted for farm work.

FOWLER & CO., John—Leeds.—16-Horse power Traction Engines.
First degree of Merit Special.

Report—Two 16-horse power portable and traction engines, fitted with 20-horse power steel winding drums, self-acting coiling gear, two "speeds" for road travelling, screw steerage worked by driver from foot-plate, wrought-iron driving wheels fitted with steel clips for steep inclines, wrought-iron fender attached, fitted with coal bunk and water tank, and 450 yards Fowler's special steel rope. Can be used for traction, threshing, saw-mill, and similar work.

General Report on John Fowler & Co.'s Engines, Ploughs, and Cultivators: —We find these to be first-class in design and workmanship, extra strong, and a sample of their every day goods, not got up specially for exhibition. We consider the introduction of steam-ploughing machinery and traction engines likely to be of great advantage to Australian farmers.

GARRETT & SONS, Richard—Leiston, Suffolk.—Wheat Drill and Broadcast Sower. Highly Commended.

Report—One "Suffolk" wheat drill, patent chain steerage, press bar, and changeable wheels and dies; also broad cast "sower." Both well made and showing good work, design, and finish.

GARRETT & SONS, Richard—Leiston, Suffolk.—Patent Horse-hoe. Highly Commended.

Report—Of good design and make.

GILPIN, Senr., Wm.—Cannock, Staffordshire.—Agricultural Implements and Tools. First degree of Merit.

Report—Improved patent manure, stable, and digging forks, hedge-bill and slashers for scrub-cuttings, half-moon trimmers, garden and field hoes, sugar-cane knives and butchers' cleavers. Good design, work, material, and finish.

HARRIS, George H.—Birmingham.—Sausage Choppers, Fillers, and Mincers. Highly Commended.

Report—For hand, horse, or steam-power; very well made, designed, and finished.

HARRIS, George H.—Birmingham.—Chaff-cutters. Commended.

Report—For hand, horse, and steam.

HILL & SMITH—Brierley Hill, near Dudley.—Iron Fencing, Hurdles, and Posts for Wire Fencing. First degree of Merit Special.

Report—Very well made and finished, and of good design.

HORNSBY & SONS, R.—Grantham.—Reapers and Mowers. First degree of Merit.

Report—The exhibit comprises the "Indispensable" reaper and "Matchless" combined mowers and reapers, back and side delivery "Paragon" mower. All these are fitted with steel-faced finger-bars, lock and interchangeable sections, all of the best material, first class workmanship, design, and finish.

HORNSBY & SONS, R.—Grantham.—Ploughs. First degree of Merit.

Report—Single, double, and treble furrow, convertible, with steel and wood beam. Can be used as single or double furrow, all of best material, design, work, and finish. All the parts are interchangeable.

HORNSBY & SONS, R.—Grantham.—Threshing Machine. Commended.

Report—Substantial, and contains several improvements suitable for this country.

CLASSES 653-658.—*Machines, Implements, and Processes of Manufacture.*

HOWARD, James & Frederick—Bedford.—Ploughs, Harrows, Cultivators, and Rollers. First degree of Merit Special.

Report—This firm shows a large assortment of ploughs single, double, treble, and four furrow, turn wrist, ridgeing, convertible (with steel beams), garden and orchard ploughs—all parts interchangeable—harrows (assorted), chain, seed, drag over, heavy and light—cultivators (assorted), with patent self-lifting gear—rollers, Cambridge and smooth sectional, angle iron frames. All the exhibits are of the best material, design, work, and finish.

HOWARD, James & Frederick—Bedford.—Reapers and Mowers. First degree of Merit Special.

Report—Side delivery reapers and two horse mowers ; very handy compact machines, best material, design, and finish, steel-faced finger-bars; self-acting hay rake, very good.

HUNT & TAWELL—Earl's Colne, Essex.—Threshers, Horse-power. First degree of Merit.

Report—Fitted with peg-drum and suited for small farmers ; fair work and design.

HUNT & TAWELL—Earl's Colne, Essex.—Winnowers. First degree of Merit.

Report—Good work, design, and finish.

HUNT & TAWELL—Earl's Colne, Essex.—Horse-power Gear. First degree of Merit.

Report—Good, strong, well made, of good design, work, and finish.

HUNT & TAWELL—Earl's Colne, Essex.—Rollers, Cambridge and Plain Sectional. Highly Commended.

Report—Fair work, design, and work.

HUNT & TAWELL—Earl's Colne, Essex.—Oat-crushers, and Bean-cutters (combined), and Pulpers and Slicers. Highly Commended.

Report—All good work, design, and finish.

HUNT & TAWELL—Earl's Colne, Essex.—Chaff-cutters. Commended.

Report—Hand, horse, and steam-power ; fair work and design.

HUNT & TAWELL—Earl's Colne, Essex.—Seed Drill. Honourable Mention.

KENRICK & SONS, Archibald—West Brunswick, Staffordshire.—Milk Pans. First degree of Merit.

Report—Porcelain lined, strong, well made, and finished, and of the best material.

LARKWORTHY & CO., J. L.—Worcester.—Iron Harrows, Duckfooted Scuffles, and Leverage Drags. First degree of Merit.

Report—Well made, good design, work, and finish.

MALDON IRON WORKS CO. (Limited)—Maldon, Essex.—Threshing-machine, 2 horse-power. First degree of Merit.

Report—Fitted with beater drum, strong, well made, fair design, and work.

CLASSES 653-658.—*Machines, Implements, and Processes of Manufacture.*

MALDON IRON WORKS CO. (Limited.)—Maldon, Essex.—Horse-power Gear. First degree of Merit.

Report—Trussed wrought iron shaft; patent safety clutch; good work, design, and finish.

MALDON IRON WORKS CO. (Limited.)—Maldon, Essex.—Corn-crushers—horse and steam-power. Highly Commended.

Report—Well finished work, good design and make.

MALDON IRON WORKS CO. (Limited.)—Maldon, Essex.—Chaff-cutters. Commended.

Report—For hand, horse, and steam-power; fair design and finish; working parts very simple.

MARSHALL, Samuel—Sheffield.—Sheep-shears and Farm Implements and Tools. First degree of Merit.

Report—Sheep-shears of various designs and patterns (very highly spoken of on trial in the colonies.) Reaping-hooks, scythes, chaff-machine knives, hay knives, reaping and mowing machine sections; all of very good material, work, design, and finish.

MARSHALL, SONS, & CO. (Limited)—Gainsborough.—Threshing-machine. First degree of Merit.

Report—This is a very superior machine, being good in design and framing, of good workmanship and material.

MARTIN, Robert—London.—Sheep-shearers and Horse-clippers. First degree of Merit.

Report—The sheep-shearing and horse-clipping tools are of excellent design, work, and finish.

NETTLEFOLDS & SONS—London.—"Coventry" Lawn-mowers. First degree of Merit.

OSBORN & CO., Samuel—Sheffield.—Agricultural Implements and Tools. Commended.

Report—Steel-cutters, chaff machine knives, reaping and mowing machine sections and fingers, fair material, work, and finish.

PARKES & CO., A. & F.—Birmingham.—Agricultural Implements and Tools. Highly Commended.

Report—Shovels, spades, hay and manure forks, grain shovels, sluicing forks and picks of fair material, work, and finish.

RAINFORTH & SONS, Wm.—Lincoln.—Wheat and Corn Screens. First degree of Merit.

Report—Fitted with adjustable gauge and outside brush; good design and finish.

RAINFORTH & SONS, Wm.—Lincoln.—Cultivators and Scarifiers. Highly Commended.

Report—Good serviceable machines; well made.

RANSOMES, SIMS, & HEAD—Ipswich.—Ploughs, Cultivators, and Harrows. First degree of Merit.

Report—Of the well-known make of this firm, all of best material, workmanship, and design.

RANSOMES, SIMS, & HEAD—Ipswich.—Automatic and Reversible. Lawn-mowers. Highly Commended.
Report—Good material, design, and finish.

RANSOMES, SIMS, & HEAD—Ipswich.—Threshing-machine. Commended.
Report—Of plain construction, but no doubt capable of doing its work satisfactorily.

RICHMOND & CHANDLER—Manchester.—Corn-crushers, for hand, horse, and steam power. Highly Commended.
Report—Smooth ; rollers well made.

RICHMOND & CHANDLER—Manchester.—Horse-power Gear. Highly Commended.
Report—Strong, well-made, and of good design and finish.

RICHMOND & CHANDLER—Manchester.—Chaff-cutters. Highly Commended.
Report—For hand, horse, and steam power. Good material, work, and design.

ROBEY & CO.—Lincoln.—Threshing-machine. Highly Commended.
Report—Substantial, of good workmanship and material, and showing general good design in framing.

ROLLINS & CO.—London.—Lawn-mowers.—First degree of Merit.
Report—Very good design, work, and finish ; did their work well on trial.

RUSTON, PROCTOR, & CO.—Lincoln.—Threshing-machines. Highly Commended.
Report—Very substantial machine, good workmanship and material, and all working parts well protected ; contains some improvements.

SAMUELSON & CO.—Banbury, Oxfordshire.—Reapers and Mowers. First degree of Merit.
Report—This firm shows side-delivery reapers, back-delivery reapers and mowers, malleable iron finger-bars, faced with steel, well-made, compact machines, good material, design, work, and finish.

SAVILLE STREET FOUNDRY & ENGINEERING CO. (Limited) Sheffield.—Farmer's Bone Mill. First degree of Merit.
Report—For crushing bones for manure. The rollers are composed of separate rings of teeth, driven entirely by friction, and easily adjusted and managed. The mill is self-contained, and includes a revolving screen for separating into sizes of $\frac{3}{4}$, $\frac{1}{2}$, and $\frac{1}{4}$ inch, and into dust. It will crush from 4 tons of bones per day, and take in the largest bones, and is so adjusted with sheave and friction band that in the event of any harder substance getting into the mill, such as iron, &c., it will slip, and so not damage the teeth. The mill is strongly made and well designed, and worthy the notice of agriculturists.

SMYTH & SONS, James—Peasenhall, Suffolk.—Seed Drill and Broadcast Sower. First degree of Merit.

Report—Fair work, good design, and finish.

SPEAR & JACKSON—Sheffield.—Agricultural Tools, Spades, Shovels, Forks, &c. First degree of Merit.

Report—Paxton's patent gardening tool sets, spades, and forks, weldless and socketed shovels of all kinds; hay and manure forks, rakes, chaff machines, knives, reaping and mowing-machine sections and fingers; plough mould boards, plain and shaped. A very fine and well assorted collection, excellent quality, good material and workmanship.

TINCKLERS, R.—Penrith.—Barrel churn.

First degree of Merit.

Report—Fitted with patent dashers. The churn is of good design, and well made.

WILDER, John—Reading, Berkshire.—Horse-power Gear.

Highly Commended.

Report—Horse-power gear, very well made and compact.

WILDER, John—Reading, Berkshire.—Chaff-cutters (for hand or horse power), and Oilcake Mill. Commended.

NEW SOUTH WALES.

ATKINS, George—Wilberforce.—Plough and Scuffler.

Commended.

CAPPER & SONS, E. P.—West Maitland.—Ploughs.

Highly Commended.

Report—Good work, design, and finish.

HENDERSON, D.—Pyrmont.—Ploughs.

Highly Commended.

Report—Well made, of fair work, design, and finish.

MANNERS, J.—Taree, Manning River.—Corn-shellers (hand or horse power. First degree of Merit.

Report—Good material, well made, and of good design.

MANNERS, J.—Taree, Manning River.—Ploughs.

Highly Commended.

Report—Fair, serviceable work shown in four ploughs.

MANNERS, J.—Taree, Manning River.—Horse-power Corn-sheller.

Highly Commendcd.

Report—Light; roughly made.

MANNERS, J.—Taree, Manning River.—Horse-power gear.

Highly Commended.

MITCHELL, W.—Richmond.—Ploughs.

Highly Commended.

Report—Two medium and heavy iron ploughs. Fair work and make.

RITCHIE, R. A.—Parramatta.—Ploughs.

First degree of Merit.

Report—Of good make, design, and finish.

RITCHIE, W.—Parramatta.—Ploughs and Adjustable Scarifier.

First degree of Merit.

Report—Made in the colony. Of very good design, make, and finish.

SIM, D.—Morpeth.—Corn-sheller.

First degree of Merit.

Report—Of good material, well made, and of good design.

SIM, D.—Morpeth.—Mowing-machine and Horse Rake.

First degree of Merit.

Report—Mowing-machine for lucerne; strong, well made, and well designed for the purpose intended; of good material. Horse rake for lucerne; strong and compact, good work, design, and finish.

TURNER, J.—Woollahra.—Chilled Iron Shares and Axle-boxes.

First degree of Merit.

Report—Samples of chilled Iron Shares, as used in Colonial-made ploughs and axle-boxes. Very good.

WARREN, W.—Eden, Twofold Bay.—Sliding wooden Butter Churn.

Highly Commended.

Report—Strongly made, but of inferior design.

WINTER, Mark—West Maitland.—Ploughs, Hoes, and Harrows.

Highly Commended.

Report—Exhibits ploughs, heavy and light, with imported mould boards, and Colonial-made shares; two horse-hoes and two harrows. Very good strong work and all of good design and finish.

WRIGHT, J.—Sydney.—Ploughs, Harrow, and Scarifier.

First degree of Merit.

Report—Exhibit of six ploughs, light, medium, and heavy; one zig-zag harrow; one broad-tined adjustable Scarifier, entirely of Colonial make,—good work, design, and finish.

NEW ZEALAND.

ELLIS, Thomas—Wanganui.—Butter-churn.

Highly Commended.

Report—Of Kauri wood, very well made and designed.

REID & GRAY—Dunedin.—Broadcast Seed-sower.

First degree of Merit.

Report—Well made, of good design, work, and finish.

REID & GRAY—Dunedin.—Ploughs, Yokes, and Swingle Trees.

Highly Commended.

Report—Double furrow and sub-soil plough, showing fair work, design, and finish; set of draught pulley-blocks and four-horse yokes; set of four-horse swingletrees, well made, but showing nothing particular in design.

SOUTH AUSTRALIA.

BAGSHAW, J. S. & N.—Adelaide.—Winnowing-machine.
Highly Commended.

Report—Spike-roller winnowing-machine, of fair design, work, and finish.

DOBBIE A. & J.—Adelaide.—Broadcast Seed-sowers.
First degree of Merit.

Report—Four-horse power, simple in design, but roughly made.

MARTIN & CO., J.—Gawler.—Stripper and Reaper for Damp Weather.
First degree of Merit.

Report—One damp weather stripper and reaper; reaps and thrashes in cool or damp weather. The patent bearings and the axles are easy of access for adjustment, the working being thereby improved; a highly finished show machine, well designed.

MARTIN & CO., J.—Gawler.—Steam Chaff-cutter.
First degree of Merit.

Report—Fitted with patent safety gearing, reversing gear, renewable steel-face plate, good design, material, and workmanship.

MARTIN & CO., J.—Gawler.—Four-horse Power Gear.
First degree of Merit.

Report—Well made, and of good design and finish.

MELLOR BROTHERS—Adelaide.—Wheat and Corn Screen.
Highly Commended.

Report—Patent regulating, self-cleaning, simple and effective, good design, work, and finish.

MELLOR BROTHERS—Adelaide.—Ploughs and Scarifier.
Highly Commended.

Report—Ploughs, three and four furrow, and scarifier of fair work and design.

MELLOR BROTHERS—Adelaide.—Mowing-machine.
Highly Commended.

Report—Light mowing-machine, with pans for windy weather or laid crops; light, strong, and fair work; well designed.

MELLOR BROTHERS—Adelaide.—"Pony" Reaper and Stripper.
Commended.

Report—Light handy machine, fair workmanship.

RAMSAY & CO., J. G.—Mount Barker.—Reaping and Stripping Machine.
Highly Commended.

Report—"Ridley's" patent, can reap high or low crop; pick comb; strong, well made, serviceable machine.

STOTT, James W.—Alma.—Reaping and Stripping Machine.
Highly Commended.

Report—Fitted with thimble comb; strong and well made.

STOTT, James W.—Alma.—Plough.
Commended.

Report—One five-furrow plough for light or sandy soil ; fair work.

WILLIAMS & DIXON—Adelaide.—Grape Mill.
First degree of Merit.

Report—Simple in construction, well designed, and made.

UNITED STATES.

ALLEN & CO., R. H.—New York.—Ploughs, Harrows, Cultivators, Horse-hoes, Rakes, &c. Honourable Mention.

Report—Rough in design, make, and finish.

AMES PLOW CO.—Boston, Mass.—Ploughs, Harrows, and Cultivators.
Commended.

Report—Wooden frames ; inferior design, work, and finish.

AMES PLOW CO.—Boston, Mass.—Thermometer and Cylinder Churns, Self-acting Cheese Press, and Sausage Fillers. Commended.

AMES PLOW CO.—Boston, Mass.—Harvesting Mowers, &c.
Honourable Mention.

AMES PLOW CO.—Boston, Mass.—"Ross" Lawn-mowers.
Honourable Mention.

AMES PLOW CO.—Boston, Mass.—Steel-tooth Horse-rake.
Honourable Mention.

AMES PLOW CO.—Boston, Mass.—Revolving Horse-rake.
Honourable Mention.

CARR & HOBSON—New York City.—Seed Drill. Commended.

Report—For loose or sandy soil ; light made ; rough design and finish.

CARR & HOBSON—New York City.—"President" Lawn-mowers.
Highly Commended.

Report—Fair design and workmanship.

CARR & HOBSON—New York City.—Thermometer Churns.
Commended.

CHADBORN & COLDWELL MANUFACTURING CO.—Newburgh, N. Y.—Excelsior Land-mower, for horse or hand power.
Highly Commended.

CHARTER OAK LAWN-MOWER CO.—Hartford, Conn.—Lawn-mower. Highly Commended.

Report—Fair work and design.

COHU, A. B.—New York City.—Churns. Highly Commended.

COHU, A. B.—New York City.—Ploughs, Rakes, Wheelbarrows, &c.
Commended.

Report—Rough make, design, and finish.

CLASSES 653-658.—*Machines, Implements, and Processes of Manufacture.*

DEERE & CO., J.—Moline, Ill.—Ploughs.
Commended.
Report—Double furrow, iron and wood beam ploughs. Though badly designed, are useful.

DURRIE, Horace—New York City.—"Pennsylvanian" Lawn-mower.
First degree of Merit.

ENTERPRISE MANUFACTURING CO.—Philadelphia, Penn.—Meat-cutters. Highly Commended.
Report—Fair work, design, and finish; handy machines.

GODELL MANUFACTURING CO.—Antrim, N.H.—Broadcast Seed-sowers. Highly Commended.
Report—Cahoon's patent broadcast seed-sowers, for hand and horse power, fair design, work, and finish.

GRAHAM, EMLEN, & PASSMORE—Philadelphia, Penn.—Philadelphia Lawn-mowers, for hand and horse power.
First degree of Merit.

HIGGANUM MANUFACTURING CO.—Higganum, Conn.—Ploughs, Harrows, Beams, &c. Commended.
Report—Rough work and bad finish, but capable of doing useful work.

HIGGANUM MANUFACTURING CO.—Higganum, Conn.—Corn-shellers and Separators. Honourable Mention.
Report—Rough in make and design.

HIGGANUM MANUFACTURING CO.—Higganum, Conn.—Root-cutters and Corn-mills. Highly Commended.

JOHNSTON HARVESTER CO.—New York City.—Side-delivery Reaper. Highly Commended.
Report—Fair work and design.

M'CORMICK, C. H. & L. J.—Chicago.—Advance Side-delivery Reaper, and Mower. Non-competitive.
Report—Fair work, design, and finish. [Award given for services in showing.]

M'CORMICK, C. H. & L. J.—Chicago.—Wire-binder.
Commended.
Report—Uses two spools wire; is fitted with compressor adjustable gatherer. All the parts are fully under the control of the driver and easy of access. The binder is strong and heavily made, and is of good design and workmanship.

OSBORNE & CO., D. M.—Auburn, N.Y.—Harvester and Wire-binder.
First degree of Merit.
Report—One wire-binder, using one spool wire, strong and well made, easily worked, not liable to get out of order with reasonable care; binds strongly and delivers sheaf lightly and separately. The "twister" is very simple and effective.

OSBORNE & CO., D. M.—Auburn, N.Y.—Reapers and Mowers.
First degree of Merit.

Report—Combined reaper and mower, single reaper and light and heavy mowers. Well made, designed, and finished.

PITTS AGRICULTURAL WORKS—Buffalo, N.Y.—Threshing-machine. Honourable Mention.

Report—Well made machine, but not adapted for this country.

PLATT & CO.—New York City.—"Buckeye" Mower.
First degree of Merit.

Report—Well designed, and of good work and finish.

WAYNE AGRICULTURAL CO.—Richmond, Ind.—Grain Drill.
First degree of Merit.

Report—Light, serviceable, well made, and of good design.

WOOD & CO., Walter A.—Hoosick Falls, N.Y.—Automatic String Sheaf-binder. First degree of Merit Special.

Report—This machine is novel in construction and entirely automatic. The "Binder" having been adjusted, each sheaf is delivered of uniform size. The whole of the binding mechanism is above the grain, the knot being tied on the upper side of the sheaf. The grain is completely shielded as it comes from elevators and cannot be disturbed by the strongest wind. The straw is straightened out by automatic packers and forms a compact flat sheaf—easy to handle and stack. Every part of the binder is visible and easy of access for oiling and adjustment. The capacity is from 10 to 12 acres per day, and requires one man and two horses to work the machine. The cost of string is less than wire and far superior—the straw being worth 10s. per ton more than that bound by wire. The introduction of this machine will be of great benefit to Australian farmers. It is worthy of special notice.

WOOD & CO., Walter A.—Hoosick Falls, N.Y.—Improved Wire-binder, with "Gordon" attachment. First degree of Merit.

Report—In this machine only one spool wire is used. All the parts are fully under the control of the driver. The wire in case of breakage can be threaded without the driver leaving his seat. It delivers the sheaf freely and lightly and well and strongly bound, is simple in action and of good workmanship. Contains nothing likely to get out of order with reasonable usage. All parts are easy of access for oiling and adjustment. There are several patents combined in this one machine.

WOOD, & CO., Walter A.—Hoosick Falls, N.Y.—Reaper and Mower.
First degree of Merit.

Report—Self-rake side delivery reaper, enclosed gear mower, very compact, well designed, and of good material and work.

WOOD & CO., Walter A.—Hoosick Falls, N.Y.—Wire-binder, with "Locks" patent binder attachment. Commended.

Report—This is a very good and well made machine, but superseded by the improved wire and string sheaf-binders of the same firm. As is the case with all its machines, this exhibit is fitted with steel-faced finger bars and malleable iron chains throughout.

VICTORIA.

BUNCLE, John—Melbourne.—Chaff-cutters.

First degree of Merit.

Report—For hand, horse, and steam power, most excellent design and workmanship, fitted with safety and reversing gear, renewable steel-face plate, and band feed.

BUNCLE, John—Melbourne.—Corn-crusher for steam or horse power.

First degree of Merit.

Report—Large capacity, fitted with screen, first-class work, design, and finish.

CHERRY, Edward—Gisborne.—Butter-churns.

First degree of Merit.

Report—Well made and of good design.

GROOM & WEDD.—Brunswick.—Binder-head.

Highly Commended.

Report—"Binder-head" complete, and in parts made to fit either "Wood's" or "Corbett's" reapers and wire-binders; very fair work and finish.

HUMBLE & NICHOLSON—Melbourne.—Threshing-machine, 4-horse.

Commended.

Report—Fair design and make.

HUTCHINSON & WALKER—Kyneton.—Reaper and Mower.

First degree of Merit.

Report—Double speed four-wheeled reaper and mower, very well made and designed.

LENNON, Hugh—Melbourne.—Ploughs, Plough Fittings, Harrows, Swingletrees.

First degree of Merit.

Report—One heavy land plough, patent solid rolled share and two wheels; medium 2-horse plough, one wheel and patent share; light 2-horse plough; pony plough; 4 or 6-horse squatter plough, for dam-sinking or road work; improved medium double furrow plough; zigzag harrow; horse, hoe, and combined drill plough; collection of plough fittings; set of dynamometrical swingletrees for testing draught; all of best workmanship, finish, and design.

LENNON, Hugh—Melbourne.—Reaping and Mowing-machines.

First degree of Merit.

Report—Challenge reaper and mower combined; patent elastic spring seat and latest improvements, strong, well made machine, good work, design, and finish; Victorian mower, with patent corn-lifters for raising laid crop, strong, well made, good design and work; patent reaping machine (knife-grinder), very good, simple, handy, and compact; patent solid lawn-finger blades for reaping machines, very good.

LUGTON & SONS, A.—Melbourne.—Block Sausage Chopping-machine.
First degree of Merit.

Report—Very well made, of good design and finish.

MUNRO, George—Ballarat.—Stripping Machine.
Commended.

Report—Contains too much cast-iron in breakable parts; of bad design; a highly finished show-machine; not a fair sample of usual work.

NICHOLSON, Joseph—Melbourne.—Reaping and Mowing-machine.
First degree of Merit.

Report—Patent double-speed reaper, with patented improvements; improved self-acting side and back delivery reaper; improved mowing-machine; extra strong burr and thistle cutter; all strong, well made machines, good material, design, and finish, and a credit to the Colony of Victoria.

NICHOLSON, Joseph—Melbourne.—Stripping-machine.
First degree of Merit.

Report—Grain "stripper" of large capacity, nearly all wrought-iron in construction, but light and strong, fitted with self-adjusting thimble-comb; can reap high or low crop; wrought-iron wheels; good design, and workmanship very good; a good serviceable machine.

NICHOLSON, Joseph—Melbourne.—Winnowers and Elevators.
First degree of Merit.

Report—Good, strong, serviceable machines, of good design, work, and finish.

ROBINSON & CO., T.—Melbourne.—Stripping Machine.
Highly Commended.

Report—Patent lever steel comb, galvanized frame, rough workmanship.

ROBINSON & SONS, J. H.—Melbourne.—Squatters' Iron Plough for dam, tank, and road-making. First degree of Merit.

Report—Strong, well made, good work, design, and finish.

WILLIAMS, Price—Melbourne.—Field-gate and Sheep Pen-gate.
Highly Commended.

Report—Very well made.

CLASSES 659–662.

Agricultural Engineering and Administration.

JUDGES.

COCKS, JAMES (Chairman)	Surry Hills, Sydney.
JONES, J. TREVOR, C.E., City Engineer... ...	Sydney.
POOLMAN, SAMUEL	Sydney.
ROYCE, GEORGE H	Sydney.

GROUP—Agricultural, Engineering, and Administration.

CLASSES—659-662.

FRANCE.

CHOUILLOU, Edouard—Rouen.—Phosphate Manures.
First degree of Merit.

Report—These fertilizers are of good quality, and moderate in price.

GREAT BRITAIN AND IRELAND.

BURNEY & CO.—London.—Iron Tanks. First degree of Merit.

Report—A very large assortment of tanks for water and other purposes; also cattle-drinking troughs, water-cart bodies, and corn-bins; all well riveted with patent rivets and of the best material and make.

MUSGRAVE & CO. (Limited)—Belfast and London.—Model of Stables, Cow-houses, &c. First degree of Merit.

Report—Of very good design and finish, being also well planned and arranged.

ST. PANCRAS IRON WORK CO.—London.—Full-size Single-stall Stable, Fittings, &c., &c. First degree of Merit.

Report—Of very good design, work, and finish.

NEW SOUTH WALES.

POATE, F.—Tamworth.—Model of Farm Improvements.
First degree of Merit.

Report—A very creditable exhibit, showing great ingenuity; this is well worthy of the attention of farmers, &c.

POATE, F.—Tamworth.—Model of actual Farm now under cultivation.
First degree of Merit.

Report—This is a very creditable production, made to scale, and well worthy of notice. There is also a small treatise on laying out and working Farms in this Colony, which is highly commendable.

WILLS J. W.—Ashfield.—Improved Bar frame Bee-house, &c.
First degree of Merit.

Report—This is a very creditable exhibit of an improved Bee-hive, well-designed and finished, being moth and vermin proof, the whole being made of the best cedar. The bars can be removed separately and honey extracted without damage to the bees, and the comb returned to hive for refilling, thus producing more honey than by the old method; it is well worthy of the notice of bee-keepers.

SOUTH AUSTRALIA.

STOTT, James W.—Alma.—Stump Grubbing-machine.
First degree of Merit.

Report—A very compact and handy machine, specially adapted for use in scrubby and light timbered country.

CLASSES 663–666.

Tillage and General Management.

JUDGES.

CAMPBELL, WALTER SCOTT, Mining Department ...	Sydney.
DUFF, JOHN, Botanical Gardens	Sydney.
MORTON, THOS. W.	Hyde Park, Sydney.
PONDER, W. F.	Sydney.

GROUP—Tillage and General Management.

CLASSES 663–666.

FRANCE.

CHAPARD, Alfred—Chantilly.—Pharmaceutical Veterinary Products.
Highly Commended.

Report—These products, called by the manufacturer "Feu Chapard," are of good quality.

NEW SOUTH WALES.

COWAN & CO.—Sydney.—A Pamphlet on Indian Teas.
First degree of Merit.

Report—A concise and instructive essay on the cultivation and preparation of tea, which also shows the adulteration to which the teas ordinarily imported into this market may be subjected.

SOUTH AUSTRALIA.

SCHOMBURGK, Ph.D., Richard—Director of the Botanical Gardens, Adelaide.—A complete Catalogue of Plants under cultivation in the Botanical Gardens, Adelaide. First degree of Merit.

Report—This is a most complete, instructive, and comprehensive list of different plants suitable to the Australian climate, and we can safely recommend it as the most useful work of reference in its class procurable in these Colonies.

DEPARTMENT VII.

HORTICULTURE.

AWARDS NOMENCLATURE.

The Awards recommended at the Horticultural Shows were for the most part described as First Prize Special, and First, Second, and Third Prizes, in accordance with a special Schedule issued for the Horticultural Section; in addition to which the Judges in a few cases "Commended" exhibits.

HORTICULTURAL SECTION, GARDEN PALACE.

CLASSES 700–724.

JUDGES.

CAMPBELL, WALTER SCOTT ... ... Sydney.

DUFF, JOHN ... ... Sydney.

MORTON, T. W. ... ... Sydney.

PONDER, W. F. ... ... Sydney.

DEPARTMENT VII.

HORTICULTURE.

GROUP—Ornamental Trees, Shrubs, Flowers, Conservatories, Garden Designing, &c.

CLASSES 700–724.

FRANCE.

BALTET, Charles—Troyes (Aube).—Works on Horticulture.
First degree of Merit.

Report—These eleven books upon gardening, printed in French and English, are all most interesting and instructive works, and the Judges can safely recommend them as standard books of reference.

VILMORIN, ANDRIEUX, ET CIE.—Paris.—Illustrations of Flowers and Plants. First degree of Merit.

Report—A splendid collection of hundreds of illustrations of flowers, plants, and vegetables, beautifully finished. The representation of the sugar beet-root is especially well executed.

GREAT BRITAIN AND IRELAND.

CARTER, DUNNETT, & BEALE—London.—Models of Turnips, Beets, &c. Highly Commended.

Report—These models show the great size of tubers produced by some varieties of this firm's seeds.

DUNN & HEWETT—London.—Illustrations and Models of Coffee and Cocoa-plants. First degree of Merit.

Report—An interesting and instructive exhibit, showing complete plants, with sections of fruit and flower.

KERR, Edward—Dublin.—Garden Implement (convertible).
Honourable Mention.

Report—An ingeniously-contrived garden implement, convertible either into spade, rake, fork, or hoe; suitable for ladies' use or amateur gardening upon a small scale.

JAPAN.

OKURA MASAKICHI—Osaka.—Models of Fruits and Vegetables.
Honourable Mention.

Report—These fifteen models are fair representations of Japanese fruits and vegetables.

CLASSES 700–724.—*Ornamental Trees, Shrubs, Flowers, Conservatories, &c.*

NEW SOUTH WALES.

BENNETT, Kenrick H.—Moolah, Laurencekirk, Booligal.—Collection of Grasses and Sedges. First degree of Merit.

Report—A most interesting collection of specimens of grasses and sedges, found in the Darling River District. The exhibitor has evidently taken a great amount of trouble to make this collection, and deserves great credit for it.

BROOMFIELD, John—Sydney.—Collection of Palms. First Prize.

CATLETT, W. H.—Burwood.—Twelve Palms. First Prize.

CATLETT, W. H.—Burwood.—Six Palms. First Prize.

COWAN & CO.—Sydney.—Samples of Bouquet Papers. First degree of Merit.

FIELD, Mrs. H. H.—Sydney.—Collection of Dried Ferns. Highly Commended.

Report—Carefully dried and artistically arranged.

FITZGERALD, F.L.S., R. D.—Sydney.—Twenty Plates, representing Indigenous Orchids. First degree of Merit.

Report—A very fine collection of plates, representing the different indigenous varieties of Australian Orchids, beautifully finished, showing the perfect flower; also its individual parts. The printed matter attached contains full information of their habitats and other interesting particulars.

ILLAWARRA DISTRICT COMMITTEE—Wollongong.—Collection of Tree and other Ferns. Honourable Mention.

Report—A fair collection of tree and other ferns, making an interesting exhibit.

MOORE, F.G.S., F.L.S., Charles.—Director of the Botanic Gardens, Sydney.—Landscape Gardening. First degree of Merit Special.

Report—We cannot pass over this section without calling the special attention of the Commission to the artistic skill exhibited in arranging the grounds surrounding the Garden Palace. Never, we think, has there been such a rapid growth of beautiful flowers and plants of brilliant colours as we find displayed before us. A few months ago the land around the building presented a state of disorder seldom to be found, but with an amount of energy rarely equalled this was rapidly transformed into beautiful displays of flowers and ornamental shrubbery, neatly intersected with walks. Altogether we consider that the display and arrangement of the flower-beds and borders are the finest we have seen in this Colony, or perhaps in any other country.

MORGAN, James—Goulburn.—Plants of Cherry and Apple Trees. First degree of Merit.

Report—A most valuable exhibit, showing a system of grafting that will confer a great boon upon all pomologists in the Colonies.

STEIME, William—Fairfield.—Collection of Vegetables.
Second Prize.

WALKER, R.—Sydney.—Model Representations of Flowers, made from wool. Highly Commended.
Report—Good models.

NEW ZEALAND.

ARMSTRONG, Charles C.—Dunedin.—Collection of New Zealand Ferns.
Commended.
Report—Artistically arranged.

CRAIG, Eric—Auckland.—Two Albums, containing Collections of New Zealand Ferns. Commended.

HARDY, C. A. C.—South Rakaia.—Collection of New Zealand Ferns.
Commended.
Report—A good botanical collection.

HARRIS, Miss E.—Nelson.—Water-colour Paintings, illustrating New Zealand Flowers and Berries. First degree of Merit.
Report—These are extremely good representations, great care having been taken to show all the characteristics of the different specimens.

HELMS, Richard—Greymouth.—Collection of New Zealand Ferns.
First degree of Merit.
Report—This is a splendidly preserved collection, botanically arranged and named, showing a great amount of care and industry in its preparation. We consider this the finest botanical collection of N. Z. ferns exhibited.

JEFFS, Charles K.—Wellington.—Collection of Dried New Zealand Ferns. First degree of Merit.
Report—A very fine collection of ferns, botanically arranged and named.

LOGAN, H. F.—Wellington.—Collection of Dried New Zealand Ferns.
Highly Commended.
Report—A good working collection of specimens of New Zealand ferns, being in many cases full-sized, and of a most instructive nature.

NUTT, Emily—Dunedin.—Water-colour Drawings of New Zealand Ferns.
Highly Commended.
Report—Carefully drawn and named.

REGAN, John—Thames.—Collection of Colonial Ferns.
Honourable Mention.

SALMON, Kate—Wellington.—Seaweed and Ferns.
Highly Commended.
Report—Artistically arranged in frames made from cones.

CLASSES 700–724.—*Ornamental Trees, Shrubs, Flowers, Conservatories, &c.*

SPENCE, D. C. A.—Dunedin.—Skeleton Leaves of Ferns.
First degree of Merit.

Report—A beautiful exhibit of very finely skeletonized leaves of ferns and other plants, being very complete, and artistically shown.

STEWART, Peter—Wellington—Collection of dried New Zealand Ferns.
First degree of Merit.

Report—A very good botanical collection, concisely named, and well mounted.

TAIT, James—Hokitika.—Case of Ferns and Mosses.
Highly Commended.

Report—A good collection of Ferns and Mosses.

THOMPSON, Mrs.—Napier.—Seaweed.
Highly Commended.

Report—A beautiful cone-framed picture of seaweed, artistically arranged in basket with neat borders.

TIZARD, Mrs. Edward—Thames.—Collection of New Zealand Ferns.
Honourable Mention.

TIZARD, Mrs. Edward—Thames.—Water-colours, illustrative of New Zealand Plants. First degree of Merit.

Report—A good collection of water-colours, beautifully painted; the representations of the different specimens copied are very fine. The interest of the collection is increased by the introduction of the botanical and local names.

QUEENSLAND.

BAILEY, F.L.S., F. M.—Brisbane.—Collection of Queensland Plants.
First degree of Merit.

Report—This is a most interesting and extensive botanical collection of Queensland plants, bound in four volumes, including many rare and unknown varieties, and will be most useful for reference.

SOUTH AUSTRALIA.

HOLDEN & CO., J. A.—Adelaide.—Fountain.
First degree of Merit.

Report—This is an ingenious and attractive fountain, suitable for rockeries or conservatories, being very picturesque. It consists of a boy and girl, the former gracefully holding an umbrella from the top of which water representing a shower of rain falls.

CLASSES 700–724.—*Ornamental Trees, Shrubs, Flowers, Conservatories, &c.*

ORANGE AND LEMON SHOW.

HELD 27th SEPTEMBER, 1879.

NEW SOUTH WALES.

BELLAMY, Zadock—Parramatta District.—Lemons (Lisbon).
First Prize.

BLACK, Henry—Parramatta District.—Oranges (Silesia).
Highly Commended.

CHAVE, Frederick—Parramatta District.—Oranges (Mandarin and Bahia).
First Prize.

CURZON, Charles J.—Sydney.—Mandarin Oranges, Parsley, Rhubarb, and Asparagus.
Highly Commended.

GALLARD, Robert—Ryde.—Seedling Oranges.
First Prize.

M'KEOWN, W. H.—Sydney.—Oranges, Lemons, Limes, and Shaddocks.
First Prize.

PYE, Squire William—Parramatta.—Oranges.
Second Prize.

SCOTT, Isaac—Parramatta District.—Oranges (Silesia).
Second Prize.

SMALL, Thomas—Parramatta.—Mandarin Oranges (Empress).
First Prize.

HORTICULTURAL SHOWS.

CLASSES 700–724.

Ornamental Trees, Shrubs, Flowers, &c.

JUDGES.

BROWNELL, WILLIAM	Sydney.
CAMPBELL, WALTER SCOTT, Mining Department ...	Sydney.
DUFF, JOHN, Botanical Gardens	Sydney.
MORTON, THOMAS W.	Hyde Park, Sydney.

STEWARDS.

BROOMFIELD, Captain JOHN	Sydney.
HILL, Hon. RICHARD, M.L.C.	Sydney.

ASSISTING STEWARD.

MORTIMORE, GEORGE	Sydney.

Horticultural Shows.

It was but to be expected that in the eminently favourable climate of New South Wales, in which fruits of temperate lands and those of semi-tropical climes are produced in abundance, and where flowers of the most vivid hues of one kind or another bloom all the year round, the four Horticultural Shows held at brief intervals in the Agricultural Hall would be full of attraction to visitors. The dates of the various shows were as follows:—First opened on 21st October, the Second on the 25th of November, the Third on the 16th of December, 1879, and the Fourth on the 17th of February, 1880. The classification of this department allowed the recommendation by the Judges of First and Second Prizes; but the Judges in addition gave "High Commendation" and "Commendation" to many of the exhibits. Special First Prizes were recommended in the case of exhibits which displayed very superior merit. It will be seen that silver medals have been given to a few of the more important exhibits, such as the fruit collections of Mr. William Stieme, of Fairfield, N.S.W., a magnificent collection of plants shown by the Hon. John Eales, M.L.C., of Duckenfield Park, near Morpeth, N.S.W., and to Mr. John Baptist, of Sydney, Captain John Broomfield, of Sydney, Mr. W. H. Catlett, of Burwood, N.S.W., and Messrs. Graham & Co., of Sydney, for the variety and excellence of their exhibits of plants and flowers. The varieties of the "Citrus" tribe displayed at the Orange and Lemon Show, held on the 27th of September, 1879, manifested the great capabilities of the climate and soil of New South Wales in this particular branch of vegetable production.

FIRST HORTICULTURAL SHOW.

HELD 21st OCTOBER, 1879.

NEW SOUTH WALES.

BAPTIST, John—Sydney.—Miscellaneous Collection of Plants.
First Prize Special and Silver Medal.

BROOMFIELD, John—Sydney.—Miscellaneous Plants (24).
First Prize.

Note.—Mr. Broomfield received a Silver Medal on account of the number and excellence of his exhibits at the various Horticultural Shows.

BROWN, William—Paddington.—Cut Flowers, Miscellaneous Collection.
First Prize.

CLASSES 700–724.—*Ornamental Trees, Shrubs, Flowers, Conservatories, &c.*

BROWN, William—Paddington.—Cut Roses.
First Prize.

BROWN, William—Paddington.—Miscellaneous Plants (24).
First Prize.

BROWN, William—Paddington.—24 Cut Flowers.
First Prize.

BROWN, William—Paddington.—Palms (6).
Second Prize.

CAMPBELL, Walter S.—Gladesville.—Cut Roses.
First Prize Special.

CAMPBELL, Mrs. W. S.—Gladesville.—Bouquets; hand and button-hole. Third Prize.

CATLETT, W. H.—Burwood.—Collection of Palms.
First Prize Champion.

Note.—Mr Catlett received a Silver Medal on account of the number and excellence of his Horticultural exhibits.

CATLETT, W. H.—Burwood.—Six Palms (6).
First Prize.

CATLETT, W. H.—Burwood.—Miscellaneous Cut Flowers (24).
First Prize.

CATLETT, W. H.—Burwood.—Cut Roses (12).
Third Prize.

EALES, Hon. John, M.L.C.—Duckenfield, Morpeth.—General collection of Plants. Champion Prize, Silver Medal.

Report—A splendid collection.

FORD, Patrick (Gardener to Hon. John Marks, M.L.C.)—Sydney.—Twenty-four Cut Roses. First Prize.

FORD, Patrick (Gardener to Hon. John Marks, M.L.C.)—Sydney.—Calceolarias (6). First Prize.

GELDING, J. & W.—Sydney.—Cut Roses (12).
First Prize.

GELDING, J. & W.—Sydney.—Cut Flowers, miscellaneous collection.
First Prize.

GELDING, J. & W.—Sydney.—Hand and Button-hole Bouquets.
Second Prize.

GELDING, J. & W.—Sydney.—New and Rare Plants.
Third Prize.

GRAHAM & CO.—Sydney.—Miscellaneous collection of Plants.
Second Prize.

Note.—Graham & Co. received a Silver Medal on account of the number and excellence of their exhibits.

CLASSES 700–724.—*Ornamental Trees, Shrubs, Flowers, Conservatories, &c.*

HANLON, Edward (Gardener to E. Knox, Esq.)—Sydney.—Cut Roses (24.) Second Prize.

LASSEGUE, Louis (Gardener to Hon. J. White, M.L.C.)—Woollahra.—Gloxinias (12). First and Second Prizes.

MORGAN, J. (Gardener to Mr. Thorne)—Sydney.—Cut Roses. Third Prize.

MORRIS, George (Gardener to Mr. G. N. Russell)—Sydney.—New and rare Ferns. Third Prize.

NILSON, Arvid—Sydney.—Plans of Landscape Gardening. First Prize.

PEAKER, Joseph (Gardener to Mr. J. Hubert Newman—Waverley.—Calceolarias. Second Prize.

PYE, Squire William—Parramatta.—Oranges and Citrons. First Prize.

PYE, Squire William—Parramatta.—Orange and Citron Plants. Second Prize.

ROSENFELDT, Henry A.—North Willoughby.—Designs for Gardens. Second Prize.

SALINIÈRE, Rev. E. M.—Glebe.—Cut Flowers, miscellaneous collection. First Prize.

SALINIÈRE, Rev. E. M.—Glebe.—Cut Flowers (24). Third Prize.

SALINIÈRE, Rev. E. M.—Glebe.—Cut Roses (12). Third Prize.

SEARLE & SONS—Sydney.—Bouquets for Hand and Button-hole. First Prize.

QUEENSLAND.

QUEENSLAND COMMISSION—Brisbane.—Two Cycads. First Prize.

CLASSES 700–724.—*Ornamental Trees, Shrubs, Flowers, Conservatories, &c.*

SECOND HORTICULTURAL SHOW.

HELD 25th NOVEMBER, 1879.

NEW SOUTH WALES.

BAPTIST, John—Sydney.—Hardy Trees and Plants. Miscellaneous Collection. First Prize.

BINDER, Jacob—Cook's River.—Cucumbers. Third Prize.

BROOMFIELD, John—Sydney.—Ornamental Foliaged Plants (12). First Prize.

BROOMFIELD, John—Sydney.—Palms (12). First Prize.

BROWN, A. H.—Sydney.—Ornamental Foliaged Plants (12). First Prize.

BROWN, A. H.—Sydney.—Six Palms. Third Prize.

BROWN, William—Paddington.—Carnations, Pinks, and Picotees. First Prize.

BROWN, William—Paddington.—Cut Gladiolus (collection). First Prize.

BROWN, William—Paddington.—Fuchsias. First Prize.

BROWN, William—Paddington.—Calladiums. First Prize.

BROWN, William—Paddington.—Plants in Flower (6). First Prize.

BROWN, William—Paddington.—Cut Pelargoniums. First Prize.

BROWN, William—Paddington.—Cut Flowers (distinct varieties). First Prize.

BROWN, William—Paddington.—Ferns (12). Second Prize.

BROWN, William—Paddington.—Cut Gladiolus (12). Third Prize.

CAMPBELL, Mary—Sydney.—Hand and Button-hole Bouquets. First Prize.

CATLETT, W. H.—Burwood.—Ferns (12). First Prize.

CATLETT, W. H.—Burwood.—Cut Flowers (distinct varieties). Second Prize.

CATLETT, W. H.—Burwood.—Plants in Flower (6). Third Prize.

FORD, Patrick (Gardener to Hon. J. Marks, M.L.C.)—Sydney.—Fuchsias. First Prize.

GELDING, J. & W.—Sydney.—Cut Flowers (miscellaneous). First Prize.

GELDING, J. & W.—Sydney.—Tree Carnations. First Prize.

CLASSES 700-724.—*Ornamental Trees, Shrubs, Flowers, Conservatories, &c.*

GELDING, J. & W.—Sydney.—Cut Gladiolus.
Second Prize.

GELDING, J. & W.—Sydney.—Miscellaneous Collection of Plants.
Extra Prize (First).

GRAHAM & CO.—Sydney.—Conifers.
First Prize.

GRAHAM & CO.—Sydney.—Hardy Trees and Shrubs.
First Prize.

HIGGINS, Thomas (Gardener to Mr. Alex. Brown)—Sydney.—Miscellaneous Collection of Vegetables. First Prize.

JOHANNSEN, J. C. (Gardener to Mr. J. Taylor)—St. Leonards.—Miscellaneous Collection of Vegetables. Second Prize.

JOHANNSEN, J. C. (Gardener to Mr. J. Taylor)—St. Leonards.—Cut Flowers (miscellaneous). Third Prize.

JOHNSON, John—Sydney.—Hand and Button-hole Bouquets.
Second Prize.

JOHNSON, John—Sydney.—Pelargoniums.
Third Prize.

JOHNSON, John—Sydney.—Cut Gladiolus.
Third Prize.

LASSEGUE, Louis (Gardener to the Hon. Jas. White, M.L.C.)—Woollahra.—Ferns (12). First Prize.

LASSEGUE, Louis (Gardener to Hon. Jas. White, M.L.C.)—Woollahra.—Palms (6). First Prize.

LASSEGUE, Louis (Gardener to Hon. Jas. White, M.L.C.—Woollahra.—Cut Flowers (Miscellaneous). Second Prize.

MORRIS, George (Gardener to Mr. G. N. Russell)—Sydney.—Calladiums. First Prize.

MORRIS, George (Gardener to Mr. G. N. Russell)—Sydney.—Fuchsias. Second Prize.

PEAKER, Joseph (Gardener to Mr. J. Hubert Newman)—Waverley.—Gloxinias. First Prize.

PEAKER, Joseph (Gardener to Mr. J. Hubert Newman)—Waverley.—Phlox Drummondi. First Prize.

SAXBY & SONS—Sydney.—Cut Flowers (Miscellaneous).
First Prize.

SAXBY & SONS—Sydney.—Carnations, Pinks, and Picotees.
First Prize.

SAXBY & SONS—Sydney.—Cut Gladiolus.
First Prize.

SCOTT, Wm.—Murrumburrah.—Cherries.
First Prize.

SEARLE & SONS—Sydney.—Hand and Button-hole Bouquets.
First Prize.

TRESEDER BROTHERS—Sydney.—Miscellaneous Plants, Collection of (for Nurserymen). First Prize.

CLASSES 700–724.—*Ornamental Trees, Shrubs, Flowers, Conservatories, &c.*

THIRD HORTICULTURAL SHOW.

HELD 16th DECEMBER, 1879.

NEW SOUTH WALES.

ANDERSON, Robert—Sydney.—Plants, Miscellaneous Collection of. Second Prize.

BAPTIST, John—Sydney.—Plants, Miscellaneous Collection of. First Prize.

BROOMFIELD, John—Sydney.—New and rare Plants, Collection of. First Prize.

BROWN, William—Paddington.—Ferns, Collection of. First Prize.

BROWN, William—Paddington.—Cut Flowers, Miscellaneous Collection of. First Prize.

BROWN, William—Paddington.—Cut Flowers (24). First Prize.

CAMPBELL, Mary—Gladesville.—Hand and Button-hole Bouquets. First Prize.

CATLETT, W. H.—Burwood.—Plants, Miscellaneous Collection of. First Prize.

CATLETT, W. H.—Burwood.—Gloxinias (12). First Prize.

GRAHAM & CO.—Sydney.—Plants, Miscellaneous Collection of. First Prize.

JOHANNSEN, J. C. (Gardener to Mr. J. Taylor.)—St. Leonards.—Collection of Vegetables. First Prize.

JOHANNSEN, J. C. (Gardener to Mr. J. Taylor)—St. Leonards.—Cut Flowers, Miscellaneous Collection of. First Prize.

MASTERS, George—Sydney.—Vegetables, Collection of. First Prize.

MORRIS, George (Gardener to Mr. G. N. Russell.)—Sydney.—Plants, Collection of 12. First Prize.

MORRIS, George (Gardener to Mr. G. N. Russell.)—Sydney.—Ferns, Collection of 12. First Prize.

SEARLE & SON—Sydney.—Hand and Button-hole Bouquets. First Prize.

TRESEDER BROTHERS—Sydney.—Cut Flowers, Miscellaneous Collection of. Second Prize.

TRESEDER BROTHERS—Sydney.—Roses, Collection of. Second Prize.

CLASSES 700–724.—*Ornamental Trees, Shrubs, Flowers, Conservatories, &c.*

FOURTH HORTICULTURAL SHOW.

HELD 17th FEBRUARY, 1880.

NEW SOUTH WALES.

ANDERSON, F.—Sydney.—Plants, Miscellaneous Collection of.
Second Prize.

BAPTIST, John—Sydney.—Plants, Miscellaneous Collection of.
First Prize Special.

Report—Commended for general excellence and superior cultivation.

BROOMFIELD, John—Sydney.—Plants, Miscellaneous Collection of.
First Prize.

BROOMFIELD, John—Sydney.—Plants, Miscellaneous Collection of.
Competition for "Excelsior" Anonymous Prize. Winner of £5 Prize.

BROWN, William—Paddington.—Plants, Miscellaneous Collection of.
First Prize.

BROWN, William—Paddington.—Adiantums.
First Prize.

BROWN, William—Paddington.—Collection of Lycopods.
First Prize.

BROWN, William—Paddington.—Cut Roses (24).
Highly Commended.

BROWNELL, William (Gardener to Hon. T. W. Smart, M.L.C.)—Sydney.—Plants, Miscellaneous Collection of. First Prize.

BROWNELL, William (Gardener to Hon. T. W. Smart, M.L.C.)—Sydney.—Plants, Miscellaneous Collection of. Second Prize.

Report—Specially commended for general excellence and superior cultivation.

CAMPBELL, Mrs. W. S.—Gladesville.—Apples.
Second Prize.

FORD, Patrick (Gardener to Hon. J. Marks, M.L.C.)—Sydney.—Achimenes, Collection of. First Prize.

FORD, Patrick (Gardener to Hon. J. Marks, M.L.C.)—Sydney.—Plants, Miscellaneous Collection of.
Winner of "Excelsior" Anonymous Prize.

HANLON, Edward (Gardener to E. Knox, Esq.)—Sydney.—Calladiums (6). First Prize.

HANLON, Edward (Gardener to E. Knox, Esq.)—Sydney.—Dracænas (6). First Prize.

HANLON, Edward (Gardener to E. Knox, Esq.)—Sydney.—Coleus, Collection of. Third Prize.

CLASSES 700–724.—*Ornamental Trees, Shrubs, Flowers, Conservatories, &c.*

HANLON, Edward (Gardener to E. Knox, Esq.)—Sydney.—New and Rare Plants. Third Prize.

HANLON, Edward (Gardener to E. Knox, Esq.)—Sydney.—Plants, Miscellaneous Collection of.
Third Prize in "Excelsior" Anonymous Prize Competition.

HELPS, J. (Gardener to His Excellency Lord Augustus Loftus)—Sydney.—Plants, Miscellaneous Collection of. First Prize.

HELPS, J. (Gardener to His Excellency Lord Augustus Loftus)—Sydney.—Plants, Miscellaneous Collection of.
Second Prize in "Excelsior," Anonymous Prize Competition.

HOWARD, H. (Gardener to Mr. J. B. Hoare)—Sydney.—Coleus, Collection of. First Prize.

JOHANNSEN, J. C. (Gardener to Mr. J. Taylor)—St. Leonards.—Cut Flowers, Miscellaneous Collection of. First Prize.

JOHANNSEN, J. C. (Gardener to Mr. J. Taylor)—St. Leonards.—Potatoes. First Prize.

JOHANNSEN, J. C. (Gardener to Mr. J. Taylor)—St. Leonards.—Coleus, Collection of. Second Prize.

JOHNSON, F.—Sydney.—Flowering Begonias (non-competitive.)
First Prize.

JOHNSON, F.—Sydney.—Variegated Begonias (non-competitive.)
First Prize.

JOHNSON, F.—Sydney.—Plants, Miscellaneous Collection of.
Second Prize.

JOHNSON, F.—Sydney.—Coleus, Collection of (non-competitive.)
Highly Commended.

JOHNSON, John—Sydney.—Plants, Miscellaneous Collection of.
Second Prize.

LASSEGUE, Louis (Gardener to Hon. J. White, M.L.C.)—Sydney.—Calladiums. First Prize.

LASSEGUE, Louis (Gardener to Hon. J. White, M.L.C.)—Sydney.—Cut Flowers, Miscellaneous Collection of. First Prize.

MAGILL, Mary—Sydney.—Cut Flowers, Miscellaneous Collection of.
Third Prize.

MAGILL, Mary—Sydney.—Dahlias, Collection of.
First Prize.

MAGILL, Mary—Sydney.—Asters, Pansies, &c.
Second Prize.

MAGILL, Mary—Sydney.—Asters, Cut (non-competitive.)
Second Prize.

MARKS, David—Sydney.—Plants, Miscellaneous Collection of.
First Prize.

MARKS, Hon. John, M.L.C.—Sydney.—Miscellaneous Plants (24).
Second Prize.

MASTERS, George—Sydney.—Collection of Vegetables.
First Prize.

MASTERS, George—Sydney.—Plants (24).
First Prize.

MASTERS, George—Sydney.—Begonias, Collection of.
First Prize.

MORRIS, George (Gardener to Mr. G. N. Russell)—Sydney.—Hanging Baskets for Ferns. First Prize.

NEILD, John Cash—Woollahra.—Miscellaneous Plants (12) (non-competitive.) First Prize.

NOTT, Mrs. Thos.—Woollahra.—Plants (24).
Second Prize.

SCOTT, Wm.—Murrumburrah.—Fruit, Collection of (non-competitive.)
Highly Commended.

SEARLE & SONS—Sydney.—Hand and Button-hole Bouquets.
First Prize.

STIEME, William—Fairfield.—Fruit, Collection of.
First Prize (Special), and First Prize.

Report—The collection consists of a great many varieties of apples, several varieties of pears, varieties of oranges, of grapes, plums, passion-fruit, medlars, &c. All were of first-rate quality; the collection as a whole deserved very great praise, not only as the produce of the exhibitor, but as an example of the perfection to which such a variety of fruit can be grown in one locality. [*Note*—This exhibitor received a Silver Medal for the excellence and variety of his fruit exhibits.]

WHITE, Hon. Jas., M.L.C.—Woollahra.—Miscellaneous Plants (24).
Second Prize.

QUEENSLAND.

BARNES, J. J.—Mackay.—Dates, Pine-apples, and Cocoa-nuts.
First Prize Special.

EDGAR, J. S.—Rockhampton.—Pine-apples.
Honourable Mention.

FITZALLAN, Eugène—Bowen.—Indigenous Orchids.
Honourable Mention.

QUEENSLAND COMMISSION—Brisbane.—Indigenous and other Plants. First Prize Special.

SOUTH AUSTRALIA.

SOUTH AUSTRALIAN COMMISSION—Adelaide.—Collection of Fruit. First Prize Special.

GENERAL AGRICULTURAL SHOW.

CLASSES 621–622.—Pomology.

JUDGES.

CAMPBELL, WALTER SCOTT, Mining Department ...	Sydney.
DUFF, JOHN, Botanical Gardens	Sydney.
MORTON, THOMAS W.	Hyde Park, Sydney.
PONDER, W. F. (Chairman)	Sydney.

The same Gentlemen acted as Judges of the Pomological Exhibits shown in the Garden Palace.

CLASSES 623–627.—Agricultural Products.

CLASSES 629–634.—Vegetable Products.

JUDGES.

PEMELL, JAMES	Sydney.
PONDER, W. F. (Chairman)	Sydney.

GENERAL AGRICULTURAL SHOW,

HELD 2nd MARCH, 1880.

Report of Judges on the Cereal exhibits displayed at the general show held at Agricultural Hall, and apart from those shown and judged in the Garden Palace itself :—"We consider that the general quality of the wheat exhibited at this show is of the highest order, that from South Australia being especially fine. Although local, climatic, and other influences in some cases considerably detracted from the quality of the specimens shown, yet they very fairly represented the districts from which they were sent ; and we have no hesitation in saying that there never has been in these Colonies so excellent and extensive a display of high-class wheats. We would especially refer to the excellent quality of the mammoth rye exhibited, the heavy yield per acre, and the superior size and colour of the grain being a great inducement for farmers to extend its cultivation. The samples of oats, and Cape, English, and skinless barleys from the Mudgee district are each very fine of their class."

NEW SOUTH WALES.

ATKINS, C.—Bathurst.—Oaten Hay Chaff, 30 cwt. to the acre. Wheaten Hay Chaff, 28 cwt. to the acre. Second Prize.

Report—Quality of hay very fine, but badly cut.

BAKER, A.—Spring Hill.—Wheat in Sheaf, 25 bushels to the acre. Highly Commended.

BAPTIST, John—Sydney.—Miscellaneous Collection of Plants. Highly Commended.

Report—For house and table decoration, excellently named and arranged.

BASSETT, William—Sydney.—Native Flax. First degree of Merit Special.

Report—A very interesting exhibit of native flax from Liverpool Plains. This exhibit is well worthy of notice ; the flax is shown in various stages of preparation from "fibre" to "lace." The fibre is good and strong throughout. As the supply of this native flax is unlimited, its manufacture into a marketable product may yet become a great Colonial industry.

BATES, F. P.—Spring Hill.—Mammoth Rye, in Sheaf and Grain, 100 bushels to the acre. First degree of Merit.

Report—Quality very fine.

BOTANIC GARDENS—Sydney—(Charles Moore, F.L.S., Director).—Collection of New and Rare Plants. First degree of Merit.

Report—This is a magnificent miscellaneous collection of new and rare plants, many of them discovered in and brought from the South Seas. The collection includes the following plants :—

Curcuma sp.?	South Sea Islands.
Heliconia aurea striata,	,,
Dracæna Turnerii,	,,
Maranta Turnerii,	,,
Crinum variegatum,	,,
Microlepia hirta cristata,	,,
Dicksonia, sp.?	,,
Tillandsia tessellata,	,,

BOYLSON & SONS, M.—Ashfield.—Flour.

Commended.

Report—Well manufactured, but wanting in colour and strength.

BROADHEAD, David—Bungonia.—Oaten Hay, 35 cwt. to the acre. Wheaten Straw (from 35 bushels of wheat per acre).

First Prize.

BROWNE, J. D.—Brewongle, near Bathurst.—Wheat, 35 bushels to the acre. Weight, 64¼ lbs. to the bushel. Highly Commended.

BROWN, William—Paddington.—Collection of Australian and other Ferns. Highly Commended.

BROWN, William—Paddington.—Tropical Fruits (4 varieties).

Commended.

BRYANT, James H.—Young.—Maize-fibre, and Paper made therefrom.

First degree of Merit Special.

Report—This fibre is shown in various stages of preparation for paper-making. The samples of paper made from the fibre are of good quality. This exhibit is well worthy the notice of Colonial paper-makers—the supply of raw material (in the shape of maize-fibre) being abundant and cheap.

BUCKHOLTZ, F.—Mudgee.—Oats.

First degree of Merit.

BUCKHOLTZ, F.—Mudgee.—Fruit.

Commended.

Report—Exhibit comprises five varieties of apples and one of pears.

BUCHANAN, Sen., John—Mount Dangar, Goulburn River.—Wheat : 20 bushels to the acre ; weight, 65¾ lbs. to the bushel.

Commended.

CAMPBELL, David H.—Cunningham Plains.—Barley, 20 bushels to the acre. Highly Commended.

General Agricultural Show.

CAMPBELL, David H.—Cunningham Plains.—Seeds and Plants of Sheep Burnet. Honourable Mention.

Report—Yield said to be 10 bushels to the acre, with 25 acres under crop. This is a valuable sheep-fodder plant, and could be introduced with great advantage on the sheep-runs of this Colony.

CAMPBELL, Wm. B.—Blacktown.—Gourds and Fruits.
Second Prize.

Report—This is a good exhibit of forty varieties of gourds, comprising some very fine specimens; also grapes, apples, &c.

CAMPBELL, Mrs. W. S.—Gladesville.—Fruit.
Commended.

Report—A good collection of eight varieties.

CANNON, Manes—Waverley.—Butter.
First degree of Merit.

Report—Very fine and well-made.

CARTER, Thos.—Sydney.—Onions.
Report—Well grown. Commended.

CAUGHEY, Hugh—Mudgee.—Maize.
Highly Commended.

CONLON, Bernard—Freeman's Reach.—Large Yellow Maize, 100 bushels to the acre. First degree of Merit.

CONLON, Bernard—Freeman's Reach.—Yellow-flint Maize, 100 bushels to the acre. Highly Commended.

DANGAR, W. J.—Neotsfield, Singleton.—Indigenous Grasses and Fodder-plants (46 varieties). Highly Commended.

DANGAR, W. J.—Neotsfield, Singleton.—Indian Fig and Fruit.
Commended.

DAVIES, George—Windsor.—Pumpkins.
Commended.

Report—Two specimens of Crown table pumpkins; well grown.

EZZY, William—Spring Hill.—Wheat in sheaf, 27 bushels to the acre.
First degree of Merit.

EZZY, William—Spring Hill—Wheat.
Commended.

FRASER, Daniel—Murrumburrah.—Wheat; 17 bushels to the acre; weight, 63½ lbs. to the bushel. Highly Commended.

GARLING, Arthur—Springfield, Mudgee.—Rye; 30 bushels to the acre.
Highly Commended.

GARLING, Arthur—Springfield, Mudgee.—Skinless Barley; 39 bushels to the acre. Commended.

GRUNSELL, Thomas—Goulburn.—Eighty varieties of fruit.
Second Prize.

Report—This is a fine miscellaneous collection of eighty varieties of grapes, apples, pears, plums, &c.

HERRIOTT, Thos.—Kogarah.—Vegetables, thirteen varieties.
Highly Commended.

Report—This is a good collection, and the specimens are creditable, considering the season of the year.

HERRIOTT, Thos.—Kogarah.—Potatoes ; eleven varieties.
Highly Commended.

HEWITT, Thomas A.—Denman.—Peaches ; two varieties.
Second Prize.

HEWITT, Thomas A.—Denman.—Potatoes.
Commended.

Report—Well grown.

JOHNSON, John—Sydney.—Miscellaneous Collection of Ornamental Trees.
Commended.

MACANSH, Wm.—Murrumburrah.—Barley ; 20 bushels to the acre.
First degree of Merit.

MACANSH, Wm.—Murrumburrah.—Wheat; 20 bushels to the acre—weight, 62½ lbs. to the bushel. Commended.

MAGILL, Mary—Sydney.—Cut Dahlias (48 varieties).
Highly Commended.

MIDDLEMISS, G.—Deniliquin.—Onions.
Honourable Mention.

MORTIMORE, Geo.—Double Bay.—Arrowroot Plant (Amorphophallus campanulatus). Commended.

Report—A well-grown plant.

M'CALLUM, Argyle—Good Hope, near Yass.—Maize in cob ; two samples ; one 35 to 40 bushels to the acre ; the other, 40 to 45 bushels to the acre. First degree of Merit.

M'CALLUM, Argyle—Good Hope, near Yass.—Potatoes.
Commended.

Report—Well grown,

NEILD, John Cash—Woollahra.—Twelve miscellaneous Plants.
Honourable Mention.

NEWMAN, J. Hubert—Waverley.—Collection of Coleus.
Commended.

PAGE, Samuel—Mudgee.—Wheat ; 27 bushels to the acre ; weight, 64¼ lbs. to the bushel. Commended

PINK, James—Sydney.—Designs for Ornamental Flower-Gardening (3.)
First degree of Merit.

Report—These designs are carefully prepared, and show the different modes of ornamental flower-gardening. They give the names and management of the different ornamental and flowering plants that have been found to succeed in this climate.

PYE, Squire William—Parramatta.—Thirty-seven varieties of Fruits and two of Preserves. Second Prize.

Report—This exhibit comprises twenty-nine varieties of well-grown apples, eight of oranges and lemons, and two of preserves.

QUINN, Denis H.—Mudgee.—Wheat; 29 bushels to the acre; weight, 62½ lbs. to the bushel. Honourable Mention.

ROBINSON, S.—Woollahra.—Miscellaneous collection of Plants.
Honourable Mention.

RUSSELL, John—Sydney.—Collection of Rare Ferns in Wardian case.
Commended.

Report—A very creditable and well-grown collection.

SCOTT, William—Murrumburrah.—11 Varieties of Fruit (non-competitive). Second Prize.

Report—This collection, consisting principally of apples, we would place, although non-competitive, in the second order of merit.

SHADLER, Adolph—Sydney.—Bread (Wheaten).
Highly Commended.

Report—As this bread is new, it shows to great advantage as compared with that from Gulgong, shown by Mr. Thompson. It is, however, of very excellent quality—specially good.

SHORLAND, Julia—Woollahra.—Native Wild Flowers, grown in the bush at Woollahra. Honourable Mention.

Report—This exhibit of three bouquets contained a number of rare specimens.

SLATTERY, M.—Spring Hill.—Wheat, 27 bushels to the acre; weight, 64 lbs. to the bushel. Honourable Mention.

SPRING HILL FARMERS' UNION—Spring Hill, Orange.—Wheat and Straw (threshed). First degree of Merit.

Report—An interesting exhibit of the samples of wheat threshed by machines shown at the Garden Palace, and worked at Spring Hill.

STIEME, William—Fairfield.—123 Varieties of Fruit.
First Prize.

Report—This is a very fine miscellaneous collection of 123 varieties of fruits, comprising well-grown specimens of grapes, plums, figs, oranges, peaches, melons, apples, pears, &c. [*Note*—Mr. Stieme received a Silver Medal for the excellence and variety of his fruit exhibits.]

THOMPSON, William—Gulgong.—Bread (Wheaten).

Commended.

Report—This bread is made from flour of excellent quality, and is well baked and well manufactured. The bread is excellent, though a little coarse. It is especially sweet and sound, and very good indeed, considering that it was six days old when seen by the Judges.

TICKNER, Edward—Bungonia.—Oaten Hay—about 20 cwt. to the acre. Highly Commended.

VOLCKERS, H. A.—Grafton.—25 Varieties of Tropical Fruits.

Second Prize.

Report—A fine collection of tropical fruits, including some very rare specimens.

QUEENSLAND.

ACCLIMATISATION SOCIETY OF QUEENSLAND—Brisbane.—Collection of Economic Plants, described in detail as follows :—

Anatto. (Bixa orellana.)
Antiaris macrophylla.
Algaroba. (Prosopis juliflora.)
Alligator Pear. (Persea gratissima.)
Allspice. (Eugenia pimento.)
Arrowroot. (Canna edulis.) (Maranta arundinacea.)
Barbadoes Aloes. (Aloe vulgaris.)
Brazilian Cherry. (Eugenia uniflora.)
Bread Fruit. (Artocarpus incisa.)
Calumba Root. (Jateorhiza palmata.)
Caoutchouc-producing Plants. (Castilloa elastica.) (Manihot glaziovii.)
Cape Almond. (Brabejum stellatifolium.)
Cape Chestnut. (Calodendron capense.)
Cape Plum. (Carissa grandiflora.)
Caramba. (Averrhoa carambola.)
Carob. (Ceratonia siliqua.)
Cassia Bark. (Cinnamomum cassia.)
Cashew Nut. (Anacardium occidentale.
Chinese Date Plum. (Diospyros Kaki.)
Chinese Raisin. (Hovenia dulcis.)
Chinese Walnut. (Pterocarya stenoptera.)
Chinese Water-nut—"Ling." (Trapa bicornis.)
Chulan. (Chloranthus inconspicuus.)
Cinnamon. (Cinnamomum zeylanicum.)
Clove. (Caryophyllus aromaticus.)
Cochin Gorke. (Xanthochymus pictorius.)
Cocoa. (Theobroma cacao.)
Coffee. (Coffea Arabica, var. Menado.) (Coffea Arabica, var. Mauritiana.) (Coffea Arabica, var. Eden.) (Coffea Arabica, var. Mokka.) (Coffea Liberica.)
Custard Apple. (Anona reticulata.) (A. (Cherimolia.) (A. Squamosa.)
Date Sp. (Phœnix pumila.) Bunch of Fruit.
Date Sp. (Phœnix Leonensis.) Bunch of Fruit.
Davidsonia Plum. (Davidsonia pruriens.)
Durian. (Durio zibethinus.)
Edible Acorn. (Quercus cornea.)
Enckea glaucescens.
Eupatorium riparum.
Fibraurea tinctoria.
Garcinia Livingstonii.
Garcinia, sp.? From Honolulu.
Ginger. (Zingiber officinalis.)
"Guango" (Rain Tree.) (Pithecolobium Saman.)
Guava. (Psidium Guineense, Psidium Cattleyanum.)
Gum Benzoin. (Styrax Benzoin.)
Gum Copal. (Trachylobium Hornmannianum.)
Hickory Nuts. (Carya alba.) (Carya macrocarpa.)
Himalayan Blackberry. (Rubus sp.?)
Horseradish Tree. (Moringa pterygosperma.)
Indian Plum. (Flaucortia rubens.) (Flaucortia Cataphracta.)
Indian Pith-hat Plant. (Æschynomene aspera.)
Indigo. (Indigofera tintoria.)
Ipecacuanha. (Cephaelis Ipecacuanha.)
Ironwood of Brazil. (Cæsalpinia ferrea.)
Ivi, or Tahitian Chestnut. (Inocarpus edulis.)

General Agricultural Show.

Ivory Palm. (Sagus amicarum.)
Jack Fruit. (Artocarpus integrifolia.)
Jujube. (Zizyphus jujuba.)
Kei Apple. (Aberia caffra.)
Kœmpferia Galanga.
Langsat. (Lansium domesticum.)
Litchi. (Nephelium Litchi.)
Logwood. (Hæmatoxylon campechianum.)
Loquat. (Eriobotrya Japonica.)
Madder. (Rubia tinctorum.)
Mahwah Tree. (Bassia latifolia.)
Mango. (Mangifera indica.)
Mangosteen. (Garcinia mangostana.)
Manilla Hemp. (Musa textilis.)
Manilla Tamarind. (Inga dulcis.)
Malay Apple. (Jambosa domestica.)
Monstera deliciosa.
Nutmeg. (Myristica moschata.)
Paraguay Tea. (Ilex Paraguayensis.)
Passion Fruits. (Passiflora macrocarpa, passiflora laurifolia — water-lemon, passiflora quadrangularis, passiflora Decaisneana.)
Pawpaw Apple. (Carica Papaya.)
Physic Nut. (Curcas purgans.)
Peppers. (Piper nigrum.) (Piper cubeba.) (Piper longum.)
Pecan Nut. (Carya olivæformis.)
Queensland Nut. (Macadamia ternifolia.)
Rose Apple. (Eugenia jambosa.)
Rosella. (Hibiscus Sabdariffa.)
Sago Plants. (Cycas Rumphii.) (Cycas revoluta.)
Sand Box-tree. (Hura crepitans.)
Sapodilla Plum. (Achras sapota.)
Sherbert Shrubs. (Grewia Asiatica.) (Grewia Didyna.)
Socotrine Aloes. (Aloe Socrotina.)
Star Apple. (Chrysophyllum olivæforme.)
Strychnine. (Strychnos nux vomica.)
Sugar-mat Plants. (Pandanus utilis, pandanus sp.)
Sweet Potato (Batatas paniculata?)
Tagasaste. (Cytisus proliferus.)
Tallow Tree. (Stillingia sebifera.)
Taro. (Colocasia esculenta.)
Tea. (Thea bohea.) (Thea Assamica.)
Turmeric. (Curcuma longa.) (Curcuma, sp.? Penang.) (Curcuma, sp.? Chittagong.)
Vanilla. (Vanilla aromatica.)
Vi-Apple. (Spondias dulcis.)
Vota-Vanga. (Vangueria edulis.)
Wax Tree. (Rhus succedaneum.)
Whampee. (Cookia punctata.)
Wine Palm. (Diplothemium maritimum) and Bunch of Fruit of same.

First degree of Merit.

Report—A very interesting and extensive collection of economical plants, especially grown for distribution and introduction within the colony of Queensland. Large though the collection be, and varied in its character, it only comprises such plants as happened to be available when the Society was invited to exhibit at the General Agricultural Show in the Agricultural Hall—only a few weeks before the special show had to be opened. The collection successfully illustrates the mode in which the Acclimatisation Society carries out the work of naturalising plants foreign to the colony, but for which both climate and soil are suited ; this being the leading aim of the Society, and one which it has been furthering for years past.

BOTANICAL GARDENS—Brisbane—Walter Hill, Director.—Collection of Economic Plants and Tropical Fruits. First degree of Merit.

Report—The collection of economic plants shown by the Director of the Brisbane Botanic Gardens is most extensive, interesting, and valuable. Large though that of the Acclimatisation Society of Queensland undoubtedly is, this collection is much more exhaustive in its character, and consists of no less than 223 varieties, thus forming the largest exhibit of the kind ever shown in New South Wales. The object of the cultivation of these interesting and valuable plants is a most laudable one, and similar to that of the Acclimatisation Society, viz., for distribution throughout the colony, where they are sure to thrive and likely to assume an increasing value as products.

HUDSON P.—Albion, Brisbane.—Pine-apples.
Commended.

Report—A fine collection.

SOUTH AUSTRALIA.

ANGAS, J. H.—Angaston.—Purple-straw Wheat : 20 bushels to the acre ; weight, 67 lbs. to the bushel. First degree of Merit.
Report—A very fine, heavy sample.

ANGAS, J. H.—Angaston.—Tuscan Wheat : 20 bushels to the acre ; weight, 66 lbs. to the bushel. Commended.

BAIN, Donald—Grace Plains—Wheat : 15 bushels to the acre ; weight, 64½ lbs. to the bushel. Highly Commended.

BROOK, William—Woodchester.—Wheat: 20 bushels to the acre ; weight, 66 lbs. to the bushel. First degree of Merit.
Report—This is the finest sample of wheat shown (at Special Agricultural Show in Agricultural Hall).

PATTERSON, Robert—Smithfield.—Wheat: 30 bushels to the acre. Weight, 66 lbs. to the bushel. First degree of Merit.

PATTERSON, Robert—Smithfield.—Wheat: 27 bushels to the acre. Weight, 65½ lbs. to the bushel. Commended.

RIGGS, John—Gawler.—Talavera Wheat: 18 bushels to the acre. Weight, 64½ lbs. to the bushel. First degree of Merit.

RIGGS, John—Gawler.—Purple-straw Wheat : 21 bushels to the acre. Weight, 64¾ lbs. to the bushel. Commended.

RIGGS, John—Gawler.—Purple-straw Wheat : 21 bushels to the acre. Weight, 64¼ lbs. to the bushel. Commended.

SCOTT, John—Port Augusta.—Wheat : 17 bushels to the acre. Weight, 64 lbs. to the bushel. Honourable Mention.

SOUTH AUSTRALIAN COMMISSION—Adelaide.—Eighty varieties of fruit. First Prize.
Report—This is a very fine and well preserved collection, considering the distance from which it has come for exhibition, of eighty varieties of fruits, principally apples and grapes. We would call special attention to the good keeping qualities of the "Sultana" grapes shown.

SOUTH AUSTRALIAN COMMISSION—Adelaide.—Several varieties of Wheat in Sheaf. First degree of Merit.

VENNING, W. J.—Crystal Brook.—Wheat: 24 bushels to the acre. Weight, 65 lbs. to the bushel. Highly Commended.

VICTORIA.

VON MUELLER, BARON, F.—Salt-bushes as represented by varieties described below with habitats, &c. :—

Atriplex Billardierii, J. Hooker; Tasmania, Victoria.
A. campanulatum, Bentham; New South Wales, Victoria.
A. cinereum, Poiret; West Australia, South Australia, Tasmania, Victoria, New South Wales, Queensland.
A. Drummondii, Moquin; West Australia.
A. halimoides, Lindley; West Australia, South Australia, Victoria, New South Wales, Queensland.
A. holocarpum, F. v. Müller; South Australia, Victoria, New South Wales.
A. hymenothecum, Moquin; West Australia.
A. isatideum, Moquin; West Australia.
A. limbatum, Bentham; New South Wales, Victoria.
A. Mülleri, Bentham; West Australia, South Australia, Victoria, N. S. Wales, Queensland.
A. nummularium, Lindley; South Australia, Victoria, New South Wales, Queensland.
A. paludosum, R. Brown; West Australia, South Australia, Tasmania, Victoria.
A. semibaccatum, R. Brown; West Australia, South Australia, Victoria, N. S. Wales, Queensland.
A. stipitatum, Bentham; South Australia, Victoria, New South Wales.
A. velutinellum, F. v. Müller; South Australia, Victoria, N. S. Wales.
A. vesicarium, Heward; South Australia, N. S. Wales, Queensland.
Chenolea bicornis, v. F. Müller; South Australia, N. S. Wales, Queensland, North Australia.
C. biflora, F. v. Müller; South Australia, Victoria, New South Wales.
C. diacantha, F. v. Müller; West Australia, South Australia, Victoria, N. S. Wales, Queensland.
C. echinopsila, F. v. Müller; New South Wales, Queensland.
C. muricata, F. v. Müller; Victoria, New South Wales, Queensland.
Chenolea paradoxa, F. v. Müller; South Australia, Victoria, New South Wales.
C. sclerolænoides, F. v. Müller; West Australia, South Australia, Victoria, New South Wales.
Chenopodium ambrosioides, Linné; West Australia, New South Wales, Queensland (introduced).
C. auricomum, Lindley; New South Wales, Queensland, North Australia.
C. carinatum, R. Brown; West Australia, South Australia, Victoria, New South Wales, Queensland.
C. cristatum, F. v. Müller; South Australia, Victoria, New South Wales, Queensland.
C. glaucum, Linné; West Australia, South Australia, Tasmania, Victoria, New South Wales (introduced).
C. microphyllum, F. v. Müller; South Australia, Victoria, New South Wales.
C. nitrariaceum, F. v. Müller; West Australia, Victoria, New South Wales, North Australia.
C. triangulare, R. Brown; New South Wales, Queensland.
Dysphania myriocephala, Bentham; West Australia, South Australia, Victoria, New South Wales.
Enchylæna tomentosa, R. Brown; West Australia, South Australia, Victoria, New South Wales, Queensland, North Australia.
E. villosa, F. v. Müller; South Australia, Victoria, New South Wales, Queensland.
Kochia appressa, Bentham; South Australia, Victoria, New South Wales.
K. brachyptera, F. v. Müller; South Australia, Victoria, New South Wales.
K. brevifolia, R. Brown; West Australia, South Australia, Victoria, New South Wales, Queensland.
K. humillima, F. v. Müller; Victoria, New South Wales.

K. lanosa, Lindley; West Australia, South Australia, New South Wales, Queensland.
K. oppositifolia, F. v. Müller; West Australia, South Australia, Victoria, New South Wales.
K. sedifolia, F. v. Müller; South Australia, Victoria, New South Wales.
K. villosa, Lindley; West Australia, South Australia, Victoria, New South Wales, Queensland, North Australia.
Rhagodia Billardieri, R. Brown; West Australia, South Australia, Tasmania, Victoria, New South Wales.
R. crassifolia, R. Brown; West Australia, South Australia, Victoria, North Australia.
R. dioica, Nees; West Australia.
R. gaudichaudiana, Moquin; West Australia, South Australia, New South Wales.
R. hastata, R. Brown; South Australia, Victoria, New South Wales, Queensland.
R. linifolia, R. Brown; New South Wales, Queensland.
R. nutans, R. Brown; South Australia, Tasmania, Victoria, New South Wales, Queensland, North Australia.
R. parabolica, R. Brown; South Australia, New South Wales, Queensland.
R. spinescens, R. Brown; South Australia, Victoria, New South Wales, Queensland.
Salicornia arbuscula, R. Brown; West Australia, Tasmania, Victoria, New South Wales.
S. australis, Solander; West Australia, South Australia, Tasmania, Victoria, New South Wales.
S. bidens, Bentham; West Australia.
Salsola kali, Linné; West Australia, South Australia, Victoria, New South Wales, Queensland, North Australia.
Suaeda maritima, Dumortier; West Australia, Tasmania, Victoria, New South Wales, Queensland.

First degree of Merit.

Report—We place this collection in the first order, on account of its very instructive character. The value of the exhibits to pastoralists cannot be overestimated and will be shown by the following interesting and instructive notes from the pen of so distinguished a botanist as Baron Von Müller:—"A remarkable feature in many of the pastoral runs of Australia is the salsolaceous vegetation, which is so singular as to give to extensive tracts of land where this class of plants prevails the distinctive general name of 'Salt-bush country.' Thus, for instance, wide plains occur between the rivers Murray, Murrumbidgee, and Darling, and beyond, where bushy salsolaceous plants form the main vegetation, and some portions of this widely level ground, especially towards the Lachlan River, are even almost exclusively covered with two kinds of low salt-bushes, namely, Atriplex halimoides and A. vesicarium, on which cattle and particularly sheep thrive well, though in seasons of drought hardly any other kind of food is available there for either herds or flocks. But the number of different sorts of salsolaceous plants indigenous to various portions of Australia is considerable, fully one hundred species standing on record, by far the greater number of these being of shrubby growth, though mostly not tall in stature. The species peculiar to the coast form but a very small proportion of the whole number of the different salsolaceous plants, the majority belonging to the inland vegetation in subsaline or also somewhat sandy or calcareous districts, but do not usually ascend to hilly country. Many of the salt-bushes have also a wide range over Australia, commencing more or less intermixed in the south-east on the Wimmera and

the Murray River and its affluents, extending thence to some of the western plains and undulations of Queensland, skirting the hilly country of Carpentaria, turning westward to Sturt's Creek and to the vicinity of Nichol Bay, verging thence southerly towards King George's Sound, reaching eastward in some places the Great Bight, and fully entering the country down to the coast at Spencer's Gulf and the upper portion of St. Vincent's Gulf, occupying, where the tertiary and post-tertiary deposits are somewhat permeated with saline ingredients, many wide interior tracts of Australia, the gregarious abundance of some species increasing on depressions, which indicate the former access of the ocean. All these saline or semi-saline plants fully resist the otherwise torrifying effect of the extreme heat of the great interior, where the shade temperature may exceptionally rise to 120° F. and even more; but where the temperature sinks again during the cooler months of the year at night occasionally to the freezing point. Splendid Merino wool is produced on this salt-bush country in extra-tropic and even subtropical latitudes, and that in localities where the annual rainfall in years of exceptional dryness did not exceed 7 inches. The cattle, and particularly the sheep, feed on almost all sorts of saline plants, but have a predilection for many species of Atriplex and Kochia, the "Cotton-bush" of squatter's delight, being a species of the latter genus (Kochia villosa), curiously so-called on account of the downy knots arising on many points of the branches, particularly where they are broken off by the depasturing animals or pierced by insects. Chenopodium nitrariaceum and C. auricomum, both tall, shrubby species, are also much liked by stock, so are several species of Rhagodia and Chenolea. A methodical re-sowing of the salt-bushes will in time become necessary, as they succumb gradually under the constant browsing, and as the presence of saline vegetation proves so wholesome and nutritive to the flocks, which in places devoid of salsolaceæ have to be provided with rock-salt."

INDEX.

The references to exhibits in the following Index are not to be taken as fully descriptive of their character; but are intended to be a general guide to the various portions of the Official Record, in which detailed information will be found. Still further to assist the reader, the titles of Groups of Classes, &c., are given in capital letters. The Courts in which the respective Exhibits were shown are given in each case, some of which are represented by familiar contractions, as: N.S.W., for New South Wales; N.Z., for New Zealand; and U.S., for United States.

A

Abbott, Downing, & Co., Concord, N.H., U.S.—Buggies, &c., 357
Abbott, Joseph, Sydney, N.S.W.—For Services as Honorary Member of Committee of Commission, cxlviii
Abbott, W. G., Sydney, N.S.W.—Poultry, 965
Abeles, Heinrich, Vienna, Austria—Liqueurs, 866
Abeles, Leopold, Vienna, Austria—Cotton Yarns, Thread, Linen goods, 233
Abendroth Bros., New York City, U.S.—Stoves and Ranges, 228; Castings and Plumbers' goods, 341
Abigail, Francis, M.P., Sydney, N.S.W.—Services as Judge, cl; Judge, 263
ABORIGINES, AUSTRALIAN—Ornaments, &c., in Ethnological Court, 171; Reference to rapid decadence of races, 365
Absolon, J., London, Great Britain—Drawings by, referred to in General Report on Fine Arts, 454, 455; award for Water-colour Painting, 478
Acclimatisation Society of Queensland, Brisbane, Queensland—Economic Plants, 1027
Achenbach, A. (Austrian Gallery).—Painting referred to in General Report on Fine Arts, 467
Achenbach, O. (Austrian Gallery)—Painting referred to in General Report on Fine Arts, 466
Acheson & Allen, Rockhampton, Queensland—Chutneys, 834; Jellies, 855
Ackermann, Eduard, Berlin, Germany—Purses, Cigar-cases, etc., 270
Ackermann, Louis, jun., Berlin, Germany—Liqueurs, 872
Actiengesellschaft für den Bau Landwirthschaftlichen Maschinen, &c., H. F. Eckert, Berlin, Germany—Ploughs, &c., 983
Actiengesellschaft für Eisen-industrie und Brückenbau, Duisburg, Germany, Iron Manufactures, 152; Iron Sections, &c., 432
Actiengesellschaft für Glas, Spiegel, und Zinnfolien Fabrikation, Furth, in Bavaria, Germany—Mirrors, 214
Actiengesellschaft für Lederfabrikation (vormals Ignaz Meyer), Munich, Germany—Leathers, 709
Actiengesellschaft Papierfabrik-Schloegmühl, Schloegmühl, near Gloggnitz, Austria—Papers, 295
Actiengesellschaft Union of Dortmund, Germany—Reference to Iron and Steel exhibits, 148
Adam et Cie., Paris, France—Furniture, 214
Adams-Acton, T., London, Great Britain—Sculpture, referred to in General Report on Fine Arts, 455
Adams, Amy, Maitland, N.S.W.—Drawing and Woolwork, 519
Adams, Peter, Paris, Ontario, Canada—Waggons, 352
Adams, P. F., Surveyor-General, N.S.W., Sydney, N.S.W.—For Services as Honorary Member of Committee of Commission, cxlviii; Services as Judge, cl; Judge, 389
Adams, Reuben Thos., Melbourne, Victoria—Filters, 230
Adams, Thos., Manchester, Great Britain—Spring Safety Valves, General Report on Machinery, 608; Award, 658
Adamson, Travers, Sunbury, Victoria—Wines, 902
Addison, John Elliott—For Services as Member of Tasmanian Commission, clxii
ADELAIDE CHAMBER OF MANUFACTURES—Linen from S. A. Flax, 256; raw silk, 262
Adet, Seward, & Co., Bordeaux, France—Brandy and Claret, 869
Adkins, Mrs., Waterloo, N.S.W., Angora Goat, 955

Adler, Georg, Buchholz, Saxony, Germany—Writing Desks, Boxes, &c., 345
Admiralty, Lords Commissioners of the, London, Great Britain—Services, cxlvi; Charts, 364
Advisory Committee on Art—The Chairman's (Mr. Combes') Report on the Fine Arts, 439 *et seq.*; Appointment of Committee, 443 *et seq.*
Aerial, Pneumatic, and Water Transportation—Group of Classes 577–585, 683 *et seq.*
Affleck, Thomas, Albury, N.S.W.—Raw Silk, 170, 261
Agence Générale de Vente des Glaceries Belges, Brussels, Belgium—Glass, Special Medal clxiv; Award, 196
Agnew, Hon. J. W., M.D., M.L.C.—Services as Member of Tasmanian Commission, clxii
Agra Central Prison, Superintendent of, Agra, India.—Carpets, 252
Agricultural Company of New Zealand, Southland, N.Z.—Building Stone, 116
Agricultural Co., Australian, Newcastle, N.S.W.—Coal, &c., 25, 98, 124, 135
Agriculture, Department of—Awards, &c., 689, *et seq.*
Agricultural Engineering and Administration—Classes 659–662, 1000
Agricultulal Products—Groups of classes 623–627, 809 *et seq.*
Agricultural Show, (General), in connection with the Exhibition.—Awards, 1021, *et seq.*
Agricultural Society of England, (Royal.)—Shows of, referred to in connection with machinery; General machinery report, 540, 553, 560, 604, 624
Agricultural Society of New South Wales—For reference to steps taken by, for holding Exhibition, *vide* Executive Commissioner's and Secretary's Reports; Services of Society, cl
Ahearn, W., Kiama, N.S.W.—Horse-shoes, 338
Aikenhead, William, Services as Member of Tasmanian Commission, clxii; Tasmanian Copper Co., Launceston (Tasmania)—Copper Ore, 23
Aiken, Lambert, & Co., New York City, U.S.—Pencils, &c., 289
Ainsworth, Thomas, Whitehaven, Great Britain—Linen, Threads, and Towels, 244
Airey, H., Sydney, N.S.W.—Services as Judge, cl; Judge, 929
Airey, H. P., Newtown, near Sydney, N.S.W.—Horses, 931
Aitchison, Geo., B.A., F.R.I.B.A., London, Great Britain—Architectural Designs, 494
Aitken & Co. J., Falkirk, Scotland—Beer, 875
Aitken, Thos., Melbourne, Victoria—Ale, 902
Aizelin, Eugène, Paris, France—Sculpture, 474
Akagawa Kiubei, Osaka, Japan—Fern-Tree-Mat, 252
Albrecht, E., Aarau, Switzerland—Newspaper Printing, 388
Albiani, Tomei, Florence, Italy, Marbles and Serpentines, 110, 134
Alcock, & Co., Melbourne, Victoria—Billiard-tables, &c., 230
Alder, Anthony, Brisbane, Queensland—Natural History Specimens, 386; Preserved Turtle, 704
Alderson & Sons, Brisbane, Queensland—Dugong Leather, 713
Alderson W. M., Sydney, N.S.W.—For services as Hon. Member of Committee, cxlviii
Alderson & Sons, Sydney, N.S.W.—Leather, Portmanteus, Travelling Bags, and Boots and Shoes, 283; Saddlery and Harness, 354; Leather, Hose and Felting, 669; Leather, 692, 711
Alexandre, Père et Fils, Paris, France—Harmoniums, 424
Alexander, Mrs. M., Sydney, N.S.W.—Mirror Frames in Imitation Leather, 519
Alexander, Wm., Sydney, N.S.W.—Services as Judge, cl; Judge, 211
Ale, Porter, and Other Beverages—Class 636, 863, *et seq.*
Alfermann & Jacobi, Herford, Rhenish-Prussia, Germany—Clothing, 270
Alger, John, Sydney, N.S.W.—Member of Sydney International Exhibition Commission, cxlvii; Commissioner in charge of Ladies Court, cxlviii, also 517
Allan & Son, John, London, Great Britain—Paperhangings, 300
Allan, Robert, Ballarat, Victoria—Model Safety Cage, 163
Allcock & Co., S., Redditch, Great Britain—Fishing Rods, Hooks and Tackle, 275
Allday & Sons, Wm., Birmingham, Great Britain—Bellows, Anvils, &c., 634
Allebos, E., Cureghem, near Brussels, Belgium—Iron Safes, 331
Allen, Wm., Brisbane, Queensland—Services as Judge cl; Judge, 951
Allen, Wm., Whyambah, Queensland—Sheep, 960
Allen & Co., R. H., New York City, U.S.—Ploughs, &c., 994
Allen & Co., Wm. T., London, Great Britain—Ornamental Castings, 494
Allen, John, Willunga, South Australia—Slates, 118, 143
Allen, Thomas, Bristol, Great Britain—Bedsteads, 217

Allen, Elsie Jane, Waverley, N.S.W.—Public School Exhibit, 383
Allen, Hon. Sir Geo. W., Vice-President, Sydney International Exhibition Commission—Services, cxlvii
Allen, Mary, Waverley, N.S.W.—Public School Exhibit, 383
Allen, Adelaide, Sydney, N.S.W.—Public School Exhibit, 376
Allerding & Son, F., Sydney, N.S.W.—Shell Jewellery, 283
Allongé, Auguste, Paris, France—Drawings and Etchings, referred to in General Fine Arts Report, 459, 460; Awards, 487
Allpress, J. B., Redfern, near Sydney, N.S.W.—Dogs, 977
Alluvial Gold—Report on, 11, *et seq.*; do. do. Specimens, list of, shown by New South Wales Mines Department, 38, *et seq.*
Alluvial Fossils—Queensland Museum, 12
Allweiler & Co., Germany, Radolfszell, Germany—Pumps, 657
Alma, Azn, P., Amsterdam—Cigars, 822
Alma-Tadema—Paintings by, referred to in General Report on Fine Arts, 449
Almao, V., Dunedin, N.Z.—Hats, &c., 287
Altmann, Ernst A., Melbourne, Victoria—Ores and Metals, 484
Althouse Windmill Co., San Francisco, California, U.S.—Windmill, 670
Alves, J., Dunedin, Otago, N.Z.—Silt elevator, 434
Alves Gebrüder, Berlin, Germany—Whips, 352
Amand & Co., Amsterdam, Netherlands—Chromo-lithographs, 503
American Novelty Company, New York City, U.S.—Toys, &c., 289
American Absorbtive Pad Co., Philadelphia, U.S.—Medicinal Pads, 328
Ames & Son, Oliver, North Easton, Massachussets, U.S.—Shovels and Spades, 341
American Watch Co., Waltham, Massachussets, U.S.—Special Medal, clxvi; Watches, 364; General Report on Chronology, 402, *et seq.*, including Special Report on the Waltham Watches, 411, *et seq.*; Awards, 421; Engraving, &c., of watch-cases, 513 (*vide* also Vanderwoerd)
American Permanent Photograph Co., Sydney, N.S.W.—Photographs, 504
Amerling F. (Austrian Gallery)—Painting referred to in General Report on Fine Arts, 347
Ames, Plow Co., Boston, Massachussets, U.S.—Agricultural Implements, 994
Amherst F. F., M.P.—Mackay, Queensland; For services as Member of Queensland Commission, clx
Analyses of Awards. cxciv
Analyses—Coal Exhibits, N.S.W., 97, *et seq.* N.Z., 105, *et seq.* Queensland, 107, *et seq* Victoria, 95; *vide* also Reports of Judges on individual exhibits.
Ancion, F., & Schnerzel, Berlin, Germany—Furniture, 214
Ancion et Cie., J., Liège, Belgium—Fire-arms, 316; Nails, Tacks, &c., 331
Anderson, J., Sydney, N.S.W.—Boots and Shoes, 283
Anderson, Abbott, and Anderson, London, Bristol and Swansea, Great Britain—India-rubber and Oilskin Manufactures, 275, 346; Woven Belting, 658
Anderson, G., Sydney, N.S.W.—Wood Letters, 348
Anderson, Helen, Hurstville, N.S.W.—Public School Exhibit, 378
Anderson, William, Sydney, N.S.W.—Public School Exhibit, 374
Anderson, Marshal, Singleton, N.S.W.—Public School Exhibit, 383
Anderson, Jessie, Sydney, N.S.W.—Public School Exhibit, 384
Anderson, Rosanna, Windsor, N.S.W.—Public School Exhibits, 374
Anderson, Annie, Windsor, N.S.W.—Public School Exhibit, 385
Anderson, James, Parramatta, N.S.W.—Leather, 711
Anderson, Anderson, & Co., London, Great Britain—Models and Plans of Ships, 684
Anderson, Inspector Robert, Sydney, N.S.W.—Plants, 1017
Anderson, F., Sydney, N.S.W.—Plants, 1018
Andrews, John, Cordeaux River, N.S.W.—Fuller's Earth, 126
Andrews, R. A., Sydney, N.S.W.—Dressed Horsehair, 253
Anchor Tube Co., Birmingham, Great Britain—Tubes and Boiler Fittings, 658
Andrews, Mary A., Kogarah, N.S.W.—Paper Flowers, 519
Andrew, Richard, Waimea West, Nelson, N.Z.—Hops, 829
Angas, J. H., Angaston, South Australia—Wheat, Great Britain, 837, 1029
Anglo-American Tin Stamping Co. (Limited), Stourport, Great Britain—Tinware, 333
Anglo-Bavarian Brewery Co., Shepton Mallet, Great Britain—Beer, 875
Angus, W. T., Sydney, N.S.W.—Buggies and Sociables, 354
Animal Products, Land and Marine, used as Food—Group of Classes, 600-603, 701, *et seq.*

Animal Products, Land and Marine, used as Materials—Group of Classes, 604–610, 707, *et seq.*
Aniseed Valley Co., Nelson, N.Z.—Copper Ores, 22; *Vide* also Johnston, Bros., & Co.
Ansdell, Richard, R.A., London, Great Britain—Oil Paintings referred to in General Report on Fine Arts, 449; Award, 478
Anson & Bros., J., Hobart Town, Tasmania—Photographs, 512
Anson, A. E., Col. R.A., C.M.G.—Administering the Government of the Straits Settlements, clxi
Ansonia Clock Co., Ansonia, Connecticut, U.S.—Clocks, 421
Anstey, Chave, & Co., Uxbridge, Middlesex, Great Britain—Annatto, 182
Anstey, Fanny E., Wollongong, N.S.W.—Public School Exhibit, 385
Anstey, George W., Wollongong, N.S.W.—Public School Exhibit, 385
Antimony Ores—Report on, 17, *et seq.* 78
Antill, J. Macquarie, Picton, N.S.W.—Cattle, 941
Antoine, Louis, Paris, France—Envelope Folding Machine, 651
Antoine, Fils, Paris, France—Inks, 179
Anvil Creek Colliery Co., N.S.W.—Coal, General Report, 102; Award, 35
Apollo Stearine Candle Co., Sydney, N.S.W.—Candles, 188
Apollo Stearine Candle Co., Melbourne, Victoria—Candles, 192
Appel, François, Paris, France—Chromo-lithographs, 486
Appleby Brothers, East Greenwich, Great Britain—Span of Iron Bridge, 432
Appliqué Work in Ladies Court—Referred to, 517
Apted, Mrs. John, Sydney, N.S.W.—Berlin Wool Pictures, 519
Aqueous Rocks of Victoria—Geological Report, Victorian Mines Department, 87, *et seq.*
Arboriculture and Forest Products—Group of Classes, 613 to 620; 715, *et seq.*, General Report on the exhibits in the group, 716, *et seq.*; Awards, 802, *et seq.*
Archard, Frederick, Makaraka, Auckland, N.Z.—Artesian Mineral Waters, 130, 150
Architectural Designs—Classes 410-427; Awards, 486, *et seq.*
Architectural Drawings from Great Britain, General Fine Arts Report, 456
Archleb, Joseph, Dobruska, Bohemia, Austria—Spigots, &c. 607, 866
Archduke of Austria H.I.H., Charles Lewis, cxliii
Arens, O., Antwerp, Belgium—Repoussé work, 473
Arkins, Daniel, Sydney, N.S.W.—Public School Exhibit, 375
Arkell, John, Blenheim, Marlborough, N.Z.—Malt, 829
Armidale Public School, N.S.W.—Awards to exhibits from, 372
Armstrong, A., Wollongong, N.S.W.—Kerosene Shale, 103
Armstrong & Co., Sir William G., Newcastle-on-Tyne, Great Britain—Special Medal, clxv; Exhibits referred to, 172; Ordnance, Award 318; Hydraulic Engines, general Machinery report, 547, 564; Award 659
Armstrong, Alice, Sydney, N.S.W.—Public School exhibit, 384
Armstrong, C. S., Rookwood, Deltota, Ceylon—Teas, 811
Armstrong, Charles C., Dunedin N.Z.—Ferns, 1009
Armet de L'Isle, Paris, France—Salts of Quinine, 322
Armengaud Aîné, C.E., Paris, France—Works on Industrial Technology, 368
Armfield, The Misses, Sunnyside, Berrima, N.S.W.—Opossum-Fur Socks, 253
Armitage Brothers, Huddersfield, Great Britain—Coatings, 245
Armitage, E., R.A., London, Great Britain—Paintings by, referred to in General Report on Fine Arts, 449
Arnaud, Paris, France—Pharmaceutical Products, 322
Arndt & Marcus, Berlin, Germany—Bronze Castings, 332
Arnold & Sons, London, Great Britain—Chemical, Medical, and Surgical Instruments, 324
Arnold, Charlotte, Sydney, N.S.W.—Public School exhibit, 375
Arnold A. S., Sydney, N.S.W.—Hats, 284
Arnold, G., Hobart Town, Tasmania—Biscuits, 859
Arnott, William, Newcastle, N.S.W.—Biscuits, 851
Arnett, Simon, Bothwell, Tasmania—Furs and Leather, 714
Arrighetti, Marco, Florence, Italy—Hams, 702; Macaroni and Olive Oil, 850; wines, 878
Arrouit, Léon, Paris, France—Aneroid Barometers, 390
Arrowsmith & Co., Arthur J., London, Great Britain; Special Medal, clxv—Parquetry Flooring and Furniture, 217
Art Department in Classification, 437, *et seq.*

Arts—Australian.

ARTS (THE FINE)—Mr. E. Combes' General Report on the, 439, *et seq.*
ART GALLERY, of Sydney Exhibition—The History of, 443, *et seq.*; Extent and Plans of, 445
ART GALLERY OF NEW SOUTH WALES—Pictures purchased for the, marked with asterisks in General Report on the Fine Arts, 451, *et seq.*
ARTS MANUFACTURES AND COMMERCE, Society for the Encouragement of, Services, cxlvi; Special Medal, clxv; Etchings by the late James Barry; referred to in General Fine Art Report, 456
Art Union of London, Great Britain.—Etchings of Engravings, General Fine Arts Report, 456; Award, 494
Art Union of Victoria, Melbourne, Victoria—Chromo-lithographs, 514
Asahi, Hatsu, Tokio, Japan—Lacquered Ware, 348
ASBESTOS, Australian—General report, 29
Ascherberg, Emil, Dresden, Germany—Pianos, 425
Ash & Lacy, Birmingham, Great Britain—Galvanized Iron, 154
Ashbury, Sophia, Penrith, N.S.W.—Public School exhibit, 380
Ashfield Public School, N.S.W.—Awards to exhibits from, 372
Ashford & Winder, W. & G., Birmingham, Great Britain—Leather Goods, 275
Ashton, J. R., Melbourne, Victoria—Oil Painting, 484
Ashwin & Falconer, Sydney, N.S.W.—Painted Ornamental Windows, 504
Ashworth, John, Redfern, near Sydney, N.S.W.—Dogs, 977
Ashworth & Sons, Edmund, Bolton, Great Britain—Sewing Cottons, 245
Askham, Bros., & Co., Sheffield, Great Britain—Steel, 154; Miners' Tools, 333
Asselberghs, Alphonse, Brussels, Belgium—Landscape Painting; General Report on the Fine Arts, 464
Aston & Co., J. Wood, Stourbridge, Great Britain—Ship Chandlery, 333
Atkins & Naylor, Kidderminister, Great Britain—Brussels Carpets, 245
Atkins, George, Wilberforce, N.S.W.—Plough, &c., 991
Atkins, C., Bathurst, N.S.W.—Hay Chaff, 1022
Atkinson, J. J. O., Oldbury, Berrima, N.S.W.—Iron Ore, 25; Coal, 135
Atkinson, Thos., M.P., Adelaide, South Australia—For Services as Member South Australian Commission, clx
Atlas Engineering Company, Sydney, N.S.W.—Machinery Exhibits referred to General Report on Machinery, 546, 628; Award, Sugar-mill, 681
Atyeo, Frederick K., Melbourne, Victoria—Carvings in Marble, 514
Auckland Steam Rope Factory, Ponsonby, Auckland, N.Z.—Ropes, Flax, &c., 349
Auckland Harbour Board—Collection of Timbers; General Report on Arboriculture, 757; Award, 804
Audemars, Louis, Brassus, Switzerland—Watches; *vide* Report on Chronology, 402, *et seq.* Special Report on Exhibit, 417; Award, 421
Audibert et Delas, Tournon, France—Wines, 869
Auld, Patrick, Auldana, South Australia—Wines, 895
Aurelia Gold Mining Co., Gympie, Queensland—Gold in quartz and calcspar, 14
AURIFEROUS QUARTZ SPECIMENS from N.S.W. gold mines, shown by N.S.W. Department of Mines, list of, 39, *et seq.*; Auriferous Quartz Specimens from Victorian mines, shown by Victorian Department of Mines, 90, *et seq.*
Auspitzs Enkel, L. Brünn, in Moravia, Austria—Tweeds, 233
Ausstellungs-Comite für Thum & Umgegend, Thum near Chemnitz, Saxony, Germany—Hosiery, 270
Austen, Jessie, Sydney, N.S.W.—Public School Exhibit, 381
Austin & Kirk, Christchurch, N.Z.—Fire-clay, &c., 126; Pottery Ware, 209
Austin, Ettie, Sydney, N.S.W.—Public School Exhibit, 381
AUSTRALIAN ABORIGINIES—Ornaments, &c., of, in Ethnological Court, 171, 366
Australian Agricultural Co., Newcastle, N.S.W.—Coal, &c., 25, 98, 124, 135; Timbers, General Report on Arboriculture, 717; Award, 803; Wool, 912
AUSTRALIAN ART—The condition of, referred to in General Report on Fine Arts, 467 *et seq.*
Australian Asbestos Co., Gundagai, N.S.W., and Melbourne, Victoria—Asbestos, 29
AUSTRALIAN BOOKBINDING AND PRINTING—Remarks by Judges on, 292, *et seq.*
Australian Diamond Drill Co., Sydney, N.S.W.—General Report on Machinery, 617
Australian Distillery Co., Melbourne, Victoria—Spirits, 902
AUSTRALIAN GOLD MINES—The total yield of Gold, General Report, 6
Australian Kerosene Oil and Mineral Co., Sydney, N.S.W.—Kerosene Oil and Shale, 103, 136, 138
AUSTRALIAN MUSEUM, Sydney, N.S.W.—Services, clvii; Ethnological Collection, 284

Australian Slate Co., Hobart Town, Tasmania—Slates, 118, 144
AUSTRIAN EXHIBITORS—Special Medals to, clxiv
AUSTRIAN LIST of Diplomas and Medals, complimentary and for services, cxlii; Commission at Sydney, cxl; Executive Committee at Vienna, cxlii
AUSTRIAN PAINTING AND SCULPTURE—Described in the General Report on the Fine Arts, 466, *et seq.*
Averill Chemical Paint Co., New York City, U.S.—Mixed Paints, 190
Avery Wm. & Thos., Birmingham, Great Britain—Scales and Weighing Machines, 393
Avril, H., London, Great Britain—Papers, 300
AWARDS FOR SERVICES, cxlii, *et seq.*
AWARDS NOMENCLATURE after title of each Department, and preceding the awards at each Stock Show
AWARDS, TABLES OF, cxciv, *et seq.*
Axam, Charles, Charcoal, Illawarra, N.S.W.—Horses, 931
Ayers, Bessie, Sydney, N.S.W.—Public School Exhibit, 384

B

Babey, Charles, St. Pierre-les-Calais, France—Curtains and Guipures, 237
Bacher & Léon, Berlin, Germany—Trimmings, Buttons, &c., 270
Bachman, Louis, Etterbeck, near Brussels, Belgium—Cartridges and Bullets, 316
Bachsmid, F., London, Great Britain—Watches; General Report on Chronology, 402-417; Award, 420
Backhouse, Benjamin, Sydney, N.S.W.—Architectural Designs, 504
Badgery, A. D., Sydney, N.S.W.—Service as Judge cl; Judge, 938
Badgery, F. D., Sutton Forest, N.S.W.—Services as Judge cl; Judge, 929
Badgery, John A., Sutton Forest, N.S.W.—Services as Judge, cl; Judge, 938
Badin J., Paris, France—Oil Painting referred to in General Report on Fine Arts, 458
Badische Anilin und Soda-fabrik, Stuttgart & Ludwigshafen, Germany—Aniline Colours and Dyes, 180
Baecker & Co., Johannisthal, near Iserlohn, Germany, 239
Baer & Suhm, Manilla, Island of Luzon—Straw Hats, Cigars, &c., 283, 822
Baer & Rempel, Germany—Wringing-machines, 215
Baertsoen, A., et Buysse, A., Ghent, Belgium—Cotton Velvet, Linen, &c., 234, 235
Baerwinkel & Rosenberg, Verviers, Belgium—Woollen Goods, 235
Baese, Florence, Italy—Straw Hats, 282
Baetz, Hermann—Leipsic, Germany—Cigars, 814
Baevenroth, C. F., Stettin, Germany—Liqueurs, 873
Bagnall Brothers, Thames, N.Z.—Timbers; General Report on Arboriculture, 757; Award, 804
Bagshaw, J. S., & N., Adelaide, South Australia—Winnowing Machine, 993
Bahse, Moritz F., Dresden, Germany—Services as Judge, cl; Judge, 232, 344, 516
Bail, Jean Antoine, Paris, France—Oil Painting, 474
Bailey & Kerr, London, Great Britain—Ostrich-feathers, 276; Hairbrushes, 346
Bailey, Florence, Ryde, N.S.W.—Public School Exhibit, 381
Bailey, F. M., F.L.S., Brisbane, Queensland—Plants, 1009
Bailey, Lily, Ryde, N.S.W.—Public School Exhibit, 381
Bailey, W. & J. A., Alloa, Great Britain—Majolica-ware, 200
Bailly, Paul, Mirecourt, Vosges, France—Violins, 424
Baily, Jessie, Sydney, N.S.W.—Public School Exhibit, 376
Bain, Donald, Grace Plains, South Australia—Wheat, 1029
Baird, Thomas, Dundullimul, Dubbo, N.S.W.—Cattle, 941
Baird, James, Melbourne, Victoria—Illumination, 515
Baird, Nelly, Sydney, N.S.W.—Public School exhibit, 384
Baker, Captain, Nouméa, New Caledonia—Furniture, 223
Baker, Alfred, Bega, N.S.W.—Public School Exhibit, 373
Baker Thomas, Maryborough, Queensland—Arrowroot and Starches, 855
Baker & Allison, Wangaehu, Wanganui, N.Z.—Wool, 917
Baker A., Spring Hill, N.S.W.—Wheat in Sheaf, 1022
Baker, Hon. E. A., M.P., Secretary for Mines, N.S.W.—cxlix
Baker, Jane, Quorribolong, N.S.W.—Public School Exhibit, 381
Baker, James E., Wellington, N.Z.—General Report on Arboriculture, 797; Award, 804

Baldauf, G., Stuttgart, Germany—Carpenters' Tools, &c., 332
Baldisseroni M., Paris, France, Painter of the Clodion Sèvres Vases presented to the Colony by the French Government ; General Report on the Fine Arts, 461
Baldock & Co., F., Camperdown, near Sydney, N.S.W.—Earthenware & Stoneware, 208
Baldwin E. P. & W., Stourport, Great Britain—Sheet Iron, &c., 154
Baldwin, Son, & Co., Stourport, Great Britain—Hollow-ware, &c., 333
Balhannah Mine, near Adelaide, South Australia—Bismuth Ores, 78
Ball & Son, Wm., Rothwell, Northamptonshire, Great Britain—Agricultural Implements, 984
Ball, Alfred, Goulburn, N.S.W.—Public School Exhibit, 377
Ballarat Woollen Co., Ballarat, Victoria—Woollen goods, 257
Ballieu, Théodore, French Consul, Sydney, N.S.W.—Services as Judge, cl ; Judge, 471 ; Model of Hawaiian Islands (shewn in French Court), 431
Ballin, A., Brentford, Middlesex, Great Britain—Etchings, 494
Bally Gebrüder, Schoenenwerd, Switzerland—Silk Ribbons, 262
Balmain Public School, N.S.W.—Awards to Exhibits from, 372
Balmer, Lawrie, & Co., Calcutta, India—Tea, 818
Balstone & Brewer, Albury, N.S.W.—Furniture, 223—(*Vide* Corrigenda)
Baltet, Charles, Troyes, Aube, France—Works on Horticulture, 1006
Baltzer & Sohn, B., Berlin, Germany—Bronze Chandeliers and Candlesticks, 214
Bambach, Anton, Eelah, Hunter River, N.S.W.—Wines, 879
Bamford & Sons, Uttoxeter, Great Britain—Pumps, 659
Bancroft & Co., A. L., San Francisco, California, U.S.—Lithographic Prints, 513
Bandaranaike, C. H. D., Ceylon—Chocolate Seeds, &c., 811
Bandoux et Cie., L., Charleroi, Belgium—Coloured Sheet-glass, 196
Bank of New Zealand, Wellington, N.Z.—Gold Specimens from N.Z. Gold-fields ; General Report on Specimens, 13 ; Award, 140
Bank für Sprit und Produktenhandel, Berlin, Germany—Wine Spirit, 871
Banks S. H., Christchurch, N.Z.—Barley Oats, Pease, Beans, &c., 829
Banks, Miss, Ashfield, N.S.W.—Wool work, 519
Bannister, R. D., Melbourne, Victoria—Services as Secretary Victorian Commission, clxiii; Services as Judge, cl ; Judge, 367
Bannister, Mrs. I. C., Melbourne, Victoria—Services as Judge, cl ; Judge in Ladies' Court, 516
Bapterosses, Briare (Loîret) and Paris, France—Buttons, 267
Baptist, John, Sydney, N.S.W.—Special Medal, clxvi ; Plants and Flowers, 1012, 1015, 1017, 1018, 1022
Barbant, Charles, Paris, France—Wood Engravings, 488
Barbedienne—Services as Member of Committee at Paris, cxliv
Barber, R. A., Yass, N.S.W.—Galena, 24
Barbier Fils, Stanislas, Paris, France—Billiard-table Accessories, 214 ; Ivory Fans, &c., 267
Barbour & Sons, Wm., Lisburn, Ireland—Threads and Yarns, 245
Barford & Perkins, Peterborough, Great Britain—Corn-grinding Mills, Steaming Apparatus, Iron Rollers, 984
Barker, George Wm., Sydney, N.S.W.—Services as Judge cl ; Judge, 808, 844
Barker, Wm. C., Sydney, N.S.W. —Services as Judge, cl ; Judge, 808
Barker, Mrs., Katherine H., Bringelly—Wines, 879
Barker, Right Rev. Frederic, D.D., Bishop of Sydney, N.S.W.—Loan Work of Art, clvii
Barker & Son, Francis, London, Great Britain—Magnetic Compasses, &c., 394
Barling, Mrs. Alfred, Casino, N.S.W.—Crochet work, 519
Barlow, Thomas O., A.R.A., London, Great Britain—Engravings, 494
Barlow & Jones (Limited)—London & Manchester, Great Britain—Quilts, Towels, &c., 245
Barluet et Cie., Paris, France—Plaques and Earthenware, 198 ; Paintings on Porcelain, 474
Barnard & Lake, Raine, Essex, Great Britain—Agricultural Implements, 984
Barnard G. L., Walkerville, South Australia—Olive Oil, 857
Barnes, J. J., Mackay, Queensland—Dates, Pine Apples, &c., Cocoa-nuts, 1020
Barnes E., Newtown, near Sydney, N.S.W.—Public School Exhibit, 379
Barnes, Isaac, Birmingham, Great Britain—Chandeliers, Lamps, &c. ; General Report, 168 ; Award, 217
Barnet James (Colonial Architect), N.S.W.—Services as Honorary Member of Committee, cxlviii ; Services as Architect, Garden Palace, cl ; Services as Judge, cl ; Judge, 210, 344; *Vide* "Colonial Architect," also his Report on Garden Palace, xx to xxiv

Barnet, Rosa, Sydney, N.S.W.—Oil Paintings, 519
Barnett, John, Sydney, N.S.W.—Services as Judge, cl ; Judge, 963
Barnett, Son, & Foster, London, Great Britain—Beer Engines, 659
Barr, Marie, Balmain, near Sydney, N.S.W.—Lace, 519
Barr, Mrs. James, Balmain, near Sydney, N.S.W.—Lace, 519.
Barrack, Captain, Savu Savu, Fiji—Vegetable Oils, 179 ; Timber, General Report on Arboriculture, 717 ; Timber Knees, 802
Barraud, C. D., Wellington, N.Z.—New Zealand *Graphic*, 387
Barrett & Co., Sydney, N.S.W.—Liqueurs and Ærated Waters, 879
Barrett W., Ballarat, Victoria—Sauce, 841
Barrett, Hayter, & Co., Burrawang, N.S.W.—Corn Meal and Oatmeal, 851
Barringer & Brown, Mansfield, Notts, Great Britain—Mustard, 816
Barron & Moxham, Sydney, N.S.W., Agents for Machinery Exhibitors—General Report on Machinery, 592, 593, 600
Barron, Mrs., Sydney, N.S.W.—Crayon Drawings, 519
Barrow, Savery, & Co. (Limited), Philadelphia, U.S.—Cooking Ranges, &c., 228
Barrows & Sons, Wm., Tipton, Staffordshire, Great Britain—Nickel-steel, 147 ; Manufactured Iron, 154 ; Horse-shoes, 333
Barry, Charles, F.S.A., F.R.I.B.A., London, Great Britain—Architectural Designs, referred to in General Fine Arts Report, 457 ; Award, 494
Barth, Millicent Sarah, Walcha, N.S.W.—Public School Exhibit, 383
Barth & Sohn, Johann, Nürnberg, Bavaria, Germany—Hops, 814
Bartholdi F ., Paris, France—Bronze Group referred to in General Fine Arts Report, 460 ; Award, 474
Bartlett, R. H., Auckland, N.Z.—Photographs, 509
Bartley N., Brisbane, Queensland—Gold, Mineral specimens, 68, *et seq.* ; Mineralogical Collection ; Award, 142
Barton R., Cobar, N.S.W.—Copper Ores, General Report, 20
Barton, Alice, Sydney, N.S.W.—Public School Exhibit, 375
Bartrum, Harvey, & Co., London, Great Britain—Waterproof Clothing, 276
Bartsch, Max, Breslau, Germany—Macaroni and Sago, 849
Barwon Woollen Mill Co. (Limited), Geelong, Victoria—Woollen goods, 257
Basset, Paris, France—Prepared Kid, 709
Bassett & Son, D., Sydney, N.S.W.—Axles, Buffers, &c., 676
Bassett Wm., Sydney, N.S.W.—Services as Judge, cl; Judge, 862 ; Exhibit Native Flax, 697, 1022
Bastiani J., Singapore, Straits Settlements—Preserved Fruits, 858
Bataille, Paris, France—Chromo-lithographs, 488
Bates, Gildea, & Walker, Burslem, Staffordshire, Great Britain—Jasper-ware and Earthen-ware, 200 ; Sanitary-ware, 217 ; Artistic Paintings on China, 494
Bates, Ada, Sydney, N.S.W.—Berlin Wool work, 519
Bates F. P., Spring Hill, N.S.W.—Rye, 1023
Bates, Onward, C.E., Sydney, N.S.W.—Span for Iron Bridge, 433
Batten, Charles, Nerang Creek, Queensland—Maize and Rye, 834
Battery Bros., Adelaide, South Australia—"Davenport," in Huon Pine, 228
Battle Creek Machinery Co., Battle Creek, Michigan, U.S.—Carving and Dove-tailing Machines, 638
Batty & Co., London, Great Britain —Sauces and Oilmen's Stores, 816 ; Jams and Jellies, 849
Batty, Florence, Balmain, near Sydney, N.S.W.—Berlin Wool work, 520
Bauer, Oscar, Johann-Georgenstadt, Saxony, Germany—Trimmings, 270
Bauer & Wiedmann, Brünn, Moravia, Austria—Tweeds, 233
Bauerle, Carl, London, Great Britain—Oil Painting, 453, 478
Baumann, A. & D., London, Great Britain—Hats, 276
Bay of Islands Coal Company, Bay of Islands, N.Z.—Coal, 105, 140
Baylie & Co., Eli, Stourbridge, Great Britain—Chains, 659
Bayliss C., Sydney, N.S.W.—Photographs, 504
Bayliss, Jones, & Bayliss, Wolverhampton, Great Britain—Fencing-wire, 154 ; Harrows and Ornamental Ironwork, 984
Bayliss, Wyke, London, Great Britain (Fine Arts Exhibitor)—Referred to in General Fine Arts Report, 454 ; Award, 78
Bayard, Emile, Paris, France—Oil Painting, 474
Baynes, R. B., Paddington, N.S.W., near Sydney—Dogs, 977
"Bazar" Actiengesellschaft, Berlin, Germany—Fashion Books, 492

Beal, J. C. (Government Printer), Brisbane, Queensland—Bookbinding, &c., 312, 313
Beal, Mary, Dunedin, N.Z.—Seaweed and Shell Ornaments, 528
Beard, G., Sydney, N.S.W.—Liqueurs and Aerated Waters, 880
Beardmore, F. J. W., Cooktown, Queensland—Tin Ores, 19
Bearham, Martha, East Maitland, N.S.W.—Public School exhibit, 379
Beath, Schiess & Co., Melbourne, Victoria—Clothing, 290
Beattie, Madame, Sydney, N.S.W.—Lace, &c., 284
Beattie, William, Sydney, N.S.W.—Pigeons, 965, *et seq.*
Beatty, Julia, Wollongong, N.S.W.—Public School exhibit, 385
Beaucourt, Fortuné, Château de la Bégorce, Gironde, France—Clarets, 869
Beaumont, A., Broughton Village, N.S.W.—Public School exhibit, 373
Beauverie, C. J., Paris, France—Fine Arts exhibitor; works referred to in General Fine Arts Report, 459
Beauvois, Paris, France—Music Engravings, 424; Engraving on Pewter Plates, 487
Beavis, Richard, London, Great Britain—Special Medal, clxv; (Fine Arts exhibitor); works referred to in General Fine Arts Report, 450; Award, 478
Bechstein, C., Berlin, Germany—Pianos, 425
Bechtels, Georg, New York City, U.S.—Lager Beer, 901
Becke & Sohn, C. C., Mühlhausen, Thuringia, Germany—Leathers, 710
Becker, August, Düsseldorf, Germany—Fine Arts Exhibitor; works referred to in General Fine Arts Report, 462
Becker and Hofbauer, Berlin, Germany—Carpets, 239
Becker, Gustav, Freiburg, Silesia, Germany—Clocks, &c., 419
Beckmann, E., Sydney, N.S.W.—Services as Judge, cl; Judge, 389, 401
Beckx, Gustav—Services as Member Victorian Commission, clxiii
Beduwe, Joseph, Liège, Belgium—Fire-engines, &c.; General Report on Machinery, 623; Award, 656
Bedwell, Crawford R., Sydney, N.S.W.—Services as Steward, cl; steward at judging, 929, 963
Beebee & Nicklin, Walsall, Great Britain—Leather Purses, &c., 276; Harness and Saddlery, 352
Beeby, Mrs., Queenstown, N.Z.—Knitting, 528
Beech, Harry, Redfern, near Sydney, N.S.W.—Public School exhibit, 382
Beedham, Miss H., Hobart Town, Tasmania—Point Lace, 530
Beernaert, Mdlle. Euphrosine, Brussels, Belgium—Oil Painting, 473
Beetham, George, Wellington, N.Z.—Model of Mount Ruapehu, 434
Beg, Dunlop, & Co., Calcutta, India—Indian Teas, 818
Bega Public School, N.S.W.—Awards to exhibits from, 373
Begas, Carl, Berlin, Germany—Sculpture; works referred to in General Fine Arts Report, 464
Begg, Samuel, Sydney, N.S.W.—Services as Designer of Exhibition Medal, cl
Begg, J. E., Paddington, near Sydney, N.S.W.—Leather, 711
Beiler, P. H., Sydney, N.S.W.—Iron Safe, 338
Beinke, F., Düsseldorf, Germany—Oil Paintings, 472
Bel & Co., August, London, Great Britain—Chemical and Electrical apparatus, 394
Belding Brothers, San Francisco, California, U.S.—Thrown or twisted Silks, 262
Belfast Rope-work Co., Belfast, Ireland—Ropes, 347
Belgian Commission, Brussels, Belgium—Collective exhibit of Iron and Steel, 147, 149; Publication on Belgian industries, 368
Belgian Exhibitors—Special Medals to, clxiv
Belgian List of Diplomas and Medals, Complimentary and for Services, cxlii
Belgian Marbles, 109
Belgian Painting and Sculpture at Exhibition described—General Fine Arts Report, 464
Bell & Black (Limited), London, Great Britain—Matches, 183; Tinware Boxes, 217
Bell Brothers, Melbourne, Victoria—Polished timbers, 791; Award, 807
Bell Brothers, Richmond, Victoria—Furniture, 230
Bell & Co., J. M., London, Great Britain—Washing, Wringing, and Mangling Machines, 217, 218
Bell & Co., Wm., Guelph, Ontario, Canada—Organs, 423
Bell & Sons, Jimbour, Queensland—Wool, 919; Sheep, 960, 961
Bell-Coleman Refrigeration Co., London, Great Britain—Refrigerating Machinery; General Report on Machinery, 614; Model of Refrigerating Machinery, 659
Bell, Henry, Birmingham, Great Britain—Pins, 276; Shoe-tips, Nails, &c., 333

Bell, Henry, London, Great Britain—India-rubber Surgical Appliances and other goods, 324, 347.
Bell, Henry, Sydney, N.S.W.—Services as Judge, cl ; Judge, 939
Bell, John, Sandhurst, Victoria—Stained-glass Window, 515
Bell, William H., Burwood, N.S.W.—Public School exhibit, 373
Bellamy, Zadock, Parramatta district, N.S.W.—Lemons, 1010
Belmore, Earl of, K.C.M.G.—Services as Member Royal Commission in London, cxlv ; President London Commission, cxlv; Member London Committee, cxlv
Belot fils, L. E., Brussels, Belgium—Frames, Cornices, Hangings, 212 ; School Furniture, 368
Bencraft & Co., G., Melbourne, Victoria—Barley, 841 ; Flour, Oatmeal, &c., 860
Bennett, A., Sydney, N.S.W.—Wood Engravings, 504
Bennett, Captain, Mount Perry, Queensland—Copper Ores, &c., General Report, 23 ; Award, 142
Bennett, Elizabeth, Gullen Flat, N.S.W.—Public School exhibit, 378
Bennett, George, M.D., F.R.C.S., F.L.S., Sydney, N.S.W.—Services as Executive Commissioner for Ceylon, cxliii
Bennett, Kenrick H., Moolah, Laurencekirk, Booligal, N.S.W.—Opossum and Wallaby Rugs, &c., 711 ; Quondong Wood, General Report on Arboriculture, 717 ; Award, 802 ; Bilbahs and Mallee Hens, 965 ; Grasses and Sedges, 1007
Bennett, W. T., Brisbane, Queensland—Photographs, 511
Bennetts, William, Camborne, Cornwall, Great Britain—Safety-fuse, 183
Bensusan, S. L., Sydney, N.S.W.—Services as Judge, cl ; Mineral specimens, 37 ; Judge, 146 ; Mineralogical collection award, 136
Bentley, Caroline, Sydney, N.S.W.—Public School exhibit, 376
Bentley & Playfair, Birmingham, Great Britain—Firearms, 318
Bentridder, J. F. de, Velvorde, Belgium—Macaroni, Starch, &c., 846
Benucci, Caioli and Co., Florence, Italy—Straw Hats, &c., 282
Berg, S., Krakau, Austria—Preserved Eggs, 701
Berg, S. van den, The Hague, Netherlands—Oil Paintings, 481
Bergan, Ella L., Granville, N.S.W.—Berlin Wool-work, 520
Bergan, James, Parramatta, N.S.W.—Services as Judge, cli ; Judge, 641
Berger, —Services as Member of Committee at Paris, cxliv
Bergia Conjugi, Turin, Italy—Vermouth, 878
Berkley, Taylor, & Co., Brisbane, Queensland—Dugong Oil, 189
Berliner Actien-gesellschaft für Centralheizungs, Wasser, & Gas-Anlagen, Berlin, Germany—Gasaliers and Candelabras, 214
Berliner Brauereigesellschaft "Tivoli," Berlin, Germany—Lager Beer, 875
Berlin Photograph Co., Berlin, Germany—Photographs, 492
Bernard & Co., Leith, Great Britain—Spirits and Liqueurs, 876
Bernardin, M., Melle, Belgium—Commercial and industrial publications, 368
Berne-Bellecour, E. P., Paris, France—Fine Arts exhibitor ; works referred to in General Fine Arts Report, 459 ; Award, 474
Bernhardi, J., Leipzig, Germany—Drugs and Chemicals, 358
Berry, Ada, Wickham, N.S.W.—Public School exhibit, 384
Berry & Son, Richard, Birmingham, Great Britain—Springs and Axles, 352
Berry, J. S., Botany, N.S.W.—Bonedust, Glue, &c., 711
Bertheau, C. Z., Bundaberg, Queensland—Liqueurs, 895
Berthier & Co., R., London, Great Britain—Boots and Shoes, 276
Berthon Boat Co. (Limited), London, Great Britain—Portable Boats and Canoes, 684
Berthon, Nicolas, Paris, France—Oil Painting, 474
Berton, P. E., Paris, France—Fine Arts exhibitor ; works referred to in General Fine Arts Report, 460
Bessand et Cie., Paris, France—Clothing, 267
Bessbrooke Granite Company, Bessbrooke, Ireland—Irish Granites, 113, 134
Bessède fils, Marseilles, France—Olive Oil, 848 ; Liqueurs, 869
Besson & Co., F., London, Great Britain—Musical Instruments, 427
Best, Catherine, Wilton, N.S.W.—Public School exhibit, 384
Beston, Edward, Sydney, N.S.W.—Services, clvi
Bettington, James B., Merriwa, N.S.W.—Wool, 912
Bevan, jun., Thomas, Waikawa, Foxton, N.Z.—Ropes, Twines, &c., from New Zealand Flax, 254, 349 ; Flax, 917
Beverley & Atkins, Sheffield, Great Britain—Drilling Machinery General Report on Machinery, 601 ; Award, 634

Beverley and Wylde, Leeds, Great Britain—Gas-cooking Apparatus, 218
Beverley, Robert, Yass, N.S.W.—Public School exhibit, 385
Bevington, Thomas, Hanley, Staffordshire—Ornamental Porcelain and Earthenware, 200
Bewley & Draper, Dublin, Ireland—Sodawater, &c., 876
Beyer, Eduard, Chemnitz, Saxony, Germany—Inks, 180
Beyers, H. L., Sydney, N.S.W.—Gold Quartz, from Hill End, 11
Beyle, Pierre Marie, Paris, France—Fine Arts exhibitor; works referred to in General Fine Arts Report, 458; Award, 474
Bezer, Emily, St. Leonards, N.S.W.—Public School exhibit, 382
Bezer, Mary, St. Leonards, N.S.W.—Public School exhibit, 382
Beche de Mer, 175
Biardot, Alphonse, Paris, France—Tinned Provisions, 701; Truffles and Mushrooms, 813; Fruits and Vegetables, 848
Bickford, Smith, & Co., Tuckingmill, Cornwall, Great Britain—Safety Fuse, 183
Bickford & Sons, A. M., Adelaide, S.A.—Liqueurs, 896
Biddell, Mrs, M. A., Sydney, N.S.W.—Loan Works of Art, clvii
Biddell Brothers, Sydney, N.S.W.—Confectionery, 851
Biggar, John Gordon, Wollongong, N.S.W.—Services, clvi
Biggar, John, Wollongong, N.S.W.—Minerals and Fossils, 37; Coal, 103
Bignon, Louis, Château de la Hournique, Gironde, France—Claret, 869
Biles, Ellen, Granville, N.S.W.—Berlin Woolwork, 520
Billyard, W. W., Parramatta, N.S.W.—Dog, 977
Binder, Jacob, Cook's River, N.S.W.—Cucumbers, 1015
Binney, Chas., Adelaide, S.A.—Coorongite, Elaterite, or Mineral Caoutchouc, 108
Binnie, J., Dunedin, N.Z.—Biscuits, 854
Binns, Mrs. Geo., Wellington, N.Z.—Point Lace, 528
Binsted, W. H., Sydney, N.S.W.—Services as Judge, cli; Judge, 161
Biolley Frères, Verviers, Belgium—Tweeds, 235
Birch, C. B., London, Great Britain—Bronze Statuary, referred to in general report on Fine Arts, 455; Award, 478
Birchall & Co., Leeds, Great Britain—Woollen Goods, 245
Birckleman, Adolphus, Windsor, N.S.W.—Public School Exhibit, 385
Birds' Patent Bottle Stopper Co., London, Great Britain—Bottle Stoppers, 659
Birdsall & Bailey, Waterloo, near Sydney, N.S.W.—Leather, 711
Birgkann, Paul, Paris, France—Ornamental Porcelain, 198
Birley, Peter, Auckland, N.Z.—Wrought Iron-work, 340
Birmingham Machinist's Co., Birmingham, Great Britain—Printing Machines, 651
Birmingham Lamp Company, Birmingham, Great Britain—Lamps, 218
Birnbaum, Bernard, London, Great Britain—Waterproof Clothing, 276; India-rubber Goods, 347
Bischofberger, Eduard, St. Gall, Switzerland—Curtains, 288
Bishnath Tea Co., Assam (Indian Court)—Tea, 819
Bishop, Mary, Parramatta, N.S.W.—Public School Exhibit, 380
Bismuth Ores from Balhannah, South Australia, 78
Bisseuil et Cie., Paris, France—Inks and Blacking, 179
Bissinger, Georges, Paris, France—Cameos, Intaglios, &c., 474
Bissland, Alice, Penrith, N.S.W.—Public School Exhibit, 380
Bisson, Captain F. S. de Carteret, London, Great Britain—Illuminated Genealogy, 362, 370
Bitterlin Fils, Paul, Paris, France—Painted Glass Windows, 488
Bivort, H. J., Jumet-Charleroi, Belgium—Sheet-glass, 196. *Vide* Corrigenda
Blabon & Son, G. W., Philadelphia, U.S.—Oilcloth, 256
Blachmann, C. H. E., Sydney, N.S.W.—Services as Judge, cli; Judge, 211
Blachmann, Hermann J. B. F., Sydney, N.S.W.—Services as Clerk to Executive Commissioner, cxlix; Do., as Acting Secretary Tasmanian Executive Commissioner, clxi
Black, Henry, Parramatta District, N.S.W.—Oranges, 1010
Black, Margaret Ann, Wellington, N.Z.—Knitted Goods, 287
Black, A. T., Broken Bay, N.S.W.—Loan Ethnological Exhibits, clvii; New Zealand Costumes, &c., 284
Blackadder, Amy, Sydney, N.S.W.—Public School Exhibit, 376
Blacket & Davy, Sydney, N.S.W.—References to firm as Agents for Exhibitors, General Report on Machinery, 538, 547, 552, 565, 566, 572, 592, 593, 600
Blacket, Edmund T., Sydney, N.S.W.—Services as Judge, cli; Judge, 423
Blackett, John, Wellington, N.Z.—Light-house Chart, 434

Blacket, Owen, Sydney, N.S.W.—Services as Judge, cli ; Judge, 211, 330
Blackfield, Eva, Grafton, N.S.W.—Public School Exhibit, 377
Blackwall Galvanized Iron Company (Limited), London, Great Britain—Galvanized Iron, &c., 154
Blackwood, Horatio, Williamstown, N.S.W.—Public School Exhibit, 384
Bladen, Frank M., Sydney, N.S.W.—Telephones, 397
Bladen-Neill, Mrs., Ladies' Silk Association, Corowa, N.S.W.—Cocoons, Spun Silk, Silk Fabrics, 261
Blair, W. N., Dunedin, Otago, N.Z.—Polished Timbers, General Report on Arboriculture, 784 ; Awards, 804
Blair, T., Paddington, near Sydney, N.S.W.—Dog, 977
Blake Manufacturing Co., G. F., Boston, Massachusetts—Steam Pumps, 670
Blake & Son, Charles, Picton, N.Z.—704
Blanchard, George, Sydney, N.S.W.—Public School Exhibit, 375
Blanchet, Frères, et Kleber, Rives (Isère) and Paris, France—Papers, 296
Blancke, Emanuel, A.R., Frankfort a/O, Germany—India-rubber Goods, 345
Blankenhorn, Dr. Adolph, Karlsruhe, Silesia, Germany—Treatise on Vine-culture, 369
Blanco, Paris, France—Stay Eyelets and Fastenings, 267
Blanqui fils, Nice, France—Liqueurs, 870
Blau, Adolphe, Sydney, N.S.W.—Services as Judge, cli ; Judge, 263
Blaxland, Lucy M., Ryde, N.S.W.—Velvet Cushion, 520
Blaxland, Miss, Sydney, N.S.W.—Loan, Works of Art, clvii
Bleasdale, Rev. John J., D.D., San Francisco, U.S.—Services, clxii
Bled & Labbé, Paris, France—Feathers, 267
Bleiberger Bergwerks Union, Klagenfurt, Illyria, Austria—Mineral Specimens, 31 ; Lead Ores, 131
Blews & Sons, Wm., Birmingham, Great Britain—Chandeliers, &c., General Report, 168 ; Awards, 218, 333 ; Weights and Measures, 394 ; Hand-bells, 427
Blinman Copper Mine, Spencer's Gulf, South Australia—Mineral Specimens, 74
Bliss, J., Yass, N.S.W.—Magnetic Iron Ores, 25
Bliss & Son, William, Chipping Norton, Oxfordshire, Great Britain—Tweeds, 245
Bliss & Co., William, London, Great Britain—Harness and Saddlery, 352
Bloch, T., Nelson, N.Z.—Photographs, 509
Blondiaux et Cie., Thy-le-Château, Belgium—Iron Rails and Sleepers, 149
Blot et Drouard, Paris, France—French Bronzes, 488
Blot—Services as Member of Committee at Paris, cxliv
Blumer & Wild, St. Gall, Switzerland—Shawls, 288
Blundell, Spence, & Co., London, Great Britain—Colours, Oils, &c., 183
Blunt, George, Sydney, N.S.W.—Services as Judge, cli ; Judge, 193
Blüthner, Julius, Leipsic, Germany—Pianos, 425
Blyde, John, Sheffield, Great Britain—Cutlery, 333
Boake, B. C., Sydney, N.S.W.—Photographs, 504
Board, G., junr., Sydney, N.S.W.—Fretwork, 284 ; Mosaics in Wood, 504
Bochirol, Sarras (Ardèche), France—Liqueurs, 869
Bocquet, Léonce, Beaune (Côte d'Or), France—Burgundy, 869
Boehm, L., Kanathea, Fiji—Cotton, 909
Bogner, Antonie, Vienna, Austria—Coloured Photographs, 486
Böhm, Gustav, Offenbach a/M, Germany—Fancy Soaps, 180
Böhm, Anton, Vienna, Austria—Coloured Photographs, 486
Boldeman, W., Rockhampton, Queensland—Soap, 189
Boldt & Vogel, Hamburg, Germany—Bottling Machinery, &c., 658
Bollarth, Franz, Vienna, Austria—Laceware, 264
Bols, Erven Lucas, Amsterdam, Netherlands—Liqueurs, &c., 878
Bolton, Joseph, Waimea West, Nelson, N.Z.—Wheat and Oats, 829
Bombala Exhibition Society, Bombala, N.S.W.—Grain and Vegetables, 823
Boncinelli e Figli, Giovanni, Florence, Italy—Mosaic Tables, 500
Bond, E. M., Albury, N.S.W.—Horse, 931
Bond, Mrs. M. A. (now Hickisson), London, Great Britain—Inks, 183
Bondier, Ulbrich et Cie., Paris, France—Briarwood Pipes, 267
Bonfils Frères, et Cie., Carpentras, Vaucluse, France—Truffles, 813
Bonnefin, Charles, Paris, France—Drawings, 488
Bonnefoy, Henri, Paris, France—Special Medal, clxiv ; Oil Painting, 474
Bonnet et Cie., Les petit fils de C. J., Lyons, France—Satins and Silks, 260
Bonnetti, G., Melbourne, Victoria—Casks, Churns, &c., 350

Bonney, C., Adelaide, South Australia—Services as Member of South Australian Commission, clx
Bonney, Charles, Burnside, South Australia—Wine, 896
Bonthorne, John M., East Maitland, N.S.W.—Horse, 931
Boobier, W. J., Sandhurst, Victoria—Wheat, 841
Boobier, Nelly, Sandhurst, Victoria—Paintings on Silk, 532
Boorook Silver Mines, near Tenterfield, N.S.W.—General Report, 8, *et seq.*
Boorook Exhibition Committee, Boorook, N.S.W.—Silver, 136
Booth, John, Prospect, N.S.W.—Cattle, 942
Booth, Miss, Hobart Town, Tasmania—Cone Picture-frame, 530
Booth, Mary, Sydney, N.S.W.—Public School Exhibit, 376
Booth & Collings, Wollongong, N.S.W.—Furniture, 223
Boothby, Joseph, C.M.G., Adelaide, S.A.—Services as Member South Australian Commission, clx; South Australian Statistics, 387
Boots and Shoes, N.S.W. Exhibits, General Report, 171
Bopp, Carl, Stuttgart, Germany—School Charts, 369
Borchers & Nentwich, Prenzlau i. U. M., Germany—Sausage Machines, &c., 983
Bord, Jean Antoine, Paris, France—Grand Piano, 424
Boreham, F., A.R.I.B.A., London, Great Britain—Architectural Designs, 456, 494
Boreham, G. H., Brisbane, Queensland—Tomato Sauce, 835
Bormey's (Professor) Manual of Geology, Collection illustrative of, 33
Born & Joachim, Berlin, Germany—Shawls, &c., 239
Borneo Company (Limited), Sarawak, Straits Settlements—Mineral Specimens, General Report, 17; Awards, 144; Tin Ingots, 159
Borreman, Réné, Ghent, Belgium—Damasks, &c., 235
Borthwick, Alex., Melbourne, Victoria—Varnishes and Paints, 192
Borwick & Sons, George, London, Great Britain—Baking Powders, 183
Boscher, Gustave, Amiens, France—Photographs, 488
Bösenberg, S., Cape of Good Hope, Cape Colony—Brandy, 868
Bosisto, Joseph, M.P., Richmond, Victoria—Member of Victorian Commission, clxiii; Eucalyptus Essential Oils and Perfumery, Special Medal, clxvi; General Report, 167; Awards, 192,329; Eucalypti Liqueur, 902
Bostock & Co., Stone, Staffordshire, Great Britain—Boots and Shoes, 276
Boston Blower Co., Boston, Massachusetts, U.S.—Forge Blower, &c., 639; Blowing Fan, 670
Botanic Gardens, Brisbane, Brisbane, Queensland—Fibres, 255; Timbers, General Report on Arboriculture, 741, *et seq.*, Barks, General Report on Arboriculture, 794; Awards, 805; Sugars, 855; Flax, 919; Economic Plants and Tropical Fruits, 1028
Botanic Gardens, Melbourne, Victoria—*Vide* Guilfoyle, W.R.
Botanic Gardens, Sydney, N.S.W., Chas. Moore, F.G.S., Director—New and Rare Plants, 1023
Botelberge et Cie., Gustave, Melle-lez-Gand, Belgium—Ultramarine Colours, 177
Bothamley, A. T., Wellington, N.Z.—Photographs, 509
Boucard, A., London, Great Britain—Natural History Diagrams, 362, 370
Bouché, Henriette, Vienna, Austria—Coloured Photographs, 486
Boucnéau, Léon, Brussels, Belgium—Marble Mantelpieces, 109, 131, 212
Boude et Fils, Marseilles, France—Sulphur, 179
Bouffier, Frank J., Sydney, N.S.W.—Wines, 880
Boulinikon Floor-Cloth and Manufacturing Company (Limited), Manchester, Great Britain—"Boulinikon Floor-Cloth," 245
Boulla, Bertrand, Nîmes-Gard, France—Tapestries, Carpets, &c., 237
Boulli Tea Co., Assam (Indian Court) Tea, 819
Boulton, E. B., Walcha, N.S.W.—Water-colour Painting, 482
Boulton & Mills, Stourbridge, Staffordshire, Great Britain—Crystal Glassware, 200
Boulvin-Ledoux, P. and C., Charleroi, Belgium—Bottles, 196
Bound, Paul E., Sydney, N.S.W.—Service as Judge, cli; Judge, 389, 401
Bouquet, Michel, Paris, France—Landscape Painting, General Report on the Fine Arts, 460; Painting on Porcelain, 475; Enamelled Paintings, 488
Bouran, Frères, et Cie., Bourdeaux, France—Wines, 869
Bourdil, Fernand—Services as member of French Commission at Sydney, cxliii
Bourlard, A., Brussels, Belgium (Fine Arts Exhibitor)—Works referred to General Fine Arts Report, 466; Award, 473
Bourne, Miss, Sydney, N.S.W.—Services as Judge, cli; Judge in Ladies' Court, 516
Bourne & Co., Joseph, Sheffield, Great Britain—Cutlery, 334

Bourne & Son, Joseph, Derby, Great Britain—Stoneware, 200
Bouvier, A., Brussels, Belgium (Fine Arts Exhibitor)—Works referred to General Fine Arts Reports, 465 ; Award, 473
Bowden, W., St. Helena (Queensland Court)—Furniture from St. Helena Woods, 297
Bowen Municipal Council, Queensland—Coal from Daintree River, 107—Bêche de mer, 705
Bowler, Lucy, Sydney, N.S.W.—Public School Exhibit, 381
Bowling, Annie, Ulmarra, N.S.W.—Public School Exhibit, 383
Bowman, Miss M., Jerry's Plains, N.S.W.—Reeled Silk, 261
Bowman, Charles, London, Great Britain—Stencil-plates, &c., 300, 347
Bowman, Ernest M., Singleton, N.S.W.—Sheep, 956
Bown & Co., T. J., Sydney, N.S.W.—Agents for Shand, Mason, & Co., London, General Report on Machinery, 570 ; Reference to Firm's own Exhibits, 623 ; Fire Engine and Pumps, 669
Bown, Charles, Sydney, N.S.W.—Services, cl
Bowning, Public School, N.S.W.—Award to, Exhibits from, 373
Boyce, Emily, Williamstown, N.S.W.—Public School Exhibit, 384
Boyd, George, Newton, Auckland, N.Z.—Fire-clay, Bricks, and Pozzuolana, General Report, 126 ; Award, 210
Boyd, Jessie T., Moama, N.S.W.—Public School Exhibit, 379
Boydell, R. B., Gresford, N.S.W.—Wines, 880
Boylson & Sons, M., Ashfield, N.S.W.—Flour, 1023
Boynton, E. M., Newark, New Jersey, U.S.—Saws, 341
Bozon, Daisy, Sydney, N.S.W.—Public School Exhibit, 184
Braby & Co., Frederick, London, Great Britain—Galvanized Iron, &c., 147, 154
Brace & Co., Henry (Limited), Walsall, Great Britain—Harness and Saddlery, 352
Braché, C., Melbourne, Victoria—Wines, 902
Bradford & Co., Thos., Manchester, Great Britain—Washing, Wringing, and Mangling Machines, 218
Bradley, Minnie, East Maitland, N.S.W.—Public School Exhibit, 379
Bradley, Walter, Randwick, N.S.W.—Services as Judge, cli ; Judge, 963 ; Angora Goats, 956
Bradley, W., jun., Randwick, N.S.W.—Poultry and Pigeons, 966
Bradley, C. F., Albury, N.S.W.—Services, clvi
Bradley, H. Burton, Sydney, N.S.W.—Services as Hon. Member of Committee, cxlviii
Bradshaw, Ettie, Penrith, N.S.W.—Public School Exhibit, 380
Brady, Mr., Tweed River, N.S.W.—Sericulture, General Report, 170
Brady Mrs., Thos. J., Parramatta River, N.S.W.—Curtains, 520
Braemer & Fraenkel, Leobschutz, Ober-Schlesien, Germany—Matting, Barley, 814
Bragard, Eugène, Brussels, Belgium—Marble Mantel-pieces, &c., 110, 131, 212
Bragge, J., Wellington, N.Z.—Photographs, 509
Brain, Clara J., Gunning, N.S.W.—Public School Exhibit, 378
Braithwaithe, A., Wellington, N.Z.—Yams, 254
Branca Fratelli, Milan, Italy—Liqueurs, 878
Brandauer & Co., C., Birmingham, Great Britain—Steel Pens, 300
Brandis, George, Enfield, South Australia—Copper Ores, General Report, 23
Brandon, D., F.R.I.B.A., London, Great Britain—Architectural Designs, 494
Brandon, Misses, Wellington, N.Z.—Water-colour Painting, 528
Brandram Brothers & Co., London, Great Britain—Whitelead, Colours, &c., 183
Brandt, Wilhelm, Berlin, Germany—Wood Buttons, 271
Brankston & Co., T., London, Great Britain—Cut Tobaccos, 816
Braquenié et Cie., Paris, France—Tapestries and Carpets, 237
Bratfield, Ellen, Grafton, N.S.W.—Public School Exhibit, 377
Bratfield, Eva, Grafton, N.S.W.—Public School Exhibit, 377
Braun fils, Ghent, Belgium—Gilt Rods (furniture), 212
Bray, A. L., Concord, N.S.W.—Horse, 931 ; Dog, 977
Bray, James S., Sydney, N.S.W.—Ornithological Collection, 372
Brazier, John, Sydney, N.S.W.—South Sea Island Dresses, &c., 284
Bréant, Paris, France—Shawls, 238
Brearley Brothers, Melbourne, Victoria—Leather, 714
Brecht, Carl, Denman, N.S.W.—Wines, 880
Breeckpot, G. V. M., Malines, Belgium—Liqueurs, 868
Breffit & Co., E., Castleford, Yorkshire, Great Britain—Bottles, &c., 200
Breithaupt & Sohn, F. W., Cassel, Germany—Theodolites, &c., 392

Bremner, Kate, Parramatta, N.S.W.—Public School Exhibit, 380
Brendel, Alb., Weimar, Germany—(Fine Arts Exhibitor), works referred to in General Fine Arts Report, 462
Brenot, Barthel et Cie., Veuve-Dijon, France—Wines, 869
Brensing, E., Nagambie, Victoria—Wines, 902
Brent, Rose, Hobart Town, Tasmania—Chess Table, 512
Bretsch, Hugo, Berlin, Germany—Fancy Goods, 271; Kindergarten Toys, 369
Brett, John, London, Great Britain—(Fine Arts Exhibitor), Special Medal, clxv; reference to works in General Fine Arts Report, 450; Award, 478
Breuer, Schuhmacher, & Co., L. W. (Kalker Werkzeug-maschinenfabrik), Kalk, near Cöln, Germany—Grain Cleaners, 983
Brewster, Wm., Sydney, N.S.W.—Services as Judge, cli; Judge, 315
Bridges, M., Newtown, near Sydney, N.S,W.—Public School Exhibit, 379
Bridgeport Organ Co., Bridgeport, Connecticut, U.S.—Cabinet Organs, 429
Brierly, Oswald W., London, Great Britain—(Fine Arts Exhibitor), referred to in General Fine Arts Report, 454; Award, 478
Briggs, Mary, Bowning, N.S.W.—Public School Exhibit, 373
Bright Brothers & Co., Melbourne, Victoria—Cake Antimony, 160
Bright, H. E., M.P.—Services as Member of South Australian Commission,
Brightman Brothers, London, Bristol, and Paris—Boots and Shoes, 276
Brinkerhoff, Turner, & Co., New York City, U.S.—Cotton, Duck, and Sail Twine, 256
Brinsmead & Sons, John, London, Great Britain—Pianos, 427
Brinton & Co., John, Kidderminster, Great Britain—Tapestry and Carpets, 246
Brisbane Normal School, Drawings, &c., 511
Brisbane Botanic Gardens, Brisbane, Queensland—Fibres, 255; Timbers with local and botanical names and economic uses—General Report on Arboriculture, 741; Barks do. do., 794; Pepper and Coffee Beans, 835
Bristol Waggon Works Co. (Limited), Bristol, Great Britain—Broad-cast Sowers, 984
Bristowe, E. H. C., Sydney, N.S.W.—Services as Accountant to the Commission, Sydney International Exhibition, cxlix; Services as Judge, cli; Judge, 975
British Syphon Manufactory (Eugster & Koertgen, proprietors), London, Great Britain—Syphons & Seltzogenes, 200
Britten & Bolton, Tamworth, N.S.W.—Flour, 851
Broad R. M., Bega, N.S.W.—Services, clvi
Broadhead, David, Bungonia, N.S.W.—Oaten Hay, 1023
Broadhurst W. G., Sydney, N.S.W.—Services, clviii
Broadmead, F., H.M.S. Danaë—Loan of Ethnological Exhibits, clvii
Brock, Wm., Green Ponds, Tasmania—Wheat, 838
Brodbeck & Co., Reichenbach, Saxony, Germany—Woollen Goods, 239
Brodribb, W. A., F.R.G.S., M.P.—Services as Member of Sydney International Exhibition Commission, cxlvii
Bromley, Wm., London, Great Britain—(Fine Arts Exhibitor), reference to in General Fine Arts Report, 458, 478
Bromley, John, London, Great Britain—Oil Painting, 478
Bromley, Edward R. C.—Services as Acting Secretary U.S. Commission, clxii
Brook & Brothers, Jonas, Huddersfield, Great Britain—Sewing Cottons, &c., 245
Brook, Wm., Woodchester, South Australia.—Wheat, 1029
Brooke & Co., Joseph, London, Great Britain—Paper Collars and Cuffs, 276
Brooke & Son, Jas., Huddersfield, Great Britain—Broad Cloths, Rugs, &c., 245
Brooke & Sons, John—Huddersfield, Great Britain—Woollen Goods, &c., 245
Brooker, Dore, & Co., Joseph, London, Great Britain—Screws, 334
Brooks, H. C., Sydney, N.S.W.—Dry Earth-closets—"Moule's" patent—223
Brooks, Jas., F.R.I.B.A., London, Great Britain—Architectural Designs, 494
Brooks, John, Lye, near Stourbridge—Engineers' Vyces, 634
Broomfield, John, Sydney, N.S.W.—Honorary Member of Committee, cxlviii; Services as Steward, cli; Steward in Judging, 1011; Exhibits (Special Medal), clxvi; Plants, 1007, 1012, 1015, 1017, 1018
Broughton Village Public School, N.S.W.—Award to Exhibits from, 373
Brown, John, Dapto, Illawarra, N.S.W.—Stones for road-making, &c., 113; Shell limestone, 124
Brown, Alexander, Sydney, N.S.W.—Services as Judge, cli; Judge, 146
Brown, John, & Co. (limited), Sheffield—Special medal, clxv; Iron Armour Plates, &c., 147; manufactured Iron and Steel, 154, 675
Brown, J. B., & Co., London, Great Britain—Galvanized Wire Netting, 147, 154

Brown, Bayley, & Dixon (limited), Sheffield Great Britain—Steel, 154; Tyres, Axles] Rails, 675
Brown & Brown, Pyrmont, N.W.S.—Manufactured Iron, 158
Brown & Sons, Galashiels, Great Britain—Tweeds, 246
Brown Frederick, Philadelphia, U.S.—Spirit of Ginger, 328
Brown, Thomas, Melbourne, Victoria—Horse-shoes, &c., 343
Brown Herbert, Lochinvar, N.S.W.—Public School Exhibit, 378
Brown, Lily, Wollongong, N.S.W.—Public School Exhibit, 385
Brown, S., Wellington, N.Z.—Model of Lighthouse, 434
Brown, Wm., Shoalhaven, N.S.W.—Maize, 823
Brown, Miss B., Sydney, N.S.W.—Needle Embroidery, 520
Brown & May, Devizes, Great Britain—Reference to Exhibits in General Report on Machinery, 559, 621
Brown, John, Mudgee, N.S.W.—Maize, 823
Brown & Co., Penang, Straits Settlements—Sugar, 858; White Rum, 900
Brown, Campbell, and Co., Thames, N.Z.—Ales, 892
Brown, F., St. Aubins, Scone, N.S.W.—Horse, 931
Brown, John, Eatanswill, Clarence River, N.S.W.—Horse, 931
Brown, John, Singleton, N.S.W.—Horse, 931
Brown, W. W., Sydney, N.S.W.—Dogs, 977
Brown, Wm., Paddington, near Sydney, N.S.W.—Plants and Flowers, 1012, 1013, 1015, 1017, 1018, 1022
Brown, A. H., Sydney, N.S.W.—Plants, 1014
Browne, Mary, Sydney, N.S.W.—Public School Exhibit, 384
Browne, James, Toronto, Ontaria, Canada—Map Stand, 213
Browne, T., Maitland, N.S.W.—Building Stones, 114, 136
Browne, Montague, Sandhurst, Victoria—841
Browne, J. D., Brewongle, near Bathurst, N.S.W.—Wheat, 1023
Browne H. De C., Mudgee, N.S.W.—Services, clvi
Brownell, Wm., Sydney, N.S.W.—Services as Judge, cli; Judge, 1011; Plants, 1018
Brownfield & Sons, Wm., Cobridge, Staffordshire, Great Britain—Majolica, Parian, China, and Stoneware, 200, 201; Artistic Paintings on Porcelain, 494
Brownhills Pottery Co., Tunstall, Staffordshire, Great Britain—Earthenware, 201
Browning George, Sydney, N.S.W.—Jams and Preserves, 851
Brownrigg, T. M. Guildford, Surrey, Great Britain—Photographs, 494
Brown-Westhead, Moore, & Co., T. C., Hanley, Staffordshire, Great Britain—Porcelain and Majolica Ware, 201; Artistic Painting on Porcelain, 494
Bruce, Alex., Chief Inspector of Stock, N.S.W.—Services as Hon. Member of Committee, cxlviii; Services as Steward, cli; Steward at Judging, 929, 939
Bruce, R., Great Smeation, Yorkshire, Great Britain—Horse, 931
Bruce New York Type Foundry, New York City, U.S.—Printing Type, 388
Brückmann, G. L., Dortmund, Germany—Iron Rails, &c., 674
Bruckmann's Verlag, Fried., Munich, Germany—Oleographs, 492
Brückner, Lampe, & Cie., Leipsic, Germany—Drugs, &c., 180
Bruhn, Albert, Strathfieldsaye, Victoria—Wines, 902
Brun, Ernest, Uzes-Gard, France—Tissues, &c., 238
Brunet-Desbaisnes, Paris, France—Etchings, 488
Brunfaut, Amalia de, Vienna, Austria—Embroideries, Glass-wool, 233
Brunker, James N., West Maitland, N.S.W.—Horse, 932
Brunn, Moravia, Austria—Woollen Manufactures from—referred to, 189, 388
Brunner Coal Company, Brunnerton, Grey River, N.Z.—Coal, 105; Fire-clay, 126; Award for Coal, 140
Brünner Gebrüder, Vienna, Austria—Petroleum Lamps, 212
Brunswick & Balke Co., The J. M., Chicago, and New York City, U.S.—Billiard Tables, &c., 228
Bryant & May, London, Great Britain—Patent Safety Matches, &c., 183; Tinware Boxes, &c., 218
Bryant, Edwin, Melbourne, Victoria—Pencil Drawings, 515
Bryants, Edward, Koroit, Victoria—Cheese, 706
Bryant, T., Camden, N.S.W.—Timbers, General Report on Arboriculture, 717; Award, 803
Bryant, James H., Young, N.S.W.—Maize Fibre, and Paper made therefrom, 1023
Buchanan, Thos., Sydney, N.S.W.—Services, clvi
Buchanan, John, sen., Mount Dangar, Goulburn River, N.S.W.—Wheat, 1023

Buchanan, A., Titanga, Lismore, Victoria—Wool, 925
Buchanan, John, F.L.S., Wellington, N.Z.—Lithographed grasses and Alpine Plants of N.Z., 387
Buchanan, Hugh, Sydney, N.S.W.—Fretwork, 520
Buchanan, Miss S., Sydney, N.S.W.—Crayon Drawing, 520
Buchanan, James, P.M., Armidale, N.S.W.—Topazes, 30
Buchanan, J., Sydney, N.S.W.—House-fittings in Colonial Woods, 223
Buchanan, Agnes, Sydney, N.S.W.—Public School Exhibits, 374
Buchanan, May, Sydney, N.S.W.—Public School Exhibit, 381
Buchanan, Laura, Sydney, N.S.W.—Public School Exhibit, 381
Buckholtz, F., Mudgee, N.S.W.—Wheat, Barley, and Oats, 823
Buckholtz, F., jun., Mudgee, N.S.W.—Wines, 881 ; Oats and Fruit, 1023
Budischowsky & Co., Vienna, Austria—Boots and Shoes, 264
Building-stones, Minerals, Ores, etc., General Report on, 1 to 130 ; Awards, 131 to 145
"Builder" Newspaper, London, Great Britain—Engravings, 494
Bulcke, V., Ostend, Belgium—Liqueurs, 868
Bull, William, Sydney, N.S.W.—Services as Judge, cli ; Judge, 351
Bulli Coal-mining Co., Bulli, N.S.W.—Coal, 101, 136
Bulman, Johnston, & Co., Launceston, Tasmania—Woollen Manufactures, General Report, 169 ; Awards, 256
Buncle, John, North Melbourne, Victoria—Saw Bench, Bark Cutter, &c., 640 ; Tobacco Cutters, 682 ; Chaff-cutters and Corn-crushers, 997
Bundock. W. A., Sydney, N.S.W.—Loan of Ethnological Exhibits, clvii
Bunting, H., Waterloo, near Sydney, N.S.W.—Poultry and Pigeons, 966 ; Dog, 978
Bunting, R., Waterloo, near Sydney, N.S.W.—Poultry and Pigeons, 966
Burdin, Aîné, Lyons, France—Church Bell, 424
Bureau d'Etat Des Beaux Arts, Paris, France—Collection of Oil Paintings and other Works of Art ; Services, cxliv ; Special Medal, clxiv ; Award, 475
Burford & Sons, W. H., Adelaide, South Australia—Soap, 190
Burgant, Guitard, et Cie., Mauzé (Deux Sévres), France—Brandy, 869
Burgess, Wm. H.—Services as Member of Tasmanian Commission, clxii
Burgfeldt, Louis, Breslau, Germany—Straw Hats, 271
Burgon & Ball, Sheffield, Great Britain—Sheep Shears, 334
Burke and Wills, the Explorers, Pastoral Occupation of the District in which they came by their Death, 697
Burkitt, R. L., Wolverhampton, Great Britain—Bicycles, 352
Burney & Co., London, Great Britain—Iron Tanks, 1000
Burnside, H., Wellington, N.Z.—Architectural Model
Burra Burra Copper Mine, South Australia—Copper Ores, 74
Burrian, Otto, Imperial Navy, Austria—Dromoscope, 390
Burroughes & Watts, London, Great Britain- Billiard Tables, &c., 218
Burrowes, S., Risdon, Tasmania—Opossum Rugs, 289
Burrows & Gleeson, Waverley, near Sydney, N.S.W.—Ales and Porters, 881
Burrum Coal Mine, Maryborough—Coal, General Report, 107
Burt, A. & T., Dunedin, N.Z.—Furniture and Gasaliers, 226 ; Refrigerator, Award, 682 ; Bottling and Corking Machine, &c., 670
Burton, Joseph R., Wellington, N.Z.—Taxidermy, 387
Burton, Brothers, Dunedin, N.Z.—Photographs, 510
Burwood Public School, N.S.W.—Awards to Exhibits from, 373
Busby, Lizzie, Windsor, N.S.W.—Public School Exhibit, 385
Busby, A. & W., Cassilis, N.S.W.—Wool, 912
Bush, Charles, Sydney, N.S.W.—Services as Judge, cli ; Judge, 654
Bush & Co., W. J., London, Great Britain—Colours, &c., 183
Buss, Thos. O., London, Great Britain—Hydrometers and Saccharometers, 394
Butcher, Robert, Sydney, N.S.W.—Services as Judge, cli ; Judge, 862
Butel & Co., Peter, Arrowtown, Southland, N.Z., 854
Butler, W. T., Sydney, N.S.W.—Crayon Drawings, 504
Button, T. L., Leven, Tasmania—Tanned Kangaroo Skins, 714
Buttura, Auguste E. E., Paris, France—Marine Landscape, General Report on the Fine Arts, 460
Buzacott, E., Sydney, N.S.W.—Pigeons, 966
Byrne, Thomas, Moss Vale, N.S.W.—Boots and Shoes, 284

C

Cabinet Collections in Ladies Court, 518
Cadell, Thos., junr., Sydney, N.S.W.—Services as Judge, cli; Judge, 963
Cadell H., St. Leonards, near Sydney, N.S.W.—Pigeons, 967
Cadogan, Earl of—Services as Member of Royal Commission for Great Britain, cxlv
Caire, Nicholas J., Melbourne, Victoria—Photographs, 515
Calcutta Jute Mills Co. (Limited), Bengal, India—Bags, Sacks, &c., 251
Calderara & Bankmann, Vienna, Austria.—Soaps, &c., 176
Calderon, P. H., R.A., London, Great Britain—Exhibitor of Works of Art; referred to in General Fine Arts Report, 450
Caldwell W., Broughton Village, N.S.W.—Public School Exhibit, 373
Caldwell, E., Broughton Village, N.S.W.—Public School Exhibit, 373
Caldwell, Frank, Fairy Meadows, N.S.W.—Public School Exhibit, 375
Caldwell, Isabella J., Fairy Meadows, N.S.W.—Public School Exhibit, 375
Caldwell & Co., Melbourne, Victoria—Wines, 903
California, U.S., The Governor of the State of, clxii
Californian Paint Co., San Francisco, Cal., U.S.—Ready-mixed Paints, 191
Callaghan, Blanche, Sydney, N.S.W.—Public School Exhibit, 376
Callard & Bowser, London, Great Britain—Confectionery, 849
Callis, Charles—Services as Secretary N.Z. Commission, clix
Calthrop, Claude, London, Great Britain—Oil Painting, referred to in General Report on Fine Arts, 452; Award, 478
Calvert, Samuel, Melbourne, Victoria—Painting, 484
Calvert, Mrs. J. J., Marrickville, N.S.W.—Silk Embroidery, 520
Calvert, J. J., Sydney, N.S.W.—Services as Hon. Member of Committee, cxlviii
Calvi, Pietro, Milan, Italy—Marble Statue, 480
Cambier, L. & H., Ath-Hainaut, Belgium—Furniture, 212
Cambier, Nicholas J., Mortanwelz, Belgium—Bolts and Nuts, 674
Cambos, J., Paris, France—Bronzes, referred to in General Report on Fine Arts, 460
Camera di Commercio, Florence, Italy—Services, cxlvi
Cameron Brothers & Co., Sydney, N.S.W.—Tobaccos, 823, 824
Cameron, Roderick W., New York, U.S.—Services as Member of London Committee, cxlv; Representative of Sydney Commission in the United States, cxliii; Honorary Commissioner for Canada, cxliii
Cameron & Co., R. W., New York City, U.S.—Services, clxii
Cameron, Sarah, Hinton, N.S.W.—Public School Exhibit, 378
Cameron, Janet, Wickham, N.S.W.—Public School Exhibit, 384
Cameron & Elliott, London, Great Britain—Designs for Decorations, 495
Camm Bros., Birmingham, Great Britain—Stained Glass Windows, Painted Tiles, &c., 495
Campbell, R. J., Sydney, N.S.W.—Minerals and Fossils, 66
Campbell, John, London, Ontario, Canada—Sociable, 352
Campbell, David H., Cunningham Plains, N.S.W.—Barley, 1023; Seeds and Plants of Sheep Burnet, 1024
Campbell Wm. B., Blacktown, N.S.W.—Gourds and Fruits, 1024
Campbell, Priscilla, Sydney, N.S.W.—Public School Exhibit, 384
Campbell Miss M., Branxton, N.S.W.—Lace Work, 520
Campbell, Mrs. Anna F., Sydney, N.S.W.—Lace, &c., 520
Campbell, Walter Scott, Gladesville, near Sydney, N.S.W.—Services as Judge, cli; Judge, 1001, 1005, 1011, 1021; Exhibits, Flowers, 1013
Campbell, Mrs. W. S., Gladesville, near Sydney, N.S.W.—Bouquets, 1013, 1015, 1017; Apples, 1018; Fruit, 1024
Campbell, Dr. J. L., Kaipara, N.Z.—Timbers, 757; Award, 804
Campbelltown Public School, N.S.W.—Awards to Exhibits from, 373
Camperdown Public School, N.S.W.—Awards to Exhibits from, 373
Campo Brothers, Brussels, Belgium—Pianos, &c., 423
Canadian Educational Exhibits, 362
Canadian List of Diplomas and Medals, Complimentary, and for Services, cxliii
Canadian Lead Public School, N.S.W.—Award to Exhibits from, 373
Candelot, Prosper, Paris, France—Jewellery, 267
Candy, C. B., Christchurch, N.Z.—Cheese, 704
Cane, H., Melbourne, Victoria—Malt Vinegar, 842

Cann, Cavaliere T. C., Florence, Italy—Method for study of English, 371
Cannon, Manes, Waverley, near Sydney, N.S.W.—Dogs, 978; Butter, 1024
Canny & Moreton, Maryborough, Queensland—Sugar, 855, 856
Canton, Robert, London, Great Britain—Chromo-Lithographs, 495
Canton, Robert, London, Great Britain—Fancy Stationery, 300
Canterbury Marble Co., Christchurch, N.Z.—Marbles, &c., 111, 140
Cantrell & Cochrane, Dublin and Belfast—Lemonade, &c., 876
Capner, R., Brisbane, Queensland—Medals and Dies, 483
Capper & Sons, E. P., West Maitland, N.S.W.—Ploughs, 991
Carabain, J., Brussels, Belgium—Oil Painting, 473
Carboniferous Fossils of N.S.W., 59 *et seq.*
Carcaut, Gustave, Paris, France—Busks and Ribs for Stays, 267
Carew, Miss, Windsor, N.S.W.—Wool-work, 520
Carey, William, Mansfield, Victoria—Patent Horse-shoes, 343
Carey, John, Sandhurst, Victoria—Model of Bridge, 677
Carey, J. W., Brisbane, Queensland—Furniture, 227; Polished Timber, General Report on Arboriculture, 756; Award, 805
Carey, Thos., Sydney, N.S.W.—Dog, 978
Carfrae, John—Services as Member of London Committee, cxlv
Carlile, Sons & Co., James, Paisley, Great Britain—Sewing and Crochet Cottons, 246
Carlisle & Clegg, London, Great Britain—Wall-papers, 300
Carmichael, L., Brisbane, Queensland—Essential Oils, &c., 190
Carmichael, G. T. & J. B., Porphyry, Seaham, N.S.W.—Wines, 881
Carmichael, L., Brisbane, Queensland—Orange Bitters, 894
Carnarvon, Earl of—Services as Member of Royal Commission for Great Britain, cxlv
Carr & Sons, Melbourne, Victoria—Roller-blinds, 230
Carr & Co., Carlisle, Great Britain—Biscuits, 849
Carr & Hobson, New York City, U.S.—Churns, Seed-drills, &c., 994
Carriages, Vehicles, and Accessories—Group of Classes, 291 to 294; Exhibits generally referred to, 173; Awards, 352 to 358
Carroll, Wm., Windsor, N.S.W.—Public School Exhibit, 385
Carron, Emily, Guildford, N.S.W.—Public School Exhibit, 377
Carstens, P. G., Altona, Germany—Stained Glass, 492
Carter, Dinsmore & Co., New York City, U.S.—Inks and Gum, 313
Carter, Australia, Sydney, N.S.W.—Public School Exhibit, 376
Carter, Geo. Lord, Sydney, N.S.W.—Services as Judge, cli; Judge, 629
Carter, Joseph, Melbourne, Victoria—Imitation Timbers, 791; Award, 807
Carter Brothers, London, Great Britain—Seeds, &c., 816
Carter, Dunnett, & Beale, London, Great Britain—Models of Turnips, Beets, &c., 1006
Carter, J. B., New York, U.S.—Services as Judge, cli; Judge, 262, 629, 646
Carter, Thomas, Sydney, N.S.W.—Onions, 1024
Carvosso, D. B., ship "Hawkesbury," from London—Cattle, 941
Caselli, Henry R., Ballarat, Victoria—Architectural Design, 515
Casey, Hon. J. J., C.M.G.—Services as Executive Commissioner for Victoria, clxiii
Cashman, E., Newtown, N.S.W.—Public School Exhibit, 379
Cashman L., Newtown, N.S.W.—Public School Exhibit, 379
Caslon & Co., H. W., London, Great Britain—Type, 652
Cassiers, M. T., Antwerp, Belgium—Chicory, 846
Castelberg & Co., London, Great Britain—Watches; references to Exhibits in Report on Chronology, 402–417; Award, 420
Castle Iron Co., Nettlefolds, Birmingham, Great Britain—Manufactured Iron, 155; Lubricators, Gauges, &c., 659
Castle, J. D., Waverley, N.S.W.—Dogs, 978
Castlemaine Woollen Mill Co. (Limited), Castlemaine, Victoria—Woollen goods, 258
Castles, Wm., Pimpama, Queensland—Arrowroot, 856
Castner & Co., A., Berlin, Germany—Model for Fountain, 477; Bronze Castings, 492
Cathells, S., Sydney, N.S.W.—Public School Exhibit, 375
Catlett, W. H., Burwood, near Sydney—Special Medal, clxvi; Plants and Flowers, 1007, 1013, 1015, 1017
Cattell & Co., J. R., Sydney, N.S.W.—Dog, 978
Caughey, James, Mudgee, N.S.W.—Maize, 824
Caughey, A. & R., Melbourne, Victoria—Wines, 903
Caughey, Hugh, Mudgee, N.S.W.—Maize, 1023

Cauty, H. H., London, Great Britain—Picture referred to in General Report on Fine Arts, 452
Cavanough, Florence, Richmond, N.S.W.—Public School Exhibit, 381
Cavenagh, W., M.P.—Services as Member of South Australian Commission, clx; Exhibit, Precious Stones, 30
Cavill, Jessica, Balmain, N.S.W., Public School Exhibit, 372
Celler Schirmfabrik (Vormals Gebrüder Hugo), Celle, Hanover, Germany—Umbrellas, &c., 271
CEMENTS, Exhibits of—General Report on, with tests, 119
CERCLE COMMERCIEL ET INDUSTRIEL DE GAND, Belgium—Services, cxlii; Velvets and Linens, 235
CERCLE ROYALE ARTISTIQUE DE BRUXELLES, Belgium—Services, cxlii; Collection of Oil Paintings and other Works of Art, Award, 473
Ceylon Company (Limited), Ceylon—Teas, 811
CEYLON, List of DIPLOMAS and MEDALS, Complimentary and for Services, cxliii
CEYLON, GOVERNMENT OF—Precious Stones, 29; Historical Jewellery, 267
Chabal-Dussurgey, M., Beauvais, France—Design for Beauvais Tapestry—General report on the Fine Arts, 460
Chadborn & Coldwell Manufacturing Co., Hartford, Conn., U.S.—Lawn-mower, 994
Chaffey, Wm. A., Moonbi, N.S.W.—Cattle, 942
Chaix et Cie., Paris, France—Works on Printing Establishments, 368
Chalamel et Cie, Paris, France—Linen, Woollen, and Silk Goods, 238
Chalmel, Gustave, Paris—Spirit Varnishes, 179
CHAMBRE DE COMMERCE DE GAND, Belgium—Services, cxlii; Exhibits of Velvets and Linens, 235
CHAMBRE DE COMMERCE DE REIMS, France.—Services, cxliv; Woollen goods, 239
CHAMBRE DE COMMERCE DE VERVIERS, Belgium.—Services, cxlii; Cloths, &c., 235
CHAMBER OF COMMERCE, ADELAIDE, South Australia—Cotton, 921
CHAMBER OF COMMERCE, HUDDERSFIELD, Great Britain—Services, cxlvi
CHAMBER OF MANUFACTURES, Adelaide, South Australia—Linen from South Australian Flax, 256; Raw Silk, 262
Chambers & Co., James, London, Great Britain—Varnishes, Oils, &c., 183
Champeaux, O. De, Paris, France—Painting referred to in General Report on the Fine Arts, 460
Champollion, Eugène A., Paris, France—Etchings, 488
Champneys, Basil, London, Great Britain—Architectural Designs, 495
Chance, W. A., Unley, South Australia—Jams and Tinned Fruits, 857
Chance, Brothers, & Co., Birmingham, Great Britain—Sheet and Plate Glass, 201
Chapman, John Alwent, Dunedin, N.Z.—Quartz Specimens, 13
Chapman, Son & Co., London, Great Britain—Fancy Leather goods, 276
Chapman, John, Sydney, N.S.W.—Services as Judge, cli; Judge, 655
Chapman & Co., Sydney, N.S.W.—Counter Shafting, 669
Chapman, Michael, Sydney, N.S.W.—Services as Honorary Member of Committee, cxlviii
Chapman, W. J., Ulladulla, N.S.W.—Services, clvi
Chappée, Armand, Le Mans (Sarthe), France—Water and Gas Pipes, 332
Chaplin & Co., Alexander, London and Glasgow, Great Britain—References to Exhibits in General Report on Machinery, 550, 552; Awards for Engines, &c., 659
Chappell & Co., London, Great Britain—Pianos, 427
Chappell, John R., Dundee. New England, N.S.W.—Wool, 912
Chapard, Alfred, Chantilly, France—Veterinary Medicines, 1002
Charcoal Creek Public School, N.S.W.—Award to Exhibits from, 373
Chard, Miss E., Sydney, N.S.W.—Crayon Drawings, 504
Chard, W. H., Sydney, N.S.W.—Services as Judge, cli; Judge, 907
Chard & Co., W. H., Sydney, N.S.W.—Samples of Wool, clviii, 913
Chardwar Estate, Assam (Indian Court)—Teas, 819
Charteris, Diana E., Goulburn, N.S.W.—Crayon Drawing, 520
Charteris, Fredk. M., Goulburn, N.S.W.—Services, clvi
Charisius, J., Königsburg, East Prussia, Germany—Hoisery, 271
Charlesworth, Jonathan, Marong, Victoria—Wheat, 842
Charmay et Cie., France—Liqueurs, 870
Charter Oak Lawn-mower Co., Hartford, Conn., U.S.—Lawn-mower, 994
Chatwood, Samuel, London, Great Britain—Iron Safes, 334
Chaumel, Aiguillon, Sur Lot, France.—Liqueurs, 870
Chave, Frederick, Parramatta District, N.S.W.—Oranges, 1010

Cheavin, George, Boston, Lincolnshire, Great Britain—Services, cxlvi ; award ; Filter, 218
Chemical Manufactures—Group of Classes, 200–205 ; Exhibits referred to, 167 ; awards, 175, *et seq.*
Chemische Fabrik Auf Actien (vormals E. Schering), Berlin, Germany.—Chemicals, 180
Cheney, Henry, Little Falls, New York, U.S.—Steel Hammers, &c., 341
Cheney, Martha, Fairy Meadows, N.S.W.—Public School Exhibit, 375
Chenu, P., Paris, France—Confectionery, 848
Chevillet, Jules, Paris, France—Artist's Water Colours, 179
Cherrill, N. K., Christchurch, N.Z.—Photographs, 510
Cherry, Edward, Gisborne, Victoria—Butter Churns, 997
Chesterman & Co., Jas., Sheffield, Great Britain—Tapes, Chains, &c., 394
Chevalier, N.—Services as Member of London Committee, cxlv ; Paintings by, lent to the Sydney Exhibition by Her Majesty Queen Victoria, and H.R.H. The Prince of Wales—referred to in General Report on Fine Arts, 448
Chevalier, M'lle., Paris, France—Paintings on Porcelain, 475
Chickering & Sons, Boston, Mass., U.S.—Pianos, 429
Child, Samuel, Christchurch, N.Z.—Picture-frame, 226
Child, Wm. Shelley, Huddersfield, Great Britain—Seal-skins and Astrakhans, 246
Childers, Hugh E., M.P.—Services as Member of Royal Commission for Great Britain, cxlv
China, Capt., Selangore, Straits Settlements—Tin Ingots, 19, 159
Chininfabrik-Braunschweig, Brunswick, Germany—Quinine, &c., 323
Chisholm, Maud, Penrith, N.S.W.—Public School Exhibit, 380
Chouillou, Edouard, Rouen, France—Phosphate Manures, 1000
Chronometric Apparatus, Chronometers, Astronomical Clocks, Watches, Chronographs, &c.—Class 310, 401 to 421
Chromo-Pyrographisches Institut, Munich, Germany—Stained Glass, 492
Christ Church Church of England Certified Denominational School, Sydney, N.S.W.—Award to Exhibits from, 373
Christy & Co., J. E. & W., London, Great Britain—Hats, &c., 276
Christian, W. M., Hinton, N.S.W.—Brandy and Wines, 881
Christian, M. S., Hinton, N.S.W.—Wines, 881
Christian, J. B., Hinton, N.S.W.—Cattle, 942
Chute, R., Brisbane, Queensland—Harness, 357
Churchill, Clara, Paddington, N.S.W.—Public School Exhibit, 380
Churchwood, A. G., Sydney, N.S.W.—Sausage-skins, 711
Chubb, C. F., Ipswich, Queensland—Malmesbury Wine, 894
Cigars—Report on Agricultural Products, 809
Ciofi, Leopoldo, Florence, Italy—Linseed Oil, 850
Cirio, Francesco, Turin and Naples, Italy—Preserved Fruits and Vegetables, 850
Clark, & Co., Robert Ingham, London, Great Britain—Varnishes, 183
Clark & Co., & Clark Thread Co., Paisley, Great Britain—Sewing Cottons, &c., 246
Clark, Daniel, Burwood, N.S.W.—Public School Exhibit, 373
Clark, Josephine, Sydney, N.S.W.—Public School Exhibit, 375
Clark, Florence, Sydney, N.S.W.—Public School Exhibit, 383
Clark, Hugh, Armidale, N.S.W.—Horse, 932
Clark Brothers, Gullendaddy, N.S.W.—Cattle, 942
Clarke, Dodd, S., Cairns, Queensland—Tin Ore, 19
Clarke, A. S., Adelaide, South Australia—Iron Ore, 28
Clarke, D., Warwick, Queensland—Perfumery, &c., 190
Clarke & Co., T. & C., Wolverhampton, Great Britain—Cooking Utensils, Wrought Iron Ware, and Sanitary Ware, 211, 334
Clarke & Sons, Enoch, London, Great Britain—Floor-cloth, 246
Clarke, & Son, J. C., Birmingham, Great Britian—Purses, Pocket-books, 277
Clarke, T. Chatfield, F.R.I.B.A., London, Great Britain—Architectural Designs, 495
Clarke, E.F.C., London, Great Britain—Architectural Designs, 495
Clarke, J. A., Brisbane, Queensland—Etchings, 511
Clarke, H., Paddington, near Sydney, N.S.W.—Poultry, 967
Clarke, Wm., London, Great Britain—Horse Clipping, &c., Machine, 985
Clarke, Hyde, D. C. L.—Services as Member of London Committee, cxlv
Clarke, Hon. W. J., M.L.C.—Services as President Victorian Commission, clxiii
Clarke's, Rev. W. B. (The late)—Collection of Fossils, illustrating the principal Sedimentary formations of N.S.W., 56
Clarence Series of N.S.W. Fossils—Specimens, 65
Claudin, Paris, France—Etchings, 488

Clarson, Mrs. Caroline, Sydney, N.S.W.—Fire Screens, 521
Clarence Pastoral and Agricultural Society, Grafton, N.S.W.—Timbers; General Report on Arboriculture, 717; Award, 803; Maize, 824
Classification of Exhibits, Synopsis of, clxvii; Classification clxix, *et seq.*
Clayton, & Shuttleworth, Lincoln, Great Britain—Reference to Exhibits in General Report on Machinery, 553, 554, 557, 621; Award, Engine, &c., 660
Cleeve, I. K., Blacktown, N.S.W.—Horse, 932
Clementi, Major—Services as Executive Commissioner for India, cxlvi; Executive Commissioner for Straits Settlements, clxi
Clements, Adelaide, Sale, Victoria—Lace, 532
Clermont, et Cie, De., Paris, France—Hats, &c., 267
Cleveland-street Public School, Sydney, N.S.W.—Awards to Exhibits from, 374
Clifford & Morris, Dunedin, N.Z.—Photographs from, 510
Clift Brothers, Breeza, N.S.W.—Sheep, 956
Clive & Hamilton, Collaroy, Merriwa, N.S.W.—Wools, 913
Clodion Sevres Vases presented to the Colony by the French Government; General Report on the Fine Arts, 461
Closing Ceremony, Sydney International Exhibition—*Vide* Executive Commissioner's Report, xcviii
Clothing, Jewellery, & Ornaments, &c.—Group of Classes, 250 and 257; Exhibits referred to, 171; Awards, 264 to 290
Clwydd Colliery, Vale of, N.S.W., 102
Coal, Great Britain, 96; New Caledonia, 97; New South Wales, 49, 97, 102; New Zealand, 105, *et seq.*; Tasmania, 81; Victoria, 88
Coal-Cliff Coal Mining Co., Coal-Cliff, N.S.W., 98, 136
Coal-Pit Heath Coal Mining Co. (Limited), Greymouth, N.Z.—Coal, 106, 141
Coats, J. & P., Paisley, Great Britain—Sewing Cottons, 246
Coates, J. P., Brisbane, Queensland—Sarsaparilla and Quinine Wine, &c., 894
Coates C. J.—Services as Member of South Australian Commission, clx
Cobar Copper Mine (Great), N.S.W.—General Report, 7, 21, 137
Cobb & Co., Sydney, N.S.W.—Travelling Coach, 355
Cochrane & Brothers, A. L., Galashiels, Great Britain—Scotch Tweeds, 246
Cochrane, Geo., Edinburgh, Great Britain—Lithographic Printing, 300
Cochrane, G., North Willoughby, N.S.W.—Fire-bricks, 208
Cochran, J., Sydney, N.S.W.—Astronomical Clock, 420
Cockerill, La Société, Seraing, near Liège, Belgium—(*Vide* Société Cockerill)
Cock, James, Sydney, N.S.W.—Services as Judge, cli; Judge, 678, 808, 854, 981, 999
Coe, Henry E., London, Great Britain—Architectural Designs, 495
Coffee & Coffee Beans, 810, *et seq.*
Cogen, Felix, Brussels Belgium—Paintings referred to in General Report on the Fine Arts, 464
Cohen, Harris, & Co., Sydney, N.S.W.—Cricketing Materials, 285
Cohen & Levy, Tamworth, N.S.W.—Wheat, 824
Cohen, Miss A. F., Sydney, N.S.W.—Plaque, 482
Cohen, Fannie, Sydney, N.S.W.—Tapestry, 521
Cohu, A. B., New York City, U.S.—Churns, Ploughs, &c., 994
Colenso, W., F.L.S., Napier, N.Z.—Early New Zealand and Maoria Publications, 387
Coleman, W. T., San Francisco, California, U.S.—Barley, 840
Coleman & Morton, Chelmsford, Great Britain—Agricultural Machinery, 985
Cole & Son, W., Tomago, N.S.W—Arrowroot, 851
Colin, Joseph, Nantes, (Loire-Inférieure), France—Tinned Provisions, 701; Preserved Mushrooms, 813; Preserved Fruits and Vegetables, 848
Collingwood Coal Mining Co., N.Z.—Coal, 106
Collectivité Des Zincs d'Art, Paris, France—French Bronzes, 488
Colman & Glendenning, Norwich, Great Britain—School Furniture, 218
Collender, H. W., New York City, U.S.—Billiard Tables, &c., 229
Collie, Wm., Napier, N.Z.—Photographs, 510
Collins, Son & Co., Wm., Glasgow, Great Britain—Bookbinding, Printing, Pens, Papers, &c., 300, 301; School Books, &c., 370; Engravings, 495
Collins & Co., Hartford, Conn., U.S.—Axes, &c., 341
Collins & Roach, Sydney, N.S.W.—Raspberry Vinegar, 824 Cordials, 882
Collingridge, A., Sydney, N.S.W.—Oil Painting, 482; Pen and Ink Sketches, Charcoal Drawings, and Engravings, 505
Collingridge, G., Ryde, N.S.W.—Engravings, 505

Collings, H., Wollongong, N.S.W.—Pencil Drawings, 521
Collin, Paul, Paris, France—Paintings referred to in General Report on the Fine Arts, 460
Collin, L. J. R., Paris, France—Oil Painting, 475
Collot, Paris, France—Scales, 390
Colonial Architect, N.S.W. (James Barnet), for services as Architect, cl ; as Judge, cl ; For references to Groups under which judged, &c. (See "Barnet.")
Colonial Printing & Bookbinding—General Remarks of Judges on, 292, *et seq.*
Colonial Wines—Report on Viniculture, 864
Colonial Museum of New Zealand, Wellington, N.Z.—Maori Dresses, &c., 287 ; Ethnological Collection, 387 ; Geological and Natural History Collection, 387; Timbers—General Report on Arboriculture 757, *et seq.*, and 784 ; Awards, 804.
Colonial Sugar Refining Co., Sydney, N.S.W.—Special Medal, clxvi ; Sugars, 851 ; Rum, 883
Colton J. W.—Services as Member of South Australian Commission, clx
Colton & Co., J., Adelaide, South Australia—Harness and Saddlery, 357
Combes, Edward, C.M.G., M.P., Sydney, N.S.W.—Services as Member of S. I. E. Commission cxlvii ; Member of London Committee cxlv ; Report of, on School Systems, 361 ; General Report on the Fine Arts at S. I. E. as Chairman Advisory Committee on Art, 439, *et seq.* ; Award to Fine Art Exhibit, 582
Commission of Sydney International Exhibition—List of Members of, cxxxv
Commissioners for South Australia, Adelaide, South Australia—Auriferous Quartz and Copper Ores, 15, Marble, 112
Commissioners for Launceston, Tasmania—Alluvial Gold (Tasmanian), 17
Commissioners in New South Wales for Paris Exposition Universelle, 1878.—Gems and Precious Stones, 30, 136
Commissioners for Tasmania—Mineral Exhibit, 80
Commissioners for Northern Tasmania—Timber, 806
Commissioners for the United States of America, cxxxviii
Commissioners of Foreign Countries and British Colonies resident in Sydney during Exhibition, cxl
Committee xiii. on Education and Science—Work of, 361 ;
Committees of the Commission Sydney International Exhibition, cxxxv, *et seq.*
Compagnie des Eaux Minerales de Vichy, Cusset près Vichy, France—Mineral Waters, 133
Comet River Coal Mine, Rockhampton, Queensland—Coal, General Report, 108
Comerre, Léon François, Rome, Italy—(Shown in French Court) ; Oil Painting referred to in General Report on Fine Arts, 458 ; Award, 475
Comein, Polydore, Brussels, Belgium—Terra-cotta Statuettes, 473
Combet, Joseph, Paris, France—Sugar-boiling Machinery ; General report on Machinery 612 ; Award, 679 ; Confectionery, 848
Commissioners, Parramatta Road Trust—Timbers, 803
Compagnie Laferme, Dresden, Germany—Cigarettes, 814
Compagnia Vinicola Siciliana, Palermo, Sicily (Italian Court—Wines, 878
Coney & Co., Birmingham, Great Britain—Corkscrews, Can-openers, &c., 334
Conigrave, J. F.—Services as Member of South Australian Commission, clx
Conlon Bernard, Freeman's Reach, N.S.W.—Maize, 824, 1024
Connell, James, Yass, N.S.W.—Wheat, Barley, Rye, and Oats, 824
Connellan, M. J., Sydney, N.S.W.—Dogs, 978
Connelly, Thos. J., Sandhurst, Victoria—Steamboat Camp, 230
Conolly, Wm., Goulburn, N,S.W.—Flour, 851
Conza, Paris, France—Camp-kitchen, 214
Cook, Samuel, *The Sydney Morning Herald* and *Echo*—Literary Services, clix
Cook, E., English and Australian Co., South Australia—Copper Ore, 23
Cook & Pulver, New York City, U.S.—Lubricating Oil, &c., 191
Cook, William, Wellington, N.Z.—Flax Mats, 254
Cook & Sons, B., Winstead, Conn., U.S.—Axes, 341
Cook, James, Auckland, N,Z.—Plated Harness Furniture, 357
Cook, Lucy, Sydney, N.S.W.—Public School Exhibit, 376
Cook, Sarah, Sydney, N.S.W.—Public School Exhibit, 378
Cook, Mary E., Marrickville, N.S.W.—Necklet, Braclets, &c., made from Seeds, 521
Cook, Henry, Sydney, N.S.W.—Transparency, 521
Cook, J. W., & V., Clifton, Oregon, U.S.—Tinned Salmon, 706
Cook, Thomas, Scone, N.S.W.—Horses, 932 ; Cattle, 942

Cooke, & Co., Wm. (Limited), Sheffield, Great Britain—Manufactured Iron, 155
Cooke Brothers, Birmingham, Great Britain—Shawl Pins, 277 ; Brass Hardware, 334
Cooke, E. W., R.A., F.R.S., Groombridge, Sussex, Great Britain—Oil Painting, 478
Cookbundoon Flag Company, Sydney, N.S.W.—Flagging, &c., 118, 136
Cools, Eliaert, Alost, Belgium—Threads, 235
Cooms, H., Darlington, near Sydney, N.S.W.—Self-supporting Staircase, 224
Coombe, Thos. Loaring, Sydney, N.S.W.—Services as Judge, cli; Judge, 808
Coombes & Son, Dunedin, N.Z.—Boots and Shoes, 287 ; Saddlery, 357
Co-operative Colliery, Plattsburg, N.S.W.—Coal, 98, 136 ; Coke, 104
Cooper & Co., London, Great Britain—Inks, 183
Cooper & Co., London, Great Britain—Quill Pens & Vellum, 301
Cooper, Box, & Co., London, Great Britain—Wearing Apparel, Hats, &c., 277
Cooper, Pope A., Brisbane, Queensland—Services as Judge, cli ; Judge, 862
Cooper, Theophilus, Anvil Creek, N.S.W.—Wine, 882
Cooper, Sir Daniel, Bart., K.C.M.G.—Services as Member of Royal Commission for Great Britain, cxlv ; Vice-President, London Commission, cxlv ; Chairman of London Committee, cxlv
Cooper, T. Sidney, R.A., London, Great Britain—Oil Painting ; General Report on Fine Arts, 453 ; Award, 478
Cooyal Public School, N.S.W.—Awards to Exhibits from, 374
Coote, Audley, M.P.—Services as Member of Tasmanian Commission, clxii
Copeland & Sons, W. T., Stoke-upon-Trent, Staffordshire—Parian and Porcelain Ware, 201 ; Paintings on Porcelain, 495
Copeland, H., Newtown, N.S.W.—Quartz Crystals, 37
Cope, Benjamin, Walsall, Great Britain—Purses, 277 ; Saddlers' Hardware, 334
Cope, C. W., R.A., London, Great Britain—(Exhibitor of Works of Art), cxlvi ; Referred to in General Report on Fine Arts, 450
Cope, H. B., Sydney, N.S.W.—Loan of Ethnological Exhibits, clvii
Copland, R., Sydney, N.S.W.—Dogs, 978
Copper Ores of Australian Colonies—General Report, 7, 20, *et seq.*, of New South Wales, 45
Coraki Public School, N.S.W.—Awards to Exhibits from, 374
Corbett, Thos., London, Great Britain—Mantelshelf, 219
Corbett, Victoria, Peakhurst, N.S.W.—Public School Exhibits, 380
Corbett, Thos., London, Great Britain—Lathes, Riveting and other Machinery, 634
Corbett, John, M.P., Bromsgrove, Worcestershire, Great Britain—Salt, 183, 849
Corbett & Peele, Shrewsbury, Great Britain—Agricultural Machinery and Implements, 985
Corbeel, Jules, Paris, France—Ivory Piano Keys, 424
Corbière et fils, et Blondet, Paris, France—Furniture Stuffs and Carpets, 238
Cornish & Co., J. C., Marrickville, N.S.W.—Bent Glass, 209
Cornish Tin Lodes, Great Britain, Dr. C. Le Neve Foster's Mineral collection illustrating, 31
Corsi, Pietro, Florence, Italy—Mosaic Tables, &c., 500
Corti, J., Sydney, N.S.W.—Mirror, 224
Corten, Charles G., Rockhampton, Queensland—Leaf Tobacco, 835
Cortland Waggon Co., New York City, U.S.—Waggons and Waggonettes, 358
Cork Distillery Co., Cork, Ireland—Whiskey, 876
Corry & Co., Wm., Belfast, Ireland—Sarsaparilla, &c., 876
Cotton (Class 641), General Report on Agriculture, 697
Coulter, David, Sydney, N.S.W.—Sunlights, 224
Courvoisier et Cie, Paris, France—Gloves, 267
Council of Education N.S.W.—Reference to its School Exhibits, 363; Awards, Illustrations of grades of N.S.W. Public Schools, 372 ; Awards to Public Schools Exhibits, 372, *et seq.*
Country Districts of N.S.W., Representation—Services of Local Secretaries, &c.
Courtry, Charles, L., Paris, France—Engravings, 489
Couillet Iron Works, (Belgium), *Vide* La Société Anonyme de Couillet
Couldery, W. H., Beenleigh, Queensland—Rum, 894
Cove & West, Northampton, Great Britain—Boots and Shoes, 277
Coventry Machinists Co. (Limited), Coventry, Great Britain—Bicycles, 352
Cowan & Co., Edinburgh, Great Britain—Papers and Account Books, 301 ; Printing Machine, 652 ; Pamphlet on Indian Teas, 1002 ; Bouquet Papers, 1007
Cowan, W. & B., London, Great Britain—Gas Meters, 394

Cowan & Co., James, Adelaide, South Australia—Wheat, 837 ; Flour, 857
Cowperthwaite & Co., Philadelphia, U.S.—Printing, 313 ; School Books, &c., 388
Coward & Co., London, Great Britain—Seidlitz Powders, &c., 324
Cowdery, E. H., Burwood, N.S.W.—Public School Exhibits, 373
Cowley, Miss Lydia, Gresford, N.S.W.—Pencil Drawings, 505
Cowley, Cornelius, Warwick, Queensland—Wheat, 835
Cowley, Lewis J., Herbert River, Queensland—Sugar, 856
Cowley, Alfred S., Herbert River, Queensland—Sugar, 856
Cox, J. C., M.D., Sydney, N.S.W.—Loan of Ethnological Exhibits, clvii ; of Tapestry clviii ; Dresses from Caroline Islands, 284
Cox, Hon. G. H., M.L.C., Mudgee, N.S.W.—Services as Member of Sydney International Exhibition Commission, cxlvii; For Services as Judge, cli; Judge, 330, 939; Attending Member of Commission at Judging, 929, 951 ; Exhibits, Maize, 824 ; Horses, 932; Cattle, 942
Cox, Masters A. E. & A. B., Sydney, N.S.W.—Australian Birds' Eggs, 521
Cox, Christopher C., M.D.—Services as Chief Executive Officer, U.S. Commission, clxii
Coxen, Mrs. Charles, Brisbane, Queensland—Stuffed Birds, 386
Crabb, R. S., Adelaide, South Australia—Malachite, 23, 143
Cracknell, E. C., Supt. N.S.W. Telegraphs.—Services as Hon. Member of Committee, cxlviii ; Services as Judge ; Judge, cli, 363, 389 ; Awards to Exhibits ; Torpedo apparatus, 396 ; Electrical instruments, 398
Crafter, Henry P., Millicent, South Australia—Wheat, 837
Craig, Eric, Auckland, New Zealand—Fern Albums, 1008
Craig, Mrs., Sydney, N.S.W.—Loan of Ethnological exhibits, clvii
Craig, Mary, Hobart Town, Tasmania—Lace and Cone work, 530
Craig, Mary, Wollongong, N.S.W.—Public School Exhibits, 385
Craig, William, Sydney, N.S.W.—Services as Judge, cli; Judge, 315, 330
Crane, Fredk., Sydney, N.S.W.—Public School Exhibit, 374
Crane, Kate, Sydney, N.S.W.—Public School Exhibit, 374
Crane, T., Sydney, N.S.W.—Services as Judge, cli ; Judge, 963
Crane, Wm., jun., Sydney, N.S.W.—Services, clvi
Crane & Brigham, San Francisco, California, U.S.—Flavouring Extracts, &c., 190
Cranes, Crane-Engines and Elevators—Described in General Report on the Machinery Department, 564, *et seq.*
Crate, J., Brisbane, Queensland—Sponges, 713
Craven, Dunnill, & Co. (Limited), Ironbridge, Shropshire, Great Britain—Encaustic and other Tiles, 201; Painting on Tiles, 495
Craven, Thos. W., Sydney, N.S.W.—Services, clviii
Crawford, A.R., Walcha, N.S.W.—Timbers ; General Report on Arboriculture, 719 ; Award, 803
Crawford, Adelaide, South Australia—Registering Gauge, 654
Crawford & Co., London, Ontario, Canada—Agricultural Machinery, 982
Crawford, W. F., Gisborne, New Zealand—Bottled Stout, 892
Crease, E. H., Wellington, N.Z.—Spices, 829
Creed, Dr. Scone, N.S.W.—Loan Exhibit, clviii
Creswell, C. F., Sydney, N.S.W.—Seeds, 824
Creutznach, Edward (Nachfolger), Chemnitz, Saxony, Germany—Hosiery, 271
Crewdson, Crosses, & Co. (Limited), Manchester, Great Britain—Calicoes, &c., 246
Cribb & Foote, Ipswich, Queensland—Cotton, 919
Cridland & Rose, Bristol, Great Britain—Boots and Shoes, 277
Crimp, J., Adelaide, South Australia—Buggy, 357
Cripps, Esther, Sydney, N.S.W.—Public School Exhibit, 376
Cripps, J. F., Sydney, N.S.W.—Confectionery, 852 ; Dog, 978
Crisp, George—Services as Member of Tasmanian Commission, clxii
Cristalleries Du Val, St. Lambert, Belgium—Glassware, 196.
Cristofle et Cie, Paris, France—Special Medal, clxv ; Nickel, 153 ; Nickel-ware, 214 ; Cloisonnés and Inlaid work ; Artistic Castings, and Engraving on Metal, 489
Critchley, R., Gympie, Queensland.—Antimony Ore, 17, 142
Crompton, J.—Services as Member of South Australia Commission, clx
Cron, Johann, Neustadt a/H., Germany—Wines, Liqueurs, &c., 873
Crook, Hon. Adam, Toronto, Ontario, Canada, 362
Crook, R. W., Sydney, N.S.W.—Contra-bass, 428
Crosbie & Co., Birmingham, Great Britain—Bedsteads, 219
Crosland & Sons, B., Huddersfield, Great Britain—Woollen goods, 246

Crossbee & Sons, Birmingham, Great Britain—Harness-fittings, 334
Crosse & Blackwell, London, Great Britain—Oilmen's Stores, 702 ; Sauces, Pickles, and Preserves, 817
Crossley Brothers, Manchester, Great Britain—Gas Engine, 660
Crossley & Sons, John (Limited), Halifax, Great Britain—Special Medal, clxv ; Carpets, &c., 246
Crochet Work in Ladies' Court, 517
Crow, Mary, Sydney, N.S.W.—Public School Exhibit, 381
Crow, Misses, Hobart Town, Tasmania—Lace and Cone-work, 530
Crowden & Garrod, London, Great Britain—Brushware, 347
Crowley & Co., John, Sheffield, Great Britain—Iron Castings, 634 ; Chaff-cutters and Lawn-mowers, 985
Crown Perfumery Co., London, Great Britain—Perfumery, 183
Crownshaw, Chapman, & Co., Sheffield, Great Britain—Saws, &c., 634
Crown-street Public School, Sydney, N.S.W.—Awards to Exhibits from, 374
Crozier, Wm., Moorna, Lower Murray, N.S.W.—Wool, 913
Crozier, Hon. John M.L.C.—Services as Member of S.A. Commission, clx ; exhibits gypsum, 125
Cruickshank, Alex., Paddington, N.S.W.—Public School Exhibit, 380
Crum & Co., W., Manchester, Great Britain—Printed Goods, 246.
Crump, J., Sydney, N.S.W.—Brass-castings, 338
Cuisin, Paris, France—Fancy Leather goods, 267
Cullen, Ellen, Sydney, N.S.W.—Public School Exhibit, 382
Cumberland Fruit Preserving Co., Marrickville, N.S.W.—Pickles, 825
Cuming, Smith, & Co., Melbourne, Victoria—Chemicals, 192
Cummins, Lizzie, Sydney, N.S.W.—Public School Exhibit, 384
Cumming, Thos. F., Darlington, Victoria—Wool, 926
Cumming, Alex., Services as Chief Clerk to Commissioners Sydney International Exhibition, cxlix
Cummings & Co., John, Boston, Massachusets, U.S.—Leathers, 714
Cunningham, A. J., Queanbeyan, N.S.W.—Sheep, 957
Cunningham & Co., P., Christchurch, N.Z.—Wheat, Oats, Barley, &c., 829, 830.
Curdts, E. H. Otto, Solingen, Rhenish Prussia, Germany—Cutlery, 333
Curran, J. J., Sydney, N.S.W.—Services as Judge, cli ; Judge, 174
Curran, J. P., Boorook, N.S.W.—Silver Ore, 11
Curranee & Co., Bombay, India—Inlaid Work-Box, 500
Currie, John L., Larra, Derrinalum, Victoria—Wool, 926
Curtis, Geo. S., Sydney, N.S.W.—Services as Judge, cli ; Judge, 700
Curtis, John, Melbourne, Victoria—Portmanteaus, 290
Curtis, James, Ballarat, Victoria—Job Printing, 314
Curry, Rebecca, Parramatta, N.S.W.—Public School Exhibit, 380
Curzon, Charles J., Sydney, N.S.W.—Oranges, 1010
Curzon Estate, Nilagiri Hills, India—Teas, 818
Cushing, Thos., London, Great Britain—Levelling Instrument, 394
Cutten, Walter C., Riddel's Creek, Victoria—Polished Spherosiderite, 31, 145
Cuvelier et Fils, J. B., Brussels, Belgium—Curaçoa, &c., 868
Czeiger, S., Vienna, Austria—Chromo-lithographs, 486

D

Dadd, E., Sydney, N.S.W.—Horse-shoes, 338
Dadley, Mrs. A., Sydney, N.S.W.—Needlework, 521
Dagnall, C. H. B., Sydney, N.S.W.—Public School Exhibit, 383
Daintree, Mrs. R., London, Great Britain—Photographic Views (shown in Queensland Court), 511
Dalehall Brick & Tile Co., Burslem, Staffordshire, Great Britain—Bricks and Tiles, 201
Dalton, Mrs. M., Sydney, N.S.W.—"Flower" Pictures, 521
Dalton Bros., Orange, N.S.W.—Wheat, 825
Daly Copper Mine, South Australia—Copper Ore, General Mineralogical Report, 74
Damon, Namur et Cie., Paris, France—Furniture, 215
Damon, Robt., Weymouth, Great Britain—Geological Collection, &c., 370
Damon, —Services as Member of the Committee at Paris, cxliv
Danelli, S., Melbourne, Victoria—Macaroni, 860
Dangar Brothers, Uralla, N.S.W.—Wool, 913, 914

Dangar, A. A., Baroona, Singleton, N.S.W.—Services as Judge, cli ; Judge, 952 ; Exhibits—Horse, 932 ; Cattle, 942, 943
Dangar, Gedye, & Co., Sydney, N.S.W.—Sheep, 956
Dangar, W. J., Neotsfield, Singleton, N.S.W.—Services as Judge, cli ; Judge, 929 ; Exhibits—Horse, 932 ; Cattle, 943 ; Sheep, 956 ; Grasses and Fodder Plants, 1024
Daniel, W., Dipton, Southland, N.Z.—Building Stone, 114–141
Daniell, S. A., Birmingham, Great Britain—Copying-presses, 301 ; Stocks, Dies, &c., 634.
Danks, John, Melbourne, Victoria—Pumps and Engineers' Fittings, 671
Dannhauser Brüder, Vienna, Austria—Underclothing, 264
D'Apice, Le Chevalier, Charles, Sydney, N.S.W.—Services as Judge, cli ; Judge 422 ; Exhibit—Arithmometer shown in French Court, 390
Darcy, J., Bega, N.S.W.—Hams and Bacon, 703 ; Maize, 825
Dargent, A., Collingwood, Victoria—Wines, 903
Darlinghurst Public School, Sydney, N.S.W.—Awards to Exhibits from, 375
Darlington Public School, near Sydney, N.S.W.—Awards to Exhibits from, 375
Darvall, Sir John B., K.C.M.G.—Services as Member of the London Commission, cxlv
Dark & Stalker, Brisbane, Queensland—Ginger-beer, 895
Darviot, Pommard, France—Liqueurs, 870
Darke, Ida, Sydney, N.S.W.—Public School Exhibit, 375
D'Arsonville, Henri, Paris, France—Glass Instruments for Scientific Studies, 390
Darwen Paper Staining Co., Darwen, Lancashire, Great Britain—Paper-hangings, 301
Dasanayake, H. L., Ceylon, Plumbago—General Mineralogical Report, 127, 132 ; Grain, 811
Dassonville de St. Hubert, Namur, Belgium—Mill-stones, General Report on Machinery, 606 ; Award, 679
Daughaday & Co., J. W., Philadelphia, U.S.—Printing-press 654
Dauphinot, Paris, France—Services as Member of Paris Committee, cxliv
Davenport & Alcock, Sydney, N.S.W.—Boots and Shoes, 284 ; Leather, 712
Davenport, G. H.—Services as Member of Queensland Commission, clx
Davenport, Samuel, Beaumont, South Australia—Services as Executive Commissioner for South Australia, clx ; Timbers, General Report on Arboriculture, 760 ; award, 806 ; Olive Oil, 857 ; Wines, 896
Daveluy D'Elhougne, Bruges, Belgium—Playing-cards, 295
Daveluy, V., Bruges, Belgium—Photographs, 487
Davey, Paxman, & Co.—Exhibits referred to in General Report on Machinery, 554, 558, 621 ; Award, Portable Engine, 660
Davy & Sands, Pyrmont, near Sydney, N.S.W.—Coining-press, 639
David et Frère, Paris, France—Imitation Diamonds, 268
Daverio, Gustav, Zürich, Switzerland—Roller Flour-mill, General Report on Machinery, 604 ; Award, 682
Daverne, Gustave, Montrouge, France—Liqueurs, 870
Davies, John, Melbourne, Victoria—Wines, 903
Davies, Florence, Sydney, N.S.W.—Public School Exhibit, 374
Davies, Clarence, Grafton, N.S.W.—Public School Exhibit, 377
Davies, Wm. E., Parramatta, N.S.W.—Public School Exhibit, 380
Davies, John, C.M.G., M.P., Sydney, N.S.W.—Chairman of the Machinery Committee and Commissioner in charge of Machinery Department, cxx ; Services as Member of Sydney International Exhibition Commission, cxlvii ; as Judge, cli
Davies, George, Windsor, N.S.W.—Services, clvi ; Exhibit—Pumpkins, 1024
Davies & Co., Arthur E.. Lochinvar, N.S.W.—Wines, 882
Davies, Robt., Melbourne, Victoria—Fire-clay, 127
Davies Brothers & Co., Wolverhampton, Great Britain—Galvanised Iron, 155
Davies, M.P., Wm., Goulburn, N.S.W.—Services as Member of Sydney International Exhibition Commission, cxlvii ; Exhibit—Baking Powder, 189
Davis Sewing Machine Co., Watertown, N.Y., U.S.—Sewing-machines, 649
Davis, Vincent, Sydney, N.S.W.—Sheep-shearing, 956
Davis, Bertha, Wollongong, N.S.W.—Public School Exhibit, 385
Davis, Clara, Wollongong, N.S.W.—Public School Exhibit, 385
Davis & Primrose, Leith, Great Britain—Steam-hammers, 634
Davis, Wm., Goulburn, N.S.W.—Services as Judge, cli ; 929
Davidson, Geo., Ballarat East, Victoria—Mats, 258
Davidson, J., Toowoomba, Queensland—Cabbage-tree Hats, 287
Dawson, Mabel Constance, Coraki, N.S.W.—Public School Exhibit, 374
Dawson, Wm. B., Paddington, near Sydney, N.S.W.—Horses, 933
Dawson, Thomas—Services as Superintendent of Garden Palace, cxlix

Dawson, Miss, Clarence Plains, Tasmania—Leather-work Picture-frames, 530
Dawans et Orban, Liege, Belgium—Wire and Nails, 331
Day, Fredk., Sydney, N.S.W.—Public School Exhibit, 373
Dean, J. S., Sydney, N.S.W.—Canaries, 967
Dean & Son, Wm., Derby, Great Britain—Gaiters, 277
Dean, Annie, Armidale, N.S.W.—Public School Exhibit, 372
Deaf and Dumb and the Blind, Institution for the, Sydney, N.S.W.—Fancy Work, 386
Deas-Thomson, Miss Julia E., Sydney, N.S.W.—Dog (Toy Terrier), 978
Debenham, Edwin, Bournemouth, Great Britain.—Photographs, 495
Declercq, Albert, Antwerp, Belgium—Liqueurs, 868
Deepest Gold-mine in the World, Pleasant Creek, Victoria—Described, 16
Deer Brothers, Frogmore Copper Mine, N.S.W.—Copper Ores, 20, 136
Deery, James, Sydney, N.S.W.—Horse-shoes, 338
Deesz, Julius, St. Johann, Saarbrücken, Germany—Pianos, 425
Deering, J. W., Homebush, N.S.W.—Water-colour Drawings, 482
Deere & Co., J., Moline, Ill., U.S.—Ploughs, 995
Defaux, Alexandre, Paris, France—Works of Art, referred to in General Report on the Fine Arts, 459, 460 ; Award, 475
Defraine, W., Brisbane, Queensland—Photo View of Brisbane, 511
Degrauw, Aymar, & Co., New York City, U.S.—Oars, 687
Degraves, C. & J., Cascades, Tasmania—Malt, 838 ; Ales, 900
Degotardi, John, Balmain, near Sydney, N.S.W.—Photographs, 505
Dehne, Fr., Halberstadt, Germany—Grain-drill, 983
Dehn, Johann Wilhelm—Services as Secretary of Imperial German Commission at Sydney, cxliv
Deitz, J., Canadian Lead, N.S.W.—Gold Mining Appliances, 163
Deinhard, Carl August, Captain German war-vessel "Bismark"—Services, clviii
Delacre, Charles, Brussels, Belgium—Extract of Beef, 701 ; Chocolate and Cocoa, 846
Delaplanche, Eugène, Paris, France—Bronze, referred to in General Report on the Fine Arts, 460 ; Award, 475
Delargy, Mary, Sydney, N.S.W.—Public School Exhibit, 382
Delarue, L. H., Sydney, N.S.W.—Fretwork, 284
Delarue, H. F., Sydney, N.S.W.—Silver-ware, 224 ; Jewellery, &c., 284 ; Artistic Castings in Silver, 505.
Delattre Père et Fils, Jules, Orignies-les-Douai (Nord), France—Wool, 910
Delecroix, Lille, France—Sewing-threads, 238
Delius, C., Aix-la-Chapelle, Germany—Cloths, 240
Delizy et Doisteau Fils, Pantin (Seine), France—Liqueurs, 870
Dell, W. R., London, Great Britain—Flour-milling Machinery, General Report on Machinery, 606, 607 ; Awards, 681
Delobbe, François A., Paris, France—Oil Painting, 475
Demartini, J., Prague, Bohemia, Austria—Soaps, &c., 176
Demorest, Madame, New York City, U.S.—Paper Patterns, 289
Dengate, F. J., Camden, N.S.W.—Horse, 933
Dennis, R., Sydney, N.S.W.—Dog, 978
Dennert & Pape, Altona, Germany—Theodolites and Levels, 392
Dennler, August F., Interlaken, Switzerland—Bitters, 900
Denny & Roberts, Dumbarton, Great Britain—Half-models of Steamers, 684
Dent, Wm., Penrith, N.S.W.—Horses, 933
Denton, Henry, Wolverhampton, Great Britain—Rollers, Harrows, &c., 985
Denton & Jutsum, London, Great Britain—Colours, &c., 184
Department I.—Mining, &c., 1, *et seq.* ; II. Manufactures, 165, *et seq.* ; III. Education and Science, 359, *et seq.* ; IV. Art, 437, *et seq.* ; V. Machinery, 533, *et seq.* ; VI. Agriculture, 689, *et seq.* ; VII. Horticulture, 1006, *et seq.*
Department of Mines of N.S.W.—Special Medal, clxvi ; General Reports—Silver Ores, 37 ; Alluvial Gold, 38 ; Auriferous Quartz, 39 ; Lode and Stream Tin, 42, *et seq.* ; Copper Ore, 45, *et seq.* ; Coal Specimens, 49, *et seq.* ; Fossils of N.S.W., 56, *et seq.* ; awards, 136, 137, 158 ; Plans, &c., 162 ; Timbers Exhibit, General Report on Arboriculture, 719, *et seq.*, giving local and botanical names and economical uses ; award, 803. (*Vide* also Mines Department.)
Department of Mines of Queensland, Brisbane—Lead and Antimony, 159
Department of Mines of Victoria—General Report—Fac-Similes of Nuggets, 16 ; Geological Specimens, 85, *et seq.* ; awards, 145
Department of Agriculture, Ottawa, Canada, cxliii

Deschamps, Paris, France—Biscuits and Cakes, 848
Des Voeux, His Excellency Geo. Wm., C.M.G., Acting-Governor of Fiji, cxliii
Desmarets et Cie., Paris, France—Oil-cloth, 238
Dessain, H., Malines, Belgium—Book-binding, 295 ; Printing, 296
Dessauer, Alois, Aschaffenburg, Germany—Fancy Papers, 297
Detang et Cie., Beaune (Côte d'or), France—Liqueurs, 870
Detmold, Wm., Melbourne, Victoria—Account Books and Book-binding, 314
Deutsche-Wasserwerks-Gessellschaft, Frankfort o/M., Germany—Seltzer-water, 130-133
Deutsche Metallpatronenfabrik Lorenz, Karlsruhe, Baden, Germany—Cartridge-material, 317
Deutsche-Nähmaschinenfabrik (vormals J. Wertheim & Co.), Frankfurt a/M., Germany—Sewing-Machines, 647
Devonian Series of N.S.W. Fossils, 58
Devonshire-street Public School, Sydney, N.S.W.—Awards to Exhibits from, 375
Deverill, H., Wellington, N.Z.—Photo-lithography, 510
Deverell, Walter, Invercargill, N.Z.—Survey Drafting, 434
Devlin, M. H., Sydney, N.S.W.—Services as Judge, clii ; Judge, 939
Devrient, J. E., Zwickau, Germany—Chemicals, 180
Dewidels, S., Prague, Bohemia, Austria—Gloves, 264
De Bellé, L. le G., Paris, France—Works of Art, referred to in General Report on the Fine Arts, 459
De Biseau, A., Brussels, Belgium—Etchings, 487
De Castella & Rowan, Melbourne, Victoria—Wines, 903
De Dorlodot et Cie., L., Lodelinsart, near Charleroi, Belgium—Glass, 196
De Groot Pzn, J.—Services as Representative Agent for the Netherlands, cxlvii
De Jaiffe, de Vroye, du Mazy, Belgium—Marbles, 110, 132
De Jersey, Madame, Brisbane, Queensland—Crêpe Flowers, 532
De Josselin, Henri, Sydney, N.S.W.—Confectionery, &c., 852
De Lairesse, C., Liège, Belgium—Stoves, 213
De Meuter, Leopold, Brussels, Belgium—Furniture, 213
De Mont Van den Akker, Ninove, Belgium—Threads, 235
De Monicault, —Services as Member of Paris Committee, cxliv
De Murska Gold Mining Co., Kingston, Victoria—Alluvial Wash, General Mineralogical Report, 16
De Munter, Pierre, Brussels, Belgium—Imitation Tapestry, 213
De Piotrowski, K., Rosedale, N.Z.—Services as Judge, cli ; Judge, 485
De Roubaix, Odenkoven, et Cie., Antwerp, Belgium—Stearine Candles, 177
De Roubaix, Jenar, et Cie., Cureghem, Belgium—Stearine Candles, 178
De Savignon, F., Paris, France—Services as French Commissioner at Sydney cxliii ; Services as Judge, cli ; Judge, 907, 951, 953
Dibdin, T. C., London, Great Britain, Works of Art—Referred to in General Report on the Fine Arts, 455 ; Awards, 471
Dibley Mary J., Sydney, N.S.W.—Public School Exhibit, 374
Dicksee, J. R., London, Great Britain—Oil Painting, General Report on the Fine Arts, 453 ; Award, 478
Dickson, Agnes, Waverley, near Sydney, N.S.W.—Public School Exhibit, 383
Dickson & Son, Mudgee, N.S.W.—Flour, 852
Dickson & Son, Balmain, N.S.W.—Soaps, 188
Dick, Maggie, Windsor, N.S.W.—Public School Exhibit, 385
Didier, Adrien, Paris, France—Engraving, 489
Didsbury, Geo., Wellington, N.Z.—Printing and Bookbinding, 312
Diedek's Sohn, A.C., Vienna, Austria—Soaps and Perfumery, 176
Dienis, Henriette, Paris, France—Costumes, 268
Dietrich, & Co., Rüdesheim, a/R, Germany—Wines, 873
Dietz-Monin—Services as Member of Paris Committee, cxliv
Diggles, S., Brisbane, Queensland—Collection of Insects, 386
Dignan, P. E., Auckland, N.Z.—Reeled Silk, 262
Dight, Arthur, Richmund, N.S.W.—Horses, 933
Diletti, Giovanni, Brisighella, Italy—Inks, 187
Dillon, Frank, London, Great Britain—Oil Painting, 478
Dilling, John, Sydney, N.S.W.—Dog, 978
Dillinger-Huttenwerke, Dillingen, a/D, Saar, Germany—Armour-plate, 153
Dimbleby, & Co., S., Northampton, Great Britain—Boot-uppers, 277
Dind, Arthur, St. Leonards, near Sydney, N.S.W.—Public School Exhibit, 383

Diplomas and Medals Complimentary and for Services, cxliii, *et seq.*
Directeur des Consulats et des Affaires Commerciales aux Affaires Etrangères—Services as member of the Committee at Paris, cxliv
Disher, Wm. John, Wellington, N.Z.—Services as Judge, clii ; Judge, 862
Disston & Sons, Henry, Philadelphia, U.S.—Saws, 341
Districts-Schitzschule Werderfels-Partenkirchen, Germany—Carvings, 215
Ditely, Edouard, Paris, France—Liqueur, 870
Diver, Dr. E., Kenley, Surrey, Great Britain—Obstetric Dress, 325
Dixon, George, Wellington, N.Z.—Raspberry Vinegar, 830; Orange Bitters, 892
Dixon, W. A., F.C.S., F.I.C.—Services as Judge, clii ; Judge, 3, General Report of—as Chairman, Classes 100–107 ; Minerals &c., 5 *et seq.* ; Analyses of Coal by, 97 *et seq.*
Dobbelmann, Louis, Rotterdam, Netherlands—Cut Tobacco, 822
Dobbelmann, Josef, Deutz, Cöln, Germany—Furniture, 215.
Dobler & Gebrüder, Ernst, Berlin, Germany—India-rubber Goods, 345
Dobbie, A. & J., Adelaide, South Australia—Seed-sowers, 993
Dobbie, J., Mount Lambie, N.S.W.—Minerals and Fossils, 66
Dobrogoïsky, A. Von—Services as Member of the Imperial German Commission at Berlin, cxliv
Dobinson, Fanny, Wollongong, N.S.W.—Public School Exhibit, 385
Dobson, Thomas Samuel, Nottingham, Great Britain—Reticulated Furnace Bars, 660
Dockree, M. E., London, Great Britain—Oil Painting, referred to in General Report on Art, 453
Docksey, Wm., Sydney, N.S.W.—Public School Exhibit, 375
Doctor's Reef, Proprietors of, Gympie, Queensland—Mundic, 14
Dodds, Thomas H., Sydney, N.S.W.—Services, clviii ; Exhibit, Dog, 978
Dodson, Henry, Blenheim, Marlborough, N.Z.—Malt, 830
Dodge, Joseph & Robert (Lt'd) Sheffield, Great Britain—Cutlery, &c., 334
Doerfel, Steinfelser & Co., C. F., Klingenthal, Saxony, Germany—Concertinas, 425
Doerr & Reinhart, Worms a/R., Germany—Leather, (calf) 710
Dogs, Cats, and Wild Animals—(Classes, 651-652)—976, *et seq.*
Dole, & Osgood, Boston, Mass., U.S.—Farm Waggons, 358
Dollond & Co., London, Great Britain—Sextants, Telescopes, &c., 394
Domeier & Boden, Einbeck, Hanover, Germany—Lager Beer, 873
Dommerich & Co., Buckau-Magdeburg, Germany—Chicory, 849
Don, D., Sydney, N.S.W.—Waterproof Oilskin-clothing, 285
Donaghy, Michl., Geelong, Victoria—Cordage, 350
Donald, M., Toowoomba, Queensland—Wheat, 835
Donkin, J. B., Forbes, N.S.W.—Horses, 933
Donnelly, A., Sydney, N.S.W.—Berlin Wool Picture, 521
Donovan, Celia, Sydney, N.S.W.—Public School Exhibit, 382
Doran, Fanny, Guildford, N.S.W.—Public School Exhibit, 377
D'Osmoy, Le Comte—Services as Member of Committee at Paris, cxliv
Dossiter Brothers, Hobart Town, Tasmania—Wheat, 838 ; Flour, 859
Doublet, M., Paris, France—Services as Judge, clii ; Judge, 258
Doubleday, Mrs. Mary, Paddington, N.S.W.—Imitation Parian (in wax), 521
Doublemard, A. D., Paris, France—Bronze Group, General Report on the Fine Arts, 460 ; Award, 475
Doughty, Charles, Hobart Town, Tasmania—Pencil Drawings, 513
Douglas, & Sons, Melbourne, Victoria—Chandeliers, 230
Douglas, Percy, Sydney, N.S.W.—Services as Judge, clii ; Judge, 351
Douglas, W. H., Sydney, N.S.W.—Services as Judge, clii ; Judge, 351
Douglas, G. B., Macetown, Otago, N.Z.—Quartz Specimens, 13.
Douglas, Axe Manufacturing Co., Boston, Mass., U.S.—Axes, 341
Douglas, Manufacturing Co., New Britain, Conn., U.S.—Tools, 341
Douglas, Adye, M.P.—Services as Member of Tasmanian Commission, clxii
Douglas, Walter, Goulburn, N.S.W.—Horses, 933 ; Cattle, 943
Doulton & Co., H., Lambeth, London, Great Britain—Pottery, 202, 219
Doulton & Watts, Lambeth, London, Great Britain—Filters, 219 ; Painting on Porcelain, &c., 495
Douzette, Louis, Berlin, Germany—Landscape Picture, referred to in General Report on Fine Arts, 462
Dowdell, Miss, Hobart Town, Tasmania—Painted Table-top, 513
Dowdell, Charles—Services as Member of Tasmanian Commission, clxii
Dowling, R., London, Great Britain—Oil Painting, 478

Dowling-street Public School, Sydney, N.S.W.—Public School Exhibit, 375
Dowling, E. J. and N., Sydney, N.S.W.—Loan of Ethnological Exhibits, clvii
Dowling, Vincent, Rylstone, N.S.W.—Services as Judge, clii; Judge, 929, 939; Exhibits: Horse, 933; Sheep, 956
Dowling, Edward, Sydney, N.S.W.—Services, clvii
Dowling, John, Hokitika, N.Z.—Leather, 712
Downe, A., St. Leonards, near Sydney, N.S.W.—Poultry, 967
Downes, Maud, Sydney, N.S.W.—Public School Exhibit, 382
Downes, May, Sydney, N.S.W.—Public School Exhibit, 382
Downey, George, Sydney, N.S.W.—Public School Exhibit, 382
Downing, J. S., Birmingham, Great Britain—Stationers' Articles, 301.
Doyle, J. F., jun., N.S.W.—Cattle, 943, 944
Doyle, James F., Lochinvar, N.S.W.—Wines, 232
Drächsler, C., Vienna, Austria—Trimmings, &c., 264
Drake, Louisa, Sydney, N.S.W.—Public School exhibit, 384
Dransfield, Joe, Wellington, N.Z.—Services as Member of N.Z. Commission, clix; exhibit, Grass Seeds, 831
Draper & Sons, Melbourne, Victoria—Earth-closet, 230
Dreaper, W. H. & G. H., Liverpool, Great Britain—Pianos, 427
Dreher, Ignatz, Gerresheim, near Düsseldorf, Germany—Iron Wire, &c., 153, 333
Dreher, Anton, Klein-Swechat and Vienna, Austria, 866
Drennan, David, Sydney, N.S.W.—Model of Yacht, 685
Dresdener Felsenkeller Brauerei, Dresden, Germany—Beers, 873
Dresse, Piron, et Cie., Ensival, Belgium—Tweeds, 235
Dresse, Laloux, et Cie., Liège, Belgium—Rifles, &c., 316
Drewe, Amelia, Sydney, N.S.W.—Musical Compositions, 521
Drewe, Clara A., Sydney, N.S.W.—Berlin Wool Picture, 521
Dreyse, N. von, Sömmerda, Germany—Patent Fire-arms, 317
Dreze Frères, Verviers, Belgium—Tweeds, 235
Drills (Rock)—General Report on Machinery, 617
Drinkwater, C., Tamworth, N.S.W.—Maize, 825
Drouven & Co., Jacob, Coblenz, a/R., Germany—Liqueur, 873
Druwé et Hendricks, Alost, Belgium, 235
Drysdale & Roberts, Sydney, N.S.W.—Boot-blacking Machine, Mantelshelf, 224; Carriage Lamps, 355; General Machinery Report, 539, 549, 559, 575, 595, 597, 598
Drysdale & Fraser, Melbourne, Victoria—Ventilators, 230
Dubois-Crèpy, Mons, Belgium—Toilet Soaps, 178
Dubois, Jeune, et Cagnion, Blanzac, France—Brandies, 870
Duboisé, A., Sydney, N.S.W.—Services as Judge, clii; Judge, 808
Dubourguet, A., Paris, France—Office requisites, 296
Dubroca, G., Paris, France—Imitation Jewellery, 268
Dubrulle, C. C., Lille, France—Safety Lamp and Miners' Hats, 162
Dubs & Co., Glasgow, Great Britain—General Report on Machinery, 627; Locomotive Engine and Crane, 675; Exhibits referred to in General Report on Machinery, 568, 569
Dubufe, Edouard, Paris, France—Oil Paintings referred to in General Fine Arts Report, 458; Award, 475
Ducat, John, Kempsey, N.S.W.—Services, clvi
Ducretet et Cie., Paris, France—Instruments of precision, 390
Dudley, Earl of, Brierley Hill, Staffordshire, Great Britain—Manufactured Iron, 155
Du Faur, Eccleston, F.R.G.S., Sydney, N.S.W.—Honorary Member of Committee, cxlviii; Services as Judge, clii; Member of Advisory Committee on Art, 442, 443, 470; Judge, 471
Duff, John, Sydney, N.S.W.—Services as Judge, clii; Judge, 1001, 1005, 1011, 1021
Duff, Nelly, Sydney, N.S.W.—Public School Exhibit, 384
Duffield & Co., William, Gawler, South Australia—Flour, 857
Duffy, Barbara, Sydney, N.S.W.—Public School Exhibit, 381
Duffy, Margaret, Sydney, N.S.W.—Public School Exhibit, 381
Duffy, Margaret, Sydney, N.S.W.—Public School Exhibit, 374
Dufourcet, Charles, Paris, France—Grape Sugar, 848
Dufrenoy, Paris, France—Maps, 368, 431
Dujoo Tea Estate, Assam (Indian Court)—Tea, 819
Duke & Son, Penshurst, Kent, Great Britain—Cricketing appliances, 278
Duke, Dr. Herbert. Sydney, N.S.W.—Loan of Ethnological exhibits, clvii

Dumaresq, W. A., Scone, N.S.W.—Horses, 933; Cattle, 944
Dummett, Mrs. Mary A., Parramatta, N.S.W.—Lace, 521
Duncan, James, Sydney, N.S.W.—Public School Exhibit, 377
Duncan, Nellie, Hay, N.S.W.—Public School Exhibit, 378
Duncan, Elizabeth, Sydney, N.S.W.—Public School Exhibit, 375
Duncan, E., London, Great Britain—Works of Art referred to in General Report on Fine Arts, 455
Duncan & Son, Christchurch, N.Z.—Grass Seeds, 831
Dunedin Harbour Board, Dunedin, N.Z.—Cement Boulders, 124
Dungor Tea Estate, Assam (Indian Court)—Tea, 819
Dunn, Lizzie, Sydney, N.S.W.—Public School Exhibits, 375, 396
Dunn, Mary, Parramatta, N.S.W.—Berlin Wool Picture, 522
Dunn, Thomas J., Sydney, N.S.W.—Services as Judge, clii; Judge, 707
Dunn & Hewett, London, Great Britain—Coffee Beans and Essence of Coffee, 817; Cocoa and Chocolate, &c., 849; Models of Coffee and Cocoa Plants, 1006.
Dunnachie, James, Glasgow, Great Britain—Fire-bricks, &c., 202
Dunod, Pierre C., Paris, France—Bookbinding, 296; Architectural Designs, 489; Scientific Works, 368
Duntney, Charles, Rosewood, Queensland—Maize, 835
Dunville & Co., Belfast, Ireland—Whiskey, 876
Dupety, Theurey, Gueuvin, Bouchon, et Cie., La Ferté sons Jouarre (Seine et Marne), France—Mill-stones, General Report on Machinery, 606
Duplan et Hamot, Paris, France—Tapestry, 238
Duplan, Services as Member of Committee at Paris, cxliv
Dupont et Hervé, L., Paris, France—Carpets, &c., 238
Dupouy et Lissoude, Paris, France—Acids, &c., 322
Dupuy et Fils, Paris, France—Chromo-lithographs, 489
Duquénel, Mirabeau, France—Brandy, 870
Durell, E., Newtown, N.S.W.—Public School Exhibit, 379
Durell, G., Newtown, N.S.W.—Public School Exhibit, 379
Durenne, Antoine, Paris, France—Ornamental Castings, 332; Iron Castings, 489, 622
Durenne, Jean François, Courbevoie (Seine), France—Exhibits referred to in General Report on Machinery, 548, 619; Award, Engine, &c., 657
Durham, Mrs. Sarah C., Woollahra, near Sydney, N.S.W.—Tapestry, clviii, 522
Durham, W. & C., Singleton, N.S.W.—Horse, 933
Durie, Peter, Paddington, near Sydney, N.S.W.—Services, clvii
Durrie & Co., Horace, New York City, U.S.—Hoes, Rakes, &c., 341; Lawn Mower, 995
Duru, Bordeaux, France—Metric system, 369
D'Urville Island Copper-mining Co., N.Z.—Copper Ore, 22, 141
Duval, Lionel, Mackay, Queensland—Sugar, 856
Duverne, Gaspard, Montceau les Mines (Sâone et Loire), France—Terra-cottas, 475
Dwyer, D., Blandford, N.S.W.—Sheep-shearing, 956
Dwyer, William, Sydney, N.S.W.—Services, clvii
Dyer, Minnie, Windsor, N.S.W.—Public School Exhibit, 385
Dyer, T. S., Laidley, Queensland—Maize, 835
Dyhrenfurth, L. R., Jacobsdorf-Kostenblut, Silesia, Germany—Wool, 911
Dyson, Evelyn, Sydney, N.S.W.—Public School Exhibit, 374

E

Eagar, Hon. Geoffrey, Under Secretary for Finance and Trade, Sydney, N.S.W., cxlix
Eales, John, M.L.C., Duckenfield, near Morpeth, N.S.W.—Special Medal in Horticultural section, clxvi; Plants, 1013
Eastern and Australian Mail Steamship Co.—Services, clix
East and West India Dock Co., London, Great Britain—Model of Docks, 684
East India Tea Co., Assam (Indian Court)—Tea, 819
Eastway Brothers, Sydney, N.S.W.—Wirework, 253
Ebels, Franz (Nachfolger), Berlin, Germany—Saddler's Furniture, &c., 271
Ebenstein Gebrüder, Berlin, Germany—Ladies Mantles, 271
Ebsworth, Frederick, Sydney, N.S.W.—Services as Judge, clii; Judge, 907
Eckerman, Ferd., Hamburg, Germany—Patent Chair, 215
Eckenbrecher, T. von, Düsseldorf, Germany—Oil Painting, 476
Eckhardt, George, Warwick, Queensland—Wheat, 835

Eclipse Windmill Co., Beloit, Wis., U.S.—Windmill, 670
Eden Public School, N.S.W.—Award to Exhibit from, 375
Edgar, John, Queenstown, N.Z.—Fossils, General Report, 67
Edginton, T., Launceston, Tasmania—Peas, Beans, Tares, and Seeds, 838
Edgar, J. S., Rockhampton, Queensland, Pine Apples, 1020
Edgell, Henry—Services as Member of Tasmanian Commission, clxii
Edgecombe, Wm., Sydney, N.S.W.—Public School Exhibit, 375
Edgemoor Iron Co., Wilmington, Delaware, U.S.—Special Medal, clxvi—Iron Truss Girder Bridge, 435
Edison, Professor Thos. A., Menlo Park, New Jersey, U.S.—Electric Pen, 313
Edler & Co., H., Bielefeld, Westphalia, Germany—Machine made quilts, 240
Edwards & Green, Wellington, N.Z.—Engravings, 510
Edwards, Miss Emily A., Nattai, N.S.W.—Velvet Cushion, 522
Edwards, James, Melbourne, Victoria—Sculling Outrigger, 688
Edwards, John E., Melbourne, Victoria—Microphone Transmitters and Telegraph Apparatus, 400
Edwards, Jeanie, Sydney, N.S.W.—Public School Exhibit, 384
Edwards, E. R., Thames, N.Z.—Quartz Specimens, General Report, 13; Specimen of Building Stone, General Report, 114; Potter's Clay, General Report, 126
Educational Supply Association, Limited, London, Great Britain—School Desks, 219; School Furniture, 370
Education and Science, Department of—Awards Nomenclature, 360; General Report, 361; Awards, 368, *et seq.*
Educational Department of Ontario, Toronto, Ontario, Canada—Services, cxliii; Educational Appliances, 368
Education, Council of, Sydney, N.S.W.—Educational Appliances and School Exhibits, 372, *et seq.*
Egli & Sennhauser, Zürich, Switzerland—Silk Gauze, 682
Ehrenhaus, C. N., Berlin, Germany—Carpets, &c., 240
Ehrenfried Brothers, Thames, N.Z.—Bottled Stout, 893
Eichhorn & Co., Speyer, Rheinfalz, Germany—Cigars, 814
Eisenwaaren-Industrie & Handels Actiengesellschaft-Moravia, Olmutz, Austria—Nails, &c., 331
Eisen & Stahlwerk-Osnabruck-Actienges: Osnabruck, Germany—Iron Permanent Ways, 674
Elbogener, Porzellan, & Kohlen-Industrie-Gesellschaft, Elbogen, Bohemia, Austria—Porcelain, 194
Eldred, E., Few's Creek, Lake Wakatipu, N.Z.—Limestone, General Report, 125
Eldred, Capt. W. H., Sydney, N.S.W.—Queensland Cinnabar and Quicksilver, General Report, 20; Awards, 143, 159
Eldred, George, Wagga Wagga, N.S.W.—Dog, 978
Elder, John, Sydney, N.S.W.—Public School Exhibit, 374
Elder, Sir Thomas, Birksgate, South Australia—Wines, 896
Electric Telegraph Department of N.S.W., Sydney, N.S.W.—Special Medal, clxvi; Collection of Electrical Instruments, 398
Eley, Brothers (Limited), London, Great Britain—Cartridges, 318
Elgin Mills Co. (Limited), Cawnpore, India—Cotton Goods, 251
Ellard, Annie, Sydney, N.S.W.—Public School Exhibit, 374
Elliott, Mary, Penrith, N.S.W.—Public School Exhibit, 380
Ellis, Kislingbury, & Co., London, Great Britain—Paraffine Candles, 184
Ellis & Nicholson, Dunedin, N.Z.—Flock for Upholstering, 254
Ellis, James F., Petersham, N.S.W.—Public School Exhibit, 381
Ellis, Thos., Wanganui, Wellington, N.Z.—Butter Churn, 992
Ellissen, Roeder, & Co., Theresienthal and Vienna, Austria—Bookbinding and Stationery, 295
Ellsworth, M. J., Cornwall, Addison Co., Vermont, U.S.—Wool, 924, 925
Elliott, Mrs., Hobart Town, Tasmania—Silvered and Gilt Cones, 530
Elliott, Brothers, Sydney, N.S.W.—Chemicals, 189; Chemical Glassware, 209; Cork, 794, 803; Wine Spirit, 883
Elliott & Son, John, London, Ontario, Canada—Reaper and Mower, 982
Elmore, A. R. A., London, Great Britain—Oil Paintings, referred to in General Report on Fine Arts, 451; Award, 478
Elphinstone, A. L., Sydney, N.S.W.—Architectural Design, 505
Elsasser Söhne, M., Bruchsal, Baden, Germany—Liqueurs, 873

Emanuel, S., Goulburn, N.S.W.—Cattle, 944
Emanuel, Mrs. S., Goulburn, N.S.W.—Poultry, 967
Engel & Co., Bernhard, Brünn, Moravia, Austria—Tweeds, 233
Engert & Rolfe, London, Great Britain—Roofing Felt, 219
ENGINEERING, ARCHITECTURE, CHARTS, MAPS, &c., Group of Classes 314 to 329; 431, *et seq.*
ENGINEERS' FITTINGS, General Report on Machinery, 652, *et seq.*
ENGINES, described in General Machinery Report (Mr. Selfe's) under heads as follow :—Stationary Engines (Horizontal Condensers), 536, *et seq.*; Vertical Engines, 540 *et seq.*; Marine Engines, 550, *et seq.*; Portable Engines, 553, *et seq.*; Traction Engines, 562, *et seq.*; Crane Engines and Elevators, 564, *et seq.*; Fire Engines and Steam Pumps, 570
English and Australian Copper Co., Adelaide, South Australia—Copper Ores, 144
ENGLISH PAINTING AND SCULPTURE, General Report on the Fine Arts, 447, *et seq.*
ENGRAVING, LITHOGRAPHY, PHOTOGRAPHY, ARCHITECTURAL DESIGNS, Group of Classes 410 to 427, 485 to 515
Engstrom, A., London, Great Britain—Patent Trace-buckle, 353
Ennever & Appleton, Sydney, N.S.W.—Confectionery, 852
Ens & Greiner, Lauscha, Sachsen-Meiningen, Germany—Paintings on Porcelain, 477
Enterprise Manufacturing Co., Philadelphia, Pennsylvania, U.S.—Bunghole Borers, 639; Flat Irons, 649; Coffee and Spice Mills, 682; Meat Cutters, 995
Enys, C. D., Trellisic, Canterbury, N.Z.—Building-stones, General Report, 114; Award, 141
Ephraimsohn & Nathansohn, Berlin, Germany—Collars and Cuffs, 271
Epthorpe, M., Newtown, near Sydney, N.S.W.—Public School Exhibit, 379
Erard, S. and P., Paris, France—Pianos, 424
Erbert & John, Planen, Germany—Collars and Cuffs, 271
Erhardt & Co., H., London, Great Britain—Tin Foil, 155; Stationery, 302.
Erlemann, Robert, Hamburg, Germany—Sleeve Links, Studs, &c., 271
Ernst & Korn, Berlin, Germany—Architectural Designs, 492
Eschke, Hermann, Berlin, Germany—Special Medal, clxvi; Landscape Painting, referred to in General Report; Report on Fine Arts, 462; Award, 477
Eskbank Iron Co., Lithgow, N.S.W.—Iron Ores, General Report, 25; Trophy of Iron, 158
Eskbank Colliery Co., Lithgow, N.S.W.—Coal Seam, General Report, 101; award, 137
Espinasse, R., Sydney, N.S.W.—Services as Superintendent of Admissions, cxlix
Estève, Jean, Paris, France—Harmonium Reeds, 424
Estey & Co., Brattleboro, Vermont, U.S.—Organs, 429
ETHNOLOGICAL COURT, in Garden Palace, Exhibits Referred to, General Report on Education and Science, 364, *et seq.*
Ettinger, Annie, Guildford, N.S.W.—Public School Exhibit, 377
Ettinger, Barbara, Guildford, N.S.W.—Public School Exhibit, 377
Ettinger, Theresa, Guildford, N.S.W.—Public School Exhibit, 377
EUCALYPTUS, ESSENTIAL OILS AND PREPARATIONS, Exhibits Referred to, 167; Awards, 192 (*Vide* Bosisto)
Eugster, Ernst—Services as Representative Agent for Switzerland, clxi
Evans & Wormull, London, Great Britain—Hunting Gear, &c., 318; Air Cushions, &c., 325; Surgical Appliances, 325; Instruments for Physical Diagnosis, 325; Dental Instruments, 325; Table Cutlery, &c., 324
Evans, George—Services as Caretaker of Art Collection, cxlvi
Evans & Co., P. & S., Bristol, Great Britain—Leather, 710
Evans, George T., Sydney, N.S.W.—Services as Judge, clii; Judge, 975
Evarts, Hon. William M.—Secretary of State, U.S., clxii
Eve, Benjamin, Alexandria, near Sydney, N.S.W.—Bone Dust, Glue, &c., 712
"Evening News" and "Town and Country Journal," Sydney, N.S.W.—Literary Services, clix; Newspaper Printing, lxxii, 309
Everard, W.—Services as Member of South Australian Commission, clx
Everard, F. W., Kingston, Victoria—Tomato Sauce, 842
Evershed, A., London, Great Britain—Etchings, 495
Eveson & Sons, Thomas, Stourbridge, Great Britain—Agricultural Implements, 985
Evett, James J., Emerald Hill, Victoria—Gold-beaters Sign and Gold-leaf, 640
Ewing, G. C., junior, St. Johnsbury, Vermont, U.S.—Services as Judge, clii; Judge, 211

Executive Commissioner's Report.

EXECUTIVE COMMISSIONER'S (SIR PATRICK JENNINGS') REPORT—Motto chosen by Commissioners for Sydney International Exhibition ; the Exhibition begins a new era in history of colony of N.S.W. ; reference to effects of Great Exhibition of 1851 (Crystal Palace), iii, iv; N.S.W. takes part in International Exhibitions ; Intercolonial Exhibitions, held under auspices of Agricultural Society, leading up to projects for International Exhibition, v, vi, vii; The first Agricultural Society's Exhibition, assuming anything like an International character, held 1877, vii ; Project of an International Exhibition mooted in Agricultural Society, and the Secretary of that Society (Mr. Joubert) leaves with the Executive Commissioner for New South Wales at the Paris Exposition Universelle, to secure co-operation of Exhibitors thereat, viii ; N.S.W. Government notifies intention to hold International Exhibition in 1879, and steps taken to make matter known, ix ; Discussions at Meetings of Agricultural Society as to its financial ability to undertake scheme, x, xi, xii ; Sir Hercules Robinson advises Society to obtain contributions for purpose, on understanding that the Government will give £ for £,—xiii, xiv; Discussions as to site and cost of building in Agricultural Society, and Press of Sydney, xv, xvi, xvii ; Colonial Secretary intimates that as matter attained proportions beyond powers of the Society to deal with, the Government would be willing to ask the Parliament to take it up, xvii ; Change of Government takes place in the mean time, but new Ministry accepts responsibility, and Commission is issued, xviii, xix ; Exhibition Building (Garden Palace) site, laid out and work commenced, xx, xxi ; Description of the building by the Colonial Architect, xx, xxi, xxii, xxiii, xxiv ; Grounds laid out by Mr. Charles Moore, F.L.S., Director of Public Gardens and Parks for the Colony, xxv ; Description of Mr. Moore's work of improvement, xxv, xxvi ; Mr. John Young as Contractor for the erection of the building, xxvi, xxvii ; Foundation-stone of eastern pier of central dome laid by Lady Robinson, xxvii, xxviii ; Complimentary luncheon to Sir Hercules Robinson on his visit to Sydney *en route* from New Zealand to Cape Colony, after the Exhibition, in which he had taken a warm interest, and which he had been unable to visit, had been over for some time, xxviii; Appointment of London Commission, xxviii ; Formal invitations to the Countries of the World to participate, xxix ; Mr. R. W. Cameron and Mr. H. W. Peabody appointed as Representative Commissioners in the United States, xxix ; Foundation-stone of Melbourne Exhibition laid, xxx ; Progress of the Sydney International Exhibition Building, xxxi ; Applications for space and provision made by the erection of the necessary buildings for machinery exhibits, agricultural implements, and live stock, agricultural and horticultural shows, xxxi, xxxii ; Works at building slightly delayed by a futile strike of carpenters, xxxiii ; Report of Executive Commissioner on proposals for musical entertainments, xxxiii to xxxvi ; Royal Commission in London appointed, xxxvi ; Memorandum prepared by Executive Commissioner for information of United States Government, xxxvi to xl ; Steam street tramway, the first in Sydney, constructed for convenience of visitors to Exhibition, xl, xli ; Progress of Garden Palace and exterior buildings, and reception of applications for space, xli, xlii ; Interest taken by Acting Governor, Sir Alfred Stephen, in success of Exhibition, xlii ; Address from the Commission of the Sydney International Exhibition, to His Excellency Lord Augustus Loftus on his landing in the Colony, and His Excellency's reply, xlii, xliii ; Diligent work of the Committees of Commission, xliv, xlv ; Erection of separate building as an Art Gallery decided upon, xlv ; the Executive Commissioner announces the completion of allotment of space in the Garden Palace, xlvi. Opening Ceremony, 17th September, 1879, description of, reprinted from *Sydney Morning Herald*, xlvii, *et seq.* ; Opening Cantata, lvii, lviii ; Address from the Executive Commissioner to his Excellency, lx, lxi ; Reply of His Excellency, lxii. Hospitalities to Intercolonial Governors, and Foreign and Colonial Commissioners and Representatives, and return festivities, lxv, *et seq.* ; Sheep and other exterior Shows, lxvi, lxvii ; Performance of first Oratorio, lxvii ; Question of opening Exhibition on Sunday, lxviii, lxix ; Fête at the Exhibition on Prince of Wales' Birthday, lxix, *et seq.* ; Opening of Art Gallery, lxxi ; Opening of Ethnological Gallery, lxxiv ; Excellence of Police arrangements and orderly behaviour of visitors, lxxiii, lxxiv ; Appointment of Judges and arrangements as to Official Catalogue at Exhibition, lxxvi ; Boxing-day fête at Garden Palace, lxxvii ; Presentation of Intercolonial Rifle Match Trophies, lxxvii ; Description of interior of Exhibition, including the positions of the various Courts, and some of the more noteworthy exhibits, lxxvii–lxxxix ; Description of exterior buildings and shows held therein, cafés, restaurants, kiosks, &c., lxxxix–xcv ; The day of the largest attendance, 26th January, the Anniversary day of the Foundation of the Colony, xcv ;

Facilities afforded by the Railway Department of the Colony for the cheap carriage of country visitors, xcvi ; The work of judging, xcvii ; Official distribution of awards and Closing Ceremony, xcviii ; Address of the Executive Commissioner on the occasion, xcix–ciii ; reply of His Excellency, ciii–cv ; Complimentary banquet to the Executive Commissioner at the Sydney Exchange, cvi ; remarks on the results of the holding of the Exhibition, cvi, *et seq.*
Eyles, Mrs., Richmond, Nelson, N.Z.—Seeds, 831
Ezold, William, Sydney, N.S.W.—Piano, 428
Ezzy, William, Spring Hill, N.S.W.—Wheat, 1024

F

Faber, A. W.—Stein-Nürnberg, Germany—Lead Pencils, 297
Fabbri & Co., G—Sydney, N.S.W.—Felt Hats, 285
Fabrics of Vegetable, Animal, or Mineral Materials, Group of classes 280–270 referred to 172 ; Awards, 345–350
Faed, J., R.S.A., London, Great Britain—Oil Painting, General Report on the Fine Arts, 452 ; Awards, 478, 479
Fahey, E. H., London, Great Britain—Oil Painting, General Report on the Fine Arts, 452
Fähndrich, C. W.—Luckenwalde, Germany—Tweeds, 240
Faint, George, Armidale, N.S.W.—Maize and Rye, 825 ; Rye Flour, 852
Fairbanks & Co., St. Johnsbury, Vermont, U.S.—Scales, &c., 399 ; Type-writer, 654 ; General Report on Machinery Department, 620.
Fairfax & Sons (Proprietors *S.M. Herald*), Sydney, N.S.W.—Literary Services, clix ; Exhibits of Newspaper Printing referred to, lxxii, 172–293 ; Awards, Newspaper Printing, 311 ; Wood Engraving, 505
Fairfax, James, Sydney, N.S.W.—Services as Member of Committee, cxlviii ; Member of Advisory Committee on Art, General Report on the Fine Arts, 443
Fairlands Estate, Coorg District, Madras, India—Coffee Beans, 818
Fairy Meadow Public School, N.S.W.—Awards to Exhibits from, 375
Faïenceries de Gien-Loiret, France—Earthenware, 198 ; Enamelled Paintings, 475
Falbe, Oscar—Berlin, Germany—Lamps and Chandeliers, 215
Falcini, Andrea, Florence, Italy—Mosaic Tables, &c., 500
Falkbeer, Carl, Services as Member of Executive Committee at Vienna, Austria, cxlii
Fallon, J. T., Albury, N.S.W.—Wines, 882, 883
Fallon, P., Yass, N.S.W., Lead and Silver Ores, General Report, 24
Farasyn, E, Brussels, Belgium—Oil Painting, 473
Farcy et Oppenheim—Paris, France—Corsets, 268
Farina, Franz Maria, Cologne, Germany—Eau-de-Cologne, &c., 180
Farina, Johann Anton, Cologne, Germany—Eau-de-Cologne, 181
Farina, Johann Maria, Gegenüber dem Altenmarkt, Cologne—Eau-de-Cologne 181
Farina, Johann Maria, Jülichsplatz, Cologne—Eau-de-Cologne, 181
Farley, Edward, Sydney, N.S.W.—Public School Exhibit, 382
Farm Economy—Appliances connected with, Class 657, 628
Farnham, Mary, Wickham, N.S.W.—Public School Exhibit, 384
Farnley Iron Co., Leeds, Great Britain—Mosaic Bricks, 202
Farreli, Alice S., Walcha, N.S.W.—Public School Exhibit, 383
Farrell, Eliza, Walcha, N.S.W.—Public School Exhibit, 383
Farrell E., Sydney, N.S.W.—Services as Judge, clii ; Judge, 714
Farrer, Misses, Plassy, Tasmania—Knitting, 530
Farrow & Jackson, London, Great Britain—Spirit Jars, 202 ; Hydrometers, &c., 395 ; Bottling Machinery, &c., 660
Faudel, Phillips, & Sons, London, Great Britain—Embroidery, &c., 247 ; Braids, Cords, &c., 260
Faulding & Co., F. H., Burossa, South Australia—Wine, 896
Favre, & Co., Singapore, Straits Settlements—Preserved Fruits, 858
Fawcett & Watson, Stourport, Great Britain—Carpets, &c., 247
Fawcett, Miss F. F., Sydney, N.S.W.—Crayon Drawings, 505
Fay & Co., A. J., Cincinnati, Ohio, U.S.—Wood-working Machinery, General Report on Machinery, 580, 583, 584, 585, 586, 622 ; Award, 639
Fear, James, Guildford, N.S.W.—Public School Exhibit, 377
Féau, Alfred, Paris, France—Gold and Silver Thimbles, 268

Feez, Albrecht, M.P.—Services as Member of Queensland Commission, clx
Fehrenbach, Annie, Sydney, N.S.W.—Public School Exhibit, 381
Feilner, Jean B., Bremen, Germany—Photographs, 492
Fein, Otto, Sydney, N.S.W.—Services as Judge, clii; Judge, 997
Fell & Co., John, Wolverhampton, Great Britain—Sanitary Ware, 219; Engineers and Plumbers' Fittings, General Report on Machinery, 604; Award, Beer Engines, Pumps, &c., 660
Fell, Brothers, & Co., Blenheim, Marlborough, N.Z.—Malting Barley, 831
Felsenthal & Co., A. M., London, Great Britain—Brass Cornices, Locks, &c., 219
Felten & Guilleaume, Carlswerk, Mühleim a/R, Germany—Manufactured Iron, 153; Wire Ropes, 658
Feltham & Co., London, Great Britain—Cricketing Articles, &c., 278
Felton, Grimwade, & Co., Melbourne, Victoria—Chemicals and Mineral Acids, 192
Fenby & Co., J. B., Birmingham, Great Britain—Tents, &c., 247
Fenn, John Joseph, Port Macquarie, N.S.W.—Wine, 883
Feraud, Jean Désiré, Clyde, Vincent, Co., N.Z.—Raspberry Vinegar, 831; Liqueurs, &c., 893
Feray D'Essone—Services as Member of Committee at Paris, cxliii
Ferguson Brothers, Carlisle, Great Britain—Cotton Goods, 247
Ferguson, Agnes, Balmain, near Sydney, N.S.W.—Public School Exhibit, 372
Ferguson & Mitchell, Dunedin, Otago, N.Z.—Bookbinding and Account Books, 312
Fern Arrangements, Wax, and Other Ornaments—Class in Ladies Court, 518, *et seq.*
Fernando, G. Mudaliyar, Ceylon—Grains, 811
Ferndale Colliery, Newcastle, N.S.W.—Coal, General Report, 97; Award, 137
Ferraro A., Sydney, N.S.W.—Carving on Paper, 505
Ferres, John, Government Printer, Melbourne, Victoria—Printing, 314
Ferris, J. H., Sydney, N.S.W.—Carvings in Wood, 482
Fewings, Frederick, Little Coogee, near Sydney, N.S.W.—Dogs, 979
Fezarkerley, Hannah, Waterloo, near Sydney, N.S.W.—Public School Exhibit, 383
Ffrost John W., Wellington, N.Z.—Rubber-stamps, 349
Fiacchi, Enrico, Florence, Italy—Carved Frames, 480
Fiehn, Heinrich, Vienna, Austria—Ocarinas, 423
Field & Sons, T., Sydney, N.S.W.—Pottery-ware, 209; Filters, 224
Field & Sons, London, Great Britain—Hats and Bonnets, 278
Field, Mrs. H. H., Sydney, N.S.W.—Dried Ferns, 1007
Fiévet, Carl, Cologne, Germany—Eau-de-Cologne, 181
Fiji, The Colony of—For Pre-eminence in the production of Cotton and other Vegetable Fibres, 909, *et seq.*
Fijian Native Exhibits, Levuka, Fiji—Native Pottery, 198; Mats and Tapa, 237; Coir Rope and Yams, 345; Models of Canoes, 684; Pearl and Tortoise-shell, 709; Rubber, 795, 802; Yams and Turmeric, 812; Arrowroot, 847
Fijian Services List—cxliii
Filmer, Wm., West Maitland, N.S.W.—Herbs, 825
Findlater, Edith D., Sydney, N.S.W.—Public School Exhibit, 376
Findlay, Wm. S., Adelaide, South Australia—Services as Judge, clii; Judge, 951, 952
Fine Arts Committee, steps taken by for the proper display of Pictures—Described in General Report on the Fine Arts, 442, *et seq.*
Fine Arts Exhibition, in connection with Sydney International Exhibition—History of, General Report on the Fine Arts, 442, *et seq.*
Fine Art Society, London, Great Britain—Engravings, 495
Finigan, Luke G., Sydney, N.S.W.—Services, clvii
Firth, Amy, Waverley, near Sydney, N.S.W.—Public School Exhibit, 383
First & Pryibil, New York City, U.S.—Wood-working Machinery, General Report on Machinery, 592, 593; Award, 639
Fischel, Söhne, & Co., D. G., Nimes, Bohemia, Austria—Bent-wood Furniture, 212
Fischer, Naumann, & Co., Ilmenau, Germany—Toys, &c., 271
Fischer, G., Nürnberg, Germany—Pencils, &c., 297
Fischer, J. S., Philadelphia, U.S.—Razor-strops, 341
Fischer, Theodor, Cassel, Germany—Works on Zoology and Natural History, 369
Fischer, A., Sydney, N.S.W.—Crayon Drawings, 505
Fischer, August, Sandhurst, Victoria—Wines, 903
Fish, Brothers, & Co., Racine, Wis., U.S.—Buggy, 358
Fish Culture, and the Apparatus connected therewith, and with their Capture (Group of Classes, 611-612)—General Report on Agriculture, 693

Fish River Creek Public School, N.S.W.—Awards to Exhibits from, 375
Fisher, J. Churchill, Sydney, N.S.W.—Services, clviii
Fisher, C. B., Headington Hill, Queensland—Wool, 819 ; Cattle, 949, 950 ; Sheep, 961
Fiske, H. C., Sydney, N.S.W.—Public School Exhibit, 382
Fitzallan, Eugène, Bowen, Queensland—Indigenous Orchids, 1020
Fitzgerald, Mary A., Sydney, N.S.W.—Public School Exhibit, 384
Fitzgerald & Prendergast, Sydney, N.S.W.—Ale, 883
Fitzgerald & Perrins, Castlemaine, Victoria—Ale, 903
Fitzgerald, Quinlan, & Co., Brisbane, Queensland—Ale and Porter, 895
Fitzgerald, R. D., F.L.S., Sydney, N.S.W.—Illustrations of Australian Orchids 1007
Fitzpatrick, Kate, Sydney, N.S.W.—Public School Exhibit, 384
Fitzpatrick, Hon. Michael, M.P., Sydney, N.S.W.—Services, cxlix
Fiveash, Mary E., Adelaide, South Australia—Painting on Velvet, 529
Fix, Adolphe, Molenbeek (St. Jean), Belgium—Nails and Rivets, 331
Fladgate, Francis—Services as Secretary of London Commission, cxlv
Flameng, Léopold, Paris, France—Engravings, 490
Flameng, M. A., Paris, France—Work of Art, General Report on the Fine Arts, 460
Flambert, Paul (French Court)—Wine, 871
Flatau & Co., A. & W., London & Northampton, Great Britain—Boots, Shoes, &c., 278
Flatow, Mrs. Joseph, Melbourne, Victoria—Flowers of Seaweeds, &c., 532
Flavel & Co., Sidney, Leamington, Great Britain—Kitcheners, 219
Flavelle, Brothers, & Roberts, London, Great Britain—Silver-plated Ware, 219 ; Jewellery and Ornaments, 278 ; Surveying Instruments, &c., 398 ; Chasings, &c., in Silver, 505
Fleming, Amy, Sydney, N.S.W.—Public School Exhibit, 376
Fleming, Geo., Nelson, N.Z.—Collection of Timbers, 804
Fleming, Geo., Nelson, N.Z.—Tables and Boxes of N.Z. Woods, 226
Fleming, Wm., Sydney, N.S.W.—Agent for Canadian Exhibitors, General Report on Machinery, 547, 561, 577, 578, 606, 625, 627
Fleming & Co., A. B., Edinburgh, Great Britain—Printing Inks, 184
Flemming & Co., Ed., Schönheide, Saxony, Germany—Brushware, 346
Fleming & Son, Thos., Halifax, Great Britain—Leather Beltings and Gauge Glasses, 660
Flensburger Actien-Brauerei Gesellschaft, Flensburg, Germany—Lager Beer, 873
Fletcher, David, Sydney, N.S.W.—Loan Works of Art, clvii
Flinsch, Ferdinand, Weesenstein bei Dresden, Germany—Card-boards and Tissue Paper, 298
Flour Mills and Milling Machinery (Class 625), described in General Report on Machinery, 604, *et seq.*, and 627
Floury, Lucien, Paris, France—Water-colour Drawing, 475
Flood, Frederick, Melbourne, Victoria—Chain Pump, 671
Flood, Hon. Edward, M.L.C.—Services as Member of Commission, Sydney International Exhibition, cxlvii
Flueck, G. B., Fluhberg, Brienz, Switzerland—Wood Carvings, 483
Fockink, Wynand, Amsterdam, Netherlands—Liqueurs, 879
Fogl, E., Vienna, Austria—Military and Naval Mercery, 264
Foges, J., Vienna, Austria—Leather, 708
Foley, J. H., R.A., (the Late) London, Great Britain—Sculpture, General Report on the Fine Arts, 455
Follot, F., Paris, France—Paperhangings, 296
Fontana, Giovanni, London, Great Britain—Services as Judge, clii ; Judge, 193 ; Sculpture, General report on the Fine Art, 455 ; Award, 479
Ford, R. G., Melbourne, Victoria—Clothes-boiler, 230 ; Drills and Mining Machinery, 618 ; Awards, 631, 672
Ford, Patrick, Gardener to Hon. J. Marks, M.L.C., Sydney, N.S.W.—Flowers, 1013, 1015, 1018
Ford, William, Melbourne, Victoria—Oil Painting, 484
Ford, Adams, & Co., Sydney, N.S.W.—Services as Custom House Agents, cl
Ford & Co., John, Edinburgh, Great Britain—Cut Crystal Ware, 202 ; Engraving on Glass, 496
Ford & Ogden, Christchurch, N,Z.—Fire Bricks, &c., General Report, 127
Ford & Sons, William, Leith, Great Britain—Whiskey, 876
Forde, W., Sydney, N.S.W.—Services as Judge, clii ; Judge, 470
Forde, Helena, Sydney, N.S.W.—Pen and Ink Sketches, 522

Forest Products (in Classes 613–620)—General Report on Arboriculture, 715, *et seq.*
Forestry—Illustrations of the Art of Planting, Managing and Protecting Forests; Statistics (Class 616), *vide* General Report on Arboriculture, 800, *et seq.*
Formsby, John, Sydney, N.S.W.—Public School Exhibit, 384
Forrest, Miss H., Sydney, N.S.W.—Chalk and Crayon Drawing, 522
Forrestt & Son, London, Great Britain—Coast Life-boat, 684
Förster, Albert, Berlin, Germany—Albums, 271
Förster & Co., Berlin, Germany—Felt Hats, 271
Forster, G. G., Sydney, N.S.W.—Dog, 978
Forster, Wm., Agent General for N.S.W.—Services as Member of London Commission, cxlv
Forster & Sons, Stephen, Sydney, N.S.W.—Metallic Bedsteads, 224; General Report on Machinery, 541; Award, 669
Forsaith, Mrs. Elizabeth M., Parramatta, N.S.W.—Orange Wine, 883
Forsyth, Archibald, Sydney, N.S.W.—Services as Judge, clii; Judge, 211, 906
Forsyth & Sons, J., Sydney, N.S.W.—Leather, 712
Forsyth & Co., Sydney, N.S.W.—Cordage, &c., 348
Forsyth & Co., Brisbane, Queensland—Cordage, &c., 349
Fortescue, W., Glebe, near Sydney, N.S.W.—Public School Exhibit, 377
Fort-street Public School, Sydney, N.S.W.—Awards to, Exhibits from, 375, *et seq.*
Fosbery, Edmund, Inspector General of Police, Sydney, N.S.W.—Services as hon. Member of Committee, cxlviii; Services as Chief of Police Force, cxlix. *Vide* Executive Commissioner's Report for testimony to efficiency of police arrangements, lxxiii
Foster, C. Le Neve, D. Sc., Truro, Cornwall, Great Britain—Geological and Mineralogical Specimens, General Report, 31; Awards, 134, 370
Foster, Rebecca, Quorribolong, N.S.W.—Public School Exhibit, 381
Foster & Sons, M. B., London, Great Britain—Bottled Stout, 876
Foster & Co., Wm. (Ltd.), Lincoln, Great Britain—General Report on Machinery, 548, 554, 559, 591, 621; Awards, Engines, &c., 660; Threshing-machine, 986
Foulonge, Chas. A., Paris, France—Water-colour Drawing, 475
Foulcher, James, Ryde, N.S.W.—Public School Exhibit, 381
Foulger & Sons, John, London, Great Britain—Paints, &c., 184
Fountain, John, Brisbane Water, N.S.W.—Iron Ore, General Report, 26; Fire Clay, General Report, 126; Award, 137
Fourcault, Frison et Cie, Dampremy, Belgium—Glass, 197
Fourdrinier, Hunt, & Co., London, Great Britain—Various descriptions of Papers, 302–333
Fournier, Roanne-Loire, France—Cream of Tartar, 179
Fowler, Mary, Canadian Lead, N.S.W.—Public School Exhibit, 373
Fowler & Co., John, Leeds, Great Britain—Special Medal, clxv; Steam Ploughs, Traction Engines, &c., General Machinery Report, 558, 560, 562, 563, 622, 627; Awards, 986
Fownes Bros. & Co., London, Great Britain—Gloves, 278
Fox & Co., H. S., Philadelphia, U.S.—Toilet Powders, 191
Fox, H. W., Brisbane, Queensland—School Map of Queensland, 435
Fox, Capt. Henry T., Sydney, N.S.W.—Services as Judge, clii; Judge, 683
Fox George, Goulburn, N.S.W.—Jams & Fruits, 852
Foy, W., Sydney, N.S.W.—Japanned-ware, &c., 224; Hollow-ware and Hardware, 338; Bellows, 638
Francati & Santamaria, Rome, Italy—Shell Cameos, 480
Francia, A., Brussels, Belgium—Landscape Painting; General Report on the Fine Arts, 465
Francis, T., Marrickville, N.S.W.—Poultry, 967
Franco-Belgian Felt Hat Co., Belgium—Felt Hats, 266
Francolini, Tito, Florence, Italy—Mosaic Tables, &c., 500
Francotte, Pirlot et Cie, Liège, Belgium—Sheet Brass, 149; manufactures referred to, 148
Frank, W. J., Sydney, N.S.W.—Services as Judge, clii; Judge, 963
Frank, J. C., Stolp, Pomerania, Germany—Amber Jewellery, 272
Frank, James P., Sydney, N.S.W.—Services as Judge, clii; Judge, 629, 632
Frankl, Brüder, Prague, Bohemia, Austria—Grass Seeds, 810
Frankland, C. J., Paterson, N.S.W.—Wine, 883
Franklin F. A., C. E., Sydney, N.S.W.—Services as Officer in charge of Judging, cxlix; Services as Representative of Country District, clvi

Frantzen, Paris, France—Artificial Flowers, 268
Fraser, Daniel, Murrumburrah, N.S.W.—Wheat, 1024
Fraser, Annie M., Grafton, N.S.W.—Public School Exhibit, 377
Fraser, Hugh, M.P.—Services as Member of South Australian Commission, clx ; Marble Mantel-pieces, 228
Frazer, Hon. John, M.L.C.—Services as Member of London Commission, cxlv ; Member of London Committee, cxlvi ; Loan Works of Art, clvii
Free, Addison, Warwick, Queensland—Wheat, 835
Freeman, G., Adelaide, South Australia—Instantaneous Photography, 512
Freeston, J., Sydney, N.S.W.—Jams and Canned Fruits, 852
Freitas, Josephine, Sydney, N.S.W.—Public School Exhibit, 381
Fremlin, A. R., Botany, N.S.W.—Wool, 914
French Exhibitors—Special Medals to, clxiv, clxv
French List of Medals and Diplomas—Complimentary and for Services, clxiii
French Painting and Sculpture, for Report on, *vide* General Report on the Fine Arts, 457
French, Geo., Parramatta, N.S.W.—Tweeds, 253
French, Henry, Sydney, N.S.W.—Public School Exhibit, 374
Fresh Food & Ice Co. (Mort & Co.'s), Sydney, N.S.W.—Refrigerating Machinery ; General Report on Machinery, 616–626 ; Award, 669
Frètè et Cie, Paris, France—Tents, &c., 238
Freudenberg, Carl—Weinheim, Baden, Germany—Calf-skins, 710
Frîc, V., Prague, Bohemia, Austria—Imitation Precious Stones, 264
Friederichsen & Co., L., Hamburg, Germany—Books and Maps, 369
Friedländer & Co., Posen, Germany—Clover and Grass Seeds, 814
Friend, Owen, Sydney, N.S.W.—Public School Exhibit, 374
Fripp, A. D., London, Great Britain—Water-colour Drawing ; General Report on Fine Arts, 454 ; award, 479
Frith & Co., F., Reigate, Great Britain—Photographs, 496
Froescheis, Johann, Nürnberg, Germany—Lead Pencils, &c., 298
Fröhlich & Wolff, Cassel, Germany—Fire-hose, Buckets, &c., 240
Froost, J. Von, Wiesbaden, Nassau, Germany—Liqueur, 873
Frost, Robert, Portland, Victoria—Cuttle-fish Flowers, 532
Fry & Sons, J. S., London, Great Britain—Cocoa and Chocolate, 843
Fry & Co., James, Ballarat, Victoria—Flour, 860
Fry & Co., James, Donald, Victoria—Flour, 861
Fry & Co., James, St. Arnaud, Victoria—Flour, 861
Fryer Mrs. Thos., Goulburn, M.S.W.—Hearth-rugs, 254
Fujiwara Seibei, Osaka, Japan—Ornaments, 282
Fuku-Oka-Ken, Local Government of, Japan—Rice, 821
Fulham, J., Redfern, N.S.W.—Cooking Stoves, 224
Fuller, Dora, Newcastle, N.S.W.—Printing on Porcelain, &c., 522
Fullin, Fanny, Waterloo, near Sydney, N.S.W.—Public School Exhibit, 383
Fulton, Charles, Blenheim, Marlborough, N.Z.—Flax, 917
Fulton, Edgar, Penrith, N.S.W.—Public School Exhibit, 380
Fürderer, Jaegler & Co., Neustadt, Baden, Germany—Regulators and Clocks, 419
Furniture and Objects of General Use in Construction, and in Dwellings (Classes 217, 227)—Exhibits generally referred to, 168 ; Awards for do, 212 to 231
"Furniture Gazette," London, Great Britain—Engravings, 496
Furnival & Sons, Thos., Cobridge, Staffordshire, Great Britain—Earthenware, 202
Furnival & Co., Manchester, Great Britain—Engine and Lithographic Printing Machine; General Report on Machinery, 539 ; Award, 652 ; Vertical Engine, 660
Furse, W., Sydney, N.S.W.—Loan Works of Art, clvii
Fyfe and Robinson, London, Great Britain—Dress-holders, Studs, Buckles, &c., 278

G

Gademann & Co., Schweinfurth, a/M., Germany—White Lead and Colours, 181
Gaillard, Paris, France—Boots and Shoes, 268
Gaisser, Munich, Germany—Oil Painting, 477
Gajani, Egisto, Florence, Italy—Special Medal, clxvi ; Book Cabinet, 223; Carved Brackets, &c., 480

Gallagher, A., Winterbourne, New England, N.S.W.—Mineral Collection; General Report, 66
Gallais, A. C., Paris, France—Nails, 332
Galland Neveu, Vienne (Isère), France—Liqueur, 870
Gallard, Robert, Ryde, N.S.W.—Oranges, 1010
Galt, Peter, Kapunda, South Australia—Flour, 857
Gamberai, Saul, Florence, Italy—Walnut Book-case, 223; Carved Brackets, &c., 480
Gandy, Maurice, Liverpool, Great Britain—Cotton Belting, 661
Gannon, F., St. Peter's, Cook's River, N.S.W.—Dogs, 978
Gannon, Frederick, Sydney, N.S.W.—Services as Judge, clii; Judge, 315, 330
Ganz & Co, Eisengiesserei und Maschinen-Fabrik, Actiengesellschaft in Ofen, Filiale-Ratibor, Germany—Krupp's Shot and Shell, 317; Flour Mill Machinery; General Report on Machinery, 604, 605, 627; Awards, 680
Gardener & Co., New York City, U.S.—Furniture, 229
Gardiner, Walter, Moke Creek, Wakatipu, N.Z.—Copper Ore; General Report, 22
Gardiner, William, Moke Creek, Wakatipu, N.Z.—Copper Ore; General Report, 22
Gardiner, J. H., Hotham, Victoria—Invalid's Chair, 230
Gardiner & Cool, Sydney, N.S.W.—India-rubber Stamps, 348
Gardiner, M., Newtown, near Sydney, N.S.W.—Public School Exhibit, 379
Gardiner, A., Newtown, near Sydney, N.S.W.—Public School Exhibit, 379
Gardiner, John A., Wellington, N.Z.—Services as Judge, clii; Judge, 939
Gardner, James, Birchwood, Southland, N.Z.—Coal; General Report, 106
Garfitt & Sons, Thomas, Highfields, Sheffield, Great Britain—Scythes, Sickles, &c., 982
Garling, Arthur, Springfield, Mudgee, N.S.W.—Rye and Barley, 1024
Garot, L. et E., Verviers, Belgium—Tweeds, 235
Garran, Andrew, LL.D.—Services as Member of Sydney International Exhibition Commission, cxlvii
Garran, Mrs. Andrew, Sydney, N.S.W.—Dog, 978
Garrett & Sons, Richard, Leiston, Suffolk, Great Britain—References to Exhibits in General Machinery Report, 553, 554, 556; Awards for Engines and Boilers, 661; Millstones, 681; Agricultural Machinery, 982, 987
Gartside, Muir & Black, Albert River, Queensland—Sugar, 856
Gascoigne, Annie, Ryde, N.S.W.—Public School Exhibits, 381
Gascoigne, Elizabeth, Ryde, N.S.W.—Public School Exhibit, 381
Gasparoli, Maria, Ixelles, near Brussels, Belgium—Paintings on Porcelain, 473
Gassaw, Lily, Guildford, N.S.W.—Public School Exhibit, 377
Gauchot et Fils, Paris, France—Brushware, 345
Gaudefroy, Charles A., Paris, France—Water-colour Drawing, 475
Gautier, Amand, Paris, France—Oil Paintings, General Report on Fine Arts, 458; Award, 475
Gawler Lime Co., Gawler, South Australia—Lime; General Report, 125
Gawthorne, B. H., Mudgee N.S.W.—Wheat, 825
Gay P., Adelaide, South Australia—Furniture, 228
Gear, A., Wellington, N.Z.—Tinned Soups, 704
Gebhardt & Wirth, Frauenmühle, Sorau, Germany, 240
Gedye, Charles T.—Services as Member of Queensland Commission, clx
Geerken, Stephan, Bremen, Germany—Iron Safe, 333
Geehan, James, Freeman's Reach, N.S.W.—Maize, 825
Gehe & Co., Dresden, Germany—Drugs and Chemicals, 181
Geikie's, Professor, Primer of Geology—Collection Illustrating, 33
Gell, Edward, Lithgow, N.S.W.—Services as Judge, clii; Judge, 210–291
Gelder & Van Zoon, Amsterdam, Netherlands—Bank Note-paper, 309
Gelding, J. & W., Sydney, N.S.W.—Flowers, &c., 1013, 1015
Geneste-Herscher, Paris, France—Military Camp Ovens, 214
Gentsch, Louis, Zeitz, Saxony, Germany, 240
George, Hugh, Sydney, N.S.W.—Services as Judge, clii; Judge, 291, 650
George, A., Sydney, N.S.W.—Model of Yacht, 686
George, J. C., Taranaki, N.Z.—Ornamental Woods, General Report on Arboriculture, 784; Award, 805
George, Thos., Dunedin, N.Z.—Plan, &c., of Dunedin Harbour, 434
Geologische Reichsanstalt K. K., Vienna, Austria—Geological Map of the Austrian Empire, 431
Georgeson, W., Sydney, N.S.W.—Cat, 978
German Mechanical Diagrams and Anatomical Models, General Reference to, 361

GERMAN PAINTING AND SCULPTURE, General Report on the Fine Arts, 461, *et seq.*
GERMAN LIST OF DIPLOMAS AND MEDALS, Complimentary and for Services, cxliv
GERMAN EXHIBITS, SPECIAL MEDALS TO, clxvi
GERMANY, HIS MAJESTY WILLIAM I., EMPEROR OF, cxliv
Gerner, F. K., Adelaide, South Australia—Washing-machine, 228
Gerard, T., Brussels, Belgium—Oil Painting, 473
Gervois, Bordeaux, France—Bottling Machines, 657
Gerhardus, Hermann—Member of Executive Committee at Vienna, Austria, cxliii
GESAMMTVORSTAND DER DEUTSCHEN KUNST-GENOSSENCHAFT, Berlin, Germany—Services, cxliv ; Special Medal, clxvi ; Collection of Paintings and other Works of Art, 477
Geyer, H., Hay, N.S.W.—Photographs, 505
Gey, August, Zschopau, Saxony, Germany—Raspberry Vinegar, 814 ; Preserved Fruits, &c., 849
Gibb, J., Christchurch, N.Z.—Oil Painting, 483
Gibb & Son, James, Wallendbeen, N.S.W.—Sheep, 956
Gibbs, W. R., Buckinbong, near Narrandera, N.S.W.—Flagstones ; General Report, 118
Gibbs, Shallard, & Co., Sydney, N.S.W.—Printing, Stereotypes, Electrotypes, and Account Books, 309 ; Photo-Lithography, and Photo-Engraving, 505 ; Printing Plant, General Report on Machinery, 613 ; Type-writer, 653
Gibbes, Augustus, Yarralumla, Queanbeyan, N.S.W.—Sheep, 956
Gibson, P. L., Paddington, near Sydney, N.S.W—Dog, 978
Gibson, James, Bellevue, Cleveland, Tasmania—Sheep, 962
Gibson, Wm., Hobart Town, Tasmania—Wheat, 838 ; Flour, 859
Gibson & Son, Wm., Scone, Tasmania—Wool, 922, 923
Gibson, A. F., Goulburn, N.S.W.—Horse, 933
Gibson, Son & Co., John, Philadelphia, U.S.—Spirits, 901
Giblin, Annie W., Sydney, N.S.W.—Lacework Fan, 522
Gick Miss N., Albury, N.S.W.—Lace-work, 522
Gifford, Isaac, Spring Creek, Marlborough, N.Z.—Barley, 831
Giffin, Ada, Paddington, near Sydney, N.S.W.—Dog, 978
Giglioli, A., Leghorn, Italy—Liqueur, 878
Gilbers, Georg, Dresden, Germany—Architectural Designs, 493
Gilbert, Sir John, R.A., Blackheath, Kent, Great Britain—Oil Painting and Water-colour Drawings ; General Report on the Fine Arts, 451, 454 ; Awards—Water-colour Painting, 479 ; Oil Painting, 479
Gilbert, Victor, Wideville (Seine-et-Oise), France—Wool, 910 ; Sheep, 955
Gilbert, Joseph, Barossa Ranges, South Australia—Wines, 896, 897
Gilberthorp, Julia, Sydney, N.S.W.—Public School Exhibit, 375
Gilchrist, T., Sydney, N.S.W.—Pigeons, 967
Gilfillan, Wood, & Co., Singapore, Straits Settlements—Tapioca and Sago, 858
Gilmour, Robert, Lake Hayes, Arrow Flat, N.Z.—Oatmeal, 854
Gilmore, Hon. Geo., M.E.C.—Services as Member of Tasmanian Commission, clxii
Gillies, A. W., Sydney, N.S.W.—Services as Judge, clii ; Judge, 263
Gillespie, C., Goulburn, N.S.W.—Boots and Shoes, 285 ; Leather, 712
Gillott, Joseph, Birmingham, Great Britain—Steel Pens, 303
Gill, H. W., Copeland, Barrington, N.S.W.—Gold Quartz; General Report, 11
Gilpin & Co., William, sen., Cannock, Staffordshire, Great Britain—Edge-tools, &c., 334 ; Agricultural Implements and Tools, 987
Gillard, Joseph, Norwood, South Australia—Wines, 897
Giorza, Paolo—Services as Director of Music, cl
Gipps, F. B., Sydney, N.S.W.—Rock Drill, 631
Giraud Frères, Blidah, Algeria (French Court)—Wheat, 813 ; Flour, 848
Giraud L., Sydney, N.S.W.—Confectionery, 852
Girerd—Services as Member of Committee at Paris, cxliii
Girard—Services as Member of Committee at Paris, cxliv
Gist & Spiritus Fabriek de Nederlandsche, Delft, Netherlands—Oils of Maize, 187 ; Maize Spirit, 879
Giuli, A., Pisa, Italy—Olive Oil, 850
Gladstone Presbyterian Church Committee, Gladstone, Queensland—Marble Font, General Report, 112 ; Award, 143
Glanmire (North), Gold Mining Co., Gympie, Queensland—Quartz Specimens, General Report, 14
Glaser & Kindermann, Leipzic, Germany—Table Covers, 241

Glaser, Hermann, Hernals-Vienna, Austria—Match and Tobacco Boxes, 264
Glassbrook, James, Double Bay, near Sydney, N.S.W.—Mule, 934
Glashütte Stolberg, Stolberg near Aix-la-Chapelle, Germany—Table Glassware, 199
Glebe Public School, Sydney, N.S.W.—Awards to Exhibits from, 376
Glebe Church of England Certified Denominational School—Award to Exhibits from 377
Gledhill, Thomas, Golcar, near Huddersfield, Great Britain—Tweeds, 247
Gledhill & Co., E. R., Sydney, N.S.W—Hats and Caps, 285
Glendale Estate, Nilagiri Hills, India—Tea, 818
Glenck & Weisse, Leipzic, Germany—Woollen Goods, 241
Gleeson, Margaret, Cooyal, N.S.W.—Public School Exhibit, 374
Glenn, James, Waterloo, near Sydney, N.S.W.—Dogs, 979
Glennie, John, Gresford, N.S.W.—Wines, 883
Glibert et Cie, A., Brussels, Belgium—Kitchen Utensils, &c., 213
Globe Nail Co., Boston, Massachussets, U.S.—Horse-shoe Nails, 342
Glover C. A., Franklin, Tasmania—Hone Stones, General Report, 129; Award, 144
Glover & Co., Wortley, near Leeds, Great Britain—Saw Sharpening Machine, 634
Glover & Co., George, London, Great Britain—Gas Meters, &c., 395
Glycerine, General Remarks of Judges on, 176
Gnocchi, G. Milan, Italy—Writing Ink, 187
Gnüchtel & Co., F. A., Lauter, Saxony, Germany—Japanned Kitchen Utensils, 215; Wooden Baskets, 346
Gobelins Tapestry—Referred to in General Fine Arts Report, 460
Goddard, A., Paddington, near Sydney, N.S.W.—Public School Exhibit, 380
Goddard, D., Paddington, near Sydney, N.S.W.—Public School Exhibit, 380
Goddard, E., Paddington, near Sydney, N.S.W.—Public School Exhibit, 380
Godell Manufacturing Co., Antrim, New Hampshire, U.S.—Seed-sowers, 995
Godfrey, L. J., N.Z.—Carving in Stone, 483
Goff, Dora, Sydney, N.S.W.—Public School Exhibit, 374
Göhring & Böhme, Leipzic, Germany—Table-covers, 240
Gold, Henry, London, Great Britain—Dogcart, 353
Gold Ores, Exhibits of—General Report, 5, *et seq.*; do., Reef and Alluvial, 11, *et seq.*; do., Alluvial Specimens (N.S.W.), 38; do., Auriferous Quartz Specimens, 39, *et seq.*; do., Victorian Specimens, 88, *et seq.*; Tasmanian Specimens, 82. (Specimens from other Colonies will be found under the head of the respective exhibitors.)
Goldie, Andrew, Sydney, N.S.W.—New Guinea Dresses and Ornaments, 285
Golding, Davis, and Co. (Limited), Widnes, Lancashire, Great Britain—Bleaching Powder, &c., 184
Golding, Alfred, London, Great Britain—Boots and Shoes, 271
Golding & Co., Boston, Mass., U.S.—Printing Presses, 654
Goldsborough, Sarah, Sydney, N.S.W.—Public School Exhibit, 375
Goldstein, A., Sydney, N.S.W.—Waterproof Oilskin Clothing, 285
Goldsworthy, Hon. R. T., Colonial Secretary of Western Australia, clxiii
Goliasch & Co., G., Berlin, Germany—Tobacco and Cigarette Boxes, 215
Gomes, B. P., Ceylon—Precious Stones, General Report, 29; Award, 132
Gomez, Joseph, Rangitikei, N.Z.—Essence of Cloves, 893
Gontard, Marteau, et Cie., Paris, France—Fastenings for Travelling articles, 268
Gontran, Mdlle., Paris, France—Fans, 268
Gooch, H. M., Melbourne, Victoria—Wines, 903
Goodall & Son, Charles, London, Great Britain—Stationery exhibits, 303, 457
Goodall, E. A., London, Great Britain—Water-colour Drawings; General Report on Fine Arts, 455; Award, 479
Goodall, F., R.A., Harrow Weald, Herts, Great Britain—Landscape Paintings; General Report on Fine Arts, 451; Award, 479
Goodchap, Charles A.—Services as Commissioner for N.S.W. Railways, cxlix
Goodlet & Smith, Sydney, N.S.W.—Pottery-ware, 209
Goodman, A. C., Sydney, N.S.W.—Dog, 979
Goodman, F., Sydney, N.S.W.—Tuscan Hats, 285
Goodman, F. N., Sydney, N.S.W.—Dog, 979
Goodman, F. W., Sydney, N.S.W.—Dog, 979
Goodman, T., Southend, Essex, Great Britain—Architectural Designs, 496
Goodwin & Co., Sydney, N.S.W.—Silvered Plate-glass, 209
Goosens, Neerman, Ghent, Belgium—Clothing, &c., 266
Göpfert, Eduard—Services as Member Executive Committee at Vienna, Austria, cxliii

Gordon, Henry, Oswald, N.S.W.—Public School Exhibit, 379
Gordon, Jessie, Paddington, near Sydney, N.S.W.—Public School Exhibit, 380
Gordon, J., Glen Gordon, Bowen, Queensland—Maize, 835
Gordon, P. R., Brisbane, Queensland—Services as Judge, clii; Judge, 929
Gordon, W., Wanganui, N.Z.—Illumination, 510
Gore & Co., Yandilla, Queensland—Wool, 919
Gore, Mary, Martha, and Wilhelmina, New England, N.S.W.—Wax Models, 522
Gorham Manufacturing Co., Providence, Rhode Island, U.S.—Special Medal, clxvi; Silver Plate, 229, 513
Gorman, John, Macdonaldtown, N.S.W.—Swine, 957
Gosnell & Co., John, London, Great Britain—Soap and Perfumery, 184
Gospel Oak Iron and Galvanized Iron Wire Co., Tipton and Wolverhampton, Great Britain—Galvanized Iron, Wire, and Goods, 155
Gosper, J. T., Windsor, N.S.W.—Maize, 825
Gostellow, E. E., Sydney, N.S.W.—Public School Exhibits, 375
Gostling, J. C. & Co., London, Great Britain—Cement, General Report, 122
Goto Shozaburo, Yokohama, Japan—Cloisonné-ware, 501
Goulburn Public School, N.S.W.—Awards to Exhibits from, 377
Gould, John, Sydney, N.S.W.—Services as Judge, clii; Judge, 193
Gould, R., Longford, Tasmania—Granite, General Report, 113
Goulding, Carrie, Sydney, N.S.W.—Public School Exhibit, 376
Goulding, Elizabeth, Ryde, N.S.W.—Public School Exhibit, 381
Goulmy, P. V., s'Hertogenbosch, Netherlands—Extract of Meat, 327; Preserved Fish, Soup, &c., 702; Truffles and Mushrooms, 822
Goupil et Cie., Paris, France—Engraving on Copper, 490
Gover, H. C., London, Great Britain—Dust and Draught Shield and Carriage Window, 675
Government Bombay Presidency, India—Services, cxlvi
Government of Ceylon—Precious Stones, General Report, 29; Award, 132; Mats, 237; Bamboos, 716; Timber, 802; Grain, 811
Government of Japan, Tokio, Japan—Firemen's Hooks and Knives, 338
Government of Madras, Madras, India—Services, cxlvi; Indigo, 187; Mats, 252; Cinchona Barks, &c., 327; Horse Gram, 818—*Vide* Madras Presidency
Government of the North-west Provinces and Oudh, India—Services, cxlvi; Shawls, Carpets, and Cotton goods, 252; Inlaid Metal-work, 500—*Vide* North-west Provinces, &c.
Government of Ontario, Canada—*Vide* Ontario
Government of Queensland, Brisbane, Queensland—Services, clx; Specimens of Timbers of Colony, General Report on Arboriculture, 756; Awards, 805
Government of Selangor, Straits Settlements—Resins, General Report on Arboriculture, 797; Award, 806
Government of Straits Settlements—*Vide* Straits Settlements
Government of the United States—*Vide* United States' Government
Government Printing Office, Adelaide, South Australia—Bookbinding, 313
Government Printing Office, Brisbane, Queensland—Bookbinding, 312, 313
Government Printing Office, Sydney, N.S.W.—Special Medal, clxvi; General references to Exhibits, 172, 294; Awards—Printing, Bookbinding and Account Books, 310; Photographs and Photographic Processes, 506—*Vide* also Reports of the Executive Commissioner (lxxii) and Secretary (cxxxii)
Government Printing Office, Tokio, Japan—Papers, &c.; General reference, 172; Awards for Papers, &c., 308—*Vide* Insatsu Kioku
Government, State of Perak, Straits Settlements—Titaniferous Sand, 19; Award (Tin Ores), 144; Mats, 256; Tin Ornaments, 240
Gow, Isabella, Balmain, near Sydney, N.S.W.—Public School Exhibit, 372
Gow, John, Mulgrave, N.S.W.—Wines, 883
Gowhatty Tea Estate, Assam (Indian Court)—Teas, 819
Gowing & Kelly, Bega, N.S.W.—Sawn Timber; General Report on Arboriculture, 740; Award, 803—*Vide* Corrigenda
Gowing, D., Bega, N.S.W.—Maize, 825
Goyder, G. W., Adelaide, South Australia—Services as Member of South Australian Commission, clx; Iron Ore, General Report, 29; Maps of Explorations, 435
Goyne, John & Co., Sandhurst, Victoria—Stamper Gratings, 258
Gracie, William, Hobart Town, Tasmania—Hops, Malt, and Barley, 839; Ale, 900
Grädler and Hartwig, Gothaer-Wurst & Rauchfleischwaarenfabrik, Albertsbad, Gotha, Germany—Tinned Sausages, 702

Grafton Public School, N.S.W.—Awards to Exhibits from, 377
Graham, Elizabeth, Campbelltown, N.S.W.—Public School Exhibit, 373
Graham, Winifred, Woonona, N.S.W.—Public School Exhibit, 385
Graham, J. A., Christchurch, N.Z.—Cheese, 704
Graham, Joseph, Sydney, N.S.W.—Services as Judge, clii ; Judge, 715
Graham, J. & R., Woodville, N.S.W.—Horse, 934
Graham, Emlen, & Passmore, Philadelphia, Penn., U.S.—Lawn-mowers, 995.
Graham & Co., Sydney, N.S.W.—Special Medal, Horticultural Section, clxvi ; Plants, 1013, 1016, 1017
Graham & Haines, New York City, U.S.—Axes, Scythes, &c., 342
Granleese, Eliza, Sydney, N.S.W.—Public School Exhibit, 375
Grant, Stephen, London, Great Britain—Rifles and Guns, 319
Grant & Watt, Aberdeen, N.S.W.—Polished Granite, General Report, 113 ; Award, 134
Grant, O. D., Thames, N.Z.—Biscuits, 854
Granville, Earl of, K.G.—Services as Member of Royal Commission in London, cxlv
"Graphic," London, Great Britain—References to exhibit, 293, 362, 456 ; Award for Printing, 303 ; Engravings and Chromo-lithographs, 456
Grässer, Louis, Zwickau, Saxony, Germany—Gloves, 272
Graves, H. Warden, Taunton, Mass., U.S.—Services as Judge, clii ; Judge, 862.
Gravier, Clement, Nîmes-Gard, France—Carpets, 238
Grawitz & Co., Stettin, Germany—Cement, General Report, 121 (*vide* Toepffer, Grawitz & Co.)
Gray, W. F., Adelaide, South Australia—System of South Australian School ventilation, 228, 388
Gray, Fleming, & Co., Invercargill, N.Z.—Barley and Wheat, 831 ; Oatmeal, 854
Gray, Henry, Sydney, N.S.W.—Services as Judge, clii ; Judge, 963
Gray, Alex. J., Sydney, N.S.W.—Poultry and Pigeons, 967, 968 ; Dog, 979.
Gray, H., Sydney, N.S.W.—Poultry, 968
Gray, Mrs. Alex. J., Sydney, N.S.W.—Cat, 979
Gray, Robert—Services as Member of London Committee, cxlvi
Grayling, W. Irwin, Taranaki, N.Z.—Tanning material, 189
Great Britain, Painting and Sculpture of—General Report on the Fine Arts, 447, *et seq.*
Great Britain—List of Diplomas and Medals—Complimentary and for services, cxlv
Great Britain—Exhibitors of—Special Medals to, clxv
Great Cobar Copper-mining Co., Sydney and Cobar, N.S.W.—Copper Ores, General Report, 21 ; Awards, 137, 158
Greaves, William, Leeds, Great Britain—Lithographic Printing-machine, 652
Grébert Borgnis, J. B., Paris, France—Fur Cloaks, &c., 268
Greedy, Albert, Lochinvar, N.S.W.—Public School Exhibit, 378
Green, Bessie, Balmain, near Sydney, N.S.W.—Public School Exhibit, 372
Green Island Coal Co. (Limited), Dunedin, N.Z.—Coal, General Report, 106
Green, Henry Thomas, Dunedin, N.Z.—Models of Canoes, 687
Green, William P.—Services as Member of Tasmanian Commission, clii
Green, W. H., Wollongong, N.S.W.—Coal, General Report, 100
Greene & Son, Henry, London, Great Britain—Gas Chandeliers, &c., 219
Greener, W. W., London and Birmingham, Great Britain—Guns, 319
Greenfield & Stewart, Wellington, N.Z.—Mantelshelf of N.Z. Woods, 226
Greenland, W. T., Melbourne, Victoria—Model of Boat, and Swivel Rowlocks, 688
Greenlees Brothers, London, Great Britain—Whiskey, 876
Greenleese, Eliza, Sydney, N.S.W.—Public School Exhibit, 375
Greenway, A., Sydney, N.S.W.—Dog, 979
Greenwood & Battley, Leeds, Great Britain—Printing-machine, 652
Greer, E., Albury, N.S.W.—Wines, 883
Greer & Ashburner, Melbourne, Victoria—Wirework, 160
Greeves, Edward G., Barryalloak, Skipton, Victoria—Wool, 927
Gregan & Co., Sydney, N.S.W.—Manuscript Copying Tablets and Inks, 188; India-rubber Stamps, 348
Gregg & Co., William, Dunedin, Otago, N.Z.—Coffees, 831
Gregory, E. L., Adelaide, South Australia—Macramé Lace, 529
Gregory & Co., H. P., Sydney, N.S.W., Agents for American Machinery Exhibitors—General Report on Machinery, 572, 583, 585, 586, 587
Gregory, James R., London, Great Britain—Mineral and Geological Collections, &c., General Report, 33 ; Awards, 134, 370

Gregory, A. C., C.M.G., Brisbane, Queensland—Specimens of Queensland Coal, General Report, 107 ; Award, 143
Gregory & Bramall, Sheffield, Great Britain—Tools, 335 ; Saw Files, &c., 635
Greig, Agnes, Sydney, N.S.W.—Public School Exhibit, 376
Greta Coal Co., Greta, N.S.W.—Coal, 137
Grether & Co., Freiburg, Baden, Germany—Hose-couplings, 658
Greve & Uhl, Osterode am Harz, Germany—Rugs, &c., 240
Greve & Quentin, Osterode am Harz, Germany—Rugs, &c., 240
Greville, W. C., Bathurst, N.S.W.—Services, clvi
Grierson, Robert W.—Services as Assistant Accountant to Sydney International Exhibition Commission, cxlix
Griffin, Mrs. D., senr., Wollongong, N.S.W.—Shell Flowers, 522
Griffin & Sons, John J., London, Great Britain—Process of Water Analysis, 395
Griffith, J. V., Sydney and Maneroo, N.S.W.—Hone-stones, 128 ; Award, 137
Griffiths, J., Newtown, near Sydney, N.S.W.—Public School Exhibit, 379
Griffiths, S. S., Wellington, N.Z.—Sugar-boiling appliances, General Report on the Machinery Department, 612 ; Awards, Confectionery and Biscuits, 854
Grillon, M'lle, Versailles, France—Artificial Flowers, 268
Grimaud, Chartier et Marteau, Paris, France—Playing Cards, 297
Grimme, Natalis, & Co., Comm. Actiengesellschaft, Brunswick, Germany—Sewing-machines, 647
Grisbrook, Maud, Sydney, N.S.W.—Public School Exhibit, 376
Gritzner & Co., Durlach, Baden, Germany—Sewing-machine Cabinets, 215 ; Sewing-machines, 647
Grob, Conrad, Munich, Germany—Genre Pictures, General Fine Arts Report, 463 ; Award, 477
Groom, Benjamin, Brunswick, Melbourne, Victoria—Hand Tobacco-cutter, 640
Groom & Wedd, Brunswick, Victoria—Binder-head (Agricultural Machinery), 997
Grossberger & Kurz, Nürnberg, Germany—Lead Pencils, 298
Grosse, Frederick, Strathfieldsaye, South Australia—Wines, 903
Grossmann & Co., Maximilian, Vienna, Austria—Timbers and Veneers, General Report on Arboriculture, 781 ; Award, 802
Groth, Hermann H., Sydney, N.S.W.—Services as Judge, clii ; Judge, 291
Grove, George William, Leamington, Great Britain—Kitchen-ranges, 219
Grubb Brothers, Hobart Town, Tasmania—Wattlebark, General Report on Arboriculture, 795 ; Award, 806
Gruber & Reeb, Strasburg, Alsace, Germany, 873
Grünfeld, Maximilian, Brünn, Moravia, Austria—Horse Leather, 708
Grünfeld, J., Berlin, Germany—Genre Picture, General Fine Arts Report, 463
Grüning, Hermann, Vienna, Austria—Bent-wood Furniture, 212
Grunsell, Thomas, Goulburn, N.S.W.—Poultry, 968 ; Fruits, 1025
Grus, Paris, France—Musical Instruments, 424
Gruson, H., Buckau-Magdeburg, Germany—Cast-iron Manufactures referred to, 148 ; Award, 153 ; Flour Milling Machinery, General Report on Machinery, 606 ; Governor for Steam-engines, 658 ; Spice and Coffee Mills, 680
Grut Père et Fils, Paris, France—Stays, 268
Guerard, Eugène Von, Melbourne, Victoria—Oil Painting, 484
Guerin, Annie, Sydney, N.S.W.—Wool-work, 522
Guerin Brècheux, Paris, France—Fans, 268
Guerlain, Paris, France—Perfumery, 179
Guesdon, Wm. A.—Services as Member of Tasmanian Commission, clxii
Guest & Co., T. B., Melbourne, Victoria—Biscuits, &c., 861
Guichard et Cie, Simon, Paris, France—Barometers, &c., 391
Guignard, Gaston, Paris, France—Oil Painting ; General Report on the Fine Arts, 460 ; Award, 475
Guilfoyle, Wm. R., Director, Botanic Gardens, Melbourne, Victoria—Collection of Australian Woods, giving local and Botanical names, and economic uses ; General Report on Arboriculture, 764, *et seq.* ; Vegetable Extracts, General Report on Arboriculture, 798, 799 ; Award, 807
Guildford Public School, N.S.W.—Awards to Exhibits from, 377
Guinet et Cie, A., Lyons, France—Silks, 260
Guise, James, St. Leonards, near Sydney, N.S.W.—Public School Exhibit, 382
Guittard & Co., E., San Francisco, California, U.S.—Spices, &c., 840 ; Chocolate and Cocoa, 859.

Gulf Tin Lode Mining Co., Sydney, N.S.W.—Tin Ore, General Report, 18; Award, 137
Gulgong Public School, N.S.W.—Awards to Exhibits from, 377
Gullen Flat Public School, N.S.W.—Awards to Exhibits from, 378
Gulliver, T. A., Thornborough, Queensland—Native Birds (Taxidermy), 386
Gulliver, Ettie, Wickham, N.S.W.—Public School Exhibit, 384
Gully, John, Nelson, N.Z.—Water-colour Paintings, 483
Gum & Spence, Lawrence, Tuapeka, Otago, N.Z.—Pipe-clay, General Report, 127; Award, 141
Gums, Resins, Caoutchouc, Gutta Percha, Vegetable Wax (Class 616)—General
Gunma Ken., Local Government of, Japan—Cocoons, Raw Silk, 260
Report on Arboriculture, 795, *et seq.*
Gunn, Donald, Pikedale, Queensland—Copper and Silver Ores, General Report, 23; Wool, 920
Gunning Public School, N.S.W.—Awards to Exhibits from, 378
Günther, J., Brussels, Belgium—Pianos, 403
Günther, Louise, Brussels, Belgium—Paintings on Porcelain, 473
Gurney, Professor T. T., Sydney, N.S.W.—Services as Judge, clii; Native Dresses from Santa Cruz Islands, 285; Judge, 300, 326
Güterbock, L., Berlin, Germany—Oil Painting, 475
Guthrie, R., Dunedin, N.Z.—Ornamental Timbers; General Report on Arboriculture, 784; Awards, 804
Guthrie & Co., Singapore, Straits Settlements—Rattans, 761; Resins, 797; Award, 806; Spices, 838; Tapioca and Sago, 858
Guthrie, John, Brisbane, Queensland—Tin Ores, General Report, 19
Guthrie G. D., Sandhurst, Victoria—Stoneware and Terra-cotta, 210; Filters,230
Guthrie & Larnach, Dunedin, N.Z.—Furniture, &c., 226
Gutknecht, J. W., Nürnberg, Germany—Lead Pencils, 298
Guy, J., Bateman's Bay, N.S.W.—Silver Ores, General Report, 11
Guyatt George, Sydney, N.S.W.—Surgical Instruments, &c., 327
Gwynne, John & Henry, Hammersmith, London, Great Britain—Pumps; Reference to exhibits in General Machinery Report, 574; Award, 661
Gypsum, Crystallized, Bouraïl, New Caledonia—General Report, 35

H

Haanen, Edouard, Verviers, Belgium—Eau-de-Cologne, 178
Haag, Carl, London, Great Britain—Water-colour Drawing, General Report on the Fine Arts, 454; Award, 479
Haag, T., Vienna, Austria, Oil Painting, 472
Haarman & Reimer, Holzminden a/d Weser, Germany—Flagstones, 118; Vaniline, 181
Haas, Gebrüder, Lambrecht, Bavaria, Germany—Tweeds, 240
Haast, Professor Julius Von, Christchurch, N.Z.—Building Stones, General Report, 115; Ethnological Collection, 387; Timbers, General Report on Arboriculture, 759; Award, 804
Hackworthy, Arthur, Wickham, N.S.W.—Public School Exhibits, 384
Hackett, W.—Services as Member of South Australian Commission, clxi
Hacket, T. R., N.Z.—Services as Judge, clii; Judge, 3
Hadwen & Co., Wm., Manchester, Great Britain—Frillings, 278
Hadkins, Douglas, Sydney, N.S.W.—Ice-chests, 669
Hadfield Steel Foundry Co., Sheffield, Great Britain—Special Medal, clxv; Cast Steel Wheels, 675
Hadfield, T., Carr's Creek, N.S.W.—Maize, 825
Hæmatite Paint Co., Nelson, N.Z.—Hæmatite Ore, General Report, 26; Hæmatite Ores and Paint, award 141
Hæmatite Iron Co., Nelson, N.Z.—Iron, 158
Haenel, C. G., Suhl, Saxony, Germany—Breech-loaders, 317
Haenel & Sohn, F., Naumburg a/S, Germany—Grand Piano, 425
Haghe, Louis, London, Great Britain—Water-colour Painting, General Report on the Fine Arts, 455; Award, 479
Hahn, A. & R., Cassel, Germany—Levelling Instruments, 392, 401
Haigh, Lewis, Sydney, N.S.W.—Services as Judge, clii; Judge, 907
Haining & Schimel, Sydney, N.S.W.—Carriages, Wheels, &c., 355

Halcombe, A. F., Manawatu, N.Z.—Timbers, 785 ; Award, 804
Hale, P., Clifton, N.S.W.—Coal, General Report, 104
Hale, Thomas, Edinburgh, Great Britain—Wood Decorations, 219
Hall, G., Lithgow Valley, N.S.W.—Building Stone, General Report, 114 ; Award, 137
Hall & Co., Ralph, Manchester, Great Britain—Velvets, Cords, &c., 247
Hall, Eugènie, Camperdown, N.S.W.—Public School Exhibit, 373
Hall, John & Edward, Dartford, Kent, Great Britain—Engine, Boiler, &c., General Report on Machinery, 549-607 ; Awards, 661 ; Weighing Machine, 681
Hall, C. Henry, Berlin, Germany—Pulsometers, General Report on Machinery, 575 ; Award, 658
Hall & Sons, G., Norwood, South Australia—Cordials, Ærated Waters, &c., 897
Halley, Jules, Durant, France—Photographic Landscapes, 487
Halley & Ewing, Wellington, N.Z.—Door of N.Z. Pine, 226
Halloran, W. J., Burwood, N.S.W.—Dog, 979
Halloran, Henry, C.M.G.—Services as Member of Sydney International Exhibition Commission, cxlvii
Halls, Edward, Sydney, N.S.W.—Services as Judge, clii ; Judge, 963
Hallstroem, F., Nienburg, a/d, Saale, Germany—Distilling Apparatus, General Report on Machinery, 612 ; Award, 680
Halse, George, London, Great Britain—Marble Statuettes, General Report on the Fine Arts, 456 ; Award, 479
Halswelle, Keeley, A.R.S.A., London, Great Britain—Special Medal, clxv ; Oil Painting, General Report on the Fine Arts, 452; Award, 479 ; Water-colour Pictures, General Report on the Fine Arts, 454
Hamal-Mouton, Liège, Belgium—Portable Forges, 633
Hamblet, Joseph, West Bromwich, London, Great Britain—Fire-bricks, &c., 202
Hamburger, Jane, Waverley, N.S.W.—Public School Exhibit, 383
Hamilton, Florence, Guildford, N.S.W.—Public School Exhibit, 377
Hamilton, Wm., Brighton, Great Britain—Furniture, 219
Hamilton, Emonie, Sydney, N.S.W.—Public School Exhibit, 384
Hamilton, G., Sydney, N.S.W.—Poultry and Pigeons, 968
Hammer, George M., London, Great Britain—School Furniture, 219, 370
Hammer, John, Adelaide, South Australia—Sauces, 837
Hammond, Thos. W., Junee, N.S.W.—Services as Judge, clii ; Judge, 907, 951
Handels & Gewerbe Kammer (Chamber of Commerce), Brunn, Moravia, Austria—Services, cxlii ; Special Medal, clxiv ; Tweeds, 234
Hancock, A., Burwood, N.S.W.—Public School Exhibit, 373
Hancock Inspirator Co., London, Great Britain—Inspirators and Pump, and Injector 661
Händel, A. M., Leipsic, Germany—Kid Gloves, 272
Hang Shucho, Osaka, Japan—Wrapping Paper, 308
Hanks, J. G., Sydney, N.S.W.—Services as Judge, clii ; Judge, 845
Hanlon, Edward (Gardener to Mr. E. Knox), Sydney, N.S.W.—Plants and Flowers, 1014, 1018
Hanna-Malzfabrik, Kremsier, Moravia, Austria—Malt, 810
Hannan, Ellen, Sydney, N.S.W.—Public School Exhibit, 383
Hannes, Theodor, Dresden, Germany.—Straw Bags, 272
Hannington, Mary, Sydney, N.S.W.—Public School Exhibit, 374
Hannoversche Ultramarin Fabrik, Linden, Hanover, Germany—Ultramarine Colours, 181
Hansen, C., Copenhagen, Denmark—Rennet, &c., 983
Hanson, Job, Sydney, N.S.W.—Statues and Monuments, 506
Harber, Mary, Marrickville, N.S.W.—Public School Exhibit, 379
Harbottle, Biddulph, & Alsop, Sydney, N.S.W.—Wines, 884
Harburger Gummi-Kamm Co., Harburg am Elbe, Germany—Vulcanized India-rubber Goods, 272-346
Harbutt, Thos. J., Auckland, N.Z.—Brushware, 349
Harcourt & Sons, R. & C., Birmingham, Great Britain—Patent Sash Chain, 219 ; Ornamental Fittings, &c., 335
Hardick, Chas. B., Brooklyn, New York—Pumps, General Report on Machinery, 572 ; Steam Pump, 670
Hardie, J., Sydney, N.S.W.—Biscuits, 852
Hardie, C. A. C., South Rakaia, N.Z.—Ferns, 1008
Harding, H., Sydney, N.S.W.—Services as Judge, clii ; Judge, 953

Hardouin, C., Penang, Straits Settlements—Tea, 838
Hardstaff, George, Paddington, near Sydney, N.S.W.—Dog, 979
HARDWARE, EDGE-TOOLS, CUTLERY, AND METALIC PRODUCTS (Group of Classes 279 to 283); Exhibits referred to, 172; Awards, 331 to 343
Hardwick, Mrs. V., Sydney, N.S.W.—Water-proof Clothing, 285
Hardy, Arthur, M.P., Mount Lofty, South Australia—Lead Ores, General Report, 24
Hardy Brothers, London, Great Britain—Special Medal, clxv; Silver and Electro Plate, Awards, 219, 496; Diamond Jewellery, &c., 278
Hardy, T. P., Brisbane, Queensland—Bookcase, 227
Hardy Patent Pick Co., Sheffield, Great Britain—Picks, &c., 335
Hardy, Thomas, Bankside, South Australia—Dried Fruits, 857
Hardy, Thomas, Monalta, South Australia—Wines, 897
Hardy, S. J., Sydney, N.S.W.—Loan of Ethnological Exhibits, clvii
Hargitt, E., London, Great Britain—Oil Painting, General Report on the Fine Arts, 452; Awards for Oil and Water-colour Pictures, 479
Harkort, J. C., Duisburg, Germany—Manufactured Iron, &c., reference to, 148
Harley & Co., George, Wolverhampton, Great Britain—Locks, 335
Harley & Sons, Nelson, N.Z.—Malt and Malting Barley, 831
Harley, Thos. H., Nelson, N.Z.—Hops, 831
Harnett, Laurence Joseph, Sydney, N.S.W.—Services as Steward, clii; Steward in Judging, 929, 939; Exhibit (Horse), 934
Harnett, R., Sydney, N.S.W.—Building Stone, General Report, 114; Award, 137
Harnwell, Wm., Melbourne, Victoria—Colonial Ovens, 230
Harper & Co., John, Willenhall, South Staffordshire, Great Britain—Cabinet Ironmongery, 353
Harper, W., Tamworth, N.S.W.—Farriers' Tools, 339
Harper, Fanny, Sydney, N.S.W.—Public School Exhibit, 374
Harper, H. A., London, Great Britain—Water-colour Painting, General Report on the Fine Arts, 455
Harper & Co., R., Sydney, N.S.W.—Spices, Coffee, Mustard, and Rice, 825, 826; Meals, Cocoa, Chocolate, &c., 852, 853
Harper, John, Paddington, N.S.W.—Dog, 979
Harper & Moores, Stourbridge, Staffordshire, Great Britain—Fire-bricks, &c., 202
Harrach's Glasfabrik, Graf Von., Neuwelt-Tannwald, Bohemia, Austria—Special Medal, clxiv; Glass-ware, General reference, 168; Award, 194
Harrang, Eugene, Sydney, N.S.W.—Public School Exhibit, 377
Harrap, Alfred—Services as Member of Tasmanian Commission, clxii
Harrild & Son, London, Great Britain—Printing Machinery, 652
Harris & Sons, Jonathan, Cockermouth, Cumberland, Great Britain—Linen Thread, 274
Harris & Son, J., Melbourne, Victoria—Boots and Shoes, 290
Harris, Charles, Woodville, N.S.W.—Public School Exhibit, 385
Harris, Nellie, Woodville, N.S.W.—Public School Exhibit, 385
Harris, Frank, Woodville, N.S.W.—Public School Exhibit, 385
Harris, Geo. H., Birmingham, Great Britain—Chain Pump, 662; Sausage Choppers, Chaff-cutters, &c., 987
Harris, Wm., North Annandale, Petersham, N.S.W.—Cattle, 944
Harris, Miss E., Nelson, N.Z.—Water-colour Paintings of New Zealand Flowers and Berries, 1008
Harrison, G. K., Stourbridge, Staffordshire, Great Britain—Fire-bricks, &c., 202
Harrison & Co., E., Manchester, Great Britain—Cotton Dress Goods, 247
Harrison, Chas., Stourport, Great Britain—Carpets, 247
Harrison & Smith, Birmingham, Great Britain—Metal Buttons, 278
Harrison, Louise Maude, Waverley, N.S.W.—Public School Exhibit, 383
Harrison, Eliza Jane, Waverley, N.S.W.—Public School Exhibit, 383
Harrison, Mrs., Hobart Town, Tasmania—Knitting in Berlin Wool, 530
Harrison, Geo. C., Cook's River, N.S.W.—Pigeon Race, 968
Harrison & Co., W. C., Port Adelaide, South Australia—Roller Mill Flour, 857
Hart, Matthew J., Birmingham, Great Britain—Tin-stamped Ware, 219
Hart, Phoebe, Sydney, N.S.W.—Public School Exhibit, 376
Hart, Campbell, & Co., Queenstown, Wakatipu, N.Z.—Photographs, 510
Hart, John, Parramatta, N.S.W.—Public School Exhibit, 380
Harte, Gregory P., San Francisco, Cal., U.S.—Services as Honorary Acting Commissioner for the United States, clxii; Services as Judge, clii; Judge, 389
Hartmann & Hauers, Hanover, Germany—Chemicals, 181

Hartmann & Eidam, L., Vienna, Austria—Meerschaum Pipes, &c., 264
Hartmann, C. H., Toowoomba, Queensland—Insects Injurious to Plants, 386
Hartmann, Philip, Blandford, N.S.W.—Wine, 884
Hartnoll, jun., Wm.—Services as Member of Tasmanian Commission, clxii
Hartley, J. A.—Services as Member of South Australian Commission, clxi
Hartshorn, S., Philadelphia, U.S.—Window Blinds, 229
Hartung, Max. Jos., Sydney, N.S.W.—Services as Expert, clii; Expert in Judging, 174
Harvesting Implements (Class 625), General Report on Machinery, 628
Harvey, Isabella, Adelaide, South Australia—Mounted Emu Egg, 529
Harvey, Robert, Parramatta, N.S.W.—Model of Frigate, 686
Harvey, S., Parramatta, N.S.W.—Models of Steam Launches, &c., 686
Haslam Foundry and Engineering Co. (Limited), Derby, Great Britain—General Report on Machinery, 536, 538; Awards (Engines), 662
Hatch, Joseph, Invercargill, N.Z.—Soap, 189; Seal Oil, 713
Hathorn & Co., London, Great Britain—Mining Machinery, General Report on Machinery, 617, 619; Award Rock Drill, 630; Air-compressing Machine, 662
Hattat Frères, Paris, France—Boots and Shoes, 268
Hatterer Veuve, Paris, France—Cigarette Papers, 297
Hatton, Sons, & Co., Kidderminster, Great Britain—Tin Plates, &c., 155
Hatton, Alice, Ryde, N.S.W.—Public School Exhibit, 381
Hatton & Patching, Sydney, N.S.W.—Photographs, 506
Hatton, Mrs., Liverpool, N.S.W.—Patchwork Quilt, 522
Hautrive, Marceau, Paris, France—Services as Judge, cliii; Judge, 232
Haviland, Edgar, Sydney, N.S.W.—Public School Exhibit, 373
Hawke, Henrietta, Fish River Creek, N.S.W.—Public School Exhibit, 375
Hawke & Plumb, Carcoar, N.S.W.—Marble, &c., General Report, 124; Limestone and Lime, Award, 137
Hawkesbury Series of N.S.W. Fossils, Specimens, 64
Hawkesbury Agricultural Association, Windsor, N.S.W.—Maize Trophy, 826
Hawkins, Thos. J., Bathurst, N.S.W.—Services as Judge, cliii; Judge, 951
Hawson, Edward, Hobart Town, Tasmania—Tin Ore, General Report, 19
Hay, Sir John, K.C.M.G., M.L.C., Services as Vice-President of Sydney International Exhibition Commission, cxlvii; as Honorary Commissioner for Canada, cxliii
Hay, Lady, Double Bay, Sydney, N.S.W.—Pictures of Australian Ferns and Flowers, 523
Hay, G. D., Binda, N.S.W.—Angora Wool, 914
Hay, Elizabeth, Balmain, near Sydney, N.S.W.—Public School Exhibit, 372
Hay Public School, N.S.W.—Awards to Exhibits from, 378
Hayes, Patrick, St. Leonards, Sydney, N.S.W.—Services as Judge, cliii; Judge, 174
Hayes, Rutherford B., His Excellency, President of the United States clxii
Hayes, W. & C., Warwick, Queensland—Maize and Wheat, 835; Flour, 856
Hayes, Edwin, R.H.A., London, Great Britain—Water-colour Paintings, General Report on the Fine Arts, 454; Award, 479
Hays, W., Townsville, Queensland—Copper Ores, 23
Haynes, Charles, Palmerston, Dunedin, N.Z.—Rye-grass Seed, 831
Hayter, James, Camden Park, N.S.W.—Horse, 934
Haywood, C. D., Hobart Town, Tasmania—Biscuits, 859
Hayward, C. Foster, F.S.A., F.R.I.B.A., London, Great Britain—Architectural Designs, 496
Hazeltine, Geo., Mudgee, N.S.W.—Horse Shoes, 339
Health Society of New South Wales, Sydney, N.S.W.—Plan of Sanitary Arrangements, 433
Heard, Edith, Ryde, N.S.W.—Public School Exhibit, 381
Heath, Ada, Sydney, N.S.W.—Public School Exhibit, 381
Heaton, Butler, & Bayne, London, Great Britain—Stained-Glass Windows, 496
Hebblewhite, S., Sydney, N.S.W.—Loan of Ethnological Exhibits, clvii
Heckert, Fritz, Petersdorf, Germany—Glassware, 199
Hector, Dr. James, C.M.G., Wellington, N.Z.—Services as Executive Commissioner for N.Z., clix; as Hon. Member of Committee, cxlviii; Mineral Collection, General Report, 67; Paleontological Collection, Award, 141; Maps of New Zealand, &c., 434
Hedberg, O. H., Hobart Town, Tasmania—Cheese, 705
Hedemann, F. C., Sydney, N.S.W.—Fijian Mats (in Fijian Court), 237
Hedges, David, Lytham, Lancashire, Great Britain—Photographs, 496

Hedouin, Edmund, Paris, France—Etchings, 490
Heerklotz & Thurmer, Dobeln, Saxony, Germany—Boot and Shoe Uppers, 241
Hefferman, Frances, Sydney, N.S.W.—Public School Exhibit, 382
Hefferman, Mary, Sydney, N.S.W.—Public School Exhibit, 382
Heincken & Zoonen, Wed., A. G., Amsterdam, Netherlands—Cheese, 702
Heinz, John, Hill End, N.S.W.—Quartz Specimens, 11
Heinz, G., Johann-Georgenstadt, Saxony, Germany—Glove-boxes, &c., 272
Heinicke, Gotthardt & Co., Muldenthal Papier-fabrik, Commandit-Gessellschaft, Freiburg, Saxony, Germany—Tinted Papers, 298
Heller, Moriz, Vienna, Austria—Wines, 866
Helms, Richard, Greymouth, N.Z.—Ferns, 1008
Helps, J. (gardener to His Excellency Lord Augustus Loftus), Sydney, N.S.W.—Plants, 1019
Hely, John F., Woollahra, near Sydney, N.S.W.—Horse, 934
Hemus & Hanna, Auckland, N.Z.—Photographs, 510
Henderson, Samuel, Melbourne, Victoria—Shirts, Collars, &c., 290
Henderson & Co., Durham, Great Britain—Carpets, 247
Henderson, D., Pyrmont, N.S.W.—Ploughs, 991
Henderson, W. B., Sydney, N.S.W.—Tin Ores, General Report, 18; Award, 137
Henderson, A. P., Viti Levu, Fiji—Iron Ore, General Report, 25
Henfrey & Co., Sydney, N.S.W.—Cordials, Liqueurs, Aerated Waters, &c., 884
Henkes, J. H., Delfshaven, near Rotterdam, Netherlands—Geneva, 879
Henneberg & Co., F. E., Gotha, Germany—Household Porcelain, 199
Hennings, W. Loma Loma, Fiji—Cocoa-nut Oil, 179; Pearl Shell, 709
Hennings, P., Botanical Institute, University of Kiel, Germany—Seeds, &c., 815
Hennings, F., Mokagai, Fiji—Dried Cocoa-nut, 847
Hennuyer, Firmin, Paris, France—Printing and Bookbinding, 297; Engravings, 490
Henrion, J. J., Hodimont, Verviers, Belgium—Tweeds, 235
Henroz, Camille, Floreffe, near Namur, Belgium—Slabs, Tiles, &c., 197
Henricot, Emile, Court St. Etienne, Belgium—Cast-iron Ware, 213
Henry, Miss Mary, Nelson, N.Z.—Scarf, 255
Henry, Lucien—Services in Lending Works of Art, clvii; Services as Judge, cliii; Judge, 485; Award to Exhibit of Bronze Medallion, 482
Henry, W. E., Sydney, N.S.W.—Loan of Ethnological Exhibits, clvii
Henry, Bridget, Dunedin, Otago, N.Z.—Wool and Silk Picture, 528
Henry, Mrs. Lucien, Dunedin, Otago, N.Z.—Silk Cushion, 529
Herald, Joseph, Sydney, N.S.W.—Public School Exhibit, 382
Herbert, F. P., Klagenfurt & Wolfsberg, Illyria, Austria—White Lead, 176
Herbert, Emily, Paddington, near Sydney, N.S.W.—Public School Exhibit, 380
Herbert & Co., London, Great Britain—Corsets, &c., 278
Herberts, F. A., Cöln, a/R, Germany—Lawn-mowers, 984
Hermes, Wilhelm, Berlin, Germany—Drawing-books, 369
Hern, Charles E., Sydney, N.S.W.—Special Medal, clxvi; Water-colour Paintings, 482
Heron, Henry, Sydney, N.S.W.—Loan of Works of Art, clvii
Heron, Mrs., Bowen, Queensland—Coral, 713
Herring, E. H., Adelaide, South Australia—Marble Mantelpieces, 228
Herring & Co., S. C., New York City, U.S.—Iron Safes, 342
Herriott, Thos., Kogarah, N.S.W.—Vegetables and Fruits, 1025
Hertz & Co., Otto, Frankfurt, a/M, Germany—Boots and Shoes, 272
Heseltine, J. P., London, Great Britain—Etchings, 496
Hess & Rom, Berlin, Germany—Furniture, 215
Hess, Ernst, Klingenthal, Saxony, Germany—Accordeons, 425
Hessl, Anton, Vienna, Austria—Gloves, 264
Hetherington, R. A., Bonshaw, New England, N.S.W.—Tin Ores, General Report, 18; Award, 137
Heubach & Co., Lauscha, near Coburg, Germany—Artificial Eyes, 323
Heuter Brothers, San Francisco, California, U.S.—Varnishes, 191
Heuzenroeder, Hy., Adelaide, South Australia—Diamonds, General Report, 30
Hewett, T. E., Sydney, N.S.W.—Microscopic Preparations, 398
Hewlett, G., Sydney, N.S.W.—Services, clviii
Hewitt, Thos. R., Denman, N.S.W.—Vegetables and Fruits, 1025
Hewitt & Co., Mackay, Queensland—Rum, 895
Hewston, Ellen, Lochinvar, N.S.W.—Public School Exhibit, 378

Heyden, Dr. F. von, Dresden, Neustadt, Germany—Salicylic Acid, 181
Heyl, Gebrüder & Co., Charlottenberg, near Berlin, Germany—Chemical Colours, 181
Heyl, Cornelius, Worms, a/R, Germany—Leather, 710
Heymann, J. D., Hamburg, Germany—Furniture, 215
Heymans, A. J., Brussels, Belgium—Landscape Painting, General Report on the Fine Arts, 465
Heyermanns, T., Brussels, Belgium—Landscape Painting, General Report on the Fine Arts, 465
Hibble, W. G., Sydney, N.S.W.—Painting and Graining, 506
Hick, Wm., Huddersfield, Great Britain—Solitaires, Studs, &c., 278
Hickman, G., Kangaroo Valley, Tasmania—Jams, 859
Hickson, R. R. P.—Services as Member of Queensland Commission, clxi
Hicks-Beach, Sir Michael, Bart., M.P.—Services as Member of Royal Commission in London, cxlv
Hicks, M., Broughton Village, N.S.W.—Public School Exhibit, 373
Hideharu Kawasi—Services as Member of Imperial Japanese Commission at Tokio, cxlvii
Hielard, —Services as member of Committee at Paris, cxliv
Hiess & Söhne, Franz, Vienna, Austria—Meerschaum Pipes, &c., 284
Higganum Manufacturing Co., Higganum, Connecticut, U.S.—Windmill, 670; Ploughs, Harrows, Reapers, &c., 995
Higgins, Miss, Albury, N.S.W.—Lace, 523
Higgins, Thomas (Gardener to Mr. Alex. Brown), Sydney, N.S.W.—Vegetables, 1016
Higgins, R. G., Potts' Point, Sydney, N.S.W.—Services as Judge, cliii; Judge Sheep-Shearing, 952
Higgins, Hon. Patrick, M.L.C.--Services as Member of Sydney International Exhibition Commission, cxlvii
Hilder, H., Sydney, N.S.W., Boot Uppers, 285
Hill, W. R. O., Ravenswood, Queensland—Galena and Lead Ore, General Report, 24
Hill, W. J., Birmingham, Great Britain—Revolvers, 319
Hill & Smith, London and Dudley, Great Britain—Iron Plates, 335; Iron Fencing, &c., 987
Hill, John, Brisbane, Queensland—Saddlery, 357
Hill & Co., J. R., Concord, New Hampshire, U.S.—Harness, 358
Hill, Susan, Grafton, N.S.W.—Public School Exhibit, 377
Hill, S., Wollongong, N.S.W.—Public School Exhibit, 385
Hill, Hon. Richard, M.L.C., Sydney, N.S.W.—Services as Member of Sydney International Exhibition Commission, cxlvii; Steward in Judging, 1011
Hill, C. Lumley, M.P.—Services as Member of Queensland Commission, clx
Hill, Edward S.—Services as Member of Sydney International Exhibition Commission, cxlvii
Hill, Thomas B.—Assistant Secretary Melbourne Exhibition, 1880, clxiii
Hilliard, Henry, Sydney, N.S.W.—Cricket Bats, 285
Hillig, C. D., Gersdorf, Saxony, Germany—Hosiery, 272
Hillman, Joseph, Ballarat, Victoria—Picks, 343; Tip-cart, 358
Hinchk & Co., C. H., Hamburg, Germany—Furniture, 215
Hinckley, Ezra, San Francisco, California, U.S.—Bedsteads, &c., 229
Hindley, E. S., Bourton, Dorset, Great Britain—Engines and Boilers, &c., Saws, Boring Machines, General Report on Machinery, 543; Awards, 635, 662
Hindmarsh, G. & N., Kiama, N.S.W.—Horse, 934
Hine, H. G., London, Great Britain—Water-colour Drawings, General Report on the Fine Arts, 454; Award, 479
Hingley & Sons, Dudley, Great Britain—Coal, General Report, 96; Manufactured Iron, &c., 155
Hinks & Son (Limited), Jas., London and Birmingham, Great Britain—Lamps, 219
Hinton Public School, N.S.W.—Awards to Exhibits from, 378
Hio-Chi-Yen-Sha, Tokio, Japan—Porcelain, &c., 206; Paintings on Porcelain, 481
Hipwood Brothers, Brisbane, Queensland—Brass Castings, 340
Hiro-Yemon-Fuckuchi, Mino, Japan—Cutlery, 338
Hirsch & Markwald, Berlin, Germany—Tweeds. 241
Hirst, George, Sydney, N.S.W.—Public School Exhibit, 375
Hisanari Machida—Services as member of Imperial Japanese Commission at Tokio, cxlvii
Hislop, A. K., Wellington, N.Z.—Tapestry Picture, 510
Hitchins, Mrs. Fortescue, Sydney, N.S.W.—Feather Flowers, 523
Hixson, Capt. Francis, R.N., Sydney, N.S.W.—Services as Judge, cliii; Judge, 683
Hobart Town Tin-smelting Co., Hobart Town, Tasmania—Tin trophy, 159
Hobbs, Brockunier, & Co., Wheeling West, Virginia, U.S.—Table Glassware, 219

Hochstädter, J. N., Vienna, Austria—Embroidered Handkerchiefs, 264
Hochheimer, Actienges Zur Bereitung Moussirender Weine (Vormals, Burgeff, & Co.), Hochheim, Germany—Wine, 873
Hochstein & Weinberg, Berlin, Germany—Cardboard, &c., 298
Hockin, Wilson, & Co., London, Great Britain—Seidlitz Powders, 325
Hocker, J. H., Brisbane, Queensland—Leaf Tobacco, 835
Hodd & Son, R., London, Great Britain—Knife-cleaner, 219
Hodges & Sons, T. W., Leicester, Great Britain—Elastic Webs and Umbrellas, 279
Hodgkinson, W. O., Georgetown, Etheridge River, Queensland—Geological collection, General Report, 14, 70 ; Gold Specimens, award, 143
Hodgson, J. E., London, Great Britain—Oil Paintings, General Report on the Fine Arts, 451
Hodgson & Ramsay, Etonvale, Darling Downs, Queensland—Wool, 920
Hodson, Amelia, Sydney, N.S.W.—Public School Exhibit, 374
Hoe & Co., R., New York City, U.S.—Circular Saw, 342 ; Printing Machinery, 654
Hoey, D., Inverell, N.S.W.—Wheat, 826
Hoff, C., Nouméa, New Caledonia—Marbles, General Report, 11 ; Limejuice, 851
Hoffman Patent Steam Brick Co., Brunswick, Victoria—Clays, General Report, 127 ; Award, 145 ; Bricks, 210
Hoffnung & Co., S., Sydney, N.S.W.—Saddles and Bridles, 355
Hofner, L., Munich, Germany (Austrian Gallery)—Oil Painting, General Report on the Fine Arts, 467
Hogarth, Hon. Thos., M.L.C.—Services as Member of Queensland Commission, clxi
Hogg, Selby, & Co., London, Great Britain—Matting and Yarns, 347 ; Spices, 817
Hokitika Exhibition Committee, Hokitika, New Zealand—Model of Gold-mine, 163 ; Timbers General, Report on Arboriculture, 760 ; Award, 804
Holborow, Daniel, Ashfield, N.S.W.—Services, cliii ; Steward in Judging, 975
Holbrook, J. D., West Torrens, South Australia—Wines, 897, 898
Holbrook & Co., E. W., New York City, U.S.—Lamp-wicks, 191, 229 ; Shirtings, &c., 257
Holdaway Brothers, Nelson, New Zealand—Wheat, 831
Holden, J. A.—Services as Member of South Australian Commission, clxi ; Fountain for Rockeries, &c., 1009
Holder, Miss E. S., Orange, N.S.W.—Crayon Drawings, 523
Holdship, G., Auckland, New Zealand—Kauri Timbers, General Report on Arboriculture, 760 ; Award, 805
Holdsworth, B., Geelong, Victoria—Building Stone, General Report, 117 ; Award, 145
Holdsworth, John E., Sydney, N.S.W.—Model of Yacht, 686
Holdsworth, P. R., Sydney, N.S.W.—Services, clviii
Holland, Thos., Cornwallis, near Windsor, N.S.W.—Horses, 934
Holland & Holland, London, Great Britain—Guns, Rifles, &c., 319
Holland & Green, Longton, Staff., Great Britain—Earthenware, 203—(*Vide* Corrigenda)
Holle, John Frederick, Sydney, N.S.W. —Services as Judge, cliii ; Judge, 232
Holliday, Capt. J., Wellington, New Zealand—Plan of Wellington Harbour, 434
Hölling & Spangenberg—Zeitz, Saxony, Germany—Pianos, 425
Hollington Brothers, London, Great Britain—Clothing, 279—(*Vide* Corrigenda)
Hollis & Son (Limited), Birmingham, Great Britain—Fire-arms, 319
Holloway, Harriett, Sydney, N.S.W.—Public School Exhibit, 374
Holloway & Sons, John, Ballarat, Victoria—Japanned-ware, &c., 230 ; Travelling Trunks, 29
Holme, Geo., Derby and Bradford, Great Britain—Elastic Web, 279
Holmes, J. B., Hunter River, N.S.W.—Wine, 884
Holmes, R. T., Wellington, New Zealand—Steel Engraving, 510
Holroyd, A. T., Parramatta, N.S.W.—Potteryware, 209
Holt, Alfred Wm., Marulan, N.S.W.—Alpacas, 957
Holt, Jessie, Sydney, N.S.W.—Public School Exhibit, 384
Holt, John G., Melbourne, Victoria—Carbon Filters, 231
Holt, T. S. E., Tempe, Cook's River, N.S.W.—Dog, 979
Holterman & Co., B. O., Sydney, N.S.W.—Photograph of Sydney, 506
Holtzmann, Emil, Speyer a/R., Germany—Tracing-paper, 298
Homberger Gebrüder, Wetzikon, Switzerland—Silk Gauze, 682
Hommel, Charles, Rappoltsweiler, Alsace, Germany—Wine, 873
Hood & Co., J., Melbourne, Victoria—Barley and Malt, 842
Hood, John, Glenelg, South Australia—Photographs, 512

Hood, R., Merang, Hexham, N.S.W.—Cattle, 950
Hooker & Co., H., Newhaven, Connecticut, U.S.—Buggies, 358
Hooker, James, Adelaide, South Australia—Iron and Boiler-plates, 159
Hooker, Sir Joseph Dalton, K.C.S.I., C.B.—Member of Royal Commission in London, cxlv
Hookey, Mrs., Hobart Town, Tasmania—Berlin Wool work, 530
Hooper & Co., C., Stone House, Gloucestershire, Great Britain—Tweeds, &c., 247
Hooper & Dodson, Nelson, New Zealand—Coke, General Report, 106; Award, 141
Hooper, Elizabeth, Sydney, N.S.W.—Public School Exhibit, 383
Hoopes & Townsend, Philadelphia, U.S.—Nuts, Bolts, Rivets, &c., 342
Hoorickx, Brussels, Belgium—Iron Safes, 332
Hooton, John, Paddington, near Sydney, N.S.W.—Services as Judge, cliii; Judge, 906
Hope & Carter, Burslem, Staffordshire, Great Britain—Earthenware, 203
Hope, Margaret, Hobart Town, Tasmania—Painted Table-tops, 513
Hopkins & Co., John, London, Great Britain—Whiskey, 876
Hopkins & Sons, J. H., Birmingham, Great Britain—Stamped and Japannedware, 219; Japanned Iron-travelling Trunks, 279
Hordern, S., Sydney, N.S.W.—Pigeons, 968
Hörich & Co., C. G., Berlin, Germany—Furniture, 215
Hornby, John, Picton, New Zealand—Timbers, 785; Award, 805
Horned Cattle (Class 646)—General Report on Agriculture, 698
Hornsby & Sons, R., Grantham, Great Britain—General Report on Machinery, 553, 554, 556, 557, 621; Award, Portable Engine, 662; Ploughs, Reapers, Mowers, &c., 987
Horses, Asses, and Mules (Class 645)—General Report on Agriculture, 698; Awards, 931, *et seq.*
Horsham & Wimmera Agricultural Society, Horsham, Victoria—Wheat, 842
Horsley, J. C., R.A., London, Great Britain—Oil Paintings, General Report on the Fine Arts, 451
Horsley, W. C., London, Great Britain—Oil Painting, General Report on the Fine Arts, 453; Award, 479
Horst-Hacker, Munich, Germany (Austrian Gallery)—Oil Painting, 472; (German Gallery) Oil Painting, 477
Horticultural Section—Awards, 1006, *et seq.*
Hortin, F. J., Hobart Town, Tasmania—Precious Stones, General Report, 30
Hortsmans Fréres, Liége, Belgium—Cards for Spinning Mills, 642
Horwitz & Co., J., Swan Creek, Warwick, Queensland—Wheat, 835; Flour, 856
Horwitz, Jülius, Cigarettenfabrik, "Thessalia," Dresden, Germany—Cigarettes, 815
Hoseman, Marion, Sydney, N.S.W.—Public School Exhibit, 376
Hosking, F. T., Wollongong, N.S.W.—Model of Harbour, 686
Hosking, Miss, Wollongong, N.S.W.—Cushion and Lace work, 523
Hoskins, Hon. James, M.P., Minister for Lands, N.S.W., cxlix
Hoskisson, Samuel, Windsor, N.S.W.—Cattle, 945
Hough, A. S., Richmond, N.S.W.—Horses, 935
Houison, May, Parramatta, N.S.W.—Public School Exhibit, 380
Hoveton Gardens Estate, Nilagiri Hills, India, 818
Howard & Anderson, St. Leonards, North Shore, N.S.W.—Furniture, 224
Howard, H. (gardener to Mr. J. B. Hoare), Sydney, N.S.W.—Plants, 1019
Howard, James & Frederick, Bedford, Great Britain—Ploughs, Harrows, Reapers, Mowers, &c., 988
Howard, J., Bathurst, N.S.W.—Minerals, General Report, 66
Howard, Kate, Gulgong, N.S.W.—Public School Exhibit, 377
Howe Machine Co. (Limited), London, Great Britain—Leather-sewing Machines, 648
Howe Scale Co., Rutland, Vermont, U.S.—Scales, 400; General Report on Machinery, 620
Howell, Adeline, Lochinvar, N.S.W.—Public School Exhibit, 378
Howell, John, Adelaide, South Australia—Olive Oil, 858
Howes, Babcock, & Co., New York City, U.S.—Flour-milling Machinery, 607, 682
Howorth, Jas., Tamworth, near Manchester, Great Britain—Ventilators, 220
Hoyte, John C., Dunedin, Otago, New Zealand—Water-colour Paintings, 483
Huard, L., Paris, France—Boots and Shoes, 269
Hübner, Carl, Düsseldorf, Germany—Pictures, General Report on the Fine Arts, 462
Huddersfield, Great Britain, Woollen Goods from—Referred to, 169
Hudson & Irvine, Dunedin, N.Z.—Oatmeal, 854
Hudson, Brothers, Redfern, near Sydney, N.S.W.—Doors, 224
Hudson, Henry, Sydney, N.S.W.—Services as Judge, cliii; Judge, 632, 672
Hudson, P., Albion, Brisbane—Pine-apples, 1029

Hudson, R. S., West Bromwich, London, Great Britain—Extract of Soap, 184
Hughan, J., Nouméa, New Caledonia—Photographs, 504
Hughes & Harvey, Melbourne, Victoria—Tin and Japanned Ware, 231
Hughes, E., Douglas Park, N.S.W.—Horse, 934
Hughes, Leslie, West Maitland, N.S.W.—Public School Exhibit, 379; Pencil Drawing, 523
Hulbert, Adelaide, Sydney, N.S.W.—Public School Exhibit, 376
Hull, Ada, Redfern, N.S.W.—Public School Exhibit, 381
Hull, Arthur F. B., Hobart Town, Tasmania—Precious Stones, General Report, 30
Hull, Hugh Munro—Services as Secretary to Tasmanian Commissioners, clxii
Hull, Jr., and Co., Auckland, N.Z.—Kauri Resin, 796; Award, 805
Hulme, Edward, Oxley, Victoria—Oil Painting, 484
Humberstone, Laura, Sydney, N.S.W.—Public School Exhibit, 376
Humberstone, Miss L., Sydney, N.S.W.—Lace, 523
Humble and Nicholson, Melbourne, Victoria—Funnel, &c., 231; Wool Press, 672; Threshing Machines, 997
Humbly, Mary, Waverley, N.S.W.—Public School Exhibit, 383
Hume and Pegrum, Sydney, N.S.W.—Cordials, Liqueurs, and Aerated Waters, &c., 884
Hume, A. H., Yass, N.S.W.—Iron Ore, General Report, 26
Hume, J. K., Yass, N.S.W.—Fossils, General Report, 67
Humphreys, Jane, Lochinvar, N.S.W.—Public School Exhibit, 379
Humphries and Sons, Jas., Kidderminster, Great Britain—Carpets, 247
Hungerford, Thomas, Denman, N.S.W.—Cattle, 945
Hunt and Co., W. F., London, Great Britain—Paper Capsules, 303
Hunt, Mrs. E., Ryde, N.S.W.—Wool Work and Lace, 523
Hunt, J. J., Redfern, N.S.W.—Canaries, 968
Hunt & Tawell, Earl's Colne, Essex, Great Britain—Agricultural Implements, &c., 988
Hunt, Robert, Deputy Master, Sydney Branch of Royal Mint—Services as hon. member of Committee, cxlviii
Hunter, Archibald D., Ballarat, Victoria—Lignite, General Report, 109
Hunter, Captain R. M., Rockhampton, Queensland—Marbles, General Report, 112; Award, 143
Hunter, James, Aberdeen, Great Britain—Polished Granite, General Report, 113; Award, 134
Hunter, Walter, Ososo, Taviuni, Fiji—Sugar, 847
Hurstville Public School, N.S.W.—Awards to, Exhibits from, 378
Hustler, J. D., Sydney, N.S.W.—Services as Judge, cliii; Judge, 808
Hutchison, Wm.—Services as member of N.Z. Commission, clix
Hutchinson & Walker, Kyneton, Victoria—Reaper and Mower, 997
Huth, J., Berlin, Germany—Picture, General Report on the Fine Arts, 463; Award, 477
Hutinet, Désiré, Paris, France—Fancy Stationery, 297; Chromo-Lithographs, 490
Hutton, J. & C., Melbourne, Victoria—Hams, 706
Hutton & Co., Highlane, Sheffield, Great Britain—Scythes, Sickles, &c., 982
Huxham & Brown, Exeter, Great Britain—General Report on Machinery, 611; Awards, Bark Mill, 635; Tanner's Pump, 662
Huxtable, Mrs., Hobart Town, Tasmania—Lace, 530
Huylebroeck, T., Secretary to the Belgian Commission at Sydney, cxlii
Hyam, Florence, Balmain near Sydney, N.S.W.—Public School Exhibit, 372
Hyam, S. H., Sydney, N.S.W.—Services as Judge, cliii; Judge, 963
Hyatt & Son, Joseph, Hobart Town, Tasmania—Locks, 340

I

I'Anson, E., F.R.I.B.A., London, Great Britain—Architectural Designs, 496
Ibach & Sohn, Rudolf, Barmen, Germany—Pianos, 425
Ibbotson, Brothers, & Co., Sheffield, Great Britain—Iron and Steel Manufactures, 155, 675
Icely, Thomas Rothery, Carcoar, N.S.W.—Horse, 934; Cattle, 945; Sheep, 957
Icke, Conrad, Newcastle, N.S.W.—Phospor-Bronze, 158
Iler & Co., Willow Springs Distillery Co., Omaha, Nebraska, U.S.—Spirits, &c., 901
Illawarra Coal Co., Wollongong, N.S.W.—Coal, General Report, 99; Award, 138
Illawarra District Exhibition Committee, Wollongong, N.S.W.—Kerosene Shale, General Report, 104; Photographs of the District, 506; Timbers, General Report on Arboriculture, 740; Timber Trophy, 803; Tree and other Ferns, 1007

Ilsley, Doubleday & Co., New York City, U.S.—Machine Oils, &c., 191
Imhof & Mukle, Vöhrenbach, Baden, Germany—Orchestrion, 426
Imperial Crown Vinegar Co., London, Great Britain—Table Vinegar, 817
Indian List of Diplomas and Medals—Complimentary and for Services, cxlvi
Ind, G. F., Paradise, South Australia—Wines, 898
Inglis, James, Sydney, N.S.W.—Loan of Exhibits, clviii; Services as Judge, cliii; Judge, 808
Ingrey & Mathison, Grenfell, N.S.W.—Flour, 853
Ingersoll Rock Drill Co., New York City, U.S.—General Report on Machinery, 619; Award, 631
Innes & Grieve, Edinburgh, Great Britain—Whisky, 876
Innes, Sir J. G. Long, Sydney, N.S.W.—Services as Member of the Commission for the Sydney International Exhibition, cxlvii
Inman Steamship Co. (Limited), Liverpool, Great Britain—Model of Steamship, 685
Institut Cartographique Militaire de la Belgique, Brussels, Belgium—Geological Maps of Belgium, 413
Insatsu Kioku, Government Printing Office, Tokio, Japan—Special Medal, clxvi; Pigments, &c., for printing, 187; Papers, 308; Engraved Work, 501; Printing-types, 653; Glue, 711
International Exhibition of 1851 (Crystal Palace)—Reference to results in progress of Arts and Industries, General Report on the Fine Arts, 468—*Vide* also Executive Commissioner's Report, iii, iv
International Exhibition Committee, Boorook, near Tenterfield, N.S.W.—Silver Ores, General Report, 8
International Watch Co., Schaffhausen, Switzerland—Watches, Report on Chronology, 402, *et seq.*, 417; award, 421
Invercargill Paper-bag Factory, Invercargill, N.Z.—Paper Bags, 312
Iredale, Gertrude, Waverley, N.S.W.—Public School Exhibit, 383
Iredale, Florence, Waverley, N.S.W.—Public School Exhibit, 383
Iron Ores—New Caledonian, General Report, 36; New South Wales, General Report, 47, *et seq.*; South Australian, General Report, 78; Tasmanian, General Report, 83; Victoria, General Report, 28
Ironclad Gold Mining Co., Sydney, N.S.W.—Gold Specimens, General Report, 12
Irroy, Ernst, Reims (Marne), France—Champagne, 870
Irving & Co., J. L., Melbourne, Victoria—Wheat, Oats, and Maize, 842
Irvin & Miller, Adelaide, South Australia—Confectionery, 857
Irwin, James, Copeland, Barrington, N.S.W.—Gold Specimens, Quartz, General Report, 12
Irwin Brothers, Ipswich, Queensland—Wine, 895
Isaacsohn, M., Bowling Alley Point, Tamworth, N.S.W.—Gold Specimens (quartz), 67; Award, 138
Isaacs, Ed., Auckland, N.Z.—Kauri Gum, General Report on Arboriculture, 760; Award, 805
Isogaya Risanji, Shidzuoka, Japan—Lacquered-ware, 223; Cabinet-work, 501
Italian List of Diplomas and Medals—Complimentary and for Services, cxlvi
Italy—His Majesty King Humbert of, cxlvi
Ithaca Calendar Clock Co., Ithaca, N.Y.—Clocks, 421
Ives & Co., New Haven, Connecticut, U.S.—Edge Tools, &c., 342
Ives & Miller, New Haven, Connecticut, U.S.—Axles, 342
Ivory & Co., H. A., London, Great Britain—Pianos, 427

J

Jackson, H. D. Nelson, N.Z.—Silver Ores, General Report, 13; Award, 141
Jackson, T. C., Melbourne, Victoria—Portmanteaus, 290
Jackson, Charles, Sydney, N.S.W.—Services as Judge, cliii; Judge 422
Jackson, T. G., London, Great Britain—Architectural Designs, 496
Jack, David, Inverell, N.S.W.—Maize Meal, 826; Wines, 885
Jack, R. L., Townsville, Queensland—Fossils, General Report, 70
Jäckel, Z. J., Vienna, Austria—Wood-carving, 472
Jacob, Henry, Goulburn, N.S.W.—Public School Exhibit, 377
Jacob & Becker, Leipsic, Germany—Orchestrionettes, 426
Jacob, William, Morooroo, South Australia—Wines, 898
Jacobs, John, Sydney, N.S.W.—Architectural Design, 506

Jaccoud—Services as Member of the Committee at Paris, cxliv
Jaenecke Gebrüder, & F. Schnemann, Hanover, Germany—Printing Inks, &c., 181
Jäger & Elwert, Reutlingen, Württemberg, Germany—Corsets, &c., 24
Jamar et Cie, Liège, Belgium—Nails, 332
James, Wm., Wellington, N.Z.—Timber Specimens, General Report on Arboriculture, 785 ; Award, 805
James, Seward & Thomas, Cardiff, Great Britain—Architectural Designs, 496
James, Henry J., Hobart Town, Tasmania—Malt, 839 ; Ale and Porter, 900
James, Alice, Guildford, N.S.W.—Public School Exhibit, 377
Jamieson, T. B., Inverell, N.S.W.—Services, clvi
Jamieson, J. T., Ipswich, Queensland—Natural History Group, 386
Jamieson, G., Sydney, N.S.W.—Services as Judge, cliii; Judge, 232
Japanese Manufactures referred to, 167, 172 (*Vide* also Executive Commissioner's Report)
Japanese List of Diplomas and Medals—Complimentary and for Services, cxlvii
Japanese Collective Exhibit of Bronzes, &c., Tokio, Japan—Special Medal, clxvi ; also 481
Japanese Commission, Tokio, Japan—Liqueur, 878
Japanese Government, Tokio, Japan—Tea, 821
Jarman, R. E., Brisbane, Queensland—Saddlery, &c., 357
Jaspart, Joseph, Courcelles-Hainaut, Belgium—Miners' Safety Lamps, 162
Jaubert, François, Ponteilla, Canton de Thuir, Perpignan, Pyrénées Oriental, France—Wines, 871
Jaubert, Léon, Sydney, N.S.W.—Services as Judge, cliii ; Judge, 315, 330 ; Award to Exhibit of chasing and die sinking, 506
Jauncey, John, Bega, N.S.W.—Hams, 703 ; Maize, 826
Jeans, Samuel, E., St. Kilda, Victoria—Gas Stoves, &c., 231
Jeffs, Charles K., Wellington, N.Z.—Ferns, 1008
Jeitteles, Daniel, Esslingen am Neckar, Germany—Gloves, 358
Jenkins, Captain B., Sydney, N.S.W.—Services as Judge, cliii ; Judge, 683
Jenkins, R. C., Carlton, Tasmania—Barley, Beans, Pease, &c., 839 ; Poultry, 974
Jenkins, Dr. R. L., Nepean Towers, Douglas Park, N.S.W.—Services as Member of the Sydney International Exhibition Commission, cxlvii ; Exhibits N.S.W. Wool, 914 ; Queensland Wool, 920 ; Cattle, 945 ; Sheep, 957
Jenkins, Charles, Yass, N.S.W.—Services, clvi
Jennings, John, San Francisco, California, U.S.—Services, clxii
Jennings, Sir Patrick Alfred, K.C.M.G., M.P., Services as Executive Commissioner Sydney International Exhibition, cxlvii ; Services as Honorary Executive Commissioner for Tasmania, clxi (*Vide* also "Executive Commissioner's Report," under which heading in Index will be found the principal subjects dealt with, extending from pages iii to cx)
Jennings, Geo., London, Great Britain—Special Medal, clxv ; Sanitary Earthenware, &c., Pumps, Valves, Cocks, &c., 662
Jennings, Alice, Sydney, N.S.W.—Public School Exhibit, 376
Jennings, Edwin, Dunedin, N.Z.—Stuffed Mammals, &c., 387
Jennings, James, Melbourne, Victoria—Spectacles, 400
Jervois, Sir Wm. F., G.C.M.G., C.B.—Services as President of the South Australian Commission, clx
Jerrems, C., Sydney, N.S.W.—Bookbinding, 310
Joel, Maurice, Dunedin, Otago, N.Z.—Ale, 893
Johannsen, J. C., St. Leonards, near Sydney, N.S.W —Raw Silk, &c., 262 ; Vegetables, Flowers, &c., 1016, 1017, 1019
Johannes, Carl, Saalfeld, Thuringia, Germany—Brass and Iron-wire Cloths, 241
Johns Manufacturing Co., H. W., New York City, U.S.—Asbestos Roof Felting, &c., 257
Johnson, W. H., Araluen, N.S.W.—Alluvial Gold, General Report, 12
Johnson & Co., J. C., London and Gateshead-on-Tyne, Great Britain—Cement, General Report, 122 ; Award, 134
Johnson & Nephew, Richard, Bradford, Great Britain—Wires, 155
Johnson & Fildes, Jabez, Manchester, Great Britain—Cotton Goods, &c., 248
Johnson, Susan, Balmain, near Sydney, N.S.W.—Public School Exhibit, 372
Johnson, Mary, Sydney, N.S.W.—Public School Exhibit, 376
Johnson, Emma, Windsor, N.S.W.—Public School Exhibit, 385
Johnson, C. E., London, Great Britain—Oil Painting, 479
Johnson, Gregson, & Currey, London, Great Britain—Block of Ships' Berths, 685

Johnson, Wm. Henry, Sydney, N.S.W.—Services, clvii
Johnson, John, Sydney, N.S.W.—Flowers, &c., 1016, 1019, 1025
Johnson, F., Sydney, N.S.W.—Plants, 1019
Johnson, Edmund—Services as Member of the London Committee, cxlvi
Johnston Bros. & Co., Aniseed Valley, Nelson, N.S.—Copper Ores, 22; Steatite, General Report, 127; Galena, &c., 24; Chrome Ore, 25, Awards; Chrome Ore, 141; Galena Silver, Lead, &c., 141
Johnston, W. J., Sydney, N.S.W.—Ovens, 224
Johnston, Mrs., Taviuni, Fiji—Coir Yarn, 345
Johnston, W., Ipswich, Queensland—Stock-whips, 357
Johnston, W. & A. K., London and Edinburgh, Great Britain—Maps, &c., 370
Johnston, Mrs., West Maitland, N.S.W.—Fancy Work, 523
Johnston, Maria Isabel, West Maitland, N.S.W.—Chalk and Crayon Drawing, 523
Johnston, Mrs., Taviuni, Fiji—Pearl Shell, 709
Johnston, J. S., Melbourne, Victoria—Wines, 904
Johnston Harvester Co., New York City, U.S.—Reaper, 995
Johnstone, O'Shannessy, & Co., Melbourne, Victoria—Photographs, 515
Johor, Maharajah of, Johor, India—Native Arms, 320; Boats, 687; Timbers, 806
Jolivet, Louis, Paris, France—Tapers and Candles, 179
Jonas, Emanuel, Bombala, N.S.W.—Services, clvi
Jones, D. M., Maytown, Queensland—Gold Specimens, General Report, 14
Jones & Sons, Geo., Stoke-upon-Trent, Staffordshire, Great Britain—Vases and Porcelain and Majolica-ware, 203
Jones, J. Trevor, C. E., Sydney, N.S.W.—Services as Judge, cliii; Judge, 211, 330, 430, 673, 981, 999
Jones & Co., David, Sydney, N.S.W.—Furniture, 224; Ladies' Riding Habits, 285
Jones, Evan, Sydney, N.S.W.—Silverware, &c., 224; Jewellery, 286; Silver Castings, 506
Jones & Son, W., Glebe, near Sydney, N.S.W.—Furniture, 224
Jones, Pryce, Newtown, North Wales, Great Britain—Shawls, Flannels, &c., 248
Jones, William, London, Great Britain—Boots and Shoes, 279
Jones' Coal Mine, Bundamba, near Ipswich, Queensland—107
Jones, Horace, F.R.S.N.A., London, Great Britain—Architectural Designs, 496
Jones & Sons, Wm., Warrington, Lancashire, Great Britain—Special Medal, clxv; General Report on Machinery, 544; Award—Boiler and Engine, 662
Jones, Edward, Birmingham, Great Britain—Saddlery, &c., 353
Jones, Wm. T., Parramatta, N.S.W.—Timber, General Report on Arboriculture, 740
Jones, Henry T., Parramatta, N.S.W.—Timbers, 803
Jones, A.—Rockhampton, Queensland—Leaf Tobacco, 836
Jones, James, Sydney, N.S.W.—Wines, 885
Jones, J., Redfern, N.S.W.—Poultry, 968
Jones, George C., Chippendale, near Sydney, N.S.W.—Cat, 979
Jones, Wm. Frederick, Sydney, N.S.W.—Loan Works of Art, clvii
Jordan, Joseph, Dunedin, N.Z.—Table-cover, 255
Jordan, Anna, Sydney, N.S.W.—Public School Exhibit, 376
Jorgenson, Niels, Melbourne, Victoria—Work-table, 231
Joseph, Nathan, London, Great Britain—Boots and Shoes, 279
Joseph, Bella, Sydney, N.S.W.—Public School Exhibit, 376
Joseph, Samuel A., Sydney, N.S.W.—Services as Member of the Commission, Sydney International Exhibition, cxlvii; Member of the Belgian Commission at Sydney, cxlii
Joske, Paul, Savu Savu, Fiji—Timbers, General Report on Arboriculture, 717; Award, 802
Josson, N. et Delangle, Antwerp, Belgium—Cement, General Report, 120; Award, 132
Joubert, Bonnaire et Cie, Angers, Loire-et-Main, France—Canvas, &c., 239
Joubert, Jules, Sydney, N.S.W.—Services as Executive Commissioner for New Caledonia, cxlvii; Services as Judge, cliii; Judge, 862; Report as Judge on Wines, on behalf of fellow Judges, 863, *et seq.*
Journet et Cie, Paris, France—Bronze and Onyx Goods, 214; Bronzes, 490
Jouveneau, A., Tournai, Belgium—Chocolates, 846
Jowa, Liège, Belgium—Galvanized Iron, 149
Jowitt & Sons, Thos., Sheffield, Great Britain—Steel and Files, 156, 335
Joy, A. Bruce, London, Great Britain—Sculpture, &c., General Report on the Fine Arts, 455; Awards, 479
Judges of General Exhibits and in Exterior Shows, clxxxvii, *et. seq.*; also prefixed to each group throughout official record.

Juleff Brothers, Redfern, N.S.W.—Cooking Stoves, 224; Ornamented Iron Work, 339
Jumeau, Emile, Paris, France—Dolls, 269
Jung, Dr. H., Arnstadt, Thuringia, Germany—Water-colours, &c., 181
Junge, M. G., Berlin, Germany—Fancy Boxes, &c., 215
Junichiro, Watanabe—Services as Secretary Imperial Japanese Commission, cxlvii
Junor, J. Y., Morpeth, N.S.W.—Cattle, 946
Junor, J. T., Morpeth, N.S.W.—Cattle, 946
Just, Thomas Cook, M.P.—Services as Member of Tasmanian Commission, clxii
Justi, H. D. Philadelphia, U.S.—Artificial Teeth, 328
Jutz, Carl, Leopold, Düsseldorf, Germany—Oil Painting, 477

K

Kahland, J., Sandhurst, Victoria—Wines, 904
Kahn, Leopold, Stuttgart, Germany—Harmonium, 426
Kaiapoi, Woollen Manufacturing Co., (Lt'd), Kaiapoi, Canterbury, N.Z.—Woollen Goods, 255
Kaines, J. H., Adelaide Plains, South Australia—Wines, 898
Kaitakushi, Tokio, Japan—Raw Silk, &c., 260
Kaitangita Coal Co., Otago, N.Z.—Coal, General Report, 106; Award, 141
Kalabarn Estate, Darjiling, India—Tea, 819
Kallab & Shöne, Franz, Brünn, Moravia, Austria—Tweeds, 233
Kameke, O. Von, Berlin, Germany—Landscape, General Report on the Fine Arts, 462
Kammel & Co., Carl, Grusbach, Moravia, Austria—Sugar, 846
Kampmann, et Cie, Epinal (Vosges) France—Hats, 269
Kanaya Gorosaburo, Kioto, Japan—Bronze Ware, 501
Kann Joseph, jun., Nürnberg, Bavaria, Germany—Hops, 815
Kantorowicz, Hartwig, Posen, and Berlin, Germany—Bitters, 874
Kantorowicz, Robert, Berlin, Germany—Blankets, &c., 241
Kanzan Den Shichi, Kioto, Japan—Porcelain Ware, 206; Cloisonné Ware, 501
Kapunda Mine, South Australia—General Report, 75
Karcher, N. Westermann, Ars, a/d. Mosel, Lothringen, Germany—Fencing Wire, 163
Karafiat, F. Brünn, Moravia, Austria—Engravings, 486
Kates, Francis, M.P., Allora, Queensland—Wheat, 836; Flour, 846
Katoomba Coal Co., N.S.W.—Coal, General Report, 101; Award, 138
Kaufmann, A. & C., Berlin—Chromo-Lithographs, 492
Kaufmann, M., Brünn, Moravia, Austria—Malt, 810
Kayser, Fer. W., Waratah, Tasmania—Mineral Specimens, 84
Kayser, A. C., Sydney, N.S.W.—Disinfecting Fluid, 188
Keach, G. W., Kiswick, Ross, Tasmania—Wool, 923
Kean, Mary, Fish River Creek, N.S.W.—Public School Exhibit, 375
Kean, Sophia, Fish River Creek, N.S.W.—Public School Exhibit, 375
Kearns, P., Springfield, N.S.W.—Iron Ore; General Report, 26
Keary Brothers, Sydney, N.S.W.—Vehicles, 355
Keating, J. T., Paddington, near Sydney, N.S.W.—Dog, 979
Keen, Ada, Hinton, N.S.W.—Public School Exhibit, 378
Keen, Robinson, Bellville, & Co., London, Great Britain—Mustard, 817
Keen, James, Kingston, Tasmania—Sauce, 839
Kehrmann, Frederick, Coblenz, a/R, Germany—Wine, 874
Keiller & Son, Dundee, Great Britain—Confectionery, 849
Keir, Dundas, & Co., Ceylon—Tea, 811
Keira (Mount) Coal Co., N.S.W.—Coal; General Report, 100
Keishikioku, Tokio, Japan—Porcelain, 207
Kelland, T. D., Sandhurst, Victoria—Wine Vinegar, 842
Keller & Sohn, Heinrich, Darmstadt, Germany—Delineations of Grasses, 369
Keller, Kilian, Mainz, a/R, Germany—Brandy, 874
Kellick, James, Sydney, N.S.W.—Services as Judge, cliii; Judge, 963; Pigeons, 967
Kelly, J., Allora, Queensland—Maize, 836
Kelly & Frazer, Thames, N.Z.—Mineral Waters; General Report, 130; Award, 141
Kelly & Gordon, Hobart Town, Tasmania—Aerated Waters, 901
Kelman, James, Branxton, N.S.W.—Wines, 885
Kelsh, John, Manoora, South Australia—Freestone; General Report, 117
Kelterborn & Co., Robt., Berlin, Germany—Furniture, 215

Kemiff, Michael, Wilton, N.S.W.—Public School Exhibit, 384
Kemish Mrs., Berkely, N.S.W.—Quilt, 523
Kempthorne, Prosser, & Co., New Zealand Drug Co. (Limited), Dunedin, N.Z.—Chemicals, &c., 189; Knife Polish, 340; Raspberry Vinegar, 831; Liqueurs, 893
Kendall, Mrs., St. Leonards, near Sydney, N.S.W.—Silk Curtains, 523
Kendall & Sons, Sydney, N.S.W—Biscuits, 853
Kendall, Henry—Services as Author of Words of Opening Cantata, cl
Kennedy, James M., Sydney, N.S.W.—Illuminations, 506
Kennedy, Wm., Auburn, South Australia—Engraved Bullocks' Horns, 512
Kennedy, Sir Arthur E., K.C.M.G., C.B.—Services as President of the Queensland Commission, clx
Kennedy's Patent Water Meter Co. (Limited), Kilmarnock, Great Britain—Water Meters, 395
Kenny, Judith, Quorribolong, N.S.W.—Public School Exhibit, 381
Kenrick & Sons, Archibald—West Bromwich, near London, Great Britain—Iron-wares, 156; Kitchen Utensils, 220; Hollow-ware and ornamental Castings in iron, 335; Artistic Castings in Iron, 496; Enamelled Tubes, 662; Coffee and Spice Mills, 680; Milk-pans, 988
Kensington Maizena and Starch Co., Melbourne, Victoria—Maizena and Starch, 861
Kent, George, London, Great Britain—Labour-saving Inventions and Filters, 220; Sponges, 710
Kent & Co., G. B., London, Great Britain—Brushes, 347
Kent, Harry Chambers, M.A., Sydney, N.S.W.—Services, cl
Kent, Miss Annette, Manly, near Sydney, N.S.W.—Services, cl
Kenyon, Charlotte, Sydney, N.S.W—Berlin Woolwork, 523
Kermode, W. A., Mona Vale, Ross, Tasmania—Wool, 923, 924
Kern, J., Aarau, Switzerland—Mathematical Instruments, 399
Kerosene Shales, N.S.W—General Report, 95
Kerr, Edward, Dublin, Ireland—Patent Safety Lamps, 170
Kerr, William, Sydney, N.S.W.—Silver-ware, 224; Jewellery, &c., 286; Castings in Silver, 506
Kerr, Price, & Co., Paisley, Great Britain—Threads, 248; Cotton Reeling Machines, 662
Kerr, Clara, Camperdown, N.S.W.—Public School Exhibit, 373
Kerr, Edward, Dublin, Ireland—Garden Implement, 1006
Kerrawarry Slate Co., Sydney, N.S.W.—Slate; General Report, 117; Award, 138
Kerrison, G. P., Bega, N.S.W.—Services, clvi
Keto, Saml., Chippendale, near Sydney, N.S.W.—Dog, 979
Kewanee Manufacturing Co., Kewanee, Illinois, U.S.—Windmill, 670
Kiderlen, E., Delfshaven, near Rotterdam, Netherlands, Geneva, 879
Kierath, Charles, Indigo, Ovens District, Victoria—Bacon, 706
Kilgannon, Cecilia, Penrith, N.S.W.—Public School Exhibit, 380
Kilgour, William, Double Bay near Sydney, N.S.W.—Dog, 979
Kilner Brothers, London, Great Britain—Glass Bottles, &c., 203
Kilner & Stewart, Melbourne, Victoria—Carved Timber, General Report on Arboriculture, 791; Award, 807
Kimball & Co., W. S., Rochester, New York, U.S.—Tobacco and Cigarettes, 840
Kimbel, M., Breslau, Germany—Decorative Designs, 492
Kimber, Drew, Kadina, South Australia—Flour, 858
Kimber Charles, Clare, South Australia—Raisins, 858
Kimberley, Earl of, Services as Member of the Royal Commission in London, cxlv
Kindergarten Methods of Instruction, referred to, 361
King, William, Leighton Buzzard, Great Britain—Vehicles, 353
King, Annie, Hinton, N.S.W.—Public School Exhibit, 378
King, Maria, Lochinvar, N.S.W.—Public School Exhibit, 378
King & Co., Gisborne, N.Z.—Flour, 854
King, G. Maitland, Mackay, Queensland—Sugar, 856
King, Philip Gidley, M.L.C., Goonoo Goonoo, near Tamworth, N.S.W.—Services as Member of the Sydney International Exhibition Commission, cxlvii
King, George, Services as Member of Queensland Commission, clx
Kingsford & Co., T., Oswego, N.Y., U.S.—Corn Flour and Starch, 860
Kinkozan Sobei, Kioto, Japan—Earthenware, 207; Cloisonné ware, 501
Kinneman, Ernst, Balmain, N.S.W.—Pleasure Boat, 686
Kinshela, M., Parramatta, N.S.W.—Horse, 934
Kippax, Emily, Sydney, N.S.W.,—Public School Exhibit, 376

Kirby, W. Lee, Brooklands Estate, Madras, India—Teas, 819
Kircher, Jacob, Warwick, Queensland—Wine, 895
Kirchner Gebrüder, Vienna, Austria—Zithers, &c., 423
Kirkland, William, East Taieri, N.Z.—Cheese, 704
Kirkman & Son, J., London, Great Britain—Pianos, 427
Kirkpatrick, Annie, Balmain, near Sydney, N.S.W.—Public School Exhibit, 372
Kirkpatrick, J. Sydney, N.S.W.—Architectural Designs for Schools, 506
Kirkpatrick, Francis, Treasury Department, N.S.W.—cl
Kiritsu Kosho Kuwaisha, Tokio, Japan—Cabinet Ware (lacquered), 501
Kirschbaum, A., Sydney, N.S.W.—Services as Judge, cliii; Judge, 174
Kirwan, John, Freeman's Reach, N.S.W.—Maize, 826
Klein-Schlatter, C. F., Barmen, Germany—Zanellas, &c., 241
Klein, Adelaide, Guildford, N.S.W.—Public School Exhibit, 377
Klein, Mary Ann, Parramatta, N.S.W.—Berlin Wool-work, 523
Kleinoscheg Brüder, Graz, Austria—Wines, 866, 867
Klemm, G., Forst, Germany—Tweeds, 241
Klimsch's Druckerei (J. Maubach & Co.), Frankfort a/M, Germany—Chromo-lithographs, 492
Klinger, Heinrich, Vienna, Austria—Canvas, Calicos, &c., 233
Klingspor, junior, F., Siegen, Westphalia, Germany—Inkstands, 298
Knauth & Co., Leipsic, Germany—India-rubber Table-covers, &c., 346
Kneese & Stoneman, Crystal Brook, South Australia—Flour, 858
Knibbs, J. H., Sydney, N.S.W.—Leather Belting and Hose, 669
Knight, M. E. Broughton Village Public School, N.S.W.—Exhibits from, 373
Knight, Miss, Chelsea, Great Britain—Hospital Patch-work Quilt, 519
Knight, J. G., Adelaide, South Australia—Auriferous Quartz, General Report, 15; Gold from Port Darwin, Award, 144
Knös & Co., A., London, Great Britain—Safety Matches, 184
Knox, Thos. F., Sydney, N.S.W.—Sheep, 957
Knox, Edward—Services as Member of the London Commission, cxlv; as Member of London Committee, cxlvi
Koch & Bergfeld, Bremen, Germany—Repoussé Silver Ware, 215, 492
Koch, Carl (Nachfolger), Frankfort, a/M, Germany—Fancy Papers, 298
Koch & Bein, Berlin, Germany—Sign-boards with Metal Letters, 333
Koennecke & Co., Berlin, Germany—Berlin Wool-work, &c., 272
Koeppen & Wenke, Berlin, Germany—Lamps, 216
Kogarah Public School, N.S.W.—Awards to Exhibits from, 378
Köhler & Winselmann, Altenburg, Saxony, Germany, 607
Kohn, Jacob & Josef, Wsetin, Moravia, Austria—212
Kohnle & Co., J., Stuttgart, Württemberg, Germany—Furniture, 215
Koken, Gustav, Hanover, Germany—Landscapes; General Report on the Fine Arts, 462
Königliche Kommission für die Gewerblichen Fortbildungs Schulen, Stuttgart, Germany—Drawing Models, 369; Plaster Models, &c., 492
Kopf & Co., London, Great Britain—Tinned Soups and Extract of Beef, 325
Kopsch, Charles, Sydney, N.S.W.—Public School Exhibit, 375
Koransha-Hizen, Japan—Porcelain, 207; Paintings on Porcelain, 481
Korff, Misses, Sydney, N.S.W.—Lace, 523
Körner & Co., Berlin, Germany—Bronze Lamps, 216
Körper & Co., Mannheim, a/R, Germany—Machine Oil, 182
Kossack, H. J., Spremberg, Germany—Tweeds, 241
Kousanie Tea Co. (Ltd)., Kumaon, North West Provinces, India—Tea, 819
Kraft & Co., J. G., Baltimore, Maryland, U.S.—Tinned Fruits, &c., 860
Krantz, Dr. A., Bonn, Germany—Minerals, &c., General Report, 31; Mineralogical Collection, Award, 133
Kratzer, Joseph J., Vienna, Austria—Leather, 708
Krauel, Dr. Richard, Sydney, N.S.W.—Consul General for the German Empire—Services as Acting Executive Commissioner for Germany in absence of Professor Reuleaux, P.C., cxliv
Krauliz, Michael, Vienna, Austria—Photo. Frames, &c., 265
Krause & Baumann, Dresden, Germany—Coloured Papers, &c., 299
Krauss, Emma, Sydney, N.S.W.—Public School Exhibit, 375
Kretschmann, Josef, Sydney, N.S.W.—Services as Judge, cliii; Judge, 422
Kropff, Oscar, Nordhausen, Germany—Ice and Bottling Machinery, 658

Krupp, Friedrich, Essen, a/d. Ruhr, Germany—Special Medal, clxvi; Manufactured Iron and Steel, 153; references to exhibits, 148, 172; Field guns, 317, 622; Wheels, Axles, &c., 675
Krüger Gebrüder, Cottbus, Germany—Tweeds, 241
Krug, Oscar, Erfurt, Germany—Liqueurs, 874
Krull, Fred. A.—Services as Member of Commission at Wellington, N.Z., clix
Kuas & Co., Max Isar, Berlin, Germany—Liqueurs, 874
Kubota Kanbei, Kiota, Japan—Lacquered-ware, 223
Kühnen, Victor, Brussels, Belgium—Oil Painting, General Report on the Fine Arts, 465; Award, 473
Kullberg, Victor, London, Great Britain—Gas Governor, 395; Watches and Chronographs, Report on Chronology, 402, *et seq.*, and 417; Awards for Watches and Chronometers, 420
Kullrich, F. F. (Inhaber C. G. Lehmann), Berlin, Germany—Fancy Leather Goods, 272
Kupferberg & Co., C. A., Mainz, a/R, Germany—Wines, 874
Kurilla Mine, South Australia—Copper Ores, General Report, 75
Kurth, W'we. F. E., Berlin, Germany—Silverware, 216, 493; Gold Jewellery, 272
Kürth, August, Leipsic, Germany—Oleographs, 493
Kurtz, A., Mudgee, N.S.W.—Barley and Wheat, 826
Kuwai Takushi, Yeddo, Japan—Sulphur, General Report, 28; Award, 135; Preserved Salmon, 702; Timbers, General Report on Arboriculture, 717; Award, 803
Kuwanno Kioku, Board of Agriculture, Tokio, Japan—Seeds, 821
Kyal Tea Estate, Darjiling, India, 819
Kyle, Ada, Moama, N.S.W.—Public School Exhibit, 379

L

Labonde, L., Wellington, N.Z.—Kauri Resin, General Report on Arboriculture, 796; Awards, 805
Labroisse, Carl, Neustadt a/H, Germany—Liqueurs, 874
Labrouche, G., Bordeaux, France—Gums, 796; Award, 802
Lackersteen, A. L., Sydney, N.S.W.—Vinegar, 826; Jams and Preserved Fruits, 853
Lackey, Hon. John, M.P., Minister for Works, N.S.W., cxlix
Lacaux Frères, Limoges, France—Liqueurs, 871
Lachaume, Jules Joseph, Sydney, N.S.W.—Loan Exhibits, clviii; Dentistry, 328
Lachenal & Co., London, Great Britain—Concertinas, 428
Lace-Work in Ladies Court, referred to, 518
Lacroix, Adolphe, Paris, France—Vitrifiable Colours, &c., 179
Lade, N., Brisbane, Queensland—Portmanteaus, 287
Ladies Court, Garden Palace—Awards for exhibits in
Lady Mary South, No. 5, Gold Mining Company, Gympie, Queensland—Auriferous Quartz, General Report, 14
Laehr & Sohn, Berlin, Germany—Wool and Worsted, 241
Lahiff, P., Wollongong, N.S.W.—Iron Ore, General Report, 26
Lahiff, Miss, Wollongong, N.S.W.—Shell-flowers, &c., 524
Lal Lal Iron Co., Ballarat, Victoria—Iron Ore, General Report, 28; Pig-Iron Award, 160
Lalanne, Maxime, Paris, France—Aquafortis and Charcoal Drawings, 490
Lamal, Prosper—Services as Member of the Belgian Commission at Sydney, cxlii
Lamal et Cie., E., Brussels, Belgium—Rolled Lead and Lead Pipes, 149
Lamb, Walter, Rooty Hill, N.S.W.—Horse, 924
Lamb, J. de V. & Roberts, P., Mudgee, N.S.W.—Wool, 914; Sheep, 957, 958
Lamb, John de V., Mudgee, N.S.W.—Services as Judge, cliii; Judge, 330, 951
Lamb, John, Auckland, N.Z.—Biscuits, 854
Lamb, W. H., Woodstock, Rooty Hill, N.S.W.—Dog, 979
Lambert & Samhammer, Sonneberg, near Coblenz, Germany—Dolls, 272
Lambert & Co., Jumet-Charleroi, Belgium—Sheet Glass, &c., 197
Lambert, Hon. F. W., M.L.C.—Services as Member Queensland Commission, clx
Lambton (New) Colliery, Newcastle, N.S.W.—Coal, General Report, 99
Lambton, Public School, N.S.W.—Awards to Exhibits from, 378
Lamont & Henderson, London, Great Britain—Photographs, 496
Lamy Fils, Auguste, Morez du Jura, France—Spectacles, &c., 391
Lancashire & Son, W. B., Sydney, N.S.W.—Leather Portmanteaus, &c., 286

Landelle, Charles, Paris, France—Oil Paintings, General Report on the Fine Arts, 458; Award, 475
Landers, Jessie, Sydney, N.S.W.—Public School Exhibit, 376
Landsberg, Mary, Kapunda, South Australia—Berlin Wool Work, 529
Lane, Gale & Co,, New York City, U.S.—Axes and Squares, 341
Lane, C. J., Sydney, N.S.W.—Services as Judge, cliii; Judge, 655
Lane, James, Windsor, N.S.W.—Public School Exhibit, 385
Lane, Clara, Windsor, N.S.W.—Public School Exhibit, 385
Lang, Gideon Scott—Services at Superintendent Agricultural Department, cxlix
Lang, Maud, Penrith, N.S.W.—Public School Exhibit, 380
Langdon, Harriet, Gullen Flat, N.S.W.—Public School Exhibit, 378
Lange & Söhne, A., Glashutte, near Dresden, Germany—Watches, &c., Report on Chronology, 402, *et seq.*, and 417
Langenhagen, C. G. de, Nancy (Meurthe et Moselle), France—Hats, 269
Langenhagen, O. Von, Saar-Union, Elsass-Lothringen, Germany—Hats, 272
Langley & Co., Chas., San Francisco, California, U.S.—Flavouring Extracts, 191
Langley, Herbert, Sydney, N.S.W.—Public School Exhibit, 382
Lanham Printing Roller Co., London, Great Britain—Rollers, 652
Lanman and Kemp, New York City, U.S.—Toilet Waters, 191
Lanné, William, Last Male Tasmanian Aborigine referred to, 365
Lansdown, Frederick, Goulburn, N.S.W.—Public School Exhibit, 377
Lappe, Th., Neudietendorf, Thuringia, Germany—Bitters, 874
Large & Townley, Napier, N.Z.—Table made from New Zealand Woods, 226
Lark, F. B., Sydney, N.S.W.—Loan of Works of Art, clvii; Services as Judge, cliii; Judge, 259
Lark, Timothy—Services as Member of London Committee, cxlvi
Larkin, E., Appin, N.S.W.—Horse, 934
Larkworthy & Co., J. L., Worcester, Great Britain—Harrows, Scuffles, &c., 988
Larnach, Donald—Services as Member of London Committee, cxlvi
Lasch, Carl, Düsseldorf, Germany—Oil Painting, 477
Lassegue, Louis (Gardener to the Hon. J. White, M.L.C.), Sydney, N.S.W.—Flowers, 1014, 1016, 1019
Lassetter and Co., F. (Limited), Sydney, N.S.W.—Grindstones, General Report, 128; Award, 138; Roller Skates, &c., 224; Wire Meat Safes, 225; Canvas Waterproof Goods, 254
Lassetter, F.—Services as Member of London Committee, cxlvi
Latham & Co., E. (New Zealand Court)—Ales, 893
Latham & Co., E., Melbourne, Victoria—Ales, 904
Latta, Mr., N.S.W.—Coal Analyses by, 102
Lauchhammer Foundry, Lauchhammer, Germany—Stoves, 216; Artistic Castings, 333
Laufs & Steudner (Nachfolger), Hanau, a/M, Germany—Renaissance Silverware, 493
Laumans, J. A., Laeken, near Brussels, Belgium—Bronze Group, 473
Laurence, Thos. J., London, Great Britain—Boxwood for Engravers, 653
333, 493
Laurie, Canala, New Caledonia—Coffee Beans, 822
Laurie, J. Stewart, London, Great Britain—School Books, &c., 370
Lautier, Fils, Grasse, France—Olive Oil, 848
Lavers, J. V., Sydney, N.S.W.—Soap and Disinfecting Fluid, 188; Filters, 225
Lavie et Cie., Pierre, Constantine, Algeria, France—848
Lavigne, A., Presqu'ile Ducos, New Caledonia—Litho. Stones, General Report, 128; Award, 135
La Villette, M'me. Elodie, Bicêtre, Paris, France—Oil Painting, 475
Law, G. F., Sydney, N.S.W.—Hats, 286
Law, David, London, Great Britain—Oil Painting, General Report on the Fine Arts, 453
Law, Sons, & Co., London, Great Britain—Bookbinders' Cloth, 303
Law, Russell, & Co., Bradford, Yorkshire, Great Britain—Woollen Goods, 248
Lawler, J., Sydney, N.S.W.—Mattresses, 225
Lawless, Thos., Thames, N.Z.—Wool-work in frame, 255
Lawrence, William, Melbourne, Victoria—Wattlebark, 795; Award, 807
Lawrie, Alexander T., Rawden Vale, N.S.W.—853
Lawson, P.H., Mudgee, N.S.W.—Hone Stones, General Report, 128; Award, 138
Lawson, John, Sydney, N.S.W.—Special Medal, clxvi; Furniture, 225
Lawton & Sons, Geo., Saddleworth and Micklehurst, Great Britain—Flannels, 248

Laycock & Sons, Samuel, Sheffield, Great Britain—Brushmakers' Materials, 347
Layman, Lillie, Sydney, N.S.W.—Public School Exhibit, 374
Layton, George E.—Services as Secretary to Queensland Commission, clx
Lazarus & Son, Henry, London, Great Britain—Models of Furniture, 220
Leach, Flower, & Co., Neath, South Wales, Great Britain—Tin Plates, 156; Tin Boxes, 220
Leather Working Machinery—General Report on Machinery, 611, *et seq.*
Learmonth, T. & S., Groongal, N.S.W.—Wool, 915
Lebegge Van Paemel, Ghent, Belgium—Oil-varnishes, 178
Le Brun, Charles—Designer of Gobelins Tapestry, General Report on the Fine Arts, 480
Le Cornu, Paris, France—Confectioners' Machinery, 680
Lecourt, Paris, France—Preserved Olives, Onions, and Truffles, 813; Preserved Fruits and Vegetables, 848
Lecointe, Paris, France—Elementary Arithmetic, 369
Lechler, J., Shervaroy District, Madras, India—Coffee Beans, 820
Leduc, Alphonse, Paris, France—Musical Publications, 424
Lee & Griffiths, Birmingham, Great Britain—Door-locks, &c., 335
Lee, John, Mudgee, N.S.W.—Malting Barley, 826
Lee, Ada, West Maitland, N.S.W.—Chalk and Crayon Drawing, 524
Lee, Blanche Maud, Sydney, N.S.W.—Sewing, 524
Lee & Hunt, Nottingham, Great Britain—Lathes, 636
Lee, Thomas, Bathurst, N.S.W.—Services as Judge, cliii; Judge, 953; Exhibit Horses, 935
Lee, James, Molong, N.S.W.—Sheep, 959
Leechman & Co., G. & W., Colombo, Ceylon—Cocoanut Oil, 179; Rugs, Mats, &c., 237; Timbers, General Report on Arboriculture, 716; Award, 802; Copra, &c., 847; Fibres and Bristles, 909
Leefe, Hon. R. B., Nananu, Fiji—Vegetable Oils, 179; Arrowroot, Bananas, 847; Angora Hair, 909
Leendertz, Jan., Amsterdam, Netherlands—Chromo-lithographs, 504
Lees, Joseph, Sydney, N.S.W.—Services as Judge, cliii; Judge, 907
Lefèbvre, Jules J., Paris, France—Special Medal, clxv; Oil Painting, General Report on the Fine Arts, 458; Award, 476
Lefèvre, Gustave, Yvoir, near Dinand, Belgium—Marbles, General Report, 110; Award, 132
Lefèvre et Cie., Paris, France—Painted Windows, 490
Lefranc, Paris, France—Printing Inks, Colours, &c., 179; Printing, 297
Lehmann, Heinrich, Berlin, Germany—Gloves, 273
Lehmann, A. M., Finsterwalde, Germany—Cloths, 241
Lehmann, R., London, Great Britain—Oil Painting, General Report on the Fine Arts, 453
Lehmus & Co., Berlin, Germany—Embroidery in Wool, 273
Leibinger, Carl, Newcastle, N.S.W.—Photographs, 506
Leigh & Co., S. T., Sydney, N.S.W.—Book-binding, 310; Engraving and Lithography, 507
Leighton, Sir Frederick, P.R.A., London, Great Britain—Services as Member of Royal Commission, cxlv; Pictures by, General Report on the Fine Arts, 449
Lejeune, V. H. T., Dison, Belgium—Tweeds, 236
Leleux, Adolphe, Paris, France—Oil Painting, General Report on the Fine Arts, 458
Lemale & Co., London, Great Britain—Dentistry, 325
Lematte, Jacques, F. F., Paris, France—Oil Painting, General Report on the Fine Arts, 458
Lemere, Bedford, & Co., London, Great Britain—Architectural Photographs, General Report on the Fine Arts, 456; Award, 497
Lemire, C., Nouméa, New Caledonia—Statistical Works on New Caledonia, 371
Lemon, Dr. Charles—Services as Member of Commission at Wellington, New Zealand, clix
Lennard, Lewis, London, Great Britain—Water-Colour Painting, 480
Lennon, Hugh, Melbourne, Victoria—Ploughs, Harrows, Reapers, &c., 997
Leonhardt, G. F., Hainichen, Saxony, Germany—Flannels, 241
Leonardt & Co., D.,—"Reservoir" Pen, reference to, 292; Steel Pens, 303
Leopold II., King of the Belgians—Medals, cxliii, clxiv; Map of Africa, award, 431; referred to General Report on Education and Science, 364; General Report on Fine Arts, 465
Leppin & Masche, Berlin, Germany—Scientific and Technical Apparatus for Schools, 392
Le Rat, E. Paul, Paris, France—Etchings, 490
Leroy, Lecail et Cie, Paris, France—Chromo-lithography, 490

Leslie, C. R., R.A.—Work of Art by, lent by Her Majesty The Queen, 447
Lesmond, Christina M., Queanbeyan, N.S.W.—Berlin Wool-work, 524
Lesmond, Jane, Queanbeyan, N.S.W.—Berlin Wool-work, 524
Lesrel, Adolphe, Paris, France—Oil Painting, General Report on the Fine Arts, 459; Award, 476
Lessing, Clara, Sydney, N.S.W.—Public School Exhibit, 376
Lessing, Matilda, Sydney, N.S.W.—Public School Exhibit, 376
Lethbridge, Geo. L., Singleton, N.S.W.—Services as Judge, cliii; Judge, 907, 951
Lette, Henry Elwes, M.P.—Services as Member of Tasmanian Commission, clxii
Levainville et Rambaud, Paris, France—Colours, &c., 176, 909
Le Vasseur (Ancienne Maison Abel Pilon), Paris, France—Dictionary of Natural History, 369; Maps, 431; Artistic Wood-engraving, 490
Levasseur—Services as Member of Committee at Paris, clxiv
Levett, Wm. & Co. (Limited), London, Great Britain—Cement, General Report, 123
Leves & Scott, Dunedin, N.Z.—Glass Embossing, 510
Levetus Brothers, Birmingham, Great Britain—Imitation Jewellery, 279
Levey, George Collins, C.M.G.—Secretary, Melbourne International Exhibition of 1880, clxiii
Levick, H., Loma Loma, Fiji—Copra, 847
Levin, Hermann, Göttingen, Hanover, Germany—Flannels, 241
Levin, Wm. Hort—Services as Member of Commission at Wellington, N.Z., clix
Levy, Ada, Dapto, N.S.W.—Lace, 524
Lévy, Marc, Paris, France—Dress-shoes, &c., 269
Levy, Minnie, Sydney, N.S.W.—Public School Exhibit, 376
Levy, Edward A.—Services as Member of London Commission, cxlv; as Member of London Committee, cxlvi
Lewald, Dagobert, Hobart Town, Tasmania—Zircons from Tin Mines, General Report, 30
Lewellyns & James, and the Nailsworth Foundry Co., Bristol, Great Britain—Engineers' Brass-work, Brass Pumps, &c., General Report on Machinery, 603; Awards, 663
Lewinsohn, E., Berlin, Germany—Ostrich Feathers, &c., 273
Lewinstein Gebrüder, Berlin, Germany—Water-proof Coatings, 242; India-rubber Cloths and Webbings, 273
Lewis, G. E., Birmingham, Great Britain—Guns and Rifles, 319
Lewis, Martha, Quorribolong, N.S.W.—Public School Exhibit, 381
Lewis, C. J., London, Great Britain—Oil Paintings, General Report on the Fine Arts, 453
Lewis, Charles, Sydney, N.S.W.—Services as Judge, cliii; Judge, 641, 655
Lewis, C., Sydney, N.S.W.—Railway Signal-post, 676
Ley, Francis, Derby, Great Britain—Pulley-blocks, 662
Lezza, S., Melbourne, Victoria—Confectionery, 861
L'Hoste, Pierre B., Paris, France—Distillery Appliances, 657
Liardet, H. E., Wellington, N.Z.—Farriers' Work, 287
Libron et Stiegler, Paris, et Bar-le-Duc (Meuse), France—Stays, 269
Libby & Co., John, Stroud, Gloucestershire, Great Britain—Clothes, 248
Liebig, Franz, Reichenberg, Bohemia, Austria—Woollen Goods, 233
Liepmann, H., Berlin, Germany—Paper-hangings, 299
Liebe, J. Paul, Dresden, Germany—Preparations of Malt, 324
Liefmann & Söhne, R., Hamburg, Germany—Grass Seeds, 815
Light, C. & R., London, Great Britain—Furniture, 220
Lightband, Allan, & Co., Christchurch, N.Z.—Boots and Shoes, 287
Lightbown, Aspinall, & Co., London, Great Britain—Paper-hangings, 303
Liggins, Wm., Goulburn, N.S.W.—Public School Exhibit, 377
Lim Teck Hee, Malacca, Straits Settlements—Tin Ore, General Report, 19
Limousin et Cie., Paris, France—Apparatus for Manufacture of Medicated Wafers, 323
Linoleum Manufacturing Co. (Limited), Staines, Middlesex, Great Britain—Linoleum Floor-cloth, 248
Lincoln, Bennett, & Co., London, Great Britain—Hats, 279
Lindeman, H. J., Cawarra, Paterson, N.S.W.—Wines, 886
Lindenschmidt, W., Munich, Germany—Oil Painting, 477
Lindheim, Wilhelm von—Services as Member of Executive Committee at Vienna Austria, cxlii
Lindheim & Co., Vienna, Austria—Oxide of Zinc, 176
Lindsay, Isabella, Charcoal Creek, N.S.W.—Public School Exhibit, 373
Linnig, W., Junior, Weimar, Germany—Oil Painting, 477

Linley & Sons, Thos., Sheffield, Great Britain—Drilling Machinery, Bellows, &c., General Report on Machinery, 601 ; Award, 635
Linsley, Kate, Windsor, N.S.W.—Public School Exhibit, 385
Linsley, Minnie, Windsor, N.S.W.—Public School Exhibit, 385
Lipman, Rachel, Sydney, N.S.W.—Public School Exhibit, 376
Lipp & Sohn, Richard, Stuttgart, Germany—Pianos, 426
Lissaute et Cosson, Paris, France—Glassware, 198
Liston, Annie, Sydney, N.S.W.—Public School Exhibit, 374
Lithography, Division of Group of Classes 410–427, 485 *et seq.*
Lithgow Valley Colliery, Lithgow, N.S.W.—Coal, General Report, 101 ; Award, 138 ; Pottery, 209
Live Stock Shows—(*Vide* Executive Commissioners' Report, also General Report on Agriculture), 698
Liversidge, Professor Archibald, Sydney University—Services as Honorary Member of Committee, cxlviii ; Loan of Ethnological Exhibits, clviii ; Coal Analyses by, 102
Liverpool Spun Oakum Co., Liverpool, Great Britain—Oakum, 347
Lix, Gustave, Paris, France—Services as Judge, cliii ; Judge, 471
Lloyd & Lloyd, Birmingham, Great Britain—Tubes, 663
Lloyd, Amoruso, & Co., Bari, Italy—Olive Oil, 850
Lloyd, Charles M., Urana, N.S.W.—Services as Judge, cliii ; Judge, 929
Loader, Hon. Thos.—Services as Member of Victorian Commission, clxiii
Lobenstein, Carl (Carl Bornmüller), Arnstadt, Germany—Bitters, 874
Lobrichon, Timoléon, Paris, France—Oil Painting, General Report on the Fine Arts, 459; Award, 476
Lochmann, J. G. & Paul, Zeitz, Saxony, Germany—Models of Steam Engines, 369
Lochinvar Public School, N.S.W.—Awards to Exhibits from, 378
Lochet Aîné et Debertrand, Paris, France—Dog Collars, 269
Lockwood & Keighley, Huddersfield, Great Britain—Woollen and Worsted Cords, 248
Lockwood, H., New York City, U.S.—Specimens of Printing, 213 ; Lithographs, 514
Locomotive Department, Southern and Western Railway, Ipswich, Queensland—Railway Carriage, 677
Loder, Andrew, Willow Tree, N.S.W.—Wines, 886 ; Cattle, 946
Loder, George, Singleton, N.S.W.—Services as Judge, cliii ; Judge, 939 ; Exhibit, Cattle, 946
Lodwidge, John—Services as Secretary to Belgian Executive Commissioner at Sydney, cxlii
Loefen, Bennewitz von, Berlin, Germany—Oil Painting, General Report on the Fine Arts, 462 ; Award, 477
Loesch, Carl, Endingen, Baden, Germany—710
Loftus, His Excellency Lord Augustus W.F.S., P.C., G.C.B.—Services as President of Sydney International Exhibition Commission, cxlvii (*Vide* Executive Commissioners' Report (indexed reference) for address to His Excellency from Commission on his arrival in the Colony, also addresses of His Excellency at opening and closing ceremonies, &c.)
Logan, H. F., Wellington, N.Z.—Ferns, 1008
Logemann, Franz, Vienna, Austria—Gloves, 265
Löhler, Theodor, Mannheim, a/R, Baden, Germany—Wire Mattresses, 242
Lojakono, Palermo, Italy—Oil Painting, 472
Lomer, Mrs., Sydney, N.S.W.—Honiton Lace, 524
London Extended Claim, Gympie, Queensland—Auriferous Quartz, 15
London School Board—Reference to Educational Exhibit, 361
London Missionary Society—Loan of Ethnological Exhibits, clviii
London and St. Katharine Docks Co., London, Great Britain—Models of Docks, 685
London Commission—Members of, cxlv, *et ante.*
London Committee—Members of, cxlv, cxlvi, *et ante.*
Longden, Sir James R., K.C.M.G., Governor of Ceylon—cxliii
Longdon & Co., F., Derby, Great Britain—Elastic Stockings, &c., 325
Lord, Hon. J., Hobartville, Tasmania—Anthracite Coal, General Report, 108
Lord, Samuel P.—Services as Commissioner and Executive Officer for United States at Sydney, clxii
Lord, Herbert, Sydney, N.S.W.—Services as Steward, cliii ; Steward at Judging, 963
Lord, George Lee, Sydney, N.S.W.—Services as Steward, cliii ; Steward at Judging, 963 ; Exhibits of Poultry, 969
Lords Commissioners of Admiralty—Services, cxlvi ; Reference to Exhibit, 364

Lorenz, Dr. Ritter, Dojmi von Delupis, Lissa, Austrian Court—Wine and Brandy, 867
Lorin, Nicolas, Chartres (Eure et Loire), France—Painted Window, 491
Lorne, Marquis of, K.T., G.C.M.G., Governor-General of Canada, cxliii
Lorrain, J., Varrains (Maine et Loire), France—Wines, 871
Lorré, Prosper, Troyes, France—Furs, 709
Löser Gebrüder, Buda-Pesth, Austria—Mineral Waters, General Report, 129; Award, 131
Lossow, Heinrich, Munich, Germany—Oil Painting, 477
Lott, Fredk., Penrith, N.S.W.—Public School Exhibit, 380
Louderback, E., Philadelphia, U.S.—Window Shades, 229
Louis-Noël, Hubert, Paris, France—Statuary, General Report on the Fine Arts, 460; Award, 476
Lovedale Estate, Nilagiri Hills, India—819
Low, Wm., Queenstown, N.Z.—Iron Stone, General Report, 26
Low, Marston, Searle, and Rivington, Sampson—London, Great Britain—Printed Illustrated Books, 370; Copper-plate Engraving, 497
Low & Duff, Dundee, Great Britain—Lathe and Hand Rest, General Report on Machinery, 609, 613; Award, 635
Low, J. & A., Welltown, Queensland—Wool, 920
Lowe, A. H., Dynevor, Denison Town, N.S.W.—Angora Wool, 914
Lowe, Robert, Mudgee, N.S.W.—Services as Judge, cliii; Judge, 939
Lowe, C. B., Mudgee, N.S.W.—Minerals and Fossils from Mudgee District, General Report, 67; Award, 138
Löwe & Co., Ludwig, Berlin, Germany—Firearms, &c., 317
Löwenstein, Adolph R., Vienna, Austria—Fancy Shoes, &c., 265
Lowenstam, L., London, Great Britain—Etchings, 497
Lower Marine Series of N.S.W. Fossils, 62
Lowery & Co., San Francisco, California, U.S.—Wheats, Oats, Barley, &c., 841
Lucas, J., Camperdown, N.S.W.—Stalactites from Fish River Caves, General Report, 67
Lucas & Co., John, Philadelphia, U.S.—Paints and Varnishes, 191
Lucas, Albert Durer, Sydney, N.S.W.—Services, cxlvi
Luce, Geo., Jersey, Channel Islands, Great Britain—Eau-de-Cologne, 184
Lüdecke, F., Berlin, Germany—Papers, 299
Ludowici, Minnie, Hunter's Hill, N.S.W.—Berlin Woolwork, 524
Ludowici, J. C., Sydney, N.S.W.—Leather Belting, 669
Lugton & Sons, Alexander, Melbourne, Victoria—Brine Pumps, 672; Chopping-machine, 998
Lukin, Gresley, Brisbane, Queensland—Services as Executive Commissioner for Queensland, clx; Exhibit, Explorations Map, 435
Lund F., Bremen, Germany—Cabinet for Silver, 216
Lune Chair Co., Lancaster, Great Britain—Furniture, 220
Lusk, S. B., Batavia, Genesee, New York, U.S.—Wool, 925
Lutwyche, Emily, Sydney, N.S.W.—Public School Exhibit, 382
Luxardo, Girolamo, Zara, Austrian Court—Liqueurs, 867
Luzet, Luxeuil (Haute Saône), France, Kirschwasser, 871
Lynch & Co., London, Great Britain—Surgical Appliances, &c., 325
Lynch, Louisa, Sydney, N.S.W.—Public School Exhibit, 376
Lynch, Mrs. J. M., Sydney, N.S.W.—Australian Flowers, &c., in wax, 524
Lynn, W. H., R.H.A., F.R.I.B.A., Belfast, Ireland—Architectural Design, 497
Lyon, George, Beechworth, Victoria—Raspberry Vinegar, 842
Lyon, Cottier, & Co., Sydney, N.S.W.—Stained Glass Windows, 507
Lyon & Blair, Wellington, N.Z.—Bookbinding, 312
Lyons, Wm., London, Great Britain—Ink, 184; Sealing-wax, 303
Lyons, Henry, Sydney, N.S.W.—Public School Exhibit, 375
"Lyttelton Times," Proprietors of the—Christchurch, Canterbury, N.Z.—Photo-lithography, 511
Lyttelton Harbour Board, Lyttelton, N.Z.—Model of Harbour, 687
Lytton, Lord, G.C.B., G.M.S.I., Viceroy and Governor of India, cxlvi

M

Macarthur, J. & W., Camden Park, N.S.W.—Maize, 826, 827; Wines, 886, 887
Macarthur, Sir William, Camden Park, N.S.W.—Seeds, 827
Macarthur, Alex., M.P.—Services as Member of London Commission, cxlv; as Member of London Committee, cxlvi

Macaulay, Miss Christian M., Darlington, near Sydney, N.S.W.—Crochet Work, 524
Macansh, J. D., Canning Downs, Warwick, Queensland—Wool, 921
Macansh, Wm., Murrumburah, N.S.W.—Barley and Wheat, 1025
MacBrair Brothers & Co., Sheffield, Great Britain—Saws, &c., 335; Stocks, Dies, Vyces, Tools, &c., 635
Macdonald, T. E., New York City, U.S.—Washing-Machines, 229
Macdonald, John, St. Helena, Queensland—Sugar Canes, 856
Macdonald, A., Sydney, N.S.W.—Loan Ethnological Exhibits, clviii
Macfarlane, James—Services as Member of the Tasmanian Commission, clxii
Macfarlane, Hagar, Wollombi, N.S.W.—Public School Exhibit, 385
MacGeorge, Leslie D., Clyde, Vincent Co., N.Z.—Plan of Suspension Bridge, 434
Machardy, Ronald, Woollahra, near Sydney, N.S.W.—Horse, 935
Machardy, Malcolm C., Sydney, N.S.W.—Services as Honorary Member of Committee, cxlviii
Machen, Montague S., Sydney, N.S.W.—Services as Judge, cliii; Judge, 862
Machine Tools—General Report on Machinery, 576
Machinery Department—533 *et seq*; General Report of Mr. Selfe on, 535–624; General Report of Mr. Oxley on, 625–628
Machinery and Implements used in Tillage (Class 653)—General Report on Machinery, 627
Machines, Tools, and Apparatus of Mining, Metallurgy, Chemistry, and the Extractive Arts, 629 *et seq.*
Machines and Implements of Spinning, Weaving, Felting, and Paper-making—Group of Classes, 520–528; 650 *et seq.*
Machines and Apparatus for Type-setting, Printing, Stamping, Embossing, &c.—Group of Classes, 538–545; 650 *et seq.*
Machines used in Preparing Agricultural Products—Group of Classes, 569–576; 678 *et seq.*
Machines and Tools for Working Metal, Wood, and Stone—Group of Classes, 510–519; 632 *et seq.*
Machines, Apparatus, &c., used in Sewing, &c.—Group of Classes, 529–537; 646 *et seq.*
Machines, Implements, and Processes of Manufacture connected with Agriculture—Group of Classes, 653–658; 988
Macholl Gebrüder (Utzschneidersche Spiritus Liqueur und Essig-Fabrik), Munich, Germany—Liqueurs, &c., 874
Macintosh, Henry, Melbourne, Victoria—Woven Wire, &c., 160
Macintosh & Co., Charles, London and Manchester, Great Britain—Waterproof Clothing, &c., 279; India-rubber Surgical Appliances, 326; General India-rubber Goods, 347
Macintyre, Adelaide, Sydney, N.S.W.—Public School Exhibit, 376
Mackay & Co., John, Edinburgh, Great Britain—Varnishes, Flavouring Essences, &c., 184
Mackay, Angus, *Sydney Daily Telegraph*—Literary Services, clix
Mackaness, James, St. Leonards, near Sydney, N.S.W.—Dogs, 979
Mackellar, Smith, & Jordan, Philadelphia, U.S.—Type, 654
Mackenzie, Captain W. D., Sydney, N.S.W.—Gold, Quartz Specimens, General Report, 12
Mackenzie, John, F.G.S. (Examiner of N.S.W. Coal-fields)—Services as Honorary Member of Committee, cxlviii; General Report; Tin Ores from New England, General Report, 18, 67; Collection of N.S.W. Coals, General Report, 102; Tin and Coal Specimens, Awards, 138
Mackenzie, Maud, East St. Leonards, near Sydney, N.S.W.—Flower and Fern Painting, 524
Mackenzie, David, Sydney, N.S.W.—Services as Judge, cliii; Judge, 211
Mackiehan, John, Penshurst, Victoria—Wine, 904
Mackwood & Co., Ceylon—Coffee, 811
Macleay, Wm., M.L.C., Sydney, N.S.W.—Services as Member of Sydney International Exhibition Commission, cxlviii; Loan of Ethnological Exhibits, clviii
Maclean, A., Darling Point, near Sydney, N.S.W.—Dog, 980
Maclean, Hector R., Sydney, N.S.W.—Services, clix
Maclellan & Co., George, Glasgow, Great Baitain—India-rubber Goods, 347
Maclure & Macdonald, London, Great Britain—Chromo-Lithographs and Engraving, 497
Macnamara, Louisa, Sydney, N.S.W.—Public School Exhibit, 375

Macome, Mrs., Sydney, N.S.W.—Loan Works of Art, clvii
Maconochie Brothers, Lowestoft, Great Britain—Bloater Paste, &c., 817
Macpherson, Mrs., Brisbane, Queensland—Knitted Quilt, 532
Macpherson, Alex., Brisbane, Queensland—Textile Fabrics, 255; Fibres for Paper-making, 313; Rice, Seeds, &c., 836; Fibres, 921
Macquarie, L., Hobart Town, Tasmania—Whaleboat, 687
Macramé Work in Ladies Court, 518
Maculloch, James, London, Great Britain—Water-colour Paintings, General Report on the Fine Arts, 455; Award, 480
Maddock, Rosina, Hobart Town, Tasmania—Lace, 530
Maddock, Master C. B., Hobart Town, Tasmania—Cone-work Picture Frame, 530
Madeley, Frederick, Birmingham, Great Britain—Cutlery, &c., 335; Saddlery and Harness, 353
Madras, Government of, Madras, India—Services, cxlvi; Teas and Tobacco, 820; Fibres, 911
Magalhaens, J., Penang, Straits Settlements—Timbers, 806
Magdala Co., Pleasant Creek, Victoria—Gold, Quartz Specimens, General Report, 16; Award, 145
Magee, Nelson, New York City, U.S.—Harness-making Machine, 342
Magill, Mary, Sydney, N.S.W.—Flowers, 1019, 1025
Maguire, W. H., Sydney, N.S.W.—Loan Works of Art, clvii; Services as Judge, cliii; Judge, 389
Mahillon, Charles, Brussels, Belgium—Musical Instruments, 423
Mahler Jacob, sen., Flensburg, Schleswig-Holstein, Germany—Leathers, 710
Mahlknecht, E., Vienna, Austria—Oil Painting, General Report on the Fine Arts, 467; Award, 473
Mahony, F., Sydney, N.S.W.—Crayon Drawings, 507
Mailer, Andrew, Port Stephens, N.S.W.—Loan Ethnological Exhibits, clviii
Mair, George, Wagga Wagga, N.S.W.—Services as Judge, cliii; Judge, 939
Maire, M'lle Valentine, Paris, France—Special Medal, clxv; Paintings on Porcelain, 476
Mais, H. C., Adelaide, South Australia—Services as Member of South Australian Commission, clxi; Working Drawings of Railway Line, 435
Maisey, Jane, Windsor, N.S.W.—Public School Exhibit, 385
Maisiat, J., Vignely, near Esbly (Seine-et-Marne), France—Oil Paintings, General Report on the Fine Arts, 459; Awards, 476
Maitland East Public School, N.S.W.—Award to Exhibits from, 379
Maitland West Public School, N.S.W.—Award to Exhibits from, 379
Maitland Exhibition Committee, Maitland, N.S.W.—Asphalt Pavements, General Report, 124; Preserved Fruits and Jellies, 853
Makepeace, Thos., Birmingham, Great Britain—Saddle-trees, 353
Makin, Edith, Wollongong, N.S.W.—Public School Exhibit, 385
Malan, Chas, Dombéa, New Caledonia—Cajeput Oil, 327
Maldon Iron Works Co. (Limited), Maldon, Essex, Great Britain—Agricultural Machinery, 988, 989
Maloga Mission for Australian Aborigines—Reference to, 366
Maltby, Eva, Brussels, Belgium—Paintings on Porcelain, 473
Maltby, Gertrude, Brussels, Belgium—Paintings on Porcelain, 473
Manbey, Arthur, Bega, N.S.W.—Public School Exhibit, 373
Manchester, Duke of, K.P.—Services as Member of the Royal Commission in London, cxlv; Vice-President of the Royal Colonial Institute, cxlvi
Mand, Carl, Coblenz, a/R, Germany—Piano, 426
Mandelson, K. S., Sydney, N.S.W.—Pencil Drawings, 507
Mander Brothers, Wolverhampton, Great Britain—Varnishes, &c., 184
Mandl, M. & J., Prossinitz and Vienna, Austria—Clothing, 265
Manegold, H. (Inhaber R. Voorgang), Berlin, Germany—Fancy Leather Goods, 273
Manfield & Sons, Northampton, Great Britain—Boots and Shoes, 279
Manfield, Northampton, Great Britain—Photographs, 497
Manifattura Ginori, Doccia, Florence, Italy—Special Medal, clxvi; Porcelain, 206
Mann, Captain Gother K., Sydney, N.S.W.—Services as Judge, cliii; Judge, 315, 330
Manners, J., Taree, Manning River, N.S.W.—Ploughs, Corn-shellers, and Horse-powers, 991
Mannheimer, V., Berlin, Germany—Ladies' Mantles, 273

Manning, Leonard, Ryde, N.S.W.—Swine, 958
Manning, John Edye, Ryde, N.S.W.—Cattle, 947
Manning, Arthur B., Ryde, N.S.W.—Cattle, 947
Manning, Mrs. James, Sydney, N.S.W.—Loan Works of Art, clvii
Manson, Donald, Waltham, Mass., U.S.—Services as Honorary Acting Commissioner and Executive Officer of U.S. Commission, clxii; Services as Judge, cliii; Judge, 315, 330
Manthey, W. (Vormals E. Thurmer), Berlin, Germany—Piano, 426
Manuel et Cie, Reims, Marne, France—Champagne, 871
Manufactures, Department of, 165 *et seq.*; General Report on, 167, *et seq.*
Manufacture Nationale de Beauvais, France—Tapestries; Services, cxliv; Special Medal, clxv; Award, 476
Manufacture Nationale des Gobelins, Paris, France—Tapestries; Services, cxliv; Special Medal, clxv; Award, 476
Maori House, Garden Palace Grounds—Reference to, 365
Marbles, Exhibits of—General Report, 109
Marchini, Cesare, Florence, Italy—Straw-Hats, &c., 282
Marchot, H., Liège, Belgium—Sheet-Iron, 150
Maré et Gérard Frères, Joseph, Bogny-Braux, Ardennes, France—Bolts, Nuts, &c., 675
Maré, Ch., Nantes (Loire-Inférieure), France—Tinned Meats, 701; Tinned Vegetables, 848
Mareschal, Jules, Paris, France—Meat-chopping Machine, 983
Marggraff Gebrüder, Schwiebus, Germany—Tweeds, 242
Marienval et Cie, Paris, France—Artificial Flowers, Feathers, &c., 269
Marie, Member of Committee at Paris, cxliv
Marine Engines—General Report on Machinery, 550 *et seq.*
Marine Series of N.S.W. Fossils (Upper and Lower)—General Mineralogical Report, 62, 63
Marion & Co., London, Great Britain—Portrait Albums, Photo. Frames, &c., 280; Fancy Stationery, 304; Photographs, 497
Marriott, Mrs. Thos., Wellington, N.Z.—Lace Work, 529
Mariotti & Fantoni, Florence, Italy—Stones for Mosaics, General Report, 111; Marbles and Serpentines,; Award, 134; Jewellery, 282; Mosaic Tables, 500
Markelbach, A., Brussels, Belgium—Oil Painting, General Report on the Fine Arts, 465
Markham, Miss M., Sydney, N.S.W.—Water-colour Drawing, 507
Marklove, R., Sydney, N.S.W.—Services as Steward, cliii; Steward in Judging, 963; Exhibit, Poultry, 969
Marks, David, Sydney, N.S.W.—Plants, 1019
Marks, Hon. John, M.L.C., Sydney, N.S.W.—Horse, 935; Plants, 1019
Marliere et Cie, Argenteuil (Seine-et-Oise), France—Embroideries, 269
Marling & Co., Stroud, Gloucestershire, Great Britain—Woollen Goods, 248
Marples & Sons, Wm., Sheffield, Great Britain—Tools, 335
Marquies, Miriam, Sydney, N.S.W.—Public School Exhibit, 374
Marr, Miss, Wollongong, N.S.W.—Lace, 524
Marr, W. G., Sydney, N.S.W.—Services as Judge, cliii; Judge, 963
Marr, H. F., Illawarra, N.S.W.—Services, clvi
Marrian & Co., Thomas, Sheffield, Great Britain—British Beer, 876
Marrickville Public School, N.S.W.—Award to Exhibits from, 379
Marsden, Thomas, Hobart Town, Tasmania—Ale, &c., 901
Marsden & Saffley, Liverpool, Great Britain—Iron Billiard-Table, 220
Marsh, L. J., St. Leonards, near Sydney, N.S.W.—Crayon Drawings, 507
Marshall, Samuel, Sheffield, Great Britain—Sheep-shears, &c., 989
Marshall & Slade, Glengallan, Queensland—Sheep, 961
Marshall, Sons, & Co., Gainsborough, Great Britain—Machinery, References to in General Report on Machinery, 537, 538, 544, 545, 546, 554, 555, 590, 591, 620, 621; Awards, 635, 663; Threshing-machines, 989
Marshall, Miss C., Sydney, N.S.W.—Oil Painting, 507
Marshall, Joseph, Paddington, N.S.W.—Special Medal, clxvi; Award, Stout and Ales, 887
Marshall, Edward, Sorell, Tasmania—Wheat and Peas, 839
Marshall & Copeland, N.Z.—Malt, 832
Marshall & Co., Aberdeen, Great Britain—Tinned Fish, 702
Marshall & Co., Allan A., Sydney, N.S.W.—General Hardware, Hollow-ware, Castings, &c., 333; Diving-dress, Cocks, Valves, &c., and Pump, 669
Marshall, Wm., Melbourne, Victoria—Show-Printing, 314

Marshall & Snellgrove, London, Great Britain—Waterproof Clothing, 280
Martens, L., Berlin, Germany—Leather Goods, 273
Martens, Rebecca, St. Leonards, North Shore, N.S.W.—Water-colour Paintings, 524
Marthaler, J., Zeitz, Saxony, Germany—Kid Gloves, 273
Martial-Bernard—Services as Member of Committee at Paris, cxliv
Martin, Robert, London, Great Britain—Sheep-shears, &c., 989
Martin, Felix, Paris, France—Sculpture, General Report on the Fine Arts, 460
Martin, Sir James, C.J., Sydney, N.S.W.—Services as Vice-President Sydney International Exhibition Commission, cxlvii
Martin, P., & Rush, G. F., Munroe Co., New York, U.S.—Wool, 925
Martin, John, Tice, Invercargill, N.Z.—Pale Ale, 893
Martin, Amsberg, Mitchell, & Co., Kent Town, South Australia—Sauces, 837 ; Cordials, and Liqueurs, 898
Martin, Emma, Wickham, N.S.W.—Public School Exhibit, 384
Martin, Eliza, Wickham, N.S.W.—Public School Exhibit, 384
Martin, Felix, Paris, France—Sculpture ; General Report on the Fine Arts, 460
Martin, Julia, Wickham, N.S.W.—Public School Exhibit, 384
Martin, Albert, Paris, France—Harmoniums, 425
Martin & Son, John, Tunbridge Wells, Kent, Great Britain—Cricket-Bats and Balls, 280
Martin & Co., Jas., Gawler, South Australia—Ore separator, 163 ; Agricultural Implements, 993
Martin, Hall, & Co., Sheffield, Great Britain—Special Medal, clxv ; Silver-plated Ware, reference to, 169 ; Award, 220 ; Engraving on Silver, 497
Martin, Maria Clementine (Klosterfrau), Cologne, Germany—Eau-de-Cologne, 182
Martin, J., Willunga, South Australia—Slate, General Report, 118 ; Award, 144
Maru Yosaburo, Tokio, Japan—Earthenware, 207
Masato Hashimoto—Services as Member of the Imperial Commission at Tokio, Japan, cxlviii
Masayoshi Matsukata—Services as President of the Imperial Commission at Tokio, Japan,
Mason, G. H., London, Great Britain—Printing Inks, 184
Mason, J. E., Taviuni, Fiji—Cotton, 909
Massey, Charles A., Gundaroo, N.S.W.—Services as Judge, cliii ; Judge, 951
Massey, B. & S., Manchester, Great Britain—Steam Hammers, General Report on Machinery, 597 ; Awards, 636
Massie, H. H.—Services as Member of Queensland Commission, clx
Massie, R. G.—Services as Member of Queensland Commission, clx
Massmann, F., Kiel, Germany—Fancy Mouldings, 216
Masters, George, Sydney, N.S.W.—Plants, Vegetables, 1017, 1020
Mataura Paper Mill Co. (Limited), Mataura, N.Z.—Brown Paper, 312
Mather, Miss E., Hobart Town, Tasmania—Flowers and Berries, 531
Mathieu, H., Paris, France—Painted Ornamental Windows, 491
Mathieu, Captain Adolphe François—Services as Commissioner-General for France, cxliii
Matsumoto Tetsuzo, Tokio, Japan—Floorcloth, 252
Matsumoto Hoyen, Tokio, Japan—Porcelain Vases, 207 : Painting on Enamel, 481
Matscheko, M.—Services as Vice-President of Executive Committee at Vienna, cxlii
Mattoni, H., Carlsbad and Vienna, Austria—Mineral Waters, General Report, 129 ; Award, 131
Mattoni & Wille, Buda-Pesth, Austria—Mineral Waters, General Report, 129 ; Award, 131
Maudoux, Auguste, Walcourt, Belgium—Marbles and Serpentines, General Report, 110 Award, 132
Maupetit, A., Limoges, France—Liqueurs, 871
Maurice, Price, Castambul, South Australia—Angora-Goat Skins, 713 ; Wool, 922
Mauser Gebrüder, & Co., Oberndorf am Neckar, Germany—Revolvers, 318
Maw & Co., Brosely, Shropshire, Great Britain—Encaustic Tiles, 203
Max, Gabriel, Munich, Germany (Austrian Gallery)—Oil Painting, General Report on the Fine Arts, 466 ; Award, 472
Maxwell, James, Dundee, Great Britain—Railway-Carriage Panel, 676
Maxwell, Daniel, Cohuna, Victoria—Wheat, 843
Maxwell, David, Paris, Ontario, Canada—Chaff-cutter, 982
May Frères et Cie, Paris, France—Buttons, 269
Mayer & Co., Alex., Vienna, Austria—Buttons, 265
Mayer & Meltzer, London, Great Britain—Surgical Instruments, Stethescopes, Laryngoscopes, &c., 326 ; Cutlery, 335

Mayer-Wismar, Ferd., Munich, Germany—Genre Picture, General Report on the Fine Arts, 463
Mayer & Deninger, Michel, Mainz, a/R, Germany—Leathers, 710
Mayer Gebrüder, Mannheim, a/R, Germany—Cigars, 815
Mayer, Samuel, Arad, Austria—Wines, 867
Mayer & Co., Kalk-Köln, a/R, Germany—Seed-screens, 984
Mayer'sche Kunstanstalt, Munich, Germany—Ecclesiastical Statuary, 493
Mayes, Miss E., Sydney, N.S.W.—Oil Paintings, 507
Mayfarth & Co., Ph., Frankfurt, a/M, Germany—Threshing-machines, &c., 984
Mayhew, James, Sydney, N.S.W.—Loan of Works of Art, clvii
Mayo, Patrick, Dublin, Ireland—Whiskey, 877
M'Alpine, Laura, Armidale, N.S.W.—Public School Exhibit, 372
M'Andrew, Sarah, Hay, N.S.W.—Public School Exhibit, 378
M'Bride & Martin, Melbourne, Victoria—Ale, 904
M'Bridge Francis, Wakatipu, N.Z.—Wheat, 832
M'Caffrey, Edward, Queenstown, N.Z.—Marbles and Freestone, General Report, 69, 112, 115; Awards, 141
M'Callum, Argyle, Good Hope, near Yass, N.S.W.—Copper Ore, &c.; General Report, 21; Maize and Potatoes, 1025
M'Camley, Theresa, Sydney, N.S.W.—Public School Exhibit, 376
M'Cardell, J. F., Christchurch, N.Z.—Illuminated Calendar, 511
M'Carthy, James, Penrith, N.S.W.—Horse, 935
M'Clary Manufacturing Co., London, and Ont., Canada—Cooking-stoves, 213
M'Clean & Sons, E., Bridgewater on Loddon, Victoria—Raspberry Vinegar, 842; Cordials, Liqueurs, &c., 904
M'Cloy, Camperdown, N.S.W.—Public School Exhibit, 373
M'Clure, Mary, Bowning, N.S.W.—Public School Exhibit, 373
M'Comas & Co., John W., Melbourne, Victoria—Chain-pump, 672
M'Connell, James H., Cessbrook, Queensland—Services as Judge, cliii; Judge, 939
M'Cormack, Jeremiah, Sydney, N.S.W.—Services, clvii
M'Cormick, Peter D., Sydney, N.S.W.—Services, clix
M'Cormick, C. H., & L. J., Chicago, Ill., U.S.—Loan Exhibit, clxii; General Report on Machinery, 554, 560; Wire-binder, 995
M'Covey, James, Orange, N.S.W.—Wheat, 827
M'Coy, Richard, Sydney, N.S.W.—Services as Judge, cliii; Judge, 263
M'Coy, Mrs. B., Sydney, N.S.W.—Appliqué Work, &c., 525
M'Cready, Robert, Pimpama, Queensland—Arrowroot, 856
M'Cready, Hugh, Mackay, Queensland—Sugar, 856
M'Credie, John, Sydney, N.S.W.—Services, clvii
M'Culloch, A. H., M.P., Sydney, N.S.W.—Dog, 979
M'Donald, R., Braidwood, N.S.W.—Furniture, 225
M'Donald Alex., Balmain, near Sydney, N.S.W.—Public School Exhibit, 372
M'Donald Wm., Tamworth, N.S.W.—Photographs, 507
M'Donald & Miller, Dunedin, N.Z.—Hams, 704
M'Donald, John, M. L., Wallabadah, N.S.W.—Wool, 915
M'Donald, A. H., Sydney, N.S.W.—Dog, 980
M'Donald, Alexander, Sydney, N.S.W.—Loan Exhibit, clviii
M'Donnell, John, Sydney, N.S.W.—Services, clvii
M'Douall, Charlotte, Ulumbarella, Barraba, N.S.W.—Animal Painting, 525
M'Dougall, Robert, Arundel, Keilor, Victoria—Cattle, 950
M'Dowall & Sons, Johnstone, near Paisley, Great Britain—Wood-working Machinery; General Report on Machinery, 581, 582; Award, 636; Counter-shafting, 664
M'Eachern, J. A., Wollongong, N.S.W.—Horse-shoes, 339
McElhone, John, M.P., Sydney, N.S.W.—Services as Judge, cliv; Judge, 939
M'Evoy, G., Cicia, Fiji—Cotton Seed, 812; Copra, 847; Cotton, 910
M'Evoy & Kesall, Cicia, Fiji—Cotton, 910
M'Ewin & Son, G., Glen Ewin, South Australia—Jams, 858
M'Ewin, George—Services as Member of the South Australian Commission, clxi
M'Ewin, George, Glen Ewin, South Australia—Ironstone, General Report, 28; Soapstone, General Report, 127
M'Farlane, D., Mudgee, N.S.W.—Bricks, 209
M'Farlane Brothers, Deniliquin, N.S.W.—Wool, 915
M'Ghie, Luya, & Co., Brisbane, Queensland—Kauri Pine, 757; Award, 805
M'Gill, Peter, Tokomairiro, N.Z.—Oats and Wheat, 832; Flour, Oatmeal, &c., 854, 855

M'Glynn, J. & P., Brisbane, Queensland—Tanned Marsupial Skins, 713
M'Gowan Samuel H., Sandhurst, Victoria—Dove-tailed "Cams," 631
M'Gregor, Alex.—Services as Member of the Tasmanian Commission, clxii
M'Gregor & Co., Dundee, Great Britain—Canvas Hose, 664
M'Guigan, John, Melbourne, Victoria—Boots, 290
M'Ilwraith, John, Melbourne, Victoria—Sheet Lead, 160; Lead Piping, 672
M'Innis, Arabella, Goulburn, N.S.W.—Opossum Fur Gloves and Stockings, 255
M'Intosh, Annie, Sydney, N.S.W.—Public School Exhibit, 375
M'Intosh, Alexander H., Kirkcaldy, Great Britain—Furniture, 220
M'Intyre, Peter, Beaufort, Victoria—Wool, 927
M'Intyre, Daniel—Services as Member of Commission at Wellington, N.Z., clix
M'Kay, Mary, Balmain, near Sydney, N.S.W.—Public School Exhibit, 372
M'Kay, Charles, M.D., Rooty Hill, N.S.W.—Wines, 887
M'Kellar, Alex., Goulburn, N.S.W.—Services as Judge, cliv; Judge, 929
M'Kenzie & Co., J. F., Melbourne, Victoria—Spices, Mustard, Curry Powder, &c., 843; Oatmeal, 861
M'Kenzie & Holland, Worcester, Great Britain—Working Models of Station and Junction, 676
M'Keown, Annie, Sydney, N.S.W.—Public School Exhibit, 381
M'Keown, W. H., Sydney, N.S.W.—Poultry, 969; Fruit, 1010
M'Kinnon, Isabella, A., Fairy Meadows, N.S.W.—Public School Exhibit, 375
M'Kissack George, Suva Maca, Taviuni, Fiji—Coffee, 812
M'Kisson & Robbins, New York City, U.S.—Chemical Preparations, 191
M'Lachlan, Ellen, Sydney, N.S.W.—Public School Exhibit, 376
M'Laren, Hugh G., Coraki, N.S.W.—Public School Exhibit, 374
M'Lean, Alex., Brisbane, Queensland—Cart, 357
M'Lean & Co., Auckland, N.Z.—Cattle, 949
M'Lean & Son, John, Sydney, N.S.W.—Electro Gold and Silver Plating, 225; Castings in Silver, 507
M'Leod Brothers, Dunedin, Otago, N.Z.—Candles, Soaps, &c., 189
M'Mahon, Mary, Sydney, N.S.W.—Public School Exhibit, 382
M'Mahon, Miss A. K., Sydney, N.S.W.—Crochet-work, 525
M'Minn, A. B., Sydney, N.S.W.—Oil Painting, 507
M'Minn, Samuel, Cecil Plains, Liverpool, N.S.W.—Cattle, 947
M'Minn, John, Sydney, N.S.W.—Dog, 980
M'Mullen, F. M., Morton Park, N.S.W.—Horse, 935
M'Naught & Smith, London and Worcester, Great Britain—Carriages, 353
M'Neill, Thos. H., Melbourne, Victoria—Furniture, 231
M'Nicol, D., Auckland, N.Z.—Wool, 917
M'Phee, John, Glen Nevis, Queensland—Malting Barley, 836
M'Pherson, E., Loma Loma, Fiji—Arrowroot, 847
M'Pherson, Thos., Melbourne, Victoria—Woolpacks, 258
M'Rae, Janet, Balmain, near Sydney, N.S.W.—Public School Exhibit, 372
Meaker, George, Bega, N.S.W.—Bacon, 703
Mechanics' Institute, Launceston, Tasmania—Loan Work of Art,
Mechanische-Drillweberei, Göppingen, Württemberg, Germany—Bed-ticks, &c., 242
Medicine, Surgery, Prothesis, &c.—Exhibits referred to, 172; Awards, 321, *et seq.*
Meek, J. & T., Oamaru, N.Z.—Wheat and Oats, 832
Mein, W. H., Christchurch, N.Z.—Preserved Meats, 704
Meiner, Emile, London, Great Britain—Chocolate and Cocoa, 850
Meinls, A. Erben, Vienna and Bärringen, Austria—Embroideries, 265
Meister, Th. Wilhelm, Berlin, Germany—Embroidery Patterns, 273
Melbourne Glass Bottle Works Co., Melbourne, Victoria—Bottles and Jars, 210
Melbourne Woollen Mill Co. (Limited), Melbourne, Victoria—Tweeds, 258
Melia, Stanislaus, Sydney, N.S.W.—Public School Exhibit, 383
Méliès, Paris, France—Boots and Shoes, 269
Mellery, Xavier, Brussels, Belgium—Oil Painting, General Report on the Fine Arts, 465
Mellor, J. F.—Services as Member of South Australian Commission,
Mellor Brothers, Adelaide, South Australia—Agricultural Implements, 993
Melly, O., Waterloo, N.S.W.—Public School Exhibit, 383
Meltzer & Co., Karl, Langenau-Haïda, Bohemia, Austria—Glass-ware, 194
Ménard, Arthur—Services as Member of the French Commission at Sydney, cxliii
Mendis, Adrian, Ceylon—Cingalese Timbers, General Report on Arboriculture, 716; Award, 802

Mens, R. von, Carlsdorf-Jordansmühl, Silesia, Germany—Wool, 911
Menzler, W., Munich, Germany (Austrian Gallery)—Oil Painting, General Report on the Fine Arts, 467 ; Award, 472
Merck, E., Darmstadt, Germany—Chemicals, 182
Meriden Britannia Co., West Meriden, Conn., U.S.—Silver-plated-ware, reference to, 168 ; Award, 229
Meriden Flint Glass Co., Meriden, Conn., U.S.—Crystal Table-ware, 210
Merrett, Samuel H., Melbourne, Victoria—Services as Judge, cliv ; Judge, 430
Merriman, Florence, Sydney, N.S.W.—Public School Exhibit, 376
Merriman, James, M.P., Sydney, N.S.W.—Services as Member of Sydney International Exhibition Commission, cxlviii
Merryweather & Sons, London, Great Britain—Fire-engines, General Report on Machinery, 570, 571 ; Awards, 663, 664
Messent, J. W., Redfern, near Sydney, N.S.W.—Pigeons, 969
Messter, Eduard, Berlin, Germany—Artificial Eyes, Optical and Medical Instruments, 324 ; Telephones, Electrical Apparatus, 392 ; (*Vide* Corrigenda)
Mesureur et Monduit Fils, Paris, France—Model in Hammered Copper, 332
Metallurgical Products—General Report, 147, *et seq.*
Metcalf, Arthur, Sydney, N.S.W.—Public School Exhibit, 375
Metropolitan Washing-machine Co., New York City, U.S.—Washing-machines, &c., 229
Metzner, Camille, Nancy (Meurthe et Moselle), France—Music Methods, 424
Meukow et Cie., A. C., Cognac-Charente, France—Brandies, 871
Meurer, G., Dresden, Germany—Stoves, &c., 216
Meyer, Otto L., Sydney, N.S.W.—Services as Judge, cliv ; Judge, 211
Meyer, Leo, Dresden, Germany—Painted China and Bronzes, 216
Meyer, Oscar, Florence, Italy—Services as Representative Italian Agent at Sydney, cxlvi ; Award to exhibits, Mosaic Tables, 501
Meyer, E. M., Sydney, N.S.W.—Continuous Still, 682
Meyer, S. A., Corowa, N.S.W.—Wines, 887
Meyer & Coblenz, Bingen, a/R, Germany—Wines, 874
Meyers, M. E., Sydney, N.S.W.—Pen-and-ink Sketches, 507
Michael, H. T., Brisbane, Queensland—Saddlery, 357
Michaud Fils et Frères, Aubervilliers (Seine) France—Soaps, 180
Michl, Anton, Rehberg, near Krems, Austria—Glue, 708
Middlemiss, G., Deniliquin, N.S.W.—Onions, 1025
Middleton, James, Birmingham, Great Britain—Brass and Iron Bedsteads, &c., 220
Middleton, T. J., London, Great Britain—Magic Lanterns, &c., 395
Midy, Chas. F. E., St. Quentin (Aisne) France—Works on Mathematics, 369
Migeon Frères, Ghent, Belgium—Canvas, &c., 236
Migerka, Dr. Franz, Services as Vice-President of Executive Committee at Vienna, cxlii
Migliorini, Giovanni, London, Great Britain—Looking-glasses, 220
Milburn Creek Copper Mining Co., Milburn Creek, N.S.W.—Copper Ore, General Report, 21 ; Award, 138
Miles, T. R., London, Great Britain—Oil Painting, 480
Milgate, Lily, Campbelltown, N.S.W.—Public School Exhibit, 373
Milham & Son, R., Sydney, N.S.W.—Saws, &c., 638
Milham, H. W., Sydney, N.S.W.—Plasterers' Tools, &c., 339
Milham, Nettie, Sydney, N.S.W.—Public School Exhibit, 376
Military and Naval Armaments, &c., General Reference to, 172 ; Awards, 315, *et seq.*
Miller, H. C., Etheridge, Queensland—Gold Quartz Specimens, General Report, 70
Miller Lock Co., D. K., Philadelphia, U.S.—Self-locking Padlocks, &c., 342
Miller, James, Armidale, N.S.W.—Public School Exhibit, 373
Miller & Co., Jas. Melbourne, Victoria—Mats, Woolpacks, &c., 258 ; Manilla Rope, 350
Miller, H., Bega, N.S.W.—Hams, 703
Miller & Co., E., Meriden, Conn., U.S.—Kerosene Lamps, &c., 229 ; Ornamental Bronzed Statuettes, 514
Miller, Ferdinand Von, Munich, Germany—Bronze Metal, 477
Miller & Harrison, Sydney, N.S.W.—Glass Door, &c., 225
Millichich, Luca, Zara, Austria—Maraschino, 867
Milne & Co., West Maitland, N.S.W.—Ale, 888
Milne, A., Wanganui, N.Z.—Engraving on Glass, 511
Milner's Safe Co. (Limited), Liverpool, Great Britain—Iron Safes, 335
Milner & Sons, Wm., Leek, Staffordshire, Great Britain—Sewing silks, 260
Mills, Peter, Launceston, Tasmania—Polished Timber, 763 ; Award, 806

Mills, Arthur, Ashfield, N.S.W.—Public School Exhibit, 372
Mills, Louisa A. H., Ashfield, N.S.W.—Berlin Woolwork, 524
Millson, A. Sydney, N.S.W.—Turnery-work, 225
Milsom, Miss O., Sydney, N.S.W.—Paintings and Sketches, 524
Milton Distillery Co., Brisbane, Queensland—Spirits, 895
Milward & Sons, Henry, Redditch, Great Britain, 280
Mimbelli, E., Leghorn, Italy—Maize, Pease, Beans, &c., 821; Olive Oil, 850
Minchen, Mrs. E. A., Paddington, near Sydney, N.S.W.—Services as Judge, cliv; Judge in Ladies' Court, 516
Mineralogical and Geological Collections, General Report, 31, *et seq.*
Minerals of New Caledonia, General Report, 33, *et seq.*
Minerals of Tasmania, General Report, 80, *et seq.*; Tin Ores, 80; Coals, 81; Copper, &c., 82; Gold, 82; Iron, 82
Minerals, Ores, Building Stones, and Mining Products—Group of Classes, 100 to 107; General Report, 5 to 130; Awards, 131 to 145
Mines Department of New South Wales, Analyses of Silver Ores, General Report, 10; Specimens of Gold Lodes and Stream Tin, Iron Ores, Coal, Rocks, &c., General Report, 37, *et seq.*; Fossils, General Report, 57, *et seq.*; Analyses of Coals, by Mr. Dixon, F.C.S., 97, *et seq.*; Collection of Timbers, General Report on Arboriculture, 719
Mines Department of Victoria—General Report, Gold Nuggets, 16; Geological Specimens, General Report, 85, *et seq.*; Mineral Collection, 88, *et seq.*; Quartz Specimens, General Report, 90, *et seq.*; Tin Ores, 94; Copper Ores, 95; Limestone, Coal, &c., 95
Mining Metallurgy and their Products, Department I.—General Report on, p. 1, *et seq.*; Awards, 131, *et seq.*
Mine Engineering, &c., 161, *et seq.*
Ministre de l'Agriculture et du Commerce, Bergerie Nationale de Rambouillet, Paris—Wools, 911; Sheep, 955
Ministero d'Agricoltura, d'Industria e del Commercio, Rome, Italy, cxlvi
Ministère de l'Intérieur, Brussels, Belgium—
Miocene Fossils (N.S.W.) in Mines Department Exhibit, 65
Miriel, G. E. A., Brest, France—Fusain Drawings, 491
Mitchell, Peter, Romsey, Victoria—Malting Barley, 843
Mitchell, F. W. M., Glebe, near Sydney, N.S.W.—Dog, 979
Mitchell, Florence, Sydney, N.S.W.—Public School Exhibit, 376
Mitchell, Albert, Redfern, near Sydney, N.S.W.—Public School Exhibit, 381
Mitchell, J. C., Hobart Town, Tasmania—Ale, 901
Mitchell, Jessie A., Walcha, N.S.W.—Public School Exhibit, 383
Mitchell, Vance, & Co., New York City, U.S.—Chandeliers, 229
Mitchell, W., Richmond, N.S.W.—Horse-shoes, 339; Ploughs, 991
Mitsui Bussan Kuwaisha, Kiritsu Kosho Kuwaisha, & Okura, & Co., Tokio, Japan—China and Earthenware, 207; Screens, 223; Cotton Rugs, 253; Silks, 261; Cloisonné ware, 502
Miyagawa Kozan, Yokohama, Japan—Special Medal, clxvi; Porcelain and Faïence, 207
Miyagawa Kozan, Ota, Japan—Paintings on Enamel, 481
Moabund Estate, Assam (Indian Court)—Tea, 819
Moama Public School, N.S.W.—Awards to Exhibits from, 379
Moaris, George (Gardener to Mr. G. N. Russell), Sydney, N.S.W.—Flowers and Plants, 1015, 1016, 1019
Modini, G. B., Sydney, N.S.W.—Firearms, 320; Cutlery, 339
Moffatt & Co., W., Dubbo, N.S.W.—Wheat, 827
Moffett, W., Invercargill, N.Z.—Raspberry Vinegar, 832; Liqueurs, &c., 893
Mogford, J., London, Great Britain—Oil and Water-Colour Paintings; General Report on the Fine Arts, 453, 455; Awards, 480
Mohl et Cie., Paris, France—Hay Press, 657
Moir, Emma, Sydney, N.S.W.—Public School Exhibit, 374
Moir & Co., Christchurch, N.Z.—Oatmeal, 855
Moir, Jas. G., Queenborough Glens, Tasmania—Shot, 320. (*Vide* Corrigenda)
Möller & Schumann, Brooklyn, U.S.—Varnishes, 191
Molh, Th., Gosselies, Hainaut, Belgium—Cooking Utensils, &c., 213
Moloney, Nellie, Waterloo, N.S.W.—Public School Exhibit, 383
Moloney, Mary, Waterloo, N.S.W.—Public School Exhibit, 383

Mole, J. H., London, Great Britain—Painting ; General Report on the Fine Arts, 455 ; Award, 480
Molinier & Co. (Limited) London, Great Britain—Leather Working Machinery ; General Report on Machinery, 611 ; Award 648
Moline & Co., Sparks, London, Great Britain—Bottled Stout, 877
Montreuil Frères et Cie, Clichy-la-Garenne, near Paris, France—Mineral Waters ; General Report, 130 ; Award 133 ; Chemical Products, 130 ; Pharmaceutical Preparations, 323
Montefiore Octavius L., Sydney, N.S.W.—Services as President of Belgian Commission at Sydney, cxlii ; Services as Judge, cliv ; Judge, 146
Montefiore-Levi, Georges, Brussels, Belgium—Services as Royal General Commissioner at Brussels, cxlii ; Exhibits : Phosphor-Bronze, 150 ; Brussels-lace, 266 ; Referred to as Commissioner General for Belgium, General Report on the Fine Arts, 464
Montefiore, Edward L., Sydney, N.S.W.—Services as Member of the Belgian Commission at Sydney, cxlii ; as Hon. Member of Committee, Sydney International Exhibition Commission, cxlviii ; as Member of Queensland Commission, clx ; as Judge, cliv ; Judge, 471 ; Exhibits :—Etchings in Fusain, and Pen and Ink Sketches, 507. Referred to as Member of the Advisory Committee on Art ; Executive Commissioner's Report, and General Report on the Fine Arts, 443, 470
Montefiore, E. L., Paris, France—Etchings, 491
Montefiore, Amy, Sydney, N.S.W.—Water-Colour Drawing, 525
Montefiore, Jacob Levi—Services as Member of London Commission, cxlv ; as Member of London Committee, cxlvi
Moncreiff, John, Perth, Great Britain—Boiler-gauge Glasses, 203 ; Water-Gauge Tubes, &c., 664
Mönch & Seiffert, Berlin, Germany—Leather Albums, 273
Mondron, Léon, Lodelinsart, near Charleroi, Belgium—Glass, 197
Monds, W., Carrick, Queensland—Wheat, 839 ; Flour and Oatmeal, 859
Monk, D. J., Sydney, N.S.W.—Vinegar, 827
Monro, Miss Mary, Sydney, N.S.W.—Macramé Work, 525
Montais, Roger de, Paris, France—Sporting Guns, 317
Montalba, Clara, London, Great Britain—Water-Colour Paintings ; General Report on the Fine Arts, 455
Montenard, F., Paris, France—Landscape Painting ; General Report on the Fine Arts, 460
Moonen, Léon, Paris, France—Services as Judge, cliv ; Judge, 263, 430, 484, 516 ; Exhibits : Furniture, 214 ; Books, 369 ; Improvements in Harmoniums, &c., 424 ; Timbers : General report on Arboriculture, 781, *et seq.* ; Award, 802
Moonta Copper Mines, South Australia—Copper Ores ; General Report, 75
Moore & Son, Thos., Sydney, N.S.W.—"Hansom" Cabs, 355
Moore, Mary E., Moama, N.S.W.—Public School Exhibit, 379
Moore, John, Latrobe River, Tasmania—Oil Painting, 484
Moore & Co., J., Armidale, N.S.W.—Wheat, 827
Moore, J., Armidale, N.S.W.—Potatoes, 827
Moore, Charles, F.G.S., F.L.S., Sydney, N.S.W.—Services as Commissioner for Ceylon, cxliii ; as Hon. Member of Committee, Sydney International Exhibition Commission, cxlviii ; as Judge, cliv ; Judge, 862 ; Award, Landscape Gardening, 1007
Moore, Joshua, Hobart Town, Tasmania—Poultry, 974
Moore, J., jun., Hobart Town, Tasmania—Poultry, 974
Moore, F. H., Sydney, N.S.W.—Loan Works of Art, clvii ; Loan Ethnological Exhibits, clviii
Moore, Robert, Sydney, N.S.W.—Loan Works of Art, clvii
Moore Brothers, Longton, Staffordshire, Great Britain—Special Medal, clxv ; Porcelain, 204
Moore & Co., Edward, South Shields, Great Britain—Glassware, 204
Moos, David, London, Great Britain—Lace Curtains, 280
Moral, S. jun., Berlin, Germany—Clothing, 273
Moravian Woollen Goods, Moravia. Austria—Reference to Exhibits, 169
Morehead, B.D., M.P.—Services as Member of Queensland Commission, clx
Morel, Alphonse, Lodelinsart, near Charleroi, Belgium—Glass, 197
Morell, G. A., C.E., Sydney, N.S.W.—Services as Judge, cliv ; Judge, 673
Morey, C. J., Levuka, Fiji—Preserved Bananas, 847
Morgan Brothers, Charters Towers, Queensland—Gold-bearing Quartz ; General Report, 15

Morgan, T., Balade, New Caledonia—Copper Ores ; General Report, 20 ; Award, 135
Morgan, J., Nouméa, New Caledonia—Cocoa-nut Fibre, 253
Morgan, Wm., Birmingham, Great Britain—Library Indicator, 371
Morgan, Wm., jun., Sydney, N.S.W.—Services as Judge, cliv ; Judge, 975
Morgan, James, Goulburn, N.S.W.—Plants of Fruit Trees, 1008
Morgan, Hon. Wm., M.L.C.—Services as Member of South Australian Commission, clxi
Morgan, J. (Gardener to Mr. Thorne), Sydney, N.S.W.—Flowers, 1014
Moriarty, Edward O., Engineer-in-Chief for Harbours and Rivers, Sydney, N.S.W.—Services as Judge, cliv; Judge, 430, 655
Morini, Francesco, Florence, Italy—Furniture, 223
Moring, Blanche, Sydney, N.S.W.—Loan Works of Art, clvii
Morley Saml., M. P., Services as Member of Royal Commission in London, cxlv
Mornay, H. De, Penang, Strait's Settlements—Tapioca, 858
Morningstar & Co., Chas., New York City, U.S.—Corn Flour and Starch, 860
Morozzi Fratelli, Florence, Italy—Gilt Lustre, 223
Morrison & Hutchinson, New York City, U.S.—Linen Shirts, 275
Morris, Wm., M.D., Sydney, N.S.W.—Services as Judge, cliv ; Judge, 321, 389
Morris, Wheeler, & Co., Philadelphia, U.S.—Nails, Spikes, &c., 342
Morris, May, Hinton, N.S.W.—Public School Exhibit, 378
Morris Mrs., Hobart Town, Tasmania—Veil, 531
Morris, C. A. M., Nerang Creek, Queensland—Sugar, 856
Morris, Augustus, Sydney, N.S.W.—Services as Secretary of Sydney International Exhibition Commission, cxlviii ; Judge, cliv ; as Commissioner and Executive Officer, United States Commission, clxii (*Vide* also, Secretary, S. I. Exhibition Commission)
Morris, George, (Gardener to Mr. G. N. Russell) Sydney, N.S.W.—Ferns, 1014; Flowers and Plants, 1016, 1017, 1020
Morris, Mrs. Augustus, Sydney, N.S.W.—Loan Works of Art, clvii
Morton & Sons, Kidderminster, Great Britain—Carpets, 248
Morton, Thos., W., Sydney, N.S.W.—Services as Judge, cliv; Judge, 1001, 1005, 1011, 1021
Mort's Dock and Engineering Co., Sydney, N.S.W.—Machinery ; General Report on Machinery, 550, 551, 561, 621 ; Awards, 669, 686
Mort, The late Thos. Sutcliffe, of Sydney, N.S.W.—Refrigerating Machinery Enterprises ; General Report on Machinery, 623
Mort, Henry, Sydney, N.S.W.—Services as Member of Sydney International Exhibition Commission, cxlviii ; As member of Queensland Commission, clx
Mort, Executors of the late Thos. S., Sydney & Bodalla, N.S.W.—Cheese, 703
Mort, William—Services as Member of London Committee, cxlvi
Mortley, Sarah, Windsor, N.S.W.—Public School Exhibit, 385
Mortimore, George, Sydney, N.S.W.—Services as Steward, cliv; Assistant Steward, Horticultural Section, 1011 ; Award, Arrowroot Plant, 1025
Moses, H.E. & M., London, Great Britain—Moleskins, 248
Mosse, Salomon, Berlin, Germany—Shirts, Collars, &c., 273
Moss, H., Nowra, Shoalhaven, N.S.W.—Loan of Ethnological Exhibits, clviii ; Arrowroot, 853
Mossman, Lavinia, Hinton, N.S.W.—Public School Exhibit, 378
Mosgiel Woollen Factory Co., Dunedin, Otago, N.Z.—Woollen Goods, reference to, 169; Awards, 255 ; Hosiery, 287
Mote, W. I. B., Sydney, N.S.W.—Paper-hangings, 310
Motschmann & Hüfner P., Sonneberg, Germany—Toys and Dolls, 273
Mottram, T.B., London, Great Britain—Boots and Shoes, 280
Mott, J. L., New York City, U.S.—Stoves and Ranges, 229
Motors and Apparatus for the Generation and Transmission of Power, &c.—Classes 546, 560 ; 656, *et seq.*
Mount Keira Colliery Co., Mount Keira, Wollongong, N.S.W.—Coal; General Report, 100 ; Fireclay, &c., General Report, 126 ; Award for Coal, 138
Mouly, T. V., Brussels, Belgium—Apparatus for Heating and Ventilating, 213
Moulton et Cie., Cognac-Charente, France—Brandies, 871
Mourant, John T., Melbourne, Victoria—Wooden, Taps, 672
Mouson & Co., J. G., Frankfurt a/M, Germany—Eau-de-Cologne, Soaps, &c., 182
Mouzin, Lecat et Cie., Nimy, near Mons, Belgium—Earthenware, 197
Mowle, S. M., Sydney, N.S.W.—Services as Honorary Member of Committee, cxlviii
Moyes & Donald, Newcastle, N.S.W.—Wool-press, 670
Mudgee Public School, N.S.W.—Award to Exhibits from, 379

Mudgee International Exhibition Committee, Mudgee, N.S.W.—Copper and Antimony Ores; General Report, 17, 67; Marble, and Sandstones; General Report, 111; Fireclay, &c.; General Report, 126; Moulding Sand, 128; Awards, Geological Collection, Marbles, &c., 138; Timbers; General Report on Arboriculture, 741; Award, 803
Mudie, Frederick, Sydney, N.S.W.—Sheep Shearing, 958
Mugulighir Tea Estate, Assam, (Indian Court), Tea, 819
Mühle & Co., H. L., Hamburg, Germany—Cod-liver Oil, 324
Mühlhaus & Co., Julius, Haïda, Bohemia, Austria—Glassware, 194
Muir Mills, Co. (Limited,) Cawnpore, India—Drills, Cloths, &c., 252
Muir Robert, Nerang Creek, Queensland—Sugar, 856
Mulla Kuttyoor Tea Concern, Kumaon, North-west Provinces of India—Teas, 820
Mulcahy P., Redfern, N.S.W.—Candles, Soap, &c., 188
Müller, Ludwig, Uri, Lauscha, Thuringia, Germany—Artificial Eyes, 324
Müller et Cacheux, Paris, France—Treatise on Working Men's Dwellings, 369
Müller, Hermann, Meistersdorf, Ullrichsthal, Bohemia, Austria—Glassware, 194; Engraving on Glass, 486
Müller, Adolf., Reutlingen, Württemberg, Germany—Cotton Quilts, 242
Müller, Gustav, Fulda, Hesse-Cassel, Germany—Hats, Caps, &c., 242
Müller, Heinrich, Berlin, Germany—Ivory and Tortoise Shell Goods, 273
Müller, H. L., London and Birmingham, Great Britain—Gas-making Machines, 664
Müller, Andreas, Bremen, Germany—Lager Beer, 874
Müller, Richard, Hohenlandin, bei Angermunde, Germany—Wool, 911
München-Dachauer Actienges: fur Maschinen-Papier Fabrikation, Munich, Bavaria, Germany—Papers, 299
Mune, W., Beenleigh, Queensland—Sugar, 856
Munro, Wm., Sydney, N.S.W.—Public School Exhibit, 376
Munro, E., Newtown, N.S.W.—Public School Exhibit, 379
Munro, L., Newtown, N.S.W.—Public School Exhibit, 379
Munro, Geo., Dunedin, N.Z.—New Zealand Marbles; General Report, 112; Native Hydraulic Cement, General Report, 125; Pottery Clay, General Report, 127; Awards; Marbles, 141; Clays, 142
Munsch, L. (Austrian Gallery)—Animal Painting; General Report on the Fine Arts, 467
Munthe, Ludwig, Düsseldorf, Germany—Special Medal, clxiv; Oil Paintings; General Report on the Fine Arts, 466; Award, 472
Mungledge Tea Co., Assam (Indian Court)—Tea, 819
Munn's Maizena Co., Merimbula, N.S.W.—Maize and Starch, 853
Munro, James, Redfern, N.S.W.—Bent Timber, 741; Award, 804
Munro, Alexander, Singleton, N.S.W.—Wines, 888
Munro, A. & W., Moree, N.S.W.—Horse, 935
Munro, George, Ballarat, Victoria—Stripping Machine, 998
Munro, Hon. James, M.P.—Services as Member of Victorian Commission, clxiii
Murakami Torajiro, Kioto, Japan—Lacquerware, 502
Murakami, Yoshin—Services as Secretary to Japanese Imperial Commission at Sydney, cxlvii
Murdoch, J. S., Brisbane, Queensland—Stained Woods, 511
Murphy, Edward, Melbourne, Victoria—Centre Pieces for Ceilings, 515
Murphy, F., Sydney, N.S.W.—Poultry, Rabbits, Pigeons, 969; Dogs, 979
Murray, Dalgleish, & Co., Southland, N.Z.—Coal; General Report, 106
Murray, Annie, Sydney, N.S.W.—Public School Exhibit, 376
Murray, Archibald, Sydney, N.S.W.—Carving in Wood, 482
Murray, A. B.—Services as Member of South Australian Commission, clxi
Murray, Wm., Glenorchy, Tasmania—Soaps and Candles, 190
Murray, H. R., Melbourne, Victoria—Model of Yacht, 688
Murray, Dalgleish, & Co., Invercargill, N.Z.—Oats, 832
Musgrave & Co. (Limited), London and Belfast—Stoves, 220; Model of Stables, &c., 1000
Musical Instruments—Class, 313; Award, 423, *et seq.*
Mutrie, Miss M. D., London, Great Britain—Oil Painting, 480
Mutrie Miss A. F., London, Great Britain—Oil Painting, 480
Mutso Hito, His Majesty, Emperor of Japan, cxlvii
Myagawa Chojiro & Saito Kiuosuke, Tokio, Japan—Pipes, Buttons, &c., 282
Myers & Erwien, Philadelphia, U.S.—Hay, Manure, and other Forks, 342
Myers & Co., A. N., London, Great Britain—Educational Appliances, 370
Myers, Thos., Wellington, N.Z.—Picture Frame, 227

N

Nagel & Kaemp, Hamburg, Germany—Flour-milling Machinery; General Report on Machinery, 608; Award, 680
Nägeli, Dr. W., Münich & Mittersendling, Germany—Preserved Fruits and Vegetables, 849
Naglo Gebrüder, Berlin, Germany—Telegraphic Instruments, 392
Naguels, Jules, Fontaine l'Evêque, Charleroi, Belgium—Tinned and Galvanized Kitchen Utensils, 213; Nails, Chains, &c., 332
Nähmaschinen Fabrik Actiengesellschaft (vormals Frister & Rossmann), Berlin, Germany—Sewing Machines, 648
Nairn & Co., M., Kirkcaldy, Great Britain—Floor-cloths, &c., 249
Nakagawa Nobori, Tokio, Japan—Engraved Copper-plates, 502
Nakamura Rikichi, Tokio, Japan—Fishing-hooks, 283
Nakamura Seijiro, Osaka, Japan—Photographs, 502
Nancarrow M., Ryde, N.S.W.—Poultry, 969
National School Furniture Co., New York City, U.S.—School Furniture, 229
National Wire Mattress Co., New Britain, Connecticut, U.S.—Wire-Mattresses, 229
National Agricultural and Industrial Association of Queensland, Brisbane, Queensland—Medals, 483
Native Exhibits (Fijian), Levuka, Fiji—(*Vide* Fijian Native Exhibits.)
Natalis-Rondot—Services as Member of the Committee at Paris, cxliv
Naumann, Franz, Delitsch, Germany—Liqueurs, 874
Neale, Edith, Penrith, N.S.W.—Public School Exhibit, 380
Neale, Miss, Parramatta, N.S.W.—Preserved Fruits and Jams, 853
Neame & Co., Dungeness, Herbert River, Queensland—Sugar Cane, 856
Needlework, &c., in Ladies' Court, 517, *et seq.*
Neild, John Cash, Woollahra, near Sydney, N.S.W.—Plants, 1020, 1025
Neilson, Archibald, Petersham, N.S.W.—Public School Exhibit, 381
Neilson, Margaret, West Maitland, N.S.W.—Fire Screens, 525
Neilson, R. D., Brisbane, Queensland—Maize, 836
Nelson Museum, Trustees, Nelson, N.Z.—Paving Stone, General Report, 116; Award, 142
Nelson, J. M., Melbourne, Victoria—Oil Painting, 484
Nelson, Mrs. and Miss, Adelaide, South Australia—Necklets, &c., of Seeds, 529
Nelson, Dale, & Co., George, London, Great Britain—Gelatine, &c., 702
Nestlé, Henry, Vevay, Switzerland and London, Great Britain—Milk Food and Condensed Milk, 705
Nettlefolds, Birmingham, Great Britain—Screws, Nails, &c., 335; Ratchet Braces, 636
Nettlefolds & Sons, London, Great Britain—Lawn Mowers, 989
Nettleton, Charles, Melbourne, Victoria—Photographs, 515
Neufeldt, Adolph H., Elbing, Germany—Tin Toys, 273
Neufeld, L., Berlin, Germany—Pianos, 426
Neubecker, A., Offenbach, a/M, Germany—Milk Refrigerators, 681
Neuhäuser, L., Ludwigshafen, a/R, Rheinfalz, Germany—Barley and Malt, 815
Neumann, Heinrich L., Vienna, Austria, and Sydney, N.S.W.—Services as Member of the Austrian Commission at Sydney, cxlii; as exhibitor of Fine Arts Collection, cxlii; Special Medal, clxiv; General Collection of Works of Art in Austrian Gallery, referred to in General Report on the Fine Arts, 466; Award, 472
Neumann, L. T., Vienna, Austria—Chromo-lithographs, 486
Newbury, P. J., Dunedin, N.Z.—Biscuits, 855
Newbould & Co., Samuel (Limited), Sheffield, Great Britain—Steel Manufactures, 156; Saw Files, Edge Tools, &c., 335
New Caledonian Minerals, General Report on Exhibit by M. Ratte, 33, *et seq.*; Copper and Gold, 34; Gypsum, Porphyry, and Serpentine, 35; Contact Zone of Serpentines, 36
New Caledonian Government, Nouméa—Coal and Anthracite, General Report, 97
New Caledonia, President, International Exhibition Committee of—Services, cxlvii
New North Clunes Quartz Mining Co. (Limited), Clunes, Victoria—Auriferous Quartz. Quartz, General Report, 17
Newcastle-Wallsend Colliery, Newcastle, N.S.W.—Coal, General Report, 97; Award, 139
Newcastle Coal Mining Co., Newcastle, N.S.W.—Coal, General Report, 98; Award, 139
New England Organ Co., Boston, Massachusetts, U.S.—Organs, 429

Neville, Louis, Christchurch, N.Z.—Oil and Water-Colour Paintings, 483
New Lambton Colliery Co., Newcastle, N.S.W.—Coal, General Report, 99; Award, 139
New South Wales, List of Diplomas and Medals, Complimentary and for Services, cxlvii, *et seq.*
New South Wales Exhibitors, Special Medals to, clxvi
New South Wales, The Colony of—Pre-eminence in the Production of Maize and Rye, 827; Total yield of gold-fields of, 61
New South Wales Shale and Oil Co., Sydney, N.S.W.—Petroleum and Cannel Coal, General Report, 104; Award, Kerosene Shale, 139; Kerosene Oil and Collective Exhibit, 188
New Zealand Agricultural Co., Southland, N.Z.—Building Stone, General Report, 116
New Zealand Flax—*Phormium tenax*, referred to, 172
New Zealand Government, Wellington, N.Z.—Maori House, 227
New Zealand, The Colony of—For pre-eminence in the production of Oats and Barley, 833
New Zealand Colonial Museum of, Maori Dresses, &c., 287
New Zealand, List of Diplomas and Medals for Services, clix, *et seq.*
New Zealand Shipping Co., Christchurch, N.Z.—Half Models of Ships, 687
New Zealand Public Works Department, Port Chalmers, N.Z.—Forgings, 638
New Zealand Commission, Wellington, N.Z.—Timbers, General Report on Arboriculture, 759; Award, 805
New Zealand Loan and Mercantile Agency Co., Oamaru, N.Z.—Wheat, Oats, and Barley, 832, 833
Newman, Mary J., Ryde, N.S.W.—Public School Exhibit, 381
Newman, H. W., Reform Gold Mining Co., Lucknow, N.S.W.—Auriferous Quartz, General Report, 12
Newman J. Hubert, Sydney, N.S.W.—Photographs, 507; Plants, 1025
Newman, Gerald, Campbelltown, N.S.W.—Public School Exhibit, 373
Newman, Isabella, Moama, N.S.W.—Public School Exhibit, 379
Newman, Priscella, Ryde, N.S.W.—Public School Exhibit, 381
Newton, J., Sydney, N.S.W.—Furniture, 225
Newton, A. P., London, Great Britain—Water-Colour Painting, General Report on the Fine Arts, 455
Newton, F. J., Watertown, New York, U.S.—Services as Judge, cliv; Judge, 655
Newtown Public School, N.S.W.—Awards to Exhibits from, 379
Nicaise, P. & N., Société Anonyme de la fabrique des Boulons de le Planches, Marcinelle, near Charleroi, Belgium—Bolts, Rivets, &c., 674
Nichols & Beddows, Walsall, Great Britain—Saddlery, 353
Nichols, Eva, Balmain, near Sydney, N.S.W.—Public School Exhibit, 372
Nichols, Amelia, St. Leonards, near Sydney, N.S.W.—Public School Exhibit, 382
Nicolle, Miss, Lake Illawarra, N.S.W.—Lace, 525
Nicholl's Leasehold Proprietors, Gympie, Queensland—Gold Quartz, General Report, 15
Nicholls, Clara, B., Sydney, N.S.W.—Lace, 525
Nicholls & Co., R. W., Ballarat, Victoria—Seeds, 843
Nicholson, Wm., Wellington, N.Z.—Side-board of N.Z. Woods, 227.
Nicholson, W., Sydney, N.S.W.—Services as Judge, cliv; Judge, 845
Nicholson, Joseph, Melbourne, Victoria—Agricultural Implements, 998
Nicholson, Lady, London, Great Britain—Loan of Works of Art, cxlvi
Nicole & Nielsen, London, Great Britain—Watches, &c., General Report on Chronology, 402, *et seq.*, 418; Award, 420
Nilson, David, Sydney, N.S.W.—Landscape Gardening, 1014
Nishi Woora Yenji, Mino, Japan—China-ware, 207
Nishimura Soyemon, Kioto, Japan—Silk Screens, 504
Nitschke & Co., W., Hackney, South Australia—Spirits and Liqueurs, 898
Niven, F. W., Ballarat, Victoria—Chromo-lithograghs, 515
Nixon, Mr. & Mrs., Sydney, N.S.W—Loan of Ethnological Exhibits, clviii
Noble, Grace, Eden, N.S.W.—Public School Exhibit, 375
Nobuakira Yamataka—Services as Member of the Imperial Commission at Tokio, Japan, cxlvii
Nocziezka & Umgeltner, Brünn, Moravia, Austria—Malt, 810
Nogakko, Imperial Agricultural College, Tokio, Japan—Agricultural Products, 821
Nolan, Luke, Brunswick, Victoria—Stoneware, &c., 210
Norddeutsche Eiswerke Actiengesellschaft, Berlin, Germany—Ice Boxes, &c., 216; 658
Normal School, Brisbane, Queensland—Drawings, &c., 511

Norman, Emily, Wickham, N.S.W.—Public School Exhibit, 384
Normanby, Marquis of, C.M.G.—Governor of Victoria, clxiii
Norrie, Wm., Auckland, N.Z.—Veneers, General Report on Arboriculture, 785; Award, 805
Norris, C. A. M., Nerang Creek, Queensland—Sugar, 857
North, Ferdinand, Erfürt, Germany—Vermicelli and Macaroni, 849
North Western Provinces & Oudh, Government of
Northern Copper Mines of South Australia—Copper Ores, General Report, 76
Northern Coal Districts of N.S.W., General Report, 97
Northern Tasmanian Exhibition Commission—Alluvial Gold, 145
Northern Meat Preserving Co., Eudunda, South Australia—Preserved Rabbits, 705
Northumberland Carriage Co., West Maitland, N.S.W.—Buggies, 355.
Norton, A., M.P., Services as Member of the Queensland Commission, clx
Norton, A. W., Sydney, N.S.W.—Furniture, 225
Norton, Ada, Sydney, N.S.W.—Public School Exhibit, 384
Nothmann Gebrüder, Berlin, Germany—Sewing Machines, 648
Notomi Kaijiro, Tokio, Japan—Paintings on Porcelain, 481
Notomi Sanjiro, Tokio, Japan—Ornamental Porcelain, 208
Nott, Mrs. Thomas, Woollahra, near Sydney, N.S.W.—Plants, 1020
Notting, Wm., London, Great Britain—Printing Press, 653
Nottingham Malleable Iron Co. (Lt'd), Nottingham, Malleable Castings, 156; The "Odling" Miners' Safety Lamp, 162
Nowlan, John, Eelah, West Maitland, N.S.W.—Cattle, 947
Nujeeb Khan & Co., Calcutta, India—Chutney, and Curry Powder, 820; Preserves, 850
Nürnberger Ultramarin-fabrik, Nürnberg, Germany—Ultramarines, 182
Nutt, Emily, Dunedin, N.Z.—Water-colour Drawings of N.Z. Ferns, 1008

O

Oag, Maggie, St. Leonards, near Sydney, N.S.W.—Public School Exhibit, 382
Oamaru Stone Co. (Limited), Oamaru, N.Z.—Specimens of Building Stone, General Report, 116; Award, 142
Obelisk in Garden Palace Grounds, representing in cubic contents the yield of Gold for the Australian Colonies, referred to and described in General Mineral Report, 6
Obpacher Gebrüder, Munich, Germany—Chromo-lithography, 493
O'Brien, Maggie, Sydney, N.S.W.—Public School Exhibit, 383
O'Brien, E. & J., Sydney, N.S.W.—Carriages, Vehicles, &c., 356
O'Brien, Catherine, Saumarez Creek, N.S.W.—Public School Exhibit, 381
O'Connell, Mary, Sydney, N.S.W. —Public School Exhibit, 383
O'Connell, Joanna, Auckland, N.Z.—Limerick Lace, 529
O'Connor, E., C.E., Hokitika, N.Z.—Plans, &c., of Water-race, 434
O'Connor, J., London, Great Britain—Oil Painting, 480
O'Connor, Patrick, Nelson, N.Z.—Wheat, 833
Odelga, J., Vienna, Austria—Surgical Instruments, &c., 322
Ofenheim, Ziffer, & Co., Elbeteinitz, Bohemia, Austria—Mineral Wax, &c., 176
Offermann, J. H., Brünn, Moravia, Austria—233
Offord, Joseph, London, Great Britain—Carriages, Vehicles, &c., 353, 354
Ogg, William Anderson—Services as Member of the London Commission, cxlv; as Member of London Committee, cxlvi
Ogilvie, Hon. E. D., Yulgilbar, Grafton, N.S.W.—Wines, 888
O'Haran, Bridget, Quorribolong, N.S.W.—Public School Exhibit, 381
Oidtmann, Dr. Heinrich, Linnich Reg., Bez Aachen (Aix-la-Chapelle), Germany—Skyographic Printing, 493
Okura & Co., Tokio, Japan—Bronze ware, 502
Okura Masakichi, Osaka, Japan—Models of Fruit and Vegetables, 1006
O'Loghlen, Sir Byran, Bart.—Services as Vice-President of the Victorian Commission, clxiii
Old Hall Earthenware Co. (Limited), Hanley, Staffordshire, Great Britain—Earthenware, 205
Olemans, Felix, Brussels, Belgium—Mustard, 811
Oliver, Albert, Sydney, N.S.W.—Public Schools Exhibit, 374
Olliffe, J. B., Sydney, N.S.W.—Pigeons, 970
Olliver, Edwin, Goulburn, N.S.W.—Public School Exhibit, 377
Ollivier Père et Fils, Libourne (Gironde), France—Wines, 871

Omant, Joseph, Hobart Town, Tasmania—For Clothing, 289
O'Meara, Morgan, Wakatipu, N.Z.—Cordials, 893
Omnozez, T., Brussels, Belgium—Marble Clocks and Vases, 213
Onderneming, Sumatra, Straits Settlements—Samples of Gambier, 858
O'Neill, D. J., Burrowa, N.S.W.—Sandstone Flagging, General Report, 118
O'Neill, C., C. E., Wellington, N.Z.—Artificial Caithness Flagging, 123 ; Award, 142
O'Neil, James, Melbourne, Victoria—Bow-strings, Sashlines, &c., 350
O'Neil, Amelia, Gulgong, N.S.W.—Public School Exhibit, 377
O'Neile, Ellen M., Gullen Flat, N.S.W.—Public School Exhibit, 378
O'Neile, Julia C., Gullen Flat, N.S.W.—Public School Exhibit, 378
O'Neile, Johanna, Gullen Flat, N.S.W.—Public School Exhibit, 378
Onions, John C. (Limited), Birmingham, Great Britain—Forges, Bellows, &c.
Ontario, Province of, Canada—Department of Education Exhibit, Special Medal, cxliii ; referred to, 362 ; Award, 368
Ontario, Government of, Toronto, Ontario, Canada—cxliii
Onus, J., Richmond, N.S.W.—Horses, 935
Opening Ceremony—*Vide* Executive Commissioners' Report, xlvii *et seq.*
Oppel, C. & Co., Friederichshall, Germany—Saline Water, 133
Oppmann, J., Würzburg, Bavaria, Germany—Wines, 875
Ord, Captain A. R., Malacca, Straits Settlements—Resins, General Report on Arboriculture, 797 ; Award, 806
O'Reilly & Pigott, Warwick, Queensland—Wheat, 836
Ori Dono, Kioto, Japan—Silk Handkerchiefs, 261
Orient Steam Navigation Company (Limited), London, Great Britain—Model, Plans, &c., of Orient Steamer, 685
Oriental Tea Company, Melbourne, Victoria—Teas, 843
Ornamental Trees, Shrubs, and Flowers—Horticultural Department, Classes 700–724 ; Awards, 1006, *et seq.*
Orsat et Cie, L. H., Paris, France—White lead, &c., 180
Orsenico, Francesco, Milan, Italy—Inks and Varnishes, 187
Ortmans et Fils, C., Verviers, Belgium—Manufactured Iron, 150
Osborne-Wallsend Colliery, Wollongong, N.S.W.—Coal, General Report, 100; Award, 139
Osborne & Co., C. T., Newark, New Jersey, U.S.—Harness-makers Tools, 342
Osborne, P. H., Bungendore, N.S.W.—Sheep, 958, 959
Osborne, & Co., D.M., Auburn, New York, U.S.—Harvester, &c., 995
Osborn & Co., Samuel, London and Sheffield, Great Britain—Cast and Forged Steels, Files, Saws, &c., 336 ; Hammers, Files, Saws, &c., 636 ; Cast Steel Springs, 676 ; Agricultural Implements, &c., 989
Oshima Shosha (Oshima & Co.) Shimotsuke, Japan—Raw Silk, 261
Oswald Public School, N.S.W.—Award to Exhibit from, 379
Oswald, Mordaunt, & Co., Northampton, Great Britain—Models of Steamers, &c., 685
Ota Mankichi, Tokio, Japan—Porcelain, 208 ; Lacquered Furniture, 223 ; Bronze Castings, &c., 338 ; Bronze and Lacquerware, 502
Ota Woohei, Osaka, Japan—Cotton Canvas, 253
Ota Heisuke, Kioto, Japan—Silk Screens, 502
Otago Slate Co. (Limited)—Otepopo, Otago, N.Z., Slates ; General Report, 117 ; Award, 142
Otago Paper Co. (Limited), Dunedin, Otago, N.Z.—Brown Paper, 312
Otago Museum, Dunedin, Otago, N.Z.—Ornamental Timbers ; General Report on Arboriculture, 785 ; Award, 805
Ottenheimer & Söhne, J. M., Stuttgart, Germany—Corsets, 275
Ott, Cesare, Leghorn, Italy—Olive Oil, 850
Overall, J., Redfern, N.S.W.—Canaries, 970
Owen, Lydia, Marrickville, N.S.W.—Public School Exhibit, 379
Owen & Lethbridge, Wangaehu, Wanganui, N.Z.—Wool, 917
Owen, Professor, C.B., F.R.S.—Member of the Royal Commission in London, cxlv
Owen, Sir Philip Cunliffe, K.C.M.G., C.B.—Services as Member of the London Committee, cxlv
Oxley, J. N., Sydney, N.S.W.—Services as Honorary Member of Committee, cxlviii ; as Superintendent of the Machinery Department, cxlviii ; Report as Superintendent of the Machinery Department, 625, *et seq.*
Ox Mine, Wattle Flat, N.S.W.—Quartz Specimens, General Report, 12
Oyens, Gérard, Paris, France—Barometers, &c., 391
Oyens, P., Brussels, Belgium—Oil Painting, 473

P

Pabst, Camille, A., Paris, France—Oil Painting, General Report on the Fine Arts, 459
Packer, Charles, R.A.M., Sydney, N.S.W.—Services, clix; Services as Judge, cliv; Judge, 422
Pachten, A., Melbourne, Victoria—Services as Judge, cliv; Judge, 862
Paddington Public School, N.S.W.—Awards to Exhibits from, 380
Page & Co., E. J., London, Great Britain—Cricketing Articles, &c., 280
Page & Sons, S.D., Norwich, Great Britain—Paper-bags, 304; Brushware, 347
Page, William, Sydney, N.S.W.—Public School Exhibit, 373
Page, Miss, Sydney, N.S.W.—Services as Judge, cliv; Judge in Ladies Court, 516
Page, Thomas, Clarence River, N.S.W.—Services, clvi
Page, Charles, Sydney, N.S.W.—Spices, 827
Page, Samuel, Mudgee, N.S.W.—Maize and Oats, 827; Wheat, 1025
Page & Co., B., Norwich, Conn., U.S.—Wood Printing Type, 654
Paine, Mrs., Sydney, N.S.W.—Quilt Work, 525
Paine, John, Waterloo, near Sydney, N.S.W.—Photographs, 508
Paine & Co., St. Neots, Huntingdonshire, Great Britain—Bottled Pale Ale, 877
Paintings & Drawings in Ladies Court, 518
Painting & Sculpture, General Report on the Fine Arts, English, 447; French, 457; German, 461; Belgian, 464; Austrian, Swiss, Dutch, &c., 466
Painting & Sculpture (in classification), Group of Classes, 400–409, 471 *et seq.*
Paling & Co., Paris, France, and Sydney, N.S.W.—Pianos, 425
Palmer, Henry, Sydney, N.S.W.—Public School Exhibit, 374
Palmer, Barbara, Lochinvar, N.S.W.—Public School Exhibit, 378
Palmer & Son, Mrs. J. S., Sydney, N.S.W.—Ornithological Collection, 386
Palmer, H., Sydney, N.S.W.—Model of Span of Railway Bridge, 434
Palmer, Edward G. W., Sydney, N.S.W.—Loan of Ethnological Exhibits, clviii
Palmer, Hon. A. H., Colonial Secretary of Queensland—Services, clx; Loan of Ethnological Exhibits, clx
Palmer, W. H., M.D., Sydney, N.S.W.—Services as Member of the Sydney International Exhibition Commission, cxlviii
Palmer, Benjamin, Sydney, N.S.W.—Services as Judge, cliv; Judge, 862
Palser, Henry P., Sydney, N.S.W.—Services as Judge, cliv; Judge, 701, 845
Palugyay & Söhne, J., Pressburg, Hungary, Austria—Wines, 867
Panton, Joseph A.—Services as Member of Victorian Commission, clxiii
Panter & Parry, Sydney, N.S.W.—Self-raising Flour, 853
Paper, Blank, Books, Stationery, &c., 172 and 291, *et seq.*
Papier Mâché Co. (Limited), London, Great Britain—Decorative Work in Papier Mâché, 220
Parbury & Lamb, Brisbane, Queensland.—Pearl Shell, 713
Parent et Cie, Paris, France—Buttons, 269
Parfumerie Maison Neuve, Delft, Netherlands.—Perfumery, 187
Park Gate Iron Co. (Limited), Rotherham, Great Britain—Iron-manufactures, 156
Parke, Miss, Fairy Meadow, N.S.W.—Crochet Quilt, 525
Parker, Sir Henry Watson, K.C.M.G.—Services as Member of London Commission, cxlv
Parkes & Co., A. & F., Birmingham, Great Britain—Agricultural Implements, &c., 989
Parkes, John Israel, Birmingham, Great Britain—Hardware, Holloware, &c., 336
Parkes, Sir Henry, K.C.M.G., M.P., Colonial Secretary and Premier of N.S.W., and Minister in charge of the Exhibition—Services, cxlix
Parkhill, Laura, Woonona, N.S.W.—Public School Exhibit, 385
Parmentier, Van Hoegaerden et Cie, Ghent, Belgium—Cotton Threads, 236
Parnell Soap Factory Co., Auckland, N.Z.—Soap, 189
Parr & Phillips, Wolverhampton, Great Britain—Patent Leadhead Nails, 336
Parr, Alice, Sydney, N.S.W.—Public School Exhibit, 384
Parr, Lizzie, Sydney, N.S.W.—Public School Exhibit, 384
Parramore, George, Ross, Tasmania.—Wool, 924
Parramore, Thos., Ross, Tasmania—Wool, 924
Parramatta Road Trust Commissioners, Parramatta, N.S.W.—Timbers, General Report on Arboriculture, 741
Parramatta Public School, N.S.W.—Awards to Exhibits from, 380
Parramatta North Public School, N.S.W.—Award to Exhibit, from, 380
Parramatta South Public School, N.S.W.—Awards to Exhibits, from, 380
Parrott, T. S., Sydney, N.S.W.—Services in Lending Ethnological Exhibits, clviii; Exhibit, 385

Parrot, A., Consul for Switzerland, Sydney, N.S.W.—Services as Judge, cliv ; Judge, 862
Parry & Co., Wynaad District, Madras, India—Coffee Beans, 821
Partridge, Annie, Hinton, N.S.W.—Public School Exhibit, 378
Partridge, J., Sydney, N.S.W.—Ovens and Japanned Ware, 225 ; Holloware, 339
Pascoe & Co., Wellington, N.Z.—Ale, 893
Pate, Mrs. G., Sydney, N.S.W.—Corsets, Stays, &c., 286 ; Surgical Corsets, Trusses, &c., 328
Paterson, Emily, S., Gladesville, N.S.W.—Water-colour Painting, 482
Paterson, F., Hobart Town, Tasmania—Stereoscopic Views, 513
Paterson, Simons & Co., Singapore, Straits Settlements—Rattans, General Report on Arboriculture, 762 ; Resins, &c., General Report on Arboriculture, 797 ; Rattans, Gums and Gutta Percha, 806
Patent Liquid Metallic Capsuling, Paint, Gilding, and Silvering Co. (Limited), London, Great Britain—Liquid Metal for Capsuling Bottles, 185
Patent Nut & Bolt Co. (Limited), Birmingham, Great Britain—Bolts, Nuts, &c., 336
Paton, H. O., Sydney, N.S.W.—Dog, 980
Paton & Sons, Robert, New York City, U.S.—School Furniture, 229
Patrick, M., Sydney, N.S.W.—Poultry, 970
Patterson, Robert, Smithfield, South Australia—Wheat, 1029
Patterson, Henry, Rylstone, N.S.W.—Building Stone, General Report, 114 ; Award, 139
Patterson, J. J., Sydney, N.S.W.—Cast-iron Railings, 339
Patterson, L., Paddington, N.S.W.—Public School Exhibit, 380
Patterson, Miss, Sydney, N.S.W.—Flowers in Water-colours, 525
Patterson, Hon. J. B., M.P.—Services as Member of Victorian Commission, clxiii
Patterson, R. C., Adelaide, South Australia—Services as Judge, cliv ; Judge, 673
Patton, Emily Sophia, Melbourne, Victoria—Embroidery, 532
Pawa Rika Lithographic Stone Co., Westland, N.Z.—Lithographic Limestone, General Report, 129 ; Award, 142.
Payten, Susan, Parramatta, N.S.W.—Public School Exhibit, 380
Payne, William, Auckland, N.Z.—Services as Judge, cliv ; Judge, 939
Peabody, Henry W., Boston, Mass., U.S.—Commissioner in United States, cxlviii
Peacock & Buchan, Southampton, Great Britain—Composition for Ship's Bottoms, 185
Peacock, G., Hobart Town, Tasmania—Jams, Jellies, &c., 859
Peacock, Caleb, M.P.—Services as Member of South Australian Commission, clxi
Peak, Elizabeth, Peakhurst, N.S.W.—Public School Exhibit, 380
Peak, Mary Ann, Peakhurst, N.S.W.—Public School Exhibit, 380
Peaker, Joseph (Gardener to Mr. J. Hubert Newman), Waverley, near Sydney, N.S.W. —Flowers, 1014, 1016
Peakhurst Public School, N.S.W.—Award to Exhibits from, 380
Peapes & Shaw, Sydney, N.S.W.—Shirts, 286
Pearin, Jacob, Brisbane, Queensland—Gold specimens, 15
Pearce, H. H., Cambridge, Tasmania—Wheat, 839
Pears, A. & F., London, Great Britain—Glycerine Soaps, 185
Pearce, Joseph, Wahgunyah, Victoria—Wines, 904
Pearse, Thomas S., Spring Grove, Orange, N.S.W.—Loan of Ethnological Exhibits, clviii ; Sheep, 959
Pearson, Jessie, Sydney, N.S.W.—Public School Exhibit, 381
Pearson, J. L., A.R.A., F.S.A., F.R.I.B.A., London, Great Britain—Architectural Designs, 497
Pease, F. S., Buffalo, N.Y., U.S.—Oils, 191
Peat, Chattock, & Co., London, Great Britain—Tin Plates, 156
Peate Brothers, & Moore, Undu Point, Fiji—Coir Yarn, 345
Peate, T. L., Lansdowne, Liverpool, N.S.W.—Cattle, 947 ; Poultry, 970
Peate, Thos., Sydney, N.S.W.—Services as Judge, cliv ; Judge, 700, 707
Pedley, P. R., Sydney, N.S.W.—Dog, 980
Peebles, Florence J., Melbourne, Victoria—Wax Flowers, 532
Peel-Liebaert, Courtrai, Belgium—Tanned Skins, 708
Peel River Land and Mineral Co. (Limited), Goonoo Goonoo, N.S.W.—Marble, General Report, 111 ; Wool, 915 ; Sheep, 959
Peine, Eduard, Hamburgh, Germany—Buttons, &c., 274
Peine, G. L., Hildesheim, Germany—Paperhangings, 299
Peirce, C. T., Sydney, N.S.W.—Services, clix
Pellens & Sommer, Berlin, Germany—Scarfs and Ties, 274

Peloubet, Pelton, & Co., New York City, U.S.—Organs, 429
Pelouze et Audouin, Paris, France—Gas Condensers, 657
Peltzer et Fils, Verviers, Belgium—Woollen Goods, 236
Pemell, James E., Sydney, N.S.W.—Services as Judge, cliv; Judge, 845, 963, 1021; Awards to Exhibits—Cattle, 947; Swine, 959, 960; Poultry, 970, 971
Penang Plantation Co., Penang, Straits Settlements—Tapioca, 858
Penang Sugar Estates Co. (Limited), Penang, Straits Settlements—Sugar, 858
Pendray, Mrs. F., Quagildrae, Bogan River, N.S.W.—Quilt, 525
Penfold, E. T., Sydney, N.S.W.—Services as Judge, cliv; Judge, 808
Penfold & Co., East Torrens, South Australia—Wines, 898
Peninsular & Oriental Steam Navigation Co.—Services, clix
Penny, Miss, Hobart Town, Tasmania—Appliqué Flowers, 531
Penrith Public School, N.S.W.—Award to Exhibits from, 380
Penson, J. A., Sydney, N.S.W.—Lamps and Reflectors, Sun Lights, &c., 225
Penton, Jane, Moama, N.S.W.—Public School Exhibit, 379
Perak, State of, Straits Settlements—Tin specimens, 19
Percy, Mrs. E., Rokeby, Tasmania—Barley and Wheat, 839
Percy, Mrs., Rokeby, Tasmania—Knitted Counterpane, 531
Perdriau, Gertrude, Balmain, near Sydney, N.S.W.—Public School Exhibit, 372
Perdriau, Albert, Sydney, N.S.W.—Public School Exhibit, 375
Perera, J. D., Mohandiram, Ceylon—Grain, 811
Perkins, W. H., Greymouth, N.Z.—Photographs, 511
Perkins, John—Services as Member of Tasmanian Commission, clxii
Perlbach, H. L., Dantzic, Germany—Amber Ornaments, &c., 274
Permezel et Cie, Lyons, France—Coloured Silks, 260
Perrin Frères, Grenoble (Isère) France—Gloves, 269
Perrin, C. G., Mudgee, N.S.W.—Maize, 827
Perrier, Fils et Cie, J., Châlons sur Marne, France—Wines, 871
Perry, John, Melbourne, Victoria—Steam Bent Timber; General Report on Arboriculture, 781; Award, 807
Perry & Co. (Limited), London and Birmingham, Great Britain—Stands for Lamps, 220; Solitaires, &c., 280; Steel Pens, 304
Perry, J. Stephen, Sydney, N.S.W.—Services as Judge, cliv; Judge, 232
Perry, Ida, Sydney, N.S.W.—Public School Exhibit, 374
Perry, William, Penrith, N.S.W.—Public School Exhibit, 380
Perugini, C. E., London, Great Britain—Oil Paintings; General Report on the Fine Arts, 453; Award, 480
Pery, Hon. Edmond A. T., Sydney, N.S.W.—Family Relics & Curiosities, 508
Peters, G., Parramatta North, N.S.W.—Building Stone, 139
Peters, Minnie, Paddington, N.S.W.—Public School Exhibit, 380
Peters, Carl, Wellington, N.Z.—Table made from N.Z. Woods, 227
Petersham Public School, N.S.W.—Award to Exhibits from, 381
Petersen & Co., B., Christchurch, N.Z.—Silver Claret Jugs and Cups, 227; Chased Silver Ware, 511
Petrie, Ellen, Sydney, N.S.W.—Public School Exhibit, 374
Petrie, Fitt C., Sydney, N.S.W.—Public School Exhibit, 374
Petrie, J. W., Grafton, N.S.W.—Secrètaire, 225
Petrie, Adam, Sydney, N.S.W.—Services as Judge, cliv; Judge, 262, 707
Petry-Chaudoir, Liège, Belgium—Model of Steam Boiler, 656
Pettigrew, W., M.L.C., Brisbane, Queensland—Furniture, 227
Peyton & Peyton, Birmingham, Great Britain—Metallic Bedsteads, 221
Peyton & Peyton Tube Co. (Limited), Smethwick, near Birmingham, Great Britain—Iron Tubes, Gas and Water Fittings, &c., 336
Peuillier—Services as Member of Committee at Paris for Sydney International Exhibition, cxliv
Peuillier, H., Paris, France—Ornamental Porcelain-ware, 199; Paintings on Porcelain, &c., 476
Pfaff, G. M., Kaiserslautern-Rheinfalz, Germany—Sewing Machines, 648
Pfeffer et Cie, J., Ghent, Belgium—Papers, 296
Phair, Annie, Fish River Creek, N.S.W.—Public School Exhibit, 375
Philadelphia Novelty Co., New York City, U.S.—"Fountain" Pen, 314; Hay Lift, 670
Phillips, Albert, London, Great Britain—Brass and Iron Bedsteads, 221
Phillips & Son, Birmingham, Great Britain—Brass and Iron Bedsteads, 221

Phillipsohn & Leschziner, Berlin, Germany—Shirts, Collars, &c., 274
Philps, Annie L., Balmain, near Sydney, N.S.W.—Public School Exhibit, 372
Philosophical Instruments and Methods—(Classes 307–312), 389
Phosphor-Bronze Co., London, Great Britain—Table of Tests made with phosphor-bronze, 336
Photography—Division of Group of Classes, 410–427, 485, *et seq.*
Piault, Jules, Paris, France—Cutlery, 332; Engraving, 491
Pichler, Hermann, Urach, Württemberg, Germany—Damask Tablecloths, 242
Pichot, Paris, France—Chromo-Lithographs, 491
Piddington, Hon. W. R., M.L.C., Sydney, N.S.W.—Services as Member of the Sydney International Exhibition Commission, cxlviii
Piedbœuf, J. P., Düsseldorf, Oberbilk, Germany—Ultramarine Blue, 182; Boiler Tubes and Pipes, 622, 658
Piemontini Santi, Florence, Italy—Wine, 879
Piel, Alexandre, Paris, France—Imitation Jewellery, 270
Pier, Fanny, Sydney, N.S.W.—Public School Exhibit, 375
Pierce, Emily Louisa, Walcha, N.S.W.—Public School Exhibit, 383
Pierce, Mary Anne, Balmain, near Sydney, N.S.W.—Public School Exhibit, 372
Pierpont, M'lle Marie de, Paris, France—Methods of Music, 425
Pierpont, D. O., Allen's Hill, Ontario County, N.Y., U.S.—Wool, 925
Pierard, Frères, et Cie, Montigny sur Sambre, France—Manufactured Iron, 150
Piesse, Miss, Hobart Town, Tasmania—Cone-work Picture Frame, 531
Piesse & Lubin, London, Great Britain—Perfumery, Soaps, &c., 185
Pifre, Abel, Paris, France—Apparatus for Employing the Heat of the Sun, 391
Pigdon, John—Services as Member of Victorian Commission, clxiii
Piguenit, W. C., Risdon, Tasmania—Oil Paintings, 484
Piguenit, Miss H. V., Hobart Town, Tasmania—Oil Painting, 531
Pike, Miss, Dunedin, N.Z.—Lace Curtain, 529
Pilcher, G. L., Rockhampton, Queensland—Entomological Specimens, 386
Pilotel, M. (care of J. Gosnell and Co.), London, Great Britain—Drawings and Etchings, 497
Pinder, Bourne, & Co., Burslem, Staffordshire, Great Britain—Earthenware and China, 204; Artistic Painting on Porcelain, 497
Pinhey, Mrs. Havelock, Randwick, N.S.W.—Paintings, 525
Pink, James, Sydney, N.S.W.—Plans for Flower Gardens, 1026
Pinon et Guerin, Rheims, France—Woollen Goods, 239
Pinschof, Carl—Services as Member of the Austrian Commission at Sydney, cxlii
Piotrowski, Kennedy de, Rosedale, N.Z.—Services as Judge, cli; Judge, 259, 484
Pirie & Sons, Alexander, London and Aberdeen, Great Britain—Papers and Fancy Stationery, 304, 305
Pirlot et Frésart, Liège, Belgium—Revolvers and General Firearms, 317
Pitman, Harriett, Sydney, N.S.W.—Public School Exhibit, 381
Pitt, T. & G., Green Ponds, Tasmania—Wheat, 839
Pitts, E. W., The Levels, Dry Creek, South Australia—Services as Member of South Australian Commission, clxi; Wool, 921-922
Pitts' Agricultural Works, Buffalo, N.Y., U.S.—Threshing Machines, 996
Plant, William, Thames, N.Z.—Retorts, Crucibles, &c., 210
Plaideau Fils et Cie, Menin, Belgium—Snuff, 811
Platt & Co., New York City, U.S.—Mower, 996
Pliocene Fossils (N.S.W.), in Mines Department Exhibit, 65
Plummer, John, London, Great Britain—Exhibits Collection of Scientific and Technical Works, 370; Representative of the *Graphic* exhibit, 456; *vide* also *Graphic*
Plumbago Crucible Co., London, Great Britain—Crucibles, Retorts, &c., 204
Poate, F., Tamworth, N.S.W.—Models of Farms, 1000
Pochtler, Carl, Vienna, Austria—Enema Apparatus, 322
Pohlmann & Son, Halifax, Great Britain—Pianos, 428
Pohl, Carl, Strathfieldsaye, South Australia—Wines, 904, 905
Poitevin, Gustave, Paris, France—Artificial Flowers, 270
Pokorny, Franz, Agram, Croatia, Austria—Liqueurs, 867
Pomey, Louis, Paris, France—Oil Painting, 476
Pomology (including Fruits of Temperate, Semi-Tropical, and Tropical regions)—General Report on Agriculture, 693
Ponder, W. F., Sydney, N.S.W.—Services as Judge, cliv; Judge, 715, 808, 1001, 1005, 1021; Compiler of General Report on Arboriculture, 716, *et seq.*

Poole, P. F., R.A., London, Great Britain—Oil Painting, General Report on the Fine Arts, 452
Pooley & Son, Henry, London & Liverpool, Great Britain—Scales, 395
Poolman, Fredk., Sydney, N.S.W.—Services as Judge, cliv ; Judge, 174, 193
Poolman, Samuel, Sydney, N.S.W.—Services as Judge, cliv ; Judge, 622, 632, 678, 981, 999
Poolman, Cissy, Sydney, N.S.W.—Public School Exhibit, 375
Poolman, Belinda, Sydney, N.S.W.—Public School Exhibit, 376
Pope, John, Sydney, N.S.W.—Services as Judge, cliv ; Judge, 906
Pope, W., Sydney, N.S.W.—Pigeons, 971
Poppe & Co., J. F., Berlin, Germany—Grass Seeds, &c., 815
Popper & Co., Leopold, Brünn, Moravia, Austria—Tweeds, 234
Popper, Isidor, Brünn, Moravia, Austria—Tweeds, 234
Popovitz, Lazarus, Marchegg, Austria—Photo of Railway Station, "Glorine," 431
Port Chalmers Building Stone Co. (Ltd.), Dunedin, Otago, N.Z.—Building Stones, General Report, 116 ; Award, 142
Portable Engines—General Report on Machinery, 553, *et seq.*
Portaels, Jean, Brussels, Belgium—Oil Painting, General Report on the Fine Arts, 464 ; Award, 473
Portland Packing Co., Portland, Maine, U.S.—Tinned Provisions, 706 ; Canned Corn and Blueberries, 860
Porter & Coates, Philadelphia, U.S.—Printing, 314 ; Engravings in Books, 514
Porter, Henry, Hartley, N.S.W.—Services, clvi
Porteus, Maggie, Balmain, near Sydney, N.S.W.—Public School Exhibit, 372
Poschinger, R. Von, Munich, Germany—Landscape Painting, General Report on the Fine Arts, 463 ; Award, 477
Posener-sprit-Actiengesellschaft, Posen, Germany—Wine and Spirits, 875
Post-Pliocene and Recent Fossils, (N.S.W.)—in Mines' Department Exhibit, 65
Postlethwaite, A. P., Egham, Surrey, Great Britain—Engines, &c., General Report on Machinery, 550, 552, 575 ; Awards, 664
Potter, Son, & Co., Thomas, Philadelphia, U.S.—Oil Cloth, 257
Potter, C. & J. G., Darwen, Lancashire, Great Britain—Paperhangings, 305
Potter, Annie, Sydney, N.S.W.—Public School Exhibit, 375
Potter, Charles, Sydney, N.S.W., Superintendent, Government Printing Office—Services, cl
Pottie, Elsia Isabel, Waverley, near Sydney, N.S.W.—Public School Exhibit, 383
Potts, T. H., Ohinitaki, Christchurch, N.Z.—Seeds, &c., General Report on Arboriculture, 760 ; Statistics with regard to growth of Coniferæ ; General Report on Arboriculture, 800 ; Award, 805
Poullain, A., Paris, France—Bronze Lamps and Chandeliers, 214
Poultry & Pigeons (Class 650)—Awards, 965, *et seq.*
Pow & Co., J. K., Melbourne, Victoria—Tanning Substances, General Report on Arboriculture, 795 ; Awards, 807
Powell, Bishop, & Stonier, Hanley, Staffordshire, Great Britain—Special Medal, clxv ; China and Earthenware, 204
Powell & Son, J. M., London, Great Britain—Printing Machinery, 653
Powis, Charles, London, Great Britain—Saws, General Report on Machinery, 596
Prächtel, C., Berlin, Germany—Carved Oak Furniture, 216
Pradel, Paquignon et Bailly, Paris, France—Medicine-chests, &c., 323
Prang & Co., L., Boston, Massachusetts, U.S.—Natural History Series, 888 ; Chromolithographs, 514
Pratt, D. C., New York City, U.S.—Roofing and School Slates, &c., General Report, 118 ; Award, 145 ; School-slates, Crayons, &c., 388
Prendergast, Wood, & Co., Newcastle, N.S.W.—Ale, 889
Prendergast, W., Pitt Town, N.S.W.—Horse, 935
Prentice Brothers, Worcester, Massachusetts, U.S.—Lathe, General Report on Machinery, 600
Prescott, H., Sydney, N.S,W.—Embossed Writing for the Blind, 386
President de la Republique Française, cxliii
Président de la Chambre de Commerce de Paris—Services as Member of the Committee at Paris, cxliv
Président du Comité de l'Exposition Internationale de la Nouvelle Caledonie—Services, cxlvii
President of the Swiss Confederation, clxi

Preston, Edward, Birmingham, Great Britain—Rules and Spirit-levels, 395; Joiners' Tools, &c., 336
Prevet et Cie., Charles, Paris, France—Preserved Vegetables, 848
Previte & Greig, London, Great Britain—Slates, General Report, 117; Roofing-slates, 134
Priest, Martha, Cooyal, N.S.W.—Public School Exhibit, 374
Priestman Brothers, London and Hull, Great Britain—Special Medal, clxv; Crane and Pile-driver, General Report on Machinery, 565, 662; Awards, 664
Price, Edwin, Penrith, N.S.W.—Public School Exhibit, 380
Price, George, Wolverhampton, Great Britain—Iron Safes, 336
Price, Amy, Penrith, N.S.W.—Public School Exhibit, 380
Price & Brothers, J. & C., Bristol, Great Britain—Stoneware, Earthenware, &c., 204
Price & Co., Napoleon, London, Great Britain—Perfumery, Fancy Soaps, &c., 185
Price's Patent Candle Co. (Limited), London, Great Britain—Candles and Soaps, 185
Prince of Wales, H.R.H. The—President of the British Royal Commission, cxlv
Prince & Co., Jan, Gouda, Netherlands—Clay Pipes, 283
Prince, Lucy, Sydney, N.S.W.—Public School Exhibit, 375
Prinsep, Val. C., London, Great Britain—Oil-painting, General Report on the Fine Arts, 452; Award, 480
Printing Machinery—General Report on Machinery, 613
Pritchard, J. & W., Camperdown, N.S.W.—Soap and Candles, 188
Pritchard, Jas., Maitland, N.S.W.—Building-stone, General Report, 114; Award, 139
Procter, Thos. R., Christchurch, N.Z.—Specimens of Jade or Greenstone, 287
Proctor, Wm., Melbourne, Victoria—Buggy, 358
Proctor & Wallis, London, Great Britain—Engine, General Report on Machinery, 548; Award, 664
Propsting, Miss Ada, Hobart Town, Tasmania—Lace and Crochet-work, 531
Prospect Estate, Nilagiri Hills, India—Tea, 819
Pruckner, Dionys, Munich, Germany—Brushware, 346
Przedechi, J., "Fabrik Sultan," Breslau, Germany—Cigarettes, 815
Public Works Department of New Zealand, Port Chalmers, N.Z.—Forgings, 638
Puissant Frères, Merbes-le-Château, Belgium—Marble Mantelpieces; General Report, 110; Award, 213; Marbles and Serpentines, Award, 132
Puissant, Hubert, Court St. Etienne, Belgium—Wrought-iron Crucible, 633
Pullin, A. R., Sydney, N.S.W.—Crayon Drawings, 508
Pumps, Pulsometers, &c.—General Report on the Machinery Department, 576
Purcell, John, Castlereagh, N.S.W.—Horse, 935
Purdey & Sons, James, London, Great Britain—Sporting Guns and Rifles, 319
Purdy and Huntington Co. (Limited), New York City, U.S.—Celluloid exhibits, 191; Collars and Cuffs in Celluloid, and Jewellery do., 289
Purified Coal & Coke Co., Sydney, N.S.W.—Purified Coal and Slack; General Report, 104; Award, 139
Purnell, Alexander, Geelong, Victoria—Model of Girder Bridge, 436
Purvis & Co., W., Mudgee, N.S.W.—Wheat, 827
Putnam Machine Co., Fitchburg, Mass., U.S.—Planeing Machine; General Report, 597, 600; Award (*vide* Corrigenda)
Putzker, M., Brünn, Moravia, Austria—Beet Sugar, 846
Pye, Squire William, Parramatta, N.S.W.—Oranges and Citrons, 1010, 1014; Fruits and Preserves, 1026

Q

Queen Victoria, Her Most Gracious Majesty, cxlv; Lends Pictures to Exhibition, described in General Report on the Fine Arts, 442 and 447, *et seq.*
Queen's Birthday Gold-mining Co., Dunolly, Victoria—Auriferous Quartz, General Report, 17
Queensland Acclimatisation Society, Brisbane, Queensland—Economic Plants, 1026
Queensland Coal, General Reference to, General Report, 96; Analyses of, 107, *et seq.*
Queensland Commission for Exhibition, Brisbane, Queensland—Members of, clx; General Collection of Ores, 143; Trophy of Copper, 159; Trophy of Tin, 159; Maps and Plans, 163; Cycads, 1014; Indigenous and other Plants, 1020
Queensland Copper Ores, referred to, General Report, 6
Queensland Gold Trophy, referred to, General Report, 6

Queensland Government, Brisbane, Queensland—Mineral Specimens, General Report 70, *et seq.* ; Loan of Ethnological Collection, clx
Queensland Grasses and Grass Seeds, 808
Queensland List of Diplomas and Medals—For Services, clx
Queensland Museum Trustees, Brisbane, Queensland—Fossils, &c., General Report, 71 ; Marbles and Minerals, 143 ; Ceratodæ Forsterii (Fish), 387
Queensland Quartz Specimens, referred to, General Report, 6
Queensland Tin Ores, referred to General Report, 6
Queensland Woollen Manufacturing Co., Ipswich, Queensland—Woollen Goods, Exhibit referred to, 169 ; Awards, 255, 256
Quinet et Richard, Paris, France—Clocks, 419
Quinn, Denis H., Mudgee, N.S.W.—Wheat, 1026
Quorribolong Public School, N.S.W.—Awards to Exhibits from, 381

R

Rabone & Sons, John, Birmingham, Great Britain—Rules, Tapes, and Levels, 325
Rademakers & Co., P., Delftshaven, near Rotterdam, Netherlands—Gin, 879
Radke, Albert, Sydney, N.S.W.—Leather Belting, 670
Rädler & Pilz, Vienna, Austria—Special Medal, clxiv ; China and Porcelain ware, 195 ; Painting on Porcelain, 473
Rae, C., Sydney, N.S.W.—Public School exhibit, 374
Raff, George, Caboolture, Queensland—Rum, 895
Railway Department of South Australia, Adelaide, South Australia—Railway Carriage, 677
Railway Department of Victoria, Melbourne, Victoria—Railway Appliances, 677
Railway Plant, Rolling Stock, and Apparatus—General Report on Machinery, 627 ; Awards, 674, *et seq.*
Rainforth & Sons, William, Lincoln, Great Britain—Cultivators, Wheat and Corn Screens, &c., 989
Raistrick & Sons, John, Thackley, near Leeds, Great Britain—Cloths, 249
Raleigh, M., Sydney, N.S.W.—Gas Water-heater and Gas Range, 225, 226
Rambi Plantation Co., Rambi, Fiji—Cocoanut Oil, 179 ; Coir Fibre and Bristles, 910
Rammé, F., Hamburg, Germany—Anatomical Models, 369
Ramsay & Fisher, Durham, Great Britain—Model of Patent Safety Cage, 162
Ramsay & Co., J. E., Mount Barker, South Australia—Reaping and Stripping Machines, 993
Ramsay, E. P., F.L.S., Sydney, N.S.W.—Services as Judge, cliv ; Judge, 707
Ramsay, John Stuart, Sydney, N.S.W.—Phonographic Corresponding Clerk to Sydney International Exhibition Commission,
Ramsden, Richard J., Sydney, N.S.W.—Services as Judge, cliv ; Judge, 646
Randall & Way, London, Great Britain—Quorn Cloth, 249
Randall, Thomas, Mudgee, N.S.W.—Wheat, 827
Ransom, T., Killymoon, Tasmania—Bituminous Coal ; General Report, 108
Ransomes, Sims, & Head, Ipswich, Great Britain—Engines, &c. ; General Report on Machinery, 545, 553, 554, 558 ; Award, 664 ; Ploughs, Cultivators, &c., 989
Raphael, Max, Breslau, Silesia, Germany—Lamp Chimneys, 216
Rasch, Joseph, Vienna, Austria—Braces, &c., 265
Rasquin, Isidore, Liège, Belgium—Leather for Belts Harness, &c., 708
Ratté, F., C.E., F.R.S., Paris, France—Services as Judge, cliv ; Judge, 3 ; Exhibitor of New Caledonian Mineral Collection, General Report, 33 ; Award, 135
Rätzer, F. G., Burgstädt, near Chemnitz, Saxony, Germany—Hosiery, 274
Rautert, August, Mainz a/R, Germany—Lager Beer, 875
Ravel et Cie., Jules, Nice, France—Olive Oil, 848
Ravenet Aîne, L. A., Paris, France—Combs, 345
Raworth, W. H., Sydney, N.S.W.—Loan Works of Art, clvii ; Services as Judge, cliv ; Judge, 367
Ray Brothers, Horneye, Ontario County, N.Y., U.S.—Wool, 925
Read, Bessie, Hinton, N.S.W.—Public School Exhibit, 378
Read, J. C., Sydney, N.S.W.—Prison Made Mats, reference to, 169 ; Award, 254
Read, Jefferson, Birmingham, Great Britain—Silver-plated Cutlery, 336
Reading, Edward, Sydney, N.S.W.—Loan Ethnological Exhibits, clviii

Reckitt & Sons, Isaac, London and Hull, Great Britain—Ultramarine Blue, 185 Starches, Blues, and Black Leads, 850
Redhead Coal Mining Co.—County of Northumberland, N.S.W.—Coal, General Report, 99 ; Award, 139
Redlich, Friedrich, Brünn, Moravia, Austria—Tweeds, 234
Redfern Public School, near Sydney, N.S.W.—Awards to Exhibits from, 381
Redshaw, Agnes, Windsor, N.S.W.—Public School Exhibit, 385
Redwood Brothers, Blenheim, Marlborough, N.Z.—Oats, 833
Reed, Charles, Ashburton, Canterbury, N.Z.—Wool, 917
Reed & Barton, Taunton, Massachusetts, U.S.—Special Medal, clxvi ; Silver-plated Ware, 229, 514
Rees, Rowland, M.P.—Services as Member of South Australian Commission, clxi
Reeve, Edward, P.M., Gosford, N.S.W.—Services, clvi
Reform Gold Mining Co., Lucknow, N.S.W.—Auriferous quartz, General Report, 12 ; Gold from Pyritous Quartz ; Award, 139
Refrigerating Machinery—General Report on Machinery, 614 *et seq.*, 626
Règnier, Jules, Dijon, France—Wines, 872
Regan, John, Thames, N.Z.—Ferns, 1008
Reich & Co., Vienna, Austria—Coloured Glassware, 195
Reichenbach & Co., M.L., St. Gall, Switzerland—Machine Embroideries, 288
Reid, A. M., Leven, Tasmania—Timbers ; General Report on Arboriculture, 763
Reid, G. M., Don River, Bowen, Queensland—Maize, 836
Reid, Alice, West Maitland, N.S.W.—Embroidery, &c., 525, 526
Reid & Baldock, Sydney, N.S.W.—Racing Outrigger of Tin, 686
Reid & Gray, Dunedin, Otago, N.Z.—Ploughs, Seed, Sowers, &c., 992
Reifschneider, Paul, Glauchau, Saxony, Germany—242
Reiffenstein, G., Vienna, Austria—Chromo-Lithographs, 486
Reilly, Henry, Melbourne, Victoria—Oil Painting, 484
Reiner, W., Aarau, Switzerland—Elastic Boot Web, 288
Reiner, Heinrich, Vienna, Austria—Surgical Instruments, 322
Reinglass, R., Weimar and Wiesbaden, Germany—Gloves, 274
Reishorn & Friedel, Brünn, Moravia, Austria—Tweeds, 234
Reiss, J., Mannheim, a/R., Germany—Cigars, 815
Relph, George, Sydney, N.S.W.—Illuminated Address, 526
Renton, J. C., Dunedin, Otago, N.Z.—Biscuits, 855
Renouard D'Adrien, Paris, France—Scales, 391
Republique Française—Son Excellence Le Président de la, cxliii
Rettich, K., Weimar, Germany—Oil Painting, General Report on the Fine Arts, 463
Reuleaux, Professor Dr. Franz, P.C.—Services as Imperial German Commissioner at Sydney, cxliv ; Services as Honorary Member of Committee of Commission, cxlviii ; Referred to as German Commissioner at Philadelphia, 1876, 168 ; As Member of the Ethnological Sub-Committee, 366
Revillon Clerjaud, Chives près Cognac, France—Wine and Brandy, 872
Rewa Plantation Co., Rewa, Fiji—Sugar, 841 ; Rum, 868
Reyaîné, Brussels, Belgium—Linens, &c., 236
Reynolds, R., Newtown, N.S.W.—Public School Exhibit, 379
Reynolds, P. E., Sydney, N.S.W.—Chromo-Lithographs and Engravings, 508
Reynolds & Co., F. W., London, Great Britain—Engines, Wood working Machinery, &c. General Report on Machinery, 540, 543, 554, 559, 588, 589, 590 ; Awards, 636, 665
Reynolds & Sons, John, Birmingham, Great Britain—Cut Nails, 336
Rhode Island Horse-shoe Co., Rhode Island, U.S.—Horse-shoes, 343
Riby, Carl A., Wolfsberg, Carinthia, Austria—Furniture, &c., 212
Richard, C., Spremberg, Germany—Tweeds, 242
Richard, F. A., Spremberg, Germany—Cloths, 242
Richard, F. C. W., Sydney—Ornamental Metal-ware, 339
Richards, Thos. (Government Printer), Sydney, N. S. W.—Services as Honorary Member of Committee, cxlviii ; Services as Judge, cliv ; Judge, 290, 650 ; Exhibits referred to, 172, 294; Printing, Bookbinding, and Account Books, 310; Photographs and Photographic Processes, 506 ; Special Medal to Department, clxvi ; for references to assistance rendered by Mr. Richards and Department, *vide* Reports of Executive Commissioner and Secretary to Commission. (*Vide* also Government Printer)
Richards & Co., Sydney, N.S.W.—Photographs, 508
Richards, Benjamin, Windsor, N.S.W.—Horses, 935, 936
Richardson, Fred. A., Spring Hill, N.S.W.—Services, clvi

Richardson, H. A., Parramatta, N.S.W.—Services, clvi
Richardson, Harriett, Waverley, N.S.W.—Public School Exhibit, 383
Richardson, Mary, Waverley, N.S.W.—Public School Exhibit, 383
Richardson, Letitia H., Charcoal Creek, N.S.W.—Public School Exhibit, 373
Richardson, George, Sydney, N.S.W.—Services as Judge, cliv ; Judge, 707
Richardson & Co., John, Leicester, Great Britain—Medicines, 326
Richardson & Co., J., London, Great Britain—Perfumery and Soaps, 185
Richarme—Services as Member of Committee at Paris, cxliv
Riche et Cie, Marchienne au Pont, Belgium—Manufactured Iron, referred to, 148 ; Award, 150
Richmond Public School, N.S.W.—Awards to Exhibits from, 381
Richmond, J. C., Wellington, N.Z.—Oil Painting, 483
Richmond & Chandler, Manchester, Great Britain—Corn-crushers, Horse Powers, &c., 990
Richmond & Gordon, Duke of—Member of the Royal Commission in London, cxlv
Richter & Co., W., Berlin, Germany—Furniture, 216
Richter, August, Muskau, Silesia, Germany, 242
Richter, E. A., Vienna, Austria—Embroideries, 265
Richter & Co., E. O., Chemnitz, Saxony, Germany—Mathematical Instruments, 392
Rickles, E., St. Leonards, near Sydney, N.S.W.—Public School Exhibit, 382
Ridge, R. C., Windsor, N.S.W.—Horse, 936
Riddiford, John P., Sydney, N.S.W.—Pen and Ink Sketch, 508
Riefler, Clemens, Munich, Germany—Drawing Instruments, &c., 393
Rieger, Wilhelm, Frankfurt a/M, Germany—Soaps and Perfumery, 182
Rigby & Sons, John, Wednesbury, Great Britain—Axle-trees, &c., 354
Rigg, James, Chester, Great Britain—Educational Appliances, referred to, 362 ; Award 371
Riggs, John, Gawler, South Australia—Wheat, 837, 1029
Rigollot & Co., London, Great Britain—Mustard Leaves, 326
Riisfeldt, Peter Emil, Sydney, N.S.W.—Photographs, 509
Riley, W. S., Birmingham, Great Britain—Sporting Rifles, 319
Rimmel, Eugène, London, Great Britain—Perfumery, Soaps, &c., 185
Ringel, Désiré, Paris, France—Bronze Statue, 476
Ripka, Joseph Max., Brünn, Moravia, Austria—Beet Sugar, 846
Rischbieter, Carl, Dessau, Germany—Window Shades, 242
Risby, J., M. H. A., Hobart Town, Tasmania—Exhibitor of Anthracite Coal, General Report, 108
Ritchie, Edith, Parramatta, N.S.W.—Public School Exhibit, 380
Ritchie, Robert A., Parramatta, N.S.W.—Services as Judge, cliv; Judge, 655; Exhibit Ploughs, General Report on Machinery, 621 ; Award, 992
Ritchie, David, Launceston, Tasmania—Barley and Pease, 840; Groats and Oatmeal, 859
Ritchie, Brothers, Murghebolne, Victoria—Wine, 905
Ritchie, Wm.—Services as Member of Tasmanian Commission, clxii
Ritchie, W., Parramatta, N.S.W.—Ploughs, &c., 992
Rix, Anton, Vienna, Austria—Soap, 176
Robathan & Cranmore, Birmingham, Great Britain—Imitation Gold Jewellery, 280
Robbe, Louis, Brussels, Belgium—Animal Painting, General Report on the Fine Arts, 465
Robberds, Miss E., Sydney, N.S.W.—Crayon Drawings, 508
Robelin, Louis, Dijon (Côte d'Or), France—Ultramarine Blue, 180
Robert, Charles Jules, Paris, France—Wood Engraving, 491
Roberts & Hunter, London, Great Britain—Roofing Slates, General Report, 117 ; Award, 134
Roberts, Col. C. F., R.A., Sydney, N.S.W.—Services, clix ; Services as Judge, cliv ; Judge, 315, 330
Roberts, Alfred, M.R.C.S.E., L.S.A., Sydney, N.S.W.—Services as Honorary Member of Committee, cxlviii ; Loan of Ethnological Exhibits, clviii ; Chairman of Ethnological Sub-Committee, 366 ; Exhibits, Sanitary appliances, 433
Roberts, P., Mudgee, N.S.W.—Services as Judge, clv ; Judge, 951
Roberts, Charles J., J.P. (Mayor of Sydney)—Services as Member of the Sydney International Exhibition Commission, cxlviii
Robertson, John, Sydney, N.S.W.—Axle-trees and Phaetons, 356
Robertson, Annie, Sydney, N.S.W.—Public School Exhibit, 376
Robertson, Ellen, Sydney, N.S.W.—Public School Exhibit, 376

Robertson, Sir John, K.C.M.G. (Member of N.S.W. Ministry), cxlix
Robertson, H. R., London, Great Britain—Oil Painting, General Report on the Fine Arts, 452
Robertson, Mrs. W. G., Sydney, N.S.W.—Shell and Seaweed Work, 526
Robertson, D. & W., Dundee, Great Britain—Stone-working, &c., Machinery, General Report on Machinery, 608, 609, 613; Awards, 636, 665, 676
Robertson & Co., J. W., Queenstown, N.Z.—Timbers, General Report on Arboriculture, 760; Award, 805
Robertson Brothers, Leghorn, Italy—Macaroni, Vermicelli, Candied Fruits, and Olive Oil, 850
Robertson Brothers, Colac, Victoria—Cattle, 950
Robertson, Alex., Nelson, N.Z.—Hemp, 917
Robey & Co., Lincoln, Great Britain—Engines, &c., General Report on Machinery, 539, 549, 550, 555, 561, 591, 621; Awards, Wood-working Machinery, 637; Engines, &c., 665; Corn-mill, 681; Threshing-machine, 990
Robie, Jean, Brussels, Belgium—Special Medal, clxiv; Oil Painting, General Report on the Fine Arts, 465; Award, 474
Robbins, Henry, Penrith, N.S.W.—Public School Exhibit, 380
Robin, Jules, Cognac, France—Brandy, 872
Robins, E. C., F.S.A., F.R.I.B.A., London, Great Britain—Architectural Designs, 497
Robinson, M., Bothwell, Tasmania—Writing-desk, 228
Robinson, W. R., Toowoomba, Queensland—Specimens of Taxidermy, 387
Robinson, Charles, Sydney, N.S.W.—Services as Honorary Member of Committee of Commission, cxlviii
Robinson, H. P., Tunbridge Wells, Great Britain—Photographs, 497
Robinson, Miss M. F., Sydney, N.S.W.—Portraits in Oils, &c., 508
Robinson, Owen, Kettering, Great Britain—Boot and Shoe-making Machines, 648
Robinson, S., Woollahra, near Sydney, N.S.W.—Plants, 1026
Robinson, Sir Hercules, G.C.M.G.—Services as First President Sydney International Exhibition Commission, cxlix; and President of New Zealand Commission, clix. For early action taken by, in Agricultural Society, &c., in connection with holding of International Exhibition (*Vide* Executive Commissioners' Report)
Robinson & Co., T., Melbourne, Victoria—Wool-press, 672; Stripping-machine, 998
Robinson & Sons, Melbourne, Victoria—Washing-machine, 231
Robinson & Sons, Thomas, Rochdale, Great Britain—Engines, &c., General Report on Machinery, 541, 554, 579, 580: Award, Wood-working Machinery, 637; Engines, &c., 665
Robinson & Sons, J. H., Melbourne, Victoria—Wool-press, 672; Iron Plough for making Dams, Tanks, &c., 998
Robson, T. B., Paynehan, South Australia—Raisins, &c., 858
Rochard, Henriette, Brussels, Belgium—Paintings on Porcelain, 474
Rocher, Prost, et Cie., Paris, France—Colours in Cakes, &c., 180
Rocher, C. W.—Secretary to Launceston Branch of Tasmanian Commission, clxii
Rock Drills, General Report on Machinery, 617
Rock & Graner, Biberach-Württemberg, Germany—Tin Toys, 274
Rocks and Minerals of New South Wales—Specimens of various, 50
Rockhampton Committee for Exhibition, Rockhampton, Queensland—Dolomite and Marbles, General Report, 112; Award, 143; Collection of Timbers, General Report on Arboriculture, 757; Award, 805
Rodanet, A. H., Paris, France—Chronometers, Report on Chronology, 402, 418; Award, 419
Rodgers & Co., C. B., New York City, U.S.—Wood-working Machinery, General Report on Machinery, 593, 594, 595; Award, 639
Roederer-Scherb, A., Rheims (Marne), France—872
Roegner, C. H., Striegau, Germany—Brushware, 346
Roger, Jules, Mouy (Oise), France—Wall-papers, 297
Rogers & Shepherd, Bega, N.S.W.—Cheese, 703
Rogers, H., Manly, N.S.W.—Marble Mantelpiece, 226
Roithner & Co., Hugo, Schweidnitz, Silesia, Germany—Hammocks, 242
Rolin Fils, et Cie., H., St. Nicholas-Waes, Belgium—Tweeds, 236
Rolland, J. B., Kessang, near Malacca, Straits Settlements—388
Rollins & Co., London, Great Britain—Lawn-mowers, 990
Rolls & Sons, James, London, Great Britain—Floor-cloths and Linoleum, 249; White Oiled Silk, 327

Romanelli, Ferdinando, Florence, Italy—Carvings, 481
Rönisch, Carl, Dresden-Neustadt, Germany—Pianos, 426
Room, Mrs., Launceston, Tasmania—Paper Flowers, 531
Rooney, Mary, Sydney, N.S.W.—Public School Exhibit, 382
Roper, Walter, Sydney, N.S.W.—Public School Exhibit, 375
Roquet, F., Rouen, France—Brush-ware, 345
Rosa Sugar Factory, Shajhanpore, India—Sugars, 850
Rose, Amy, Peakhurst, N.S.W.—Public School Exhibit, 380
Rose, Sir John, G.C.M.G.—Services as Member of the Royal Commission in London, cxliv
Rose, William, St. Leonards, near Sydney, N.S.W.—Dog, 980
Rose & Co., L., London and Leith, Great Britain—Cordials, 877
Rosenfeldt, Henry A., North Willoughby, near Sydney, N.S.W.—Designs for Gardens, 1014
Rosenkranz, Ernst, Dresden-Aldstadt, Germany—Pianos, 426
Rosenthal, C. M., Philadelphia, U.S.—Services as Judge, clv ; Judge, 193, 485, 808, 862, 906
Roskamp & Dehmann, Carl, Springe-Hanover, Germany—"Persian" Carpets, 243
Ross, R. D., M.P.—Services as Member of South Australian Commission, clxi
Ross, J., Camperdown, N.S.W.—Glass Bottles, Jars, &c., 209
Ross, Annie, Sydney, N.S.W.—Public School Exhibit, 375
Ross & Co., London, Great Britain—Telescopes and Microscopes, 396
Ross, Florence E., Sydney, N.S.W.—Crayon Drawing, 526
Rosseels, J., Brussels, Belgium—Oil Painting, 474
Rossi, Carlo, Verona, Italy—Wine, 879
Rossiter, George, Nouméa, New Caledonia—Chrome Ore, General Report, 25 ; Marbles, General Report, 111 ; Awards, 135
Rossiter, E., Brisbane, Queensland—Rugs, Mats, &c., 713
Rothery, H. W., Carcoar, N.S.W.—Copper and Iron Ores, General Report, 21
Rothery, William, Carcoar, N.S.W.—Mineral Waters, General Report, 130
Rotter, Georg, Dresden, Germany—Photograph Paper, 299
Rotton, Henry, Bathurst, N.S.W.—Horses, 936
Rouffio, Paul, Paris, France—Oil Painting, 476
Rouillon, Ferdinand, Grenoble (Isère), France—Gloves, 270
Rouppe Van der Voort, & Lewin, s'Hertogenbosch, Netherlands—Tinfoil and Tinfoil Capsules, 157 ; small Shot, 319
Roûquier-Milius, Dugny, Seine, France—Colours, &c., 180
Rouse, George, Mudgee, N.S.W.—Wheat, 827 ; Wool, 915
Rouse, E. S., Rouse Hill, N.S.W.—Horse, 936
Rouse, R., Mudgee, N.S.W.—Horse, 936
Rowan, Mrs. Ellis, Double Bay, near Sydney, N.S.W.—Special Medal, clxvi ; Water-colour Paintings, 482
Rowbottom, E. S., Melbourne, Victoria—Barley, 844
Rowe & Son, Sydney, N.S.W.—Venetian Blinds, 226
Rowe, E. S., Sydney, N.S.W.—Fret-work, 286
Rowe, Grace, Waterloo, N.S.W.—Public School Exhibit, 383
Rowe, Ruth, Waterloo, N.S.W.—Public School Exhibit, 383
Rowe, Thomas, Sydney, N.S.W.—Architectural Model, 433 ; Architectural Designs, 508
Rowe, Edwin, Sydney, N.S.W.—Horse, 936
Rowland, John R., Melbourne, Victoria—Engraving and Enamelling, 515
Rowlands & Sons, T., Philadelphia, U.S.—Shovels, Spades, &c., 343
Rowley, W. & G., Melbourne, Victoria—Bird-cages, 258
Rowley, G. B., Sydney, N.S.W.—Dog, 980
Rowley & Hermance, Williamsport, Penn., U.S.—Glass-papering Machine, 639
Roy—Services as Member of Committee at Paris, cxliv
Royal Mint, Sydney Branch, N.S.W.—Exhibits referred to, 364 ; Automatic Balance, 421 ; Collection of Medals and Coins, 433
Royal Commission (British) in London—Members of, cxlv ; Electro-type Reproductions of the Regalia, forwarded by, General Report on the Fine Arts, 457. *Vide* also Executive Commissioner's Report
Royal Society of Tasmania—Timbers, General Report on Arboriculture, 763 ; Award, 806
Royal London Condiment Works, London, Great Britain—Pickles, 818
Royce, George H., Sydney, N.S.W.—Services as Judge clv ; Judge, 646, 981, 999

Royse, Stead, & Co., Wairoa, Hawke's Bay, N.Z.—Wheat and Oats, 834; Flour and Oatmeal, 855
Rudder, E. W., Kempsey, Macleay River, N.S.W.—Marble, General Report, 111; Specimens of Dyes, from Wood, &c., of the district, General Report on Arboriculture, 794; Award, 834
Rudd, F. W., Sydney, N.S.W.—Dog, 980
Ruhmann, Adolf., Guggenbach and Vienna, Austria, Papers, 295
Rumpp, C. F., Philadelphia, U.S.—Leather Dressing Cases, &c., 289
Rumsey & Co., Seneca Falls, New York, U.S.—Fire Engine, &c., 671
Rungo Valley Estate, India, Tea, 819
Rush, Maggie, Sydney, N.S.W.—Public School Exhibit, 376
Rushton, Robert, Sydney, N.S.W.—Painted Panellings, 508
Ruston, Proctor, & Co., Lincoln, Great Britain—Engines, &c., General Report on Machinery, 554, 555, 621; Awards; Portable Engine, 665; Threshing Machines, 990
Russell, Peter Nicol—Services as Member of London Commission, cxlv
Russell, John, Sydney, N.S.W.—Ferns, 1026
Russell W. R., Karamu, Hawke's Bay, N.Z.—Grass Seed, 834
Russell, Phillip, Carngham, Victoria—Wool, 927, 928
Russell & Erwin Manufacturing Co., New Britain, Connecticut, U.S.—Locks, Hinges, &c., 343; Ornamental sand Castings, 514
Russell, H. C., B.A., F.R.A.S., Government Astronomer, Sydney, N.S.W.—Services as Honorary Member of Committee, cxlviii; Services as Judge, clv; Judge, 363, 389, 401; Exhibits: Meteorograph and Reflecting Telescope, 386; Tests of Watch Exhibits made by Mr. Russell at the Sydney Observatory, 408, *et seq.*
Russell, Emily, Lochinvar, N.S.W.—Public School Exhibit, 378
Russell, Fanny, Moama, N.S.W.—Public School Exhibit, 379
Russell, Kate, Waterloo, N.S,W.—Public School Exhibit, 383
Russell & Sons, T., London and Liverpool, Great Britain—Watches, Chronographs, &c., Report on Chronology, 402, *et seq.*, 418; award, 420
Russell & Co. John (Limited), London, Great Britain—Chandeliers and Gas fittings, 221, 336; Stocks, Dies, Taps, &c., 637; Boiler Tubes, &c., 665
Russell, J. C., Burraga, N.S.W.—Copper Ores, General Report, 21; Award, 140
Rustless & General Iron Co., London, Great Britain—Non-corrosive Tubing and Hollow-ware, 156
Rust & Co., T. W., Leicester, Great Britain—Woollen Yarns, 249
Rutherford, J., Bathurst, N.S.W.—Gold Specimens, General Report, 12; Award, 140
Rutherford, James, Bathurst, N.S.W.—Horse, 937
Rutishauser & Douillon—Geneva, Switzerland—Jewellery, 288
Ruths, J. G. V., Hamburgh, Germany—Special Medal, clxvi; Oil Painting, General Report on the Fine Arts, 463; Award, 477
Ryan & Denmeade, Sydney, N.S.W.—Confectionery, 853
Ryde Public School, N.S.W.—Award to Exhibits from, 381
Ryder Brothers, Mango, Fiji—Coffee and Maize, 812; Preserved Bananas and Copra, 847; Cotton, 910
Ryder & Sons, J., Selby, Yorkshire, Great Britain—Threads and Twines, 249

S

Sabine, C.—Services as Member of the South Australian Commission, clxi
Sachsse & Co., C., Leipsic, Germany—Essential Oils, &c., 182
Sachsiche Holz Industrie-Gesellschaft, Rabenau, near Dresden, Germany—Furniture, 216
Sachsische Stick-Maschinen-Fabrik, Kappel, near Chemnitz, Saxony, Germany—Wood-working Machinery, General Report on Machinery, 582, 583; Award, 633; Knitting Machines, 648
Sadler, Robert Jas.—Services as Member of Tasmanian Commission, clxii
Sahl, Carl Ludwig, Sydney, N.S.W.—Services as Honorary Member of Committee, cxlviii; Services as Judge, clv; Judge, 862
Sahei Shima, Osaka, Japan—Copper Castings, &c., 338
Sai-ichiro Kisaigawa, Nagasaki, Japan—Cigars, 821
Saint, Frères, Paris, France—Flax Yarns and Twines, 239
Saint-Blancard, Gérard, Bordeaux, France—French Plums, 848

Saito Zenbei, Tokio, Japan—Bronze-ware, 503
Sakata, Haruo—Services as Executive Commissioner in Sydney for Empire of Japan, cxlvii
Sakai Goichi, Osaka, Japan—Cotton Cloths, 253 ; Sugar-candy, 851
Salcher & Söhne, M., Wagstadt and Vienna, Austria—Buttons, 265
Salisbury, Marquis of, K.G.—Services as Member of the Royal Commission in London, cxlv
Salinière, Rev. E. M., Glebe, near Sydney, N.S.W.—Flowers, 1014
Sallandrouze Frères, Aubusson (Creuse), and Paris, France—Carpets, 239
Salmon, Kate, Wellington, N.Z.—Sea-weed and Ferns, 1008
Salomon, Paris, France—Jewellery, &c., 270
Salomons, Julian E.—Services as Member of the London Committee, cxlvi
Salter & Co., Samuel, Trowbridge, Wilts, Great Britain—Tweeds, 249
Salter & Sons, Angaston, South Australia—Wines, 899
Salting, Messrs., Cunningham Plains, N.S.W.—Sheep, 960
Salzbergwerk Neu-Stassfurt, Stassfurt, Saxony, Germany—Salt, 182
Samek Brüder, Brünn, Moravia, Austria—Tweeds, 234
Samson, Gustav, Cottbuss, Germany—Tweeds, 243
Samuel & Sons, Barnett, London, Great Britain—Harmoniums and Flutes, 428
Samuel, Hon. Saul, C.M.G.—Sydney, N.S.W.—Services as Member of the Commission Sydney International Exhibition, cxlviii ; Postmaster-General, N.S.W., cxlix ; Shows, Vesicular Basalt, General Mineralogical Report, 30 ; Exhibits—Model of Steamship, 686 ; Glue, 712 ; Wool, 916
Samuelson & Co., Banbury, Oxfordshire, Great Britain—Reapers and Mowers, 990
Samuely, D. Brünn, Moravia, Austria—Chemicals, 176
Sano Tokujiro, Osaka, Japan—Basket-ware, 348
Sands, John, Sydney, N.S.W.—General Printing, 310 ; Account Books and Book-binding, 311 ; Illuminations, 508 ; Reference to Exhibits, 293
Sanders, James, Burra Burra, South Australia—Jigging-machine, 163
Sanders, Brenda G., Sydney, N.S.W.—Public School Exhibit, 376
Sanders & Sons, London, Great Britain—Beer Engines, 666
Sanders & Co., James, Canowie, South Australia—Sheep, 962
Sanderson, F. J.—Services as Member of the South Australian Commission,
Sandstein, M., Christchurch, N.Z.—Silver Epèrgne, 227
Sandrini, A., Florence, Italy—Mosaic Tables, 501
Sandridge Distillery Co., Melbourne, Victoria—Alcohol, 905
Sandrock, G. F., Bowen, Queensland—Coral and Shells, 713
Sanzel, Felix, Paris, France—Marble Statue, 476
Sarg's, Sohn, & Co., F. A., Liesing, near Vienna, Austria—Glycerine, 176
Sargood, Son, & Ewen, Dunedin, N.Z.—Boots and Shoes, 287
Sasaki T. T., Nagasaki, Japan—Buttons, &c., 283 ; Needlework, 503
Saumarez Creek Public School, N.S.W.—Awards to Exhibits from, 381
Saunders & Co., T. H., London, Great Britain—Paper Manufactures, 305
Sauvage, A. J., Verviers, Belgium—Tweeds, 236
Savard Veuve, Paris, France—Plated Jewellery, &c., 270
Savalle Fils et Cie., Paris, France—Diaphanometer, 680
Savignon, F. De, Paris, France—(*Vide* De Savignon)
Saville Street Foundry & Engineering Co. (Limited), Sheffield, Great Britain—Bone-mill, 990
Sawyer & Co., L. D., Hamilton, Ontario, Canada—Threshing Machine, &c., 982
Saxby & Sons, Sydney, N.S.W.—Flowers, 1016
Saxony—Woollen Goods, referred to, 169
Sax, Julius, London, Great Britain—Electrical Apparatus, 397
Sayer, James W., Sydney, N.S.W.—Services as Designer of Obverse of Medal, cl ; Crayon Drawing, 508
Saywell, Thomas, Sydney, N.S.W.—Tobaccos, Cigars, &c., 828
Schäde, F.—Services as Member of Imperial German Commission at Berlin, cxliv
Schadn, Johann, Vienna, Austria—Wines, 867
Schäfer & Scheibe, Otto, Berlin, Germany—Fancy Stationery, &c., 299
Schäfer & Hauschner, Berlin, Germany—Bronze Chandeliers, &c., 216
Schäffer & Budenberg, London, Great Britain—Engine Fittings, &c., General Report on ; Machinery, 573, 602, 603 ; Awards, 666
Schaumann, H., Munich, Germany—Oil Paintings, 472
Scheibe & Dathe, Gera (Reuss), Germany—Calf-skins, 710
Schelle, Albert Van.—Services as Executive Commissioner for Belgium at Sydney, cxlii
Scheidl, Alois, Vienna, Austria—Frames, &c., 212

Schieffelin & Co., New York City, U.S.—Medicinal Preparations, 328
Schiedmayer & Söhne, Stuttgart, Germany—Piano, 426
Schifferdecker & Söhne, Heidelberg, a/R, Germany—Portland Cement; General Report, 121; Award, 133
Schilling & Phillip, Grossenhain, Saxony, Germany—Tweeds, 243
Schilling & Zürn, Johanngeorgenstadt, Saxony, Germany—Tablecloths, 243
Schittenhelm, & Sohn, K., Vienna, Austria—Buttons, 265
Schilling, Friedrich, Stuttgart, Germany—Piano, 426
Schlapfer, Zuberbühler, J., Speicher, Switzerland—Curtains, 289
Schlesinger & Söhne, J., Trencsin, Hungary, Austria—Potash, 177
Schlesinger, Martin, Berlin, Germany—Fancy Stationery, &c., 299
Schlesinger & Co., New York City, U.S.—Tin Toys, 289
Schlesinger, Anton, Vienna, Austria—Pendulum Clocks, 419
Schleicher, M. L., Berlin, Germany—Special Medal, clxvi; Marble Mantelpieces, 216
Schlömp, Edwin, Leipsic, Germany—Photograph Engravings, 493
Schlumberger, R., Vöslau & Vienna, Austria—Wines, 867
Schmidt, J. C., Erfurt, Germany—Dried Flowers, 274
Schmidt, De Villez et Cie, Dampremy, Belgium—Sheet-glass, 197
Schmidt & Jaedicke, Berlin, Germany—Petroleum Table Lamps, 216
Schmidt, Emile, Brussels, Belgium—Liqueur, 868
Schödl, Max, Vienna, Austria—Special Medal, clxiv; Oil Paintings; General Report on the Fine Arts, 466; Award, 472
Schörke, Alexander, Gorlitz, Germany—Preparations of Peas and Beans, 849
Schöttlander-Löbel, Carlsbad, Bohemia, Austria—Mineral Waters, General Report, 129; Award, 131
Schöttler, H. W., Leipsic, Germany—Cigars, 816
Schofield & Kirk, Huddersfield, Great Britain—Power Looms, 642
Schofield, Wm., Melbourne, Victoria—Scale Board for making Boxes, General report on Arboriculture, 791; Award, 807; Services as Member of the South Australian Commission
Schönberger Gebrüder, Vienna, Austria—Fancy Leather, and Bronze Goods, 265
Schönberger, Victor—Services as Executive Commissioner for Austria at Sydney, cxlii
Schomburg & Söhne, H., Berlin, Germany—Insulators, 199
Schomburgk, Rd., Ph. D., Botanic Gardens, Adelaide, South Australia—Timbers; General Report on Arboriculture, 751; Award, 806; Catalogue of Plants, 1002
School Board for London, London, Great Britain—Services, cxlvi; Methods of Instruction 371; Exhibit referred to, 362
Schreiber, F. W., London, Great Britain—Tinfoil and Tinfoil Capsules, 156; Spring Capsuling Machines, 666
Schreiber & Nephews, J., Vienna, Austria—Ornamental Glassware, 195
Schreiber, Gottfried, Graz, Austria—Biscuits, &c., 846
Schryver, Louis de, Paris, France—Oil Painting, 476
Schramm, & Sohn, C. F., Heidenheim, Württemberg, Germany, 243
Schröder, Carl, Polyt. Arbeits Institut, Darmstadt, Germany—Mathematical and Engineering Models; Award, 370; General Report on Machinery, 623
Schröder, Dr. Hugo, Hamburg, Germany—Microscopes and Telescopes, 393
Schröder, E., Castlemaine, Victoria—Wines, 905
Schütz, August, Wurzen, Saxony, Germany—Paperhangings, 299
Schuster Gebrüder, Markt-Neukirchen, Saxony, Germany—Violins, &c., 426
Schultze, Fimmen & Co., (Guss-Stahlwerk Augustfehn), Augustfehn, Oldenburg, Germany—Cast-steel and Steel Tools, 633
Schultze, Ladewig, Beutel & Sohn, Perleberg, Germany—Mustard, 816
Schulz-Briesen, Ed., Düsseldorf, Germany—Oil Painting; General Report on the Fine Arts, 463
Schultz, Naomi, Adelaide, South Australia—Hair-work, 529
Schuster, Rudolph, (C. G. Lüderitz Kunstverlag), Berlin, Germany—Engravings and Lithographs, 493
Schwalbe, A., Berlin, Germany—Pocket-books, and Fancy Leather Goods, 274
Schwartzkoff, H., Parramatta, N.S.W.—Services, clvi
Schwaarwächter, J. C., Berlin, Germany—Photographs, 493
Schwarzmann, & Co., D., Vienna, Austria—Clothing, 265
Schwartze & Co., Helmuth, London, Great Britain—Wool samples; Services in showing, cxlvi; Award, 911

Schweinfurther Ultramarian-Fabrik, Oberndorf-Schweinfurth, Germany—Ultramarine, 182
Science and Art Department, South Kensington, London, Great Britain—Services, cxlvi ; Exhibits referred to, 362 ; Award for Systematic Modes of Instruction in Art, 371
Scientific and Philosophical Instruments and Methods—(Classes 307-312); Referred to, 363 ; Awards, 390, *et seq.*
Sckerl, A., Schwiebus, Germany—Cloths, 243
Scott Brothers, Christchurch, N.Z.—Stoves, 227
Scott & Son, W. & C., London & Birmingham, Great Britain—Guns, Rifles, &c., 319
Scott, Robert, Galt, Ontario, Canada—Spokes, Rims, &c., 352
Scott, Lizzie, Sydney, N.S.W.—Public School Exhibit, 374
Scott, Brilling, London, Great Britain—Architectural Designs, 498
Scott, J. Oldrid, F.R.I.B.A., London, Great Britain—Architectural Designs, 498
Scott, David, Sydney, N.S.W.—Photographs, 508
Scott, Hannah, Sydney, N.S.W.—Pen and Ink Drawings, 526
Scott, James, M.P.—Services as Member of Tasmanian Commission, clxii
Scott, Brothers, Halifax, Great Britain—Wood and Metal Working Machinery : General Report, Machinery, 601 ; Award, 637
Scott & Mullaly, Cootamundra, N.S.W.—Flour, 854
Scott, R., Leith Mills, Tasmania—Oatmeal, 859
Scott, W. R., Sydney, N.S.W.—Services as Judge, clv ; Judge, 907
Scott, Isaac, Parramatta District, N.S.W.—Oranges, 1010
Scott, Wm., Murrumburrah, N.S.W.—Fruit, 1016, 1019, 1026
Scott, John, Port Augusta, South Australia—Wheat, 1029
Scottish Assam Tea Co., Assam (Indian Court), 819
Scottish Vulcanite Co., Edinburgh, Great Britain—Vulcanized India-rubber Goods, 280
Sculpture—General Report on the Fine Arts—French, 457 ; German, 461 ; Belgian, 464; Austrian, &c., 466
Sculpture and Painting—Group of Classes, 400-409 ; Awards, 472-484
Searle, Louisa, Wollongong, N.S.W.—Public School Exhibit, 385
Searle, Alice, Wollongong, N.S.W.—Public School Exhibit, 385
Seaforth Estate, Nilagiri Hills, India—Tea, 819
Searle & Sons, Sydney, N.S.W.—Bouquets, 1014, 1016, 1017, 1020
Seben, Henri Van, Brussels, Belgium—Landscape, General Report on the Fine Arts, 465
Seccombe, E., Ulladulla, N.S.W.—Seaweed Pictures, 526
Secrétaire Général du Ministère de l'Agriculture et du Commerce—Services as Member of Committee at Paris, cxliv
Secretary's (Mr. Augustus Morris's) Report.—Organization and Management of the Exhibition, cxi; System of classification, cxiv ; Reception of exhibits, cxiv; Admissions, with tabulated returns, cxv ; Allotment of space to Countries and Colonies, or installation, cxviii ; Display of Art exhibits, cxix ; Machinery Department, cxx ; Agricultural Hall and Live Stock Buildings, cxxi; Restaurants, cxxi ; Extent of space occupied by all buildings, cxxii ; Exhibits of the N.S.W. Department of Mines, cxxii ; The Timbers of the Colony, shown by the Department of Mines, cxxii ; Awards, cxxiii, *et seq.* ; Awards nomenclature, cxxiv ; Descriptions of designs of medal and diploma, cxxv, cxxvi ; Monetary cost of Exhibition, with figured Statement, cxxvii, cxxviii ; Editing the Official Record, cxxix ; Public Banquet to the Foreign and Colonial Commissioners in the Town Hall, Sydney, 12th February, 1880, cxxxii ; Public Banquet to the Executive Commissioner, Sir Patrick Jennings, 20th April, 1880, cxxxii ; Luncheon to Sir Hercules Robinson, First President Sydney International Exhibition Commission, cxxxiii ; Work of the Staff of the Commission, cxxxiii, cxxxiv.
Seddon, J. P., F.R.I. B.A.—Water-colour Painting, 480 ; Architectural Designs, 498
See, John, M.P., Sydney, N.S.W.—Services as Judge, clv ; Judge, 345, 808
Seeldrayers, E., Brussels, Belgium—Oil Painting, 474
Seekings & Ellery, Gloucester, Great Gritain—General Report of Machinery, 554, 560 ; Award—Engine, 666
Seimi Kioku, Kioto, Japan—Cloisonné-ware, 503
Seichiro Hayashi, Tokio, Japan—Tissue-paper, 309
Seidel & Naumann, Dresden, Germany—Sewing-machines, 648
Selangor, Sultan of, Straits Settlements—Jewellery, 288
Sellheim, P. F., Maytown, Queensland—Tin Ores, General Report, 73 ; Award, 143

Sell, Carlo, Pirano, Illyria, Austria—Soap, 177
Self, W. G., Sydney, N.S.W.—Chemicals, 188
Selfe, Norman, C. E., Sydney, N.S.W.—Services as Judge, clv; Judge, 221, 656, 678; General Report on Machinery by, 535, *et seq.*; Exhibits—Models of Torpedo Boats, 686
Selig, Junr., & Co., M., Berlin, Germany—Brushes, Tube Expanders, &c., 633
Seligmann & Co., J. A., Berlin, Germany—Needlework, 274
Seligsohn, Ehrmann, & Co., Berlin, Germany—Collars and Cuffs, 274
Seligson & Sommerfeld, London, Great Britain—Photo-Albums, 280
Sells, Mrs., Sydney, N.S.W.—Silk Counterpane, 526
Sellers & Co., Wm., Philadelphia, Pennsylvania, U.S.—Machinery, General Report on Machinery, 588, 589, 625, 627; Awards, 639, 677
Sentis, Consul-General—Services as Member of Committee at Paris, cxliv
Sénamaud et Cie, Bordeaux, France—Food-cutting and Mixing Machines, 983
Seppelt, B., Seppeltsfield, South Australia—Wines, 899
Serpentines, New Caledonian, General Report, 35
Sericulture in New South Wales—Progress and Prospects of, 170
Serrure, E., St. Nicholas-Waes, Belgium—Works on Architecture, 368
Services, Diplomas, Medals—Complimentary and for
Sessions & Sons, J., Gloucester, Great Britain—Slate Baths, Mantelpieces, 221
Seuffert, Anton, Auckland, N.Z.—Chess Table, 227
Sevres Vases in the French Court, Art Gallery, Referred to in the General Report on the Fine Arts, 461. (*Vide* also Executive Commissioner's Report)
Seymour, J. H., Sandhurst, Victoria—Safety Cage and Mining Appliances, 163
Seymour, Scott, & Brother, T., Philadelphia, U.S.—Papoleum Floor Cloth, &c., 257
Seymour, Walter E., Richmond, Victoria—Patent Hose-coupling, 672
Shadler, Adolph, Sydney, N.S.W.—Bread, 1026
Shag Point Coal Co. (Limited), Dunedin, Otago, New Zealand—Coal, General Report, 106
Shallard & Co., T. F., Melbourne, Victoria—Washing-machine, 231
Shand, Mason, & Co., London, Great Britain—Fire Engine, 666
Shanks & Sons, Alexander, London and Arbroath, Great Britain—Engines, &c., General Report on Machinery, 536, 537, 540, 541, 621; Awards, 666
Sharp, R., Sydney, N.S.W.—Harness, 356
Sharp, Edward, Gresford, N.S.W.—Pen and Ink Sketch, 526
Sharp, Fredk L., Sydney, N.S.W.—Public School Exhibit, 382
Sharp, Henry, Adelong, N.S.W.—Microscopic Subjects, &c., 399
Sharpe & Co., Ballina, N.S.W.—Arrowroot, 854
Sharman, Mrs., Sydney, N.S.W.—Imitation Parian Marble, 526
Shaw, Harold, Balmain, near Sydney, N.S.W.—Public School Exhibit, 372
Shaw & Son, Frederick, Huddersfield, Great Britain—Wire Cards, for carding machines, 249
Shaw, John, Wallerawang, N.S.W.—Services as Judge, clv; Judge, 929
Shaw, Jonathan, Melbourne, Victoria—Service as Judge, clv; Judge, 951
Shaw, Thomas, Melbourne, Victoria—Services as Judge, clv; Judge, 951
Shaw, Mary, Sydney, N.S.W.—Public School Exhibit, 376
Shaw & Fisher, Sheffield, Great Britain—Electro-plated Wares, &c., 221; Silver-ware, 498
Shearsby, Florence, Sydney, N.S.W.—Public School Exhibit, 376
Shearer, C. H., Launceston, Tasmania—Counterpane, &c., 531
Sheble & Fisher, Philadelphia, U.S.—Steel Rakes, Forks, &c., 343
Sheedy, Edward, Dunedin, New Zealand—Hams, 704
Sheep (Class 647)—General Agricultural Report, 699; Awards, 955, *et seq.*
Sheldon & Co., Auburn, New York, U.S.—Carriage Axles, 343
Sheldon & Co., Edward, Cosely, near Bilston, Staffordshire, Great Britain—Kitchen Utensils, 221; Hollow-ware, 336
Shenstone, Alice, Balmain, near Sydney, N.S.W.—Public School Exhibit, 372
Shepherd, P. L. C., Sydney, N.S.W.—Services as Judge, clv; Judge, 715
Sherar, George, Burwood, N.S.W.—Bag-pipes, 428
Sherbrooke, Lord—Services as member of the London Commission, cxlv
Sherlock, Wm., Budleigh, Salterton, Devon, Great Britain—Photographs of Animals, General Report on the Fine Arts, 456
Sherwin, Miss, Launceston, Tasmania—Indian Ink Sketches, 531
Sherwin, Herbert, Hobart Town, Tasmania—Wool-work, 531
Shidzu-Oka-Ken, Local Government of, Japan—Vegetable Isinglass, 711; Maize and Rice, 822

Shield, Rippon, Hobart Town, Tasmania—Freestone, General Report, 117 ; Award, 145
Shields, Fannie, Sydney, N.S.W.—Public School Exhibit, 375
Shimada Sobei, Osaka, Japan—Porcelain Ornaments, 208
Shimidzu Roku-Bei, Kioto, Japan—Porcelain-ware, 208 ; Modelling, 503
Shin-Shio-Sha, Osaka, Japan—Silk Rug, 253
Shin-Shi-Chi, Yoshida, Osaka, Japan—Knives, 338
Shippo Kuwaisha, Nagoya, Owari, Japan—Ornamental Porcelain, 208 ; Fans, &c., 283 ; Cloisonne-ware, 503
Shobei Osawa, Osaka, Japan—Iron and Copper Castings, &c., 338
Shorland, Julia, Woollahra, near Sydney, N.S.W.—Native Wild Flowers, 1026
Short, G., Sydney, N.S.W.—Book-binding with India-Rubber backs, 311
Short, T. W., Bathurst, N.S.W.—Sheep Shearing, 960
Shotts' Ironworks, Glasgow, Great Britain—Iron Manufactures, 156
Shropshire Iron Co. (Limited), Hadley, near Wellington, Great Britain—Galvanized Wire, &c., 156
Sicker Safe and Strong-Room Co. (Limited), Soho, near Birmingham, Great Britain—Iron Safes, 336
Siebe & Gorman, London, Great Britain—Refrigerating-machinery, &c., General Report on Machinery, 615 ; Award, 666, 667
Siegert & Sons, Dr. J. G. B., London, Great Britain—Bitters, 877
Siegl, senr., Karl, Mährisch-Schönberg, Austria—Linens, 234
Siemens & Halske, Berlin, Germany—Exhibits referred to, 363 ; Award, Electric Lamps, 393
Silbermann, Albert, Berlin, Germany—Gas-burners, Shade-holders, &c., 216
Silber Light Co., London, Great Britain—Lamps, &c., 221
Silicated Carbon Filter Co., London, Great Britain—Filters, 221
Siligmüller, F. A., Würzburg, Bavaria, Germany—875
Silks and Silk Fabrics—Referred to 169, *et seq.* ; Silk and Silk Fabrics and Mixtures in which Silk is the predominating material, Group of Classes 242–249, 259 *et seq.* ; Referred to, 169
Silk-culture in New South Wales—170, *et seq.*
Silver Ores, from Boorook, near Tenterfield, N.S.W.—General Report, 8
Silver Lake Co., Boston, Massachusetts, U.S.—Cotton and Worsted Cordage, 351
Silurian Fossils of New South Wales—General Report, 57
Sim & Co., J. N., Forbes, N.S.W.—Flour, 854
Sim, D., Morpeth, N.S.W.—Corn-sheller, Mowing-machine, &c., 992
Simms, W. K., M.P.—Services as Member of the South Australian Commission,
Simmons, Annie, Hinton, N.S.W.—Public School Exhibit, 378
Simmons, W. H., London, Great Britain—Engravings, 498
Simonis, Iwan, Verviers, Belgium—Cloths, 236
Simons, Mrs. E. P., Melbourne, Victoria—Artificial Flowers, 290
Simons, Frederick G., Balmain, near Sydney, N.S.W.—Public School Exhibit, 372
Simonsens, Pierre, Melbourne, Victoria—Imitation Stained Glass, 515
Simonetti, Achille, Sydney, N.S.W.—Loan Works of Art, clvii ; Services as Judge, clv ; Judge, 193, 485 ; Award to Exhibits, 428
Simpson Hall, Miller, & Co., New York City, U.S.—Silver-plated-ware, 229–514
Simpson & Co., L., London, Great Britain—Boots and Shoes, 280 (*Vide* Corrigenda)
Simpson & Son, A., Adelaide, South Australia—Iron Safes, 340
Simpson, Alice, Penrith, N.S.W.—Public School Exhibit, 380
Simpson, Amelia, Waterloo, N.S.W.—Public School Exhibit, 383
Simpson, May, Sydney, N.S.W.—Public School Exhibits, 384
Simpson, G. M., Bon Accord, Dalby, Queensland—Services as Member of Queensland Commission, clx ; Wool, 921 ; Sheep, 961
Simson, Colin W., M.P., Hay, N.S.W.—Services as Judge, clv ; Judge, 951.
Sinapius, A., Spremberg, Germany—Tweeds, 243
Singbulli & Murmah Tea Co., Darjiling, India—Tea, 820
Singer Manufacturing Co., London and Glasgow, Great Britain—Work executed by Singer's Sewing Machine, 281 ; Sewing-machines, 649
Singer, C. T., Kirchberg, Saxony, Germany—Cloths, 243
Singleton Coal Mining Co., Singleton, N.S.W.—Coal ; General Report, 102
Singleton Public School, N.S.W.—Awards to Exhibits from, 382
Skarratt, Charles C., Sydney, N.S.W.—Services as Judge, clv ; Judge, 863
Skeen & Co., W. L. H., Colombo, Ceylon—Photographs, 487
Skidmore, Elizabeth, Kogarah, N.S.W.—Public School Exhibit, 378

Skilbeck & Co., Robert, Huddersfield, Great Britain—Tweeds, 249
Skinner & Co., J., Sydney, N.S.W.—Brass Castings, 676
Skinner, B., Brisbane, Queensland—Preserved Meats and Soups, 705 ; Fruits, Jams, and Jellies, 857
Skrivan & Sohn, Johann, Schwechat and Vienna, Austria—Hats, 265
Slazenger et Fils, Manchester, Great Britain—Leggings and Gaiters, 281
Slattery, M., Spring Hill, N.S.W.—Wheat, 1026
Slate Exhibits, General Report, 117, *et seq.*
Slack & Brownlow, Sheffield, Great Britain—Filters, 221
Slee, R., Sydney, N.S.W.—Cooking Stoves, 226
Slingsby, Robert, Lincoln, Great Britain—Photographs, 498
Slouthour Oscillating Pump Co., Philadelphia, Pennsylvania, U.S.—Pumps, 671
Sloan, J. J. A., H.M.S. "Danaë"—Loan of Ethnological Exhibits, clviii
Slyney, Amelia, Sydney, N.S.W.—Public School Exhibit, 383
Smallwood, D. J., Caddai, Hawkesbury River, N.S.W.—Maize, 828
Smale, Josiah, Macclesfield, Great Britain—Services as Judge, clv ; Judge, 259, 641, 906 ; Letter of, on the Prospects of Sericulture in N.S.W., 170
Small, Thomas, Parramatta, N.S.W.—Oranges, 1010
Small, Amy, Ryde, N.S.W.—Public School Exhibit, 381
Small, Charlotte, Ryde, N.S.W.—Public School Exhibit, 381
Smart, A. F., Moree, N.S.W.—Horse, 936
Smart, J., R.S.A., Edinburgh, Great Britain—Landscape Painting, General Report on the Fine Arts,
Smee, William A. & S., London, Great Britain—Furniture, 221 ; Wall-papers, 305
Smellie & Co., Robert R., Brisbane, Queensland—Moulding Sand, General Report, 128 ; Award, 143 ; Ornamental Castings, 340
Smith & Co., T. & H., London and Edinburgh, Great Britain—Flavouring Quintessences and Medicines, 185 ; Opium Products and Alkaloids, 326 ; Milk Preparations, 327
Smith & Wellstood, Glasgow, Great Britain—Cooking Stoves, 221
Smith & Sons, Richard, Kidderminster, Great Britain—Carpets, &c., 249
Smith, John M'Garvie, Sydney, N.S.W.—Services as Judge, clv ; Judge, 263, 389, 401 ; Exhibits—Fine Brass Work for Watches, &c., 420
Smith & Co., J. T., Christchurch, N.Z.—Bookbinding, 313
Smith & Sons, Thos., Birmingham, Great Britain—Tools, &c., 336
Smith & Son, C., London, Great Britain—Maps and Globes, 371
Smith, Stephen H., Grafton, N.S.W.—Public School Exhibit, 377
Smith, Maud J. E., Sydney, N.S.W.—Public School Exhibit, 381
Smith, Christopher, Smith's Flat, N.S.W.—Public School Exhibit, 383
Smith, Annie, Sydney, N.S.W.—Public School Exhibit, 384
Smith, T. Roger, F.R.I.B.A., London, Great Britain—Architectural Designs, 498
Smith, Miss B., Sydney, N.S.W.—Crochet Work, 526
Smith, Miss E. M., Illawarra, N.S.W.—Shell, Flowers, and Sea-weed, 526
Smith, Mrs. W. J., Sydney, N.S.W.—Wool Flowers, 526
Smith, H. T., Toronto, Ontario, Canada—Gas Manufacturing Machine, 630 ; Soda Water and Bottling Machines, 657
Smith & Coventry, Salford, Great Britain—General Report on Machinery, 598 ; Tool-holders, &c., 637
Smith & Son, Wm., Sydney, N.S.W.—Tools for Tin and Galvanized Iron Working, 638
Smith Machine Co., H. B., New Jersey City, U.S.—Wood-working Machinery, 592, 639
Smith & Sons, W. Howard, Melbourne, Victoria—Model of Dredge, 688
Smith, E. T., M.P.—Services as Member of the South Australian Commission,
Smith, Hon. J., Levuka, Fiji—Collection of Shells, 709
Smith, Caleb J. L., Deloraine, Tasmania—Oats, 840
Smith, James, Nelson, N.Z.—Liqueurs, 893, 894
Smith & Son, Angaston, South Australia—Wines, 899
Smith, George H., Wahgunyah, Victoria—Wines, 905
Smith, E., Gininderra, N.S.W.—Horse, 936
Smith, Hon. John, Molong, N.S.W.—Services as Judge, clv ; Judge, 951
Smith, G. H. R., Woollahra, near Sydney, N.S.W.—Poultry and Pigeons, 971 ; Dog, 980
Smith, John, Hobart Town, Tasmania—Poultry, 974

Smith, Hon. John, M.D., L.L.D., C.M.G., M.L.C., Sydney, N.S.W.—Services as Member of Sydney International Exhibition Commission, cxlviii
Smith, R. Burdett, M.P., Sydney, N.S.W.—Services as Member of Sydney International Exhibition Commission, cxlviii ; Loan Exhibit, clviii
Smith, C. F., Illawarra, N.S.W.—Services, clvi
Smith, Hon. Cecil Clementi, C.M.G., Col. Secretary, Singapore, Straits Settlements, clxi
Smith, Alex. K., C.E., M.P.—Services as Member of the Victorian Commission, clxiii
Smith's Flat Public School, N.S.W.—Awards to Exhibits from, 383
Smithers, Ada, Sydney, N.S.W.—Public School Exhibit, 384
Smithers, Gertrude, Sydney, N.S.W.—Public School Exhibits, 384
Smyth, Warington W., F.R.S.—Services as Member of the Royal Commission in London, cxlv
Smyth & Sons, James, Peasenhall, Suffolk, Great Britain—Seed Drill, &c., 991
Snowball Copper Co., Gundagai, N.S.W.—Copper in Ingots, 158
Snowball & Co., Melbourne, Victoria—Wire-rope, 160
Snyers-Rang et Cie., Brussels, Belgium—Furniture, 213
Soane, Harry, London, Great Britain—Engraving, 498
Soaps, Exhibits of—Generally referred to, 175
Société Anonyme des Aciéries d' Angleur, Ougrée, near Liège, Belgium—Iron and Steel Manufactures, referred to, 148 ; Award, 150
Société Anonyme de la Fabrique de Fer de Charleroi, Marchienne lez Charleroi, Belgium—Iron Plates, 150
Société Anonyme de la Fabrique de Fer D'Ougrée, Ougrée, near Liège, Belgium—Manufactured Iron, Referred to, 148 ; Award, 150
Société Anonyme des Fonderies, Laminoirs et Trefileries de Dampremy, Drampremy, near Liège, Belgium—Manufactured Iron, 150
Société Anonyme des Hauts Fourneaux d'Athus, Athus, Belgium—Pig-iron, 151
Société Anonyme des Hauts Fourneaux de Monceau sur Sambre, Monceau sur Sambre, Liège, Belgium—Manufactured Iron, 151
Société Anonyme de Marcinelle et Couillet, Couillet, Belgium—Iron and Rolled Iron Rails, 151 ; Locomotive and Tender, 627, 674
Société Anonyme Metallurgique d'Espérance Longdoz, Liège, Belgium—Iron and Steel, 151
Société Anonyme pour le traitement des Minerais de Nickel, Paris, France—Nickel, 153
Société Anonyme de Fabrication de Produits Chimiques, Paris, France—Chemical Products, 180
Société Anonyme des Verreries Nationale de Jumet, Jumet, Charleroi, Belgium—Coloured Glass, 197
Société Anonyme des Fonderies d'Andenne, Andenne sur Meuse, Belgium—Cooking Utensils, 213
Société Anonyme des Corderies et Clouteries Du Châtelet, Belgium—Nails, &c., 332
Société Anonyme des Clouteries Mécaniques De Fontaine L'Evêque, Belgium—Nails, &c., 332
Société Anonyme des Forges, Usines, et Fonderies, Gilly, Belgium—Steam Hammer, 633
Société Anonyme des Usines de la Louvière, Belgium—Rail Fixtures, Rivets, &c., 674
Société Anonyme des Tanneries et Maroquineries, Saventhem, near Brussels, Belgium—Tanned and Japanned Skins, 708
Société Cockerill, Seraing, near Liège, Belgium—Special Medal, clxiv ; Castings, Rolled Iron and Steel Rails, referred to, 147, 148 ; Award, 151 ; Trophy of Manufactured Iron, 674 ; Models of Mail Steamers, 684
Societe Commerciale et Industrielle d'Anvers, Belgium—Services, cxlii
Société des Hauts, Fourneaux d' Ougrée, Belgium—Exhibit referred to, 148
Société Des Forges et Laminoirs De St. Fiacre (Sohier et Cie., Alex), Monceau sur Sambre, Belgium—Manufactured Iron, 152
Société Des Forges, Laminoirs, et Fonderies de Jemappes, Jemappes, near Liège, Belgium—Iron and Steel, 152
Società Enologica, Verona, Italy—Wines, 878
Société Industrielle du Grand Duché de Luxembourg, St. Josse ten Noode lez Bruxelles, Belgium—Grindstones, General Report, 128 ; Award, 132
Society for the Encouragement of Arts, Manufactures and Commerce, London, Great Britain—Services, cxlvi ; Special Medal, clxv
Söhnlein and Co., Schierstein-Rheingauer-Schaumweinfabrik, Germany—Wine, 875

Solvay & Cie., Couillet, Belgium—Carbonate of Potash, 178
Somerville, James, Kiama, N.S.W.—Services, clvi
Somerville, Annie, Sydney, N.S.W.—Public School Exhibit, 374
Somerville, H. J., Sydney, N.S.W.—Public School Exhibit, 374
Sommerfeld, M. & O., Cottbus, Germany—Woollen Goods, 243
Soom Tea Co., Darjiling, India—Tea, 819
Soper, William, Reading, Great Britain—Rifles, 319
Soper, R. W., Sydney, N.S.W.—Dog, 980
Sorby, T. C., London, Great Britain—Architectural Designs, 498
Sorer, E. M., Brünn, Moravia, Austria—Tweeds, 234
South Australia, The Colony of—For Pre-eminence in the Production of Wheat, 837
South Australian United Vineyards Association, Adelaide, South Australia—Wines, 900
South Australian Copper Ores—General Report, 7
South Australian Commission, Adelaide, South Australia—Auriferous Quartz, Copper and Iron Ores, General Report, 15; Awards—Copper Ores, 144; Dolomite and Marble, 144; Bookbinding, 313; Books Printed for the Government of the Colony, 388; Photographs of South Australian Scenery, 512; Furs and Skins, 714; Timber, General Report on Arboriculture, 761; Awards, 806; Cotton, 922; Plants, 1020; Fruits and Wheat in sheaf, 1029
South Australian Government, Adelaide, South Australia—Mineralogical Collection, General Report, 79; Award, 144; Ethnological Collection
South Kensington Museum, London, Great Britain—Paintings, Designs, Drawings, &c., Special Medal, clxv; Award to exhibit, 498
South, Sarah Ann, Ballarat, Victoria—Fancy Leather Work, 532
Southern Tasmanian Commission, Hobart Town, Tasmania—Mineralogical Collection, 145
Soudry, Alphonse—Services as Member of French Commission at Sydney, cxliii
Soubre, Charles, Brussels, Belgium—Oil Painting, 474
Soyer, Paul, Paris, France—Enamelling, 491
Spackman, Elizabeth, Gullen Flat, N.S.W.—Public School Exhibit, 378
Spackman, Harriet, Gullen Flat, N.S.W.—Public School Exhibit, 378
Sparagnapane & Co., G., London, Great Britain—Wedding Cake Ornaments, 850
Spark, Henry L., Paddington, N.S.W.—Public School Exhibit, 380
Sparke, William E., Sydney, N.S.W.—Services as Judge, clv: Judge, 863
Spencer, Dr., Bathurst, N.S.W.—Alluvial Gold, General Report, 13
Spencer, F., Hobart Town, Tasmania—Anthracite Coal, General Report, 109; Award, 140
Spencer & Co., Walter, Rotherham, Great Britain—Cast Steel Files, &c., 156; 337
Spencer, J., Sydney, N.S.W.—Artificial Teeth, &c., 328
Spencer, John (Vulcan Tube Works), West Bromwich, Great Britain—Tubes & Fittings, 667
Spencer, Oliver M., Melbourne, Victoria—President, U.S. Commission at Sydney, clxii
Spence, D. C. A., Dunedin, Otago, N.Z.—Ferns, 1009
Spearin, Eliza, Wilton, N.S.W.—Public School Exhibit, 384
Speer, C. Broughton Village, N.S.W —Public School Exhibit, 373
Spedding, W., Mount Keira, N.S.W.—Mining Tools, 638
Spear & Jackson, Sheffield, Great Britain—Agricultural Implements, 991
Speight & Co., James, Dunedin, N.Z.—Ale, 894
Spirituous Liquors, 862, *et seq.*
Spitzer & Söhne, F., Vienna, Austria—Wines, 867, 868
Spitz, S., Brünn, Moravia, Austria—Tweeds, 234
Spicer Brothers, London, Great Britain—Paper Manufactures, 305, 306,
Spreat, W. W. J., Wellington, N.Z.—Map of Otago, 435
Spring, Elizabeth, Parramatta, N.S.W—Crochet-work, 526
Spring Safety Valves, General Report on Machinery, 608
Spratt's Patent, London, Great Britain—Dog-cakes aud Poultry-meal, 818
Springfield Estate, Nilagiri Hills, India—Tea, 819
Spring Hill Farmers' Union, Spring Hill, N.S.W.—Wheat, &c., 1026
Squintani & Co., Carlo G., London, Great Britain—Printing Presses, General Report on
Stadelmann & Co., Jean, Nürnberg, Bavaria, Germany—Gas-burners, 216
Staes Sproelants, Termonde, Belgium—Oils, 846
Staff of the Commission, Sydney International Exhibition,—Services, cxlix (*Vide* also Secretary's Report)
Staiger, K. T., F.L.S., Brisbane, Queensland—Essential Oils, 190; Fire-bricks, 210

Stanes & Co., (Indian Court)—Teas, 820
Stanford, Edward, London, Great Britain—Maps, 371
Stanley, Deane, Manchester, Great Britain—Towels, &c., 249
Stanley William, Sydney, N.S.W.—Services, clix
Stanley Rule and Level Co., New Britain, Connecticut, U.S.—Rules and Levels, 400
Stanton & Son, Stroud, Gloucestershire, Great Britain—Cloths, &c., 249
Stansell, John B., Christchurch, N.Z.—Iron Ore, General Report, 26; Marble, General Report, 112; Clays, &c., General Report, 127; Award for Glass making sand, 142
Stapleton, Mary Ann, Cooyal, N.S.W.—Public School Exhibit, 374
Stärke-Zuckerfabrik Actiengesellschaft, Vormals C.A., Kohlmann & Co., Frankfurt a/O, Germany—Starch-sugar, &c., 849
Starkey, Brothers, Huddersfield, Great Britain—Broadcloths, &c., 249
Starkey, John, Sydney, N.S.W.—Services as Honorary Member of Committee, cxlviii; Cordials, Ærated Waters, &c., 889
State of Perak, Straits Settlements—Tin Specimens, General Report, 19
Machinery, 613; Award, 653
Stationary Engines, General Report on Machinery, 536, *et seq.*
Star Brush Co. (Limited), London, Great Britain—Brushes, 348
Starkenborgh, J. N. T. Van, Düsseldorf, Germany—Landscape, General Report on the Fine Arts, 463; Award, 477
Starkey, Miss B., Sydney, N.S.W.—Wool-work Picture, 526
Steam Pumps and Fire Engines, General Report on Machinery, 570, *et seq.*
Steel, Louisa, Lambton, N.S.W.—Public School Exhibit, 378
Steel & Co., Octavius, Calcutta, India—Teas, 821
Steel Company of Scotland (Limited), Glasgow, Great Britain—Steel, 157
Steele, Christina, Sydney, N.S.W.—Public School Exhibit, 375
Steele, Jessie, Sydney, N.S.W.—Public School Exhibit, 376
Steffeck, C., Berlin, Germany—Oil Painting, 477
Steffeck, Professor C., Services as Member of the Imperial German Commission at Berlin, cxliv
Stehr, Annie, Sydney, N.S.W—Public School Exhibit, 374
Steiner, Julius, Brünn, Moravia, Austria—Beet-Sugar, 846
Steiner, Henry, Adelaide, South Australia—Silver-ware, &c., 228; Engravings on Metal, 512
Steinbrecher, Anton & Fritz, Trubau, Moravia, Austria—Cottons, 234
Steinway & Sons, New York City, U.S.—Pianos, 429
Stengel, William, Leipsic, Germany—Spirits, 875
Stephen, Sir Alfred, C.B., K.C.M.G., Lieutenant-Governor of N.S.W.—Services as Vice President of Sydney International Exhibition Commission, cxlvii
Stephen & Co., G. H., Sydney, N.S.W.—Wines, 889
Stephen, Ernest F., Sydney, N.S.W.—Services as Judge, clv; Judge, 975; Exhibit, Dogs, 980
Stephens, W. J., M.A., Sydney, N.S.W.—Services as Honorary Member of Committee of Commissioners, cxlix; referred to as Member of Ethnological Sub-Committee, 366; Services as Judge, clv; Judge. 367, 471
Stephens, Henry, Sydney, N.S.W.—Services as Judge, clv; Judge, 707
Stephens, James, London and Liversedge, Yorkshire, Great Britain—Carpets, 250
Stephens, Thomas, F.G.S., Hobart Town, Tasmania—Geological Collection, 84, *et seq.*; Award, 145; Timbers, General Report on Arboriculture, 764; Award, 806
Stephens, H. C., London, Great Britain—Writing Inks, &c., 186; Steel Pens, and Sealing Wax, 306
Stephenson & Co,, Mark, Sydney, N.S.W.—Steering-wheel, Oars, 686
Stern's Möbelfabrik, Stuttgart, Württemberg, Germany—Furniture, 216
Stettiner Portland Cement-Fabrik, Stettin, Pomerania, Germany—Cement; General Report, 122; Award, 133
Stettiner Chamotte-Fabrik-Actiengesellschaft, Stettin, Germany—Tiles, Drain Pipes, &c., 199
Stevenson & Sons, L., Melbourne, Victoria—Hats, 290
Stevenson, John, M.P.—Services as Member of Queensland Commission, clx
Stevenson, D. W., Edinburgh, Great Britain—Sculpture, 480
Stevenson, Miss J. M., Newtown, N.S.W.—Crochet-work, 527
Stevenson, Mawhood, & Co., Attercliffe, Sheffield, Great Britain—Files, Edge-tools, &c., 337

Stevenson & Elliott, Melbourne, Victoria—Landau, 358
Stevens, J., Sydney, N.S.W.—Corking and Bottling Machine, 670
Stewart, Thomas, junior, Redfern, N.S.W.—Horse, 936
Stewart, Peter, Wellington, N.Z.—Ferns, 1009
Stewart, Taylor, & Co., Mudgee, N.S.W.—Coal, General Report, 100; Award, 141
Stewart & Co., Wellington, N.Z.—Door of N.Z. Woods, 227
Stewart & Co., S. R., Aberdeen, Great Britain—Horn and Tortoise-shell Goods, 281
Stewart, Lena, Balmain, near Sydney, N.S.W.—Public School Exhibit, 372
Stewart, F., Newtown, N.S.W.—Public School Exhibit, 379
Stewart, Harriet, Hinton, N.S.W.—Public School Exhibit, 378
Stewart, W., Sydney, N.S.W.—Cedar, General Report on Arboriculture, 757; Award, 805
Stieler & Sohn, C. F.—Nürnberg, Germany—Gold and Silver Wire, and Wire-cloth, 243
Stieme, William, Fairfield, near Liverpool, N.S.W.—Special Medal, Horticultural Section, clxvi; Vegetables, 1007; Fruit, 1020, 1026
Stieme, G., Guildford, N.S.W.—Public School Exhibit, 377
Stiller & Co., Moreton Bay, Queensland—Dugong Oil, 190; Stuffed Dugong, 387
Stillwell & Son, Edward, London, Great Britain—Laces and Embroideries, 281
Stiassny, Franz, & Max, Vienna, Austria—Gloves, 266
Stinson, Barbara, Guildford, N.S.W.—Public School Exhibit, 377
Stinson Caroline, Guildford, N.S.W.—Public School Exhibit, 377
Stinson Eliza, Guildford, N.S.W.—Public School Exhibit, 377
Stinson, Emma, Guildford, N.S.W.—Public School Exhibit, 377
Stinson, Grace, Guildford, N.S.W.—Public School Exhibit, 377
Stinson, Sarah, Guildford, N.S.W.—Public School Exhibit, 377
Stirling, Rear Admiral—Services as Member of the London Committee, cxlvi
Stokes & Martin, Melbourne, Victoria—Struck Metal Goods, 231; Award, 484
Storer & Sons, David, London, Liverpool, and Glasgow, Great Britain—Paints, Oils, &c., 186; Decorations for Houses, 498
Stoddart & Co., J. M., Philadelphia, U.S.—Bookbinding, 314. (*Vide* Corrigenda)
Stone-working Machinery, General Report on Machinery, 608
Stone, J., Deptford, Great Britain—Sanitary-ware, 221; Taps for gas and water-pipes, 637; Pumps, &c., 604, 667; Steering gear, 685
Stopps, Arthur James, Sydney, N.S.W.—Services as Judge, clv; Judge, 430
Stott, James W., Alma, South Australia—Reaper and Stripper, 993, 994, 1000
Stöwer, Bernhard, Stettin-Grünhof, Germany—Sewing Machines, 648
Stow Flexible Shaft Co., Philadelphia, Pennsylvania, U.S.—Flexible Shafting, 671
Strachan & Co., Stroud, Gloucestershire, Great Britain—Cloths, &c., 250
Strachan, Thomas, Axedale, Victoria—Dried Fruits, 861
Straits Settlements—Tin Ores, General Report, 7; Mineral Specimens from Sarawak, &c., General Report, 17; Mineral Exhibits of Government of State of Perak, General Report, 19
Straits Settlements Government—Loan of Ethnological collection, clxi; Exhibit Prison Cane-work, 359
Straits Settlements, List of Medals and Diplomas Complimentary and for Services, clxi
Strakosch & Söhne, S., Brünn, Moravia, Austria—Tweeds, 234
Strakosch, Bernhard, Vienna, Austria—Shoes and Slippers, 266
Stramitzer, J., Vienna, Austria—Lace, &c., 266
Strang, David, Invercargill, N.Z.—Coffee and Pepper, 834
Strathmann & Joachim, Leipzic, Germany—Concertinas, 427
Strecker, C. M., Munich, Germany—Landscape, General Report on the Fine Arts, 463
Stringer & Co., Melbourne, Victoria—Games, 844
Strong, James, Rocky Waterholes, Queensland—Maize, 836
Struth, John, Sydney, N.S.W.—Service as Judge, clv; Judge, 146, 632
Stuart, Alexander—Services as Member of the London Committee, cxlvi
Stuart J. & W., Musselburgh, Great Britain—Twines and Nets, 250
Stuart, F., Sydney, N.S.W.—Dog, 980
Stuart, C., Sydney, N.S.W.—Loan Works of Art, clvii
Stud Cattle, Fat Cattle, and Fat Sheep—Classes 646-647, 937, *et seq.*
Studebaker, Brothers, South Bend, Indiana, U.S.—Farm Waggon, 358
Sturdy, Alice, Tenterfield, N.S.W.—Public School Exhibit, 383

Sturgess, Henry, Rockhampton, Queensland—Timbers, General Report on Arboriculture, 757 ; Award, 805
Sturzkopf F., Weimar, Germany—Genre Picture, General Report on the Fine Arts, 463
Styles, T., Yass. N.S.W.—Lime, General Report, 124
St. Barnabas Church of England Certified Denominational School, Sydney, N.S.W.—Awards to Exhibits from, 381
St. Heaps, C., Sydney, N.S.W.—Violins, &c., 428
St. James's Church of England Certified Denominational School, Sydney, N.S.W.—Awards to Exhibits from, 382
St. John, S. S., Raki-Raki, Viti Levu, Fiji—Peanuts, 812
St. Julian, Blanche, Sydney, N.S.W.—Public School Exhibit, 384
St. Julian, Eleanor, Sydney, N.S.W.—Public School Exhibit, 384
St. Leonards Public School, near Sydney, N.S.W.—Awards to Exhibits from, 382
St. Louis Stamping Co., St. Louis, U.S.—Granite Iron Ware, 229
St. Mary's Roman Catholic Certified Denominational School, Sydney, N.S.W—Awards to Exhibits from, 382
St. Pancras Iron Work Co., London, Great Britain—Stable and Fittings, 1000
St. Paul's Church of England Certified Denominational School, Sydney, N.S.W.—Awards to Exhibits from, 382
St. Peter's Church of England Certified Denominational School, Sydney, N.S.W.—Awards to Exhibits from, 382
St. Phillips' Church of England Certified Denominational School, Sydney, N.S.W.—Awards to Exhibits from, 382
Sullivan, J., Sydney, N.S.W.—Umbrellas, 286
Sullivan, Thos., Sydney, N.S.W.—Services as Judge, clv ; Judge, 939
Sullivan, T. S. and H. E., Petersham, near Sydney, N.S.W.—Poultry and Pigeons, 971, 972, 973
Sulman, J., F.R.I.B.A., London, Great Britain—Architectural Designs, 498
Sulphur, Exhibited by White Island Sulphur Co., Auckland, N.Z.—General Report, 29
Sultan of Selangor, Straits Settlements—Jewellery, &c., 288
Sunderland, Rev. J. P., Sydney, N.S.W., Agent, London Missionary Society—Services in connection with loan of Ethnological Exhibits, clviii
Superintendent of Central Prison, Agra, India—Carpets, 252
Suppes, F., Ghent, Belgium—Cottons and Linens, 236
Surman and Co., Invercargill, N.Z.—Malt, 834
Surry Hills Roman Catholic Certified Denominational School, Sydney, N.S.W.—Awards to Exhibits from, 383
Survey Department of New South Wales, Sydney, N.S.W.—Maps and Plans, Exhibit referred to, 364 ; Award, 433
Surveyor-General of New Zealand, Wellington, N.Z.—Lithographs, 435
Suter, Hartmann & Co., London, Great Britain—Steamship Model, &c., 685
Sutton, J. W., Brisbane, Queensland—Mineralogical Collection, General Report, 74 ; Award, 143
Sutton, Peter, Sydney, N.S.W.—Services as Judge, clv ; Judge, 929
Suttor, Mrs. C. C. A., Bathurst, N.S.W.—Gold in quartz, General Report, 13
Suttor, Hon. Wm. H., M.L.C., Sydney, N.S.W.—Services as Member Sydney International Exhibition Commission, cxlviii
Suttor, Hon. F. B., M.P., Minister of Justice, N.S.W.—cxlix
Suttor, F. B. & W. S., Bathurst, N.S.W.—Horses, 936, 937
Suttor, F. W., Campbelltown, N.S.W.—Horses, 937
Suttor, George & Herbert, Bathurst, N.S.W.—Horses, 937
Swain, Annie, Armidale, N.S.W.—Public School Exhibit, 372
Swallow & Ariell, Melbourne, Victoria—Biscuits, &c., 861
Swanston, Charles Lambert, Branxton, N.S.W.—Loan of Ethnological Exhibits, clviii
Sweeney, S. & F., Parramatta, N.S.W.—Cab, 356
Sweet, Samuel W., Adelaide, S.A.—Photographs, 512
Swidersky, Ph.D., Leipsic, Germany—Printing Machines, 651
Swift, Mrs. M., Sydney, N.S.W.—Knitting, 527
Swiss Collective Exhibit of Musical Boxes—428
Swiss Collective Exhibit of Wood Carvings—483
Swiss Confederation, His Excellency the President of the—clxi
Sydney Broom Manufacturing Co., Sydney, N.S.W.—Millet Brooms, 349
Sydney International Exhibition Commission, cxxxv; Committees of the Commission and Members of, cxxxv, *et seq.;* Official Staff of the Commission, cxlix

Sydney Meat Preserving Co., Sydney, N.S.W.—Preserved Meats, 703
Sydney, Melbourne, & Wallerawang Coal Co., Sydney, N.S.W.—Lime, General Report, 125
"Sydney Morning Herald," Proprietors of, Sydney, N.S.W.—Exhibits of Newspaper Printing, &c., referred to, 172, 293, and in Executive Commissioner's Report, lxxxii; Awards—Newspaper Printing, 311; Wood Engraving, 505
Sydney Soap Co., Sydney, N.S.W.—Candles and Soap, 189
Syed Inche Mahomed, Singapore, Straits Settlements—Jewellery, &c., 288
Sykes & Sons, John, Huddersfield, Great Britain—Wool working Machinery, General Report in Machinery, 609-610; Awards, 642-643; Counter Shafting, 667
Sykes, Macvay, & Co., Castleford, Yorkshire, Great Britain—Glass Bottles, 205
Syndicat Liegois, Liège, Belgium—Exhibits of Manufactured Iron, referred to 148; Award, 152
Synopsis of Classification of Exhibits at Sydney International Exhibition—clxviii
Szyrbalski, Felician, Moravica-Lyski, Austria—Rye and Barley, 810

T

Tachibana Kisaburo, Osaka, Japan—Indigo, 187
Tainsy, T., Brussels, Belgium—Marbles and Serpentines, General Report, 110; Award, 132; Marble Mantelpiece, 213
Tait, John, Sydney, N.S.W.—Services as Judge, clv; Judge, 929
Tait, James, Hokitika, N.Z.—Ferns and Mosses, 1009
Takahashi Dohachi, Kioto, Japan—Porcelain-ware, 208; Paintings on Porcelain, 481
Takeya Seizo, Tokio, Japan—Tobacco Pouches, &c., 284; Imitation Leather, 309
Talisker Mine, Cape Jervis, South Australia—Lead Ores from, 79
Tallerman, S. D. & L. A., London, Great Britain—Boots and Shoes, 28
Tall, Geo., Sydney, N.S.W.—Locks, &c., 339
Tame, Elizabeth, Guilford, N.S.W.—Public School Exhibit, 377
Tame, Martha, Guildford, N.S.W.—Public School Exhibit, 377
Tamworth Exhibition Committee, Tamworth, N.S.W.—Wheat and Maize, 828
Tan Hoon Guan, Straits Settlements—Tapioca, 858
Tan Tek Guan, Malacca, Straits Settlements—Timbers, General Report on Arboriculture, 762; Yams, &c., 838
Tancred, Clement W., Canterbury, N.Z.—Wool, 917
Tangre, Paris, France—Wire Gauze and Netting, 239
Tangye Brothers, Birmingham, Great Britain—Engines, Cranes, &c., General Report on Machinery, 538, 547, 550, 572; Award Special, 637, 667, 668, 676
Tanite Manufacturing Co., Stroudsburg, Pennsylvania, U.S.—Emery Grinders, 639
Tann, John, London, Great Britain—Iron Safes, 337
Tannert, O. E., Adelaide, South Australia—Basket Ware, 349
Tapestry Carpets, &c. (Class 239); Exhibits referred to, 169
Tapling & Co., Thos., London, Great Britain—Tapestry, 250
Taranaki Iron Co., Taranaki, N.Z.—Iron, 158
Tarring & Wilkinson, London, Great Britain—Architectural Designs, 498
Tarver, E. J., F.R.I.B.A., London, Great Britain—Architectural Designs, 498
Taskaska Taheiji, Mino, Japan—Rice, 822
Tasmania, the Colony of—For pre-eminence in the production of Barley, 840
Tasmanian Commissioners for Exhibition—Ethnological Collection, clxii; Mineralogical Collection, General Report, 80, *et seq.*; Timbers, General Report on Arboriculture, 762
Tasmanian Aborigines, referred to, 365
Tasmanian Commission (Southern)—Mineralogical Collection, 145
Tasmanian Commission (Northern)—Alluvial Gold, 145; Colonial Woods, 806
Tasmanian List of Diplomas and Medals for Services—clxi
Taste, Jean, Verviers, Belgium—Tweeds, 236
Tasson & Washer, Brussels, Belgium—Inlaid Flooring, 213
Tasson, Joseph, Brussels, Belgium—Decorative Designs for Dwellings, 487
Taulez-Bottelier, Bruges, Belgium—Flax, 909
Taussig, Gottlieb, Vienna, Austria—Soaps and Perfumery, 177
Tayler, Josiah, Sydney, N.S.W.—Services as Judge, clv; Judge, 161, 367, 430, 485
Tayler, Mrs. J. M., Queenstown, N.Z.—Fruit Wine, 894
Tayler, Lloyd, F.R.I.B.A., Melbourne, Victoria—Loan Work of Art, clxiii
Tayler & Co., W., Sydney, N.S.W.—Sarsaparilla, &c., 889

Taylor, Charles, Sydney, N.S.W.—Public School Exhibit, 376
Taylor D., Illawarra District, N.S.W.—Maize, 828
Taylor, Emily, Sydney, N.S.W.—Public School Exhibit, 384
Taylor, Florence, Parramatta, N.S.W.—Public School Exhibit, 380
Taylor, James, Sandhurst, Victoria—Granite, 113; award, 145; polished Marble Fountain, 515
Taylor, Mrs. James, Sandhurst, Victoria—Wax Flowers, 532
Taylor, Sarah, Sydney, N.S.W.—Berlin Woolwork, 527
Taylor, James, St. Leonards, near Sydney, N.S.W.—Horses, 937.
Taylor, D., St. Johnston, Tasmania—Sheep, 962
Taylor, Saml., Sydney, N.S.W.—Brushware, &c., 349
Taylor & Farley Organ Co., Worcester, Massachusetts—Organs, 429
Taylor & Sons, Robert, Marsden, Yorkshire, Great Britain—Power Loom, General Report on Machinery, 610; Award, 644
Taylor Brothers, Sheffield, Yorkshire, Great Britain—Saws, 637
Taylor & Co., Huddersfield, Great Britain—Tweeds, 250
Taylor & Littlewood, Huddersfield, Great Britain—Tweeds, 250
Taylor Brothers, Sheffield, Great Britain—Saws, Edge Tools, &c., 337
Tazayemon Okamoto, Mino, Japan—Bronze Castings, 338
Teale, Lavinia, Windsor, N.S.W.—Public School Exhibit, 385
Teas—Exhibits of, described in Report, 809; Awards for do., 811 *et seq.*
Tecker-Gayen, Jan, Altona, Germany—Schnapps and Geneva, 875
Tecker-Gayen, Jan, London, Great Britain—Schnapps and Geneva, 877
Teichmann, M., Leobschütz, Silesia, Germany—Shawls, &c., 243
Telegraph Construction and Maintenance Co. (Limited), London, Great Britain—Submarine Telegraph Cables, 397
Telephonic Communication—Exhibits illustrating, referred to, 362
Telfer, Mary, Balmain, near Sydney, N.S.W.—Public School Exhibit, 372
Tenner, A. B., Eisfeld, Sachsen-Meiningen, Germany—Window-blinds, &c., 217
Tenterfield Public School, N.S.W.—Awards to Exhibits from, 383
Terrier, Philibert, Lochinvar, N.S.W.—Wines, 889
Terry, Edward, Ryde, N.S.W.—Horses, 937
Terry, Ethel Maud, Ryde, N.S.W.—Horse, 937
Terry, Samuel H., M.P.—Services as Member of the Sydney International Exhibition Commission, cxlviii
Terry, W. D., Belair, South Australia—Marmalade, 858
Tervie, A., Albury, N.S.W.—Building Stone, 114
Tetlow & Brother, H., Philadelphia, U.S.—Perfumery, &c., 191
Tetzer, Reinhold, Berlin, Germany—Inks, 182
Textile Substances of Vegetable or Mineral Origin—Classes 639–644, 906 *et seq.*
Thackeray, Miss, London, Great Britain—Oil Painting, General Report on the Fine Arts, 449
Thames Produce Co. (Limited), Thames, N.Z.—Kauri Resin, General Report on Arboriculture, 796; Award 805
Thevenot, Dijon (Côte-d'Or), France—Medicinal Capsules, 323
Thia Shola Estate, Nilagiri Hills, India—Tea, 819
Thie, Wilhelm, Vienna, Austria—Mouth Harmonicas, 423
Thiemann, A., Kronthal, Germany—Mineral Waters, 133
Thiel, Albert, Düsseldorf, Germany—Blankets, 243
Thiele & Steinert, Berlin and Freiberg, Germany—Gold and Silver Wires, Lace, &c., 243
Thiriart et Cie, C., Liège, Belgium—Fire Pump, &c., 656
Thirion, C. A., Paris, France—Statistics of French Patents, 369
Thirion, Eugène Romain, Paris, France—Special Medal, clxv; Oil Painting, 476
Thirkell, Geo. F., Darlington Park, Tasmania—840
Thomas, John, Upper Macleay River, N.S.W.—Antimony Ore, General Report, 17; Award, 140
Thompson & Priest, Mintaro, South Australia—Flagstones, General Report, 119; Award, 144
Thompson, W. S., Avondale, N.S.W.—Limestone, General Report, 124
Thompson & Fürstenau, Berlin, Germany—Furniture, 217
Thompson, A., St. Leonards, near Sydney, N.S.W.—Public School Exhibit, 382
Thompson, Herbert S., Sydney, N.S.W.—Architectural Designs, 509
Thompson, Mrs., Napier, N.Z.—Sea-weeds, 1009

Thompson, Wm., Gulgong, N.S.W.—Bread, 1027
Thompson, T., Sydney, N.S.W.—Services as Judge, clv; Judge, 963
Thompson, J. S. McD.—Services as Member of Commission at Wellington, N.Z., clix
Thomson & Co., W. S., London, Great Britain—Corsets, &c., 281
Thomson, Sterne, & Co. (Limited), Glasgow and London, Great Britain—Emery Wheels and Machines, 637
Thomson & Co., A. G., Glasgow, Great Britain—Whisky, 877
Thomson & Co., D. J., Leith, Great Britain—Cordials, &c., 877
Thomson, Thos., Bluff Harbour, N.Z.—Washing-machine, 227
Thomson, James, N.S.W. Treasury Department, Sydney, N.S.W.—cl
Thomson, Wm. Kerr—Services as Member of the Victorian Commission, clxiii
Thomas & Sons, S., Redditch, Great Britain—Needles, 281
Thomas, Emily A., Sydney, N.S.W.—Public School Exhibit, 377
Thomas, Augustus G., Sydney, N.S.W.—Public School Exhibit, 377
Thomas, Edith, Guildford, N.S.W.—Public School Exhibit, 377
Thomas, Rachel, Guildford, N.S.W.—Public School Exhibit, 377
Thomas' Coal Mine, Bundamba, near Ipswich, Queensland—General Report, 107
Thomas & Co., Seth, Bristol, Connecticut, U.S.—Clocks, 421
Thomas, A. E., Mudgee, N.S.W.—Leather, 712
Thomle, P., Brisbane, Queensland—Inlaid Cabinet-work, 227
Thonet Gebrüder, Vienna, Austria—Furniture, 212
Thoreau et Fils, Samur (Maine et Loire), France—Champagnes, 872
Thornthwaite, Ernest J., Burwood, N.S.W.—Public School Exhibit, 373
Thornton, Hon. George, M.L.C., Sydney, N.S.W.—Services as Member of the Sydney International Exhibition Commission, cxlviii; Services as Judge, clv; Judge, 422
Thornton, Mrs. W., Hobart Town, Tasmania—Berlin Wool-work, 531
Thorley, Joseph, London, Great Britain—Cattle Food, 818
Thorley's (J. W.) Cattle Food Co. (Ltd.) London, Great Britain—Cattle Food, 818
Thorn E., Parramatta, N.S.W.—Poultry, 973
Thorn, Charles, Norwich, Great Britain—Vehicles, 354
Thorne, H., Sydney, N.S.W.—Horse, 237
Thorne, James, Sydney, N.S.W.—Services as Judge, clv; Judge, 963
Thorne, W. A., Sydney, N.S.W.—Dog, 980
Thorpe, Geo. Stone, Camperdown, N.S.W.—Terra-cotta, 209
Thorpe, Thomas, Goonoo Goonoo, near Tamworth, N.S.W.—Services as Judge, clv; Judge, 907
Thorpe, Frederick, Mount Heemskirk, Tasmania—Tin Ore, General Report, 20
Thorrand & Co, Grenoble (Isère), France—Cement, 120
Threlkeld, L. E., Sydney, N.S.W.—Loan of Ethnological Exhibits, clviii
Threshers, Winnowers, &c. (Class 656), General Report on Machinery, 628
Thurlow, J. G., Fort Bourke, N.S.W.—Opals, General Report, 30
Thurber, H. K. & F. B., New York City, U.S.—Capsicums, 841; Preserved Fruits and Vegetables, &c., 860
Thurston, Hon. J. B., Levuka, Fiji—Colonial Secretary of Fiji, cxliii; Exhibits—Copra, 847; Cotton, 910
Thurston & Co., London, Great Britain—Billiard-table, 221
Thurston, Emily J., Mudgee, N.S.W.—Public School Exhibit, 379
Thyer, Joseph, Jamestown, South Australia—Wheat, 837
Tibble, T., Marshall Mount, N.S.W.—Cabbage-tree Hats, 527
Tickner, Edward, Bungonia, N.S.W.—Hay, 1027
Tidmarsh & Co., John, Adelaide, South Australia—Candles, 190
Tiefenbrünner, Georg, Munich, Germany—Zithers, 427
Tierney, Mrs., Sydney, N.S.W.—Dog, 980
Tiessenhausen, P. Von, Munich, Germany—Oil Painting, 472
Tiedemann, Emil, Bremen, Germany—Water-colour Photographs, 493
Tillage and General Management (Agriculture), Classes 663, 666; Awards, 1002
Tilden & Stokes, New York City, U.S.—Varnishes, &c., 191
Till, Franz, Dresden, Germany—Paintings on Porcelain, 477
Timmins & Sons, Richard, Birmingham, Great Britain—Hammers, Tools, &c., 337
Timbers of Australia—Their Local and Botanical names, and Economic Uses; *vide* General Report on Arboriculture, 716, *et seq.*
Tincklers, R., Penrith, N.S.W.—Churn, 991
Tingcombe, Miss, Sydney, N.S.W.—Oil Painting, 509
Tindale Mary, West Maitland, N.S.W.—Embroidery, 527

Tindall, Miss, Sydney, N.S.W.—Crayon Portraits, 527
Tingell, May, Bega, N.S.W.—Public School Exhibit,
Tin (Lode & Stream), from N.S.W. Mines—Specimens, General Report, 42 *et seq.* ; (Exhibits of Tin from other Colonies are given under the head of their respective Exhibitors.)
Tippet, J. C., Melbourne, Victoria—Combined Refrigerators and Filters, 231
Tirard—Services as Member of the Committee at Paris, cxliii
Tisdale, Jane, Woollahra, near Sydney, N.S.W.—Point Lace, 527
Tisdall, Wm. H., Birmingham, Great Britain—Guns, &c., 319
Tisserand—Services as Member of the Committee at Paris, cxliii
Tittel & Krüger, Leipsic, Germany—Yarns, 244 ; Wool Embroidery, 274
Titze, Adolph, Leipsic, Germany—Chromo-Lithographs, 493
Tivoli Coal Mine, Ipswich, Queensland—Coal, General Report, 108
Tizard, Mrs. Edward, Thames, N.Z.—Ferns (N.Z.) and Plants of N.Z., the latter in Water-colours, 1009
Tocchi, Augustus, Yorketown, South Australia—Plaster of Paris, General Report, 125 ; Award, 144 ; Salt, 190
Todd, Henry, Darlington, near Sydney, N.S.W.—Swine, 960
Todd, John—Services as Member of the London Committee, cxlvi
Todd, Charles, C.M.G.—Services as Member of the South Australian Commission, clxi
Todderdale, Alice, Sydney, N.S.W.—Public School Exhibit, 374
Toepffer, Grawitz, & Co., Portland-Cement-Fabrik-"Stern," Stettin, Germany—Cement, General Report, 120 ; Award, 133
Toft, Peter, London, Great Britain—Oil Painting, 480
Toiray-Maurin, C. G., Paris, France—Inks, 180
Tombs & Davies, Christchurch, N.Z.—Bookbinding and Account Books, 312
Tombs, William, Papanui, Christchurch, N.Z.—Wheat, 834
Tommasich, Francesco, Capo d'Istria, Austria—Wines, 868
Tomkins, Mary, Hunter's Hill, N.S.W.—Crayon Drawing, 527
Tomkinson, Florence, Richmond, N.S.W.,—Public School Exhibit, 381
Tomkinson & Adam, Kidderminster, Great Britain—Special Medal, clxv ; Carpets, 520
Toohey, J. T. & J., Sydney, N.S.W.—Ales and Porter, 889, 890
Tooth, Robert L., Sydney, N.S.W.—Services as Honorary Commissioner for Canada, cxliii
Tooth & Co., Sydney, N.S.W.—Ales, 890
Toose, W. E., Sydney, N.S.W.—Articles, Mounted in Gold and Silver, 226
Topham & Co., Charles, London, Great Britain—Sausage-machines, 221 ; Boiler-tube Brushes, 348
Torelli, Jafet, Florence, Italy—Faïence-ware, 206
Torchon, Charles, Paris, France—Preparations of Chloral, &c., 323 ; Chromo-typography, 491
Tost & Rohu, Mesdames, Sydney, N.S.W.—Taxidermy, 386
Tourte & Brüggeman, Berlin, Germany—Fancy Leather Goods, 274
Tourteau, E., Brussels, Belgium—Paintings on Porcelain, 474
Townend & Co., Thos., London, Great Britain—Hats, 281
Townsend, Mrs., Waterloo, near Sydney, N.S.W.—Crochet-work, 527
Townsend, Albert, Pavilion Center, Genesee, New York, U.S.—Wool, 925
Townsend, William, M.P.—Services as Member of the South Australian Commission, clxi
Towns & Co., Sydney, N.S.W.—Preserved Meats, 703
Town, Andrew, Richmond, N.S.W.—Horses, 937, 938
Traction Engines—General Report on Machinery, 562
Trassler, Alfred, Troppau in Austrian-Silesia, Austria—Chromo-lithographs, 486
Travers, Wm. Thomas L., F.L.S., Wellington, N.Z.—Photographs of New Zealand Scenery, 511
Trayser et Cie., Ph. J., Stuttgart—Harmoniums, 427
Trebeck, Prosper N., Sydney, N.S.W.—Services as Member of the Commission for the Sydney International Exhibition Commission, cxlviii ; Attendant on Judging as Member of Commission, 951
Trebitsch, Arnold, Vienna, Austria—Pipes, &c., 267
Trefftz & Son, J. G., Leipsic, Germany—Cloths, &c., 244
Tremouroue, N. & G., Brussels, Belgium—Kitchen Utensils, 213
Trent Brothers, Christchurch, N.Z.—Chicory and Pepper, 834 ; Chicory, 855
Tresca, Edmond, Paris, France—Tapestry, 239

Treseder Brothers, Sydney, N.S.W.—Plants and Flowers, 1016, 1017
Tress & Co., London, Great Britain—Hats, 281
Trethowan, Mrs., Sydney, N.S.W.—Loan Exhibits, clviii
Trevail, Sylvanus, Tywardreath, Cornwall, Great Britain—Architectural Designs, 498
Tribaudeau, G., Besançon, France—Watches, Report on Chronology, 402, *et seq.*, and 418; Award, 419
Trickett, Edward, Sydney, N.S.W.—Loan Exhibit, clviii
Troedel & Co., Charles, Sydney, N.S.W.—Printing, 311
Troitzsch, Otto (Konigl. Hof-Kunst-Institut für Oelfarbendruck), Berlin, Germany—Chromo-lithographs, 493
Tronson & Rutherford, Melbourne, Victoria.—Woollen flocks, 928
Trost & Co., J., Zürich, Switzerland—Piano, 429
Trouette & Blampied, Great Western, Victoria—Wines, 905
Trübner & Co., London, Great Britain—Exhibit referred to, 362; Books and Book-cases, 371
Truefitt, G., F.R.I.B.A., London, Great Britain—Architectural Designs, 498
Trump Brothers Manufacturing Co., Wilmington, Del., U.S.—General Report on Machinery, 592; Scroll-saws, 639
Truscott, A., Burwood, N.S.W.—Public School Exhibit, 373
Tsukushi Sanjiro, Osaka, Japan—Timbers, General Report on Arboriculture, 794; Award, 803
Tsumskichi Amenuroni, Osaka, Japan—Resins, General Report on Arboriculture, 724; Award, 803
Tuchtfeldt, A., Hamburg, Germany—India-rubber Hose, 346
Tuchfabrik-Langensalza, Langensalza, Germany—Tweeds, 244
Tuck & Co., H. G., West Maitland, N.S.W.—Vehicles, 356
Tucker Manufacturing Co., Boston, Mass., U.S.—Wire Mattresses, 229
Tullis & Son, John, Glasgow, Great Britain—Leather Belting, 668
Tulloch, W., Warwick, Queensland—Wheat, 836
Turnbull, Clara, Windsor, N.S.W.—Public School Exhibit, 385
Turner & Son, Charles, London, Great Britain—Colours, 186
Turner, W. J., Hunter's Hill, N.S.W.—"Cone" Mirror Frame, 226
Turner & Co., J. B., Huddersfield, Great Britain—Tweeds, 250
Turner & Sons, R., Redditch, Great Britain—Needles, Pins, &c., 281
Turner & Henderson, Sydney, N.S.W.—Illuminated Address, 509
Turner, Charles, Melbourne, Victoria—Lithography, 513
Turner, Naylor, & Marples (late Sorby & Co.), Sheffield, Great Britain—Saws, Edge-Tools, &c., 337; Stocks, Dies, &c., 637
Turner, R. B., Brussels, Belgium—Sewing Machine Fittings, 647
Turner, Frederick, Brisbane, Queensland—Grass Seed, 836
Turner, S., Sydney, N.S.W—Self-raising Flour, 854
Turner, J., Woollahra, near Sydney, N.S.W.—Chilled Iron Shares, &c., 992
Turner, George, Sydney, N.S.W.—Services, clvii
Turner, W. M.—Chairman of Launceston Branch of Tasmanian Commission, clxi
Türpe, A., Dresden, Germany, Clock-case, 217
Turquet—Services as Member of the Committee at Paris, cxliii
Turton Brothers & Matthews, Sheffield, Great Britain—Steels, Saws, Tools, &c., 337; Springs, Axles, &c., 676
Turville, Sir Francis, K.C.M.G.—Services as Member of the London Commission, cxlv
Tutill, G., London, Great Britain—Regalia and Banners, 348
Tuting, G. C., Sydney, N.S.W.—Services as Judge, clv; Judge, 232, and Ladies Court,
Tweed River, N.S.W.—Sericulture at, referred to, 170
Twining, Thomas, Twickenham, Great Britain—Apparatus for Lectures, referred to 261; Award, 371
Twopeny, R. E. N.—Services as Secretary South Australian Commission, clxi
Tye, Thomas, Newtown, near Sydney, N.S.W.—Poultry, 973
Tye Sin, F., Penang, Straits Settlements—Tin Ore, General Report on Mineralogy, 19; Rubber and Gutta-percha, 797
Tyer, Alfred N., Nghaurangha, Wellington, N.Z.—Leather, 713
Tylor & Sons, J., London, Great Britain—Sanitary-ware, 221; Plumbers' and Gasfitters', Hardware, 337; Inferential Meter, 397; Soda-water Machines, 668
Tyrel, J. de Poix, M.L.A., Brisbane, Queensland—Tin Ore, General Report, 19; Section of Tin Mine, 163

U

Udal & Co., Wm., Birmingham, Great Britain—Brassware and Hardware, 337 ; Wire Brushes, 348 ; Door-fittings and Electro-plated Ware, 222 ; Artistic Castings, 499
Udal & Sons, Wm., Birmingham, Great Britain—Gauges, 668
Uechtritz & Faist, Schramberg, Germany—Majolica-ware, 199
Ulbrich, Anton, Püllna, near Brüx, Austria—Mineral Waters, General Report, 130 ; Award, 131
Ulmarra Public School, N.S.W.—Award to Exhibit from, 383
Ullathorne & Co., London, Great Britain—Boot and Shoe-making Machinery, 611
Ullrich, H., Vienna, Austria—Bohemian Glass-ware, 195
Underberg-Albrecht, H,, Rheinberg, a/N.R., Germany—Wine Bottles, 199 ; Bitters, 875
Underhill, John, Bega, N.S.W.—Public School Exhibit, 373
Underwood, E., Quirindi, N.S.W.—Horse, 938
Union Actiengesellschaft für Bergbau, Eisen & Stahl-Industrie, Dortmund, Westphalia, Germany—Manufactured Iron and Steel, 153 ; Axles for Railway Carriages, 675
Union Syndicale de Bruxelles, Belgium—Services, cxlii
Union Steamship Company of New Zealand, Dunedin, N.Z.—Services, clix ; Models of Steamships, 687
Union Stove Works, New York City, U.S.—Stoves and Ranges, 230
Unite, John, London, Great Britain—Tarpaulins, Canvases, &c., 250
United States List of Diplomas and Medals—Complimentary and for Services, clxii
United States, Government of the, clxii
United States Exhibitors, List of Special Medals, clxvi
United States—President of the, clxii
Unterberger, Franz. Innsbruck, Tyrol, Austria—Wood Carvings, 473
Unwin, Brothers, London, Great Britain—Printing, Book-binding, &c., 306 ; Fac-Simile Reprints of Old Black Letter Works, 371 ; Copper-plate Engraving, 499
Upper Marine Series of Fossils in Mines Department Exhibit, 63 *et seq.*
Upper Coal Measures of N.S.W.—Fossils of, in Mines Department Exhibit, 64, *et seq.*
Upton, Emma, Penrith, N.S.W.—Public School Exhibit, 380

V

Vaas & Littmann, Halle a/S, Germany—Ice Machines, General Report on Machinery, 616 ; Award, 658
Vale of Clwydd Coal Mining Co., Lithgow, N.S.W.—Coal, General Report, 102 ; Award, 140
Vale, Hon. W. M. K., M.P., Melbourne, Victoria—Services as Member of Victorian Commission, clxiii
Valte, Hermann, Cottbus, Germany—Tweeds, 244
Van Bomberghen, Josephine, Brussels, Belgium—Paintings on Porcelain, 474
Van De Walle, Ghent, Belgium—Cigars, 811
Van de Wynkele, Charles, Ghent, Belgium—236
Van Der Brugghen, C., Brussels, Belgium—Liqueurs, 868
Van Der Zypen & Charlier, Deutz-Cöln, a/R., Germany—Wheels and axles, 675
Van Goethem (W. Reallier et Cie), Molenbeek (St. Jean), Belgium—Sugar Centrifugal Machine, General Report on Machinery, 576 ; Awards, 656, 679
Van Gulpen, J., Aix-la-Chapelle (Aachen), Germany—Woollen Goods, 244
Van Immerseel, Brussels, Belgium—Paintings on Porcelain, 474
Van Speybrouck, E. D., Bruges, Belgium—Lace, 266
Van Zuyleckom, Levelt, & Co., Amsterdam, Netherlands—Liqueurs, &c., 879
Vanderbergh et Cie., Antwerp, Belgium—Geneva, 868
Vanderborght, A. & B., Brussels, Belgium—Printers' Furniture, &c., 651
Vandercook, W. C., Cherry Hill, Winnebay, Illinois, U.S.—Wool, 925
Vanderschrick Frères, Brussels, Belgium—Liqueurs, 868
Vanderwoerd, Charles, Mechanical Superintendent American Watch Co., Waltham, Massachusetts, U.S.—Compensating balance for Watches, 421 ; Description of Invention, with diagrams, 415
Vansittart, Mrs. Henrietta, Twickenham, Great Britain—Screw Propeller, 685
Vaughan-Jones, E., London, Great Britain—Spirits, 877

Vaughan, H. & T., Willenhall, South Staffordshire, Great Britain—Door Locks, &c., 337
Vaughan, Bridget, Sydney, N.S.W.—Public School Exhibit, 382
Vauréal, Henry de, Paris, France—Bronze Statues, 476
Vavin, Charles, Paris, France—Magneto-Machine for sorting Metals, 162
Vayson, Paul, Paris, France—Oil Painting, 476
Vegetable Products used as Food or Materials, General Report on Agriculture, 694; Awards, 846, *et seq.*
Vencatachellum, P., Madras, India—Pickles, Curry Powder, &c., 820, 821; Jams and Jellies, 850
Venning, W. J., Crystal Brook, South Australia—Wheat, 837, 1029
Verbist-Lamal, Réné, Brussels, Belgium—Marbles and Serpentines, General Report, 110; Award, 132; Marble Mantel-pieces, 213
Verdon, Sir George F., K.C.M.G., C.B., F.R.S.—Services as Vice President of Victorian Commission, clxiii
Vereinigte-Dresdner-Strohhut & Feder-Fabrik, Dresden, Germany—Straw Hats, 275
Vergé, M., Paris, France—Services as Judge, clv; Judge, 678
Verhas, J., Brussels, Belgium—Oil Painting, 474
Verhoustraeten, R., C.E., Seraing, near Liège, Belgium—Services as Judge, clv; Judge, 3
Vermont Merino Sheep Breeders' Association, Middleburg, Vermont, U.S.—Collective Exhibit of Merino Wools, 925
Vernay, J. N., Vienna, Austria—Printing and Lithography, 368
Vernon, Chas., Adelaide, South Australia—Plaster of Paris, General Report, 125
Verreries de Mariemont, Mariemont, Belgium—Sheet Glass, &c., 197
Verse, Spelman et Brichot, Cureghem, near Brussels, Belgium—Leather Belting, &c., 656
Vertical Engines, General Report on Machinery, 540
Verviers (Belgium), Woollen Manufactures from, referred to, 169
Verzyl et Cie., G. G., Louvain, Belgium—Saltpetre, 178
Vessière, Paulin, Paris, France—Clothing, 270
Veyrassat, Jules Jacques, Paris, France—Oil Painting, 476
Vial & Son, Wm., Sydney, N.S.W.—Carriages, 356
Vicars & Co., J., Sydney, N.S.W.—Loan Exhibit, clviii; Exhibits of Woollen Goods referred to 169, 610; Award Tweeds, 254
Vicars, John, Sydney, N.S.W.—Services as Judge, clv; Judge, 907
Vichy, De, Ivry sur Seine, France—Liqueurs, 872
Vichy Mineral Waters Co., Vichy (Allier), France—Mineral Waters, General Report, 130
Vickerman & Sons, B., Huddersfield, Great Britain—Coatings and Sergings, 250
Vickers, Sons, & Co. (Limited), Sheffield, Great Britain—Steel Axles, &c., 157, 676; Steel Bells, 428; Cast Steel Pinions, 637; Crank-shaft, 623, 668
Vickery, J., Junr., Sydney, N.S.W.—Cocoat-nut Fibre Matting (Fijian), 237
Vickery, Ebenezer, Sydney, N.S.W.—Services as Executive Commissioner for Fiji, cxliii; Exhibits—Coir Rope (Fijian), 345; Tortoise-shell (Fijian), 709
Victoria, Her Majesty Queen—cxlv; Lends Works of Art to Exhibition, described in General Report on Fine Arts, 444, 447, 448; *Vide* also Executive Commissioner's Report, lxiv
Victoria, Total Gold Yield of Colony of—General Report, 6; Tin Ores of, 7
Victoria Preserving Co., "Red Cross," Melbourne, Victoria—Preserves, Sauces, Vinegar, &c., 844; Jams, &c., 861
Victoria Sugar Co., Melbourne, Victoria—Sugars, 861
Victorian Woollen and Cloth Manufacturing Co., Geelong, Victoria—Woollen Goods, 258
Victorian Exhibitors, List of Special Medals to—clxvi
Victorian List of Diplomas and Medals, Complimentary and for Services—clxiii
Victorian Mines Department—Fac-similes of Gold Nuggets, General Report, 16; Geological Specimens, General Report, 85
Vile, Job, Masterton, N.Z.—Wheat and Oats, 834
Villard et Weill, Lûneville (Meurthe et Moselle), France—Toys, 270
Villeneuve, Ernest J., Paris, France—Bookbinding Materials, 297
Vilmorin, Andrieux, et Cie, Paris, France—Special Medal, clxv; Seeds, 813; Illustrations of Flowers and Plants, 1006
Vincent, E., Newtown, N.S.W.—Public School Exhibit, 379
Vincent & Co., Christchurch, N.Z.—Ale, 894
Vinçotte, T. H., Brussels, Belgium—Statuary, 465; Award, 474
Vindin, A., West Maitland, N.S.W.—Services, clvi

Vine, Florence, Penrith, N.S.W.—Public School Exhibit, 380
Vine, Letitia, Penrith, N.S.W.—Public School Exhibit, 380
Vineyards of Australia—Yield of the, 865; Acreage under Cultivation, 865
Vinton, T., Redfern, N.S.W.—Safety Kerosene Oil Measurer and Gas Cooking Stoves, 226
Vion et Baury, Paris, France—Porcelain Ornaments, 198
Virginia Tobacco Manufacturing Co. (Limited), Melbourne, Victoria—Tobacco and Snuff, 844
Vité, François, Berlin, Germany—Fancy Leather Goods, 275
Vivian, Jas. M., New Plymouth, Taranaki, N.Z.—Iron Sand, General Report, 26, *et seq.*
Vogel, Fritz, Sonneberg, Thuringia, Germany—Toys, &c., 275
Voges and Sohn, Wilhelm, Graudenz, West Prussia, Germany—Brushware, 346
Vogts & Co., Ferdinand, Berlin, Germany—Furniture, 217
Voitellier, Gustave, Mantes (Seine et Oise) France—Artificial Incubator, 983
Volckers, H. A., Grafton, N.S.W.—Tropical Fruits, 1027
Volner, F., Savu Savu, Fiji—Copra, 847
Vonck, E., Sourabaya, Netherlands-India—Scarf for Joining Keels of Ships, 433
Von Haast, Julius, Ph.D., F.R.S., Christchurch, N.Z.—Canterbury Building Stones, 142
Von Römer & Foedisch, Freireuth, near Werdau, Saxony, Germany—Porcelain Ware, 199
Von Mueller, Baron Frederick, K.C.M.G., Melbourne, Victoria—Salt-bushes of Australia, 1030; Report of Exhibitor upon Salsolaceæ, 1031
Vorster, R. & H., Hagen, Rhenish-Prussia, Germany—Axes, Cutlery, &c., 333
Voss & Sohn, C., Stettin, Germany—Church Bells, 427
Vreede, L. et H., Verviers, Belgium—Flannels, 236
Vuagnat, François, Paris, France—Oil Painting, 476

W

Waagen & Co., A., Berlin, Germany—Lamps, Chandeliers, &c., 217
Wacey, Geo., Sydney, N.S.W.—Mantel-pieces, 226
Wade & Co., John, Sydney, N.S.W.—Starch and Corn-Flour, 854
Waeldin, Huber, Lahr-Baden, Germany—Leather, &c., 712
Wagenmann, Gustav, Vienna, Austria—Wax, Wax Candles, &c., 177
Wagner, Franz, Meistersdorf-Ullrichsthal, Bohemia, Austria—Glassware, Special Medal, clxiv; Award, 195
Wagner & Sohn, D. H., Grünhainichen, Saxony, Germany—Toys, 275
Wagstaff, Capt., ship "La Hogue," from London to Sydney—Ravens, 973; Dog, 977
Wahlis, Ernst, Vienna, Austria—Porcelain-ware, 196
Waite, C., Sydney, N.S.W.—Loan Works of Arts, clvii
Wake, John, Adelaide, South Australia—Plaster Ornaments, 512
Wakfer, Ada, Sydney, N.S.W.—Public School Exhibit, 375
Waki Kitei, Kioto, Japan—Porcelain, 208; Painting on Porcelain, 481
Walcha Public School, N.S.W.—Awards to Exhibits from, 383
Walden, Ellen, Sydney, N.S.W.—Public School Exhibit, 374
Waldie, Mrs., Redfern, N.S.W.—Tatting-work, 527
Wales, H.R.H. The Prince of—President of the Royal Commission in London, cxlv; Lends Works of Art to the Sydney International Exhibition, *Vide* Executive Commissioner's Report, lxiv; also Report on the Fine Arts, 444, *et seq.*
Wales, G., Sydney, N.S.W.—Poultry, 973
Walker Brothers, Dudley and Walsall, Great Britain—Galvanized Iron and Wire, 157
Walker & Hall, Sheffield, Great Britain—Silver and Electro-plated Ware, &c., 222; Silver-ware, 499
Walker & Sons, Wm., London, Great Britain—Special Medal, clxv; Furniture, 222
Walker & Sons, Kidderminster, Great Britain—Carpets, 250
Walker & Sons, Joseph, Huddersfield, Great Britian—Woollen Goods, 250
Walker, J., Birmingham, Great Britain—Locks, 337
Walker, J. A., Wollongong, N.S.W.—Horse-shoes, 341
Walker, Miss A. F., Concord, N.S.W.—Water-colour Paintings of Australian Flowers, &c., 483, 527
Walker & Jarrett, Sydney, N.S.W.—Painted Panellings, 509
Walker, R. C., Critchett—Principal Under Secretary, N.S.W., cxlix
Walker, F. B., Wheatley, Sydney, N.S.W.—Loan Works of Art, clvii

Walker, Misses M. & A., Concord, N.S.W.—Fern Albums, 527
Walker, J., Sydney, N.S.W.—Services as Judge, clv; Judge, 700
Walker, Frederick, Preston, Victoria—Glue, 714
Walker, B. F., Toowoomba, Queensland—Wheat, 846
Walker, Emma J., Hobart Town, Tasmania—Malt, 840; Flour, 859
Walker & Son, J. H., Melbourne, Victoria—Biscuits, 861
Walker & Sons, John, Kilmarnock, Great Britain—Whiskey, 877
Walker, Robert, Sydney, N.S.W.—Flowers in Wool, 1008
Wall, Ada, Windsor, N.S.W.—Public School Exhibit, 365
Wallace, John, London, Great Britain—Iron Girders, 157
Wallace & Co., John, London, Great Britain—Patent "Bearings," 668
Wallace, James, Hillside, Papatoitoi, Auckland, N.Z.—Wools, 918
Wallace, D. J., Melbourne, Victoria—Services as Judge, clv; Judge, 951
Wallaroo Copper Mines, Yorke's Peninsula, South Australia—Copper Ores, General Report, 76
Walle, John, Adelaide, South Australia—Plaster Ornaments, 512
Wallerawang Iron & Coal Co., Sydney, N.S.W.—Coal and Iron, General Report, 104, *et seq.*; Exhibit showing Classification of Coal and Iron-stone, 140
Wallis, Austen A., Sydney, N.S.W.—Public School Exhibit, 382
Wallis, Albert, Sydney, N.S.W.—Public School Exhibit, 382
Wallis, Joseph, London, Great Britain—Nickel-flutes, 429
Wallis, W., Double Bay, near Sydney, N.S.W.—Services as Judge, clv; Judge, 471
Walloon Coal Mine, West Moreton, Queensland—Coal, General Report, 108
Walls, John, Camperdown, Victoria—Washing-machine, 231
Walmsley, John, Petersham, N.S.W.—Wood Engravings, 509
Walpole, Mrs., Franklin, Tasmania—Knitting, 531
Walsh, Nora, Wickham, N.S.W.—Public School Exhibit, 384
Walsh, John—Services as Member of the Queensland Commission, clx
Walsh, Alice, Campbelltown, N.S.W.—Public School Exhibit, 373
Walton, & Co., F., Sunbury-on-Thames, Great Britain—Wall-papers, 306
Walton Park Coal Co. (Limited), Dunedin, N.Z.—Coal, General Report, 106
Walton, Henry, Glen Craigie, Wellington, N.Z.—Leathers, 713
Wamsutta Mills Co., New Bedford, Mass., U.S.—Calicos, Sheetings, &c., 257
Wanganui (West) Coal Co., Wanganui, N.Z.—Anthracite Coal, General Report, 107
Wannel, A., Oswald, N.S.W.—Public School Exhibit, 379
Want, George F., Sydney, N.S.W.—Services as Judge, clv; Judge, 330, 351; Exhibit, Dog, 980
Wanzer Sewing Machine Co., Hamilton, Ontario, Canada—Sewing Machines, 647
Waratah Coal Co., Waratah, near Newcastle, N.S.W.—Coal, General Report, 98; Lime, General Report, 124; Award, 140
Warboys, Mary, Petersham, N.S.W.—Public School Exhibit, 380
Warby, Esther, Campbelltown, N.S.W.—Public School Exhibit, 373
Warburton, Piers Eliot, Manawatu, N.Z.—Hams, 704
Warburton, G. E., Glebe, N.S.W.—Poultry, 873
Ward, Ebenezer, M.P., Para Wurlie, South Australia—Limestone, General Report, 125
Ward & Co., Marcus, London, and Belfast—Special Medal, clxv; Exhibits referred to, 292, 294, 362, (*Vide* also Executive Commissioner's Report); Awards—Fancy-leather Goods, 282; Printing and Book-binding, Fancy Stationery, &c., 307; School Appliances, 371; Duplex Cheque Paper, 433; Lithographic Coloured Printing, and Engraving, 499
Ward, F., St. Leonards, near Sydney, N.S.W.—Dog, 980
Wardell, W., C.E., Sydney, N.S.W.—Architect of Art Gallery; General Report on the Fine Arts, 444
Ware, W. R., Baringhup, Victoria—Dried Fruits, 861
Wareham, John V., Sydney, N.S.W.—Services, clix
Waring, Alice, Petersham, N.S.W.—Public School Exhibit, 380
Warner & Co., Wm., R., Philadelphia, U.S.—Medicinal Preparations, 328
Warner, W., Sydney, N.S.W.—Services as Judge, clv; Judge, 845
Warner, Miss E., Redfern, N.S.W.—Crayon Drawings, 527
Warren, Wm., Queenstown, N.Z.—Copper Ore, General Report, 23
Warren, E. G., London, Great Britain—Water-colour Paintings, General Report on the Fine Arts, 455; Award, 480
Warren, Florence, Sydney, N.S.W.—Lace and Fancy-work, 527
Warren, G. J., London, Great Britain—Bottled Stout, 877

Warren, W., Eden, Twofold Bay, N.S.W.—Butter-churn, 992
Warrenheip Distillery Co., Ballarat, Victoria—Spirits, 905
Warrington, John, Burwood, N.S.W.—Poultry, 973, 974
Washburn & Moen Manufacturing Co., Worcester, Mass., U.S.—Barbed Iron-wire, 350
Watanabe, Junichiro—Secretary to Japanese Executive Commissioner, cxlvii
Watches (Class 310)—Report of the Judges on, referred to, 363, Report 401 *et seq.*
Waterbury & Co., L., Brooklyn, U.S.—Cordage, 350
Waterbury Clock Co., Waterbury, Connecticut, U.S.—Clocks, 421
Water-Colour Drawings in Ladies' Court, 519
Waterhouse, Miss, Newtown, near Sydney, N.S.W.—Fern Table-top, 573
Waterhouse, F. G.—Services as Member of the South Australian Commission, clxi
Waterhouse, Alfred, A.R.A., F.R.I.B.A., London, Great Britain—Architectural Designs, General Report on the Fine Arts, 456; Award, 499
Waterhouse, G. J., Sydney, N.S.W.—Services as Secretary of the Fijian Commission, cxliii; Exhibits—Coral and Shells from Fiji, 709; Carossa Nuts (Fijian), General Report on Arboriculture, 799; Award, 802; Cayenne Pepper, &c., 812
Waterloo Public School, near Sydney, N.S.W.—Awards to Exhibits from, 383
Waterloo Roman Catholic Certified Denominational School, near Sydney, N.S.W.—Awards to Exhibits from, 383
Waterlow & Sons (Limited), London, Great Britain—Special Medal, clxv; Book-binding, Account Books, Telegraph-tape, Railway Tickets, and Stylograph, 307, 308; Duplex Cheque-paper, 433; Engraving and Chromo-lithography, 499; Ticket-daters, &c., 653
Waterman, John, Sydney, N.S.W.—Loan of Ethnological Exhibits, clviii
Waterous Engine Works Company, Brantford, Ontario, Canada—Engines, &c., General Report on Machinery, 547, 554, 561, 577, 606; Awards, 633, 657, 679
Waterston, Sons, & Stewart, G., London and Edinburgh, Great Britain—Sealing-wax, 308
Waters, Horace, New York City, U.S.—Organs, 429
Waters, E., Auckland, N.Z.—Confectionery, 855
Waters & Son, E., New York City, U.S.—Papier Mâché Racing Boat, 688
Waterstown Coal Mine, Ipswich, Queensland—Coal, General Report, 108
Watkins, B. Colles, R.H.A., Dublin, Ireland—Oil Painting, General Report on the Fine Arts, 454
Watson & Co., Bombay, India—Native Pottery, 206; Carved Indian Furniture, 222; Inlaid-work in Metal, Wires, &c., 500
Watson & Naylor, Kidderminster, Great Britain—Carpets, 250
Watson, Eleanor, Hurstville, N.S.W.—Public School Exhibit, 378
Watson, Emily, Parramatta, N.S.W.—Public School Exhibit, 380
Watson, George C., Alexandria, near Sydney, N.S.W.—Leather, &c., 712
Watson, Kate, Sydney, N.S.W.—Public School Exhibit, 384
Watson, Mary, Sydney, N.S.W.—Public School Exhibit, 384
Watson, Geo. C., Adelaide, South Australia—Stone Inlaid Table, 512
Watson, Joseph, Sydney, N.S.W.—Nickel-plating and Beer-engines, General Report on Machinery, 624; Awards, 670
Watson, Hon. Jas., M.P., Colonial Treasurer of New South Wales, cxlix
Watson & Paterson, Melbourne, Victoria—Hams, Bacon, &c., 706
Watson & M'Gill, Petersburgh, Va., U.S.—Tobaccos, 841
Watson & Young, Albury, N.S.W.—Cordials and Ærated Waters, 890
Watson, John, Ayr, Ontario, Canada—Chaff-cutters, 982
Watt, Charles (Government Analyst), Sydney, N.S.W.—Services as Honorary Member of Committee, cxlix; Services as Judge, clv; Judge, 174
Watt, John—Services as Member of the London Committee, cxlvi
Watt, W. H., Wangamia, N.Z.—Wool, 918
Watts, G. F., R.A., London, Great Britain—Oil Paintings, General Report on the Fine Arts, 452
Watts, Walter K., East Melbourne, Victoria—Models of Yachts, &c., 688; Inlaid Table-tops, General Report Arboriculture, 791; Award, 807
Waverley Public School, near Sydney, N.S.W.—Awards to Exhibits from, 383
Way, E., Toowoomba, Queensland—Indigenous Grass-seeds, 836
Wayne, Agricultural Co., Richmond, Indiana, U.S.—Grain-drill, 996
Weaber, Henry, Brisbane, Queensland—Spectacles, 399
Wearne, Miss M., Forest Lodge, near Sydney, N.S.W.—Oil Paintings, 528
Wearne, W. C., Holdsworthy, near Liverpool, N.S.W.—Brown Papers, 311
Weaver & Co., Hobart Town, Tasmania—Cordials, &c., 900

Webb & Sons, Stourbridge, Staffordshire, Great Britain—Iron and Steel Bars, &c., Exhibit referred to, 147 ; Award, 157
Webb & Sons, Stourbridge, Staffordshire, Great Britain, Special Medal, clxv; Glassware, &c., Exhibit referred to, 168; Awards, Bronze and Crystal Glass, 205 ; Glass Chandeliers, Mirrors, &c., 222 ; Engraving on Glass, 499
Webb, Edmund, M.P., Bathurst, N.S.W.—Services as Member of Sydney International Exhibition Commission, cxlviii ; Services as Judge, clvi ; Judge, 258
Webb, James, London, Great Britain—Oil Painting, General Report on the Fine Arts, 454
Weber, Philip, Philadelphia, U.S. (shown in Austrian Gallery)—American Landscapes, 467 ; Award, 484
Webley & Son, P., Birmingham, Great Britain—Sporting Rifles and Revolvers, 319
Webster, Alex., Launceston, Tasmania—Baths, 228
Webster & Son, Francis, Arbroath, Great Britain—Flax and Cotton Sail Canvas, 251
Webster, Alex. S., Sydney, N.S.W.—Services as Acting Executive Commissioner for New Zealand in absence of Dr. Hector, clix
Wedgwood & Son, J., Stoke-upon-Trent, Staffordshire, Great Britain—Earthen, Jasper, and Majolica Ware, 205
Weed & Becker Manufacturing Co., Cohoes, N. Y., U.S.—Axes, Hatchets, and Edge-tools, 343
Wegner, H., Berlin, Germany—Turnery, 346
Weighing Machines, General Report on Machinery, 620
Weiller, J. & Co., London, Great Britain, and Italy—Marbles and Serpentines, General Report, 110
Weiller & Co., Joseph, London, Great Britain—Photographs, 499
Weir, David, Sydney, N.S.W.—Services as Catalogue Compiler and Clerk, Staff Sydney International Exhibition Commission, cxlix
Weir, Jessie, Sydney, N.S.W.—Berlin Wool-work, 528
Weissenberger & Co., Hermann, Cannstadt, a/N, in Württemberg, Germany—Ice-Machines, 658
Weiss, Martin, Vienna, Austria—Fancy Wooden Articles, 266
Weiss, Rudolph, Gaudenzdorf, near Vienna, Austria—Gloves, 266
Weiss & Sohn, Johann, Vienna, Austria—Tools, &c., for Printing, 331
Weiss & Co., George A., Chicago, Illinois, U.S.—Lager Beer, 902
Welch, Margetson, & Co., London, Great Britain—Shirts, Ties, &c., 282
Welch, W. P., Woollahra, near Sydney, N.S.W.—Pigeons, 974
Weld, Sir Frederick A., K.C.M.G.—Services as President of the Tasmanian Commission, clxi
Wellauer, J., & Müller, J., St. Gall and Uesslingen, Switzerland—Statistics of Swiss Benevolent Institutions, 388
Wells, Richard, Ashfield, N.S.W.—Public School Exhibit, 372
Wells, Ada, Sydney, N.S.W.—Public School Exhibit, 376
Wells, George, Glebe, near Sydney, N.S.W.—Horse, 938
Welponer, Alois, Bozen and Roveredo, Tyrol, Austria—Hides, 708
Welsh Woollen Manufacturing Co. (Limited), Newtown, Montgomeryshire, Wales —Tweeds, 251
Welt & Pöhler, Berlin, Germany—Bronze and Iron Lamps, 217
Wendt, Joachim M., Adelaide, South Australia—Silver and Plated Ware, 228 ; Jewellery and Silver Ware, 288 ; Jewellery, &c., 288 ; Engravings on Metal, 512
Wendel, J., Auckland, N.Z.—Grape and Quinine Wines, 894
Were, J. B.—Services as Member of Victorian Commission, clxiii
Werkmeister, A., Berlin, Germany—Gilt and Polished Mouldings, 217
Wertheim, Louis, Frankfurt a/M, Germany—Asbestos and Soapstone Steam Packing, 244
Wertheim & Co., F., Vienna, Austria—Iron Safes, 331
Werner, Hermann, Cottbus, Germany—Spirits, 875
Wessel, Ludwig, Bonn a/R, Germany—Fancy Earthenware, 199
Westphälischer Draht-Industrie-Verein, Hamm, Westphalia, Germany—Wire, Spikes, Nails, &c.. 152
Westphälischer-Union-Actiengesellschaft für Bergbau Eisen & Draht Industrie, Hamm, a/d Lippe, Westphalia, Germany—Manufactured Iron, 153 ; Wire Nails, Screws, &c,, 333
West-Erskine, W. A. E., M.P.—Services as Member of the South Australian Commission, clxi ; Room-cooler, 228.

West, A., Sydney, N.S.W.—Copper Toe-tips for Boots and Shoes, 286
West, Clara, Sydney, N.S.W.—Public School Exhibit, 376
West Cumberland Iron and Steel Co. (Limited), Workington, Great Britain—Iron and Steel Rails, Plates, &c., 157
West, Dr. Arthur A., Glebe, near Sydney, N.S.W.—Horse, 938
West, E. A. S., Paddington, near Sydney, N.S.W.—Dog, 980
West, W. C., Sydney, N.S.W.—Dog, 980
West Wanganui Coal Co., Wanganui, Wellington, N.Z.—Anthracite Coal, General Report, 107
Western Australian Diplomas and Medals Complimentary and for Services, clxiii
Western Australia, His Excellency the Governor of, clxiii
Western Australia, Government of—Loan of Ethnological Collection, clxiii
Western Meat Preserving Co., Colac, Victoria—Preserved Game, 706
Westerhout, J. E., Malacca, Straits Settlements—Wood Chopper and Hatchet, 340; Jelly and Tapioca, 859
Weston, Chas. D., West Maitland, N.S.W.—Public School Exhibit, 379
Weston, Frank J., South Creek, N.S.W.—Services as Judge, clvi; Judge, 929
Westport Colliery Co., Westport, N.Z.—Coal, General Report, 107; Award, 142
Wetherby, Rugg, & Richardson, Worcester, Massachusetts, U.S.—Re-Sawing Machines, 640
Weule, J. F., Boeckenem, Hanover, Germany—Church Clocks, 420
Wezel & Naumann, Leipsic, Germany—Chromo-Lithographs, 493
White & Brothers, John Bazley, London, Great Britain—Cements; General Report, 119, 123; Award, 134; Movable Cottage, made of Tiles, 205
White, Daniel, Melbourne, Victoria—Stanhope Phaeton, 358
White, Edward, Martindale, Denman, N.S.W.—Cattle, 948; Sheep, 960
White, Eliza, Fullerton, South Australia—Wines, 900
White, H. C., Glenalvon, Murrurundi, N.S.W.—Cattle, 948
White, Hon. James, M.L.C., Woollahra, near Sydney, N.S.W.—Plants, 1020
White Island Sulphur Co., Auckland—Sulphur—General Report, 28
White, J. F., and H. C., Belltrees, Scone, Tasmania—Wool, 916
White, Mary Ann, Waverley, N.S.W.—Public School Exhibit, 383
White, Mrs. S. (N.Z.)—Picture-frame of New Zealand Pine Cones, 227
White, Samuel S., Philadelphia, U.S.—Dental Instruments, Artificial Teeth, &c., 328
White & Son, Wm., Glasgow, Great Britain—Clay Pipes, 282
White, Wm., Kaikora, Hawke's Bay, N.Z.—Wheat, 834
White, W. H., F.R.I.B.A., London—Architectural Designs, 499
Whitehead & Co. (Limited), Rockhampton, Queensland—Preserved Meats and Extract of Beef, 705
Whitehead & Co., Edward, Melbourne, Victoria—Fancy Envelopes, 314
Whitehead, Isaac, Melbourne, Victoria—Oil Paintings, 484
Whitelaw & Blair, Melbourne, Victoria—Mirrors, 231
Whitfield & Co., Frederic, Birmingham, Great Britain—Iron Safes, 337
Whitfield, S. B., Birmingham, Great Britain—Iron and Brass Bedsteads, 223; Steel Pens, 308
Whitfield, P. B., Sydney, N.S.W.—Services as Judge, clvi; Judge, 907
Whiting, Miss E., Sydney, N.S.W.—Fretwork, 528
Whitley, W., Maryborough, Queensland—Coal; General Report, 108; Awards, 143
Whitley & Co., London, Great Britain—Gwynfé Hammock Tents, 251
Whitwam & Co., Huddersfield, Great Britain—Tweeds, 251
Whittall & Co., M., Kidderminster, Great Britain—Carpets, 251
Whittier Machine Co., Boston, Mass., U.S.—Special Medal, clxvi; Whittier Elevator, General Report on Machinery, 566 *et seq.*; Awards, 671
Whysall, Nelly, Sydney, N.S.W.—Public School Exhibit, 384
Whyte, John, Redfern, N.S.W.—Dog, 980
Whichcord, J., F.S.A., London, Great Britain—Architectural Designs, 499
Whichello, S. H., Toowoomba, Queensland—Leather, 713
Whiffen, Thos., London, Great Britain—Quinine, Strychnine, &c., 327; Cinchona Bark, General Report on Arboriculture, 792; Pharmaceutical Preparations, 803
Whitmore & Binyon, London, Great Britain—Milling Machinery, 606, 607; Awards, 681
Wianamatta Series of N.S.W. Fossils—Specimens, 64
Wickham Public School, N.S.W.—Awards to Exhibits from, 384
Wiener, C., Brussels, Belgium—Terra-cotta Group, General Report on the Fine Arts, 465; Award, 474

Wiener Schuhwaarenfabrik Actienges : (Vormals, D. H. Pollak & H. Horwitz), Vienna, Austria—Boots and Shoes, 266
Wigley, Hon. T. H., Opaka Station, Co. Geraldine, New Zealand—Wheat, 834
Wightman, Wm., Newtown, N.S.W.—Public School Exhibit, 379
Wijenarayana, Straits Settlements—Tortoiseshell Fancy Goods, 288
Anvils, Tools, &c., 637
Wilcox, Joseph, Birmingham, Great Britain—Kitchen Wire-work, 222
Wild, H., Idar, Germany—Agates, Bloodstones, &c., 275
Wilder, John, Reading, Berkshire, Great Britain—Horse-powers and Chaff-cutters, 991
Wildridge, J., St. Leonards, N.S.W.—Poultry, 974
Wiley & Russell Manufacturing Co., Greenfield, Massachussets, U.S.,—General Report on Machinery, 592, 600 ; Award, Hand-screw making Machine, 640
Wilhelm & Co., Franz, Vienna, Austria—Drugs and Chemicals, 322
Wilhelm, Eduard—Services as member of Austrian Commission at Sydney, cxlii
Wilhelm, Franz—Services as President of Executive Committee at Vienna, Austria, cxlii
Wilke & Co., H., Port Adelaide, South Australia—Furs, 714 ; Wattle Barks, General Report on Arboriculture, 795 ; Yacka Gum, General Report on Arboriculture, 797 ; Awards, 806
Wilke, C. G., Guben, Germany—Hats, 275
Wilkens & Danger, Bremen, Germany—Jewellery, &c., 275
Wilkins, Jessie, Wickham, N.S.W.—Public School Exhibit, 384
Wilkins, Wm. (Under Secretary N.S.W. Department of Public Instruction), Sydney, N.S.W.—Services as honorary member of Committee, cxlix ; Services as Judge, clvi ; Judge, 367
Wilkinson, C. S., F.G.S., Sydney, N.S.W.—Geological Surveyor of the Colony ; Services as honorary member of Committee, cxlix ; Arranger of N.S.W. Mineralogical Collection, 38, *et seq.*
Wilkinson, Fanny, Marrickville, N.S.W.—Public School Exhibit, 379
Wilkinson, Henry, Sydney, N.S.W.—Services, clvii
Wilkinson, J. A., Sydney, N.S.W.—Wines, 890
Wilkinson, Sarah, Marrickville, N.S.W.—Public School Exhibit, 379
Wilkinson & Sons, Joshua, Dudley, Great Britain—Wrought Iron, &c., 157 ; Smiths'
Willard, Chas., Sydney, N.S.W.—Public School Exhibit, 382
Willard, Fredk., Sydney, N.S.W.—Public School Exhibit, 382
Willcocks, W., Redfern, N.S.W.—Pigeons, 974
William-street Public School, Sydney, N.S.W.—Awards to Exhibits from, 384
Williams, Edward H., M.D.—Commissioner and Executive Officer for U.S., clxii
Williams, Alfred, Eight-mile Plains, near Brisbane, Queensland—Coffee Beans, 836
Williams & Dixon, Adelaide, South Australia—Grape Mill, 994
Williams, Cornwell J., Thames, N.Z.—Lead Ore, General Report, 24
Williams, Captain, W. R., Wellington, N.Z.—Coal, General Report, 107
Williams, C., Sydney, N.S.W.—Imitation Woods and Marbles, 509
Williams, Dimond, & Co., San Francisco, California, U.S.—Services, clxii
Williams, Ellen, Sydney, N.S.W.—Public School Exhibit, 376
Williams, Evelyn, Sydney, N.S.W.—Public School Exhibit, 381
Williams, J.. Glebe, near Sydney, N.S.W.—Pigeons, 974
Williams, J., Sydney, N.S.W.—Loan of Ethnological Exhibits clviii ; Ethnological Exhibits, from the Samoan and Marshall Groups, 287
Williams & Murray, Liverpool, N.S.W.—Newspaper and Brown and Wrapping Papers, 311
Williams, Price, Melbourne, Victoria—Washing Machines and Patent Hinges, 231
Williams, Percy E., Sydney, N.S.W.—Crayon Drawings and Copies in Oil, 509
Williams, Price, Melbourne, Victoria—Wool and Hay Presses, 672; Field and Sheep Pen Gates, 998
Williams, Thos. C., Richmond, Virginia, U.S.—Tobacco, 841
Williams, Thos., Robertson, N.S.W.—Horse, 938
Williamson, Magor, & Co., Calcutta, India ; Teas, 821
Williamstown Public School, N.S.W.—Awards and Exhibits from, 384
Willes, Mary, Sydney, N.S.W.—Public School Exhibit, 382
Willis, Thos. C.. Paddington, N.S.W.—Public School Exhibit, 380
Willis, Wm. H., London, Great Britain—Playing and Menu and Programme Cards, 308
Wills-Allen T. P., Gunnible, Liverpool Plains, N.S.W.—Wool, 916
Wills, J. W., Ashfield, N.S.W.—Improved Bee-house, 1000
Wills & Co., G. R., Adelaide, South Australia—Boots and Shoes, 288
Wilshire, Ada, Ashfield, N.S.W.—Conchology, Entomology, and Botany, &c., 528

Wilson & Co., F. W., Brisbane, Queensland—Biscuits, 857
Wilson & Co., W. J., Philadelphia, U.S.—Biscuits, &c., 860
Wilson & Co., James, Dunedin, New Zealand—Ale, 894
Wilson & Cunningham, Arbroath, Great Britain—Navy Canvas, 251
Wilson & Co., W. D., New York City, U.S.—Perambulators, 358
Wilson, Anna, Dunedin, Otago, N.Z.—Point Lace, 529
Wilson, A. S., Ivanhoe, Victoria—Wines, 905
Wilson, A. S., Blue Mountains, N.S.W.—Tanned Snake Skins, 712
Wilson Brothers & Co., Birmingham, Great Britain—Brass and Iron Bedsteads, 222
Wilson, C., Armidale, N.S.W.—Services, clvi
Wilson, Commodore John C., R.N. (Australian Naval Station)—Services, cxlix
Wilson, Corben, & Co., Melbourne, Victoria—Slate Baths and Mantel-pieces, 231
Wilson, Elizabeth, Sydney, N.S.W.—Public School Exhibit, 374
Wilson, John, Gala, Lismore, Victoria—Wools, 928
Wilson, J. T. Darling Downs, Queensland—Wheat, 836
Wilson, J., Malvern, Christchurch, N.Z.—Building Stone, General Report, 116
Wilson, Miss L., Sydney, N.S.W.—Wool-work, 528
Wilson, Mrs., Maria A., London, Great Britain—Services in lending Works of Art, cxlvi
Wilson, Sir James M., K.C.M.G.—Services as Chairman of Tasmanian Commission, clxii
Wilson, Sir Samuel, M.L.C.—Services as Vice-President of the Victorian Commission, clxiii
Wilson, Wm. A., Sydney, N.S.W.—Public School Exhibit, 375
Wilson, W., Malvern, Christchurch, N.Z.—Coal, General Report, 107
Wilson, Wm., M.L.C.—Services as member of Victorian Commission, clxiii
Wilton Public School, N.S.W.—Awards to Exhibits from, 384
Wilton, Thos. T., Sydney, N.S.W.—Services as Judge, clvi; Judge, 290, 650
Wimble & Co., F. T., Melbourne, Victoria—Printing and Lithographic Inks, 192
Winchester Repeating Arms Co., Newhaven, Connecticut, U.S.—Special Medal, clxvi; Rifles, Muskets, &c., 320
Winckelmann & Söhne, Berlin, Germany—Drawing Books, 370
Windsor, Kate, Melbourne, Victoria—Embroidery, 532
Windsor Public School, N.S.W.—Awards to Exhibits from, 385
Wines, Spirituous, Fermented, and other Drinks (Classes 635–638)—863, *et seq.*
Winkelhausen, H. A., Stargardt, West Prussia, Germany—Bitters, 875
Winn, J. C., Richmond, Victoria—Malt, 844
Winstanley, Ida, Sydney, N.S.W.—Public School Exhibit, 375
Winston, C. E., Sydney, N.S.W.—Wood Engraving, 509
Winter, Mark, West Maitland, N.S.W.—Pickles, Preserves, &c., 828; Ploughs, &c., 992
Wiper, John, Melbourne, Victoria—Bent Lamp-glass, 210
Wisby, Mrs. F., Sydney, N.S.W.—Honiton Lace, 528
Wisdom, Hon. Robert, Attorney General of New South Wales—cxlix
Wise, Henry, Sydney, N.S.W.—Services as Judge, clvi; Judge, 471
Wisner & Son, J. O., Brantford, Ontario, Canada—Grain Drill, 982
Witten, J., Paddington, N.S.W.—Cabbage-tree Hats, 286
Wittmann & Roth, London, Great Britain—Iridescent Glass-ware, 205
Witty, James W., Wairoa, Hawke's Bay, New Zealand—Hops, 834
Wohlfarth Gebrüder, & Barlösius, Leipsic, Germany—Colours for Painting, Printing, &c., 182
Wolf, S., Mainz a.R., Germany—Boots and Shoes, 275
Wolf, senr., J. G., Kirchberg, Germany—Clothes, 244
Wolfe & Gorrick, West Maitland, N.S.W. —Tobaccos, 828
Wolff & Co., Hoechst, a/M., Germany—Bed-feathers and Downs, 710
Wolff & Glaserfeld, Berlin, Germany—Collars and Cuffs, 275
Wolff & Sohn, Friedrich, Carlsruhe, Silesia, Germany—Perfumery and Soaps, 182
Wolff & Speyer, Berlin, Germany—Sail-cloth, Horse-rugs, &c., 244
Wolff, F., Gladbach, Germany—Dress Goods, Zanellas, &c., 244
Wolfsohn, Helena, Dresden, Germany—Painting on Dresden China, 477
Wollfilzfabrik-Lambrecht, Lambrecht, Germany—Varieties of Felt, 244
Wöllmer, Wilhelm, Berlin, Germany—Type-founders' Articles, 651
Wollombi Public School, N.S.W.—Awards to Exhibits from, 385
Wollongong Public School, N.S.W.—Awards to Exhibits from, 385
Wollongong Church of England Certified Denominational School, N.S.W.—Awards to Exhibits from, 385
Wolter & Echberg, Melbourne, Victoria—Washing-machines and Churns, 231

Woods of Australia—Described with Local and Botanic Names and Economic Uses in General Report on Arboriculture, 716, *et seq.*
Wool—Reports of Judges and Awards in (Class 639), 907, *et seq.*
Woolner, T., R.A., London, Great Britain—Marble and Bronze Busts, General Report on the Fine Arts, 454 ; Award, 480
Wood & Co., Henry, Liverpool, Great Britain—Chains and Anchor, 157, 668
Wood & Co., Wm., Burslem, Staffordshire, Great Britain—China Door, Furniture, &c., 205
Wood & Co., Walter A., Hoosick Falls, N.Y., U.S.—Agricultural Machinery and Implements, 996
Wood & Co., W. T., Goulburn, N.S.W.—Boots and Shoes, 286 ; Leather, 712
Wood, Ebenezer C., Petersham, N.S.W.—Public School Exhibit, 381
Wood, Harrie, Under-Secretary for Mines, Sydney, N.S.W.—Services as Honorary Member of Committee, cxlix
Wood, P. H,, Bega, N.S.W.—Cheese, 703 ; Maize, 828
Wood & Son, Collingwood, Victoria—Ale, 905
Wood, W. D., Christchurch, N.Z.—Flour, 855
Wood, Mrs. A. P., Goulburn, N.S.W.—Drawing, 509
Woodfield & Sons, Wm., Redditch, Great Britain—Needles, &c., 282
Woodhouse, E. B., Mount Gilead, Campbelltown, N.S.W.—Services as Judge, ; Judge, 939 ; Awards to Exhibits—Cattle, 948, 949 ; Swine, 960
Woodhouse, Mrs. E. H., Rockwood, Campbelltown, N.S.W.—Sheep, 960 ; Horse, 938
Woodin, Miss, Hobart Town, Tasmania—Ferns in Cone Frame, 532
Woods, George, Chippendale, near Sydney, N.S.W.—Dog, 980
Woods, Hon. John, M.P., Melbourne, Victoria—Services as Member of Victorian Commission, clxiii ; Patent Break, 677
Woods, John, Sydney, N.S.W.—Services as Judge, clvi ; Judge, 929
Wood's Machine Co., S. A., Boston, Mass., U.S.—Wood-working Machinery, General Report on Machinery, 592, 593 ; Award, 640
Woods & Co., John, Sydney, N.S.W.—Services as Carrying Agents to Sydney International Exhibition Commission, cl
Woods & Markby, Inverell, N.S.W.—Wheat, 829
Woods, Sherwood, & Co., Lowell, Mass., U.S.—Wire Goods, 230
Woodville Public School, N.S.W.—Awards to Exhibits from, 385
Woodville Church of Edgland Certified Denominational School, N.S.W.—Awards to Exhibits from, 385
Woodward, Grosvenor, & Co., Kidderminster—Carpets, 251
Woodward, Walter, Gunning, N.S.W.—Public School Exhibits, 378
Wood-working and Machine Tools—General Report on Machinery, 576
Woolcott, Charles H., Sydney, N.S.W.—Services as Judge, clvi ; Judge, 471
Woolcott, A. H., St. Leonards, near Sydney, N.S.W.—Dog, 980
Wooldridge, J., Sydney, N.S.W.—Ovens, 226
Woollams & Co., Wm., London, Great Britain—Papers, 308
Woollard, George, Wollongong, N.S.W—Public School Exhibit, 385
Woollen Goods—General reference to Exhibits of, 168
Woolley, Kate, Sydney. N.S.W.—Public School Exhibit, 382
Woolley, Mary M., Sydney, N.S.W.—Oil-painting, 528
Woolnough, Horace, Sydney, N.S.W.—Services as Judge, clvi ; Judge, 263
Wool-work and Wool-work Pictures—Ladies' Court, 515, *et seq.*
Wool-working Machinery—General Report on Machinery, 609
Woonoona Public School, N.S.W.—Awards to Exhibits from, 385
Wooster, J. F., Sydney, N.S.W.—Services as Judge, clvi ; Judge, 211
Wooyemura Sanjiro, Tokio, Japan—Enamelled and Coloured Papers, 309
Wooyeno Yeizaburo, Kioto, Japan—Fans, 283 ; Wall-papers, 309
Wornum & Sons, R., London, Great Britain—Grand Pianos, 428
Worssam & Co., Samuel, Lambeth, London, Great Britain—Wood-working Machinery, General Report on Machinery, 587 ; Award, 638
Worthington, John S., Queenstown, N.Z.—Iron-sand, General Report, 28
Wortley, Lieutenant-Colonel H. Stuart, London, Great Britain—Instantaneous Photography, General Report on the Fine Arts, 456 ; Award, 499
Wostenholm & Son, George (Limited), Sheffield, Great Britain—Cutlery, 337
Woven Goods of Vegetable or Mineral Materials, and Woven and Felted Goods of Wool, &c.—Exhibits of, 233, *et seq.*
Wratislaw, Mary J., Adelaide, South Australia—Water-colour Paintings, 529
Wren, Joseph E., Sydney, N.S.W.—Services as Judge, clvi ; Judge, 629

Wren, H., junr., Bega, N.S.W.—Cheese, 703
Wren, John, Mudgee, N.S.W.—Malting Barley, 829
Wren & Sons, Bega, N.S.W.—Maize, 829
Wrigg, H. C. W., Wellington, N.Z.—Pen and Ink Drawings, 511
Wrigglesworth & Burns, Wellington, N.Z.—Photographs, 511
Wright, John, Mudgee, N.S.W.—Limestone, General Report, 124
Wright & Butler, Birmingham, Great Britain—Lamps, Cooking Stoves, &c., 222
Wright & Co., John, Birmingham, Great Britain—Gas Cooking and Heating Stoves, 222
Wright & Fletcher, Birmingham, Great Britain—Bronzes and Chandeliers, 222 ; Castings in Bronze, 500
Wright, Wm., T., Newtown, N.S.W.—Public School Exhibit, 379
Wright, Martha, Sydney, N.S.W.—Wool-work, 528
Wright & Edwards, Melbourne, Victoria—Water-auger, 631
Wright, Horatio G. A., M.R.C.S.E., Sydney, N.S.W.—Services as Judge, clvi; Judge, 389
Wright & Sons, Peter, Dudley, Great Britain—Anvils, Vyces, &c., 638
Wright, Wm., Warwick, Queensland—Sheep-shearing, 961
Wright, John, Sydney, N.S.W.—Services as Judge, clvi; Judge, 963; Awards, Pigeon-race, 974 ; Ploughs, &c., 992
Wright, T. A.—Services as Secretary to the Royal Commission in London, cxlv
Würtzburg, H., Berlin, Germany—Engravings and Photographs, 493
Württembergische Uhren-Fabrik, Schwenningen, Black Forest, Germany—Watchmen's and Railway Control Clocks, Report on Horology, 402, 418 ; Award, 420
Wüst & Co., Wilhelm, Laupheim, Württemberg, Germany—Tools for Carpentry Work, 333
Wyatt, T. H., F.S.A., F.R.I.B.A., London, Great Britain—Architectural Designs, 500
Wyeth & Brother, J. (now Lanman & Kemp), Philadelphia, U.S.—Medicinal Preparations, 329
Wylie & Lochhead, London and Glasgow, Great Britain—Paperhangings, 308
Wyndham, John, Branxton, N.S.W.—Wines, 890, 891, 892
Wyndham, Reginald, Branxton, N.S.W.—Service as Judge, clvi; Judge, 939; Awards to Exhibits, 949
Wynen & Cie, Louis J., Antwerp, Belgium—Imitation Marble Tables, &c., in Cement, General Report, 120 ; Award, 213
Wynfield, D. W., London, Great Britain—Oil Painting, General Report on the Fine Arts, 454
Wynn, Lily, Woodville, N.S.W.—Public School Exhibit, 385

Y

Yabsley, Arthur H., Coraki, N.S.W.—Public School Exhibit, 374
Yale Lock Manufacturing Company, Stamford, Conn., U.S.—Patent Locks, &c., 343
Yanagita Woohei, Osaka, Japan—Rattan Oil Cloth, 253
Yass Public School, N.S.W.—Award to exhibit from, 385
Yates & Co., John, Birmingham, Great Britain—Axes, Picks, &c., 337
Yates, Fanny, Paddington, N.S.W.—Public School Exhibit, 380
Yates, Haywood, & Co., London and Rotherham, Great Britain—Mantelpieces, Ranges and Fenders, 222
Yates & Sons, John, Birmingham, Great Britain—Electro-plated-ware, 222
Yeo, George S., Sydney, N.S.W.—Services as Judge, clvi; Judge, 951
Yeo, T. Devonshire, England, Great Britain—Cattle, 941
Yeo, George C., Mulgrave, N.S.W.—Cattle, 949
Yerkes & Plumb, Philadelphia, U.S.—Hammers, Axes, &c., 343
Yield of Australian Gold-fields, Obelisk representing total, referred to in General Report, 6
York, Frederick, London, Great Britain—Photographs, 500
York & Walsh, Alexandria, N.S.W.—Leather, 712 ; Wool, 916
Yoshida Yasubei & Murakami Torajiro, Kioto, Japan—Bronze-ware, 503
Young's Paraffine Light and Mineral Oil Company (Limited), Glasgow, Great Britain—Candles and Oil, 187 ; Lamps, &c., 222
Young, A. W., M.P.—Services as Member of the London Committee, cxlvi
Young, William, London, Great Britain—Architectural Designs, 500
Young, John, Sydney, N.S.W.—Contractor for erection Garden Palace (*Vide* Executive Commissioners' Report), xxvi ; Contractor for Erection of Art Gallery, 444

Young, Ladd, & Coffin, New York City, U.S.—Perfumery and Eau-de-Cologne, 191
Young & Lark, London, Great Britain—Lace, 282
Young, Robert, Sydney, N.S.W.—Public School Exhibit, 374
Young, Addie, Sydney, N.S.W.—Public School Exhibit, 376
Younger, Montague, Sydney, N.S.W.—Services, clix; Services as Judge, clvi; Judge, 422
Younger, H., Sydney, N.S.W.—Waterman's Skiff, 686
Youl, J. B., Melbourne, Victoria—Shawls, Scarfs, &c., 258; Hosiery, 290
Yudanamutana Copper Mines, South Australia—Copper Ores, 78
Yvon et Gaboriau, Cognac-Charente, France—Brandies, 872

Z

Zair, G. & J., Birmingham, Great Britain—Whips, 354
Zedlitz, Freiherr von—Acting Executive Commissioner of Imperial German Commission at Berlin, cxliv
Zevenboom, John, Melbourne, Victoria—Brush-ware, 350
Zevenboom & Thompson, Melbourne, Victoria—Brushware, 350
Ziemann, A., Stuttgart, Germany—Vacuum apparatus, 630
Ziffer, L., Berlin, Germany—Colouring Extracts, 182
Zimmerli, Edouard, Paris, France—Preparations for Jewellery, 270
Zimmermann & Co., London, Great Britain—Composition and Real Bronzes, 222
Zizula Gebrüder, Vienna, Austria—Billiard-table, 212
Zlotskowski, Ora, Sydney, N.S.W.—Public School Exhibit, 374
Zollner, Simon, Sydney, N.S.W.—Galvanized-iron work and Bellows, 349
Zorn, Edward, Oakleigh, Victoria—Tomato Sauces, 844
Zouch, W. H., Ashburton, Canterbury, N.Z.—387
Zschille & Co., Feodor, Grossenhain, Saxony, Germany—Coatings, 244
Zsolnay, Wilhelm, Fünfkirchen, Hungary, Austria—Earthenware, 196
Zuccato & Wolff, London, Great Britain—Typograph and Papyrograph, 653
Zuree et Cie., Charles, Ghent, Belgium—Dyed Skins, 709

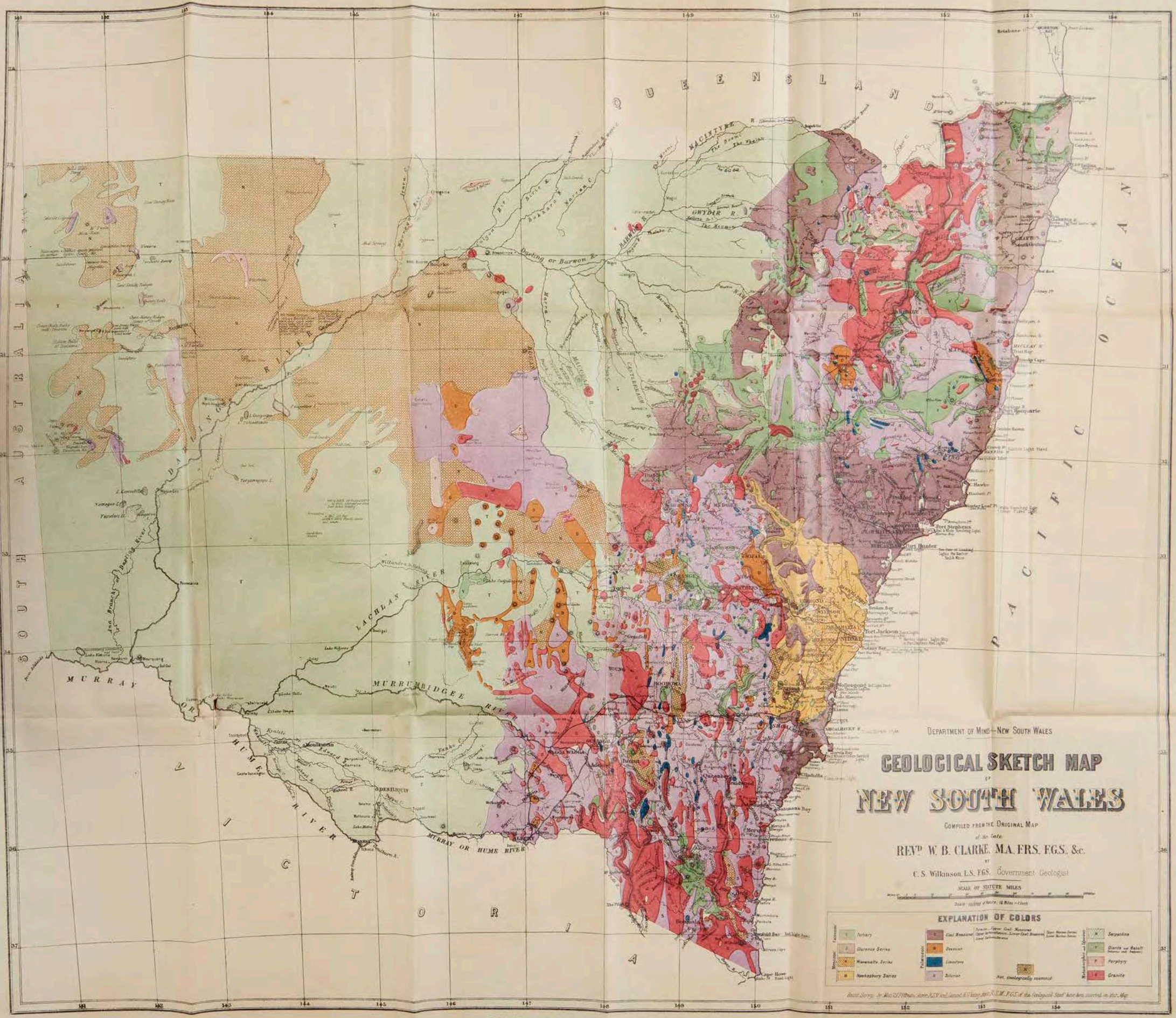
VIEWS AND DIAGRAMS.

Frontispiece: View of Garden Palace (exterior).
Diagram, drawn at Government Observatory, Sydney, showing timing rates of watch exhibits—facing p. 409.
Diagrams (1, 2, 3), showing new mode of compensating balance for watches—facing p. 415.
Exterior View and Ground Plan of Art Gallery (two diagrams)—preceding p. 439.

MAPS.

Mineral Map of Colony of New South Wales.
Ground Plan of Garden Palace, Exterior Buildings, and Grounds.
Plans of Basement, Ground Floor, and Galleries of Garden Palace, showing allotment of space to participating countries.

Sydney: Thomas Richards, Government Printer.—1881.



DEPARTMENT OF MINES—NEW SOUTH WALES

GEOLOGICAL SKETCH MAP OF NEW SOUTH WALES

COMPILED FROM THE ORIGINAL MAP

of the late

REVᴰ W. B. CLARKE, M.A. F.R.S. F.G.S. &c.

BY

C. S. Wilkinson, I.S. F.G.S. Government Geologist

SCALE OF STATUTE MILES

EXPLANATION OF COLORS

Mesozoic / Cainozoic: Tertiary; Clarence Series; Wianamatta Series; Hawkesbury Series

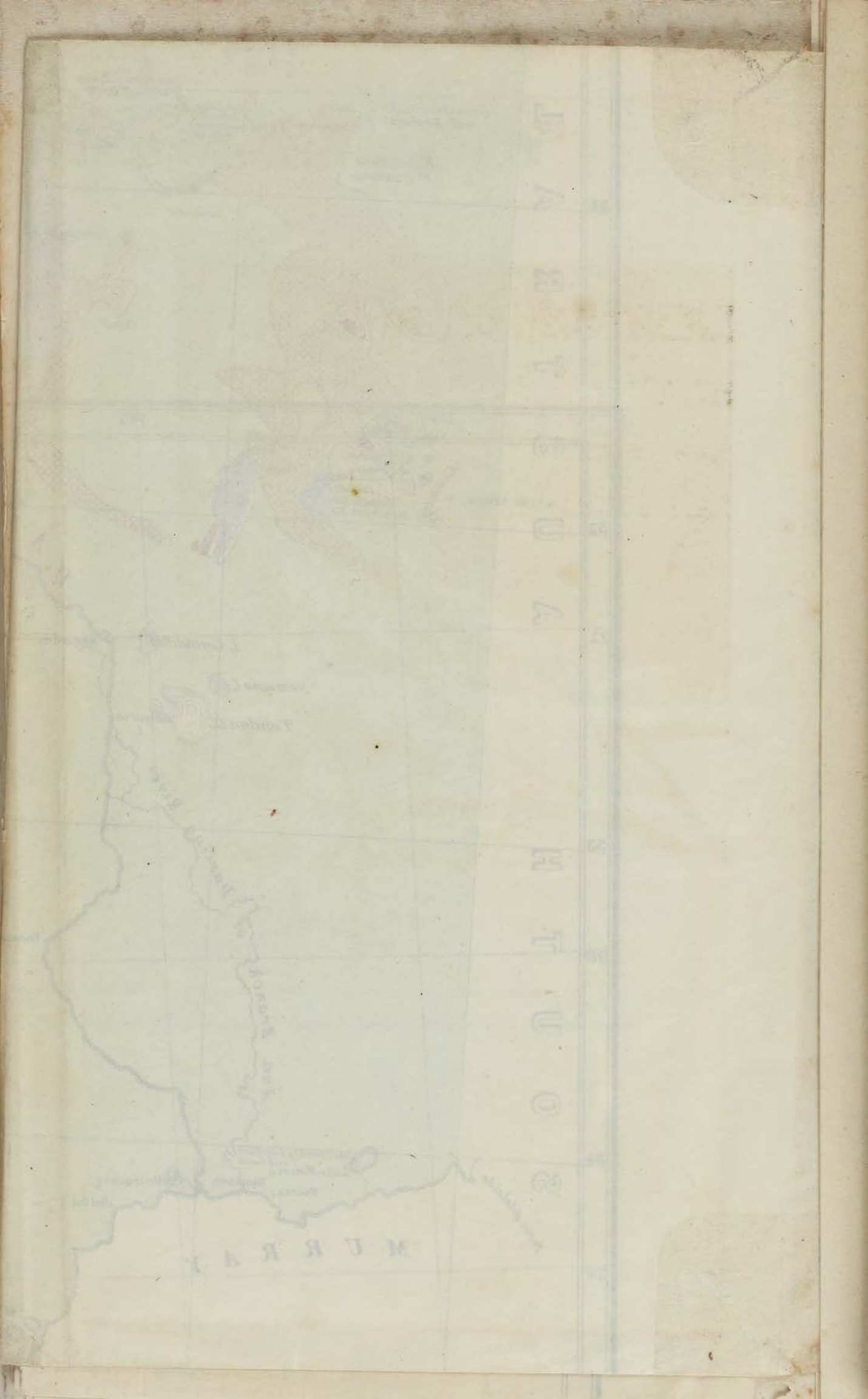
Palæozoic: Coal Measures; Devonian; Limestone; Silurian

Not Geologically examined

Metamorphic and Igneous: Serpentine; Diorite and Basalt; Porphyry; Granite

Recent Surveys by Messrs Jeffreys, Adams, R.S.W. and Samuel, R. Young, and C. S. M., F.G.S. of the Geological Staff have been inserted in this Map

Sydney, Thomas Richards, Government Printer, 1881.



XHIBITION OF 1879.

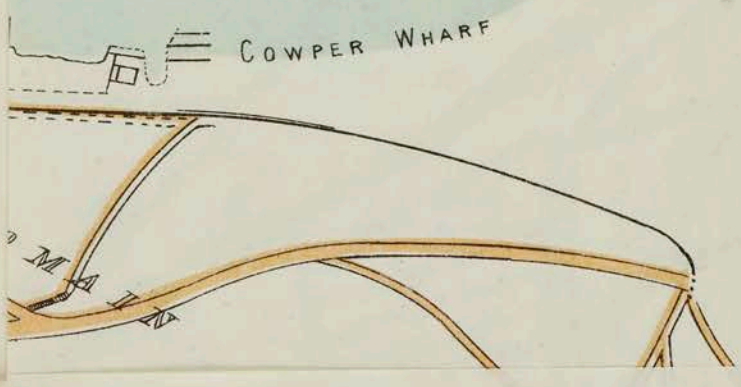
DNEY

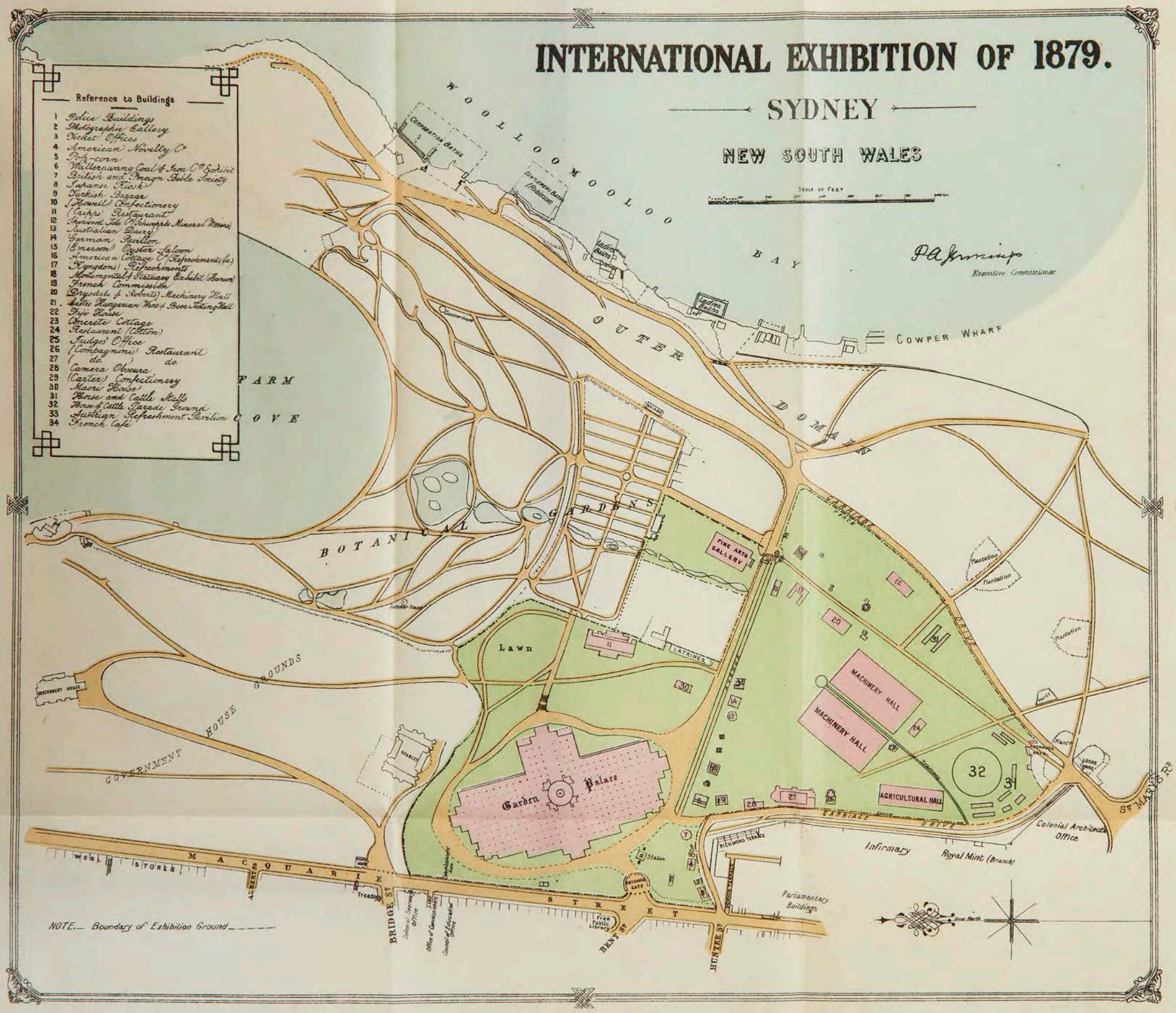
UTH WALES

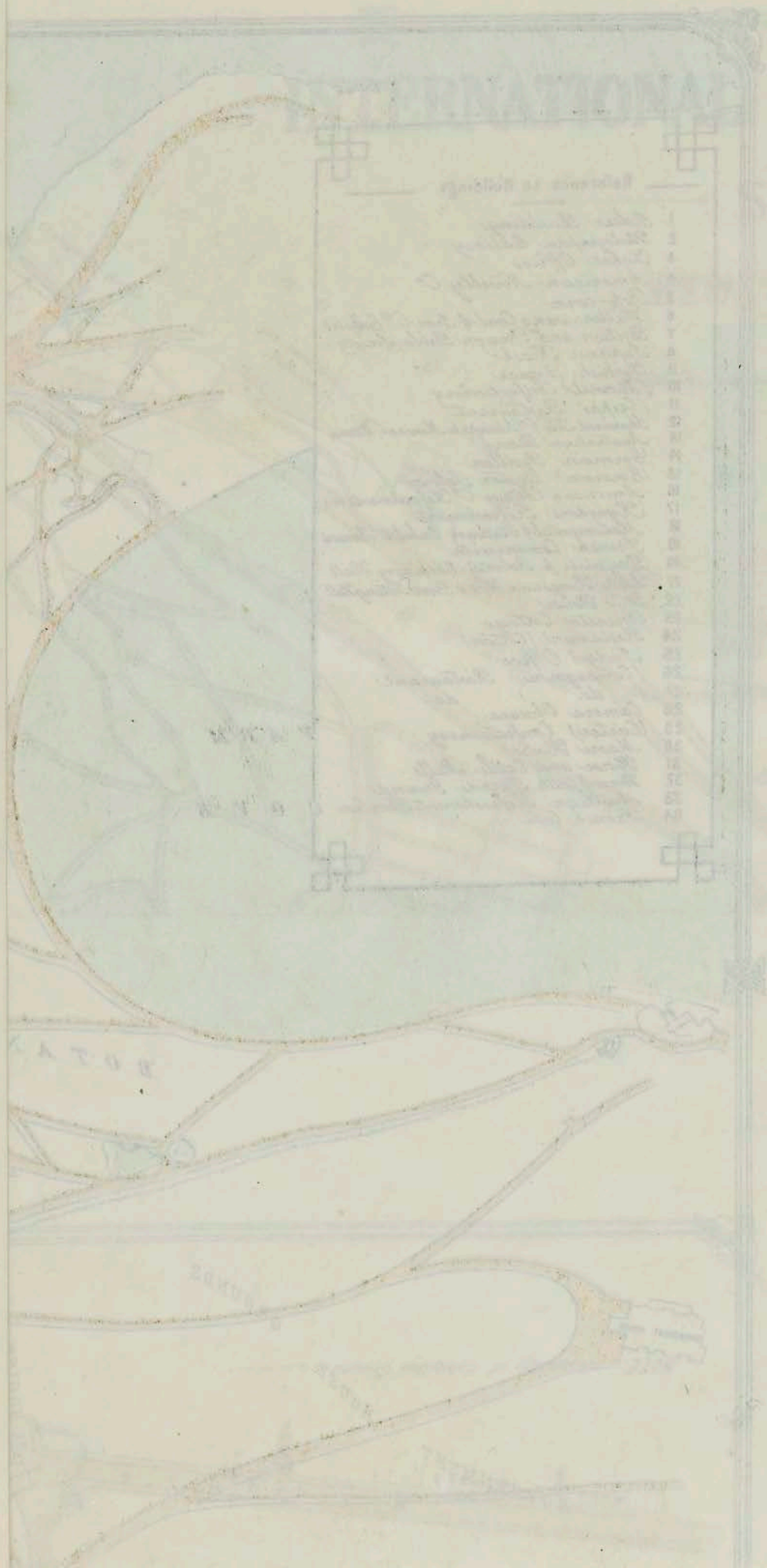
ALE OF FEET

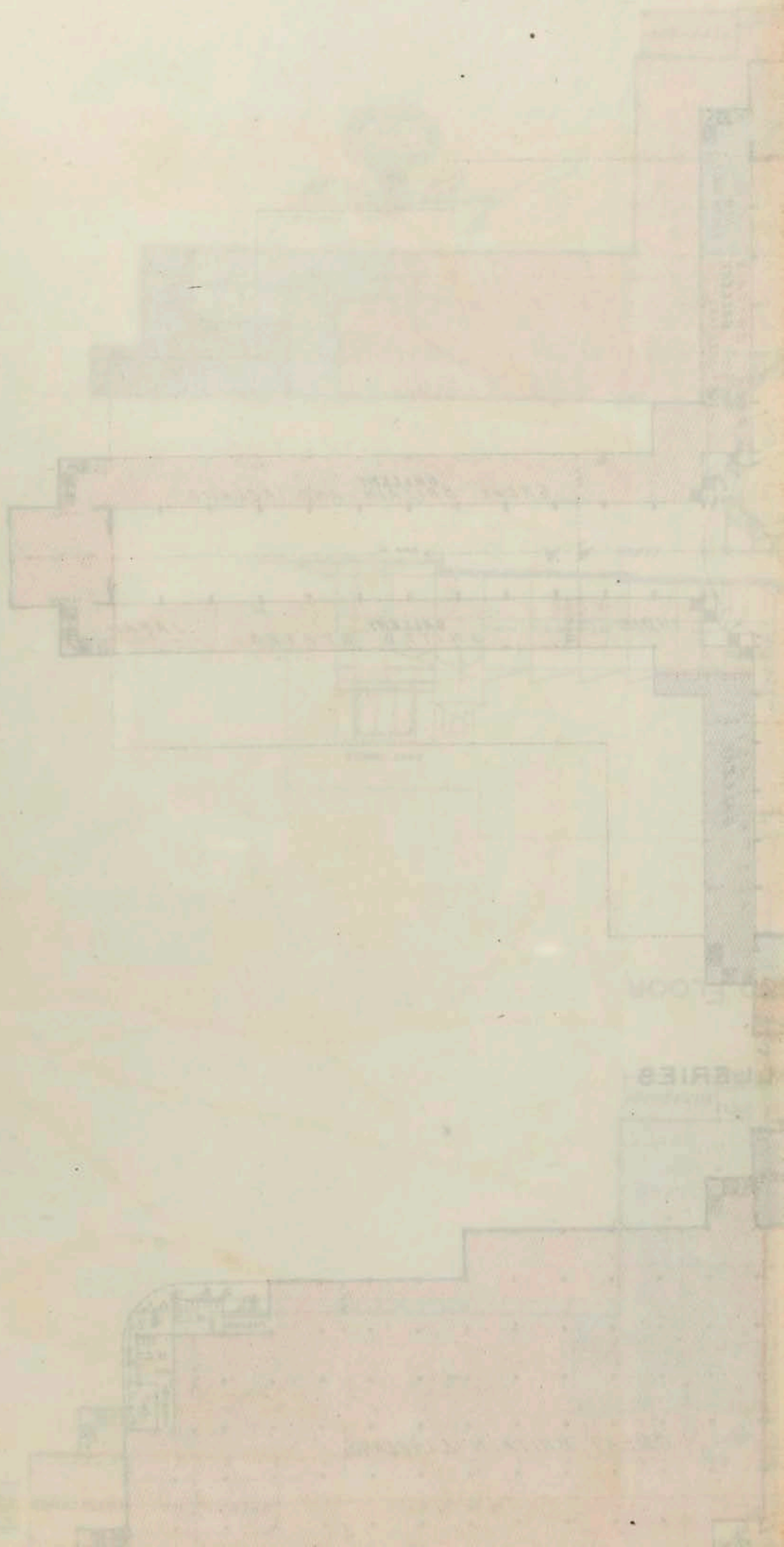
P A Jennings

Executive Commissioner.




INTERNATIONAL EXHIBITION OF 1879.
SYDNEY
NEW SOUTH WALES
Scale of Feet
Reference to Buildings
1 Police Buildings
2 Photographic Gallery
3 Ticket Offices
4 American Novelty Co
5 Pop-corn
6 Wallerawang Coal & Iron Co's Exhibit
7 British and Foreign Bible Society
8 Japanese Kiosk
9 Turkish Bazaar
10 (Howell) Confectionery
11 (Cripps) Restaurant
12 Sherwood Tile Co (Schweppes Mineral Waters)
13 Australian Dairy
14 German Pavilion
15 (Emerson) Oyster Saloon
16 American Cottage Co (Refreshments &c.)
17 Kyngdons) Refreshments
18 Monumental & Statuary Exhibit (Hanson)
19 French Commission
20 (Drysdale & Roberts) Machinery Hall
21 Austro Hungarian Wine & Beer Testing Hall
22 Fiji House
23 Concrete Cottage
24 Restaurant (Cotton)
25 Judges' Office
26 (Compagnoni) Restaurant
27 (do.) do.
28 Camera Obscura
29 (Carter) Confectionery
30 Maori House
31 Horse and Cattle Stalls
32 Horse & Cattle Parade Ground
33 Austrian Refreshment Pavilion
34 French Café
WOOLLOOMOOLOO BAY
Corporation Baths
Gentlemens Baths (Robinson)
Ladies Baths
Ladies Baths
Cowper Wharf
Executive Commissioner
OUTER DOMAIN
FARM COVE
BOTANICAL GARDENS
Aviary
Fine Arts Gallery
Carriage Drive
Plantation
Plantation
Plantation
Lawn
Latrines
Government House
Government House Grounds
Stables
Garden Palace
Machinery Hall
Machinery Hall
Agricultural Hall
Carriage Drive
Richmond Terrace
Infirmary
Royal Mint (Branch)
Colonial Architects Office
St Mary's Rd
Parliamentary Buildings
Statue
Entrance Gate
Free Public Library
Macquarie Street
Wool Stores
Albert St
Treasury
Bridge St
Colonial Secretary Office
Office of Commissioners
Council of Education Office
Bent St
Hunter St
NOTE.— Boundary of Exhibition Ground
True North

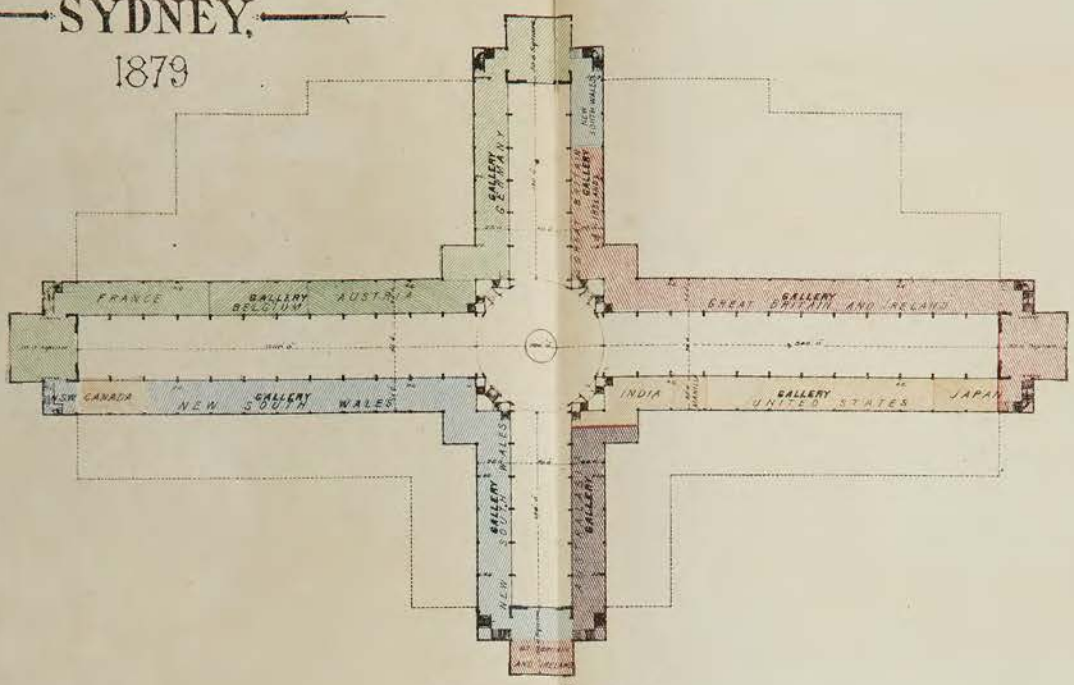




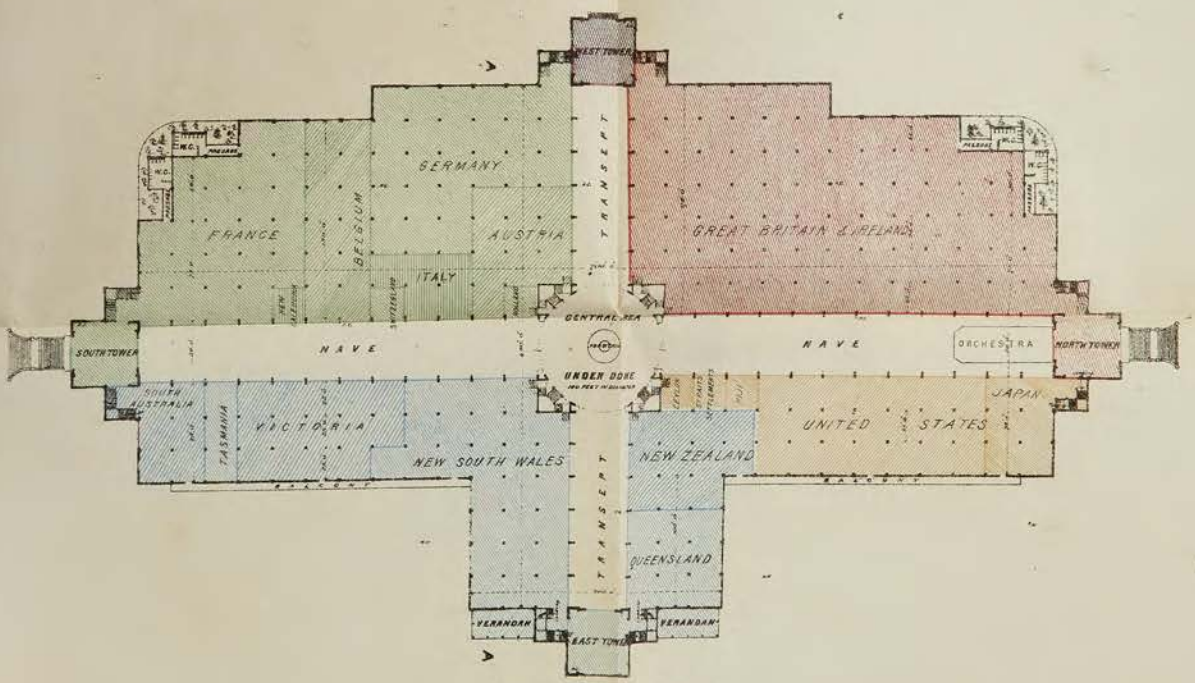
International Exhibition,

SYDNEY,

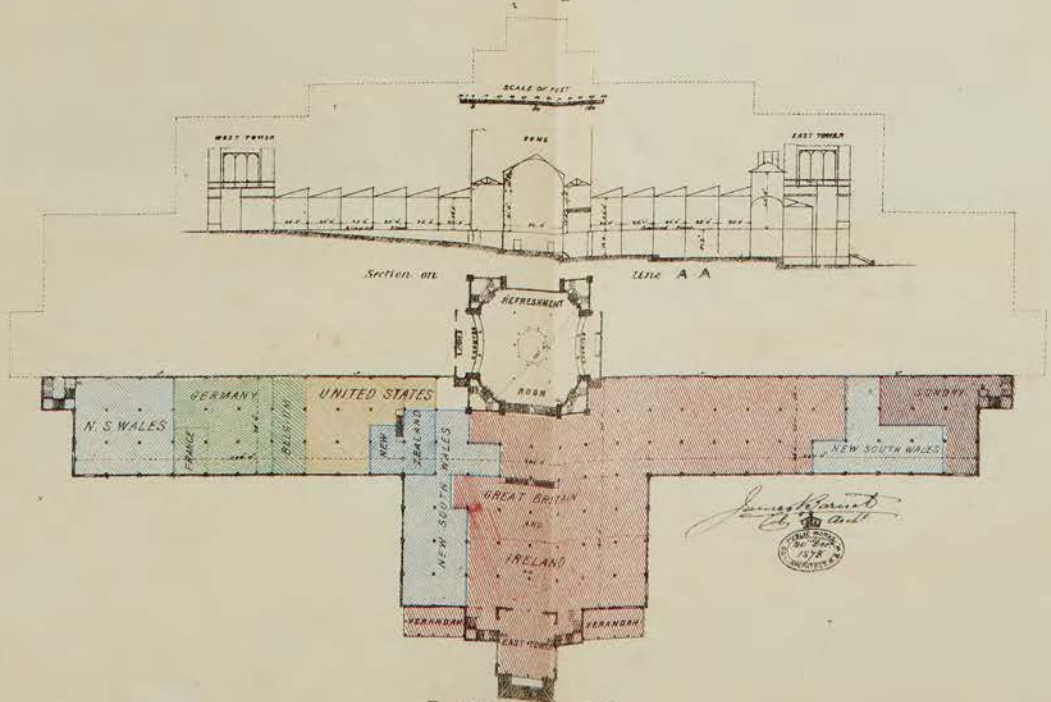
1879



PLAN OF GALLERIES



PLAN OF GROUND FLOOR



PLAN OF BASEMENT

International Exhibition,

SYDNEY,

1879