SECTION IX.

THE EMPIRE'S COURTS.

BRITISH GOVERNMENT'S SECTION.—AN IMPERIAL DISPLAY.

To the art-loving and the thoughtful New-Zealander the exhibits sent out by the Imperial Government, and so well and systematically displayed and arranged, were in many respects the most valuable and informing section of the Exhibition. The British Government had entered with considerable interest and energy into the work of organizing a suitable exhibit for this distant land's ambitious exposition of arts and industries, and devoted the sum of £10,000 to this purpose. The exhibit as arranged was designed to reflect to a large extent the artistic, social, educational, scientific, and naval and military life of the British Isles, and in this mission it succeeded admirably. The magnificent picture-collection was in itself an education in art—oils, water-colours, and black-and-white; it summarised the best traditions and the best products of British art; it was a delight to every visitor, an eye-feast of form and colour. The exquisite examples of kindred arts and crafts were equally comprehensive and wisely selected—all the best of their kind. Then there was the sociological, educational, and scientific collection, full of information in diagram, pictorial and other forms. To the section of Social Economy in the British Court, Sir John Gorst, the special envoy of the British Government to the Exhibition, drew particular attention in one of his speeches. It deserved, he said, the careful study of colonial statesmen, throwing as it did a flood of light on the social conditions, good and evil, under which people lived in the Old Country. Certainly the sociological side of the exhibit was full of meat for thought, especially for those earnest-minded New-Zealanders who are anxious above all things to keep this land free from the social iniquities, inequalities, and grievous wrongs so deeply rooted in Old World communities. Educationally there was much to interest enthusiasts in advanced and practical and technical instruction; and the proofs of progress made by the Mother-country in specialised education during late years came as a surprise to those New-Zealanders disposed to regard "Old England" as being behind the times in this respect. The superbly finished maps, the delightfully artistic specimens of pictorial photography, the delicate scientific instruments of meticulous and exquisite precision, were all triumphs of their kind. And side by side with the triumphs of the arts of peace were the reminders of Britain's glorious feats of arms by land and by sea, the weapons with which she holds the land and wards the five oceans, from the Indian mountain-gun whose epic Kipling has sung to the monster 12-in. shells which her battleships send screaming through five or six miles of air, and the glittering array of medals that epitomized her brave centuries of battle-story. It typified all the virility, the fighting qualities of the Briton; it brought a thrill of pride to the son of this most distant outpost of the Empire. Not an exhibit, a picture, a book, weapon, or medal was there without good use and reason; every one had its silent mission to these Islanders remote from the heart of the old Empire, and told its story well.

The British Government exhibit was under the charge of the British Commissioner, Captain Percy Atkin, a gentleman who had had considerable experience of exhibitions, and who had brought skill and taste to bear in his arrangement of the court. Captain

Atkin remained in the colony during the whole period of the Exhibition, and he and his courteous assistants delighted in showing visitors round the court and in furnishing information about the exhibits.

The British Government exhibit was arranged in two sections, of which Section No. 1 (Art) was installed in the Art Gallery, and Section No. 2 (General) in the Main Building of the Exhibition, near the northern side of the Main Avenue; this general section occupied an area of 23,760 square feet. The Art Section—which is described elsewhere (see Section X) under its class heading—was under the immediate supervision of Mr. A. A. Longden, himself an artist of repute, who came out from England as special art representative in charge of the pictures.

Section No. 2 included these departments, of which summarised accounts follow:—

Education;	Medals, Coins, and Seals;
Social Economy;	Geographical and Exploration;
Naval Exhibits;	Meteorology;
Military Exhibits;	Photography.

In addition to these a space in the general building was allotted to applied art and architecture.

A remarkably large number of sales of pictures and other works in the British sections during the Exhibition. The total sales amounted to a value of £17,458 9s. 44d. Details of the works of art sold are given in the account of the Art Gallery. In addition pictorial photographs were sold to the value of over £103, and meteorological instruments to the value of £245.

Education.

The whole scheme of the British educational system was illustrated by the numerous exhibits in the Department of Education, emphasizing the resources, varieties, and traditions of education in the British Islands. Every stage of education was represented by pictures and in other ways, from primary schools to special technical schools and the universities. Elementary schools and continuation classes were represented by pictures and plans of school buildings, photographs of classes at work, a series of time-tables, class-programmes, courses of instruction, examination-papers, and worked exercises. The English public schools, including Eton, Winchester, Rugby, Marlborough, and numerous secondary schools of varied types, were represented by photographs of buildings, of classes at work, and of games, together with brief accounts of school life and organization. Various schools of art, music, mining, nautical training, and agriculture sent pictures of their buildings and appliances, details of methods of instruction, and examples of work done by students. In the case of agricultural schools, charts of farms and plots under experimental cultivation were shown. English, Scottish, and Irish universities were represented by photographs of buildings, recreation-grounds, university life, and also by calendars and other publications. There were maps showing the distribution of educational facilities in Great Britain; charts illustrating physical exercises, sets of prospectuses from secondary schools and technical institutions; reports of education authorities. Specimen copies of journals and periodicals touching on educational topics, together with some useful reference-books, were available for consultation by visitors to the court.

In the primary-education section the exhibitors were the Aberdeen School Board; the Board of Education for England and Wales; the Burslem Education Committee; the Commissioners of National Education, Ireland; Church of England Training College, Dublin; Dublin Church of Ireland Directing Schools; the Duke of York's Royal Military School, Chelsea; the Glasgow School Board; Leeds Education Committee; Liverpool Education Committee; London County Council; National Union of Teachers; Scotch Education Department; the Stornoway-Nicoloson Institute, Lewis, Scotland; and the

" Warspite " Marine Society, London. Amongst the most interesting of these were the Leeds and Liverpool pictures showing classes of girls and boys engaged in various lessons, including work in modelling, &c., by young children, nature lessons in the infants' department in Liverpool schools, and blind children at work at various occupations. The training-ship " Warspite " pictures showed this school-vessel moored off Greenhithe, Kent, and there were photographs of the boys at various drills and exercises, including sail-drill, and pictures of seamanship-instruction models on board the " Warspite " ; there was also a pamphlet describing the Marine Society's scheme of an ocean training-ship, the large four-masted ship " Port Jackson," which trades to Australia and carries a large number of boys who are being trained in seamanship and navigation. In connection with the education of physically and mentally defective children, there were

Applied Arts Section in the British Court.

a number of photographs showing these children in Bristol schools, engaged in various useful occupations such as wood-carving, modelling, basket-making, straw-weaving, &c. The British and Foreign Blind Association sent appliances and books, including various styles for writing Braille. Gardner's Trust for the Blind, London, contributed exhibits including numerous photographs of the classes at work at the Royal Normal College and Academy of Music for the Blind, Upper Norwood.

In secondary education there were some interesting photographs showing classes at work in nature-study at the Aberdeen Grammar School, which makes a specialty of botanizing and school-garden work. The great English schools were represented by photographs and books, and included Rugby ; Eton ; Fettes College, Edinburgh ; Dulwich College ; George Heriot's College, Edinburgh ; Hailebury College, Hertfordshire ; Marlborough College, Wiltshire ; and Winchester College (which was founded in A.D.

1382). An exhibit of interest in the Rugby collection consisted of portfolios of drawings, paintings, and designs showing the excellent art system practised in this college The venerable Winchester College buildings and college life were illustrated by over thirty photographs.

A very large collection of photographs, and calendars and other publications furnished the New-Zealander with some idea of the picturesque buildings as well as the educational scope of the great universities. The University of Aberdeen was represented by a number of volumes of records printed for the New Spalding Club of Aberdeen, containing numerous illustrations of the college buildings and portraits of eminent benefactors, teachers, and alumni, and various class records and calendars. Cambridge University was represented by photographic views of a number of books and pamphlets, including an architectural history of Cambridge in four volumes. The historic buildings of Oxford University were illustrated by a number of fine photographs showing the various colleges and many places sanctified by historical reminiscences. One of these was the celebrated Merton Library, which dates back to about A.D. 1376. There were various reports of the Oxford University institutions, examination-papers, and official publications. Another of Britain's ancient universities represented was St. Andrew's, Dundee, of which numerous good photographic views were shown; one of these was of the foreign and the historic theological school known as St. Mary's College, founded in 1537; another was of St. Salvatore's Church, the Church of the University, erected in A.D. 1450. There were pictures of University Hall, which was founded a few years ago as a residence for women students. A touch of modernity was furnished by the pictures of the engineering and chemical laboratories in the University College, Dundee, which was founded by Dr. Baxter, a Dundee manufacturer, in 1880, and made part of St. Andrew's University in 1897. There were also views of the new School of Medicine erected in 1903, and of the Gatty Marine Laboratory, founded by Charles Gatty, F.R.S.E., and presented to St. Andrew's University in 1896. Other universities represented by picture and book were those of Birmingham, Durham, Trinity College (Dublin), the Royal University of Ireland (Dublin), Edinburgh, Glasgow, Girton College (Cambridge), Leeds, Liverpool, London, Newnham College (Cambridge), Sheffield (particularly interesting because of its useful courses in mining, chemistry, and engineering), the Victoria University of Manchester, and the University of Wales.

Specialised Instruction.

In the subsection of Specialised Instruction the most interesting item was an exhibit dealing with art instruction in various British schools. The Board of Education of South Kensington sent a comprehensive exhibit illustrative of work in every branch of industrial art and design. There was a case of reproductions of art objects from South Kensington in metal, coloured plaster, plain plaster, coloured drawings, and photographs; the electrotype reproductions were exact copies of the best silversmiths' work, and the other work of which replicas were shown comprised art work in porcelain, ivory-carving, wood-carving, jewellery, metal-work, and glass. These reproductions exemplified the useful practice of the South Kensington Board in circulating artistic designs and specimens of work calculated to inspire the art student with worthy ideas of beauty of form and decoration. In 1905 the Board lent reproductions and photographs of art exhibits in the Victoria and Albert Museum to various schools of art throughout the kingdom, to the number of more than twenty thousand.

The following is a list of the branches of art work embraced in the collection sent to the Exhibition: Enamels and glass, pottery, lead-work, iron-work, silver-work, jewellery, medals, furniture, carved and inlaid wood, inlaid stone, plaster-ceiling work, woven and printed textiles, carpets, embroidery, lace, bookbinding, leather-work,

carvings in ivory, and lettering and figuring decoration. In addition there were drawings and photographs and portfolios containing some beautiful chromolithographs and autotypes.

From the Belfast Municipal Technical Institute came a number of photographs illustrating the various classes in industrial art. The Crawford Municipal Technical Institute of Cork, which makes a specialty of instruction in lace-manufacture, sent a number of lace-designs as examples of students' work. The Dublin Museum (Department of Agricultural and Technical Instruction for Ireland) sent examples of observation-work, and descriptions of photographs showing the forms of various trees in summer and winter. The Glasgow School of Art sent a number of examples of students' work in the form of life-drawing, painting, &c.

Up-to-date agricultural education in Great Britain was illustrated by photographs and diagrams of scientific agricultural research from Cambridge University (Department of Agriculture), covering amongst other things experiments in pasture-values, analyses of milk, and the composition of root-crops; photographs, diagrams, and various publications from the University of Durham, and Armstrong College, Newcastle-upon-Tyne; diagrams, photographs, charts, and calendars from the West of Scotland Agricultural College, Glasgow; and a number of official publications from the Department of Agriculture and Technical Instruction for Ireland. In the horticultural branch the Essex Education Committee (Biological Department, including the county School of Horticulture) sent maps showing the centres in the county in which instruction in nature-study and in horticulture had been given during the past four years; a plan of the Committee's Horticultural School-garden at Chelmsford, with its various experimental plots, orchard, vinery, &c., and sets of useful publications issued by the Department.

In the mining branch there were shown a number of interesting photographs taken underground by means of magnesium flashlight in the King Edward Mine, the property of the Camborne Mining School in Cornwall, illustrating the facilities provided there for students desiring to acquire practical mining experience and knowledge.

In music there were exhibits from the Royal Academy of Music, London, and the Royal Military School of Music, Hounslow; the former included specimen copies of the diplomas granted by the academy, the Charles Lucas Medal competed for annually by composers, and the students' magazine; the latter school's exhibit contained photographs of the buildings and the students, and outlined the course of study in military music.

Instruction in the science of navigation was illustrated by an exhibit from the Leith Nautical College, Edinburgh, comprising photographs of the college, workshops, and students at work, drawings of students, ship-building designs, and specimens of class-work in mathematics, navigation, and nautical astronomy. There were also photographs illustrating life on board the nautical training-ship H.M.S. "Worcester," off Greenhithe, Kent, which trains boys to become officers in the mercantile marine.

In technology there was a large and carefully classified exhibit that deserved careful study from students in technical art. The Halifax Technical School sent a number of cards and diagrams descriptive of the organization and work of the evening classes of the Halifax schools. A special feature of these schools is the useful course of instruction given in worsted-spinning, weaving, and engineering. There were examples of students' weaving-work in the form of tartans, worsteds of various classes, dress fabrics, silk tapestries, decorative fabrics, heavy tapestries, and carpets. The London Borough Polytechnic had specimens of students' work in the form of book-covers, a book on printing, and various other specimens of industrial skill. A particularly fine exhibit was that sent by the Crafts School in Bethnal Green, London, comprising students' craft-work in the original, and a number of cards containing photographs of students' work. The originals sent included such varied articles as carved mouldings, glazed

tiles, keyhole-shields in copper and brass, and a reflector for electric light. These were the work of students whose ages ranged from fourteen to twenty-one years. The photographs showed all kinds of work illustrating the successful application of art designs to industry, including cornice-mouldings, panels for plaster decoration, wood-carving, matchboard for dado; copper, lead, and brass plaques; picture-frames, brass candle-sconces, and a variety of other work in metal and wood. In addition there were a large number of drawings and decorative designs, including some for printed fabrics and colours. The Northampton Institute, London, sent a number of articles illustrative of work in the mechanical engineering, electrical engineering, and artistic crafts departments of the school. These included some beautifully finished artistic work in the form of chased panels in steel and copper, a carved oak-panel with heraldic designs, and a chased yachting-shield in copper and steel. The Manchester Municipal School of Technology contributed a number of photographs showing its engineering workshops, chemical laboratories, and cotton spinning and weaving works. The Northamptonshire County Council sent photographs and other data showing the scope of the classes held in boot and shoe manufacture in the county. In addition, a number of other universities, colleges, and technical institutions sent calendars, prospectuses, reports, &c., and a number of scientific societies and associations contributed copies of their reports, journals, proceedings, &c., to the section.

Social Economy.

The Social Economy exhibit in the British Section was of particular interest to many a thoughtful New-Zealander, and was one that deserved careful study on the part of the colony's legislators and public men. The collection illustrated by diagrams and otherwise the various social and economical conditions in Great Britain. The subjects included economic resources and organization of industrial workers, industrial remuneration, co-operative institutions, provident institutions, housing of the working-classes, the liquor question, general betterment movement, reformatory schools, public health, and municipal improvements. Particularly prominent were the diagrams contributed by the British Board of Trade, the Post-Office Savings-Bank, the London County Council, and the Metropolitan Asylums Board. The Board of Trade diagrams and the Post-Office Savings-Bank diagrams were both reproduced in handy form for gratuitous distribution to visitors. The Right Hon. Charles Booth, celebrated for his investigations dealing with the life and labour of the people in London, lent his 400 ft. map of London and a complete set of his works. Several of the leading English municipalities contributed statements and reports covering their spheres of work in the direction of public health, the housing problem, police regulations, pauperism, the unemployed, markets and prices, locomotion, &c.

First in importance came the large charts prepared by the Commercial Labour and Statistical Department of the British Board of Trade. These charts were twenty-eight in number and were based on statistics found for the most part in the annual and other reports of the various departments of the Board of Trade, supplemented by reports issued by the Home Office, the Local Government Board, the Department of Agriculture, and Fisheries and other Departments. The first two charts gave the estimated number of persons occupied in various manual-labour groups of trade in the United Kingdom. These showed that the leading industries for men were agriculture, the transport trades, the metal trades, building, mining, and quarrying; and for women domestic service and the clothing and textile industries. The fluctuations in the various numbers in each trade from 1861 to 1901 were also shown. Next there were the charts dealing with employment and the rates of wages, showing fluctuations in employment and the changes in wages in various groups of trades spread over a long period of years. Variations of wholesale prices during the period 1871–1905 for the forty-five staple articles entering

into the national consumption were illustrated by another chart; these articles were arranged in four groups—namely, coal and metals, raw materials of textiles, articles of food and drink, and other raw materials, &c. The fluctuations in the prices for each group were shown. A general fall in prices was shown by the first of these charts to have taken place since 1873; in the second chart a fall was shown to have been common to the four groups of articles included, although not so marked in the case of coal and metal as in the other groups. Other interesting charts showed the prices of wheat and bread in Great Britain for over a hundred years (1800–1905); the fluctuations in the period 1877–1905 in the general level of retail prices of the principal articles of food consumed by the working-classes in London; consumption per head of population of various dutiable articles of food and drink; the percentage cost of eight different groups of articles of food consumed by (*a*) urban workmen's families, (*b*) agricultural labourers and families in London and Wales, Scotland, and Ireland respectively; the number of paupers per 1,000 of population in the British Islands for the period 1856–1905; the total value of Britain's foreign trade; British shipping and railway traffic; production and home consumption of coal and iron, and the home consumption of raw cotton and raw wool; British mercantile shipbuilding; the numbers of workpeople affected by strikes and other trade disputes causing stoppage of work; figures relating to trade-unionism in the United Kingdom, workmen's co-operative societies, and the relative risk of death from accident in certain occupations, besides the fluctuations from year to year, and the total number of deaths from industrial accidents in the principal occupations covered by legislation. In these last two charts a noticeable feature was the high death-rate from accidents amongst seamen, covering a period of the last twenty years. The least dangerous occupation was shown to be that of textile operatives, in which the death-rate from accident per 10,000 employed was shown to be only 0·7, as compared with 58·1 per 10,000 in the case of seamen.

The Right Hon. Charles Booth's social map of London indicated by means of a series of colours the social condition of the inhabitants of the various parts of London. Seven grades of social life were depicted as follows: (1.) The vicious, semi-criminal, loafing, &c. (2.) Very poor class—casual labour, chronic want. (3.) Poor—18s. to £1 1s. a week for a moderate family. (4.) Mixed class—an approximately equal proportion of persons in poverty and in comfort. (5.) Fairly comfortable working-class and others on the same social level. (6.) Well-to-do ordinary middle class. (7.) Upper middle and wealthy classes. Each of these grades was given a distinctive colour. Mr. Booth's first map of this kind was prepared in the years 1887–89, and was the outcome of a desire to portray graphically a great mass of information gathered for the opening volumes of his work "Life and Labour of the People in London." The present map was prepared ten years later (1899–1900), and the particulars as to social condition were the results of visits made by the author or his secretaries in company with police officers to every street, court, and alley in London. In addition there was a large statistical sheet containing the facts graphically presented in the map. There was also a map showing the positions of all the churches, schools, and publichouses in London. This was to accompany the concluding volumes of Mr. Booth's work, in which an attempt is made to gauge and describe the part played by each of these influences on the "Life and Labour of the People." The exhibit also included the seventeen volumes which comprised Mr. Booth's complete work.

The Garden City Association of London contributed several publications and a large number of plans and pictures illustrative of its benevolent objects and work. The aim of the Garden City Association is to promote the relief of overcrowded areas, and to secure a wider distribution of the population over the land—primarily, by advocating and assisting in the establishment of "garden cities" on a predetermined plan, designed to secure healthful and adequate housing, in which the inhabitants shall become in a

collective capacity the owners of the sites; secondly, by encouraging the removal of manufactures from congested centres to the country, and by improving the conditions of existing towns. The principal publications sent were Mr. Howard's book "Garden Cities of To-morrow," which was the genesis of the movement, and "The Garden City Movement," the official handbook of the association. Existing developments on garden-city lines in London were illustrated by books of views and plans of Port Sunlight, the well-planned model village of about six hundred houses inhabited by Messrs. Lever Bros.' employees; the Bournville village near Birmingham, which was largely subsidised by Messrs. Cadbury; and the First Garden City, an estate of about 4,000 acres near Hitchin, Hertfordshire, which is being developed on the principles of the Garden City Association. In connection with First Garden City a block-plan was shown illustrating the general scheme of arrangement of houses on a large portion of the estate, which is to group the cottages around a green in preference to building them facing the ordinary road. Much of the building of these houses is being done by the Garden City Tenants (Limited). This society is a copartnership undertaking, the profit on the tenant's rent, after repayment of principal and interest, being returned to the tenant in the form of share capital.

The British Home Office sent from Whitehall some valuable reports dealing with the regulation of industry and labour, the suppression of crime, and the liquor question, and reports and photographs in great variety illustrating the reformatory and industrial-school system of Great Britain. It was explained that the aim of the Industrial Schools Department has been to effect a compromise between the literary and the practical sides of education, and so far as possible to dovetail the one into the other. The industrial training in these British schools has greatly improved of recent years, and must continue to improve as the principles of technical education are better understood. Not only is an effort made to occupy children at agricultural work, tailoring, shoemaking, carpentry, blacksmith's work, plumbing, &c., in order to inculcate habits of industry, but the theory of what they are practising is explained to them so as to develop the intellect. Above all, the value of drawing as the basis of technical education is now generally recognised. In many of the girls' schools not only do the girls assist in the school kitchen, but the older ones attend definite courses of cookery lessons, and, besides, make and mend their own garments, and receive lessons in dressmaking. The children entering these reformatory and industrial schools are said to be physically the most poorly developed in the country, consequently physical training is an important feature. Small though the boys are, however, the success of the physical-culture course is attested by the large proportion of the boys who find their way into the army and the navy, and by the fact that in open competitions with boys attending ordinary schools they more than hold their own. Over a hundred photographs arranged by the Chief Inspector of Reformatory and Industrial Schools, Old Scotland Yard, London, were shown in illustration of the various phases of the system: these included views of schools, of boys and girls at work, of physical training, of summer camps, and of various training-ships and the boys' life afloat. There were also examples of boys' and girls' work from the Home Office Schools Exhibition at Liverpool, July, 1906. The London County Council sent a large number of diagrams which showed amongst other facts of interest the density of population of the City of London for the past century; pauperism in London and in England and Wales, 1862–1905; percentage of general employment among members of various trades in London and the United Kingdom since 1894; London markets and prices of the necessaries of life; locomotion in London; and diagrams relating to the public health, including one showing the proportion of the London population overcrowded. The Post-Office Savings-Bank of Great Britain and Ireland showed in a large oak frame tables of statistics and diagrams illustrating in a popular manner the growth and development of Post-Office Savings-Bank business since

its inception in 1861. It was shown that, in 1905, 10,000,000 depositors in the bank had £152,000,000 to their credit.

Amongst other exhibits in the Department of Social Economy were handbooks, reports, diagrams, &c., from the Corporations of London, Edinburgh, Dublin, Birmingham, Bradford, Glasgow, Liverpool, Leeds, and Sheffield; the Guinness Trust; Iveagh Trust, London; Metropolitan Asylums Board; and the Scottish Home Industries Association.

Naval and Military.

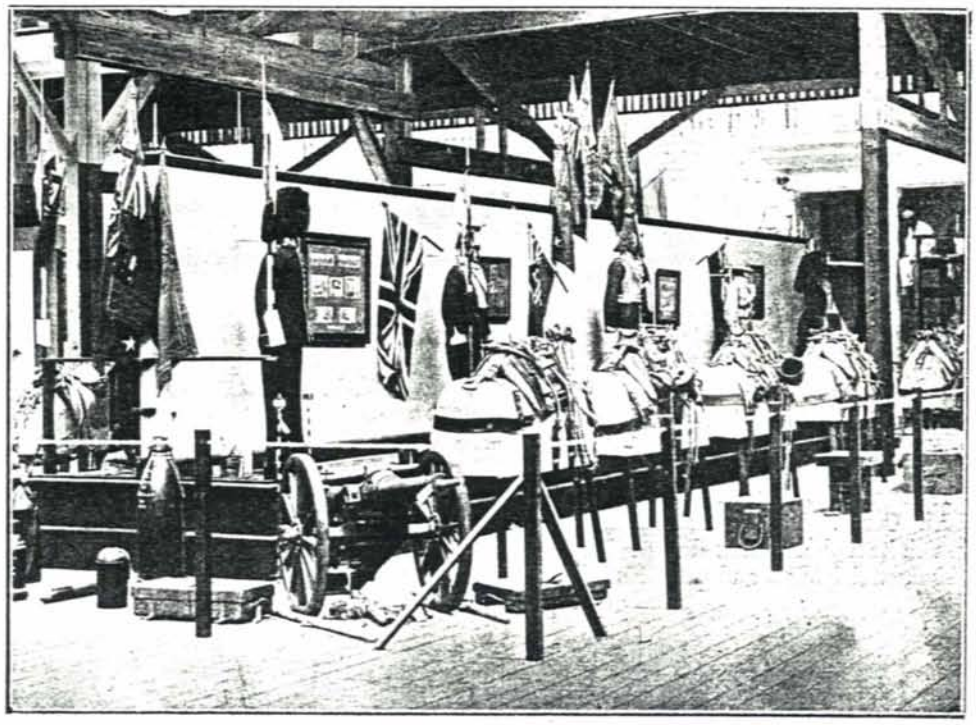
The principal exhibits in the Naval Section of the British Court were two large and beautiful models of the latest British types of floating fortresses: one was a model of H.M. first-class battleship "Swiftsure," built by Armstrong, Whitworth, and Co., at

A Battleship Model in the British Court.

Elswick, for the Chilian Government, and purchased by the British Government in 1903. This great war-vessel has a displacement of 11,800 tons, and the horse-power of her engines is 12,500; her heavy armament includes four 10-in. guns. The other model was of H.M. first-class battleship "Albion," launched at the works of the Thames Ironworks and Shipbuilding Company in 1898; she has a displacement of nearly 13,000 tons; indicated horse-power, 13,500; and included in her thirty-two heavy guns there are four huge 12-in. (46-ton) guns. These models were completely finished in every detail, down to the big guns and every particular of deck furniture. Of considerable interest to New-Zealanders was another exhibit, the detailed drawings of H.M. first-class battleship "New Zealand," which was launched by Lady Onslow at Portsmouth Dockyard in

1904. The "New Zealand" is one of the eight battleships known as the "King Edward VII" class; she is an immense ship, of 16,350 tons displacement, and engines of 18,000-horse power, giving a speed of nineteen knots; armour belting 9 in. thick, and an armament of forty-eight guns, including four 12-in. guns.

The walls of the four bays in the court were hung with photographs of British warships of all classes, including battleships, cruisers, torpedo-boats, destroyers, scouts, sloops, &c. Here one saw every grade of vessel in the great fleet with which Britain keeps the seas, from the huge first-class battleships of the "New Zealand" type down to the little scout "Pathfinder." In all there were about forty fine naval photographs. Some of these pictures were of historic interest, particularly those of the older ships. Most interesting of all, perhaps, was that of H.M.S. "Calliope," built in 1885, and now



THE MILITARY SECTION, BRITISH COURT.

a training-ship on the Tyne. The "Calliope," a handsome square-rigged cruiser, was one of the masted vessels which patrolled the South Pacific towards the end of the "eighties," when most of the British ships on the Australasian Station still used sails as an auxiliary to steam-power. The "Calliope's" wonderful escape from destruction in the hurricane at Apia, Samoa, in 1889, when Captain Kane successfully worked the ship out to the open sea in the face of a gale which wrecked several other warships, will ever be memorable in the naval history of the Pacific.

The British War Office exhibit formed a military museum covering a large area of the court. Every New-Zealander, civilian as well as Volunteer, who visited the court could not but have been interested in the variety of *matériel* for the purposes of

war. Amongst the artillery shown, the exhibit that drew most attention was that of mountain artillery, such as is used in the frequent wars on the hilly frontiers of northern India. The complete 10-pounder B.L. jointed gun, with its carriage, used in these campaigns (each mountain battery has six guns) is so designed as to be separable into the following "loads," each carried by a mule on a specially shaped pack-saddle: (1) Breech end of gun; (2) muzzle end of gun; (3) wheels; (4) axle and small stores; (5) carriage; while the ammunition-mules each carried two filled boxes of shells, fuses, and cartridges. Captain Atkin, the Commissioner, had dummy mules set up in the court, each with its load, to show at a glance this mode of transporting mountain-guns. Other guns mounted in the court were the Maxim and Gardner automatic guns, with which streams of bullets can be fired at the rate of 600 per minute. Of artillery-ammunition every kind was shown, from the huge armour-piercing shell for 12-in. gun down to projectiles for small quick-firers. There were cases, also, showing various stages of the manufacture of ammunition, and friction, percussion, and electric tubes used for firing modern guns. Specimens of harness and saddlery as used by cavalry, artillery, mounted infantry, Royal Engineers, and Army Service Corps were shown, and there were photographs of artillery material of various kinds. A historical collection of shot and shell was included in the exhibit; amongst these relics of past days of warfare were specimens of chain-shot, invented by Admiral De Witt (1666), and formerly much employed for carrying away the rigging of vessels in naval warfare; bar-shot, used for the same purpose; grape-shot; various kinds of projectiles for the old-fashioned muzzle-loading guns; and a hand-grenade, such as were frequently used by the British troops when attacking Maori pas in the New Zealand wars of the "sixties."

The Royal Small Arms Factory sent a collection of rifles, carbines, bayonets, pistols, cavalry swords, and lances, showing various types of weapons which had been in use in the British army. In firearms there was every kind, from the old "Brown Bess" used a hundred years ago to the Lee-Enfield magazine rifle of the latest pattern. The Royal Army Clothing Department sent full sets of uniforms belonging to some of the most famous British regiments—the Royal Horse Guards, 11th Hussars, 21st Lancers, Royal Horse Artillery, Grenadier Guards, the Queen's Royal West Surrey Regiment, the Royal Fusiliers, the Royal Irish Regiment, the Black Watch, and the King's Royal Rifle Corps. These uniforms Captain Atkin had cleverly fitted up on "dummies" which he had constructed at the Exhibition. There were also shown specimens of British regimental badges and war-medal ribbons.

Medals, Coins, and Seals.

Adjoining the Military Section was a splendid collection of medals, coins, and seals sent from the Royal Mint, London. The total number of naval and military medals shown was about 230; in most cases two specimens of each medal were shown. They covered every British campaign during the past century, from Waterloo up to the South African War and the Thibet Expedition, 1903–4. The triumphs of peaceful exploration were memorised by several Arctic and Antarctic medals. In addition there was a collection of English coronation medals, from that of King Edward VI (1546) up to King Edward VII (1902). Of coins, there was a specimen of every current coin of the British Empire. There were photographic representations of British seals and seals of all the British possessions. A particularly valuable and historic collection shown in glass cases was that of the great seals of England from the time of Offa, King of the Mercians, A.D. 790, down to the time of Queen Victoria. Another case contained specimens of the twenty-six gold, silver, and bronze medals of H.M. Board of Trade, for gallantry in saving life at sea, and for assisting British vessels in distress.

At the close of the Exhibition the British Government presented the whole of the military, naval, and coronation medals shown in the court to the Canterbury Museum.

Geographical Exploration and Instruments.

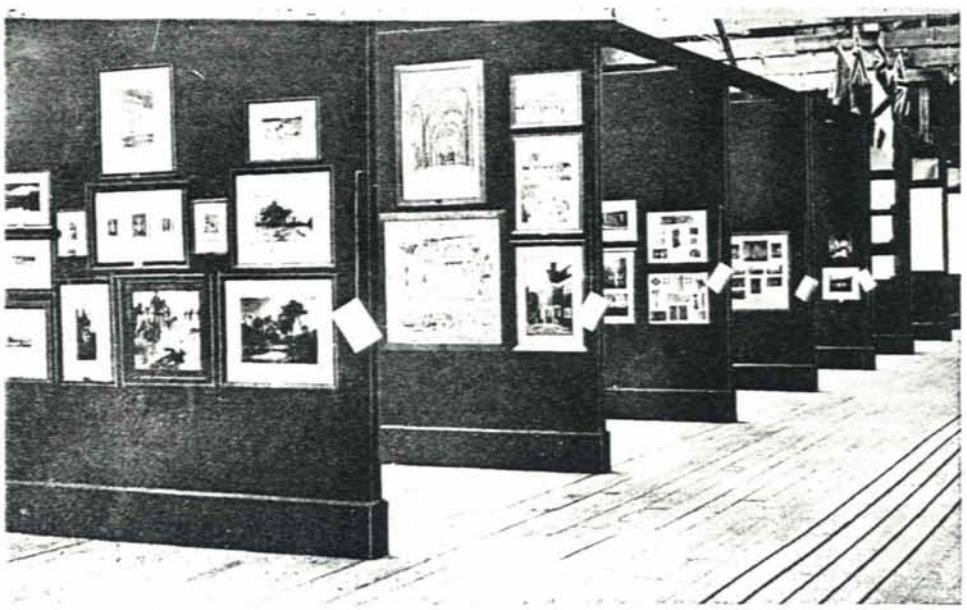
Of particular interest to New-Zealanders and Australians, who have so much to do with pioneer surveying and exploring work, was the exhibit of the Royal Geographical Society, London. This collection included a fine selection of maps published by the society, covering Europe, Asia, Africa, Australasia, America, and the polar regions. One of the New Zealand maps was that showing Mr. J. H. Kerry-Nicholls's travels in 1883 in the King-country, then a purely Maori district. There were a number of excellent photographs taken in the Far South regions of eternal ice by the members of the British Antarctic Expedition, 1902–4;[1] and there was a selection of works published by the Royal Geographical Society in recent years. Specimens of the following instruments as recommended by the society for explorers and geographical surveyors were shown: A 4 in. transit theodolite; Casella's traveller's transit alpine theodolite; pillar sextant, 8 in.; sextant, bridge-handle pattern, 7 in. radius; box sextant, with telescope, &c.; Casella's portable circular artificial horizon; 4 in. prismatic compass; Casella's altazimuth, 4½ in., best cylindrical aneroid; pocket aneroid; watch aneroid; a set of alpine maximum and minimum thermometers; hydrometer; Livingstone's portable rain-gauge; Casella's anemometer; best standard maximum thermometer; best standard minimum thermometer; best standard hygrometer; self-recording barometer or barograph (Richard system); self-recording thermometer or thermograph (Richard system); silver watertight keyless fusee half-chronometer watch, London-made.

Other geographical exhibits were a number of excellent Ordnance Survey maps of Great Britain and Ireland, some of them printed in colours; and a number of large-scale geographical maps illustrating some of the types of maps prepared by the Geological Survey of Great Britain. The Palestine Exploration Fund, which has for its object the accurate and systematic investigation of the archæology, topography, the geological and physical geography, and the manners and customs of the Holy Land, sent a number of beautiful maps of Palestine, including a large photographic relief map, besides a considerable number of the Fund's books published, dealing with surveys, excavations, and researches in that country.

Meteorology.

The British Meteorological Office sent a valuable group of exhibits in illustration of the methods of organization adopted by the Meteorological Office and the institutions associated with it, and of the results obtained from the official weather stations and by co-operation with volunteer observers on land and on sea throughout the world. A selection of charts, diagrams, &c., from those published by the office was on exhibition, together with specimens of the various instruments used and the working-forms adopted. The instruments shown, some of them of the most delicate and exact character, included the various barometers, thermometers, and hydrometers and other instruments used in the ships of the British Government and the mercantile marine; the instruments used in telegraphic reporting stations, including a sunshine-recorder and barograph; and the usual equipment of instruments for a normal climatological station. Some of the most interesting of these instruments were the automatic recording apparatus used at the official observatories (stations of the first order), which included various kinds of barographs and thermographs, and anemometers of different classes, and self-recording rain-gauges. With these instruments were shown specimens of autographic traces from the official observatories, including barograms (records of pressure); thermograms (records of temperature); and anemograms (records of velocity and direction of wind); hyetograms (records of rain) from various rain-gauges; hygrograms (records of the humidity of the air) from Richard's type of instrument; specimens of sunshine-records

from Falmouth, summer and winter, and specimens of sunshine-records for the same dates from the Falkland Islands in the South Atlantic. The self-recording rain-gauges were especially interesting, and included specimens of various kinds from the leading British manufacturers of meteorological instruments. Some recorded by traces the gradual fall of the rain, others at intervals by small tipping-buckets making either a direct record on a drum driven by a clock or else forming an electrical connection by means of which the record was made in a distant office and automatically inscribed at the proper time. There were various charts, reports, &c., showing the latest methods adopted in telegraphic reporting, forecasts and storm-warnings, in preparing meteorological ocean-charts and the various weather reports issued by the Meteorological Office diagrams showing the relation between the yields of wheat and barley in the United Kingdom, the warmth of spring and summer, the rainfall; and a great variety of other charts, maps, and diagrams.



In the Drawings, Etchings, &c., Section, British Court.

In the division of this section dealing with experimental investigations there were a number of instruments used by meteorological observers in the investigation of the upper-air conditions: one of these was a half-sized model of the kites used for raising the meteorograph high into the air for recording the barometric pressure, temperature, and humidity. There were meteorographs consisting of clockwork which turns the paper sheets for receiving the records, and pens actuated by apparatus which is affected by pressure, temperature, &c. There were two new meteorographs for balloons, weighing 3½ oz. and 1 oz. respectively; a photograph of a winch for winding in kite-wire, and specimens of records obtained. Another exceedingly sensitive instrument shown was a micro-barograph for recording the minor fluctuations of atmospheric pressure.

The various instruments in this section, many of them requiring the greatest skill in handling, were carefully set up in position by the Rev. D. C. Bates, of the New Zealand Government Meteorological Office, Wellington.

Photography.

"One of the most notable features in modern life," said the informative introductory note to the list of the exhibits organized by the Royal Photographic Society of Great Britain, "is the widely extended use of photography, not only as a pictorial art for producing pictures from nature in monochrome or colour, which in point of æsthetic merit may well rank as works of fine art, but as a graphic art of universal application for the illustration of books, newspapers, administrative reports, and public documents of all kinds, as well as for reproductions of works of art by photo-mechanical processes akin to wood or copper-plate engravings and lithography. It has become absolutely indispensable in all branches of scientific investigation as a means of truthfully and automatically recording observations of phenomena or delicate details of structure, which would be quite beyond the power of the skilled draughtsman to portray. It may fairly be said that few of the applied sciences enter so largely into our daily life as photography."

The two branches of photography referred to—the pictorial, and scientific and technical photography—were illustrated by a large collection of pictures numbering 270, shown on the walls of the various bays in the British Court.

In purely pictorial work there were many exceedingly beautiful triumphs of the camera, many of them showing that subordination of detail and broadness and suggestiveness of effect that almost persuaded one they were the productions of a brush or crayon artist instead of the work of a mechanical photographer. The examples shown were representative of the best modern English pictorial photography, the encouragement and advancement of which is one of the principal objects of the Royal Photographic Society. The artistic photographs shown included all sorts of subjects, from landscapes and seascapes to portraits, and numbered 132. Some particularly beautiful photographic effects were those in some of the pictures of twilight, evening, and sunrise.

In the scientific and technical photography subdivision there were numerous examples illustrating the marvellous manner in which photography has been applied to observation and recording of astronomical phenomena. The Royal Observatory, Greenwich, and other British observatories' exhibits showed daily records made of the sun's disc, and various records of the starry world. In connection with astronomy there were two particularly interesting views sent by the Solar Physics Observatory, South Kensington, illustrating researches made by Sir Norman Lockyer into the religious-astronomical monuments erected in Europe, Egypt, and elsewhere thousands of years ago. There were views of the Stone Circle at Boscawen-Un in Cornwall, which is believed to have been built and used for astronomical observations by the ancient inhabitants of Britain about 2000 B.C. From a careful survey of a number of British stone circles, including this one, Sir Norman has arrived at the conclusion that these monuments and the outlying monoliths near them were erected for religious-astronomical purposes during the period 2300–1200 B.C. A stone circle was erected on a plain having a clear horizon, and outlying stones and barrows were set up in such positions that the rising of the sun on one of the festival days would take place at that point on the horizon tipped by the apex of the stone or barrow. At certain seasons—*e.g.*, the May festival (our modern May Day)—it was necessary for the astronomer-priests to prepare a sacrifice by the time the sun rose, and in those cases outlying stones were erected to mark the rising-point of a bright star which appeared on the horizon about an hour before the festival sunrise, thereby giving warning of the coming of the principal luminary.

There were several curious shadow-pictures produced by the action of the X-rays, particularly Dr. Rodman's radiographs of mollusca and Dr. Holland's surgical radiographs.

Moonlight photography was represented by two photographs taken by Sir W. Abney, which were of interest as showing that satisfactory pictures might thus be made.

Dr. Vaughan Cornish, who has made a close study of wave-motions, sand, snow, and water, sent several illustrations of water-waves, ships' waves, roll waves, and stationary waves, which were particularly instructive as exemplifying the value and capabilities of the modern methods of photographing objects in rapid motion. Another remarkable example of this was seen in the photographs of flying bullets by Professor Boys, lent by Messrs. Newton and Co. Photo-micrography, another important development of scientific photography which is applied to all branches of science, was represented by numerous exhibits, some of which illustrated the structure of nickel, steel, iron, and other metals, and some of the subtle changes that take place in metals under variations of physical conditions.

In meteorological photography there were some excellent photographs of cloud-types by Captain Wilson-Barker, R.N.R. Some good examples of work with the tele-photographic lens were exhibited by Mr. Bagot Molesworth, one of them being a view of Mount Vesuvius from eight miles off, and another a peak of the Pyrenees, photographed at a distance of thirty-two miles. This method of photography, by which an enlarged image of distant objects is obtained on a lens, has great possibilities for military purposes.

In vulcanology, Dr. Tempest Anderson showed a number of good photographs illustrating the recent eruptions of Vesuvius and Stromboli.

The London County Council School of Photo-engraving and Lithography contributed a number of illustrations of spectrum tests of various autochromatic photographic plates, together with results of experiments made to ascertain the absorption of various dyes, &c., used in making colour-filters for three-colour-printing work. These results were of considerable interest to colour-printers.

Among other technical applications of photography illustrated were specimens of photogravure-process blocks and reproductions in black and white and in two colours by the Swan Electric Engraving Company, of London.

The Autotype Company, of London, exhibited some excellent reproductions by the photo-collotype process, and an illustration of the process showing the gelatine film on glass before inking, the plate inked ready for printing, and the finished print. The Autotype Company also sent a copper plate of medals produced by their photogravure process, steel-faced in order to harden the surface, and ready for printing, with a print from the same.

Photographing in colours has always been an interesting problem to photographers, but it is only recently that any successful practical results have been obtained—these by an indirect method, in which the rays forming white light are separated into three groups, corresponding to the three primary colour-sensations, red, green, and blue-violet. Two good specimens of prints photographed in colour from nature were sent by the Rotary Photographic Company, of London, one of still life and the other a village scene.

Some clever and curious pictures of animal-life were included in the collection—among them Mr. Martin Duncan's "Octopus attacking a Crab," Mr. Oliver G. Pike's studies of birds, and W. Farren's photos of birds and bird home-life.

British History Ceremonies and Old Customs.

A collection of ninety-two excellent history photographs taken and exhibited by Sir Benjamin Stone, M.P., of Birmingham, illustrated in a manner that particularly interested New-Zealanders some of the immeasurably ancient festivals, ceremonies, and customs that are preserved to this day in the British Isles. The object of Sir Benjamin Stone's work is to preserve a permanent pictorial record of current national life and

history, and the collection shown was a carefully selected series chosen for the purpose of illustrating the peculiar educational value of such pictures. To dwellers in this new country there was much food for thought in these illustrations of quaint old customs, all of which dated back for many centuries, and some of them for thousands of years. Amongst them were pictures of the May Day Festival at Knutsford, with the May Queen and the morris-dancers and the picturesque processions. How many know that the origin of May and the May Queen can be traced back to Maia, the mother of Mercury, to whom the Romans offered sacrifice? May Day ceremonies are said to be an intermixture of the observations in the ancient homage paid to Maia and to Flora, the goddess of flowers. Another ancient custom illustrated, the origin of which is lost in the mists of remote antiquity, was the Baal fires, kindled at Whalton and elsewhere in Northumberland on St. John's Eve and Midsummer Eve. There were pictures of the villagers bringing in and building up the piles of faggots, and the Whalton bonfire prepared for lighting. These midsummer fires are said to be a survival of an exceedingly ancient pagan rite—the fires which the Phœnicians used to kindle in honour of the god Baal. The Great Pole Fair held at Corby once every twenty years, which commemorates the charter granted by Queen Elizabeth in 1585, and confirmed by Charles II in 1682, freeing the men of the parish from town and bridge toll throughout the kingdom, and from serving in the militia and on juries, was illustrated by three pictures taken on the 19th May, 1902. These pictures showed the Chairman of the District Council reading the charter in public, and the custom of "poling" and "chairing" strangers entering the village, and the placing of officials and visitors in the village stocks until they have paid some small toll. The celebrated Welsh Eisteddfod or gathering of the national bards of Wales was illustrated by three pictures, showing the opening of the bardic meetings (the survival of the ancient Druidic meetings) at Bangor, and the installation of a chaired Bard at Bangor in 1902.

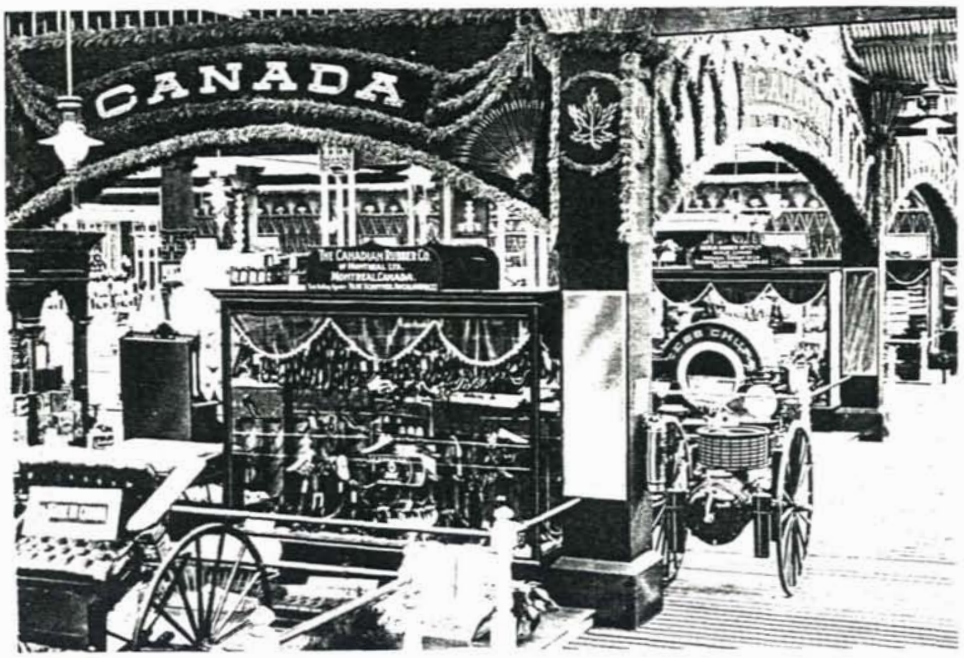
Five photographs illustrated the ancient custom of "Tynwald Day" in the Isle of Man, when, according to immemorial usage, the laws of the island are read publicly on the Tynwald Hill—an annual ceremony—in Manx and English. This ceremony dates back to the days of the sagas and the sea-kings. The photographs were taken on the occasion of the Tynwald gathering on the 5th July, 1900. Other photographs illustrated the Guy Fawkes search, which has been kept up from the time of the Gunpowder Plot to the present day, when the vaults of the Houses of Parliament are diligently searched early on the first morning of the session. There were pictures of the Green-hill Bower Day or Court of Arraye, including a display of the town's arms, which has been kept up in Lichfield since the days of Queen Mary; views of the historic Tower of London; that singular survival of primitive nature festivals, the Cornish Flower Dance or "Furry," which is kept up with great merriment at Helston in Cornwall on the 8th May, called "Furry Day"—really Flora Day; the Hocktide festival observances in the old-fashioned town of Hungerford; the "Horn Dance," an ancient custom at Abbott-Bromley, Staffordshire; the collection of "wroth money," a relic of the ancient feudal days, at Knightlow Hill in Warwickshire, by the Duke of Buccleuch; "Garland Day" at Abbotsbruy, Dorset—a survival of the ancient festival of Neptune; the ancient ceremony of dressing the wells with flowers at Tissington in Derbyshire; Highland sports and pipers' competitions, and the Harvest Home at Whalton, Northumberland, a survival of the ancient festival of Ceres.

Besides these there were a great number of pictures of places and objects of historic interest in Great Britain, to annotate which would be to write a book of history. A fine series of pictures illustrated Westminster Abbey. Then there were pictures of Windsor Castle; many fully illustrating the gorgeous scenes at the coronation of King Edward VII, and a number of the British Houses of Parliament. Other historic pictures showed some of the most venerable baronial halls and ancient castles and manor-houses, and

a variety of other memory-haunted spots, from the immeasurably ancient monoliths and trilithons of Stonehenge, set up by the labour of a long-vanished race, to the great Roman wall across Northumberland, and various places at Stratford-on-Avon associated with the memory of Shakespeare.

THE CANADIAN COURT.

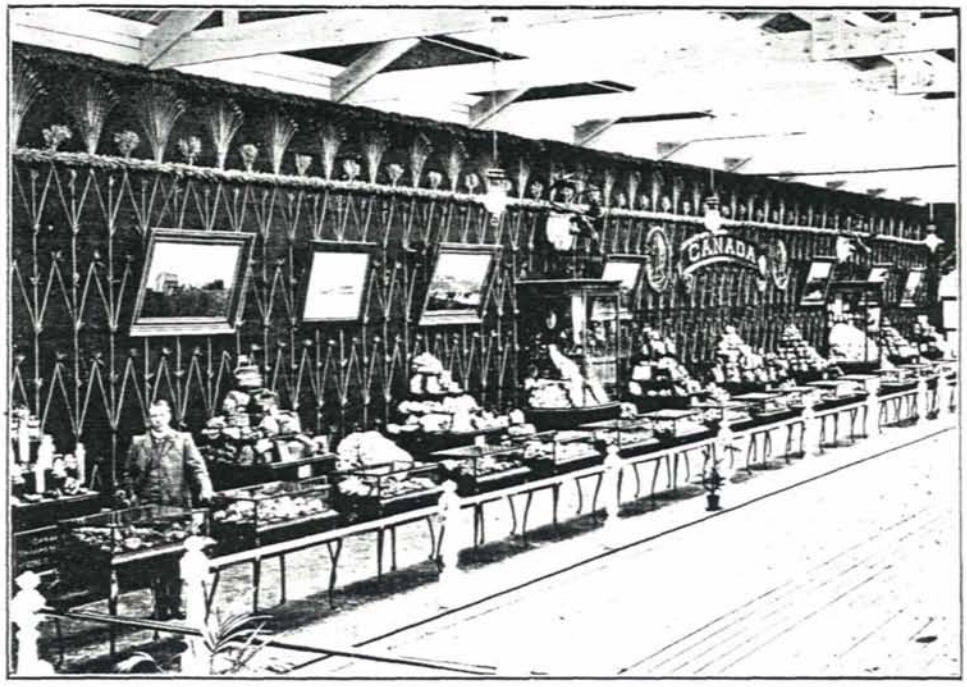
Incomparably the finest commercial and industrial display from outside the boundaries of New Zealand was that furnished by the Dominion of Canada. In beauty of general arrangement and in the skilful exhibition of its immense variety of contents, it was a model court. New-Zealanders were not unfamiliar with the enormous range of natural resources and wealth that the great Dominion possesses, but the extraordinarily varied



IN THE CANADIAN COURT.

character of her products and the excellence of quality of the article manufactured from the raw material was an eye-opener equally to the business man and the manufacturer and to the ordinary sight-seeing visitor. Canada well recognises the solid advantages of advertisement to be gained from international exhibitions, and no great fair is held in any part of the world that does not include an attractive Canadian Court in which the products of the Dominion are set out. The Dominion spends about £50,000 annually in this way, and considers the money expended a good investment. Canada, it was made clear by her Commissioners at the Exhibition, does not seek to draw settlers from New Zealand, well knowing the climatic and other advantages of this country; but she desires to promote trade relations between the two countries, to induce New-Zealanders to take the Canadian route on their travels to the Old Country, and generally to foster a feeling of close friendship.

The Canadian Court was located in the south-eastern portion of the Exhibition Building, near the Armagh Street entrance. It had a pavilion-front of its own, with a special entrance. The design of the pavilion corresponded with that of the Main Building; the pediment over the entrance bore ornamental designs of corn-sheaves, symbolizing Canada's great agricultural industry. The frontage of the court was 152 ft. The total space occupied was 21,900 square feet; the floor and wall-space devoted to exhibits was 18,000 square feet. The entire court was surrounded by a series of graceful and decorative arches which plainly defined the bounds of the display. The scheme of decoration was exceedingly handsome, with a simplicity that made it doubly effective in an artistic sense. The wall-space was covered with red art muslin, which was panelled with wheat sheaves and ears and stalks arranged in a variety of beautiful designs, some



THE MINERALS SECTION, CANADIAN COURT.

forming interwoven arches, others fan-like sprays and chevron-shaped patterns. On every arch the name "Canada" stood out prominently, surrounded by a border of corn-sheaves, and everywhere was the maple-leaf, Canada's national "totem." The tasteful and handsome adornment of the walls of the suite of rooms occupied by the Commissioners was especially admired; it set a fine example of art decoration to the other courts in the Exhibition.

To the New-Zealander and the visiting Australian the court was indeed an education in matters Canadian: the careful arrangement and classification and adequate labelling of the exhibits enabled one to readily gather a good idea of the scope and quality of the whole display. To further insure that the visitor should learn something definite about the great Dominion, he was presented with books and booklets dealing with the country,

its industries and its progress, from the copious Government handbook, similar to our New Zealand Year-book, down to a dainty little pamphlet containing "One Thousand Facts about Canada." Most people knew in a general way that Canada was the great granary of the world, and there was a vague impression that her chief products were wheat and snow, but the publications issued in the court furnished in convenient tabular form an immense amount of useful information about the Dominion, and assuredly no one who walked through the aisles of Canada's glittering court, even if he only glanced at the pyramids and cases and piles of raw material and the array of manufactured goods on either hand, could fail to come away vividly impressed with the present vast importance and incalculably enormous possibilities of Canada's great industries.

SOME CANADIAN MINERAL EXHIBITS.

The exhibits to which the court was devoted consisted of minerals, agricultural products, fruits, machinery, and general manufactured articles in great numbers and variety. The mineral section was probably the one that most impressed the visitor with the Dominion's wealth-producing capacity. In this division no opportunity was lost of impressing the visitor with the immensity of the treasure that lies beneath Canada's soil. Placards announced that "Canada produces a greater variety of economic minerals than any other country in the world"; that "Canada has 100,000 square miles of coal-bearing area"; "Canada has the largest asbestos-deposits in the world"; "Canada has the largest cobalt-deposits in the world"; "Canada produces more than half the world's supply of nickel"; and "Canada produces the highest quantity of mica for electrical purposes in the world." The metals and their ores shown included gold, silver, iron, zinc, copper, lead, mercury, antimony, nickel, arsenides and silver,

magnetite, manganese, chromite, tungsten, and molybdenite. Alluvial gold and auriferous ores were shown in great variety from different parts of the Dominion. Since 1862 Canada has produced over £40,000,000 sterling in gold, and in the year prior to the Exhibition the total gold-yield was close upon £3,000,000 sterling. More valuable, however, than the gold are Canada's great coal-seams, from which her miners hewed in 1905 anthracite coal, bituminous coal, and lignite to the value of over three and a half millions sterling. The iron-deposits of Canada, too, are of immense value; there are about a dozen iron-smelting works in active operation in the Dominion. Of other minerals there was a good display of asbestos, of which Canada supplies the best kind. The Dominion produces about 90 per cent. of the world's supply of this valuable material, the demand for which is continually increasing. The exhibit showed every form of this

CANADIAN VEHICLES AND OTHER MANUFACTURES.

product and its uses, from the raw rock to asbestos rope and cloth. Another mineral exhibit carrying special interest consisted of specimens of mica, which comes from Canadian mines in thick slabs several feet in superficial area. In addition, there was a display of the various articles of manufacture in which it is used in Canada. Calcium-carbide, from which acetylene gas is developed, was also shown. Corundum, a valuable substitute for emery, used for grinding and polishing purposes, was another useful mineral of which samples were shown. In building-stones, marble, granite, and syenite of beautiful grain were exhibited, and samples of other building-materials brought out from Canada were sandstone, limestone, lime and cement, gypsum, brick and terra-cotta work, and roofing-slabs.

The fact that Canada, with her immense area of arable land and her bounteous fertility, is one of the greatest grain-producing countries in the world, was brought to

mind by a large stand of splendid samples of wheat and other cereals, produced on the great plains of the central portion of the Dominion. Canada produces annually nearly 300,000,000 bushels of grain of all kinds, and in 1906 the estimated yield of her wheat-crops was 90,250,000 bushels. From Montreal and Toronto, and also from Victoria and British Columbia, came excellent samples of flour, oatmeal, rolled oats, flake oatmeal, self-rising pancake-flour, and other milled grain-products. From a large meat-packing company in Ontario there was a first-class display of bacon of all kinds and potted meats. The dairying business, which is attaining such large dimensions in Canada, and which is being conducted on scientific lines much as in New Zealand, was illustrated by excellent samples of cheese of various kinds from Toronto, besides some condensed milk. Fruit-growing, which has become within the last few years one of Canada's most

CANADIAN FRUIT EXHIBITS.

important industries, was represented in the court by some excellent samples of the products of the orchard. There was a beautifully arranged display of bottled fruits of the most inviting character in a central position in the court, besides some splendid fresh apples, the principal fruit grown. In a recent season Canada's total production of apples was considerably over 40,000,000 bushels. Most of the apples shown in the court came from the great fruit-orchard known as Coldstream Ranch, the property of Lord Aberdeen, in the Okanagan Valley. The chief bottled fruits shown were peaches, pears, and plums.

Canada's immense forests are one of her main sources of wealth; the total exports of the products of the lumberman's business during a recent season reached the value of over £7,000,000. The manufacture of wood-pulp is one of her great industries; scores of pulp-mills are working, and there are many paper-mills. In the enormous pine forests

of the Dominion there is an inexhaustible source of the raw material for paper-making; New Zealand already imports a good deal of this from the Dominion. Every stage of the manufacture of paper was illustrated in the Court, from stacks of spruce and other timbers to the pulp and the finished article, ranging from the finest note-paper to all kinds of machine-printed wall-paper and the great rolls on which the daily newspapers are printed. Besides the manufacture of paper, Canada uses wood-pulp for making a great many articles, from cotton-wool to carpets and boots, car-wheels and steampipes. Samples of these were shown, and also examples of the way in which the pulp is being turned to account for such useful indurated-fibre ware as buckets and pans. It was wonderful to think that all these different articles were made from the same raw material as the daily newspaper.

That famous product of the great Canadian woods, the sugar yielded by the maple tree, was one of the many interesting features of Canada's Court. A large supply of maple-syrup, which had been brought to Christchurch by the Canadian Commissioners, was converted into thousands of cakes of sugar each weighing 2 oz., and these cakes were all distributed to the young people visiting the Exhibition. This sugar, it was explained to visitors, is made from the pure sap of the maple-tree, which runs very freely in the spring-time, when the trees are tapped by boring auger-holes. Under favourable conditions an average sugar-maple-tree runs from eight to twelve quarts of sap per day. This sap is boiled down into sugar; it takes about ten quarts of sap to make a pound of sugar. This sugar is not the only thing for which the maple-tree is useful, for it is a valuable timber-tree, and it does not seem to be injured by the sugar-tapping. Not only is it a useful tree, but it is one of the most beautiful in the American forests, and its handsome red and golden leaf is Canada's national emblem.

Another interesting and attractive exhibit, the product of the forests, was a collection of the beautiful canoes for which Canada is famous, built on the shapely model of the Indian canoes, but of thin cedar-planking instead of the olden birch-bark. Light and graceful craft, that brought up a mind-picture of the canoe that came to Hiawatha as he stood on the shores of "Big-Sea-Water"—

> A birch canoe with paddles
> Rising, sinking on the water,
> Dripping, flashing in the sunshine.

These canoes (made at Peterborough, Ontario) are beginning to come into use in New Zealand, and indeed they would be exceedingly well suited for many of our inland waterways, and provide a delightful means of exploring shallow rivers and creeks and for enjoying the thrilling sport of running the rapids of the Wanganui and similar streams. The Maori dug-out canoe, being so thick and solid, is safer in navigating snaggy rivers; the advantages of the Canadian canoe, on the other hand, are its extreme lightness and handiness, and its good carrying-capacity on a draught of a few inches.

The manufactured articles in the court numbered many hundreds, and it is hardly possible to enumerate them all here. Some of the most eye-pleasing were the products of the woodwork factories, in the way of beautifully finished furniture made from Canadian oak and other ornamental woods. The bentwood chairs for which Canadian factories have such a fine name were shown in various styles; these came from a large furniture-factory at Owen Sound, Ontario. The tables, chairs, and desks exhibited were all highly finished, and combined exceedingly well utility with artistic design. Then there were beautiful pianos and organs, splendidly finished and of the highest quality and tone; wheel vehicles of good useful patterns and the best workmanship; harvesting-implements, cultivators, seeders, lawn-mowers, and general agricultural implements of all kinds; cheese-factory, creamery, and dairy machinery; windmills and pumps, hose-towers, signal-towers, steel structures, hydraulic rams and general water-supply appliances—all from great manufacturing establishments in the Province

of Ontario. Amongst the miscellaneous items were a pyramid of bottles of Canadian whisky; a display of bicycles, automobiles (gasoline and electric); railway motor-cars, and gasoline and oil engines of various kinds; boots and shoes of all kinds, and a varied collection of the rubber footwear so largely made in Canada; sewing-machines, musical instruments, children's toys; typewriters; a display of woollen fabrics from Nova Scotia; ladders of all kinds of the latest and most useful patterns, and a great variety of other products of Canadian manufacture.

The offices comprised two Commissioners' rooms, a general office and a reception-room, decorated with the same taste and skill as shown in the court outside, and fitted with Canadian oak furniture specially brought out from the Dominion for the purpose. On the outer walls were mounted some exceptionally fine specimens of heads of moose and caribou, Canada's big game; and there were many large pictures illustrative of Canada's agricultural districts and its general scenery. The Canadian Pacific and the Grand Trunk Railways, the two transcontinental railways, also had excellent views on exhibition, illustrating particularly the grand mountain scenery traversed by their lines.

Mr. T. H. Race and Mr. W. A. Burns, the Canadian Commissioners, were accompanied to the colony by three experts—Mr. R. L. Broadbent, mineralogist; Mr. A. W. Despard, in charge of the decorations; and Mr. H. C. Knowlton, in charge of the fruit and other food exhibits: and to the experience and skill of these gentlemen the excellent arrangement and general attractiveness of the court were very largely due.

The Premier, Sir Joseph Ward, received the following message from the Premier of Canada on the opening-day: "Canada sends greetings to the sister colony on the opening of the Exhibition to-morrow, and best wishes for success. Much gratified to participate, and trust that Canada's exhibits will add interest.—LAURIER."

Replying to Sir Wilfrid Laurier's message, New Zealand's Premier sent the following: "Premier Laurier, Ottawa.—New Zealand heartily reciprocates and appreciates Canada's good wishes. Exhibition magnificent success. Canada's display a credit to your country, and hope the forerunner of increased commercial relations.—WARD, Premier."

THE CANADIAN COMMISSIONERS.

The Canadian Commissioners were Mr. T. H. Race, representing the Government of Canada, and Mr. William A. Burns, commercial representative of the Dominion.

Mr. Race, a tall courtly gentleman of the old school, won high popularity during his stay in New Zealand. Canada could have sent no more fitting representative to uphold her dignity and traditions in her far-removed sister Dominion. He never wearied of receiving visitors in his court, of furnishing information to inquirers regarding his country and the splendid specimens of its industry on exhibition; and, as an after-dinner speaker at the numerous official and social gatherings held in Christchurch during the Exhibition season, he was extremely felicitous, and lost no opportunity of making manifest his admiration for these lands of the Far South. Mr. Race, although an American for so many years, was born in the north of England. He went to Canada in the early "fifties" with his parents, who settled near the town of Port Hope. When the American Civil War was raging in 1863, young Race left school and went south, bent on seeing something of soldiering life. He served for some time in the Confederate forces, "but before long," he says, "I discovered that the great cause of justice and right was really with the North, and I left my Southern corps as soon as I could." Joining the Federal army, he witnessed some of the most famous events in that great struggle, and at the end of the war returned to his home, and for several years worked as a farmer. Subsequently, after some experience of business pursuits, Mr. Race became a journalist, and for nearly thirty years he has been a prominent Canadian newspaper-

writer. He has always been closely in touch with agriculture in its various branches, and is particularly interested in fruit-culture. During his life in Canada he has held many positions of honour and influence, and has had considerable experience of international-exhibition work.

Mr. William A. Burns, Canada's commercial representative, is a Canadian by birth. He was some years ago appointed with Colonel William Hutchison to the Exhibition Branch of the Dominion Government. For many years he was a commercial traveller in Canada, and during the last six or seven years has been representing his Government at Exhibitions in different parts of the world. His special mission is to promote trade and to disseminate information regarding the scope and possibilities of the Dominion's immense natural resources and the high quality of her manufactures.

AUSTRALIAN COURTS.

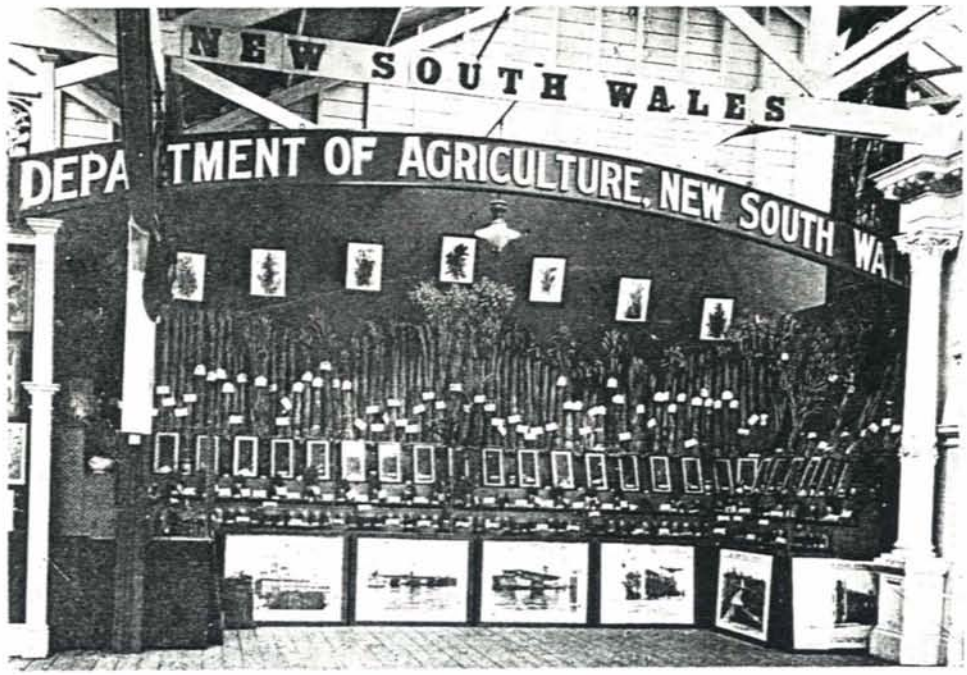
NEW SOUTH WALES.

New South Wales, New Zealand's mother-colony, the nearest of the Australias and the one which has from the earliest times held the closest commercial relations with this country, was represented at the Exhibition by a court of proportions and wealth of contents befitting the senior State of the Commonwealth. This court occupied an area of 10,000 square feet in the southern section of the Main Building, and in decorative art had considerable claims to admiration. A conspicuous feature was a handsome State arch, upheld by three massive columns and flanked by a Corinthian colonnade, in fibrous plaster, surrounding the court. A fine wool arch, emblematic of the State's greatest source of wealth, stood near the principal entrance. Within the court were

THE FRONT OF THE NEW SOUTH WALES COURT.

the offices of the State official representatives—Mr. H. C. L. Anderson, Executive Commissioner for New South Wales; Mr. W. G. Durie, Executive Secretary; and Mr. Larcombe, Mineralogist.

The exhibits in the New South Wales Court were classified in a number of well-defined sections. The Lands Department of New South Wales made a large display of maps and diagrams. The recently established Intelligence Department and Tourist Bureau showed a collection of photographic enlargements illustrating the industrial, pastoral, and agricultural resources and the attractive tourist resorts of New South Wales. The Lands Department Forestry Branch sent a collection of representative samples of the commercial timbers of New South Wales, dressed, undressed, and in the rough, together with manufactured articles in the rough, and specimens illustrating



New South Wales Agricultural Exhibits.

the durability and life of the timbers. The Agricultural Department of the State made a fine display of orchard-products, grains, grasses, &c., including every kind of article raised from the soil, from apricots to cider and olive-oil, and wheat, barley, oats, fodder-grass, peas, and other legumes. The New South Wales Department of Public Instruction sent exhibits of students' work from the Sydney Technical College (these were placed on view in a separate bay near the southern entrance of the Exhibition). The Department of Public Instruction also sent exhibits from the Technological Museum, Sydney. These consisted of manufactured articles made from New South Wales timbers, and samples illustrating the special qualities of the hardwood timbers; specimens, both rough and polished, of trachyte, granite, and Pyrmont sandstone; models of the edible fishes of New South Wales; samples of different kinds of New South Wales wools,

illustrating their manufacturing properties, and an exhibit of specimens of essential oils, illustrating the result of years of research by the Museum in connection with the essential oils of the State, and demonstrating the commercial possibilities of these oils, especially those of the eucalypt. The Mines Department and other exhibitors sent a great collection of exhibits illustrating the State's mineral resources. Then came exhibits from private firms throughout the State illustrative of nearly every important industry and manufacture in New South Wales. These exhibits included such diverse

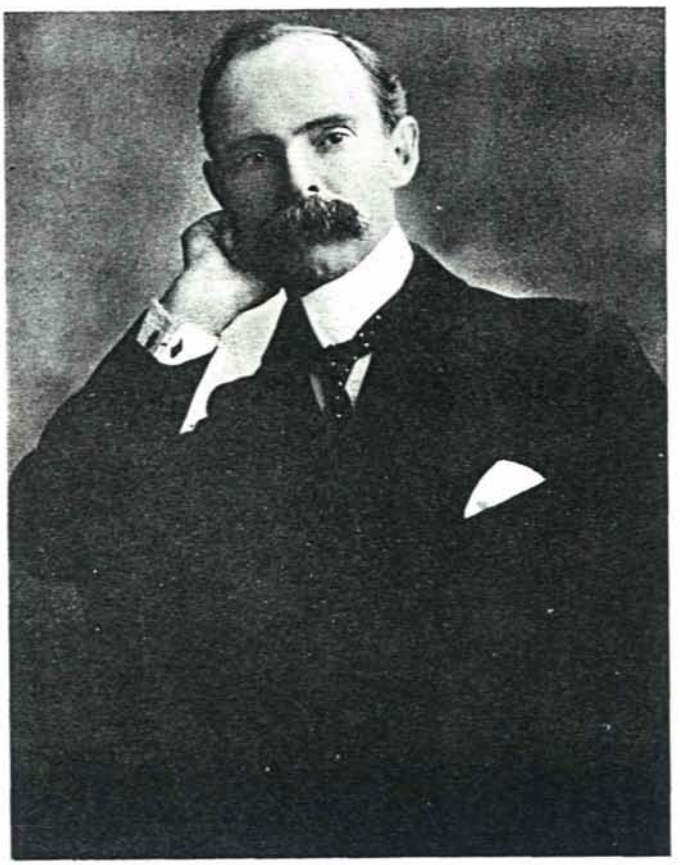
MR. H. C. L. ANDERSON, EXECUTIVE COMMISSIONER FOR NEW SOUTH WALES.

articles as specimen fleeces of wool, specimens of wines made in the State, soaps of all kinds, foods manufactured from New South Wales cereals, biscuits, pianos, billiard-tables; tweeds, &c., made from New South Wales wool; manufactures from white-marble quarries; bars of pig lead and other mineral products from Broken Hill; agricultural implements; a pyramidal trophy of bottle-manufacture; potash minerals and products of various kinds; coachbuilders' and wheelwrights' materials and parts; collections of furs from New South Wales animals, and skins of native birds; paintings in oils of Australian flowers; boots and shoes; stained-glass windows; grass-seed; and a model of an up-to-date wool-shed.

A collection of representative samples of the State's commercial timbers included some beautiful specimens, particularly those of the celebrated Australian hardwoods.

Australian Timbers.

There was the ironbark, dark red in colour and tough and durable, so much used for railway sleepers, piles, bridge-construction, and beams in large buildings; there was the red-cedar, a very valuable timber, dark red and beautifully marked; there were specimens of the Australian rose-wood (so called because of its scent), of much value in furniture-making, shipbuilding,



Mr. W. G. Durie, Executive Secretary, New South Wales Court.

&c.; the white beech, one of the most useful of indigenous timbers; the durable and elastic silky oak, fine-grained and prettily marked; the tough and useful red mahogany; the Sydney blue-gum, light red in colour, strong and lasting; the spotted gum, used for shipbuilding, wheelmaking, &c.; specimens of the lofty blackbutt eucalypt, so highly prized for house carpentry, shipbuilding, bridge-planking, and street-paving blocks, and about equal in strength to the tough ironbark; the grey-gum, and other hard, heavy, tough, and useful timbers; the woolly-butt, a eucalypt that has been known to keep sound for more than fifty years; the stringy bark, the bark of which is used for roofing

sheds and country dwellings in Australia, much as the Maoris in New Zealand use the *tangai*, the thick bark of the totara-pine; the close-grained grey boxwood, used for a great variety of purposes; the turpentine-tree, used for piles and posts, and as such said to be almost imperishable; the white mahogany, a good railway-sleeper timber. Samples of paving-blocks were shown in tallow-wood, blackbutt, grey-gum, Sydney blue-gum, red mahogany, and brush-box. Railway-sleepers were shown cut from the two iron-barks, the red and white mahogany, tallow-wood, blackbutt, grey-gum, and grey-box.

The great wool industry of New South Wales was illustrated by some splendid samples of the staple commodity of the State, from the finest merino clothing-wool to the many excellent grades of crossbreds. New South Wales at the time of the Exhibition season had about 44,000,000 sheep to shear. The specimens of wool shown were suitable for the manufacture of any and all kinds of fabrics, from the finest merino dress goods down to horse-rugs. The breeds represented in the collection were merinos, crossbreds, pure Shropshire Downs, and Lincolns. There were also shown wools in the greasy, scoured, and dyed states to illustrate the different stages of manufacture; specimens of cards for carding-machine used in the process of converting wool into yarn or thread; unfinished and finished cloth, &c.

The Mines of New South Wales.

One of the most interesting of mineral displays in the Exhibition was that made in the New South Wales section, arranged by Mr. C. O. G. Larcombe, of the New South Wales Geological Survey, acting under the direction of Mr. E. F. Pittman, A.R.S.M. The immense mineral resources of the State were illustrated by specimens of almost every known mineral, not jumbled together in an unattractive mass, as is too often the case with exhibits of this class, but arranged with considerable taste, and altogether making an exhibit that invited the eye of the visitor.

A trophy of great interest was that illustrative of the mineral wealth of the celebrated Broken Hill group of mines and the Cobar districts. The Broken Hill exhibit contained typical ores mined in that rich district, and the products from their treatment at the mills. The Broken Hill fields, it was stated, had yielded up to date minerals valued at over £43,500,000; in dividends and bonuses a sum of £12,835,000 had been paid. In addition to this the great heaps of tailings from earlier operations are considered to be mines of wealth in themselves. The value of the metals hidden in these tailings is estimated at £20,000,000. The Cobar mineral-specimens included typical sulphide and carbonate ore and the different resultant products. During the period 1894–1906 the Cobar mines yielded copper valued at £3,400,000, besides large quantities of gold and silver.

Tin, of which £7,436,000 worth has been produced in New South Wales, was represented by ores and concentrates obtained from different parts of the State. Specimens of ore from the Mount Boppy gold-mines were shown, flanked by actual-size pyramids representing the production of gold (6,086 oz.) for the first year's operations, and the total production (133,977 oz.) from 1901 to 1906. This mine affords a good example, as our own Waihi does, of the success which attends the working of low-grade ores on a large and scientific scale. The mine, it was stated, had up to date paid dividends equal to 133¾ per cent. Close by this trophy was another containing copper-ores from the Burraga district, showing the typical sulphide ore and concentrates, together with metallurgical products up to the refined metal. Some 150 ingots of metallic copper crowned the exhibit. The mine from which these specimens were obtained has an output of 150 tons of copper per month.

The beautiful marble which abounds in New South Wales made a handsome display. Upon a flooring of marble tiles stood an attractive superstructure, the principal feature of which was a fine marble mantelpiece. Close by was a great block of concrete of local manufacture, weighing 1½ tons, illustrative of the material now being used in the con-

struction of the great Cataract Dam which is to augment Sydney's water-supply. In another part of the court was a conspicuous exhibit of eighty polished slabs of marble obtained in different parts of the State, and exhibited by the Government. These beautiful marbles are now coming into considerable use in the construction of different public buildings in Sydney and elsewhere in the State.

Other minerals shown included zinc and lead concentrates from the Central Mine at Broken Hill, also metallic zinc and bullion and the fluxes and coke used in smelting. There were specimens of the iron-ores which will in time to come make New South Wales a great ironworking country; some of these ores are to be used by the company which lately obtained the contract for the manufacture of steel and iron required by the New South Wales Government. The company which has been formed to work the kerosene-shale deposits of the State made an excellent display of the various products of the shale, including wax and candles, which made an attractive trophy, and jars containing crude oils—naphtha, &c.—distilled from the shale.

Two ornamental pillars of Wunderlich steel, each 12 ft. in height, representing the gold and silver output of New South Wales, were shown, and bore statistics concerning these items of the State's mineral wealth.

Coal, the mineral of most value to New South Wales, was represented by large blocks from the northern, and southern, and western districts of the State, and also a specimen mined from underneath the City of Sydney. Newcastle's famous coal was naturally the most important of these specimens—the coal that brings "wind-jammers" from all parts of the world to load at the great Australian coal-port. The enormous value of this mineral to New South Wales was made manifest to inquirers in the Mining Handbook prepared by Mr. Larcombe. The quantity of coal mined in New South Wales up to the end of 1905 was estimated at a total of 122,393,863 tons, valued at £48,000,000. Mining engineers calculate that there are still remaining and available for use in the coal-bearing areas of the State some 115,300,000,000 tons, representing a money value of £38,500,000,000.

On the eastern and southern sides of the court benches were covered with a great variety of specimens that gave some idea of the great diversity of the State's mineral resources. This collection included samples of gold-ore, silver, lead, tin, zinc, antimony, bismuth, wolfram, &c.

The value of the minerals raised in New South Wales during the last half-century was set forth as follows in the interesting little handbook prepared by Mr. Larcombe:—

	£
"1856 to 1865	16,049,515
1866 to 1875	17,769,684
1876 to 1885	21,565,857
1886 to 1895	45,006,328
1896 to 1905	56,989,837

"The value of the output from the mineral-fields of the State to the end of 1905 is estimated at £164,322,805. The production for 1905 is valued at £7,017,940, and exceeds that for the previous year by £626,175. The production for 1905 thus constituted a record, being considerably the largest in the history of the State."

During the half-century terminating in 1906 the amount of gold won in New South Wales was estimated at 12,532,651 oz., valued at £53,235,286. The total area under mining occupation in New South Wales at the beginning of 1906 was approximately 268,628 acres, a very tiny area when compared with the size of the State—namely, 310,700 square miles. That such an enormous amount of wealth should have been won from this small area augurs well for the great mineral possibilities of the State as a whole.

VICTORIA.

The natural products and manufactured goods that the wealthy State of Victoria —the real "Australia Felix"—sends out to the world found fitting representation in a court covering a floor-space of 6,800 square feet in the northern section of the Main Building, not far from the southern wall of the Machinery Hall. Mr. Edward Nicholls, the Victorian Government's representative. had arranged his exhibits on either side

MR. EDWARD NICHOLLS, THE VICTORIAN GOVERNMENT'S REPRESENTATIVE.

of a long avenue, one of the cross-passages running westward from the main north-and-south avenue. The artistic and the utilitarian were blended well, and there was much to fix for a space the interest of the Exhibition sightseer.

Very fittingly the gold trophy was a distinctive feature of the Victoria Court—an enormous gilt obelisk representing a quarter of the solid gold won in the Victorian

" diggings " and mines during the past fifty-five years. Mr. Nicholls had intended to erect an obelisk representing the entire bulk of gold won, but it would have been too high for the building. Since 1851, when the Victorian goldfields were discovered, the State's gold-yield up to 1906 totalled the enormous quantity of 68,367,403 oz., valued at £273,236,500, an average yield per year of close on £5,000,000. The quarter-sized obelisk equalled £68,301,625, and was 11 ft. 6 in. square at the base. Behind the obelisk was a collection of models of the largest gold nuggets discovered in Victoria; these also were the largest in the world. The Bendigo School of Mines sent models illustrating the primitive rough-and-ready modes of winning gold in the old digging days—those days described in Charles Reade's novel " Never Too Late to Mend," when tens of thousands of adventurous diggers rushed the great alluvial fields of Bendigo and Ballarat. Alongside these historic relics were models of the latest improved principles of gold-winning machinery.

In the Victorian Court.

Victoria's great agricultural and pastoral resources had their due place in the court in the form of fleeces of wool from several large sheep-stations, supplied by the Sheep-breeders' Association, and fine samples of prize wheat, oats, and barley sent by the Royal Agricultural Society. There were also exhibits of compressed fodder: Victoria supplied a good deal of this to the Japanese Government during the recent war with Russia. Victoria's valuable timbers were not forgotten; a great block of red-gum, measuring 10 ft. by 4 ft. 10 in., came from the banks of the Murray River. Amongst the commercial exhibits that took the eye there were some beautiful furs of various kinds of Victorian animals, sent by Mr. N. Nettleberg; footwear sent by Whybrow and Co.; an attractive exhibit of Victorian wines shown in a handsome kiosk by Messrs. Irvine and Co., of the Great Western Vineyard; a large stand of " Boomerang "-brandy bottles formed into a huge bottle-shaped trophy; dried fruits of all kinds from the celebrated Mildura Settle-

ment; and a specimen of the four-oared clinker outrigger racing-boats built by Messrs. Greenland and Son, of Princes Bridge, Melbourne: these beautiful boats are built to specifications for the New Zealand Amateur Rowing Association. A great many other industrial and trade exhibits had their places in the court; they comprised agricultural implements of every sort made in Victoria, spring rabbit-traps and rabbit-destroyers of various kinds, patent sheep-dip, knife cleaners and sharpeners, and other patent articles; dress stands, and dressed figures in cases, showing paper patterns.

The great Australian bush and the tribes of blacks who once had the bush to themselves were brought to mind by an exhibit of Australasian Native weapons. A case of snakes preserved in spirits reminded New-Zealanders, too, of the deadly pests of the Australian bush, from which, fortunately, New Zealand is entirely free. Of historic relics there were several that brought up memories of the old bushranging days: the primitive armour and nail-can helmet worn by Ned Kelly and his comrades, and their firearms, drew more attention than most of the other articles shown in the court.

The court was beautified by some fine pieces of statuary from the Melbourne Exhibition Trustees. Dr. L. L. Smith, Chairman of Trustees for the Exhibition Buildings, lent a number of valuable paintings, which were hung on the walls of the court; these included subjects such as "Faust and Marguerite," "The Nativity," and "Cupid's Dart." There was also a good portrait in oils of the Hon. Thomas Bent, as Speaker of the Legislative Assembly of Victoria.

The great natural wealth and potentialities of "Australia Felix" were very readably set out in a booklet distributed to visitors and containing a multitude of facts concerning the State and the development of its resources, and practical information for intending settlers. For example, the following salient facts caught the eye: Victoria's area is just about equal to the combined area of England, Scotland, and Wales; its acreage is 56,245,760, and its population over 1,200,000; it has about 12,000,000 acres of land still available for selection by farmers. Roughly speaking, there is room for 200,000 more farms, promising a productiveness as great as the 53,000 farms in the State which produced in 1906 wealth to the amount of over £20,000,000 sterling, an average of £383 per farm. The private wealth per head of the people of Victoria is £261, the third highest in the world (New Zealand comes first).

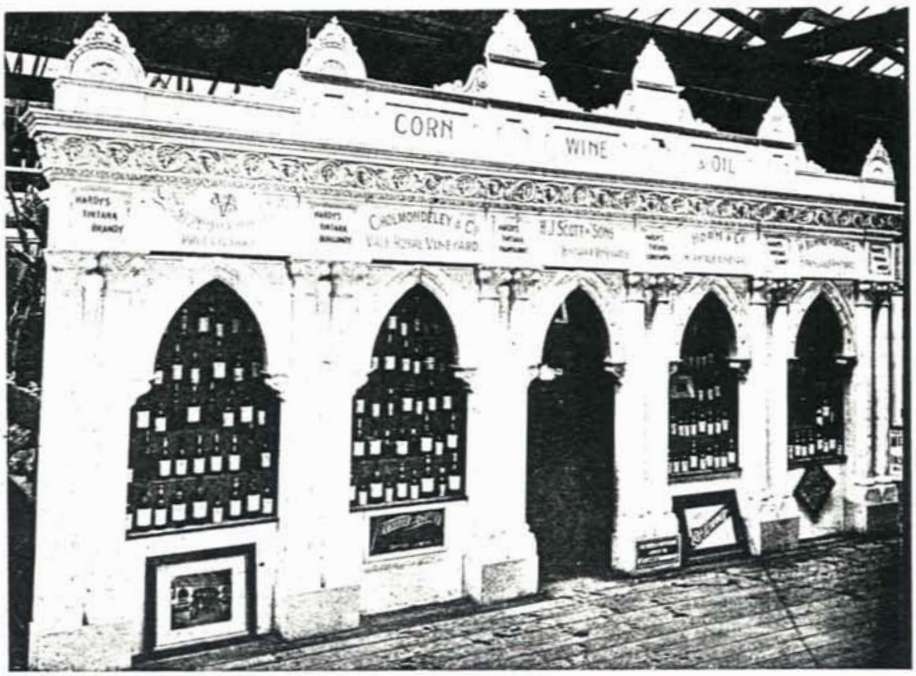
In a corner of the Victorian Court there was a private display of some splendid specimens of timber from Western Australia, including the famous jarrah hardwood of that State. The exhibit demonstrated the excellence of these timbers for general building and cabinetmaking work, and particularly for those purposes in which durability and strength are the prime requirements. Mr. George A. Julius, the West Australian representative, gave several lectures on the hardwoods of Australasia generally.

During the Exhibition season, Mr. T. E. Donne, General Manager of the Department of Tourist and Health Resorts, was the subject of the following resolution passed by the Victorian Commissioners, presided over by Mr. E. Nicholls, the Victorian Government representative:—

"That the Victorian Commissioners for the New Zealand International Exhibition held at Christchurch desire to place on record their appreciation of the uniform kindness, attention, and assistance received from Mr. T. E. Donne, Superintendent of the Tourist Department. His valuable services given in Melbourne, and later in Christchurch, tended to overcome many difficulties, whilst the attention on all occasions shown to the Commissioners and their representatives' requirements in connection with Exhibition matters claims their most cordial recognition and thanks."

SOUTH AUSTRALIA.

"Corn, Wine, and Oil" was the legend on the front of the handsome little court devoted to South Australia that indicated some of the chief natural products of this fruitful State. The South Australian Government exhibit occupied a space of about 1,000 square feet in the southern section of the Main Building. On the front a series of Moorish arches in fibrous plaster, and ornamental columns decorated with designs of the product of the vine, enclosed spaces within which wines and other vineyard products made under the supervision of the South Australian Government were exhibited. These wines and the excellent specimens of the various fruits which the State produces formed the predominating feature of the exhibit. The Government of South Australia, in arranging for representation at the Exhibition, decided that it would not be advisable to forward a display of their manufactures, as there was no great prospect of business resulting on general lines. It was, however, resolved to invite the wine-makers and

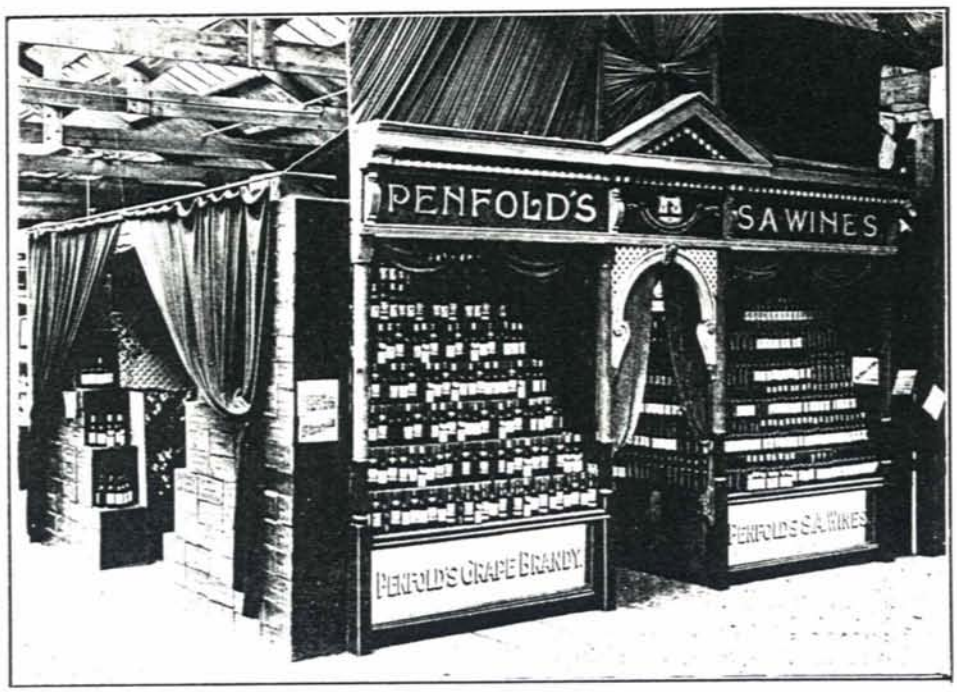


THE SOUTH AUSTRALIAN COURT.

fruit-preservers to make an exhibit commensurate with the importance of those great products of South Australia, forming as they do two of the principal items which the State exports to New Zealand.

The wines which the numerous great vineyards of South Australia place on the market made a large and attractively arranged display. The names of the vineyards were painted in blue on the polished white surface of the structure devoted to the exhibition of wines and brandy. The vineyards represented by samples of bottled wines and brandy, and grapes, were those of Bindarra, Yalumba, Renmark, Stonyfell, Horndale, Tintara, Beaumont, Vale Royal, Spring Vale, and the vineyards of Auldana Limited. The wines shown included samples of port, sherry, muscatel, claret, Bur-

gundy, Chablis, Constantia, Madeira, Frontignac, and hock. The wines made in the vineyards named are manufactured under the supervision of the South Australian Government, a fact that is a guarantee of their purity. A collection of wines was also sent from Roseworthy College by the Viticultural Expert of South Australia. Nature has specially favoured South Australia as a wine-growing country, and her vineyards have long held the premier position in Australasia. In the warmer portions of the State the richest and most generous kinds, such as Frontignac, Constantia, and port, are produced, but of recent years the growth of the vine has also been highly successful in the hilly country; and the more delicate clarets, hocks, and rich Burgundys produced have taken all the first honours wherever exhibited in other countries. This, it was explained by Mr. Scott, the Executive Commissioner for South Australia, himself a wine-grower of long experience, is due to the fact that a more scientific method of fermentation is now adopted, producing wine of a uniform quality year by year.



A South Australian Wine Exhibit.

Dried and preserved fruits made another fine display. There were raisins, currants, dried apples and pears, prunes, peaches, and apricots, figs, &c., enclosed in glass cases tier upon tier. Close by was a splendid collection of olive-oils, preserves, jams, and almonds from various firms throughout the State, and from the irrigation colony of Renmark. The manufacture of preserved fruits and jams has now become one of the stable industries of the State. Olive-oils and salad-oils are also produced in large quantities, and command a ready sale to the trade at 10s. per gallon.

Samples of wool and some fine prize specimens of grain, shown at the last Adelaide Agricultural Show, were also exhibited.

Upon the side facing Canada were arranged some natural products of the great Northern Territory of South Australia, including specimens of the mineral resources of that country, and cotton, arrowroot, various fibres, tropical food-products, and medicinal products. The Government Resident, Mr. Justice Herbert, sent some fine natural-history specimens, including a great pair of buffalo-horns, a shield of the shell of the North Australian turtle, and some alligator-heads. The immense tract of country comprised in the Northern Territory is particularly rich in minerals. The samples of ores shown included gold, silver, tin, copper, wolfram, galena, malachite, copper-sulphide ore, and amblygonite, which produces the lithia used in medicine.

Through the enterprise of Mr. H. J. Scott, Commissioner in charge of the court, several shipments of excellent table-grapes were sent over from Adelaide during the Exhibition season, and sold immediately at good prices. This has resulted in the establishment of a regular import trade in Australian grapes.

THE FIJI ISLANDS COURT.

THE FIJI ISLANDS.

The attractively displayed exhibit from the British Crown Colony of Fiji had a novelty that took the eyes of passing visitors at once, and prompted all sorts of curious questions. The court it occupied, just off the Main Avenue and alongside the Tourist Department's room, was but a small one, but every inch of space was profitably occupied with articles of produce that typified the wonderful resources of these beautiful islands—the isles of the banana and the sugar-cane; with barbaric implements and weapons, and picturesque examples of handicraft from the Fiji Native villages, handsome drapings

of the bark-cloth *tapa*, growing canes and South Sea plants, and an immense variety of objects that suggested the soft warm tropics and all the strange life and charm of Coral Lands. It was a complete epitome of the richest of South Sea Island groups.

Geographically the Fijis are our neighbours, and commercially they have many ties with our Islands. The trade between New Zealand and this Group is older than that with any other part of the South Pacific. Fiji has been compared by travellers to the British West Indies, but it is of larger area, and holds more possibilities of industrial development. It is a wonderful archipelago. There are about two hundred islands, of which about eighty are inhabited. The total area of the colony (including the little dependency of Rotuma, fourteen square miles) is 7,435 square miles or 4,953,920 acres. The two largest islands, Viti Levu and Vanua Levu, are mountainous, and of grand and picturesque volcanic contour; in some places they rise 4,000 and 4,500 ft. above the sea. There are several rivers of great size in comparison with the area of the islands through

IN THE FIJI COURT.

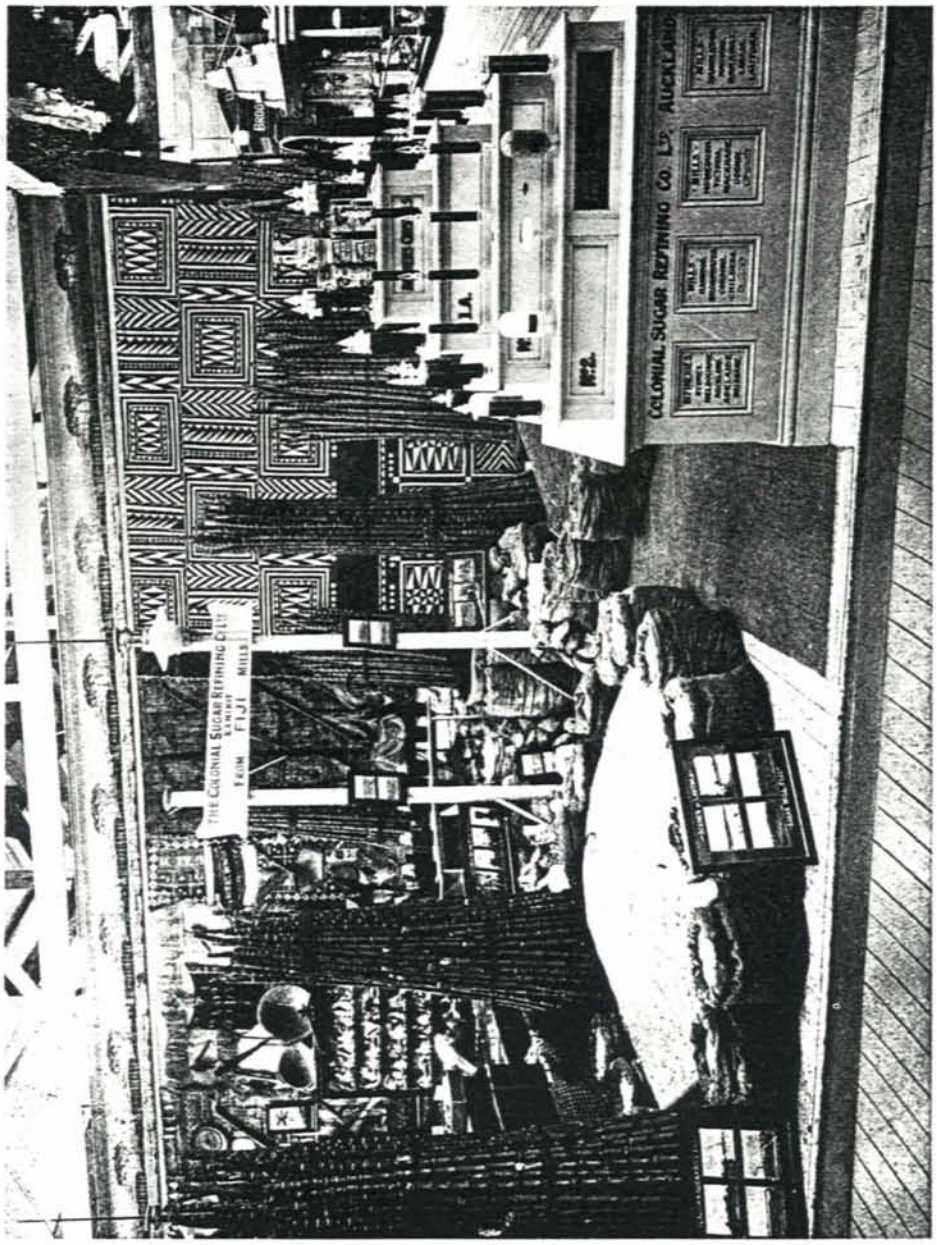
which they run; and the Group is rich in harbours and sheltered lagoons protected by nature's breakwaters, the coral reefs. Fiji's white population in 1905 numbered 2,675; half-castes, 1,649; native Fijians, 86,816; and Indians, 25,952. The large introduced population of Indian coolies provides the labour for the great sugar-plantations. Already Fiji's little white population does a big business. In 1906 the Group's total trade was £1,212,906, of which the imports were £609,496, and exports £603,410. During that year New Zealand exported to Fiji over £100,000 worth of goods, largely foodstuffs such as butter and meat; and during the same period Fiji sent us produce (chiefly raw sugar and fruit) to the value of £370,182. New Zealand is more favourably situated

than any other country for trade with Fiji. The distance from Auckland to Suva, the capital of the group, is 1,140 miles; from Sydney it is 1,743 miles. The total area of the lands under cultivation by Europeans and Indians is not much over 70,000 acres, so that there is room for great expansion in the agricultural and other industries in the Group. It is rather surprising for New-Zealanders to learn that in this little tropic group, according to the figures given in the official publication at the Exhibition Court, there were at last returns 28,635 cattle and 3,758 horses. Fiji is an excellent country for grazing, and cattle of all kinds and sheep do well.

Fiji's main products are sugar, copra, and bananas. Samples of these were set out in the court, but the exhibit that gave the distinctive tropic air to the colony's handsome display was the cotton—the famous Sea Island cotton which gave Fiji its industrial start over forty years ago, soon after the American Civil War commenced, when cotton rose to high prices in the world's markets because of the blockade of the Southern States ports. Cotton, though very little grown in Fiji now, was at one time the staple export of the Group; all the drier areas are exceedingly well adapted for the production of the better classes of cotton. The cotton-trees, with their white masses of snowy cotton, that stood along the front of the little court were an amusing source of wonderment to many visitors. "Oh! look at the wool," said one, on a first view of the tropic court. At Christmas-time, too, the children looked for Santa Claus, and asked their mothers when the dolls and balls and other toys were going to be tied on the branches. The cotton was sent by Mr. T. F. Burness, a pioneer planter of Caboni and a veteran of the Maori wars in New Zealand.

The great sugar industry was represented by an interesting exhibit sent by the Colonial Sugar Refining Company, consisting of a mound of the raw material obtained from the crushed sugar-cane, brown sugar, molasses, and refined sugar, besides some specimens of growing canes. Fiji has been growing sugar on a large scale for more than a quarter of a century. The Colonial Sugar Company has large mills at Nausori, on the Rewa River, Lautoka and Ba, on Viti Levu Island, and at Labasa, on Vanua Levu. Other companies are established on Viti Levu—the Vancouver-Fiji Company at Navua (Rewa River), and the Penang Sugar Company on the northern coast. The Colonial Sugar Company sends the raw product up to Auckland to be refined at the large sugar-works at Chelsea, on the Waitemata. The sugar exported from Fiji in 1905 totalled 52,138 tons, valued at £539,594.

Of other commercial products of Fiji shown in the court, there were samples of copra, the dried kernel of the cocoanut, which fetches some £15 per ton; bananas, which the Group grows to perfection and in immense quantities; tobacco, rice, vanilla, arrow-root, ginger, peanuts, pimento, cocoa, coffee, turmeric, cotton-oil, *bêche-de-mer*, pearl-shell, and gum. There were piles of large cocoanuts clothed in the rough outer husk, besides some beautifully polished nuts of large size. The samples of copra shown were from the plantations of Lever Bros., Rabi Island: the Hon. A. A. Coubrough and Mr. J. V. Tarte, of Taviuni Island: Mr. C. O. Eyre, of Malau; and Mr. McPherson, of Cicia. The bananas came from Mr. E. Gaspard, of the Rewa River, an exceedingly rich fruit- and cane-growing district; this exhibitor also sent some growing banana-plants. The various other tropic products mentioned above, besides a number of other articles of commercial value, were sent by Fiji planters and merchants, including Messrs. Brodziak and Co., Suva (pearl-shell and vanilla); Burness, of Caboni (tobacco and locally made cigars and cigarettes); J. T. Cronin, Tailevu (cassava-starch); Mr. W. T. Ewins, Ba (native-grown coffee); C. D. Eyre, Malau (growing palms, cocoanuts, *bêche-de-mer*, and rubber); Humphrey and Inchboard (coffee and rubber); W. H. Johnson, Tavua (castor-oil beans, peanuts, cotton, fibre, maize); McPherson, Cicia (exhibit showing the various uses of the cocoanut-tree and its produce); Powell Bros., Lami (cocoa, ginger, turmeric, vanilla, pimento, and various growing plants of economic value); Ragg and



SUGAR AND OTHER FIJI ISLANDS EXHIBITS.

Co., Nadi (vanilla-beans and extract); Hon. W. Robbie, Wainunu (tea and cocoa); L. Smith, Samabula (arrowroot, prepared by hand); S. J. Taylor (rice); H. A. Treacy, Nasinu (yangona, the Fijian kava plant, the root of which is chewed or grated to make a beverage); Hon. J. B. Turner, Suva (castor-oil beans).

Amongst these items of Fijian produce were some of particular economic importance. Fiji promises to be a land as rich in spices as Ceylon; cloves, vanilla, pimento, cinnamon, do exceedingly well. Another growing industry is tea-planting. On the Wainunu River, a beautiful broad stream that flows from the mountains of Vanua Levu Island, Captain Robbie has a large plantation, with about 200 acres under tea, which produces a leaf of excellent and delicate flavour. The yield is said to be 500 lb. per acre. Cocoa grows well, and is already being exported to New Zealand and elsewhere: the industry promises to be a large and remunerative one. The rubber-tree is being planted, and it is predicted that the rubber industry will be one of high value to Fiji in the future, for the colony has just the climate and soil suitable for this business, besides the requisite cheap labour—the Hindoo coolies. The *bêche-de-mer* trade is one of the oldest South Sea industries; it succeeded the sandal-wooding that took the first adventurous trading-craft to the cannibal isles of Old Fiji. *Bêche-de-mer* is a sea-slug found on coral reefs all over the Pacific; it is dried and smoked, and in the leathery-looking form in which it was exhibited it is sent away to China, where it is a great food delicacy, used chiefly for making soup; for the best kinds the Chinese merchants pay up to £200 per ton. Fiji's timber resources were illustrated by a large collection of various indigenous woods, sent by the Public Works Department of the colony. Amongst them were some woods of great utility and some of much beauty, well adapted for the manufacture of fine artistic furniture. There was the dakua, a mountain timber very closely resembling the New Zealand kauri—in fact it is called the "Fijian kauri"—and it exudes a resin like kauri-gum. Some dakua-trees are of large size, running up to 6 ft. or 7 ft. in diameter. Yaka is a handsome furniture-wood; damanu is a good durable tough timber; yasi is a useful hardwood much used for bridges, sleepers, and house-building.

The Native industries and handicrafts of Fiji were responsible for much of the picturesque decorative effect of the court. On the walls hung great tapestries of fine *tapa*-cloth made from the well-bleached and beaten bark of the paper-mulberry tree (called the *malo* in these islands), stencilled in a variety of handsome patterns, some of them geometrical designs, some copies of native foliage and other familiar objects. There was a huge roll of *magimagi* (pronounced "mangimangi") or sinnet, used for a variety of tying purposes, chiefly in the fastening-together of houses; cocoanut-fibre sinnet and forest-creepers are the Fijian house-builders' substitutes for nails and bolts. The roll of *magimagi* exhibited was sent by His Excellency Sir Everard F. im Thurn, Governor of Fiji and High Commissioner of the Western Pacific, who also lent for exhibition a fine old polished *tanoa* or bowl for the *yangona* drink. On the walls there were trophies of all kinds of Fijian weapons of war and implements used in various native industries. The natives of Kandavu, that long snake-shaped island in the south of the Group, sent through Mr. A. B. Edwards, the local Stipendiary Magistrate, a large number of these articles, including barbed spears and heavy polished clubs, a Fijian bow and arrow, a *yangona*-bowl; *tapa*-cloth, with the various stages of preparation and the beating-mallet used in making it; *magimagi*, and finished fishing-net; a *lali* or wooden drum, a model canoe, stone axes; mats, and the material and implements used in making them; fans and fly-whisks, some samples of Native pottery, &c. The Natives of Lau Island showed, through their Magistrate, Mr. J. Hill, specimens of *bêche-de-mer*, turtle-shell, pottery, mats and *tapa*, and some beautiful sea-shells. From Lomaiviti, Nadroga, Ba, Ra, and Colo North also came Native weapons, utensils, mats, *fête*-dresses of fibre, rubber, *bêche-de-mer*, arrowroot, and native salt. Ratu Joni Madraiwiwi, a Fijian chief, who is a member of the Legislative Council, sent samples of native-

grown tobacco. The Methodist Mission at Navuloa contributed, through the Rev. W. Heighway, a number of articles representative of Native industry. Then, from far-away Rotuma, a little Polynesian island lying all by itself some hundreds of miles to the north of Fiji, came a collection of well-plaited Native mats, sent by Dr. H. McDonald, the Governor's Commissioner. The Roman Catholic mission and Mr. C. Kaad,

MR. LESLIE E. BROWN, COMMISSIONER FOR FIJI.

of Levuka, also sent Rotuma mats and produce. In the court there were two pretty models of Fijian canoes, one an old-time war-canoe, and the other an outrigger sailing-canoe—probably the fastest and most beautiful sailing-machines to be seen in the Pacific.

Perhaps the most beautiful exhibit in the court was the splendid set of sea-shells loaned by Messrs. Brown and Joske, of Suva. These shells, showing all colours and all

of nature's strange and vivid tropic designs, filled three large glass cases, and were the delight and the envy of many a visiting shell-collector. It was a museum of South Sea conchology. Then there were paintings of some of the large wondrously hued butterflies of Fiji, and various Island scenes; these were the work of several Suva residents —Mrs. Land, Miss N. Walker, Miss Winning, and Mr. L. Walker. Mr. Le Faivre, of Suva, sent some good photographs of Fiji life and scenery.

The Fiji Committee who promoted the exhibits and the Executive Commissioners who arranged it so well deserve commendation for their excellent and comprehensive trade museum, which helped to dispel a good deal of popular vague misconceptions as to Fiji's industrial progress and capabilities. The great variety of tropic products which the colony is able to grow was something of which most visitors to the court had previously no idea. Small though the court was, it was educative in a high degree. The Fiji Committee for the Exhibition consisted of the Hon. W. McRae (Chairman), Hon. T. R. Ward, Mr. A. M. T. Duncan, Mr. E. F. Powell, and Mr. C. H. Knowles (Secretary). The colony's Executive Commissioner to the Exhibition was Mr. Leslie E. Brown, of Suva, with Mr. S. K. Sleigh as co-Commissioner.

The Commissioners issued to visitors to the court a well-compiled little "Handbook of Fiji," giving an account of the resources, natural features, and industries and trade of the Group.

HAWAIIAN ISLANDS.

A small exhibit in the Fijian Court was representative of the Islands of Hawaii, first known to fame as the Sandwich Islands. A fine set of photographs illustrated some of the beautiful scenery of the Group, particularly that of localities near Honolulu, and scenes of Native life. The industries of the Islands were represented by a number of good samples of products such as sugar, coffee, rice, taro, sisal, rubber, and tobacco. There was a collection of Native curios, including several very rare feather *leis* or headwreaths made from the brilliant plumage of certain Hawaiian birds.