

1AH3/13

The

Official Year Book

of

New South Wales.

1919.



H. A. SMITH.

COPYRIGHTED AND PUBLISHED

By Authority of the Government of the State of
New South Wales.

This page was added on 11 January 2013 to include the Disclaimer below.
No other amendments were made to this Product

DISCLAIMER

Users are warned that this historic issue of this publication series may contain language or views which, reflecting the authors' attitudes or that of the period in which the item was written, may be considered to be inappropriate or offensive today.



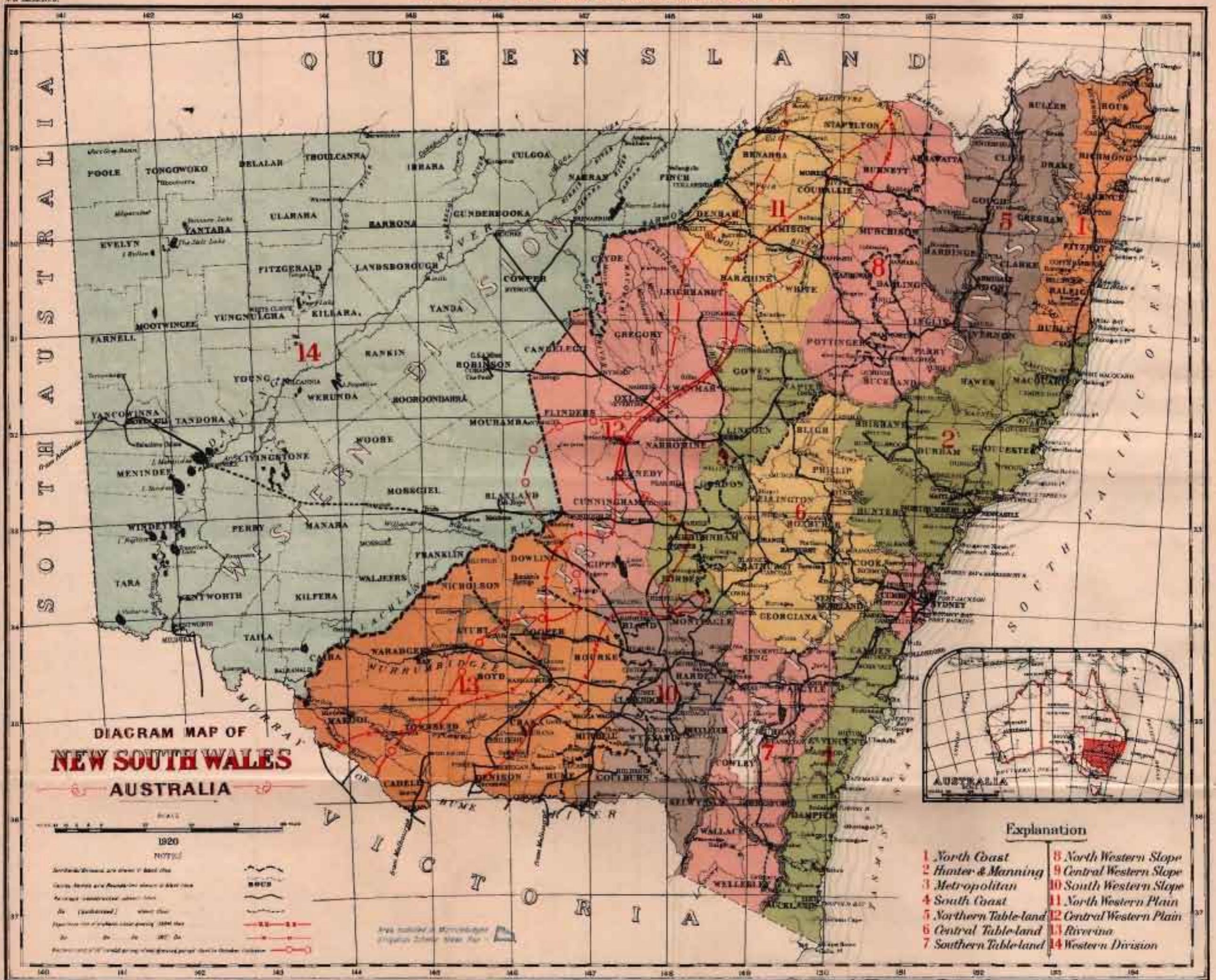


DIAGRAM MAP OF
NEW SOUTH WALES
 AUSTRALIA



Explanation

- | | |
|-----------------------|--------------------------|
| 1 North Coast | 8 North Western Slope |
| 2 Hunter & Manning | 9 Central Western Slope |
| 3 Metropolitan | 10 South Western Slope |
| 4 South Coast | 11 North Western Plain |
| 5 Northern Table-land | 12 Central Western Plain |
| 6 Central Table-land | 13 Riverina |
| 7 Southern Table-land | 14 Western Division |

THE
OFFICIAL YEAR BOOK
OF
NEW SOUTH WALES.
1919.



H. A. SMITH, F.S.S.,
GOVERNMENT STATISTICIAN.

COPYRIGHTED AND PUBLISHED BY AUTHORITY OF THE GOVERNMENT
OF NEW SOUTH WALES.

W. A. GULLICK, GOVERNMENT PRINTER.

1920.

[2s. 6d.]

PREFACE.

THIS is the twenty-seventh issue of the Official Year Book, which up to 1904 was known as the "Wealth and Progress of New South Wales."

The contents have been published already in eighteen parts, which were issued as they became available from the printer, in order to render them of immediate service. The information was brought up to the latest date available at time of publication.

A diagram map of New South Wales is published with the volume to show the railways, county and territorial divisions, and area of the State suitable for profitable cultivation of wheat.

Every care has been taken to keep the work free from errors, but if any are noticed, it would be deemed a favor if their nature were indicated.

I have to express my thanks to the responsible officers of the various State and Commonwealth Departments, and to others who have kindly supplied all desired information, often at considerable trouble.

The "Statistical Register of New South Wales" is published annually from this Bureau; and as it contains in full detail the results of the collected and compiled statistics of the State, it will prove of great service if studied in conjunction with this Year Book.

H. A. SMITH,
Government Statistician.

Bureau of Statistics,
Sydney, 8th December, 1920.

CONTENTS

	PAGE.
Historical Index - - - - -	I
Geography - - - - -	9
Climate - - - - -	14
Constitution, Government - - - - -	22
Defence - - - - -	35
Population - - - - -	41
Vital Statistics - - - - -	53
Education - - - - -	89
Public Finance - - - - -	121
Private Finance - - - - -	149
Employment and Industrial Arbitration - - - - -	185
Mining Industry - - - - -	225
Law Courts - - - - -	251
Police and Prison Services - - - - -	269
Local Government - - - - -	281
Commerce - - - - -	325
Shipping - - - - -	336
Manufacturing Industry - - - - -	351
Railways and Tramways - - - - -	389
Posts and Telegraphs - - - - -	413
Land Legislation and Settlement - - - - -	419
Rural Settlement - - - - -	455
Food and Prices - - - - -	467
Pastoral Industry - - - - -	521
Dairying Industry - - - - -	543
Forestry - - - - -	556
Fisheries - - - - -	559
Agriculture - - - - -	563
Water Conservation and Irrigation - - - - -	601
Social Condition - - - - -	609
Index - - - - -	659
Map of New South Wales - - - - -	<i>Frontispiece</i>

CHRONOLOGICAL TABLE

OF

Events in the History of British Settlement in New South Wales (Australia).

- 1770 Captain Cook landed at Botany Bay, 28th April, 1770.
- 1774 Discovery of Norfolk Island by Captain Cook.
- 1788 "First Fleet," under the command of Captain A. Phillip, anchored in Botany Bay, 18th January; formal possession taken of Sydney Cove, Port Jackson, 26th January; 1,035 persons debarked—Governor Arthur Phillip formally proclaimed the Colony, 7th February—Norfolk Island established as a dependency—French Navigator La Perouse visited Botany Bay—Lord Howe Island discovered by Ball—First settlement at Rose Hill (afterwards Parramatta)—Observatory established at Downs' Point—First cultivation of Wheat and Barley—Pittwater, Brisbane Water, Hawkesbury River discovered.
- 1789 Hawkesbury River explored—First harvest (Wheat and Barley) reaped at Parramatta—Nepean River discovered—First colonial-built boat, "Rose Hill Packet," launched.
- 1790 Second Fleet arrived—"Scurvy" lost at Norfolk Island—Scarcity of provisions—Signal Station established at South Head, Port Jackson.
- 1791 Third Fleet arrived—Settlements at Prospect Hill and The Ponds—First grants of land to settlers—First Exploration Map of Australia published.
- 1792 First foreign trading vessel "Philadelphia" arrived—Governor Phillip returned to England.
- 1793 First free immigrants arrived in the "Belona" and settled at Liberty Plains—Exploration of Blue Mountains attempted—First place of public worship built in Sydney.
- 1794 Hawkesbury River settlement.
- 1795 Hawkesbury River agricultural settlements flooded—First printing press erected—Descendants of strayed cattle found at Cowpastures, Nepean River—First important civil action at law.
- 1796 Port Hacking explored by Bass and Flinders—First theatre opened—Coal found at Port Stephens and at Newcastle—First school opened at Parramatta.
- 1797 Coal discovered at Hawarra (Coalcliff) and near Coal (Hunter) River—Bass discovered Twofeldt Bay—Merino sheep imported from Cape of Good Hope—Yuggerah Lakes discovered.
- 1798 Intimacy of Van Diemen's Land (Tasmania) established by Bass and Flinders—Bass discovered Bass Strait, Western Port, &c.
- 1799 Bass and Flinders returned from Van Diemen's Land—Flinders explored North Coast—Wilson reached Lachlan River via Mittagong Tableland—Coal shipped from Hunter River District.
- 1800 Customs House established at Sydney—Import duties first levied—First Volunteer Force for Defense raised at Sydney—Flinders' Chart of Bass Strait and Van Diemen's Land published.
- 1801 First lease of copper mine—Hunter River coal-mines worked—First colonial manufacture of blankets and linen—First rough canvas muster.
- 1802 Port Phillip discovered by Lieutenant Murray—First book (General Standing Orders) printed in Sydney—Flinders' explorations.

- 1803 First sample of Australian wool taken to England by Captain Macarthur—Caley attempted to cross Blue Mountains—First newspaper (*Sydney Gazette and New South Wales Advertiser*) published in Sydney—First settlement established at Bledin, in Van Diemen's Land, by Bowen—Yarra River, Melbourne, discovered—Attempted colonisation of Port Phillip by Collins—Flinders completed the circumnavigation of Australia.
- 1804 Newcastle settlement—"George III flock of merinos" arrived—Castle Hill Gaol outbreak.
- 1805 Macarthur received a grant of 5,000 acres including part of Crown lands reserve; began sheep-farming at Camden with imported Spanish Merinos.
- 1806 "Mack Flood" on Macquarie and South Coast—Shortage of provisions; Wines, 80s. bushel—Tobacco successfully cultivated.
- 1807 First parcel of merchantable wool (24 lb.) exported to England.
- 1808 Macarthur arrested and tried—Governor Bligh deposed—Major Johnston assumed Government.
- 1809 Johnston and Macarthur proceeded to England—Free school established—Street regulations—First Post Office conducted by James Nichols.
- 1810 Sydney streets and Hyde Park named—Tail-gates erected.
- 1811 Johnston tried by court-martial—Sydney Hospital foundation laid.
- 1812 Creation of Governor's Court and Supreme Court—Select Committee of House of Commons appointed to inquire into condition of New South Wales—Great scarcity of coin; private money-orders and promissory notes issued.
- 1813 Bligh, Lawson, and Wentworth opposed Blue Mountains—Krans discovered Bathurst Plains and Macquarie River—"Holy Dollar" and "Dump" issued for local currency.
- 1814 Charter of Justice published—Civil Jurisdiction, Supreme Court commenced—First Judge (J. H. Best) arrived—Home explored Barrina District—Name "Australia" substituted for "New Holland," as recommendation of Flinders—New Zealand proclaimed a dependency of New South Wales.
- 1815 Cox's Road, Eden Plains to Bathurst opened—Bathurst founded by Governor Macquarie—First steam engine erected in Sydney—First sitting of Supreme Court—Krans explored Lockhart River.
- 1816 Sydney Hospital opened—Sydney Botanic Gardens formed—Judge Bent recalled.
- 1817 Oaley's first journey inland—Nichols and Howe discovered Lake George and Bathurst, and the Goulburn Plains—First bank established—King's essential regulations—Hyde Park Barracks built—Macarthur returned to New South Wales after eight years' banishment.
- 1818 Oaley discovered Peel, Hastings, and Manning Rivers, and Liverpool Plains—Free immigration suspended—Port Macquarie discovered by King.
- 1819 Commissioner Bigge's inquiry into laws and administration of Colony—First Australian Savings Bank opened at Sydney.
- 1820 Breemidine and Hyde Rivers discovered—Russian exploration ships arrived—Government gaols built established—William Charles Wentworth published in England an account of Australia.
- 1821 Two ships despatched with Australian produce for England—Philosophical (now Royal) Society formed—Thurby's tour of discovery inland—Settlement formed at Port Macquarie.
- 1822 (Royal) Agricultural Society of New South Wales established—First Colonial Attorney admitted—Bees introduced—Road from Richmond to West Maitland opened—Settlement formed at Wollington Valley.
- 1823 First Australian Constitution, Legislative Council of five to seven persons; first members (five) appointed under warrant of 1st December—Dr. John Dunmore Lang arrives—Caley discovered Tweed and Brisbane Rivers—Five settlers empowered—Squinting commenced—Particles of gold found at Park River, near Bathurst—Mineral Plains discovered by Curtis and Ovens.
- 1824 New South Wales mentioned a Crown Colony—Governor's censorship ended and press free—First Criminal Session with trial by jury—First Land regulations—Hans and Harold overland explorers to the South—New Charter of Justice proclaimed—First Executive Council meeting, 25th August—Currency Act (first act of Parliament in Australia)—First manufacture of sugar—Australian Agricultural Company formed—Johnston Bay founded—Supreme Court of Criminal Jurisdiction established.

- 1825 Van Diemen's Land (Tasmania) proclaimed a separate Colony—Licence Houses granted—Attempt to colonise New Zealand from Sydney—First Postal Act.
- 1826 Church and School Corporation—Australian Subscription Library founded—Fluorine settlement established by Bishop—Land Board appointed—Commenced panic caused by extensive operations of Australian Agricultural Company—Lockyer established a Settlement at King George's Sound.
- 1827 Colony self-supporting—Land and stock speculations—Sydney Gazette issued daily—Sydney Water supply scheme (Botany Swamps) initiated—Home discovered new route to Bathurst—Cunningham explored Cunningham River and general district of Darling Downs—Regular mail services instituted—Petition for right of trial by jury in civil cases and for representative legislature—Naval control of Customs ceased—Western boundary of New South Wales extended—Stirling's expedition to Western Australia.
- 1828 Second Constitution; Legislative Council enlarged to fifteen members—First Census, population 26,588—Letters of Denatation—Richmond River discovered by Ross—General Post-office communication established—English Criminal Law adopted—Possession taken of Western Australia by Fremantle.
- 1829 Sturt's expeditions and discovery of Darling and Murray Rivers—Act of Council, establishing trial by jury in civil cases—Settlement established in Western Australia.
- 1830 Sturt's overland journey southward—Scarcity of labour—Dr. Lang's Scotch mechanics introduced—Road to Hunter River formed—Boat shipped to England, and horses to India.
- 1831 Lord Rippon's Land Regulations for Another Sale—Land grants abolished—Mitchell's explorations north of Liverpool Plains—First immigrant ship arrived—First steamer "Sophia Jane," arrived at Sydney—First colonial-built steamer launched.
- 1832 First appropriation of Public Funds for Immigration—Government Gazette first published—Savings Bank of New South Wales instituted.
- 1833 Sydney Mechanics' School of Arts established—Appellate jurisdiction of Privy Council extended to Colony—Census, population 80,784—Public meetings; petition for representative assembly and protest against appropriation of revenue except for local purposes.
- 1834 First Friendly Society founded—Mitchell's Road over the Blue Mountains opened—Settlement at Twofold Bay—South Australia proclaimed a colony by Imperial Act.
- 1835 Public meeting petitioned for representation in Parliament—Quackery ban lifted by abolition—Road to Ellerslie commenced—Melbourne founded—Port Phillip proclaimed as part of New South Wales.
- 1836 Mitchell's expeditions in southern New South Wales—Society, Annually recognised—Act passed for maintenance of members of regiments—Australian Museum founded—Census, population 77,090—Permanent settlement commenced in South Australia.
- 1837 Select Committee on Transportation appointed in London—Water supply, tunnel from Botany Swamps, completed.
- 1838 Assignment of Convicts system ceased—Botanic Gardens, Sydney, opened to the public—Sale of Port Phillip land at Sydney—Prepayment of postage by stamped covers.
- 1839 Squatting Act passed—Strzelecki found gold near Hartley—Military juries ceased—Church Act established religious equality.
- 1840 Monastery crisis—Strzelecki's expedition to Western Port—Order-in-Council abolishing transportation of convicts.
- 1841 Rev. W. B. Clarke found mines of alluvial gold near Bathurst—First Public (Immigration) Loan—Immigration Committee appointed—New Zealand proclaimed a separate Colony—Sydney lit with gas—Census, population 116,721.
- 1842 Sydney Municipal Corporation established—Bank crisis—Crown Land Sales Act—Moreton Bay settlement proclaimed.
- 1843 First Representative Constitution Act; twelve Crown nominees and twenty-four elected members of Legislative Council—Incorporation of Suburban and City Towns—First General Election—Representative Assembly—Financial crisis—Moreton Bay granted Legislative representation.

- 1844 Exports exceeded imports—Norfolk Island annexed to Van Diemen's Land (Tasmania)—Leichhardt explored from Moreton Bay to Port Essington.
- 1845 Barcoo explored by Mitchell and Kennedy—Responsible Government discussed.
- 1846 Sydney Tram and Rail Company formed—Public protests against renewal of transportation—Imperial Act giving fourteen years' lease to squatters in unsettled districts—Census, population 154,205—Meat preserving industry initiated.
- 1847 Crown Land Leases Act—Australian Agricultural Co. abandoned Coal monopoly—First overland mail between Sydney and Adelaide—Iron smelting works (Fitzroy Ironworks) opened near Berrima.
- 1848 Influx of Chinese—Kennedy's last exploring expedition—National and Denominational School Boards established—Carroon copper-mines discovered—Leichhardt set out on last expedition—Attempted revival of transportation, Order-in-Council of 1849 revoked.
- 1849 Exodus of population to California gold-fields—Uniform twopenny postage instituted—Contract for conveyance of English mails—Anti-transportation meetings—Last convict ships arrived.
- 1850 Construction of first Australian railway commenced at Sydney—University of Sydney incorporated—Final abolition of transportation.
- 1851 Hargraves discovered payable gold near Bathurst—Gold proclaimed Crown property—Colony of Victoria (Port Phillip District) separated from New South Wales—Imperial Act authorised preparation of Constitution for New South Wales—Telegraph first used—Census population, 182,424—Agitation for separation of Queensland.
- 1852 Gold revenue allotted to Colonial Legislatures—First P. & O. mail steamer ("Chusan") arrived from England—Inauguration and formal opening of Sydney University.
- 1853 First steamer on the Murray—Sydney City Corporation dissolved—First sewerage works in Sydney—Constitution Bill passed—Convicts finally deported from Norfolk Island.
- 1854 Volunteer Force enrolled—Fitzroy Dock commenced—University affiliated colleges established.
- 1855 Railway, Sydney to Parramatta, opened—Gold-fields control scheme—Royal Sydney Mint established—New Constitution inaugurated; Responsible Government—First Australian gun-boat ("Spitfire") launched at Sydney—Operative men obtained eight-hour working-day concession.
- 1856 First elective Parliament and responsible Ministry—Civil Registration of Births, Deaths, and Marriages inaugurated—Pitcairn Islanders placed on Norfolk Island—Norfolk Island transferred to jurisdiction of Governor of New South Wales—Census, population 252,643.
- 1857 Wrecks of "Dunbar" (119 lives lost) and "Catherine Adamson" (21 lives lost) at Sydney Heads—Select Committee on Federation—Electoral lists and rolls printed—Corporation of Sydney (dissolved 1853) restored—Newcastle and Maitland connected by rail.
- 1858 Manhood suffrage and vote by ballot enacted—Telegraphic communication, Sydney to Melbourne and Adelaide—Royal Charter to Sydney University—Chinese Restriction Bill defeated by Upper House—Legislation to establish Country District Courts and Country Municipalities.
- 1859 Moreton Bay (Queensland) separated from New South Wales—Darling River navigated by Cadell and Hamell.
- 1860 Kiambs gold-field rush—Troops sent from New South Wales to New Zealand (Maori war)—Burke and Wills expedition.
- 1861 Lambing Flat gold rush—Anti-Chinese riots at Lambing Flat and Berrangong gold-fields—Sir John Robertson's Land Act; free selection before survey—Restriction of Chinese immigration—Emigration Commissioners, Forbes and Dalley, appointed to visit the United Kingdom—First Tramway (horse-drawn), Pitt-street, Sydney—Sydney and Brisbane connected by telegraph.
- 1862 State aid to religion abolished—Real Property (Torrens) Act passed—Railway opened to Penrith—Free selection of land came into operation.
- 1863 Agent-General in London appointed—Northern Territory separated and annexed to South Australia—Money Order System established.

- 1864 Darling River floods.
- 1865 Border Duties Conference—Stamp Duties imposed.
- 1866 Public Schools Act; Council of Education replaced National and Denominational School Boards—Garden Island dedicated to Imperial Government.
- 1867 Industrial Schools established—Municipalities Act—Diamonds found at Mudgee—First Volunteer Land Order issued.
- 1868 Duke of Edinburgh's visit—His attempted assassination at Clontarf—First issue of bronze coin by Sydney Mint.
- 1869 Eskbank Iron Company established—Old Australian Subscription Library (founded 1826) converted into Free Public Library—Railway to Goulburn opened—Cable laid between Tasmania and mainland of Australia.
- 1870 Intercolonial Exhibition at Sydney, celebrating Centenary of Cook's landing; monument erected at Kurnell, Botany Bay—Imperial troops withdrawn from New South Wales—Federal Conference, Melbourne.
- 1871 Forest Reserves established—Permanent military force raised—National Art Gallery founded—Census, population 203,981—Government (Post Office) Savings Bank established.
- 1872 International Exhibition at Sydney—Cable to England completed—Tin-fields opened.
- 1873 Intercolonial Premiers' Conference, Sydney—Great activity on gold-fields.
- 1874 Triennial Parliaments Act—Intercolonial Conference—General Post Office opened—Volunteer Land Orders abolished.
- 1875 New Land Act, "Dummying" restricted.
- 1876 Telegraphic cable laid between New South Wales and New Zealand—Railway to Bathurst opened—Dunluquin-Moama railway opened.
- 1877 Rail to Orange and Cootamundra—Tolls abolished—Precious metal discovered at Abercrombie River.
- 1878 Forestry and timber regulations—Technical College instituted in connection with Sydney Mechanics' School of Arts—Rail to Wagga—Pioneer vessel (s.s. "Garonne") of Orient S.N. Co. arrived from London.
- 1879 Royal Zoological Society founded—International Exhibition at Garden Palace, Sydney—First steam tramway in Sydney—Copyright Act—National Park dedicated—Technological Museum opened—First issue silver coin from Sydney Mint—First artesian bore, on Kallara Run, near Paroo River.
- 1880 Public Instruction Act—Electoral Act—Famora Gold-Field—Country Towns Water Supply and Sewerage Act—Telephones established in Sydney—Federal Conferences, Sydney and Melbourne.
- 1881 Chinese immigration further restricted—Women admitted as students for degrees at Sydney University—Rail to Albany—Trade Unions Act—State Children's Relief Board established—Prince Albert Victor and Prince George of Wales arrived in H.M.S. "Bacchante"—Infectious Diseases Supervision Act, creating Board of Health.
- 1882 Garden Palace destroyed by fire—Clyde Engineering Works established.
- 1883 Silver discovered at Broken Hill—Broken Hill Proprietary Syndicate formed—Railway bridge across Murray River opened—Through railway communication established Sydney-Melbourne—State system of Technical Education instituted—Destruction of rabbits compulsory—Diamonds found at Bingara—Intercolonial Federal Federation Conference.
- 1884 Land legislation restricting sales by auction—Land Act giving sixty of tenure to pastoral lessees—Federation Bill rejected.
- 1885 N.S.W. Military Contingent sent to Sudan—Broken Hill silver Mine opened—Territorial Division of the Colony—Local Land Boards instituted—Intercolonial Trades Union Conference—Federal Council of Australasia constituted—Cessation of assisted immigration.
- 1886 Industrial depression—Foreign parcels post established—Dairies Supervision Act.
- 1887 Bull-dogging disaster (83 lives lost)—Scarcity of employment; Government relief works started—Australasian Conference in London—Australasian Naval Defence Force Act.

- 1888 Centenary Celebration of Settlement in Australia—Centennial Park dedicated—Drastic legislation against Chinese immigration (poll-tax, 1900)—Weekly mail service to England inaugurated—New South Wales and Queensland railway systems connected—Railway Commissioners appointed—International Conference at Sydney regarding Chinese immigration—Imperial Defence Act—Metropolitan Board of Water Supply and Sewerage established.
- 1889 Rail communication, Brisbane to Adelaide through Sydney and Melbourne, established by opening of Hawkesbury River Bridge—Payment of Members of Parliament.
- 1890 Maritime and seamen's strikes—Federal Conference in Melbourne—Naval Agreement.
- 1891 Failure of many Building Societies—Thirty-five Labour members returned to Legislative Assembly—Australian Auxiliary Squadron arrived—First National Australasian Convention; draft Bill adopted—Australasian Colonies joined Postal Union.
- 1892 First Industrial Arbitration laws; Councils of Conciliation established—Women's College, Sydney University opened—Bathurst District Water Supply and Sewerage Board—Technical College, Lithgow, opened—Clubbson's Protection Act.
- 1893 Financial crisis—Inland and Interstate Parcel Post inaugurated—Electoral Act, "One Man One Vote"—Cable communication with New Caledonia—Postal Notes issued—Married Women's Property Act.
- 1894 First Offenders' Probation Act—Kingsgate Church dedicated.
- 1895 Land Legislation—Land and Income Tax Acts passed—Freight Tariff instituted—Federal Convention at Hobart—Standard Time Act—Gravel Lands Act.
- 1896 Factories and shops regulations—F. X. Russell lectured to School of Engineering, Sydney University—Establishment of Police—People's Federal Convention at Bathurst—Federal Enabling Acts passed by all States except Queensland.
- 1897 Municipalities Act—Colonial Frontier Commissioners with Secretary for Colonies in London—Federal Convention resumed at Adelaide and Sydney.
- 1898 First voyage of wheat for export—Proposed Federation Constitution Bill rejected by New South Wales—Sydney and Newcastle connected by telegraph—Federal Convention resumed at Melbourne.
- 1899 Advances to settlers instituted—Australasian Federation Enabling Act Referendum; acceptance by New South Wales—Early closing of shops—Beer War; first Contingent sent to South Africa from New South Wales—Incorporation of Public Library—First gold dredge in operation.
- 1900 Old-age Pensions instituted—Miners' Accident Relief Fund established—First Federal Elections—Metropolitan Traffic Act—Naval Contingent despatched to China—Commonwealth of Australia Constitution Act received Royal assent—First Federal Ministry formed.
- 1901 Federation of Australian Colonies—Proclamation of Commonwealth of Australia—Opening of first Federal Parliament by H.R.H. the Duke of Cornwall and York—Industrial Arbitration Act—Sydney Harbour Trust formed—Naval Contingent returned from China—Glass Bottlemaking Act—Western Lands Act—Introduction of Pacific Islanders prohibited—Police, Customs, and Defence Departments transferred to Commonwealth—Interstate Freights established.
- 1902 Mt. Kosciuszko Colliery Explosion (ninety-five lives lost)—Women's Franchise—Pacific Cable completed—Legitimation of Children Act—First sitting of Arbitration Court—Parliamentary Select Committee re Greater Sydney—Fo was declared, South African War.
- 1903 Referendum favouring reduction of number of members of Legislative Assembly from 125 to 90—High Court of Australia inaugurated—Index of Criminals Prevention Act.
- 1904 Reduction of number of members of Parliament from 125 to 90—Redistribution of Electorates—Educational Reforms commenced—Patents, Trade Marks, &c., transferred to Commonwealth—Inland Protection Act—Commonwealth Conciliation and Arbitration Act.

- 1906 Assisted Immigration reintroduced—Children's Courts instituted—Habitual Criminals Act—Local Government (Officers) Act extending local government to whole State.
- 1906 Harrow Jack (Bicentennial) Dam withdrawn—Public School fees abolished—Sydney Central Railway Station opened.
- 1907 Invalidity and Accident Pensions—Telephone connected, Sydney-Melbourne—Opening of blast furnace for manufacture of iron and steel at Lithgow—Medical Inspection of School Children instituted—Advances to soldiers transferred to the control of Government Savings Bank.
- 1908 Visit of United States (American) Fleet—Minimum Wage Act—Industrial Wages Boards constituted—Subventions to Friendly Societies Act—Yass-Canberra Federal Capital Site selected—Crown Lands Amendment Act (Concessional)—Cataract Dam completed—Prisoners Detention Act—Private Hospitals Act.
- 1909 Fisher Library (Sydney University) opened—Old-age Pensions administration transferred to Commonwealth—Pace Fuel Act—Lord Kitchener's report on military defence—Imperial Conference on Defence of Empire.
- 1910 Mitchell Library opened—Referenda favouring transfer of State Duties to Federal Government and rejecting proposed State League agreement with Commonwealth—Australian Notes Act—Australian silver coinage issued—Parliamentary Elections (Second Ballot) Act—Saturday Half-holiday instituted in Sydney and the larger towns of N.S.W.—Workmen's Compensation Act—Federal Land Tax—Involuntary and Accident Pensions administration transferred to Commonwealth—Visit of Admiral Henslowen to inspect Naval Defence arrangements—Arrival of "Yaira" and "Parasmatia," first vessels of Australian Navy—Australian Penny Postage.
- 1911 First Australian Notes issue—Federal Referenda relating to municipalities and industrial legislation; proposals rejected—Federal Capital Site at Yass-Canberra transferred to Commonwealth—Compulsory cadets training initiated—Murrumbidgee Irrigation Trust appointed—First wireless station (private) licensed for transmission of public business—Imperial Conference in London—Landmark wireless station, with Australian-made apparatus, transmitted message over 2,000 miles—First section of North Coast Railway opened—Evening Continuation Schools opened—Departure of Mawson Antarctic Expedition—Launch of H.M.S. "Australia"—Flight of first Australian Aviator (W. E. Hart) from Sydney to Perth.
- 1912 Itinerary Enrolment, Secondary Education—Federal Capital design selected—Murray Waters Agreement—Lithgow Small Arms Factory opened—Murrumbidgee Irrigation Farms available, and irrigation commenced—Commonwealth Bank established—Darcy Garden Suburb planned, and buildings erected by Government—Commonwealth Maternity allowances—Sydney (Pennant Hills) Wireless Station opened.
- 1913 Federal Capital City named Canberra, and foundation stone laid—Visit of Dominion Royal Commission—British Trade Commissioners office established at Sydney—First elective Senate, University of Sydney—Arrival at Sydney (4th October) of Australian Fleet, including battle cruiser "Australia" and cruisers "Sydney" and "Melbourne"—Departure of (Imperial) Admiral King-Hall—First Cost of Living and Living Wage Inquiry in Industrial Arbitration Court—Appointment of Interstate Commission—State Government Savings Bank agencies removed from post office.
- 1914 Public Trust Office established—Return of Mawson Antarctic Expedition—Visit of General Sir Ian Hamilton, Inspector-General of Overseas Military Forces—Norfolk Island transferred to control of Commonwealth Government—First Aerial Mail, Melbourne to Sydney, carried by M. Goullaux—Direct telephones, Sydney to Adelaide, opened—Murray Waters Agreement (Presser's Conference)—First Baby Clinic opened—State advances for homes initiated—European War; local defence forces mobilised—Expeditionary base of volunteers despatched to co-operate with Imperial forces—Australian Naval Unit transferred to direct Imperial control—Necessity Commodities Control and Wheat Acquisition Acts—War Preventions Act—Australian war vessels aided in capture of German Samoa—German possessions in Pacific captured by Australian naval and military forces—H.M.A.S. "Sydney" destroyed German cruiser "Emden"—German gunboat "Komet" captured and added to Australian navy.

- 1915 Australian Expeditionary Forces in action at Dardanelles and in Egypt—Return of First Expeditionary Force from New Guinea—Newcastle iron and steel works opened—Conservatorium of Music opened—Policewomen appointed—State trawling scheme in operation—Meat supply for Imperial Uses Act—War census—Commonwealth Powers (War) Act—Commonwealth Income Tax—Wheat harvest marketed by Australian Governments—Lighthouses transferred to Commonwealth control.
- 1916 Australian Expeditionary Forces in action in France—Commonwealth proclamation ordering early closing of hotels—Liquor Referendum resulted in closing hotels at 6 p.m.—Commonwealth Advisory Council for Scientific Research—Fleet of cargo steamers bought by Commonwealth Government—Sunday Trading Act—Fair Rents Court commenced—Valuation of Land Act—Eight Hours Act—Soldiers Repatriation Fund established—Military Service Referendum; rejection of proposal for compulsory military service abroad—Public Instruction Act amended in order to provide for registration of private schools—Workmen's Compensation law extended to all workers—Testator's Family Maintenance Act—Imperial Wool Purchase Scheme initiated.
- 1917 Transcontinental Railway opened—River Murray Waters Act in operation—Daylight Saving initiated and abandoned—Second Military Service Referendum; proposal rejected—Extensive industrial dislocation—Interstate Commission Prices investigation—War-time Profits Tax imposed—Voluntary Workers (Soldiers Homes) Act passed.
- 1918 European War armistice declared—N.S.W. Board of Trade constituted—Visit of French Mission—Women's Legal Status Act passed—Judges Retirement Act—War Postage imposed—Venereal Diseases Act passed—Commonwealth Repatriation Department created—Poor Persons Legal Remedies Act passed—Act passed to introduce system of proportional representation at State Parliamentary elections.
- 1919 European War—Peace signed—State Housing scheme initiated—Influenza epidemic—Wheat silos erected for bulk handling—First aeroplane flight, England to Australia (twenty-eight days) by Ross Smith—Commonwealth Royal Commission appointed to inquire into basic wage and cost of living—First Federal General Elections in accordance with preferential voting system—Federal Referenda; proposals to extend legislative powers and to provide for nationalisation of monopolies rejected—Report by Viscount Jellicoe on Naval Defence.

GEOGRAPHY AND CLIMATE.

GEOGRAPHY.

AREA OF NEW SOUTH WALES.

THE area of New South Wales, including Lord Howe Island (its dependency) and the Federal Capital Territory, is estimated at 310,372 square miles, or 198,638,080 acres, representing rather more than one-tenth of the total area of the Commonwealth of Australia. The Federal Territory consists of about 900 square miles at Canberra, the site of the Federal Capital, and 28 square miles at Jervis Bay, used for naval purposes.

The length of the State, measuring directly from Point Danger on the north to Cape Howe on the south, is 683 miles. From east to west, along the 29th parallel, the breadth is 756 miles, while diagonally from the south-west corner, where the River Murray passes into South Australia, to Point Danger, the distance is 850 miles.

Lord Howe Island is 7 miles in length, by a width ranging from half-a-mile to 1½ miles, and has an area of 5 square miles.

The area of New South Wales, and of each of the other States, in relation to the total area of the Commonwealth is shown in the following statement :—

State or Territory.	Area.	Per cent. of total area.
	sq. miles.	
New South Wales	309,444	10.40
Victoria	87,884	2.96
Queensland	670,560	23.54
South Australia	380,070	12.78
Western Australia	975,920	32.81
Tasmania	26,215	.88
Northern Territory	323,620	17.60
Federal Capital Territory	900*	}
" Area at Jervis Bay	28	
Total Commonwealth	2,974,581	100.00

* Approximate.

BOUNDARIES OF NEW SOUTH WALES.

New South Wales lies in the temperate zone, almost entirely between the 29th and 36th parallels of south latitude and the 141st and 154th meridians of east longitude; the southern boundary dips from the 34th parallel on the west to the 37th parallel on the east. The State is bordered on the north, west, and south respectively by the States of Queensland, South

Australia, and Victoria, and on the east by the South Pacific Ocean. The total length of coast line is 700 miles, representing 1 mile of coast to 443 square miles of its area, as against an average of 1 to 261 for the continent of Australia.

GEOGRAPHICAL FEATURES.

In the 1914 issue of this Year Book an account was given of the important geographical features of New South Wales.

Lord Howe Island.

Lord Howe Island is a dependency of New South Wales and is included in the electorate of Sydney; it is situated about 300 miles east of Port Macquarie, and 430 miles north-east from Sydney, in latitude 31° 33' 4" S., longitude 159° 4' 26" E. The island was discovered in 1788; it is of volcanic origin, and Mount Goswami, the highest point, reaches a height of 2,610 feet. The climate and soil are favourable for the growth of subtropical products; but on account of the rocky formation of the greater part of the surface of 3,220 acres, only about 300 acres are suitable for cultivation. The land has not been alienated, but is occupied rent free on sufferance, and is utilized mainly for the production of *Centasia palm seed*. A Board of Control manages the affairs of the island and supervises the palm seed industry. At the Census of 1911 the population numbered 160 persons, and on 31st Dec. m. v. 1918, it was estimated at 113.

The Surface of New South Wales.

The surface of New South Wales is divided naturally into five well-defined divisions—the Coast District, the Tablelands, the Western Slopes, the Inland Rivers Districts, and the Western Plains. The tablelands occupy the summit of the Great Dividing Range, which traverses the State from north to south and marks the division between the coastal district and the hinterland.

The coastal strip is undulating and well watered. The average width is about 30 miles, but at Clifton the tableland abuts on the ocean. The widest part (150 miles) is in the valley of the Hunter River, where the relatively soft rocks of the coal basin have offered least obstruction to river erosion. The Great Coal Basin (extending from beyond Gunnedah on the north to Ulladulla on the south), underlies the central portion of the coastal region; the seam emerges at Newcastle and Bulli, but at Sydney lies about 3,000 feet below the surface. Coal seams are found in the Clarence River district, but for the most part the northern and southern sections of the Coast District are devoted to dairy farming and the cultivation of such crops as maize, lucerne, and, in the extreme north, sugar-cane and bananas. The northern forests yield a great variety of valuable timbers.

There are three tablelands—the northern, the central, and the southern—comprising an extensive plateau region, furrowed in many parts by deep, rugged valleys. Generally they present on the eastern side a steep escarpment towards the coast, while on the west they slope gradually towards the plains. The tablelands vary in width from 50 to 100 miles. The northern tableland commences in Queensland and terminates on the northern side of the Peel River Valley; its average height is 2,500 feet. The central tableland is bounded by the Warrumbungle and Liverpool Ranges on the north, and by the valleys of the Maclean, Castlemaine and Wallandilly Rivers on the south. The southern tableland extends northward from

the Victorian border, and slopes gradually to the Crookwell River on the north-west and to the spurs of the Callaria Range on the north-east. Its average height is slightly less than the northern tableland, although the Kosciusko Plateau, the most elevated portion of the State, is within its limits. Level upland plains occur throughout the Tableland Division.

The Western Slopes sweep with greater or less abruptness from the western limits of the tablelands to the head-waters of successive systems of inland rivers.

The inland rivers constitute a well-defined area, distinct in character from the Western Plains. The northern division comprises the Gwydir and the Namoi River systems; the central division, the Castlereagh, the Macquarie, and the Bogan; and the southern, specifically designated the Riverina, the Lachlan, the Murrumbidgee, the Edwards and the Murray.

The Great Plain district stretches from the river-courses of the Barwon, the Bogan, and the Lachlan, to the western boundary of the State. The plains slope very gently from the bed of the Darling eastward towards the Great Dividing Range and westward towards the South Australian border. Only a few trifling elevations occur, and the plains are for the most part devoid of timber. They are watered by the rivers of the Murray-Darling system. The Darling and its tributaries are liable to considerable shrinkage in periods of dry weather, but in wet seasons they overflow their banks and flood the surrounding country for miles, rendering it extremely fertile.

The surface of the plains consists of rich red and black soils, the former being particularly rich in plant food. The black soil formations represent the silted-up channels of old rivers which, when flooded, spread a fertile silt over the surrounding district. The black soil plains occupy large areas along the middle courses of the Castlereagh, the Namoi, and the Gwydir Rivers.

Geological Formation.

The sedimentary rock formations found in New South Wales are classified as follows:—

CAMPANIAN.	Post-Tertiary	Recent: auriferous and stanniferous soils, and alluvial deposits in the beds of existing rivers.	Pleistocene; alluvial beds containing gold, tin, and gem-stones.
	Cretaceous	Miocene; quartzites with plant remains at Dalton, near Gungah.	
			MESOZOIC.
Jurassic	Middle Cretaceous; auriferous alluvial beds at Mount Brown.	Lower Cretaceous; Rolling Downs formation of Queensland.	
Hawkesbury Series	Form the base of the artesian water-bearing basin. These Measures contain thin coal-seams, not at present worked in New South Wales.		
		Hawkesbury Series	Winnamatta Shales; contain fireclays.
Hawkesbury Series	Narrabeen Shales.		

PALÆOZOIC.			
Permo-Carboniferous ...	1. Upper or Newcastle Coal Measures	The productive coal-seams of New South Wales occur in three measures.	
	2. Dempsey Series		
	3. Middle or Tomago Coal Measures		
	4. Upper Marine Series		
	5. Greta Coal Measures		
	6. Lower Marine Series		
Carboniferous ...	Rhincopteris Beds and Associated Marine Beds		
	Marine beds of Dungog and Clarence Town areas, and New England District, equivalent in part to the Star Beds of Queensland.		
Devonian ...	Upper Devonian	All the metalliferous lodes and reefs occur in these formations, or in such igneous rocks as granites, quartz-porphyrus, felsites, diorites, &c.	
	Lower Devonian		
Silurian ...	Limestones and slates at Yass, Molong, Wellington, Quindong, Portland, &c.		
	Slates and Tuffs at Mandurama, Cadia, Tongsley, Berridale, and in the counties of Anichland and Wallesey, on the Victorian border, Talvoop, Tallong, Chatsbury, and in the Mouro-Albury district.		
Ordovician ...			
Cambrian ...	Limestones, schists, and glacial beds of Torravanee.		

Post-Tertiary and Tertiary deposits cover approximately one-third of the area of New South Wales, embracing practically the valleys of the western river systems, except for a broad belt of pre-Silurian, Silurian, and Devonian rocks between the Bogan River and the Barrier Range. Tertiary and Post-Tertiary fluvial deposits constitute the chief sources of alluvial gold, stream tin, and gem-stones. The Cretaceous formation was the source of supply of the first artesian water struck. Lower Cretaceous rocks occupy the greater part of the basin of the Upper Darling and its tributaries, overlying a considerable area of Trias-Jura water-bearing formation. The Upper Cretaceous formation is opal-bearing, rich deposits being worked at White Cliffs and Lightning Ridge. Rocks of Jurassic age are limited in occurrence to the locality of Gulgong. Triassic and Trias-Jura rocks extend over a large part of the coastal district, the Trias-Jura having a great development as conglomerates, sandstones, and shales in the Clarence River District. Wianamatta shales, Hawkesbury sandstone, and Narrabeen shales, constitute the Hawkesbury series of Triassic age. The Hawkesbury sandstone overlies the Narrabeen shales, and extends from Sydney on all sides for some 70 miles embracing practically the whole Hawkesbury River Valley. This formation extends also continuously from Sydney to the head of the Goulburn River, and has an important development in the Macquarie and Castlereagh River basins. The Wianamatta shales cover a large area in County Cumberland and outcrop in the Blue Mountains.

The Permo-Carboniferous formation extends along the coast between the Clyde and Hunter River districts and westward to the mountains and in the Central-Western Division. This formation is described in detail in the chapter relating to the Mining Industry. Carboniferous strata are developed in the Hunter and Manning River districts, and thence in a north-north-westerly direction to Warialda. They are of marine and fresh-water origin, interbedded with tuffs and lavas and intersected by metalliferous lodes, but contain no workable coal seams.

Rocks of Devonian age are developed within the Blue Mountain area and in isolated localities, as in the Yass-Goulburn district, and in the Western and New England Division; they are traversed by metalliferous lodes and quartz reefs.

Upper Silurian beds occur generally west of the tablelands, on the upper courses of the Murrumbidgee and Lachlan Rivers, and extend northwards. They are developed also in the basins of the Clyde and Upper Shoalhaven, and probably in the basins of the Upper Namoi and Macleay Rivers. In certain districts of the State sediments of this age contain commercial deposits of gold, silver, tin, copper, lead, and antimony; the limestone beds in which the Jenolan, Wellington, Yarrangobilly, and Wombeyan Caves occur are of this age.

Ordovician rocks have been located on the Victorian-New South Wales boundary line, and at the localities mentioned in the table of formations. Their area is not defined. Sediments of this age contain important deposits of gold, silver, and copper. Rocks of Cambrian age contain the Broken Hill lode, and probably occur in the Cooma-Albury districts.

Capital City of New South Wales.

Sydney, the capital city of New South Wales, and the seat of Government, is situated on the shores of Port Jackson. It is the oldest and largest of the Australian towns, and is the main commercial and industrial centre of New South Wales. The great bulk of the sea trade of the State passes through Sydney, where all the main railways converge and numerous large manufacturing establishments are conducted.

FEDERAL CAPITAL TERRITORY.

The Federal Capital Territory, formerly part of the State of New South Wales, is situated in the upper basin of the Murrumbidgee River, being watered by its tributaries, Molonglo and Cotter. Canberra, the site chosen for the capital city, is 3 miles distant from Queanbeyan, with which it is connected by rail. Although the site was chosen in 1908 the seat of Government is still in Melbourne, Victoria.

TOURIST DISTRICTS.

The main tourist districts of New South Wales are situated in the coastal and tableland divisions, but the fertile Riverina, in the south, the artesian hor a in the north-west, and the Murrumbidgee Irrigation Area are of material interest to visitors from other lands.

The main tourist districts are:—

Sydney and its surroundings.	Southern Highlands.
Illawarra and South Coast districts.	Hawkesbury River.
Blue Mountains and Central Tableland.	Northern Lakes.
Jenolan, Wombeyan, and Yarrangobilly Caves.	New England Highlands.
Kosciuszko and the Alpine snowfields.	North Coast district.

The Government Tourist Bureau of New South Wales was established for the purpose of advertising the scenic and health resorts of the State, to supply information to tourists, and to improve transport facilities and

accommodation in tourist districts. Information is supplied at the Bureau free of charge. Itineraries are prepared, guide books published, and tours organised, with the object of unfolding the natural beauties and displaying the advantages of all parts of the State to the inquiring traveller and prospective citizen. The Government Accommodation Houses at the Caves and at Kissinginjo are managed by the Bureau.

CLIMATE.

Meteorological Bureau.

Meteorological observations in New South Wales are directed from Sydney as the centre of a subdivision of Australia, which includes the greater part of New South Wales; a special climatological station is maintained also at Dulibo, and there are many reporting stations throughout the State. Bulletins and weather charts are issued daily by the Meteorological Bureau, and rain maps and isobaric charts are prepared.

Signals are displayed in Sydney to give storm warnings and to indicate fair weather, rain, and cold or heat waves; forecasts are telegraphed daily to towns in country districts, and the city forecasts are published in the early editions of the press.

SYDNEY OBSERVATORY.

Sydney Observatory, lat. $33^{\circ} 51' 41.1''$ south, long. $151^{\circ} 19' 28.1''$ east, established in the year 1850, is a State institution. Since the creation of a Federal weather bureau in 1907 the work of the Observatory has been of an astronomical character. The principal instruments are the transit circle, astrogaph, equatorial, and seismograph. Owing to the unsuitableness of the atmosphere in Sydney the astrogaph has been removed to Pennant Hills. The principal scientific work is the determination of the position, distribution, and movement of stars in the region allotted to Sydney (*viz.*, 52° to 63° south declination) in the great international scheme. In addition, occasional observations, such as those of comets, are made with the equatorial, and systematic records of earth tremors are sent to the Earthquake Committee of the British Association for the Advancement of Science. Practical and popular work enhances the determination and notification of the standard time of the State; correspondence of an educational character on astronomical matters, and day and evening reception of visitors interested in astronomy.

WEATHER.

The weather is determined chiefly by anticyclones, or areas of high barometric pressure, with their attendant tropical and antarctic depressions, in which the winds blow spirally outward from the centre or maximum. These anticyclones pass almost continuously across the face of the continent of Australia from west to east, and the explanation of the existence of such high-pressure belts lies probably in the fact that this area is within the zone in which polar and equatorial currents meet and for some time circulate before flowing north and south. The easterly movement depends on the revolution of the earth.

A general surging movement occasionally takes place in the atmosphere, sometimes towards, and sometimes from, the equator. The movement causes sudden changes in the weather—heat when the surge is to the south, and very cold weather when it moves towards the equator. Probably, these sudden displacements of the air systems are due to thermal action, resulting in expansion or contraction in the atmospheric belts to the north and south of Australia.

New South Wales is peculiarly free from cyclonic disturbances, although occasionally a cyclone may reach the State from the north-east tropics or from the Antarctic low pressure belt which lies to the south of Australia, or may result from monsoonal disturbances.

THE SEASONS.

The seasons occur as follows:—Summer—December, January, and February; autumn—March, April, and May; winter—June, July, and August; spring—September, October, and November.

January is the hottest and July the coldest month, and the temperatures of autumn and spring are approximately the mean of the whole year.

WINDS.

In the summer months the prevailing winds on the coast of New South Wales blow from the north, with an easterly tendency which extends to, and in parts beyond, the highlands; in the western districts the winds are usually from the west. Southerly winds, which are characteristic of the summer weather on the coast, occur most frequently during the months from September to February, and between 7 p.m. and midnight. These winds, which are deflected sea breezes, cause a rapid and welcome fall in temperature, and are sometimes accompanied by thunderstorms.

During winter, the prevailing direction of the wind is westerly. In the southern areas of the State the winds are almost due west, but proceeding northwards there is a southerly tendency, while on reaching latitudes north of Sydney the direction is almost due south. When they reach the north-eastern parts of the State, these winds are deflected in a westerly direction, and are merged in the south-east trade winds north of latitude 30°. During the cold months of the year, Australia lies directly in the great high-pressure stream referred to previously, and the high pressure when passing over the continent tends to break up into individual anti-cyclonic circulations.

RAINFALL.

Generally, the wet season extends over the first six months of the year, although occasionally the most serviceable rains come in the spring. The coastal districts receive the heaviest falls, ranging from 20 inches in the south to 70 inches in the north. Despite their proximity to the sea, the mountain chains are not of sufficient elevation to cause any great condensation; so that, with slight irregularities, the average rainfall gradually diminishes towards the western limits of the State, the figures ranging from a mean of about 20 inches on the seaboard to 10 or 20 inches on the Western Plains.

A classification of areas in New South Wales in accordance with the annual rainfall shows the following distribution:—

Annual Rainfall.		Area.	Annual Rainfall.		Area.
Inches.		Sq. Miles.	Inches.		Sq. Miles.
Over 70	—	693	30 to 35	...	77,302
60 to 70	—	1,762	15 „ 20	...	67,629
50 „ 60	—	4,329	10 „ 15	...	77,268
40 „ 30	—	15,804	Under 10	...	44,997
30 „ 40	—	30,790	Total	...	310,372

The distribution of rainfall is dependent on three factors—(1) the energy present in the atmospheric systems, (2) the rate of movement of the atmospheric stream, and (3) the prevailing latitudes in which the anticyclones are moving.

The chief agencies for precipitating rainfall are Antarctic depressions, monsoonal depressions, and anticyclonic systems. Antarctic depressions are the main cause of the good winter rains in the Riverina and on the South-western Slope. A seasonal prevalence of this type of weather would cause a low rainfall on the coast and tablelands, and over that portion of the inland district north of the Lachlan River. A monsoonal prevalence ensures a good season inland north of the Lachlan, but not necessarily in eastern and southern areas. An anticyclonic prevalence results in good rains over coastal and tableland districts, but causes dryness west of the mountains.

Generally, June is the wettest month in all southern districts west of the highlands; in other parts of the interior the month of greatest humidity is January, February, or March. On the Northern Tablelands, the Central Western Slope, and Central Western Plains, the highest monthly average is recorded in January. February is the wettest month on the North-western Plains and over the country to the north of the Darling and east of the Paroo; and March in the far north-west quarter and over the central Darling country between Tilpa and Pooncarie. In the coastal districts, every month, except November, is represented in some part as the wettest.

CLIMATIC DIVISIONS.

The territory of New South Wales may be divided into four climatic divisions—the Coast, the Tablelands, the Western Slopes of the Dividing Range, and the Western Plains.

Coast.

In the Coastal division, which lies between the Pacific Ocean and the Great Dividing Range, the rainfall average is comparatively high.

Sydney is situated half-way between the extreme northern and southern limits of the State. Its mean annual temperature is 63° Fahrenheit. The mean range is only 17°, calculated over a period of sixty years, the mean summer temperature being about 71°, and the mean winter temperature 54°.

The following table shows the average meteorological conditions of Sydney based on the experience of the sixty years ended 1918:—

Month.	Hourly Average Reading of Standard Barometer, corrected to 30" Prob. Standard Quantity and Mean Sea Level.	Temperature (in shade).			Rainfall.			
		Mean (Fahrenheit).	Average Reading of Maximum Thermometer.	Average Reading of Minimum Thermometer.	Average.	Greatest.	Least.	Average number of days with rain.
		"	"	"	inches.	inches.	inches.	
January	29.978	71.7	85.5	64.9	2.00	15.26	0.42	14.0
February.. ..	29.899	71.5	77.4	64.9	4.54	18.56	0.54	14.2
March	30.079	69.2	75.5	62.0	5.11	18.70	0.62	15.0
April	30.129	64.6	71.0	57.9	5.40	24.40	0.06	12.4
May	30.073	58.6	65.0	52.0	4.91	20.87	0.18	10.0
June	29.992	54.4	60.5	48.2	5.05	16.20	0.19	12.7
July	30.142	52.5	59.0	45.5	4.88	12.21	0.12	12.5
August	30.004	55.0	62.3	47.6	2.12	14.89	0.94	11.4
September	30.182	59.1	66.5	51.5	2.91	14.05	0.68	12.0
October	29.890	63.5	71.1	55.9	2.94	11.14	0.21	12.7
November	29.958	67.0	74.4	59.6	2.88	9.88	0.07	12.5
December	29.926	70.1	77.2	62.9	2.61	6.47	0.23	12.8
Annual	30.027	62.1	69.0	56.2	45.02	82.76	23.01	15.25

The North Coast districts are favoured with a warm, moist climate, the rainfall being from 40 to 70 inches annually. The mean temperature for the year is from 60° to 69°, the summer mean being 75° to 78°, and the winter mean 56° to 59°. On the South Coast the rainfall varies from 50 to 60 inches, and the mean temperature ranges between 67° and 63°, the summer mean being from 66° at the foot of the ranges to 70° on the sea coast, and the winter from 48° to 54° over the same area.

Coastal rains come from the sea with both south-east and north-east winds, being further augmented in the latter part of the year by thunderstorms from the north-west. The principal precipitating agencies are the Antarctic depressions, the anticyclones when travelling in high latitudes, and in the extreme north-east reliable rains are precipitated by the south-east trades.

The following table shows the meteorological conditions of the principal stations in the Coastal Division, arranged in the order of their latitude. These stations are representative of the whole division, and the figures are the average of a large number of years:—

Station.	Least Distance from East Coast.		Temperature (in Shade).						Rainfall— Inch Annual.
			Annual.	Mean Summer.	Mean Winter.	Mean Daily Range.	Highest.	Lowest.	
	miles.	feet.	°	°	°	°	°	°	inches.
Lismore	13	52	67.2	75.4	57.0	22.5	116.2	22.9	50.85
Grafton	22	40	67.6	76.3	57.4	25.9	114.9	24.9	38.44
Singleton	40	135	64.1	76.1	52.1	20.3	113.9	22.0	29.00
West Maitland ...	18	40	64.2	74.7	53.0	21.1	114.0	28.0	34.01
Newcastle	1	112	64.8	72.9	56.4	15.1	119.5	31.0	46.95
Enn	36	87	62.7	73.2	56.4	16.2	107.6	26.8	29.88
Sydney	5	146	63.1	71.0	54.0	13.7	108.3	35.9	48.02
Wollungong	0	33	63.0	70.1	54.8	16.8	113.4	31.9	43.72
Nowra	6	30	62.8	71.1	54.0	19.9	109.5	32.6	38.09
Moruya Heads ...	0	55	61.0	68.1	53.0	19.1	114.8	26.3	36.45
Enga	0	50	60.3	69.6	50.0	26.5	109.0	30.0	32.83
Eden	0	107	60.0	67.7	51.8	14.2	106.0	29.3	34.16

Taking the coast as a whole, the difference between the mean summer and mean winter temperature is about 17° only.

Tablelands.

On the Northern Tableland the rainfall is consistent, ranging from 30 inches in the western parts to 40 inches in the eastern. The temperature is cool and bracing, the average for the year being between 54° and 60°; the mean summer temperature lies between 65° and 70°, and the mean winter between 43° and 45°. The Southern Tableland is the coldest part of the State, the mean annual temperature being about 56°. In summer the mean ranges from 57° to 68°, and in winter from 34° to 44°. At Kiandra, the elevation of which is 4,640 feet, the mean annual temperature is 44.4°. Near the southern extremity of the tableland, on the Snowy and Murrumbidgee Ranges, the snow is present generally throughout the year.

The statement below shows, for the Tablelands, similar particulars to those already given for the Coastal Division:—

Station.	Least distance from East Coast.	Altitude.	Temperature (in Shade).						Rainfall— Mean Annual.
			Mean Annual.	Mean summer.	Mean winter.	Mean July range.	Highest.	Lowest.	
	miles.	feet.	°	°	°	°	°	°	inches.
Tenterden	80	3,827	53.8	69.0	47.2	34.8	107.3	11.8	20.48
Inverell	124	1,980	50.0	71.8	47.2	29.2	119.8	12.4	20.40
Glen Innes	90	3,518	56.4	67.2	44.1	25.3	107.3	14.4	21.51
Armidale	81	3,323	59.9	67.0	44.1	24.4	105.2	11.2	22.28
Murrumbidgee	94	1,545	60.0	72.7	40.7	10.9	107.3	19.0	21.27
Castle	120	1,500	60.2	72.9	47.2	24.8	109.3	19.0	22.74
Newellbrook	88	473	63.4	75.2	49.4	23.4	117.0	19.0	23.70
Hedge	121	1,635	60.0	72.6	46.8	30.3	114.9	15.0	25.85
Bathurst	98	2,206	57.1	65.4	44.0	28.0	119.0	13.0	25.88
Kauroyong Heights	35	1,870	57.3	61.7	43.9	13.2	99.0	25.5	30.46
Katoomba	55	2,269	52.6	63.0	43.2	13.4	100.0	25.0	35.97
Covera	73	987	61.6	76.0	47.0	27.2	113.0	22.5	33.04
Pitca	39	549	61.3	72.2	50.1	26.6	114.0	19.7	26.62
Creekwell	31	2,000	52.0	64.7	39.4	22.7	100.0	12.1	32.42
Mont Vale	31	2,202	55.2	63.8	44.0	21.0	100.0	15.9	28.54
Goulburn	54	2,687	56.1	67.7	44.1	21.0	111.0	13.0	24.97
Yass	92	1,616	57.0	70.0	44.7	24.2	108.0	21.0	24.28
Kilnaree	88	4,020	44.4	55.3	32.0	20.7	93.0	11.0	61.32
Cooma	92	2,617	54.2	66.0	41.0	22.7	112.0	11.0	19.07
Bombala	37	3,000	55.0	64.0	42.1	24.7	99.0	17.0	22.76

Western Slopes.

On the Western Slopes the rainfall is distributed uniformly, varying from 20 inches in the western parts to 30 inches in the eastern; the greater part of the wheat-growing area of the State is situated on these slopes, where the average rainfall is about 25 inches. The mean annual temperature ranges from 63° in the north to 60° in the south, in the summer from 81° to 74°, and in the winter from 52° to 47°.

North of the Lambton River, good rains are expected from the monsoonal disturbances during February and March, although these may come as late as May, and incidentally during the remainder of the year. These monsoonal or seasonal rains are caused by reflection in the interior of Australia during the summer months, when the heat suspends the moisture accumulated chiefly from the Southern Ocean.

In the Riverina district, south of the Murrumbidgee generally, and on the South-western Slopes, fairly reliable rains, light but frequent, are experienced during the winter and spring months.

The next statement gives, for the principal stations on the Western Slopes, information similar to that shown for Coast and Tablelands:—

Station.	Least Distance from East Coast.		Temperature (in shade).							Rainfall— Mean Annual.
	miles.	feet.	Mean Annual.	Mean Summer.	Mean Winter.	Mean Daily Range.	Highest.	Lowest.		
Morse	204	680	67.3	80.4	53.2	30.2	117.3	18.0	22.45	
Wartahla	102	1,106	61.6	73.9	47.9	34.0	111.0	18.0	28.40	
Hingsen	103	1,300	64.4	77.3	50.3	29.9	112.5	16.0	31.08	
Narrabri	103	697	60.8	80.7	51.9	28.5	110.9	18.4	35.98	
Gunnsluh	106	874	63.0	79.1	50.9	28.8	114.0	24.0	24.51	
Coonabarabran	185	1,073	60.0	73.0	46.4	32.0	111.9	11.4	29.76	
Quirindi	115	1,378	63.0	76.5	49.5	27.1	113.6	17.0	27.92	
Dubbo	177	870	63.0	77.5	49.3	27.9	115.4	16.9	22.40	
Forbes	176	781	63.9	77.6	49.7	24.3	118.4	24.0	19.96	
Young	140	1,416	59.4	73.0	45.8	26.2	113.9	20.3	25.42	
Marulan	187	709	63.0	76.2	47.4	26.6	114.0	23.0	20.13	
Murrumbidgee	196	1,208	60.4	74.0	47.3	27.5	114.9	19.0	24.23	
Wagga Wagga	158	612	62.2	76.2	48.7	25.3	119.0	18.4	21.51	
Urana	213	400	62.5	76.2	48.1	22.6	117.0	18.4	17.18	
Albury	173	542	60.8	74.3	47.7	27.3	117.3	18.9	27.94	

Western Plains.

The Western District consists of a vast plain, the continuity of which is broken only by the Grey and Barrier Ranges. Owing to the absence of mountains in the interior, the annual rainfall over a great part of this division, which lies in the zone of perpetual high pressure, does not exceed 10 inches. It increases from 8 inches on the western boundary to 10 and 15 inches along the Darling River, and 20 inches on the eastern limits. The mean annual temperature ranges from 69° in the north to 62° in the south; in the summer from 83° to 74°, and in the winter from 53° to 45°.

Although the summer readings of the thermometer in this district may be from 10° to 20° higher than those on the coast, the heat is not distressing. Excessive heat is experienced occasionally, and with many summers intervening, its occurrence being in all probability due to a temporary stagnation in the easterly atmospheric drift. Under normal conditions, air entering Western Australia with a temperature of 70° or 86° would accumulate only 25° to 35° by contact with the radiation from the soil during its passage across the continent.

The winter, with an average temperature over 50°, accompanied by clear skies and an absence of snow, leaves little to be desired from the standpoint of health; while, also owing chiefly to the dryness of the climate, these inland regions produce the best merino wool in the world.

The meteorological conditions of the Western Plains will be seen from the following statement, corresponding to those given already for the other divisions of the State:—

Station,	Least Distance from East Coast.	Altitude.	Temperature in Shade.						Rainfall—Mean Annual.
			Mean Annual.	Mean Summer.	Mean Winter.	Mean Daily Range.	Highest.	Lowest.	
	miles.	feet.	°	°	°	°	°	°	inches.
Brewarrina	345	430	68·7	82·8	54·1	26·4	120·0	28·0	15·51
Walgett	286	436	68·0	82·1	52·9	25·7	122·2	23·2	18·66
Bourke	386	361	69·2	83·7	54·1	27·6	127·0	25·0	14·21
Wilcannia	473	297	66·4	80·3	52·2	26·1	120·8	21·8	10·33
Cobar	345	821	67·0	81·1	52·4	24·0	118·7	25·0	14·44
Broken Hill	555	1,001	64·7	77·8	51·2	23·6	115·9	28·5	9·89
Mount Hope	296	600	64·9	78·9	50·4	22·1	123·6	24·6	15·28
Coodabola	227	706	65·4	79·0	51·3	27·1	122·2	20·0	17·40
Wentworth	478	196	63·6	76·3	51·4	25·7	119·0	21·0	12·19
Hay	309	310	63·2	76·2	50·3	27·4	117·3	22·9	14·18
Kenton	422	188	62·6	75·3	50·2	26·4	124·8	17·1	12·37
Deniliquin	287	312	62·0	74·6	49·5	25·3	121·1	18·0	16·23

TIDES.

A self-recording tide-gauge has been in operation at Fort Denison, in Port Jackson, since 1867. The average range of ordinary tides is 3 feet 4½ inches, and of spring tides 5 feet 1½ inches. In June, 1915, in January, 1912, and in December, 1910, the tide-gauge at Fort Denison recorded 6 feet 0 inches, which is practically the highest tide registered.

At Port Hunter, the average rise and fall of ordinary tides is 3 feet 4½ inches, and of spring tides 5 feet 5½ inches; the greatest range being 6 feet 6½ inches. The highest tide registered was 7 feet 4 inches in May, 1898.

For the coast the average rise of spring tides may be taken as 5 feet 6 inches.

CONSTITUTION, GOVERNMENT, AND DEFENCE. DEVELOPMENT OF REPRESENTATIVE GOVERNMENT.

EARLY CONSTITUTIONS OF NEW SOUTH WALES.

On the foundation of New South Wales as a British Colony the Governor, under his Commission and Letters Patent, was empowered to make ordinances for the government of the settlement; subsequently he was authorized to impose a limited taxation by customs duties, and during the first thirty-five years of the colony's existence was possessed of virtually absolute administrative power.

In 1825 an Act was passed in the Imperial Parliament, providing "for the better administration of justice in New South Wales and Van Diemen's Land" by the creation of a Legislative Council, with a minimum of five and a maximum of seven members, nominated by the Governor. This Council acted as an advisory body to the Governor, with authority to assist him in making laws and ordinances. Five members were appointed under His Majesty's warrant of 1st December, 1825, viz.:—Wm. Stewart, Lieutenant-Governor; Francis Forbes, Chief Justice; Frederic Goulburn, Colonial Secretary; James Bowman, Principal Surgeon; John Oxley, Surveyor-General.

All laws or ordinances had to be submitted to a summoned meeting of this Council, and any action of the Governor contrary to the advice of the Council was referable to England for decision. The first meeting of the Council was held on 25th August, 1825. Practically coincident with the institution of this Legislative Council, which embodied the first form of constitutional government, a new Charter of Justice was proclaimed, and the system of trial by jury inaugurated.

The Legislative Council, as constituted in 1825, was subsequently increased in 1828 to fifteen members, and its functions were extended; but twenty years of its existence demonstrated the inefficiency of such a limited measure of constitutional government in the face of the expanding commercial and agricultural interests of a rapidly developing population.

REPRESENTATIVE GOVERNMENT.

In 1843 a measure of direct representation in the Legislative Council was given to the people of the Colony by means of an Imperial enactment of the previous year which defined the functions of the Council and the conditions under which Royal Assent was to be accorded to Bills passed by it, and extended its membership to thirty-six, namely, twelve nominees of the Crown and twenty-four members elected by the people.

Eight years' experience of partly representative government proved the necessity for extension of popular representation. In 1851 the Australian Colonies Government Act of the Imperial Parliament gave authority to the existing Legislative Council to prepare a democratic Constitution for the colonies. At the same time, provision was made for the establishment of Port Phillip District as a separate colony. In 1853 a select committee of the

Council, which then numbered fifty-four (thirty-six elective and eighteen nominee members), adopted a draft Constitution for a Legislature of two Houses, which, with minor amendments, was accepted by the Imperial Parliament in 1855. The New South Wales Constitution Act, 1855, conferred a fully responsible system of government, entire control of Crown lands devolving upon the New South Wales Parliament, which was empowered also, subject to the provisions of the Act, to make laws amending its Constitution.

The first elective Parliament was opened by Governor Denison, on 22nd May, 1856. The Constitution has been amended by many Acts, but the essential form of the original Legislature remains intact, though its functions have been enlarged from time to time by Imperial enactments, such as those which empowered the State Parliament to deal with matters relating to coinage, copyright, extradition, naturalisation, shipping, &c. Since 1901, when the Commonwealth of Australia was inaugurated, legislative functions have been divided between the Parliaments of the Commonwealth and of the State.

THE COMMONWEALTH.

The formal inauguration of the Commonwealth took place on 1st January, 1901, and under the Commonwealth of Australia Constitution Act, the Parliament of the Commonwealth is empowered to make laws on matters affecting the peace, order, and good government of the Commonwealth, particularly with respect to the following:—Trade and commerce with other countries and among States, taxation, bounties on production, borrowing money on public credit, postal, telegraphic and telephonic services, defence, lighthouses, astronomical and meteorological observations, quarantine, fisheries, census and statistics, currency, banking, insurance, weights and measures, bills of exchange and promissory notes, bankruptcy, copyright, patents and trade marks, naturalisation and aliens, foreign corporations and trading, or financial corporations formed within the Commonwealth, marriage, divorce, invalid and old-age pensions, migration, external affairs, railway control in relation to defence and railway acquisition or construction, subject to the consent of the State, conciliation and arbitration in regard to disputes extending beyond the limits of one State.

To alter the Constitution, the law for the proposed alteration must be submitted to a referendum of electors not less than two nor more than six months after its passage through both Houses of Parliament, and must be approved by a majority of electors voting, in a majority of the States, as well as in the whole Commonwealth. The Constitution has been altered by the Constitution Alteration (Senate Elections) Act, 1906, and the Constitution Alteration (State Debts) Act, 1909.

The Parliament of the Commonwealth is empowered specifically to legislate on any matter referred to it by the Parliament or Parliaments of any State or States, but so that the law made shall extend only to the States which are parties to the reference.

Outside the specific functions of the Commonwealth the Constitution of each State continues as at the establishment of the Commonwealth, and the Parliament of New South Wales has legislative power in all matters not specifically within the functions of the Commonwealth.

EXECUTIVE GOVERNMENT.

In both State and Commonwealth the executive government rests with a Governor representing the Crown, who acts on the advice of an Executive Council responsible to Parliament.

The State Executive Government.

The Governor is the representative of the British Sovereign; he is appointed by the King, and his functions and powers are defined by his Commission and the Royal Instructions accompanying it. He assents to Bills as passed by Parliament, or he may withhold his assent pending reference of a Bill to the Imperial Government. Bills of certain classes are reserved for Royal Assent. In his Executive capacity, the Governor summons, and acts under advice of the Executive Council, of which the members are Ministers of the Crown controlling administrative departments of the State. The Governor appoints Ministers and members of the Legislative Council, Judges, Justices of the Peace, Commissioners, and other officers, and he may summon, prorogue, or dissolve any Parliament. In the exercise of these functions, he is in general guided by the advice of the Executive Council, but in special circumstances acts at his own discretion, especially with regard to dissolution of Parliament. The prerogative of mercy vested in him is exercised only with the advice of the Executive Council.

The term of office for which the Governor is appointed is five years, and his salary (£5,000 per annum), with certain allowances for his staff, is provided by the Constitution out of the revenues of the State.

Commonwealth Executive Government.

The Crown is represented by the Governor-General of Australia, who is appointed by the King. The Senate and the House of Representatives are elective Chambers. As representative of the King, the Governor-General is Commander-in-Chief of the Naval and Military Forces. His office carries a salary of £10,000 per annum, and the amount is not alterable during his occupancy of office. The present Governor-General and Commander-in-Chief is the Right Hon. Sir Ronald Crauford Munro Ferguson, P.C. G.C.M.G.

The Governor-General's powers and functions are assigned to him under his Commission, subject to the Constitution; as head of the Legislature he appoints the times for holding sessions of Parliament, prorogues Parliament, and dissolves the House of Representatives. In his Executive Government he is advised by the Executive Council, which is composed of members summoned by the Governor-General, being Ministers of the Crown administering Commonwealth Departments. Under the provisions of the Constitution Act the Ministry numbered seven, and the maximum amount specified for their salaries was £12,000 per annum. Amendments have increased the number to nine and the maximum amount of salaries to £15,500.

THE STATE PARLIAMENT.

The Legislative Council.

Under the Constitution Act, 1902, the Governor may summon to the Legislative Council any person he thinks fit, provided such person is of the full age of 21 years, and is a natural-born or naturalised subject of His Majesty in Great Britain or in New South Wales. At least four-fifths of the members summoned to this Council must be persons not holding any office of emolument under the Crown. The members have a life tenure of office, subject to certain qualifications, but are not entitled to remuneration for

their services; as a matter of privilege, they are allowed to travel free on the State railways and tramways. The presence of one-fourth of the members, exclusive of the President, is necessary to form a quorum for the despatch of business. The Constitution Act contains no proviso as to the number of members; in December, 1919, there were 67. The President receives an annual salary of £750, and the Chairman of Committees £470.

The Legislative Assembly.

The Legislative Assembly consists of ninety elected members, each being an adult male British subject, and entitled to a vote at the Parliamentary elections. Members of the Federal Legislature and of the Legislative Council, persons holding non-political offices of profit under the Crown, except in the navy or army are disqualified for membership. Under the provisions of the Constitution Amendment Act of 1916 any officer of the public service of New South Wales may be nominated and elected to the Legislative Assembly, but if elected must forthwith resign his position in the service. The Women's Legal Status Act, 1918, which received assent on 21st December, 1918, provides that a person shall not by reason of sex be deemed to be under any disability or subject to any disqualification to be elected and to act as a member of the Legislative Assembly.

Each member receives the sum of £500 per annum by way of reimbursement for expenses incurred in the discharge of Parliamentary duties, is allowed to travel free on the State railways and tramways, and has free transmission of correspondence.

The seat of a member becomes vacant if the member be absent without permission for a whole session of the Legislature, becomes bankrupt, a subject of a foreign power, or convicted of a crime. The Speaker of the Legislative Assembly receives a salary of £1,000 per annum, and the Chairman of Committees £740 per annum. The Leader of the Opposition receives £250 per annum in addition to his remuneration as a Member of Parliament.

Parliament may be dissolved at the discretion of the Governor, if the Government is defeated in the Assembly, otherwise it exists for three years; before the passing of the Triennial Parliaments Act, 1874, the limit of duration was five years.

The Constitution Act makes no distinction between the powers and privileges of the two Houses of Parliament, but it is tacitly agreed that the procedure in each House shall be conducted according to that of its prototype in the Imperial Parliament.

STATE ELECTIONS.

The law relating to State elections is contained in the Parliamentary Electorates and Elections Act of 1912 and an Amending Act passed in 1918.

The Act of 1918 provides that at general elections the members of the Legislative Assembly shall be 90, to be elected in accordance with the principles of proportional representation. The first election under this system will take place in 1920. The electoral districts have been so arranged that each district within the metropolitan and adjacent areas, and that containing the city of Newcastle, shall be represented by five members, and each of the remaining districts by three.

Adult British subjects are entitled to be enrolled as electors if resident in the Commonwealth for six months, in New South Wales for three months, and in the electoral district for one month. The hours of polling are from 8 a.m. to 7 p.m., polling day being a public holiday from mid-day; under the liquor laws hotels are closed during the hours of polling. Electors absent from their districts may record their votes at any polling-place in the State, and postal voting is allowed in the case of persons precluded from attendance at any polling-place by reason of illness or infirmity, distance over 15 miles, or travelling.

Lists of electors are collected annually by the police and revised in each district by a revision court consisting of a stipendiary or police magistrate. Supplementary lists are collected and revised wherever practicable before a general election.

Before voting, an elector is required to sign a declaration that he is the person referred to in the roll and that he has not already voted at the election.

The following table shows the voting at the elections held in New South Wales since plural voting was abolished—

Year of Election.	Voters on Roll.	Electors per Member.	Total Electors (including members supplanted).	Counted Electors.					
				Electors on Roll.	Value recorded.	Percentage of Value recorded.	Number of Votes.	Percentage of Total Votes.	
1894	299,811	2,250	125	1	224,316	294,545	99.58	3,310	1.03
1898	267,458	2,129	125	8	228,225	323,524	84.54	1,554	95
1898	324,329	2,583	125	2	226,461	378,717	80.93	1,628	92
1901	348,194	2,789	125	12	279,581	403,329	72.13	1,234	79
1904 { Male	363,002	2,661	68	2	204,260	228,057	74.95	2,073	68
{ Female	352,479								
1907 { Male	392,845	3,288	90	5	221,715	267,301	72.10	12,243	2.87
{ Female	353,055								
1910 { Male	452,022	6,511	90	2	244,262	272,709	72.53	10,205	1.78
{ Female	400,389								
1912 { Male	523,633	11,522	90	2	334,279	385,828	73.20	14,429	2.10
{ Female	494,306								
1917 { Male	574,308	12,324	90	8	323,661	328,029	62.46	6,844	1.04
{ Female	532,822								

Making due allowance for obstacles to voting, especially in sparsely settled districts, the figures quoted indicate that a large percentage of the electors, particularly women, attach little value to the privilege. At the first election after enfranchisement, 80.5 per cent. of voters recorded their votes; in 1907, 69.8 per cent.; at the elections of 1910 and 1912 about 67 per cent.; and in 1917 only 60.6 per cent. voted.

In the case of men, the highest proportion of votes, 80·4 per cent., was recorded at the first election shown in the table above, when popular interest was excited by a strenuous contest on the question of fiscal reform. At subsequent elections the percentage of votes decreased, the proportion at the three elections in 1907-13 being about 72 per cent. of men enrolled. In 1917 many of the electors were absent on war service, and the percentage of voters was low, viz., 52·4.

The number of informal votes was high at the election in 1907, being 3 per cent. of the total votes recorded; at the 1910 election a change made in the method of marking the ballot-papers no doubt accounted for the percentage of informal votes being reduced to 1·78 per cent. The percentage rose to 2·1 in 1913; this was the first election at which the absent voting was in operation, and many informalities occurred through the non-compliance by election-officers with the special conditions regarding the issue of ballot-papers to electors outside the districts in which they were enrolled. In 1917 there were 5,844 informal votes, representing ·94 per cent. of the total votes recorded.

DISTRIBUTION OF ELECTORATES.

After federation of the Australian States the question of reducing the membership of the Legislative Assembly of New South Wales was submitted by a referendum to the electors in 1904; and, as a result, the number of representatives was reduced to 90, the voting being for 125 members 63,171, for 100 members 12,316, and for 90 members 206,273 votes.

The following table shows the average number of persons represented by each member of the Assembly, and the proportion of the population enrolled on the electoral lists at various dates on which the membership or franchise has been altered since the opening of the first Parliament and at each year of election since 1901:—

Year of Election.	Number of Members.	Population per Member.	Percentage of Population Enrolled.
1856	54	5,200	15·8
1858	72	4,200	22·3
1860	108	3,900	25·2
1885	122	7,800	24·5
1891	141	8,100	26·7
1894	125	9,800	24·3
1901	125	10,900	25·3
1904	90	15,900	48·3
1907	90	17,000	45·8
1910	90	18,200	38·0
1913	90	29,400	34·7
1917	80	29,800	39·2

The number of distinct electors cannot be ascertained for any period prior to the year 1894, and the figures in the last column have been calculated on the total number of votes to which the electors on the roll were entitled;

they are, therefore, somewhat in excess of the actual proportions. At the census of 1901 the percentage of adult males in the total population was about 28, and of adults, males and females, 52. At the election in 1901 the proportion of the population enrolled was 25 per cent., and after the Women's Franchise Act, 1902, was passed it rose to 48 per cent. In 1910 the proportion was 53 per cent.; while at the Census date, 2nd April, 1911, the adult population represented 55.8 per cent. of the total. In March, 1917, the electors on the roll represented 59.2 per cent. of the total population.

A list of the Parliaments since Responsible Government was established is shown below:—

Number of Parliament.	Opened.		Dissolved.		Duration.	No. of Sessions.
	Day	Year	Day	Year		
1	22 May	1856	19 Dec.	1857	1 6 28	2
2	23 March	1858	11 April	1859	1 0 19	2
3	30 Aug.	1859	10 Nov.	1860	1 2 11	2
4	10 Jan.	1861	10 Nov.	1864	3 10 0	5
5	24 Jan.	1865	15 Nov.	1869	4 9 22	6
6	27 Jan.	1870	3 Feb.	1872	2 0 7	3
7	30 April	1872	28 Nov.	1874	2 6 29	4
8	27 Jan.	1875	12 Oct.	1877	2 8 15	3
9	27 Nov.	1877	9 Nov.	1880	2 11 13	3
10	15 Dec.	1880	23 Nov.	1882	1 11 8	3
11	3 Jan.	1883	7 Oct.	1885	2 9 4	6
12	17 Nov.	1885	26 Jan.	1887	1 2 9	2
13	8 March	1887	19 Jan.	1889	1 10 11	3
14	27 Feb.	1889	6 June	1891	2 3 10	4
15	14 July	1891	25 June	1894	2 11 11	4
16	7 Aug.	1894	5 July	1895	0 10 28	1
17	13 Aug.	1895	8 July	1898	2 10 25	4
18	15 Aug.	1898	11 June	1901	2 9 26	5
19	23 July	1901	16 July	1904	2 11 23	4
20	23 Aug.	1904	12 July	1907	2 10 19	4
21	2 Oct.	1907	14 Sept.	1910	2 11 12	5
22	15 Nov.	1910	6 Nov.	1913	2 11 22	5
23	23 Dec.	1913	21 Feb.	1917	3 1 30	5
24	17 April	1917	18 Feb.	1920	2 10 2	4

STATE MINISTRIES.

The various Ministries which have held office since the establishment of Responsible Government, together with the duration in office of each, are shown below:—

Number.	Ministry.			From—	To—	Duration.	
	Name.					months.	days.
1	Donaldson	...	...	6 June 1856	25 Aug. 1856	2	20
2	Cowper	...	...	25 Aug. 1856	2 Oct. 1856	1	7
3	Parker	...	...	3 Oct. 1856	5 Sept. 1857	11	4
4	Cowper	...	...	7 Sept. 1857	26 Oct. 1859	25	20
5	Foster	...	...	27 Oct. 1859	8 Mar. 1860	4	11
6	Robertson	...	...	9 Mar. 1860	9 Jan. 1861	10	1
7	Cowper	...	...	10 Jan. 1861	15 Oct. 1863	33	6
8	Martin	...	...	16 Oct. 1863	2 Feb. 1865	15	18
9	Cowper	...	...	3 Feb. 1865	21 Jan. 1866	11	19
10	Martin	...	...	22 Jan. 1866	26 Oct. 1868	33	5
11	Robertson	...	...	27 Oct. 1868	12 Jan. 1870	14	17
12	Cowper	...	...	13 Jan. 1870	15 Dec. 1870	11	3
13	Martin	...	...	16 Dec. 1870	13 May 1872	16	28
14	Parkes	...	...	14 May 1872	8 Feb. 1875	32	26
15	Robertson	...	...	9 Feb. 1875	21 Mar. 1877	25	13
16	Parkes	...	...	22 Mar. 1877	16 Aug. 1877	4	26
17	Robertson	...	...	17 Aug. 1877	17 Dec. 1877	4	1
18	Farnell	...	...	18 Dec. 1877	20 Dec. 1878	12	3
19	Parkes	...	...	21 Dec. 1878	4 Jan. 1883	48	15
20	Stuart	...	...	5 Jan. 1883	6 Oct. 1885	33	2
21	Dibbs	...	...	7 Oct. 1885	21 Dec. 1885	2	15
22	Robertson	...	...	22 Dec. 1885	25 Feb. 1886	2	4
23	Jennings	...	...	26 Feb. 1886	19 Jan. 1887	10	25
24	Parkes	...	...	20 Jan. 1887	16 Jan. 1889	23	28
25	Dibbs	...	...	17 Jan. 1889	7 Mar. 1889	1	19
26	Parkes	...	...	8 Mar. 1889	22 Oct. 1891	31	15
27	Dibbs	...	...	23 Oct. 1891	2 Aug. 1894	33	11
28	Reid	...	...	3 Aug. 1894	13 Sept. 1899	61	11
29	Lynn	...	...	14 Sept. 1899	27 Mar. 1901	18	14
30	See	...	...	28 Mar. 1901	14 June 1904	38	16
31	Waddell	...	...	15 June 1904	26 Aug. 1904	2	15
32	Caruthers	...	...	30 Aug. 1904	1 Oct. 1907	37	2
33	Wade	...	...	2 Oct. 1907	20 Oct. 1910	36	19
34	McGowan	...	...	21 Oct. 1910	29 June 1913	32	9
35	Holman	...	...	30 June 1913	15 Nov. 1916	40	16
36	Holman	...	...	16 Nov. 1916	Still in office.		

The Holman Ministry, which is in office, consists of the following members:—

Prime Minister	Hon. W. A. HOLMAN, M.L.A.
Colonial Secretary and Vice-President of the Executive Council	Hon. G. W. FULLER, M.L.A.
Attorney-General	Hon. J. GANLAN, K.C., M.L.C.
Minister of Justice and for Local Government	Hon. J. D. FINGERSALL, M.L.C.
Secretary for Lands and Minister for Agriculture and for Forestry	Hon. W. G. ARMYNOD, M.L.A.
Secretary for Public Works & Minister of Railways	Hon. B. T. BALL, M.L.A.
Colonial Treasurer and Secretary for Mines	Hon. J. C. L. FERRYPATRICK, M.L.A.
Minister of Public Instruction and of Labour and Industry	Hon. A. G. F. JAMES, M.L.A.
Minister of Housing	Hon. C. W. OAKES, M.L.A.
Minister of Public Health	Hon. A. BUCKINGHAM, M.L.A.
Assistant Secretary for Lands	Hon. J. T. O'NEIL, M.L.A.
Assistant Minister for Agriculture	Hon. A. H. GREEN, M.L.A.

Under the provisions of the Ministers' Salaries Act of 1908, the following annual payments from the Consolidated Revenue Fund are authorised:—

	£
The Premier (in addition to his salary as Minister of the Crown)	500
The Attorney-General	1,500
Six Ministers of the Crown, £1,375 each	8,250
The Vice-President of the Executive Council	800
Total	11,050

The Constitution Act of 1902 authorises the payment of £1,000 per annum as salary for the office of Solicitor-General.

PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS.

As soon as practicable after the commencement of the first session of every Parliament, a joint committee of members of the Legislative Council and Legislative Assembly, called the Parliamentary Standing Committee on Public Works, is appointed by ballot. This Committee consists of three members of the Legislative Council, and four members of the Legislative Assembly and has power, under the Public Works Act, to prosecute inquiries, to examine witnesses, and to compel the production of books, &c.

The Chairman receives by way of remuneration £3 3s. for each sitting of the Committee, and every other member £2 2s.

Proposals for public works of an estimated cost exceeding £10,000 must be submitted and explained by a Minister in the Legislative Assembly, and then referred to the Public Works Committee for report.

COMMISSIONERS AND TRUSTS.

In addition to the Ministerial Departments, various public services are administered by Commissioners, Boards and Trusts; the more important of these are—

- Chief Commissioner for Railways and Tramways.
- Metropolitan Board of Water Supply and Sewerage.
- Hunter District Water Supply and Sewerage Board.
- Sydney Harbour Trust Commissioners.
- Water Conservation and Irrigation Commission.
- Housing Board.
- Commissioners of the Government Savings Bank of New South Wales.
- Board of Fire Commissioners of New South Wales.
- Metropolitan Meat Industry Board.
- Forestry Commission.

In each case the authority controls a specific service, and administers the statute law in relation to it.

COST OF PARLIAMENT—NEW SOUTH WALES.

The following statement shows the cost of Parliamentary Government in New South Wales during the five financial years 1915-1919:—

Head of Expenditure.	1915.	1916.	1917.	1918.	1919.
Governor—					
Governor's salary	5,000	5,000	5,000	5,000	5,000
Official Secretary	400	400	400	400	400
Private Secretary	350	350	350	—	—
Aide-de-Camp	350	350	200	—	—
Ouelches	512	796	80	210	225
Additional, Repairs and maintenance of					
Residences	4,845	3,653	1,300	580	1,019
Miscellaneous	1,053	1,547	2,350	2,780	2,374
Total	£ 12,319	19,096	16,084	9,370	9,048
Executive Council—					
Salaries of Officers	—	—	145	115	109
Other Expenses	—	—	—	—	12
Total	£ —	—	145	115	121
Ministry—					
Salaries of Ministers	11,328	11,549	11,549	11,549	11,549
Other expenses	1,215	1,258	989	2,291	649
Total	£ 12,543	12,807	12,538	13,840	12,198
Parliament—					
The Legislative Council—					
Railway passes	£ 5,303	6,079	5,029	8,432	8,549
The Legislative Assembly—					
Allowances to Members	49,541	49,235	27,681	49,607	49,743
Railway passes	19,722	19,287	11,282	16,441	11,751
Other expenses (Postage, Stamps, &c.)	2,539	1,779	1,733	3,433	1,777
Total	£ 71,764	70,301	44,644	69,480	63,271
Miscellaneous—					
Fees and expenses of Parliamentary					
Standing Committees on Public Works	5,394	6,225	3,933	4	—
Salaries of Officers and Staff	22,673	21,454	21,330	22,636	21,927
Printing	9,646	14,367	17,158	15,110	10,462
Honour (including Salaries)	6,540	7,121	6,969	6,923	7,162
Library	675	675	544	535	767
Water, power, light, and heat	749	575	462	532	508
Postage, stores, and stationery	346	947	596	2,006	695
Refreshment Rooms	329	—	—	—	—
Miscellaneous	2,756	3,339	2,480	1,929	2,109
Total Parliament	£ 49,009	59,306	53,300	57,747	43,611
Electoral Office and Elections—					
Salaries	875	1,129	1,832	1,367	1,361
Elections, Printing of Electoral Rolls,					
expenses of Electoral Registrars, and					
contingents	24,112	56,491	50,047	23,765	8,334
Total	£ 24,987	57,620	51,879	25,132	9,715
Royal Commissions and Select Committees					
Fees, &c.	4,231	—	—	—	—
Miscellaneous	1,276	4,114	6,171	3,872	10,466
Total	£ 5,507	4,114	6,171	3,872	10,466
GRAND TOTAL	£ 166,359	198,029	191,322	161,978	149,029

* Includes £29,041 for Liquor Refraining.

THE COMMONWEALTH PARLIAMENT.

A session of the Parliament must be held once at least in every year, with a maximum interval of twelve months between sessions.

The Senate.

The Senate consists of thirty-six members, six of whom are elected for each State, the people in each State voting as in one electorate. The term of service of a Senator is six years; but, in accordance with the Constitution Act, the seats of half the number chosen at an election of a new Senate become vacant at the expiration of three years. An election is held triennially to fill the vacancies then occurring by effluxion of time. A system of preferential voting at Senate elections was introduced in 1919 in terms of the Commonwealth Electoral Amendment Act, 1919.

House of Representatives.

The House of Representatives, as far as practicable, contains twice as many members as the Senate, the number elected for the several States being in proportion to the respective populations, but with a specified minimum of five each. There are, at the present time, seventy-five members in this House, the number from New South Wales being twenty-seven.

The House of Representatives is liable to dissolution at the discretion of the Governor-General if the Ministry loses its majority, otherwise it exists for three years. In the event of the failure of the Senate and House of Representatives to agree on the subject of any proposed law, the Governor-General may dissolve both Chambers simultaneously, and if the new Houses disagree, the Governor-General may convene a joint sitting of the members of the Houses to deliberate and vote upon the proposed law, when resolutions, to be effective, must be carried by an absolute majority of all the members. This furnishes the first example within the British Empire of a provision for joint session to overcome a deadlock.

The qualifications of members of the Commonwealth Parliament are the same for both Houses; candidates for election must be adult British subjects natural born or naturalised for five years, resident within the Commonwealth for at least three years and entitled to vote. The allowance attaching to the office of member was originally £400 per annum, but was raised by Parliament in 1907 to £600 per annum. The seat of a member becomes vacant if he is absent without leave for two consecutive months of any session.

The qualifications of electors are the same for both Federal Houses. Electors must be adult British subjects, who have lived in Australia for six months continuously. Aboriginal natives of Australia, Asiatics, Africans, and Pacific Islanders, except natives of New Zealand, are disqualified unless entitled to vote at the election of a State Legislative Assembly.

Members of Expeditionary Forces and munition and other workers engaged under agreement with the Commonwealth Government, were entitled to vote while on service abroad, and for three years after the war they may qualify as electors in Australia even if under the age of 21 years.

The Commonwealth Electoral Act, 1918, provides for a system of preferential voting at elections for the House of Representatives.

FEDERAL ELECTIONS.

Senate.

The following table shows the votes polled at the Senate Elections in the State of New South Wales. The last Federal Elections took place on 13th December, 1919:—

Election.	Electors Enrolled.		Electors to whom Ballot Papers were issued.		Informal Ballot Papers.	Percentage of Electors Enrolled to whom Ballot Papers were issued.		
	Men.	Women.	Men.	Women.		Men.	Women.	Total.
1901	329,093	...	220,573	...	38,674	67·02	...	67·02
1903	360,285	326,764	189,877	134,487	15,796	52·70	41·16	47·21
1906	392,077	345,522	229,654	151,682	28,016	58·57	43·90	51·70
1910	444,269	390,393	301,167	211,635	24,213	67·79	54·21	61·44
1913	554,028	482,159	405,152	312,703	48,195	73·13	64·85	69·28
1914	576,309	508,820	407,464	294,939	34,984	70·70	58·19	64·85
1917	566,345	528,489	430,514	343,143	29,825	76·02	64·93	70·66
1919	550,363	529,076	400,477	317,088	67,227	72·77	59·93	66·35

House of Representatives.

The votes recorded in the State of New South Wales at the elections of members of the House of Representatives were as follow:—

Election.	Electors Enrolled (Contested Divisions only).		Electors to whom Ballot Papers were issued.		Informal Ballot Papers.	Percentage of Electors Enrolled to whom Ballot Papers were issued.		
	Men.	Women.	Men.	Women.		Men.	Women.	Total.
1901	315,962	...	215,105	...	4,070	68·08	...	68·08
1903	303,254	274,763	164,133	118,381	7,834	54·12	43·08	48·88
1906	363,723	314,777	216,150	141,227	11,705	59·43	44·87	52·67
1910	431,702	379,927	294,049	207,868	8,002	68·11	54·71	61·84
1913	554,028	482,159	405,152	312,703	22,262	73·13	64·85	69·28
1914	491,086	429,906	351,172	257,581	14,816	71·51	59·92	66·10
1917	484,854	447,437	370,618	292,925	19,874	76·44	65·47	71·17
1919	527,779	508,129	385,614	308,183	26,517	73·06	60·65	66·85

The percentage of voters increased steadily at the elections during the period 1903-1913; the improvement was not continued in 1914, when the electoral contest was modified in consequence of the outbreak of war in Europe, but in 1917 the percentage was the highest since the inauguration of the Commonwealth Parliament.

FEDERAL MINISTRIES.

In the following statement is shown the various Ministries which have held office since the inauguration of the Commonwealth, also the duration of each Ministry:—

Ministry.		From—	To—	Duration.	
Number.	Name.			mths.	dys.
1	Barton	1 Jan., 1901 ...	23 Sept., 1903...	32	23
2	Deakin	23 Sept., 1903..	26 April, 1904...	7	3
3	Watson	26 April, 1904...	17 Aug., 1904 ...	3	22
4	Reid-McLean	17 Aug., 1904 ...	4 July, 1905 ...	10	17
5	Deakin	4 July, 1905 ...	12 Nov., 1908 ...	40	8
6	Fisher	12 Nov., 1908 ...	2 June, 1909 ...	6	21
7	Deakin	2 June, 1909 ...	29 April, 1910...	10	27
8	Fisher	29 April, 1910..	20 June, 1913 ...	37	22
9	Cook	20 June, 1913 ...	17 Sept., 1914...	14	23
10	Fisher	17 Sept., 1914...	27 Oct., 1915 ...	13	10
11	Hughes	27 Oct., 1915 ...	14 Nov., 1916 ...	12	18
12	Hughes	14 Nov., 1916 ..	17 Feb., 1917 ...	3	3
13	Hughes	17 Feb., 1917 ..	8 Jan., 1918 ...	10	22
14	Hughes	10 Jan., 1918 ...	Still in Office.	...	...

FEDERAL REFERENDA.

The Referendum (Constitution Alteration) Act, 1906-19, provides the necessary machinery for the submission to the electors of any proposed law for the alteration of the Constitution.

The following statement shows the votes recorded in the State of New South Wales and in the Commonwealth at the various referenda which have been taken in relation to the Federal Constitution:—

Date.	Referendum.	State of New South Wales.			Commonwealth of Australia.			
		For.	Against.	Majority	For.	Against.	Result.	Majority.
1898	Federation	71,595	66,228	5,367	219,712	108,363	...	111,349
1899	Federation	107,420	82,741	24,679	422,788	161,077	A	261,711
1906	Senate Elections...	286,888	55,261	231,627	774,011	162,470	A	611,541
1910	Financial Agreement	227,650	253,107	25,457	645,514	670,838	R	25,324
1910	State Debts	159,275	318,412	159,137	715,053	586,271	A	128,782
1911	Legislative Powers	135,968	240,605	104,637	483,356	742,704	R	259,348
1911	Monopolies	138,237	238,177	99,940	488,668	736,392	R	247,724
1913	Trade and Commerce	317,848	359,418	41,570	958,419	982,615	R	24,196
1913	Corporations	317,668	361,255	43,587	960,711	986,824	R	26,113
1913	Industrial Matters	318,622	361,044	42,422	961,601	987,611	R	26,010
1913	Railway Disputes	316,928	361,743	44,815	956,358	990,046	R	33,688
1913	Trusts	319,150	358,155	39,005	967,331	975,943	R	8,612
1913	N'n'liation of Monopolies	301,192	341,724	40,532	917,165	941,947	R	24,782
1910	Legislative Powers	259,751	390,450	130,699	911,357	924,160	R	12,803
1919	N'n'liation of Monopolies	227,156	365,847	138,691	813,860	859,451	R	45,591

A. Accepted. R. Rejected.

In 1916 and in the following year referenda were taken in relation to a proposal that the Government be empowered during the war to compel citizens to serve with the military forces outside the Commonwealth. In 1916 the proposal was rejected in New South Wales, Queensland, and South Australia, and in 1917 in all States except Western Australia and Tasmania:—

Date.	Referendum.	State of New South Wales.			Commonwealth of Australia.		
		For.	Against.	Majority Against.	For.	Against.	Majority Against.
1916	Military Service...	395,805	674,544	117,739	1,087,527	1,180,039	72,476
1917	Military Service...	341,256	487,774	146,518	1,015,120	1,181,547	166,526

SEAT OF FEDERAL GOVERNMENT—ORDINANCE.

The agreement under section 125 of the Commonwealth Constitution Act, between the State of New South Wales and the Commonwealth, for the surrender and acceptance of territory in the Canberra district for the seat of Federal Government was ratified, and an ordinance issued on 22nd December, 1910, for the Provisional Government of the Territory. On 12th March, 1913, the official ceremony took place in connection with the establishment of the seat of Government and the selection of Canberra as the name of the Capital City announced. All laws hitherto in force in the Territory (except those imposing duties on estates of deceased persons) remain in force and continue to be administered by the State authorities. All revenue belongs to the Commonwealth. The authority of State magistrates, gaolers, and police continues, and all offenders are tried in the Courts of the State. Licences to sell intoxicating liquors are not granted, and existing licences may be renewed for the same premises only. The seat of Government is still in Melbourne, Victoria.

DEFENCE.

Upon the inauguration of the Commonwealth the duty of providing for the defence of Australia devolved upon the Federal Government, and the Parliament of the Commonwealth may legislate for the naval and military defence of Australia, and for the control of the forces to execute and maintain the Federal laws.

A system of universal training was brought into operation on 1st January, 1911, persons who reached the age of 18 years in or before the year 1911 being exempted.

The prescribed annual training is as follows:—

Rank.	Age.	Service.	Training.
	years.	years.	
Junior Cadets	12-14	2	96 hours each year
Senior Cadets	14-15	3	18 drills each year—4 whole days (8½ hours), 12 half-days (two hours), and 24 night drills (one hour). Minimum service, 64 hours per annum.
Citizen Forces— Naval Forces, Artillery and Engineer Arms, and Army Service Corps.	18-25	7	Drills equivalent to 25 whole days (six hours) of which, at least, 17 days must be in shape of continuous training.
Other	18-25	7	Drills equivalent to 16 whole days (six hours), of which, at least, 8 days must be in shape of continuous training.
Citizen Forces	25-26	1	(See registration or one muster parade.)

Members of Senior Cadets and Citizen Forces who have not attained a required standard of efficiency during each annual training must attend an equivalent additional training for each year in which they failed to qualify as efficient.

Exemptions from training in time of peace may be granted on account of medical unfitness, or distance from training places, also in cases where attendance would impose great hardship. Persons who have been on war service are not required to undergo training, and those not substantially of European origin are exempt except from duties of a non-combatant nature.

In time of war the following are liable for service:—

1. From 18 to 35 years of age—All unmarried men or widowers without children.
2. From 35 to 45 years of age—All unmarried men or widowers without children.
3. From 18 to 35 years of age—All married men or widowers with children.
4. From 35 to 45 years of age—All married men or widowers with children.
5. All men aged 45 to 60 years.

The Commonwealth is organised for Defence purposes into six military districts, corresponding as far as practicable with the political divisions into States. The second military district represents the State of New South Wales, excepting the North Coast district, the Barrier district, which are attached to Queensland and South Australia respectively, and the Deniliquin, Moama, and Corowa districts attached to Victoria.

The following table contains information regarding the military forces of the Commonwealth on 31st December, 1919; the figures do not include the members of overseas Expeditionary Forces.

Classification.	Military Districts.						Total.
	1st. Queens- land.	2nd. New South Wales.	3rd. Victoria.	4th. South Australia.	5th. Western Australia.	6th. Tasmania.	
Permanently employed	319	802	1,119	199	232	138	3,325*
Citizen Soldiers	17,929	46,662	41,791	13,204	6,387	5,660	131,633
Engineer and Railway Staff Corps	8	11	0	5	9	4	46
Army Nursing Service	32	108	25		204	2	371
Area Officers	21	67	51	8	16	9	172
Rifle Clubs	13,282	23,029	21,907	8,849	9,158	4,751	80,976
Senior Cadets	13,038	37,441	36,323	9,837	6,491	3,331	101,001
Unattached list of Officers	72	92	98	34	10	21	327
Reserve of Officers	190	143	404	44	427	44	1,618
Chaplains	63	138	120	196	40	20	596
Total	44,860	108,783	93,917	32,356	22,801	14,500	319,943*

* Includes 310 headquarters staff and models at Duntroon Military College.

JUNIOR CADETS.

The training of Junior Cadets embraces physical training, elementary marching drill, and the attainment of a certain standard of efficiency in not less than one of the following subjects:—Miniature rifle shooting, swimming, running in organised games, first aid. In schools in the naval training areas instruction is given also in mariners' compass and elementary signalling. The training is commenced on 1st July of the year in which the cadet reaches the age of 12 years and is conducted by school teachers, who are instructed for this purpose by a staff of instructors maintained by the Defence Department.

Junior Cadets are not required to register, but are examined medically. Particulars regarding the medical examinations during the year ended 31st December, 1918, are given in the following table:—

Military District	Boys medically examined.			Percentage of total examined.	
	Total.	Medically fit.	Unfit and temporarily unfit.	Medically fit.	Unfit and temporarily unfit.
1st—Queensland	7,183	7,008	180	97.5	2.5
2nd—New South Wales	21,266	20,772	494	97.7	2.3
3rd—Victoria	16,387	16,129	258	98.4	1.6
4th—South Australia	5,760	5,658	102	98.2	1.8
5th—Western Australia	4,367	4,305	62	98.6	1.4
6th—Tasmania	1,795	1,752	43	97.7	2.3
Commonwealth	56,783	55,625	1,158	98.0	2.0

SENIOR CADETS.

Boys are required to register for military training as Senior Cadets in January and February, and to commence training on 1st July of the year in which they reach the age of 14 years. After medical examination they are organised in naval or military units and trained in elementary exercises or in musketry on open ranges, but are not required to attend camp. The minimum efficient service of Senior Cadets is 64 hours per annum, of which 36 hours is performed in the employer's time, the remainder in the leisure time of the cadet. The following return shows the registrations and medical examinations of Senior Cadets during the year ended 31st December, 1918:—

Military District.	Total Registrations	Medically examined	Medically fit.		Exemptions granted.	Number actually in training.
			Number.	Percentage of medically examined.		
1st—Queensland	14,813	14,082	13,116	89.5	1,022	12,997
2nd—New South Wales	39,725	39,036	36,649	91.3	3,767	34,876
3rd—Victoria	32,412	32,275	29,446	91.2	2,868	29,014
4th—South Australia	10,547	10,532	9,731	92.4	817	9,731
5th—Western Australia	6,769	6,704	6,186	91.5	675	6,124
6th—Tasmania	4,589	4,498	3,973	88.3	603	3,927
Commonwealth	108,805	107,797	98,103	91.0	10,235	96,599

It will be seen that only a very small percentage failed to pass the medical examination, and that percentage would be further reduced by the exclusion of lads deemed only temporarily unfit.

CITIZEN FORCES.

On 1st July of the year in which the Senior Cadets reach the age of 18 years they are transferred, after medical examination, to the Citizen Forces, and serve for eight years. Except in the last year of this service (when only one Muster parade is necessary) the continuous training is 25 days per annum for specialist and technical corps, and 15 days per annum for other corps.

NAVAL DEFENCE.

The Naval Defence of Australia was maintained by the Imperial Navy under agreement between the Imperial Government and the Governments of Australia and New Zealand until 1913, when the Imperial squadron was replaced by Australian war vessels. The Australian Navy includes the battle-cruiser "Australia," three light cruisers, and a number of destroyers, submarines, mine sweepers, and other vessels. The naval forces consist of the permanent forces who engage for continuous service and the reserves and the trainees under the universal training system.

WAR CONTINGENTS.

Although service in the military forces beyond Commonwealth territory is not obligatory, in time of war contingents of volunteers have been sent from Australia to co-operate with the Imperial Forces. The first contingent was despatched from New South Wales to the Sudan Campaign in 1885; large numbers of troops were sent from all the Australian States to the South African war, which commenced in 1899, and a naval contingent proceeded to China at the time of the Boxer rebellion in 1900.

EUROPEAN WAR.

Naval and Military Operations.

Upon the outbreak of war in August, 1914, the control of the Australian Navy was transferred to the British Admiralty, and an offer to despatch and maintain a fully equipped expeditionary force for service abroad was accepted by the Imperial Government, the local forces being immediately mobilised for home defence.

The first expedition, consisting of military and naval forces, sailed from Australia on 19th August, 1914, to seize and occupy German possessions in the Pacific; German New Guinea and neighbouring islands were occupied and were garrisoned by a special force organised for service in the tropics.

The Australian Imperial Expeditionary Forces were despatched to Egypt, where the first convoy landed in December, 1914; the Australians assisted in the defence of Egypt against the Turkish invasion in February, 1915, and subsequently were actively engaged in the Dardanelles, in Europe, and in other theatres of the war. In France and Flanders there were five divisions of Australians, and these troops gained special distinction at Fleurbaix, Pozieres, Bapaume, Peronne, Bullecourt, Messines, Passchendaele, and Amiens. Meanwhile the Australian Light Horse, associated with New Zealanders in the Anzac Mounted Division, were successfully engaged in the campaign in Egypt and Palestine.

From the outbreak of war in August, 1914, to the Armistice on 11th November, 1918, the total enlistments of soldiers for the Australian Imperial Force were 416,809, and the total embarkations were 329,785. The enlistments in the various military districts were as follows:—

District.	Enlistments.		
	Total	Per cent. of—	
		Total population.	Males aged 15-45 years.
1st—Queensland ..	57,705	8.5 74	37.7 37.0
2nd—New South Wales ..	164,030	8.8 87	39.8 39.4
3rd—Victoria	112,800	7.9 79	38.8 38.6
4th—South Australia ...	34,959	8.0 72	37.6 36.3
5th—Western Australia ..	32,231	9.0 100	37.4 37.7
6th—Tasmania	15,485	7.9 84	37.8 38.2
Total	416,809	8.5	36.7

Of the men on active service 59,081 have died; other casualties (gross) number 264,984.

Immediately after the declaration of war the Australian war vessels were actively employed in the destruction of German Pacific wireless stations and in search for enemy warships known to be cruising in the Pacific. The search was suspended in order to assist in the convey of the New Zealand Expedition to Samoa and to take part in the Australian expedition against German New Guinea. During the latter operations the submarine AEL was lost whilst engaged on patrol work; the cause of the disaster being unknown. The German gunboat "Komet," and the Government yacht "Nusa," with other prizes were captured, the "Komet," having been renamed "Uta," is now attached to the Australian navy.

Whilst the Australian war vessels were escorting the first Australian and New Zealand Imperial Expeditionary Forces to Egypt, news was received of the presence of the German cruiser "Emden" at Cocos Island; the H.M.A.S. "Sydney" proceeded to Cocos Island, and after a short engagement, on the 9th November, 1914, completely disabled the "Emden," which was driven ashore on North Keeling Island and became a total wreck.

The battle cruiser "Australia" joined the Grand Fleet in the North Sea during 1915, and was made flagship of a battle-cruiser division. The light cruisers "Sydney" and "Melbourne" also joined the Grand Fleet in 1917; previously they were engaged in patrol work in the North Atlantic. The destroyers and other Australian war vessels travelled great distances in the performance of the duties allotted to them. The submarine, AR2, was lost in May, 1915, whilst operating in the sea of Marmora.

REPATRIATION OF SOLDIERS AND SAILORS.

The Department of Repatriation has been created by the Commonwealth Government to conduct the work of re-establishing the returned soldiers and sailors in civil occupations. Legislation has been enacted in the State and Commonwealth Parliaments to facilitate this work. The State Acts include the Returned Soldiers' Settlement Acts, 1916, 1917, and 1919, and

the Closer Settlement (Amendment) Act, 1919, which make special provision for the settlement of these men on the land; financial assistance may be granted to them, and training farms established. The Voluntary Workers (Soldiers' Holdings) Act, 1917, provides for Crown grants of land and for advances of money for the purpose of providing homes for disabled members of the Commonwealth Forces, or for the dependents of those who have died. The Returned Soldiers and Sailors Employment Act of 1919 gives preference in employment to returned soldiers and sailors, and provides for their reinstatement in positions held prior to enlistment.

Of the Commonwealth Acts, The Australian Soldiers' Repatriation Fund Act, 1916, provided for the administration of a fund raised by public subscription for assisting soldiers and sailors and their dependents; the Australian Soldiers' Repatriation Acts, 1917 and 1918, authorize the Repatriation Commission to make recommendations for regulating the granting of assistance and benefits to soldiers upon discharge, and to soldiers' dependents, and provide for the appointment of a State Repatriation Board for each State. Under the War Service Homes Acts, 1918 and 1919, assistance may be granted to enable Australian soldiers and sailors and their female dependents to acquire homes.

POPULATION.

EARLY ENUMERATIONS.

THE first census of New South Wales was taken during the month of November in the year 1828 when 36,598 persons were enumerated, of whom 27,611 were males and 8,987 were females.

After 1828 there was a rapid increase in population, induced by the steady development of the Colony, and by the expansion of settlement which followed the opening of the country by exploration. A system of assisted immigration was introduced on a scale of annually increasing dimensions, and attained definite strength in the year 1832, so that at the census of 1833 the population had increased to 60,794, being an advance of over 24,000 on the number in 1828, or of 66 per cent. during the period of five years.

The enumerations shown below are those for the Colony of New South Wales within the boundaries existing at the time of taking the census.

Date of Census.	Males.	Females.	Total.	Increase.		
				Number.	Per cent.	
1828, November	27,611	8,987	36,598	—	—	
1833, September 2	44,644	16,150	60,794	24,196	66.1	
1836, September 2	55,529	21,557	77,086	16,302	26.8	
1841, March 2	87,296	43,558	130,854	53,768	40.7	
1846, March 2	114,769	74,840	189,609	58,755	44.9	
1851, March 1	Incl. Tasmania, East Victoria	153,843	112,409	266,252	78,729	41.5
	Excl. Tasmania, East Victoria	100,643	81,350	180,993	—	—
1856, March 1	100,498	119,294	209,792	78,729	41.7	

With the rapid expansion of settlement a great demand for labour was created, and the high rates of wages attracted a large influx of unassisted immigrants. The most powerful factor in promoting the development of Australia was, however, the discovery of rich goldfields in 1851.

Victoria was founded in July, 1851, by the separation of the District of Port Phillip, with a population of 77,345, from New South Wales. For purposes of comparison, the population at the census of 1851 has been shown in the above table, both inclusive and exclusive of Victoria.

After the census year of 1856 there was yet another reduction in the territory of New South Wales, when in 1859 Queensland, with a population of 16,907, was separated.

A further, though comparatively small, reduction in area and in population took place on the 1st January, 1911, when the Federal Capital Territory was transferred to the Commonwealth.

CENSUS ENUMERATIONS, 1861-1911.

At the census taken in New South Wales on the 7th April, 1861, the ascertained population was 350,860. Thereafter the numbers were determined decennially, and the last census was taken on the 3rd April, 1911, when the population had increased to 1,648,746. This number does not include the population of the Federal Capital Territory, which at the census of 1911 numbered 997 males and 727 females, or 1,724 persons, of whom 10 were aborigines. The population of New South Wales at each census period from 1861 to 1911 is stated below, and the estimated population as at 31st December, 1918. Aboriginal natives are included, except in 1861, when they were not enumerated; their number in 1911 was 2,012 (1,152 males and 860 females).

Year.	Males.	Females.	Total.	Increase since Previous Census.
1861	198,488	152,372	350,860	...
1871	275,551	228,430	503,981	153,121
1881	411,149	340,319	751,468	247,487
1891	612,562	519,672	1,132,234	380,766
1901	712,456	646,677	1,359,133	226,899
1911	858,850	789,896	1,648,746	289,613
1918	956,237	971,937	1,928,174	279,428

The relative increase from census to census may be measured according to the several methods shown in the following statement. In the first column the population in 1861 is taken as basis.

Year.	Index Number of Population.	Increase since previous Census.		Persons per Square Mile.
		During Period.	Average Annual Rate.	
1861	100	per cent. ...	per cent. ...	1.12
1871	144	43.64	3.69	1.61
1881	214	49.11	4.08	2.41
1891	323	50.67	4.19	3.64
1901	387	20.04	1.84	4.38
1911	470	21.31	1.95	5.32
1918	550	16.94	2.02	6.23

The following statement shows the population of each State of the Commonwealth at the last census, in comparison with the estimated population as at the 31st December, 1918, and the average annual rate of increase during the period. The figures are exclusive of aborigines of full-blood.

State.	Census Population, 1911.	Estimated Population, December, 1918.	Proportion in Each State.		Average Annual Rate of Increase since Census, 1911.
			1911.	1918.	
New South Wales ...	1,646,734	1,926,162	per cent. 36·96	per cent. 33·32	per cent. 2·04
Victoria	1,315,551	1,430,758	29·53	28·46	1·09
Queensland	605,815	694,440	13·60	13·81	1·78
South Australia	408,558	445,708	9·17	8·87	1·13
Western Australia	282,114	313,147	6·33	6·24	1·37
Tasmania	191,211	208,873	4·29	4·16	1·15
Northern Territory ...	3,310	4,781	0·08	0·10	4·86
Federal Capital Territory	1,714	2,232	0·04	0·04	3·47
Commonwealth ...	4,455,005	5,026,401	100·00	100·00	1·57

SEX DISTRIBUTION.

Prior to the outbreak of war in 1914, and the consequent enlistment of eligible men for service, the number of males in New South Wales had always exceeded the number of females. In the early days the disparity was very marked, but there has been a gradual tendency towards an equal sex distribution. The distribution of the sexes at each census since 1861 and at the end of 1918 was as follows:—

Year.	Proportion of Males.	Proportion of Females.	Males per 100 Females.
	per cent.	per cent.	No.
1861	56·57	43·43	130
1871	54·67	45·33	121
1881	54·86	45·14	121
1891	54·14	45·86	118
1901	52·42	47·58	110
1911	52·09	47·91	109
1918	49·59	50·41	98

From 1871 to 1881 the proportion of males remained constant at about 55 per cent., but immigration was checked towards the end of the next decade, and in 1891 the proportion of males had decreased slightly. During the following period there was very little immigration, and in 1901 the difference between the sexes had become less than at any previous period,

the proportion of males being 52·42 per cent., or 110 males to every 100 females. At the census of 1911 the percentages were—males 52·09, females 47·91, or 109 males to every 100 females. At the end of the year 1918 it was estimated that there were 99 males per 100 females, a ratio brought about by successive embarkations of males of military age for service abroad.

ESTIMATES OF POPULATION.

Reliable estimates of the population are required during the intercensal periods for many purposes affecting the welfare of the community. Apart from its value as the standard by which other statistics are measured, the population is used as the basis of important political and financial arrangements between the Government of the Commonwealth and the individual States, as, for instance, in the distribution amongst the States of representation in the Federal Parliament, and in the determination of the amount of revenue to be paid back to each State by the Commonwealth.

The elements of increase of the population are the excess of births over deaths, which is termed "natural increase," and the excess of immigration over emigration. The registers of births and deaths ensure a reliable return of the natural increase, but it is unfortunate that the records of arrivals and departures are defective, as in a young and progressive country the element of migration is extremely variable.

The records of overland migration are not perfect, but they give with approximate accuracy the gain or loss to the State across its borders. In the case of the sea traffic, however, the returns are less reliable, as there are persons whose departure is not recorded. The usual practice has been to assume that arrivals as recorded are correct, and to add to the recorded departures, as an allowance for the unrecorded, a certain percentage of those departures based on the experience of the preceding intercensal period. This method is not altogether satisfactory, as when the census is taken it is found that the estimate differs more or less from the census figure, and it becomes necessary to adjust the estimates for all the years between census enumerations, so that they may not appear incompatible with census results.

At different periods Conferences of the Statisticians of the several States of the Commonwealth have been held for the purpose of devising a uniform method of estimating population.

The estimated population of New South Wales, including aborigines, at the end of each of the last ten years, was as follows:—

Year.	Estimated Population at End of Year.			Annual Increase.		Mean Population.
	Males.	Females.	Total.	Numerical.	Per cent.	
1909	529,329	767,336	1,296,665	36,639	2·35	1,577,260
1910	552,040	785,340	1,337,380	41,335	2·90	1,618,209
1911	582,341	809,345	1,391,686	62,949	3·80	1,661,500
1912	635,979	842,983	1,478,962	80,225	4·74	1,738,860
1913	662,749	869,707	1,532,456	33,494	3·01	1,809,400
1914	667,033	894,095	1,561,128	29,572	1·59	1,832,400
1915	658,162	917,253	1,575,415	8,357	0·45	1,868,200
1916	623,113	934,897	1,558,010	-12,495	-0·67	1,896,300
1917	634,252	954,877	1,589,129	31,309	1·63	1,874,400
1918	656,297	971,837	1,628,134	39,045	2·07	1,909,500

* Excludes 1,774 persons, the population of the Federal Capital Territory, which has been excluded in all subsequent years. (-) Denotes a decrease of population.

THE SOURCES OF INCREASE.

The following statement shows the extent to which each source contributed to the growth of the population during the census periods from 1861; in calculating the increase from 1901 to 1911, the population of the Federal Capital Territory has been taken into consideration, and aborigines have been included.

Period.	Increase.		Total Increase.	Average Annual Rate of Increase.		
	By Excess of Births over Deaths.	By Excess of Immigrations over Emigrations.		By Excess of Births over Deaths.	By Excess of Immigrations over Emigrations.	Total.
				per cent.	per cent.	per cent.
1861-71.	198,077	47,044	245,121	2.68	1.27	3.95
1871-81.	140,382	107,102	247,484	2.49	1.93	4.42
1881-91.	211,331	169,462	380,793	2.81	2.01	4.82
1891-1901.	220,673	224	220,897	1.84	—	1.84
1901-11.	247,583	43,472	291,055	1.69	0.32	2.01
1911-18*.	230,124	22,280	252,404	1.57	0.18	1.75

* Seven years and nine months.

The rate of natural increase fell steadily throughout each intercensal period, and reached its lowest point in 1903, when it was only half the average annual rate during the period 1861-71. The fall was caused by the declining birth-rate, as the death-rate had shown constant improvement. Since 1903, however, the rate of natural increase has risen. During the period 1911-18 (seven years and nine months) the excess of live births over deaths reached 1.87 per cent. During individual years of the period 1911-18 the rate has fluctuated. In 1914 it fell to 1.72 per cent., a result no doubt largely owing to the withdrawal from the community the service of a considerable number of married and prospective married men of military age. In 1917 there was a marked improvement, the rate of natural increase rising to 1.86 per cent. It fell again, however, in 1918 to 1.69 per cent., the lowest since 1908 when it was 1.68 per cent.

In the year 1861 immigration ceased, and during the next decade the population progressed solely by reason of the natural increase, as the excess of arrivals was only 225. The balance of migration was, moreover, affected by the rush of men to Western Australia after the discovery of gold in 1861, and by the departure of over 5,000 troops to the war in South Africa, from 1899 to 1901. After that war the troops returned to New South Wales, and in 1905 State assistance to immigrants was restored, so that the experience of 1901-11 was an improvement on that of the ten years prior to 1901.

During the period 1912-18 departures exceeded arrivals by 2,763, this result being due to 113,471 troops having left the State for service abroad during the years 1914-18 inclusive.

MIGRATION.

The following table shows the arrivals in and departures from New South Wales by sea and by land during the last ten years, allowance being made for those unrecorded.

Year.	Arrivals.				Departures.			
	Interstate.		From other Countries.	Total.	Interstate.		To other Countries.	Total.
	By Land.	By Sea.			By Land.	By Sea.		
1909	144,190	55,985	51,025	250,500	140,775	64,750	37,748	241,779
1910	163,691	58,146	53,379	275,216	168,600	66,722	39,792	269,023
1911	198,458	71,292	70,405	340,155	197,088	69,922	44,379	308,883
1912	221,600	75,873	87,916	385,397	213,268	71,170	53,831	338,278
1913	234,441	71,400	78,259	381,100	224,914	63,923	66,261	350,038
1914	237,016	75,875	67,268	400,159	250,488	71,875	74,002	405,425
1915	275,955	65,736	44,362	386,053	269,747	58,811	82,383	410,941
1916	303,030	55,423	39,698	398,151	293,736	51,624	97,497	442,857
1917	234,672	40,005	33,060	307,837	224,059	36,567	52,504	313,129
1918	193,164	28,583	110,447	332,194	263,229	25,403	42,567	331,294

The large movement of population each year can hardly be described as immigration or emigration in the ordinary sense in which those terms are used, as it is due largely to the arrival and departure of tourists and business men. Of the total movement, 82 per cent. is with the other Australian States, and one-third of the movement with countries outside Australia is with New Zealand.

The war had a marked effect on the increase of population, as during the five years 1914-18 the net loss of population to various countries was 70,974. New South Wales gained during this period 52,909 persons from the other Australian States, 3,321 from New Zealand, 1,261 from the United Kingdom, 335 from India; and lost to British possessions other than Australia and New Zealand, and to foreign countries, 128,500, but 113,471 of these were soldiers. The gain by immigration from the United Kingdom in 1914 amounted to 4,500, in 1915 to 792, and in 1916 to 5, but during 1916 and 1917 there was a loss of 891 and 3,241 respectively owing to the departure of large numbers of munition workers. During 1918 there were 1,710 persons withdrawn from the community as crews, and the excess of arrivals from other countries over departures amounted to 7,183.

After the revival of the assisted immigration policy in 1905 there had been a steadily increasing stream of arrivals from the United Kingdom, amounting in 1912 to 75,278. Owing to great improvement in labour conditions in Great Britain, and keener competition among Overseas Dominions for British emigrants, the gain from the United Kingdom in 1913 was less than in 1912. During 1914, in consequence of the War, the addition to the population from this source numbered only 4,510; in 1915 the number of assisted emigrants had dwindled to 1,695, and has fallen every year since, reaching the lowest point in 1918 when only 199 arrived.

STATE-ASSISTED IMMIGRATION.

Recognising the need of a more rapid increase in population, in order to develop the vast resources and latent wealth of the country, the State Government arranged in 1905 for the systematic advertisement in the United Kingdom of the advantages offered to immigrants. The cost of the passage to desirable settlers was partly paid by the Government; and residents of New South Wales were enabled to arrange, by nomination, assisted passages for relatives and friends.

Under an agreement with the States, the Federal Government co-operated in the scheme by undertaking the advertisement of the resources of Australia, while the selection of immigrants was conducted by the representatives of the individual States, which also arranged the assisted passages.

The number of persons assisted to immigrate during the ten years 1909-18 is shown hereunder.

Year.	Total Assisted Immigrants.			Nominated by Relatives or Friends in New South Wales (Included in Preceding).		
	Males.	Females.	Total.	Males.	Females.	Total.
1909	...	...	4,308	...	...	1,979
1910	3,039	2,019	5,058	1,406	1,530	2,936
1911	5,880	4,042	9,922	3,647	3,279	6,926
1912	8,361	6,595	14,956	5,278	5,545	10,823
1913	4,181	5,682	9,863	3,336	4,909	8,335
1914	2,463	3,161	5,624	1,574	2,440	4,014
1915	535	1,161	1,696	495	825	1,320
1916	185	470	655	184	395	579
1917	68	188	256	63	167	230
1918	31	168	199	31	168	199

Full details relating to assisted immigration are shown in the chapter on Employment and Industrial Arbitration in this Year Book.

THE DISTRIBUTION OF POPULATION.

The distribution of population estimated as at the 31st December, 1918, together with the proportion in each Division and the average population per square mile, is shown in the following table.

Division.	Area.	Estimated Population, 1918.		
		Total.	Proportion in Each Division.	
	sq. miles.		per cent.	per sq. mile.
Sydney	5	106,000	5·4	21,200·0
Suburbs	180	686,700	35·6	3,815·0
Metropolis	185	792,700	41·0	4,284·8
Country Municipalities	2,853	463,500	24·3	162·5
* Shires	180,531	658,300	34·0	3·6
Western Division (Part unincorporated).	125,893	13,561	0·7	0·1
Lord Howe Island	5	113	0·0	22·6
Total, New South Wales ...	309,467	1,928,174	100·0	6·2

* The Ku-ring-gai Shire, area 36 sq. miles, population 15,560, is included with the suburbs of the metropolis.

The population of the metropolis represents more than two-fifths of the total population; less than one-quarter resides in the country municipalities, and over one-third in the other incorporated areas.

The area of the Federal Capital Territory, transferred to the Commonwealth, is about 900 square miles. At the 31st December, 1918, its estimated population was 2,232.

THE POPULATION OF THE METROPOLIS.

The metropolis includes Sydney, the forty municipalities which surround it, and the Ku-ring-gai Shire, as well as the islands of Port Jackson, and embraces an area of 185 square miles. The boundaries may be described roughly as follow: On the east, the sea-coast; on the south, the waters of Botany Bay and George's River; on the west, the western boundaries of Hurstville, Canterbury, Enfield, Strathfield, Homebush, Concord, and Ryde; on the north, the northern boundaries of Eastwood and Ryde, the western and eastern boundaries of Ku-ring-gai Shire, the north-eastern boundary of Willoughby, and the northern boundary of Manly. The habitations within these limits are fairly continuous.

The following statement shows the population of each municipality of the metropolis, and of Ku-ring-gai Shire, at the census of 1911, and as at the 31st December, 1918:—

Municipality	Population.		Municipality.	Population.	
	Census, April, 1911.	Estimated, 31st Dec., 1918.		Census, April, 1911.	Estimated, 31st Dec., 1918.
City of Sydney*	119,771	106,000	Manly	10,465	14,440
Alexandria	10,723	11,400	Marrickville	20,653	28,200
Annandale	11,240	12,200	Passaic	5,836	8,100
Ashfield	20,424	20,200	Steeles	13,243	17,010
Balmain	22,038	22,400	Newtown	26,408	27,910
Bexley	8,817	11,200	North Sydney	24,644	41,820
Botany	4,426	3,800	Paddington	24,317	25,890
Burwood	9,260	13,225	Petersham	21,712	24,200
Canterbury	11,333	28,285	Randwick	16,462	22,900
Concord	4,078	7,420	Rosburn	24,427	28,030
Darlington	3,810	3,840	Rockdale	14,080	18,000
Drummoyne	8,878	14,600	Ryde	5,281	10,420
Eastwood	968	1,200	St. Peter's	8,410	10,840
Enfield	2,444	6,270	Strathfield	4,048	8,850
Erskineville	7,299	7,670	Vaucluse	1,672	2,770
Glades	21,943	22,720	Waterloo	10,072	11,250
Homebush	878	1,220	Waverley	19,821	29,220
Hunter's Hill	5,013	6,040	Willoughby	12,028	22,280
Hurstville	8,523	11,960	Woolfords	16,989	21,280
Kogarah	6,952	12,640	Ku-ring-gai Shire	9,455	12,500
Lane Cove	3,708	2,240			
Leichhardt	24,254	28,240	Total	692,332	792,700

* Includes shipping and the islands of Port Jackson.

The metropolitan population is unevenly distributed. At the census of 1911 two-fifths of the inhabitants resided within an area of less than 7,000 acres, having a density from 30 to 80 per acre, one-third occupied about 24,000 acres, with an average density of 10, and the remainder were scattered over about 88,000 acres, having a density of a little over 1 per acre.

The population of the metropolis at census periods and on the 31st December, 1918, is shown in the following table, together with the proportion which the metropolitan population bears to that of the whole State.

Year.	Census Population			Males per 100 Females.	Percentage of Population of Whole State.
	Males.	Females.	Total.		
1871	68,396	70,813	139,209	96.21	27.62
1881	114,970	112,230	227,200	102.41	30.23
1891	197,350	189,584	386,934	104.64	34.02
1901	241,700	216,282	457,982	111.76	35.99
1911	312,074	304,079	616,153	102.64	39.55
1918	*	*	792,700		41.11

* Not ascertained.

A comparison of the populations of the chief cities (including suburbs) of the States of the Commonwealth is shown herewith.

Metropolis.	Census, 1911.			Estimated Population, 31st Dec., 1918.	Proportion of Population of Whole State.
	Males.	Females.	Total.		
Sydney	305,739	322,778	628,517	792,700	41.11
Melbourne	277,006	311,018	588,024	725,000	50.57
Brisbane	67,628	71,832	139,460	181,100	26.18
Adelaide	93,579	99,089	192,668	250,751	22.89
Perth	53,224	53,561	106,785	139,000	42.43
Hobart	18,487	21,430	39,917	41,500	19.67

The census populations given above are exclusive of shipping, and for this reason the population of Sydney differs from that shown in the previous table.

THE COUNTRY DISTRICTS OF NEW SOUTH WALES.

In the opening stages of the history of New South Wales settlement followed the main roads, but with the establishment of the railway the population settled within reach of the railway lines. In the coastal area, where the bulk of the people dwells, the development of the towns has more than kept pace with the general population. Thus, in the Valley of the Hunter, with its large agricultural, mining, and manufacturing industries, population has made rapid strides. Newcastle and suburbs, for instance, increased from 7,810 in 1861 to 54,991 in 1901, and the estimated population in 1918 was 60,850. Though Wollongong has increased considerably in population, the Illawarra District as a whole, notwithstanding its rich deposits of coal and the fertility of its pasture-lands, has stagnated, if not declined; whilst the dairy, maize, and sugar-growing districts of the Clarence and Richmond Rivers have increased generally in their urban population. A number of industrial works have been established around Lithgow, which has become an important centre of the western coalfields, and the site of a small-arms and munitions factory. On the 31st December, 1918, the country districts contained 1,135,474 inhabitants, or 58.9 per cent. of the total estimated population.

The following statement shows the population of the country municipalities of New South Wales containing more than 2,000 inhabitants as at the census of 1911, and at the 31st December, 1918.

Municipality.	Census, 1911.	Estimated, Dec., 1918.	Municipality.	Census, 1911.	Estimated, Dec., 1918.
Afury	6,300	6,600	Lismore	7,331	8,625
Armidale	4,728	5,279	Lithgow	8,196	10,430
Asbury	5,521	11,350	Liverpool	2,811	3,800
Bathurst	2,061	2,740	*Maitland	11,313	11,970
Bathurst	2,033	2,703	Maree	2,031	2,150
Bathurst	5,575	8,670	Merimbouh	2,942	3,000
Broken Hill	30,972	24,858	Merimbouh	2,136	2,640
Cadiz	3,425	2,740	Merimbouh	2,592	3,530
Cobar	4,430	3,103	†Narrabri	3,320	2,540
Coma	2,063	2,033	Narrandina	2,374	2,430
Comandale	2,293	2,550	Newcastle, includ- ing Suburbs.	50,380	50,830
Coonamble	2,967	3,100	Orange	6,721	7,200
Croydon	2,063	2,130	Parkes	2,923	3,330
Crows	3,271	4,150	Parramatta	12,463	12,600
Cudjigong	2,678	2,530	Penrith	3,682	3,700
Dunblighin	2,494	2,430	Prospect and Sher- wood.	3,021	5,050
Dubbo	4,437	4,870	Quirindi	2,240	2,600
Forbes	4,416	5,170	Singleton	2,001	2,000
Glen Innes	4,030	4,870	Smithfield and Fair- field.	2,220	3,350
Goulburn	19,023	10,840	Tamworth	7,141	8,000
*Grafton	5,888	6,120	Temora	2,791	3,350
Granville	1,231	11,860	Tenterfield	2,792	2,940
Gunnedah	3,005	3,050	Wagga Wagga	3,419	7,303
Hay	2,461	2,130	Wellington	3,338	4,450
Illawarra, Central	5,003	5,350	Windsor	2,460	2,450
Illawarra, North	5,157	5,800	Wollongong	4,050	5,000
Inverell	4,549	5,480	Yass	2,136	2,130
Juncos	2,531	2,740	Young	3,139	3,350
Katoomba	4,923	5,000			
Kempsey	2,962	3,250			
Ladysmith	2,415	3,253			

* Includes South Grafton. † East and West. ‡ Includes West Murrumbidgee.

PERSONS OF NON-EUROPEAN RACES.

Legislative measures to restrict the influx of coloured aliens were passed in New South Wales in the early days of self-government. Public feeling was first aroused by the entry of large numbers of Chinese, and the enactments imposed limitations on the immigration of this race only. Subsequently, however, these restrictive powers were extended to regulate the influx of all coloured aliens.

At the establishment of the Commonwealth the control of the conditions relating to immigration was transferred to the Federal Parliament. The Federal legislation relating to the restriction of immigration does not aim at the exclusion of the people of any particular race or colour, but of undesirable immigrants generally. Under its provisions no person is allowed to land who fails to pass a dictation test in any European language chosen by the Customs Officers. This test has not been applied to any desirable immigrant of European nationality. Paupers, criminals, lunatics, and other persons likely to be a source of danger to public health or morals, are excluded.

Provision is made also to prevent the immigration of labourers under contract to perform manual labour if their arrival has any connection with an industrial dispute, or if the contract-rate of wages is less than that current in the district where the work is to be performed.

At the census of 1911 the number of persons of non-European races, other than aborigines, residing in New South Wales was 13,140, and was representative of the very small proportion of 8 per 1,000 of the total population. The most numerous were the Chinese, who constituted 70 per cent. of the coloured aliens, Hindus and Syrians following in the order given.

The Chinese.

The Chinese were first attracted to this State by the gold discoveries. At the census of 1861 they numbered 12,988, exclusive of half-castes, who were not enumerated until 1891. From 1861 to 1871 the number declined, probably on account of the diminution in the gold-yield and the discovery of richer goldfields in the neighbouring States; but in 1878 there was a steady increase in the arrivals from China, and this lasted until about 1888, when an effective check was given to their immigration by the Chinese Restriction and Regulation Act.

The following table shows the number of Chinese (including half-castes) in Australia at each census since 1891.

State.	1891.	1901.	1911.
New South Wales (including Federal Capital Territory) ...	14,156	11,263	9,358
Victoria	9,377	6,953	5,601
Queensland	8,574	9,313	6,714
South Australia (including Northern Territory)	3,997	3,455	1,698
Western Australia... ..	917	1,569	1,872
Tasmania	1,056	609	529
Total, Commonwealth	38,077	33,165	25,772

At the census of 1911 there were 3 Chinese in the Federal Capital area, and 1,339 in the Northern Territory.

The arrivals of Chinese in New South Wales during 1918 numbered 883 and the departures 704.

THE ABORIGINES.

It is difficult to form a correct estimate of the number of aborigines; but though there is reason to believe that they were formerly numerous, they have decreased rapidly before the advance of settlement and systematised occupation.

Governor Phillip estimated the aboriginal population, about the year 1790, at 1,000,000, of which number about 3,000 lived between Broken and Botany Bays. The latter estimate was very likely correct, but the first Governor doubtless based his calculation on the assumption that the resources of the unlocked Continent were as great as those of the strip of settlement immediately under his notice.

The aborigines were never properly counted until the census of 1891, when they were classed as full-blood and half-caste. In 1901 the full-blood and nomadic half-caste only were counted. In reckoning the quota to determine the number of Members to which the State is entitled in the House of Representatives (in accordance with the provisions of the Commonwealth Constitution Act), aboriginal natives of Australia are not included. It has been decided that only full-bloods are aborigines within the meaning of the Act, and consequently in 1901 and 1911 half-castes were included in the

general population. The number shown in the following table for the census of 1911 represents only those who were employed by whites, or who were living in the vicinity of white settlements at the date of the census. In 1861 aborigines were not enumerated; in 1871 and 1881 the wandering tribes were passed over, and those only who were civilised, or who were in contact with Europeans, were enumerated and included in the general population. The number of full-blood aborigines in New South Wales at each census is shown below; the figures for 1911 are exclusive of the Federal Capital Territory, in which were enumerated 10 aborigines—5 males and 5 females.

Census.	Males.	Females.	Total.
1871	700	274	983
1881	938	705	1,643
1891	4,559	3,721	8,280
1901	2,451	1,836	4,287
1911	1,152	860	2,012

In 1891 the number of half-castes was 1,663 males and 1,520 females. In 1901 the number of both full-bloods and half-castes was 4,093 males and 3,541 females, and of these 509 were nomads—259 males and 250 females. In addition to the 2,012 full-bloods at the census of 1911, half-castes were enumerated numbering 4,312, of which total 2,335 were males and 2,177 were females.

The Board for the Protection of Aborigines many years ago was constituted to safeguard the interests of the aboriginal population, and reserves were dedicated in different parts of the State, dwellings erected, and the means of livelihood organised. The residents on these reservations are encouraged in the tillage of the soil, and supplied with tools and seeds, and their children are educated. Under an Act passed in 1909 the control of the reserves was vested in the Board, and its powers of administration were considerably amplified with a view to the amelioration of the conditions of the aborigines. Information relating to the work of the Board will be found in a later chapter of this Year Book.

NATURALISATION.

Under the Commonwealth Naturalisation Act, which came into operation on 1st January, 1904, the issue of naturalisation certificates became a function of the Commonwealth Government.

Since 1849 certificates have been granted in New South Wales to 17,331 persons. Germans numbered 6,686; Swedes, 1,761; Russians, 1,113; Danes, 1,158; Italians, 973; and French, 802. Only two Chinese have been naturalised in New South Wales since 1887, but prior to that year 908 had obtained certificates.

Records of the occupations of persons naturalised show that labourers, seamen, miners, cooks, carpenters, farmers, engineers, fruiterers, and firemen were the most numerous, in the order given.

VITAL STATISTICS.

REGISTRATION OF BIRTHS, DEATHS, AND MARRIAGES.

Civil registration of births, deaths, and marriages was inaugurated in New South Wales in March, 1856, when a general registry was established, and a Registrar-General appointed by the Governor. The laws relating to registration were consolidated by the Registration of Births, Deaths, and Marriages Act, 1899, and the Acts relating to marriage by the Marriage Act, 1899.

New South Wales has been divided into 213 registry districts, in each of which a District Registrar has been appointed.

All births must be registered by the parent within sixty days. After the expiration of sixty days no birth may be registered unless, within six months, a declaration is furnished by the parent, or by some person present at the birth. Within six months of the arrival in New South Wales of a child under the age of 18 months, born outside the State, the birth may be registered upon declaration by the parent, if the parents intend to reside in New South Wales. Still-births are not registered.

Notice of the death of any person must be supplied to the District Registrar by a relation of the deceased, or by the householdier or tenant of the house or place in which the death occurs.

Marriages may be celebrated only by District Registrars or by ministers of religion registered for that purpose by the Registrar-General. In the former case, the parties to be married must sign, before the Registrar of the district in which the intended wife ordinarily resides, a declaration that they consentively object to be married by a minister of religion, or that there is no minister available for the purpose of performing the marriage.

Marriage with a deceased wife's sister is valid in New South Wales.

MARRIAGES.

The number of marriages celebrated in New South Wales during 1918 was 13,191, corresponding to a rate of 6.91 per 1,000 of the population. This showed a marked decline on the record of 1915, when the number of marriages was 18,129, and the rate was 9.70.

The following table shows the average annual number of marriages and the rates per 1,000 of the population during each quinquennium since 1870.

Period.	Average Number of Marriages.	Rate per 1,000 of Population.	Period.	Average Number of Marriages.	Rate per 1,000 of Population.
1870-74	4,091	1.77	1905-09	12,599	7.91
1875-79	4,967	1.98	1910-14	15,978	9.05
1880-84	6,708	3.39	1915	18,129	9.70
1885-89	7,678	4.07	1916	18,320	9.74
1890-94	1,354	0.60	1917	12,261	7.07
1895-99	8,719	4.74	1918	13,191	6.91
1900-04	10,540	7.37			

Until the year 1891 the increase in the number of marriages was remarkably steady, but in 1892 there was a decline, which continued until 1895, when the figures again took an upward movement, though the proportion married per 1,000 of the population did not reach the 1891 level until

1900. In 1901 the rate was the highest since 1886, but in the next two years it declined again considerably. From 1904 to 1912 there was a constant improvement. Compared with the rates of the quinquennium 1905-09, the marriage rate of 1914 disclosed an advance of over 17 per cent. It is probable that the high rate for 1915 was due, in part, to a number of marriages contracted by soldiers prior to their departure for the war, and the decline in 1916, 1917 and 1918 to the withdrawal of marriageable men from the total population.

Of the bachelors marrying in New South Wales only $4\frac{1}{4}$ per cent. are outside the ages 20-44, and of the spinsters less than $1\frac{1}{2}$ per cent. are outside the ages 15-39. Adopting these therefore as the marriageable ages of the sexes, the following table shows, at the census years 1871 to 1911, the proportion of bachelors and of spinsters married per 1,000 unmarried males and females within the specified groups.

Year.	Proportion of Bachelors Married during Year per 1,000 Unmarried Males Aged 20 to 44.	Proportion of Spinsters Married during Year per 1,000 Unmarried Females Aged 15 to 39.
1871	65.60	87.07
1881	65.21	82.32
1891	57.85	71.28
1901	65.92	62.69
1911	79.11	74.96

Up to 1891 the female rate was the higher, but after that year the male rate exceeded the female, as a result of the increase in the proportion of females in the population.

The marriage rate is an intimate reflex of the comparative prosperity of a country, and a high marriage rate is an obvious proof of the existence of a considerable proportion of marriageable persons in the community. From each point of view the facts in respect to New South Wales are satisfactory.

The following statement shows the marriage rate per 1,000 of the population in each State of the Commonwealth of Australia and in New Zealand in 1918, and in a number of other countries in 1914.

State.	1918.	Country.	1914.
South Australia ...	7.25	Roumania ...	8.5
Queensland ...	6.99	England and Wales ...	8.0
<i>New South Wales</i> ...	6.91	Italy ...	7.5
Victoria ...	6.40	Scotland... ..	7.4
New Zealand ...	5.65	Denmark ...	6.9
Tasmania ...	5.55	Netherlands ...	6.7
Western Australia ...	5.18	Spain ...	6.5
		Norway ...	6.5
		Sweden ...	5.8
		Ireland ...	5.4
		France ...	5.1

A comparison of the marriage rates of various countries may be misleading, on account of the different conditions of life and the varying number of marriageable persons.

MARK SIGNATURES IN MARRIAGE REGISTERS.

The number of persons who signed the marriage register with marks in the year 1918 was 111, equal to 4·20 per 1,000 persons married.

In 1870 the proportion of signatures made with marks was as high as 18·23 per cent. of the whole, and this significant decrease in illiteracy is emphatic evidence of the efficiency of the State system of public instruction.

MARRIAGES ACCORDING TO DENOMINATIONAL RITES.

Of every hundred marriages performed in New South Wales, about ninety-seven are celebrated by ministers of religion licensed under the authority of the Registrar-General. The number of marriages at which clergymen officiated during the year 1918 was 12,670, and of those contracted before District Registrars 529, or a proportion respectively of 96·0 and 4·0 per cent.

As compared with the previous quinquennial period, the returns relating to marriages solemnised by the Church of England and the Roman Catholic denominations showed increased rates for the year 1918. The following table gives the number and proportion per cent. of marriages registered by the several denominations during 1918, in comparison with the preceding quinquennium.

Denomination.	Marriages, 1913-1917.	Proportion per cent.	Marriages, 1918.	Proportion per cent.
Church of England	34,791	42·76	5,760	43·64
Roman Catholic	15,457	19·00	2,732	20·69
Presbyterian... ..	10,976	13·49	1,706	12·93
Methodist	10,978	13·49	1,578	11·96
Congregational	2,811	3·45	276	2·09
Baptist	1,447	1·78	175	1·33
Hebrew	238	·29	38	·29
All Other Sects	2,513	3·09	405	3·06
District Registrars	2,160	2·65	529	4·01
Total Marriages	81,374	100·00	13,199	100·00

CONDITION BEFORE MARRIAGE.

During the year 1918, of the males married, 12,157 were bachelors, 888 were widowers, and 154 were divorced. Of the females, 12,168 were spinsters, 858 were widows, and 173 were divorced. The proportion of males re-married was 7·89 per cent., and of females 7·81 per cent.

The following table shows at quinquennial intervals since 1881 the proportion of first marriages and of re-marriages, per 10,000 married.

Period.	Bachelors.	Widowers and Divorced Men.	Spinsters.	Widows and Divorced Women.
1881	9,087	913	9,044	956
1886	9,137	863	9,156	844
1891	9,229	771	9,216	784
1896	9,184	816	9,172	828
1901	9,270	730	9,268	732
1906	9,262	738	9,352	648
1911	9,407	593	9,456	544
1916	9,377	623	9,362	638
1917	9,245	755	9,267	733
1918	9,211	789	9,219	781

AGE AT MARRIAGE.

Of the 13,199 couples married in 1918, the ages of 13,195 bridegrooms and 13,194 brides were recorded.

The following statement shows the average age at marriage both of bridegrooms and of brides for each of the last ten years. The difference between the ages at marriage of males and females is now about 4 years, the males being the older.

Year.	Average Age of—		Average Age of—		Year.	Average Age of—		Average Age of—	
	All Bridegrooms.	Spinsters.	All Brides.	Spinners.		All Bridegrooms.	Spinsters.	All Brides.	Spinners.
	years.	years.	years.	years.		years.	years.	years.	years.
1909	29.1	28.3	25.3	24.7	1914	28.8	27.9	25.4	25.0
1910	29.0	28.2	25.3	24.6	1915	28.7	28.0	25.3	25.0
1911	28.8	28.0	25.3	24.7	1916	29.1	28.4	26.1	25.2
1912	29.9	28.4	25.3	25.0	1917	29.7	28.5	26.0	25.0
1913	29.8	27.8	25.3	24.7	1918	29.5	28.0	25.5	24.5

The average age at marriage, of both bridegrooms and brides, has remained practically constant during the last ten years, although there is now a tendency to delay marriage on the part of both sexes.

The foregoing figures relate to all persons marrying during the year, and to those contracting unions for the first time. During 1915 the average marrying age of bachelors was about eighteen months lower than of all bridegrooms, and of spinners, twelve months lower than in the case of all brides.

THE MARRIAGES OF MINORS.

The number of persons under 21 years of age who were married during 1918 was 3,577, or 13.6 per cent. of the total. The following are the figures at decennial intervals since 1881.

Year.	Minors.		Percentage of	
	Bridegrooms.	Brides.	Bridegrooms.	Brides.
1881	149	1,600	7.37	26.45
1891	177	2,083	7.09	34.95
1901	351	2,540	3.23	24.15
1911	701	3,499	4.59	22.92
1918	685	3,892	5.28	21.90

Compared with the early years the proportion of minors increased among bridegrooms up to the year 1912, when it gradually decreased, but it decreased continuously, with infrequent fluctuations, among brides.

BIRTHS.

The number of births registered during 1918 was 50,700, equal to a rate of 26.55 per 1,000 of the population, but 6.4 per cent. below the average for the last quinquennium. The number registered during 1915, namely 52,885, was the highest recorded in New South Wales for any single year. The birth rate fell away sharply after 1888, and declined continuously till 1903, but since that year there has been an improvement, and the rate in 1912 was the highest since 1885. There was a decline in the birth rate during the war years, 1914 to 1918 inclusive, coincident with the decline in the marriage rate.

The following table shows the average annual number of births and the birth-rate per 1,000 of the total population in quinquennial periods since 1870.

Year.	Average Births.	Birth-rate per 1,000 of Population.	Year.	Average Births.	Birth-rate per 1,000 of Population.
1870-74	20,723	33.36	1905-09	41,788	27.56
1875-79	24,388	38.51	1910-14	50,190	28.80
1880-84	30,417	37.89	1915	52,885	28.31
1885-89	36,877	36.85	1916	52,075	27.00
1890-94	39,550	33.80	1917	52,467	27.89
1895-99	37,042	28.68	1918	50,700	26.55
1900-04	37,498	28.99			

The rates shown in this table are calculated by the usual crude method of relating the births to the total population. It is unsatisfactory, for several reasons, so to measure the birth-rate. A preferable method for purposes of strict analysis is to relate the mothers of various ages to the total number of women at corresponding ages, or to relate the births to the number of women of child-bearing ages.

These methods can be followed with exactitude only at census dates since at any other time it is very difficult to make a reliable estimate of the number living at various ages, on account of migration and other influences.

The birth-rate per 1,000 of the population of each State of the Commonwealth, of New Zealand, and of a number of countries, according to the latest information, is given in the following table.

State.	1918.	Country.	1914
Queensland	28.37	Romania	42.5
New South Wales	25.55	Italy	31.7
Tasmania	23.91	Spain	29.8
South Australia	25.80	Prussia (1913)	28.2
New Zealand	23.45	Netherlands	28.9
Western Australia	22.84	Scotland	26.1
Victoria	22.25	Denmark	25.6
		Norway	25.2
		United States (Registration area)	24.9
		England and Wales	23.8
		Switzerland (1913)	23.1
		Sweden	22.9
		Ireland	22.6
		France	18.0

The Australian birth-rates are lower than in several of the countries of the Old World, but as will be shown subsequently this is more than counter-balanced by a much lower death-rate.

BIRTH-RATES—METROPOLIS AND REMAINDER OF THE STATE.

During the year 1918 the births recorded in the metropolitan district of New South Wales numbered 19,526, and in the remainder of the State 31,174, or 24.87 and 27.72 per 1,000 of the population respectively. Prior

to the year 1893 the metropolitan birth-rate was the higher, but since then, with the exception of the year 1913, the country has consistently shown a higher rate.

Period.	Number of Births.			Births per 1,000 of Population.		
	Metropolis.	Remainder of State.	New South Wales.	Metropolis.	Remainder of State.	New South Wales.
1880-84	49,058	103,026	152,084	40·16	36·90	37·89
1885-89	65,866	118,517	184,383	41·50	34·69	36·85
1890-94	68,754	123,998	197,752	34·11	33·63	33·80
1895-99	61,224	123,986	185,210	26·73	29·75	28·68
1900-04	63,694	123,795	187,489	25·16	28·05	26·99
1905-09	72,409	136,529	208,938	25·50	28·80	27·56
1910-14	95,529	155,423	250,952	28·26	29·32	28·90
1915	20,871	32,014	52,885	27·55	28·83	28·31
1916	20,856	31,219	52,075	27·31	28·32	27·90
1917	20,278	32,189	52,467	26·30	29·17	27·99
1918	19,526	31,174	50,700	24·87	27·72	26·55

THE SEXES OF CHILDREN.

Of the 50,700 children born during the year (exclusive of those still-born), 26,009 were males and 24,691 were females, the proportion being 105 males to 100 females. In no year, as far as observation extends, have the female births exceeded in number those of males, although the difference has sometimes been very small. The preponderance of births of male children in New South Wales during a number of years is shown in the following table.

Year.	Males.	Females.	Total.	Year.	Males.	Females.	Total.
1870-74	10,577	10,156	20,733	1905-09	21,406	20,382	41,788
1875-79	12,477	11,911	24,388	1910-14	25,728	24,462	50,190
1880-84	15,567	14,850	30,417	1915	27,105	25,780	52,885
1885-89	18,898	17,979	36,877	1916	26,599	25,476	52,075
1890-94	20,324	19,226	39,550	1917	26,988	25,479	52,467
1895-99	18,979	18,063	37,042	1918	26,009	24,691	50,700
1900-04	19,134	18,364	37,498				

The excess of males over females born during the past fifty-eight years has ranged from 2 per cent. in 1875, 1876, and 1901, to about 8·7 per cent. in 1864, the average being 5 per cent.

The proportion of males born during the war years was very little different from that in the pre-war years.

It is noteworthy that in the case of illegitimate births, the births of males have always maintained the ascendancy, save in the quinquennial period 1885-89 and in the year 1915, when the births of females predominated slightly.

The following table shows the number of males born to every 100 females, both in legitimate and illegitimate births, during the last forty-eight years.

Year.	Legitimate Births.	Illegitimate Births.	All Births.	Year.	Legitimate Births.	Illegitimate Births.	All Births.
1870-74	104·3	101·0	104·1	1905-09	105·0	104·9	105·0
1875-79	104·6	108·8	104·8	1910-14	105·2	105·1	105·2
1880-84	104·9	103·9	104·8	1915	105·4	99·8	105·1
1885-89	105·4	98·8	105·1	1916	104·4	103·7	104·4
1890-94	105·7	105·4	105·7	1917	106·0	104·6	105·9
1895-99	105·0	105·4	105·1	1918	105·5	101·6	105·3
1900-04	104·3	102·8	104·2				

ILLEGITIMACY.

The number of illegitimate births in 1918 was 2,654, equal to 5.23 per cent. of the total births. A statement of the illegitimate births in New South Wales, distinguishing between the metropolis and the remainder of the State, is given herewith.

Year.	Number of Illegitimate Births.			Ratio per cent. to Total Births.		
	Metropolis.	Remainder of State.	New South Wales.	Metropolis.	Remainder of State.	New South Wales.
1900	1,222	1,383	2,605	10.08	5.53	7.01
1905	1,530	1,382	2,912	11.11	5.37	7.37
1910	1,530	1,370	2,900	9.44	4.67	6.37
1915	1,480	1,201	2,681	7.09	3.75	5.07
1916	1,334	1,167	2,501	6.40	3.74	4.80
1917	1,383	1,150	2,533	6.82	3.57	4.83
1918	1,460	1,194	2,654	7.48	3.83	5.23

The smaller proportion of illegitimate births in the extra-metropolitan area is doubtless partly due to the fact that prospective mothers journey to the metropolis, not only for the sake of the advantages of lying-in at one of the public maternity hospitals, but to avoid the publicity of their unfortunate condition.

THE LEGITIMATION ACT OF 1902.

In 1902 an Act was passed to legitimise children born before the marriage of their parents, provided that no legal impediment to the marriage existed at the time of birth. On registration in accordance with the provisions of the Legitimation Act, any child who comes within the scope of its intentions, born before or after the passing thereof, is deemed to be legitimised from birth by the post-natal union of its parents, and entitled to the status of offspring born in wedlock. Since the passing of the Act there have been 4,906 registrations. The number in each of the last ten years is shown in the following table.

Year.	Registrations.	Year.	Registrations.
1909	267	1914	393
1910	288	1915	416
1911	394	1916	420
1912	405	1917	390
1913	298	1918	447

PLURAL BIRTHS.

During the year 1918 there were 554 cases of plural births. The children thus born numbered 1,105 (exclusive of five still-births), and included 552 cases of twins (578 males and 521 females), and two cases of triplets (3

males and 3 females). Of these 5½ cases, 23 were classified as illegitimate. The number of children born at plural births formed 2·18 per cent. of the total births.

The following table shows the number of cases of twins, triplets, and quadruplets born in New South Wales during the last ten years, excluding those still born, and distinguishing legitimate and illegitimate.

Class of -	Legitimate.	Illegitimate.	Total.
Twins	5,176	242	5,418
Triplets	47	2	50
Quadruplets	1	-	1

The total number of confinements recorded during the ten years was 497,367; hence the rates per million confinements were:—10,835 cases of twins, 101 of triplets, and 2 of quadruplets, otherwise stated, there were 11 plural births in every 1,000 confinements.

NATURAL INCREASE.

The excess of births over deaths, or "natural increase" during 1918 was 31,801, the lowest since 1912. During 1918 the birth rate was lower and the death rate higher than in previous years.

The following table shows the natural increase of population during the ten years, 1909 to 1918, for the metropolis, for the remainder of the State, and for the whole of New South Wales.

Year.	NATURAL INCREASE					Increase per cent. of Population at end of previous Year.
	Metropolis.	Remainder of State.	Whole of State.		Total.	
			Males.	Females.		
1909	8,312	15,517	12,297	14,622	27,029	1·79
1910	9,809	15,503	14,084	15,248	29,332	1·94
1911	10,806	15,642	14,204	15,994	30,498	1·98
1912	12,123	20,545	15,526	17,551	33,167	1·95
1913	12,597	19,805	15,001	17,511	32,612	1·92
1914	13,219	21,020	14,423	19,460	34,024	1·90
1915	12,940	23,263	19,640	17,627	31,273	1·79
1916	12,790	19,521	15,114	12,167	22,281	1·72
1917	10,760	21,534	16,220	17,969	34,439	1·80
1918	11,664	23,196	15,084	16,775	31,860	1·65

On account of the more favourable death rates, the rate of natural increase has improved during the last twenty years.

Although male births are more numerous than those of females, the increase of population from the excess of births over deaths is greatly in favour of the latter. The male population certainly exceeds the female, but there is a correspondingly larger number of deaths among males. There is also a greater mortality among male than among female children, a cause from which alone the natural excess of male births is almost neutralised. During the ten years which closed with 1918, the number of females added to the community by excess of births over deaths exceeded the males by 17,330, or 11·5 per cent.

The rate of natural increase in New South Wales is not exceeded in any country outside Australia, as will be seen from the following table. The figures represent the birth and the death rates, and the difference between

them (the natural increase) per 1,000 of mean population in each country—for the Australian States and the Dominion of New Zealand for 1918, and for the majority of other countries for 1914.

Country.	Birth rate.	Death rate.	Natural Increase.	Country.	Birth rate.	Death rate.	Natural Increase.
Roumania ...	42.5	23.8	18.7	Hungary (1912) ...	36.2	25.3	11.0
Queensland ...	28.3	16.4	11.9	Norway ...	25.2	13.5	11.7
Jamzica ...	34.9	21.4	13.5	Finland (1913) ...	27.1	16.1	11.0
Tasmania ...	25.9	8.5	17.4	United States (1913) ...	24.9	14.0	10.9
Burma (1912) ...	39.0	21.1	17.9	Austria (1912) ...	21.2	20.2	10.8
New South Wales ...	29.6	9.9	19.7	Scotland ...	26.1	16.5	10.6
Netherlands ...	28.2	12.4	15.8	England and Wales ...	23.8	14.0	9.8
South Australia ...	25.8	10.9	14.9	Chile ...	27.0	17.8	9.2
Japan (1911) ...	34.1	20.4	13.7	Sweden ...	22.0	13.8	8.1
Western Australia ...	32.8	9.1	23.7	Switzerland (1913) ...	23.1	14.2	8.9
Prussia (1913) ...	28.2	14.9	13.3	Belgium (1912) ...	22.8	14.8	7.9
Italy ...	31.1	17.9	13.2	Spain ...	29.8	22.1	7.7
Denmark ...	25.6	12.6	13.0	Iceland ...	22.6	16.3	6.3
Victoria ...	22.2	10.7	11.5	Ceylon ...	26.1	22.2	3.9
New Zealand ...	28.4	14.8	13.6	France ...	18.0	19.6	-1.6

* Registration Area.

From the foregoing figures it may be seen readily that the countries with the highest birth-rate have not necessarily the highest rate of natural increase; the increase in population depends also upon the death-rate, which is influenced to a considerable extent by the deaths of the newly-born.

DEATHS.

The deaths during 1918 numbered 18,840 equal to a rate of 14.87 per 1,000 of the population which is slightly greater than that for 1917 but lower than any rate previously experienced. Of the total, 10,925 were males and 7,915 females, the rate for the former being 11.36 and for the latter 8.21 per 1,000 living of each of the sexes. The average annual number of deaths from 1870 with the rate per 1,000 of population in quinquennial periods, was as follows:

Period.	Average Annual Number of Deaths.			Deaths per 1,000 of Total Population.		
	Males.	Females.	Total.	Males.	Females.	Total.
1870-74	4,391	2,948	7,339	15.58	12.22	13.92
1875-79	6,199	4,360	10,559	17.99	15.10	16.57
1880-84	7,298	5,124	12,422	19.55	14.74	17.46
1885-89	8,461	6,043	14,504	21.45	13.36	14.49
1890-94	8,877	6,344	15,221	24.06	11.77	13.01
1895-99	9,002	6,514	15,516	23.11	10.77	12.04
1900-04	8,193	6,733	14,926	22.60	10.17	11.47
1905-09	8,076	6,583	14,659	21.92	9.04	10.33
1910-14	10,298	7,555	17,853	21.06	9.13	10.43
1915	11,457	8,153	19,610	21.92	9.89	10.26
1916	11,485	8,369	19,854	22.22	9.04	10.64
1917	10,459	7,618	18,077	21.08	7.93	9.29
1918	10,925	7,915	18,840	21.36	8.21	9.87

The death rate has fallen continuously for both sexes, but slightly more for males than for females. The death-rate for males is, however, about one-third higher than for females, the reason being that males are exposed

to more and greater risks than females, and that male infants are the more delicate. It will be noticed that the death-rate has declined markedly since the period 1885-89, coincidentally with the decline in the birth-rate. The falling birth-rate has influenced the death-rate, inasmuch as it has affected the age-constitution of the population by reducing the proportion living at the first five years, at which the mortality is high, and at the same time increasing the proportion living at ages from 5 upwards, at which the mortality is low.

A table of the death-rates per 1,000 for each of the Australian States, and for New Zealand, for 1918, and for a number of other countries, for 1914, is given herewith for purposes of comparison.

State.	1918.	Country.	1914.
New Zealand	14·84	Roumania	23·8
Victoria	10·70	Spain	22·1
Queensland	10·39	France	19·6
South Australia	9·97	Italy	18·7
<i>New South Wales</i>	9·87	Ireland	16·3
Western Australia	9·11	Scotland... ..	15·5
Tasmania	8·84	Prussia (1913)	14·9
		Switzerland (1913)	14·3
		England and Wales	14·0
		Sweden	13·8
		United States (Regis- tration area).	13·6
		Norway	13·5
		Denmark	12·6
		Netherlands	12·4

The comparatively favourable health conditions of Australasia will be manifest from an inspection of these rates. New South Wales occupied the fifth place in the list for 1918, with a rate of 9·87, as against the higher rates of New Zealand, Victoria, Queensland and South Australia; though the parent State does not compare quite so well with Western Australia and Tasmania. The death-rate in 1918 in New Zealand was abnormal, on account of an epidemic of influenza.

It might have been expected that the rates of European countries in any case would be higher than those of New South Wales, on account of the larger proportion of old persons in their populations.

DEATHS—METROPOLIS AND REMAINDER OF THE STATE.

It is not possible to show the exact difference between urban and rural mortality in New South Wales, but an approximate idea may be obtained from a comparison of the experience of the metropolis with that of the remainder of the State, which is, of course, not absolutely rural, as a few large towns are contained therein. Separating the State, however, into these two broad divisions, during the year 1918 the record of deaths for the metropolis was 7,862, and for the remainder of the State 10,978, equivalent respectively

to rates of 10·02 and 9·76 per 1,000 of the living. The average annual number of deaths and the rate per 1,000 in each of these divisions since 1880, in five-year periods, are given in the subjoined table.

Period.	Metropolis.		Remainder of the State.		New South Wales.	
	Average Number of Deaths.	Ratio per 1,000 Living.	Average Number of Deaths.	Ratio per 1,000 Living.	Average Number of Deaths.	Ratio per 1,000 Living.
1880-84	5,033	20·60	7,377	13·21	12,410	15·46
1885-89	6,181	19·47	8,323	12·18	14,504	14·49
1890-94	5,979	14·33	9,242	12·05	15,221	13·01
1895-99	5,634	12·30	9,882	11·86	15,516	12·01
1900-04	5,845	11·54	10,083	11·42	15,923	11·47
1905-09	5,979	10·53	9,680	10·21	15,359	10·33
1910-14	7,312	10·81	10,841	10·23	18,153	10·45
1915	8,189	10·81	11,421	10·29	19,610	10·50
1916	8,156	10·63	11,698	10·61	19,554	10·64
1917	7,518	9·75	10,451	9·47	17,969	9·59
1918	7,862	10·02	10,978	9·76	18,840	9·87

The death-rate has improved steadily both in the metropolis and in the remainder of the State, but notably so in the former, where it is now very little higher than in the latter, whereas thirty years ago it was 50 per cent. in advance. The improvement dates from the quinquennium beginning with the year 1890, and is coincident with the installation of the modern system of sewage and the enforcement of the provisions of the Dairies Supervision Act of 1886. The marked decline in the rates for each Division and for the State as a whole is evident from the fact that the metropolitan rate for the period 1885-9 was 19·5 per 1,000, and for the year 1918 it was 10·02, or a difference of 50 per cent.; for the same dates the rates for the remainder of the State were respectively 12·2 and 9·8, or a difference of 19 per cent.; and for the whole State, 14·5 and 9·9, or a difference of 32 per cent.

THE MORTALITY OF INFANTS AND YOUNG CHILDREN.

A further measure of the mortality rates in the metropolis and in the remainder of the State, which affords a most sensitive test, is obtained by a comparison of the death-rates of infants in each Division.

Children under 1 Year.

During the year 1918 the children who died before completing the first year of life numbered 3,000, equivalent to a rate of 59·2 per 1,000 births. This rate, is 16 per cent. below the average for the last decade, which included several years of exceptionally low infantile mortality. To the total the metropolis contributed 1,225 deaths, or 62·7 per 1,000 births, and the remainder of the State 1,775, or 56·9 per 1,000 births.

The following table shows the average annual number of deaths of children under 1 year, in the metropolis and in the remainder of the State, and the proportion per 1,000 births in quinquennial periods since the year 1880.

Period.	Metropolis.		Remainder of State.		New South Wales.	
	Deaths under 1.	Rate per 1,000 Births.	Deaths under 1.	Rate per 1,000 Births.	Deaths under 1.	Rate per 1,000 Births.
1880-84	1,707	174.0	1,955	94.9	3,663	120.4
1885-89	2,488	184.6	2,226	95.2	4,714	129.0
1890-94	1,908	128.8	2,471	95.8	4,379	110.7
1895-99	1,646	134.4	2,572	103.7	4,218	113.9
1900-04	1,434	111.2	2,399	98.9	3,833	101.7
1905-09	1,253	86.7	2,035	74.5	3,288	78.7
1910-14	1,437	75.9	2,211	71.1	3,648	72.7
1915	1,516	72.6	2,087	65.2	3,603	68.1
1916	1,428	68.5	2,105	67.4	3,533	67.8
1917	1,312	59.8	1,868	55.0	3,016	57.5
1918	1,226	62.7	1,725	56.9	2,951	56.2

The remarkable improvement in the infantile mortality rate in the metropolis is partly due to the measures adopted to combat preventable diseases by more rigid health laws, and by education. The Infectious Disease Supervision Act became law in 1881, and in 1896 the Public Health Act was passed, while in 1902 all acts relating to Public Health were consolidated in the Public Health Act, 1902. A scheme for the preservation of infant health was formulated by the Sydney Municipal Council in 1903, and instructional pamphlets were circulated for the guidance of mothers in the care and feeding of young children. In the following year trained women inspectors were appointed to visit mothers in the populous parts of the city and in the surrounding suburbs. Further efforts to reduce infantile mortality led to the establishment of Baby Clinics in Sydney and Newcastle in 1914, and subsequently in Broken Hill. The Notification of Births Act, 1910, enables the health authorities to obtain early knowledge of the birth of a child, and empowers them to bring infants under their supervision immediately after birth, when measures for the prevention of illness are most efficacious. Details regarding the Baby Clinics will be found in a later chapter.

The death rate is higher for male infants than for females, the rates in 1918 being 66.1 and 51.8 per 1,000 births respectively. The rates for each sex are shown in the following table in quinquennial periods since 1880.

Period	Males.		Females.	
	Deaths under 1.	Rate per 1,000 Births.	Deaths under 1.	Rate per 1,000 Births.
1880-84	1,002	177.9	1,071	112.5
1885-89	2,405	187.2	2,019	117.3
1890-94	2,413	119.7	1,966	102.3
1895-99	2,304	123.4	1,914	105.9
1900-04	2,077	108.4	1,738	94.0
1905-09	1,832	86.6	1,453	71.5
1910-14	2,037	79.2	1,611	65.8
1915	2,023	74.6	1,390	61.3
1916	1,968	73.0	1,367	51.5
1917	1,750	64.4	1,266	49.7
1918	1,719	66.1	1,293	51.8

The death-rate of female infants has improved more than the male rate, having declined from 112.5 per 1,000 births in 1880-84 to 51.8 in 1918, or by 53.9 per cent., while the male rate has decreased from 127.9 per 1,000 births to 66.1, or by 48.3 per cent.

During the period reviewed the excess of the male infantile deaths fluctuated from 16.4 per 1,000 births in the quinquennium 1890-94 to 14.2 in 1918. The excess is illustrated also in a later table which shows that out of 10,000 children of each sex born alive, 2,103 boys and 9,337 girls will survive the first year after birth.

Reference to the table on page 85 shows that the death-rate for male infants is higher than for female infants in regard to all the causes to which the majority of infantile deaths are attributed, i.e., premature birth, infantile debility, diarrhoea and enteritis.

Of the total number of deaths of infants under 1 year of age about one-third occur within a week of birth; at the end of the first month the proportion is over two-fifths; and at the end of three months, three-fifths. Approximately, one child in every 45 born dies within a week of birth. The following statement shows for 1918, in comparison with the average of the preceding quinquennium, the deaths per 1,000 births during each of the first four weeks after birth, and then for each successive month. The experience in the metropolis is distinguished from that in the remainder of the State, the sexes are taken together, and for the year 1918 the illegitimate children are distinguished from the legitimate for the State as a whole.

Age.	Metropolis.		Remainder of State.		New South Wales.			
	1915-17.	1918.	1915-17.	1918.	1918.		Total.	
					Legiti- mate.	Illegi- timate.		
Under 1 week	23.7	24.5	23.5	25.4	23.6	24.5	33.0	25.1
1 week	3.8	3.3	3.9	3.9	3.9	3.7	3.8	3.7
2 weeks	2.3	2.4	2.6	2.6	2.4	2.4	3.8	2.4
3	1.8	2.1	2.0	1.5	2.0	1.8	6.0	1.7
Total under 1 month	31.6	32.3	32.0	33.3	31.9	32.1	48.2	32.9
1 month	5.8	5.8	5.8	4.5	5.8	4.7	10.9	5.0
2 months	4.7	3.2	4.0	2.7	4.3	2.7	7.9	3.0
3	4.8	3.9	3.4	2.4	3.9	2.6	9.0	3.0
4	3.9	2.6	3.6	2.4	3.7	2.3	4.0	2.4
5	3.2	2.0	2.6	2.4	3.0	2.4	1.4	2.4
6	3.3	2.8	3.1	1.9	3.1	2.1	6.8	2.3
7	2.9	1.9	2.7	1.5	2.8	1.5	4.5	1.7
8	2.4	2.7	2.7	1.8	2.6	2.1	2.3	2.1
9	2.4	1.5	2.5	1.6	2.5	1.4	4.2	1.6
10	2.4	1.7	2.1	9	2.1	1.2	2.6	1.2
11	2.4	1.7	2.2	1.5	2.3	1.4	3.4	1.6
Total under 1 year ...	69.6	62.7	67.3	56.9	65.2	46.8	107.7	39.2

In the first week of life the mortality is six times as great as in the second, and in the second about twice as great as in the fourth. During the second month the mortality falls rapidly, and thereafter gradually. Comparing the mortality in the metropolis and in the remainder of the State, the usual experience is that at every stage of life more children die in the former. In 1918 the rate per 1,000 births was 62.7 in the metropolis, and 56.9 in the remainder of the State. During the previous quinquennial period the metropolitan rate was 4 per cent. higher than that for the remainder of the State.

The table shows a great waste of life among illegitimate children, the mortality under 1 year being 107.7 per 1,000, as compared with 56.5 among legitimate children. The largest proportional excess is not immediately after birth, but about three months later. During the first week the mortality of illegimitates exceeds that of legitimates by 43 per cent.; thereafter it increases until, in the third month, the excess is 246 per cent.; after this it drops irregularly, until in the eleventh month it amounts to 142 per cent.

The following statement furnishes a comparison of the rates of infantile mortality in the Australian States, in New Zealand, and in various other countries. The rates indicate the deaths under one year per 1,000 births.

State	1918.	Country.	1914.
New South Wales	62.7	Chile	298
Victoria	61.8	Ceylon	213
Tasmania	61.4	Rumania	187
Western Australia	57.1	Italy (1913)	137
Queensland	56.7	Finland (1913)	112
South Australia	51.3	Scotland	111
New Zealand	46.4	England and Wales	105
		Ontario, Canada	105
		*United States (1915)	100
		Denmark	99
		Netherlands	95
		Ireland	87

* Registration Area.

Of the rates shown in the foregoing table, that for New Zealand is the best; but the rates for Australasia generally are greatly superior to those prevailing in the other countries for which records are available.

Children under 5 Years.

There has been a great improvement in the death-rate of children under 5 years. At every period shown in the following table the metropolitan rate, however, was the higher, being in some cases over 50, and never below 7 per cent. in excess until 1917, when the excess was only 1.5 per cent.

The following table shows the mortality in each Division, in periods of five years since 1890, of children under 5 years of age.

Period.	Metropolis.		Remainder of State.		New South Wales.	
	Average Annual Number.	Rate per 1,000 Living.	Average Annual Number.	Rate per 1,000 Living.	Average Annual Number.	Rate per 1,000 Living.
1890-94	2,674	48·45	3,546	32·06	6,220	37·52
1895-99	2,206	40·77	3,487	30·97	5,693	34·15
1900-04	1,846	35·17	3,210	29·64	5,036	31·44
1905-09	1,612	27·61	2,723	23·39	4,335	24·80
1910-14	1,895	25·47	2,986	21·77	4,881	23·07
1915	2,187	24·60	2,977	19·95	5,164	21·69
1916	2,019	21·84	3,052	20·17	5,071	20·80
1917	1,576	16·73	2,499	16·49	4,075	16·58
1918	1,705	18·10	2,463	16·54	4,168	17·14

The improvement in the metropolis has been greater than in the remainder of the State, the rate having decreased since 1890 by 65 per cent. in the former, and in the latter by 49 per cent. Outside the metropolis the rate did not vary to any significant extent until 1904, when there was a marked decline, which has been continuous. Compared with the mortality rate of a quarter of a century ago, during the year 1918 there was a saving of 30 lives in every 1,000 children under 5 years of age in the metropolis, and of 16 in the remainder of the State.

The following table shows for 1918, and for the quinquennial period preceding, the death-rates of illegitimate children under one year and under five years of age, as compared with those of legitimate children of like ages.

Age.	Legitimate.		Illegitimate.		Total.	
	Deaths.	Rate per 1,000 Living.	Deaths.	Rate per 1,000 Living.	Deaths.	Rate per 1,000 Living.
Under 1 year—						
1913-17	16,053	64·24	1,921	144·49	17,974	68·30
1918	2,714	56·49	286	107·76	3,000	59·17
Under 5 years—						
1913-17	22,448	20·05	2,263	39·04	24,711	20·99
1918	3,730	15·61	438	41·28	4,168	17·14

The foregoing figures show the poor chance of survival afforded to the illegitimate as compared with that of the legitimate infant, since at each of the ages specified the death-rate of the former was twice that of the latter; and it is a fact of the utmost gravity that in the year 1918 of the children illegitimately born, one ninth died before completing the first year of existence.

CHILDREN SURVIVING AT THE AGE OF FIVE YEARS.

The tables just given show the death-rates of children under one and under 5. In the next statement will be found, out of 10,000 children born alive, of both sexes, the number living at each period up to five years of age.

The table, which is unadjusted, is based on the experience of the ten years 1906-15, and it appears that out of 10,000 boys born 1,039 die before reaching 5 years of age, and out of 10,000 girls 906 die. Of these, 249 boys and 199 girls die within the first week of birth, and 327 boys and 260 girls within the first month. At the end of the first year there will be 9,193 boys and 9,327 girls surviving.

NUMBER OF CHILDREN LIVING AT EACH AGE OUT OF 10,000 BORN ALIVE.

Age.	Boys.	Girls.	Age.	Boys.	Girls.
0 week	10,000	10,000	7 months	8,333	8,455
1 "	9,751	9,901	8 "	8,286	8,426
2 weeks	9,705	9,765	9 "	8,268	8,400
3 "	9,673	9,740	10 "	8,241	8,373
1 month	9,648	9,720	11 "	8,217	8,348
2 months	9,573	9,680	1 year	8,183	8,327
3 "	9,519	9,615	2 years	8,059	8,188
4 "	9,464	9,567	3 "	8,000	8,120
5 "	9,410	9,523	4 "	8,061	8,094
6 "	9,373	9,487			

THE INDEX OF MORTALITY.

In order to compare the death-rates of New South Wales with those of the other Commonwealth States on a uniform basis, allowances must be made for the age-constitution of the populations, and the death-rate (index of mortality) of each has been calculated on the basis that its population contained the same proportion at each of five age-groups (under 1, 1-19, 20-39, 40-59, and 60 and over) as was contained in the population of Australia as a whole at the census of 1911. Similarly, in obtaining the index of mortality of each capital city, the population of those ages of all the capital cities at the census of 1911 was taken as a basis.

The index of mortality during 1918 were as follow, the crude rates also being shown for purposes of comparison:—

State.	Index of Mortality.	Crude Death-rate.	City.	Index of Mortality.	Crude Death-rate.
Queensland	10·53	16·29	Hobart	13·70	14·58
Western Australia	10·42	9·11	Brisbane	12·09	17·94
Victoria	10·18	10·70	Melbourne	11·48	11·62
New South Wales	9·95	9·87	Adelaide	10·93	11·03
South Australia	9·89	9·97	Sydney	10·31	10·02
Tasmania	9·90	8·84	Perth	9·83	11·33

THE CAUSES OF DEATH.

The system of classification adopted in this most important section of vital statistics is that employed by the Registrar-General in England, which is in accordance with the International List of Causes of Death, based on the second decennial revision by the International Commission at Paris in 1909.

In the following table will be found the principal causes of death arranged in order of fatality, together with the average number of deaths from similar causes during the previous quinquennium, due allowance having been made for the increase in population.

Cause of Death.	Number, 1918.	Average Number, 1913-17.	Increase (or Decrease) in 1918.	Cause of Death.	Number, 1918.	Average Number, 1913-17.	Increase (or Decrease) in 1918.
			per cent.				per cent.
Organic Disease of the Heart	2,133	1,803	+ 18.30	Leucemia, Anemia, Chlorosis ..	198	173	+ 14.45
Endocarditis	110	103	+ 12.92	Appendicitis	151	148	+ 2.03
Cancer	1,610	1,453	+ 10.65	Insanity ..	143	163	- 13.19
Pneumonia	1,194	1,258	- 4.98	Whooping-cough ..	136	191	- 28.79
Scaldfy	1,139	1,269	- 10.24	Convulsions—	128	154	- 16.88
Tuberculosis—				Infants	106	137	- 8.02
Lungs	1,090	1,171	- 6.96	Cirrhosis of the Liver	106	109	- 14.66
Diarrhea and Enteritis (under 2)	429	1,197	- 47.33	Embolism, Thrombosis	117	210	- 34.25
" (over 2)	273	389	- 31.42	Typhoid Fever ..	166	148	- 29.05
Bright's Disease—				Meningitis ..	87	115	- 24.34
Acute and Chronic	883	1,002	- 11.87	Gastritis ..	84	90	- 6.67
Premature Birth	883	924	- 4.13	Epilepsy ..	82	98	- 11.82
Accidents	870	1,067	- 18.46	Acute Rheumatism	80	80	—
Hemorrhage, &c. of the Brain	790	765	+ 3.14	Cerebro-spinal Meningitis	79	102	- 23.49
Bronchitis	603	508	+ 8.65	Murder ..	60	53	- 6.66
Congenital Deformity	573	414	+ 10.14	Syphilis ..	43	71	- 39.43
Influenza ..	472	117	+ 217.93	Alcoholism—			
Puerperal Condition	267	313	- 14.60	Acute and Chronic	32	58	- 44.82
Diphtheria and Croup	229	293	- 18.47	Scarlet Fever ..	17	57	- 70.17
Diabetes	229	200	+ 14.90	Other Diseases ..	2,729	2,731	+ 0.29
Congenital Malformation	221	201	+ 9.95				
Intestinal Obstruction	205	174	+ 17.82				
Suicide ..	201	215	- 23.25	All Causes ..	19,840	19,739	+ 4.85

The number of deaths in 1918 was 619 (or 4.7 per cent.) less than shown by the experience of the previous five years, and of the ten numerically highest fatal causes, only diseases of the heart and cancer showed marked increases in the average number for the previous quinquennium.

TYPHOID FEVER.

The number of deaths from typhoid fever during the year 1918 was 117, equivalent to 0.61 per 10,000 living. The number was 44 per cent. less than the average for the preceding five years. This is essentially a preventable disease, and does not obtain a foothold where a proper system of sanitation has been installed and ordinary health precautions have been taken; a great improvement has been attained during the three past decades.

The number of deaths from typhoid fever, and their correlative rates since 1884, are stated below.

Period.	Males.		Females.		Total.	
	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.
1884-88	1,356	5.32	1,115	5.13	2,471	5.13
1889-93	950	5.11	714	2.74	1,673	2.94
1894-98	1,107	3.97	721	2.46	1,828	2.69
1899-1903	1,054	2.93	733	2.75	1,787	2.61
1904-08	748	1.93	507	1.42	1,255	1.69
1909-13	773	1.76	464	1.56	1,237	1.47
1914	709	1.74	81	0.52	790	1.33
1915	541	1.47	78	0.86	619	1.17
1916	113	1.04	94	1.02	208	1.12
1917	71	0.77	33	0.35	104	0.53
1918	23	0.77	44	0.46	117	0.61

The decrease between 1888 and 1893 was very marked, and may be traced to the operation of the provisions of the Dairies Supervision Act, which became law in 1889. From that year until 1903 the rate was fairly even, and did not greatly decline, but during the next quinquennium there was considerable decrease in both the number and the rate of deaths from typhoid.

The following statement shows the rate for the metropolis and for the remainder of the State during the last twenty-four years. Owing to a superior system of sewage, and to greater attention to sanitary inspection, the rate in the metropolis has almost invariably been lower than that of the remainder of the State, but was higher during 1918.

Period.	Metropolis.		Remainder of State.	
	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.
1894-98	307	2.28	1,211	2.54
1899-1903	428	1.72	1,381	2.17
1904-08	234	1.91	923	1.97
1909-13	303	1.12	874	1.02
1914	86	1.05	170	1.33
1915	83	1.09	136	1.23
1916	71	0.95	136	1.23
1917	33	0.43	74	0.67
1918	54	0.79	62	0.55

The greater number of deaths from typhoid occur in the summer and autumn. In 1918 there were 44 deaths during the summer months of December, January, and February; and 30 during the autumn months of March, April, and May.

SMALLPOX.

After a considerable period of immunity, smallpox, of the mildest type, became epidemic in Sydney during the year 1913. In the absence of severe symptoms, the disease escaped detection until it had become distributed throughout the metropolitan area, and thence, in a few instances, to other parts of the State. The total number of cases notified during the outbreak, was 2,398, of which 115 occurred in 1917, the last case being notified in October of that year. Five patients died, but in each case death was probably due to some other cause.

Vaccination.

Vaccination is not compulsory in New South Wales, and a very small proportion of the people submit voluntarily to the operation unless an

epidemic threatens. This cavalier attitude towards the dread scourge of smallpox may be attributed to a general feeling of security from infection on account of the distance from those countries in which the disease is more or less endemic. The duration of voyages from such places has been considerably diminished, and consequently the risk of sufferers from smallpox entering the State or the Commonwealth undetected by the inspectors of the Quarantine Department has been greatly increased.

During the year 1912, in consequence of an outbreak of smallpox (practically restricted to Sydney), a popular demand for vaccination became insistent, a number of depôts were opened, and about 425,000 persons were vaccinated by Government medical officers and by private medical practitioners.

MEASLES.

During the year 1918 the deaths due to measles amounted to 76, a number equal to a rate of 0.40 per 10,000 living. The rate for males was 0.47 and for females 0.33. The following statement shows the deaths from this cause, and the rate per 10,000 living, for each sex, arranged in quinquennial periods since 1884.

Period.	Males.		Females.		Total.	
	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.
1884-8	166	0.63	165	0.76	331	0.69
1889-93	393	1.28	369	1.41	762	1.34
1894-98	338	1.00	324	1.09	662	1.04
1899-1903	160	0.44	219	0.67	379	0.55
1904-08	82	0.21	107	0.30	189	0.25
1909-13	309	0.71	267	0.67	576	0.69
1914	5	0.05	14	0.16	19	0.10
1915	194	2.02	130	1.43	324	1.73
1916	44	0.47	29	0.31	73	0.39
1917	14	0.15	16	0.17	30	0.16
1918	44	0.47	32	0.33	76	0.40

The rate in 1918 shows a decrease of 63 per cent. as compared with that of the preceding quinquennium. The high rates during the second and third quinquennial periods, and in the year 1915, were due to severe outbreaks in 1893, 1898, and 1915.

Measles is a disease chiefly affecting children, and is periodically epidemic. It was epidemic in 1898-9, when 719 deaths were recorded; in 1912, when there were 371 fatal cases; and in 1915, when there were 324. Of the number first cited, 233 were deaths of children under 5 years of age, and 54 were those of children under 1 year of age. During the year 1918 deaths from measles of children under 1 year of age numbered 16, and bore the proportion of 0.31 per 1,000 births for New South Wales, the proportions for the metropolis and the remainder of the State being respectively 0.40 and 0.03. In the same year, deaths from the same cause of children under 5 years of age numbered 61, and bore the proportion of 0.25 per 1,000 children living of the same age-group for New South Wales. The proportions for the metropolis and the remainder of the State were respectively 0.40 and 0.15.

SCARLET FEVER.

In 1918, the number of deaths from this disease was 17, equivalent to a rate of 0.09 per 10,000 of the population. The number of deaths in the metropolis was 11, and in the remainder of the State 6—showing respectively rates of 0.14 and 0.05 per 10,000. The rate for 1918 of deaths from this

cause was 70 per cent. below the rate for the preceding quinquennium. Since 1884 the deaths from scarlet fever and the rates for each sex have been as follow:—

Period.	Males.		Females.		Total.	
	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.
1884-88	287	1.06	342	1.07	629	1.30
1889-93	155	0.60	226	0.90	421	0.74
1894-98	102	0.48	218	0.73	380	0.60
1899-1903	84	0.23	114	0.25	198	0.29
1904-08	88	0.23	81	0.28	179	0.24
1909-13	41	0.08	37	0.14	78	0.12
1914	5	0.05	16	0.15	21	0.11
1915	40	0.42	37	0.63	87	0.52
1916	43	0.46	65	0.70	108	0.58
1917	14	0.15	16	0.17	30	0.16
1918	10	0.11	7	0.07	17	0.09

Like measles, scarlet fever is an epidemic disease which mainly affects children, the rate generally being somewhat higher for females than for males. During 1918 it caused the deaths of 8 children under the age of 5 years, 2 of whom were females. Though not nearly so fatal as formerly, its sporadic recrudescence is stimulative of constant vigilance on the part of the authorities responsible for the health of the State. The death-rate from this cause of mortality has fluctuated since the years 1893 and 1894, when it was very heavy, ranging from 0.06 in 1912 to 0.63 in 1896.

WHOOPIING-COUGH.

Whooping-cough is another disease which mainly affects children, and to which, like scarlet fever, females are more susceptible than males. During the year 1918 the deaths from this cause numbered 136, of which 66 were of boys and 70 of girls. Of the total number 74 were infants and of the remainder all but 2 were under 5 years of age. The rate was 0.71 per 10,000 living, or 29 per cent. below the average of the preceding quinquennium. The deaths and rates for each sex since 1884 are given below.

Period.	Males.		Females.		Total.	
	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.
1884-88	327	1.24	472	2.17	799	1.46
1889-93	405	1.61	666	2.66	1,161	2.04
1894-98	343	1.01	502	1.69	845	1.33
1899-1903	573	1.59	796	2.23	1,369	1.90
1904-08	369	0.95	445	1.25	814	1.10
1909-13	377	0.86	436	1.09	813	0.97
1914	67	0.69	88	1.00	155	0.84
1915	31	0.32	32	0.35	63	0.34
1916	86	0.91	104	1.12	190	1.02
1917	85	0.92	88	0.93	173	0.92
1918	66	0.70	70	0.73	136	0.71

Whooping-cough may justly be regarded as a permanent menace and a constantly recurring ailment of infancy and childhood, for the table shows only spasms of declension, followed by increases in the death-rate, which is maintained by epidemic outbreaks, one such occurring in 1907, when 594 cases proved fatal, and the rate was the highest since 1878. An examination of the table on page 85 showing the seasonal prevalence of diseases indicates that whooping-cough is most fatal during the months of October, November, December, and January.

DIPHTHERIA AND CROUP.

Diphtheria, under which heading membranous croup is included, was the cause of 2.4 deaths in 1918, while croup, so defined, caused 5. The rate for the total (239) was 1.25 per 10,000 living, or 18 per cent. below the rate for the preceding quinquennium. Metropolitan deaths from these diseases numbered 97, and those in the remainder of the State 142, the respective corresponding rates per 10,000 living in each division being 1.21 and 1.26. The following table shows the number of deaths and the rates in quinquennial periods since 1884.

Period	Males		Females		Total	
	Deaths	Rate per 10,000	Deaths	Rate per 10,000	Deaths	Rate per 10,000
1884-88	1,069	4.04	930	4.51	2,049	4.25
1889-94	1,433	4.65	1,398	5.36	2,872	4.98
1894-98	712	2.10	710	2.58	1,423	2.84
1899-1903	310	0.80	299	0.92	609	0.89
1904-08	387	0.95	338	0.95	703	0.97
1909-13	601	1.38	640	1.59	1,244	1.48
1914	121	1.24	139	1.57	259	1.39
1915	139	1.46	133	1.47	272	1.47
1916	163	1.73	139	1.68	321	1.73
1917	194	1.84	120	1.33	250	1.33
1918	112	1.19	127	1.32	239	1.25

In the early years the rate was high, and showed little improvement until 1893, since which year it has declined markedly; so much so, that in 1909 it was less than one-fourth of the rate eight years before. During the next quinquennium it tended upwards, the rate for 1913 being the highest for fourteen years. The experience of the decennial period 1909-1918 shows the disease to be most fatal during the months of April, May, June, and July. Ninety-two per cent. of the persons who died from diphtheria during 1918 were under 10, and about 70 per cent. were under 5 years of age.

INFLUENZA.

During 1918, the deaths from influenza of 218 males and 154 females were recorded, the rates per 10,000 living of each sex being 2.31 and 1.60 respectively. The total deaths were 372, equivalent to a rate of 1.95 per 10,000 living. In the metropolis there were 134 deaths, the rate being 1.71, while in the remainder of the State there were 238 deaths with an equivalent rate of 2.12. Of the total deaths 68 per cent. occurred among adults over 54 years of age. The total includes the deaths of 43 persons in Quarantine who arrived in

New South Wales by sea during the year. This disease was little known, and few deaths were recorded as being caused by its agency, prior to 1891; but in that year it made its appearance in a severely epidemic form, and it has since been continuously more or less prevalent. About half the deaths from influenza usually occur in the four months extending from July to October.

TUBERCULOUS DISEASES

Of the total deaths in New South Wales during the year 1918 the number ascribed to the several classified forms of tuberculous disease was 1,269, or 6·7 per cent. of the actual bill of mortality for the State, and equal to 6·65 per 10,000 living—a rate of 6 per cent. below the average for the preceding quinquennium.

Tuberculosis of the Lungs.

Tuberculosis of the lungs, or phthisis, was the cause of 1,093 deaths, or 85 per cent. of the number due to tuberculosis during the year 1918, and it stands fifth in the order of the fatal diseases of the State. The general mortality rate per 10,000 living was 5·72, the male rate being 6·89, and the female rate, 4·53. For the decade 1876-85, the rate increased from 9·30 in the second to 11·63 in the last year of the series; but in 1886 a decline, slightly interrupted during individual years, set in, and in 1917 the rate was the lowest on record. In 1918 the men rose to 5·72 which, however, was less than 5·84, the rate for the previous quinquennium. The improvement in the death-rate of the victims of phthisis may be ascribed to increased stringency in the admission of immigrants and visitors; to the application under official supervision of regulations minimising the dangers of phthisic infection attending certain industries; and to the extension of the precautionary and curative methods which have been introduced as results of the modern school of research and experiment.

The following table shows the deaths from tuberculosis of the lungs and the rates for each sex since 1884.

Period	Males		Females		Total	
	Deaths	Rate per 10,000	Deaths	Rate per 10,000	Deaths	Rate per 10,000
1884-85	3,132	11·83	2,022	9·30	5,154	10·69
1886-93	3,269	10·61	1,925	7·28	5,194	9·15
1894-98	3,191	9·43	1,983	6·68	5,174	8·15
1899-1908	3,322	9·24	2,304	7·08	5,626	8·21
1904-08	2,985	7·72	2,184	6·13	5,169	6·96
1909-13	3,303	7·29	2,281	5·68	5,484	6·92
1914	752	7·75	428	4·83	1,179	6·36
1915	665	6·92	457	5·04	1,122	6·01
1916	675	7·18	482	5·20	1,157	6·20
1917	631	6·80	386	4·08	1,017	5·43
1918	650	6·83	443	4·59	1,093	5·72

The decrease in the number of deaths from phthisis and other forms of tuberculosis may to a large extent be ascribed to the effect of the Acts relating to the supervision of dairies (1886), of diseased animals and meat (1892), the maintenance of public health (1896), and the inspection of foods sold for human consumption (1908). The Board of Health was empowered thereby to supervise dairies and dairy products, and to prohibit the sale of tuberculous meat. The powers conferred by the Pure Food Act of 1908 made

the finding of a diseased cow in a dairy herd *proves* *in* evidence that her milk had been sold for food, and provided for prosecution for selling diseased milk.

The following table shows the deaths and the rates of phthisis mortality for the metropolis and the remainder of the State. In the quinquennial period 1894-98 the rate for the former was 47 per cent. higher than that for the latter division; but since that period the extra-metropolitan rate has fluctuated but little, while owing to the progressive establishment of hospitals for the treatment of consumptive patients that of the metropolis itself has markedly improved, the decline amounting to 52 per cent.

Period.	Metropolis.		Remainder of State.	
	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.
1894-98	2,902	10.26	2,872	6.90
1899-1903	2,480	10.09	2,135	7.18
1904-08	2,184	7.80	2,985	6.40
1909-1913	2,171	6.70	3,333	6.45
1914	439	5.63	746	6.73
1915	403	5.20	721	6.40
1916	423	5.54	751	6.70
1917	360	4.70	651	6.90
1918	351	4.89	709	6.31

Pulmonary tuberculosis is a notifiable disease within the City of Sydney, in the area controlled by the Hunter District Water Supply and Sewerage Board, and in the Katoomba Municipality and Blue Mountain Shire. The compulsory observance of health regulations, the ventilation of business and residential buildings and places of amusement, the destruction in recent years of very many unhealthy tenements, the abolition of congested areas, the re-alignment of streets on a more generous scale, and the creation of broad new thoroughfares, have resulted in the disappearance of a number of those urban conditions favourable to the culture of a disease like phthisis.

A comparison of death-rates from phthisis in various countries is given below. The rates are stated per 1,000 of the total population, and do not take account either of age or sex, which are material factors. This omission makes the comparison more favourable to New South Wales and to other Australian States, because the proportion of aged persons in the Commonwealth is smaller than in the countries of the Old World. There is possibly also a variation in the methods of classification of deaths in the various countries cited.

Country.	Death-rate per 1,000 of Total Population.		Year.	Death-rate per 1,000 of Total Population.	
	1914.	1918.		1914.	1918.
Ontario (Canada), 1917	0.56		Tasmania	0.45	
Scotland	1.05		Queensland	0.49	
Italy (1913)	1.05		New Zealand (1911)	0.54	
Netherlands (1913)	1.10		New South Wales	0.37	
England and Wales	1.20		Victoria	0.66	
United States (Registration areas)			South Australia	0.72	
1914	4.29		Western Australia	0.78	
Ireland (1914)	1.93				

New South Wales, which stands in a mid-position with regard to the States of the Commonwealth, shares with them the advantage of showing a rate lower than that of any of the other countries given.

Tuberculosis of Meninges.

During the year 1918 tuberculosis of meninges caused 72 deaths, which is equal to a rate of 0.38 per 10,000 living. Of the total number 41 were males; the rates for males and females respectively being 0.43 and 0.32 per 10,000 living of each sex. Nearly 65 per cent. of the deaths occurred in the metropolis. Most of the victims were children, 54 per cent. being under the age of 5 years.

Abdominal Tuberculosis.

Included under this heading are deaths due to *tuberculosis mesenterica*, and in 1918 the number recorded was 40, of which 22 were those of females. The rate shown was 0.21 per 10,000 living. The disease is confined chiefly to children, and of those who died during the year, 9, or 23 per cent., were under 5 years of age. There were 35 deaths in 1915, and of these 13, or 37 per cent., were of children under 5 years of age; of 33 deaths in 1916, those of children under 5 numbered 11, or 33 per cent., and of 40 deaths in 1917, those of children under 5 numbered 12, or 30 per cent. Of the total deaths during 1918, 19 occurred in the metropolis and 21 in the remainder of the State, the rates per 10,000 living being 0.24 and 0.19 respectively. The death-rate for the whole State of children under 5 years of age was 0.04 per 1,000 living.

Other Tuberculous Diseases.

To tuberculous diseases other than those above specified were due 64 deaths, equivalent to a rate of 0.34 per 10,000 living.

CANCER.

In 1918 the deaths from cancer numbered 1,610, equal to a rate of 8.43 per 10,000 living, and 10.6 per cent. above the average of the quinquennial period preceding. The total included 881 males and 729 females, the rates being 9.32 and 7.56 per 10,000 living of each sex respectively. The rate for the previous five years was 7.6 which was considerably lower than that experienced during 1918.

Classified according to the parts of the body affected and arranged in order of fatality, cancer caused the following deaths:—Stomach and liver, 626; peritoneum, intestines, and rectum, 198; mouth, 134; and other organs 652.

The following table shows the deaths and rates per 10,000 living of each sex since 1884.

Period.	Males.		Females.		Total.	
	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.
1884-88	859	3.25	732	3.37	1,591	3.30
1889-93	1,262	4.10	1,038	3.98	2,300	4.04
1894-98	1,719	5.09	1,387	4.68	3,106	4.89
1899-1903	2,295	6.38	1,877	5.77	4,172	6.09
1904-08	2,671	6.91	2,418	6.78	5,089	6.85
1909-13	3,362	7.66	2,860	7.12	6,222	7.40
1914	732	7.54	658	7.46	1,390	7.50
1915	720	7.49	665	7.33	1,385	7.41
1916	779	8.29	689	7.44	1,468	7.87
1917	774	8.35	717	7.57	1,491	7.95
1918	881	9.32	729	7.56	1,610	8.43

In New South Wales the male rate is usually the higher, which is contrary to the experience of the United Kingdom.

The ages of the 1,610 persons who died from cancer during 1918 ranged from 1 to 100 years, but the disease is essentially one of advanced age, 93 per cent. being 35 years and over.

Cancer is probably the most feared of all diseases, inasmuch as no specific remedy is known, and in all countries for which records are kept the death-rate is increasing.

In the following table the rates, based on the whole population, are given for certain countries. The comparison is uncorrected for age-incidence, and is therefore somewhat crude, but it apparently favours the Australian States.

Country.	Death-rate per 1,000 of Total Population.	State.	Death-rate per 1,000 of Total Population.
	1914.		1918.
Jamaica	0.18	Victoria	0.95
Spain	0.56	New Zealand (1917) ...	0.87
Italy (1913)	0.67	South Australia	0.85
United States (Registra- tion Area)	0.79	New South Wales	0.84
Prussia (1913)	0.83	Queensland	0.84
Ireland	0.87	Tasmania	0.71
Norway (1913)	0.97	Western Australia ...	0.71
England and Wales ...	1.07		
Netherlands	1.07		
Scotland	1.13		
Switzerland (1913) ...	1.27		

DIABETES.

The deaths due to diabetes in 1918 numbered 229, equal to a rate of 1.20 per 10,000 living, which is above the average for the preceding quinquennium. The rate for males was 0.99 and for females 1.40 per 10,000 living of each sex. Most of the deaths occurred after middle life, 186 being those of persons over 45 years of age.

MENINGITIS.

The diseases included under the above heading, encephalitis, simple meningitis, and cerebro-spinal meningitis, caused 185 deaths during 1918, the corresponding rate being 0.97 per 10,000 living. Of this number 116 were males and 69 females, equivalent to rates per 10,000 living of each sex of 1.23 and 0.72 respectively. The deaths in the metropolis and country were 74 and 111, with corresponding rates, per 10,000 living, of 0.94 and 0.99. The rate for 1918 was lower than that of the previous five years.

The disease principally affects children; 90 or 49 per cent. of those who died during 1918 were under 5 years of age.

The deaths caused by cerebro-spinal meningitis during 1918 numbered 80.

HÆMORRHAGE OF THE BRAIN.

To cerebral hæmorrhage and apoplexy, during the year 1918, were due 647 deaths, of which 316 were those of males and 301 those of females. The rate was 3.39 per 10,000 living, or 3.66 for males and 3.12 for females.

The following table shows the number of deaths and the rates for both sexes from the diseases of cerebral hæmorrhage and apoplexy in quinquennial periods since 1884.

Period.	Males.		Females.		Total.	
	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.
1884-88	778	2·97	467	2·15	1,245	2·58
1889-93	796	2·58	618	2·37	1,414	2·45
1894-98	843	2·79	719	2·39	1,562	2·60
1899-1903	1,050	2·92	788	2·42	1,838	2·68
1904-08	1,308	3·31	1,039	2·91	2,347	3·15
1909-13	1,027	3·71	1,439	3·53	3,066	3·65
1914	343	3·55	297	3·37	642	3·46
1915	343	3·57	296	2·96	611	3·27
1916	339	3·61	291	3·14	630	3·39
1917	320	3·45	274	2·89	594	3·17
1918	346	3·66	301	3·12	647	3·39

CONVULSIONS OF CHILDREN.

Convulsions of children (under 5 years of age) caused 128 deaths during 1918, or 0·67 per 10,000 living at all ages, which is 17 per cent. below the average for the previous quinquennium.

Appended is a table showing the deaths and the rates for both sexes for every fifth year since 1875.

Year.	Males.		Females.		Total.	
	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.
1875	297	9·34	205	7·69	502	8·59
1880	388	9·75	297	8·98	685	9·40
1885	428	8·38	392	9·41	820	8·84
1890	328	5·47	274	5·45	602	5·46
1895	280	4·19	243	4·17	523	4·18
1900	203	2·84	168	2·63	371	2·74
1905	119	1·57	92	1·32	211	1·43
1910	103	1·23	71	0·91	174	1·08
1915	91	0·95	67	0·74	158	0·85
1916	90	1·02	65	0·79	161	0·86
1917	63	0·68	49	0·59	112	0·60
1918	75	0·79	53	0·55	128	0·67

This disease is essentially infantile, being limited to children under 5 years of age, and the rates would therefore be better stated proportionately to that age period. On this basis the death-rate was 0·53 per 1,000 living as compared with 0·64 of the previous quinquennium. Of the total deaths during 1918, 161 occurred during the first year of life, the equivalent rate being 1·99 per 1,000 births. The deaths of males were more numerous than of the females, the numbers during the first year of life being 60 and 41 respectively,

and for all children under 5 years of age 75 males and 53 females. The rate for the metropolis was considerably lower than that for the remainder of the State. The continuous decline in this cause of infantile mortality is indicative of increasingly definite and exhaustive diagnoses of the diseases of children.

INSANITY.

Insanity is classed as a distinct disease of the nervous system, but of the total number of deaths of insane persons in 1918 only 143 appeared in the tables as due to that cause (which included general paralysis of the insane), the remainder being assigned to the immediately determining factor in the patient's particular case.

The death-rate per 10,000 living, of persons dying from insanity, including general paralysis of the insane, was 1.10 for males and 0.80 for females.

Practically all the persons in New South Wales coming within this classification are under treatment in the various mental hospitals. At the end of 1918 there were 7,851 persons under official control and receiving treatment—a proportion per 1,000 of the population of 4.1 or slightly in advance of the average for the preceding quinquennium, which was 3.8.

The percentage of deaths of insane persons in New South Wales is comparatively light. The following table has been computed on the basis of the average number of patients resident in mental hospitals.

Period.	Males.		Females.		Total.	
	Deaths in Hospitals for Insane.	Proportion of Average Number Resident.	Deaths in Hospitals for Insane.	Proportion of Average Number Resident.	Deaths in Hospitals for Insane.	Proportion of Average Number Resident.
		per cent.		per cent.		per cent.
1894-98	782	6.86	366	5.18	1,148	6.21
1899-1903	1,021	7.77	465	5.54	1,486	6.91
1904-1908	1,250	8.24	613	6.00	1,863	7.35
1909-1913	1,540	8.56	741	6.24	2,281	7.64
1914	301	7.72	168	6.44	469	7.21
1915	310	7.83	179	6.27	489	7.30
1916	306	9.70	214	7.92	520	8.94
1917	363	8.82	171	6.15	534	7.74
1918	369	8.92	182	6.33	551	7.80

DISEASES OF THE HEART.

Diseases of the heart were the cause of 2,326 deaths during 1918, showing a rate of 12.18 per 10,000 living, which was 18 per cent. above the average for the preceding five years. Of the total deaths 1,347 were of males and 979 of females, the corresponding rates per 10,000 living of each sex being 14.25 and 10.15. There was little difference between the rates experienced in the metropolis and in the remainder of the State.

The ages of persons who died during 1918 ranged up to 100 years, and 84 per cent. of those who succumbed were over 45 years of age.

The deaths and the death-rates of each sex since 1884 are shown below :—

Period.	Males.		Females.		Total.	
	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.
1884-88	2,149	8·12	1,390	6·39	3,539	7·34
1889-93	2,250	7·30	1,357	5·20	3,607	6·34
1894-98	2,434	7·19	1,478	4·98	3,912	6·16
1899-1903	2,917	8·11	1,932	5·94	4,849	7·08
1904-1908	3,791	9·81	2,727	7·65	6,518	8·77
1909-1913	5,054	11·51	3,633	9·05	8,687	10·33
1914	988	10·18	682	7·73	1,670	9·01
1915	1,041	10·83	783	8·63	1,824	9·76
1916	1,238	13·17	856	9·24	2,094	11·22
1917	1,336	14·41	868	9·16	2,204	11·76
1918	1,347	14·25	979	10·15	2,326	12·18

The classified causes of the total number of deaths include pericarditis, endocarditis, organic diseases of the heart, and angina pectoris. The apparent increase in mortality due to diseases of the heart is probably the result of more specialised biological knowledge, and of the greater attention given to pathological diagnoses. Many deaths formerly recorded as being caused by senile decay would now doubtlessly be assigned to some cardiac trouble.

The rate for the two years 1911 and 1912 was 10·82 per 10,000 persons living. It declined to 9·77 for 1913, and to 9·01 for 1914; and it increased to 9·76 for 1915, to 11·22 for 1916, to 11·76 for 1917, and to 12·18 for 1918.

BRONCHITIS.

Bronchitis caused 603 deaths during 1918, equal to a rate of 3·16 per 10,000 living. Of the total 306 were males and 297 females, the corresponding rates per 10,000 of each sex being 3·24 and 3·08. The rate for the State was 8·5 per cent. higher than that experienced during the previous five years. Deaths in the metropolis numbered 221 while 382 succumbed in the remainder of the State. The corresponding rates were 2·82 and 3·40 per 10,000 living. Of the total deaths 221 were caused by acute bronchitis, the remainder being due to the disease in its chronic form. Of those persons who died of acute bronchitis 50 per cent. were under 5 years of age, while 95 per cent. of those who succumbed to chronic bronchitis were over 55 years of age. Experience shows the disease to be most prevalent during the months of June, July, August, and September.

PNEUMONIA.

Pneumonia, including broncho-pneumonia was the cause of 1,194 deaths during 1918, the equivalent rate per 10,000 living being 6·25 which was below

the average for the preceding quinquennium. Of the total, 727 were males and 467 females. The male and female rates per 10,000 living were 7.69 and 4.84 respectively. The deaths in the metropolis numbered 518 and those in the remainder of the State, 676. The rate in the metropolis was 9.8 per cent. higher than that in the country. An analysis of the deaths according to age shows that pneumonia is most destructive in its attacks on young people and adults in the decline of life. Of the persons who died from pneumonia during 1918, 36 per cent. were under 5 years of age and 39 per cent. over 50 years of age. The following table gives deaths and rates, according to sex, since the year 1884.

Period.	Males.		Females.		Total.	
	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.
1884-88	2,032	7.68	1,301	5.98	3,333	6.91
1889-93	2,158	7.00	1,373	5.26	3,531	6.21
1894-98	2,514	7.43	1,528	5.15	4,042	6.37
1899-1903	3,191	8.87	2,000	6.15	5,191	7.58
1904-1908	2,816	7.28	1,824	5.12	4,640	6.24
1909-1913	2,983	6.79	1,931	4.81	4,914	5.85
1914	640	6.59	444	5.03	1,084	5.85
1915	896	9.32	527	5.81	1,423	7.62
1916	864	9.19	553	5.97	1,417	7.59
1917	652	7.03	411	4.34	1,063	5.67
1918	727	7.69	467	4.84	1,194	6.25

The greatest mortality from pneumonia occurs in the cold weather, and in 1918 there were from this cause 743 deaths, or 63 per cent. of the total number in the four months ranging from June to September.

There has been little reduction in the mortality for some years. There was a drop after 1888, but the rate subsequently increased, with a few fluctuations, to the highest point on record, 9.73 per 10,000 living in 1902. The general rate since the year cited has been much lower, that for 1918, being 36 per cent. below.

DISEASES OF THE DIGESTIVE SYSTEM.

Diseases of the digestive system accounted for the deaths of 965 males and 971 females during 1918, the respective rates per 10,000 living being 10.21 and 8.20. The rate corresponding to the total deaths in the State was 9.20 per 10,000 living and was 29 per cent. below that experienced during the previous five years. Deaths resulting from diseases of the digestive system were caused in the main by diarrhœa and enteritis, with cirrhosis of the liver, hernia, and intestinal obstruction, and appendicitis typhiti next in order of fatality.

DIARRHŒA AND ENTERITIS.

In 1918 these two diseases were the cause of 903 deaths, or 4.73 per 10,000 living, the rates for males being 5.37 and for females 4.10. The general

rate was 42 per cent. below the average for the preceding quinquennium. The following table gives the deaths and the rates of males and females since 1884.

Period.	Males		Females		Total.	
	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.
1884-88	3,412	12·89	3,048	14·02	6,460	13·40
1889-93	3,451	11·90	2,851	10·92	6,302	11·07
1894-98	4,947	11·94	2,638	12·28	7,585	12·09
1899-1903	4,422	10·29	3,901	11·99	8,323	12·13
1904-1908	3,714	9·61	3,000	9·41	6,714	9·03
1909-1913	4,237	9·90	3,471	9·65	7,708	9·21
1914	891	9·18	756	9·34	1,647	9·99
1915	887	9·23	753	9·10	1,640	9·68
1916	759	8·07	639	8·30	1,398	7·49
1917	677	6·22	432	4·71	1,109	5·98
1918	169	1·37	305	4·16	474	4·73

There was a considerable drop in the rate after 1888, due probably to the beneficial operations of the Diseases Supervision Act. During the next fifteen years there was a gradual increase, followed by a marked improvement in 1904, an improvement which has been consistently maintained.

According to the classification, deaths from these diseases are divided into two groups, one including children under 2 years of age, and the other all persons 2 years of age and over. In the first group there were 628, or 70 per cent. of the total number of mortality cases, and in the second 275.

Of the total deaths from diarrhoea and enteritis 427, or 47 per cent., occurred in the three summer months of January, February, and December; and 123, or 21 per cent., in the autumn months of March, April, and May. As a rule, about 50 per cent. of the deaths occur in the summer quarter of the year.

APPENDICITIS.

To this cause 151 deaths were ascribed in 1918, the rate being 0·79 per 10,000 living, which is slightly higher than the average of the preceding quinquennium. Appendicitis is much more fatal to males than to females, the rate for the former in 1918 being 0·94, and for the latter 0·54 per 10,000 living.

CIRRHOSIS OF THE LIVER.

In 1918 the deaths from cirrhosis of the liver numbered 126, the rate being 0·65 per 10,000 living—8 per cent. below the average for the previous quinquennial period. This disease is more prevalent among males than females—the rate for the former in 1918 being 0·88, and for the latter 0·45 per 10,000 living in each sex.

BRIGHT'S DISEASE.

During 1918 there were 1,192 deaths due to diseases of the genito-urinary system, of which number 811 were caused by Bright's disease and 72 by acute nephritis. Taking these two diseases together, the rate was 4.63 per 10,000 living, and for males and females 2.94 and 3.32 respectively, the general rate being 12 per cent. below that of 1917, and increased during the previous quinquennium. The deaths due to these diseases in the metropolis were 456 and in the rest of the State 427, the corresponding rates per 10,000 living being 5.81 and 3.80. Experience shows that the fatality of these diseases increases slightly during the winter months.

The changes in the rates of Bright's disease and of acute nephritis are shown below.

Period.	Males.		Females.		Total.	
	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.
1894-98	626	3.37	296	1.79	1,612	2.16
1899-03	907	3.94	570	2.18	1,477	2.80
1894-98	1,291	3.61	821	2.77	2,112	3.23
1899-1903	1,039	4.41	998	3.06	2,635	3.88
1904-1908	2,066	5.32	1,199	3.91	3,255	4.25
1909-1913	2,440	6.03	1,530	3.98	4,188	4.95
1914	610	6.28	347	3.93	1,077	5.16
1915	647	6.33	312	3.44	1,009	5.13
1916	636	6.76	310	3.67	976	5.27
1917	624	6.73	393	3.93	987	5.27
1918	863	6.96	329	3.92	583	4.02

During the whole period covered by the foregoing table the rate both for males and for females has more than doubled. The male rate is about half as high again as the female. Not many persons under 35 die from nephritis, the proportions for 1918 being 12 per cent. for those under 35, and 88 for those over that age.

DEATHS IN CHILD-BIRTH.

During 1918 the number of deaths of women resulting from various diseases and casualties incident to child-birth was 267, equivalent to a rate of 5.3 per 1,000 births or 1 death for every 189 births. Puerperal septicaemia caused 95 deaths, puerperal hæmorrhage 33, accidents of pregnancy 31, albuminuria and eclampsia 60, and other casualties of child-birth 50. The experience of the decennial period 1909-1918 shows that the average numbers of fatal cases per 1,000 births for married and for single women are 5.6 and 9.5 respectively, plural births being reckoned as single births.

Cause of Death.	1909-1918.	
	Total Deaths.	Proportion due to Each Cause.
Accidents of Pregnancy	397	per cent. 10.30
Puerperal Hæmorrhage	310	12.00
Puerperal Septicæmia	1,092	27.86
Albuminuria and Eclampsia	622	16.44
Other Casualties of Child-birth	618	21.38
Total	2,884	100.00

THE CAUSES OF INFANTILE MORTALITY.

The mortality of infants in New South Wales has been exceptionally low since 1904. An upward movement in 1907, when the rate was higher than in any of the three preceding years, was followed by a decline in the following year, a decline that was continued until 1911. In 1912 there was a slight increase as compared with the year before, but the rate was considerably lower than the average for the preceding quinquennium, notwithstanding the fact that it was a period of low mortality. In 1913 the rate was 78.3, and the highest since 1907. In 1914 the rate again declined, and in 1918 it was 59.17 per 1,000 births, and 13 per cent. below the average for the last quinquennium.

Children are susceptible to the attacks of disease at the earliest age-periods of life, and about 1,000 children out of every 10,000 born in New South Wales die before reaching their fifth year, but the rates for preventable diseases are highest. There is, therefore, no doubt that many children succumb through parental ignorance of the proper food or treatment required.

The following statement shows the principal causes of the deaths of children—under 1 per 1,000 births and under 5 per 1,000 living—in 1918 and in the five years 1913-17, distinguishing deaths in the metropolis from those in the remainder of the State:—

Cause of Death.	Deaths under 1 per 1,000 Births.						Deaths under 5 per 1,000 Living.					
	Metropolis.		Remainder of State.		New South Wales.		Metropolis.		Remainder of State.		New South Wales.	
	1913-1917.	1918.	1913-1917.	1918.	1913-1917.	1918.	1913-1917.	1918.	1913-1917.	1918.	1913-1917.	1918.
Measles	0.4	0.4	0.3	0.3	0.3	0.3	0.4	0.4	0.3	0.2	0.3	0.3
Scarlet Fever	0.1	..	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.0	0.1	0.0
Whooping-cough	2.0	1.3	2.3	1.8	2.3	1.5	0.7	0.5	0.8	0.6	0.3	0.5
Diphtheria and Croup	0.7	0.7	0.3	0.2	0.5	0.4	0.8	0.8	0.8	0.6	0.8	0.7
Tuberculosis—Meninges	0.4	0.5	0.2	0.1	0.3	0.3	0.3	0.3	0.2	0.1	0.2	0.2
" Abdominal	0.1	0.0	0.2	0.1	0.2	0.1	0.1	0.0	0.1	0.0	0.1	0.0
" Other Organs	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Syphilis	0.7	0.5	0.3	0.4	0.5	0.4	0.2	0.1	0.0	0.1	0.1	0.1
Meningitis	0.9	0.9	0.8	0.6	0.9	0.7	0.5	0.4	0.4	0.4	0.5	0.4
Convulsions	1.5	1.0	2.7	2.6	2.2	2.0	0.5	0.3	0.7	0.7	0.6	0.5
Bronchitis	1.3	1.1	2.2	2.1	1.8	1.7	0.4	0.3	0.3	0.6	0.5	0.4
Broncho-pneumonia	3.4	3.1	2.8	2.4	3.0	3.0	1.4	1.4	1.0	0.9	1.2	1.1
Pneumonia	1.5	1.1	1.7	1.9	1.7	1.6	0.8	0.7	0.7	0.7	0.7	0.7
Diarrhoea and Enteritis	19.1	11.4	16.1	7.9	17.2	9.3	5.6	3.4	4.9	2.6	5.2	2.9
Congenital Malformations	3.6	4.7	2.9	3.1	3.1	3.8	0.9	1.6	0.7	0.7	0.7	0.9
Infantile Debility	7.7	8.0	7.6	6.9	7.6	7.3	1.3	1.7	1.6	1.4	1.7	1.8
Premature Birth	17.7	18.0	16.6	17.1	17.0	17.4	4.2	3.7	3.6	3.6	3.8	3.6
All Others	8.6	8.9	9.9	9.5	9.4	9.3	3.4	2.9	3.7	3.2	3.6	3.1
Total	69.8	62.7	67.3	56.9	68.3	59.2	22.2	18.1	20.3	16.5	21.0	17.1

The high mortality of infants is due to the deaths of children who are incapacitated, even at birth, either from immaturity or inherited debility, for the struggle for existence. Of children under 1, the deaths from these

cases in 1918 were equal to 28.6 per 1,000 births, or nearly 48 per cent. of the total deaths of children under one. A table already given shows that the mortality during the first month of life is over two-fifths of the total mortality during the whole of the first year, and over 59 per cent. of this two-fifths proportion of the year's total mortality was due in 1918 to deaths from congenital debility or defects.

Among children under one year, diarrhoea and enteritis were responsible for 9.5 deaths per 1,000 births, and infectious diseases to 2.2, of which whooping cough alone caused 1.5. Respiratory diseases afflict children with fatal results, bronchitis in 1918 causing 1.7, broncho-pneumonia 3.0, and pneumonia 1.6 deaths per 1,000 births. The death-rate for these respiratory diseases was normal in 1918. Convulsions had a death-rate of 2.0, tuberculous diseases of 0.5, and meningitis (not tuberculous) of 0.7 per 1,000 births.

The greater number of fatal cases of children under 5 years of age is due to diarrhoea and enteritis, infantile debility, broncho-pneumonia, congenital malformations, diphtheria and croup, pneumonia, convulsions, whooping-cough, tuberculosis, meningitis, bronchitis, measles, and syphilis in the order given.

The Deaths of Illegitimate Children.

The following table shows the causes of death of illegitimate as compared with those of legitimate children. The figures represent the deaths of children under 1 year per 1,000 births in New South Wales during the year 1918.

Cause of Death.	Deaths under 1 per 1,000 Births.				
	Legitimate.	Illegitimate.	Males.	Females.	Total.
Measles	0.3	0.4	0.3	0.3	0.3
Scarlet Fever	0.0	—	—	0.0	0.0
Whooping-cough	1.5	1.0	1.3	1.7	1.5
Diphtheria and Croup	0.6	—	0.4	0.4	0.4
Tuberculosis—Meninges	0.2	—	0.1	0.4	0.2
Abdominal	0.1	—	0.1	0.1	0.1
Other Organs	0.1	—	0.1	0.1	0.1
Syphilis	0.3	2.0	0.3	0.5	0.4
Meningitis	0.7	—	0.8	0.6	0.7
Convulsions	2.0	2.6	2.3	1.7	2.0
Epilepsy	1.7	1.0	2.1	1.3	1.7
Broncho-pneumonia	3.0	3.0	3.2	2.9	3.0
Pneumonia	1.6	1.0	1.8	1.4	1.6
Diarrhoea and Enteritis	9.5	10.4	10.8	7.7	9.2
Congenital Malformations	3.8	2.0	4.0	2.9	3.8
Infantile Debility	0.0	21.7	0.5	0.1	2.3
Premature Birth	17.2	21.5	10.0	13.7	17.8
All Others	8.8	19.6	10.5	6.1	9.3
Total	26.5	101.7	60.1	61.9	65.2

A greater mortality is characteristic of illegitimate than of legitimate children, because the former are the victims of their rejected intrusion into life. Exclusive of diseases inherited from contaminated parents, continued neglect and lack of care are largely responsible for these higher death-rates of the unwanted. Infantile debility, including congenital malformations

and premature birth, showed 47.2 deaths per 1,000 births as against the legitimate rate of 27.6; diarrhoea and enteritis 29.4 as compared with 8.1, respiratory diseases 6.8 as compared with 6.3, and syphilis 2.2 as compared with 0.3. No great difference was, however, exhibited between the legitimate and the illegitimate rates for epidemic diseases.

A comparison of the rates for each sex shows that the male rates were the higher for all causes of death, except measles and whooping-cough, for which the rates were equal, and tuberculous diseases, for which the female rates were the greater.

This fact explains the excess of the male infantile mortality as compared with the female, which has been shown in a previous table.

THE SEASONAL PREVALENCE OF DISEASES.

The following tabulation shows the principal diseases and the seasons of the year during which their effects are most fatal to their victims. The figures are based on the experience of the ten years 1909-18, and show the proportion of deaths per 1,000 from the diseases specified for each of the twelve months. In order to make the results of the computation comparable the returns have been adjusted so as to correct the inequality of the number of days in each month.

Month.	Typhoid Fever.	In- fluenza.	Spn. Pneum. and Empy.	Whoop- ing- cough.	Phallia.	Pneu- monia.	Bron- chitis.	Diarrhoea, Enteritis, and Dysentery.	Height's Disease.
January . . .	144	33	70	110	78	53	45	146	74
February . . .	153	24	72	60	75	45	39	130	74
March	132	22	88	58	74	47	43	108	69
April	118	34	116	64	61	60	55	100	74
May	92	38	123	54	83	73	78	65	84
June	68	76	109	44	84	97	110	42	94
July	45	104	101	48	85	119	176	32	98
August	36	125	71	70	85	131	154	28	98
September . .	34	164	77	91	69	182	121	29	84
October	29	173	57	119	85	97	87	49	83
November . . .	55	84	88	119	84	79	65	121	86
December . . .	94	83	53	143	85	87	47	150	77
	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000

The chief features of the above table are exhibited in the contrast between the figures relating to typhoid fever, diarrhoea and enteritis on the one hand, and to influenza, pneumonia, and bronchitis on the other. In the first

group the influence of the hot weather is the controlling factor: in the second, the cold. The warmest months in the year are January, February, and December; the coldest, June, July, and August. Phthisis varies little throughout the year, but the rates show that it is more fatal in the colder months. Bright's disease shows likewise a higher mortality during the cold weather.

DEATHS FROM VIOLENCE.

The persons dying during the year 1918 numbered 18,840, and of these 1,159, or 6.15 per cent., met with violent deaths. The rate, 0.1 per 10,000, was, however, 18.7 per cent. lower than the mean rate for the preceding quinquennium. The mortality rate from violence for males was more than three times as great as that for females.

In the year 1918 the males thus dying numbered 910, or 8.1 per 10,000 living, and the females 249, or 2.6 per 10,000 living.

DEATHS FROM SUICIDE.

The number of persons who took their own lives in 1918 was 200, or a rate of 1.03 per 10,000 living, and about 16 per cent. below the average for the preceding quinquennium. The number of male suicides was 146, at a rate of 1.76 per 10,000 living, and of female 54, or a rate of 0.55 per 10,000 living—the male rate thus being five times that of the female.

The number of deaths from suicide and the rates per 10,000 living since 1881 are shown in the following table.

Period.	Males		Females		Total	
	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.
1884-88	428	1.63	88	0.44	524	1.09
1889-93	318	1.68	110	0.42	428	1.11
1894-98	479	2.41	169	0.37	648	1.34
1899-1903	451	1.41	142	0.44	593	1.16
1904-1908	719	1.91	160	0.49	879	1.19
1909-1913	877	1.95	279	0.79	1,056	1.35
1914	216	2.18	56	0.65	278	1.45
1915	298	2.18	88	0.65	388	1.39
1916	170	1.63	42	0.45	212	1.14
1917	184	1.45	39	0.41	223	0.92
1918	160	1.76	54	0.55	200	1.03

The means usually adopted for self-destruction by men are shooting, poisoning, cutting, and hanging. Women, as a general rule, avoid weapons and resort mostly to poison. Of every 100 cases of suicide that were consummated during the quinquennial period ending 1918, 29 were by the agency of poison, 30 by shooting, 18 by cutting, 14 by hanging, and 8 by drowning.

Experience shows that the suicidal tendency is largely influenced by the seasons, as the conduct of male victims clearly exhibits, for they are more prone to self destruction in the first and the last quarters of the year. During the ten years ended 1918 the proportion of male suicides per 1,000 was, during the first quarter of the year, 277, during the last 256, during the third 245, and during the second 237. January, February, and December, the three hot months of the year, have usually the largest record of suicides.

Female suicides, quarter-annually classified for the same period, show the highest proportion during the third quarter of the year, the figures being 293 per 1,000 for the third quarter, 247 for the first, and 250 for the second and fourth respectively.

DEATHS FROM ACCIDENTS

During the year 1918 the number of fatal accidents was 870, viz., 670 of males and 200 of females, or equal to rates of 7.09 and 2.67 per 10,000 living of each sex, and the general rate was 4.86 per 10,000 living. Accidental deaths have always been numerically greater in the extra-metropolitan area. Of those registered during 1918, deaths from accident in the metropolitan municipality numbered 288, and in the remainder of the State 582. As a general rule, about three-fourths of the accidents occur in the latter division, which contains about five-eighths of the total population.

The number of deaths from accident and the rates per 10,000 since 1884 are shown in the table below.

Period.	Males.		Females.		Total.	
	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.
1884-89	3,530	13.41	944	4.34	4,474	9.32
1890-93	3,666	11.00	908	3.70	4,574	8.14
1894-98	3,408	10.33	1,005	3.69	4,413	7.23
1899-1903	3,432	7.24	1,103	3.30	4,535	6.62
1904-1908	3,143	8.13	1,056	2.90	4,199	6.65
1909-1913	3,801	8.86	1,114	2.77	4,915	5.95
1914	903	9.30	210	2.45	1,113	6.04
1915	712	7.41	225	2.48	937	5.01
1916	779	8.29	211	2.28	990	5.30
1917	750	8.09	223	2.35	973	5.19
1918	670	7.09	200	2.67	870	4.86

Although the death-rate from accidents is still high compared with that of more settled countries, it has decreased, the decline for males being more rapid than for females. For the years prior to 1894 the rates were really slightly lower than those shown in the table, because certain causes formerly classed as accidents now fall into different categories.

The experience of the past quinquennium shows that out of every 1,000 accidents 152 are due to vehicles and horses, 140 to drowning, 133 to burns or scalds, 118 to falls, 101 to railways and tramways, 39 to mines and quarries, and 41 to weather agencies, i.e., excessive cold or heat, and lightning. Among males the greatest number of deaths are due to vehicles and horses, and among females to burns and scalds.

EDUCATION.

In New South Wales the State has established a system of national education which embraces all branches of primary, secondary, and technical education, and there are a number of private institutions subject to State inspection, of which the majority are conducted under the auspices of the religious denominations. The teaching in all State schools is strictly non-sectarian, but provision is made for religious instruction by visiting ministers and teachers of religion.

The law relating to education is contained in the Public Instruction Act, 1880, as amended by the Free Education Act, 1906, and by the Public Instruction (Amendment) Acts, 1916 and 1917; special enactments relate to the University and affiliated colleges.

Under the provisions of the Act of 1880 State education was placed under the control of the Department of Public Instruction, administered by a responsible Minister of the Crown. Authority was given for the establishment of primary, superior, and evening public schools, and of high schools, and for the appointment of itinerant teachers in sparsely-settled districts. Attendance at school for a minimum period of seventy days in each half year was declared obligatory on all children between the ages of 6 and 14 years.

The Free Education Act, 1906, provided for the abolition of fees in the primary and superior public schools, and instruction in the high schools was made free also by regulation of the Department of Public Instruction, as from 1st January, 1911.

The Public Instruction (Amendment) Act, 1916, was passed with the view of amending defects in the law relating to compulsory school attendance, and bringing the private schools under a measure of State supervision, especially in regard to hygiene and standard of education.

The clauses of the Principal Act relating to compulsory attendance were repealed, and the statutory school age was raised by the exclusion of children between the ages of 6 and 7 years. Parents and guardians of children between 7 and 14 years must cause them to attend regularly at a State school, or at a private school certified as efficient; if a child has been absent without sufficient cause for more than six half-days during three months, the parent becomes liable to prosecution. Exemptions may be granted to children receiving efficient instruction at home on at least 65 days in each half-year, and the ones of proof lies upon the parent or guardian; also to those over 13 years of age, who are certified as being educated to the standard required by the Principal Act, and to those residing in places where there is not adequate school accommodation within reasonable distance. Children who habitually disobey the orders of parents and guardians to attend school may be sent to an institution for the detention of truants.

At the direction of the Minister of Public Instruction, parents and guardians may be required to furnish returns with regard to children between the ages of 7 and 14 years.

Development of Public School System

In the period during which the Public Instruction Act, 1880, has been operative, numerous adjustments in organisation and procedure have been made to encourage educational development in consonance with changing ideals. In New South Wales a considerable proportion of the population is located in sparsely-settled districts, and is virtual detachment from community life. On the other hand, an urban population is concentrated at a few points only. These two entirely diverse conditions of settlement complicate the

difficulties of administering a general educational policy, making the higher standards designed by the law unattainable except in large centres of population and necessitating special adjustments of standards for isolated areas and pioneer settlements.

In these circumstances school accommodation extended steadily, the immediate needs being supplied by the establishment of primary schools to which superior departments were added as occasion arose, and high schools were established in the more populous districts.

It became apparent, however, that many grave defects existed, and in 1902 a Royal Commission was appointed to inquire into the educational methods in Europe and America, with the object of improving the system in New South Wales. As a result of these investigations, important reforms have been made, and special efforts have been directed towards establishing proper co-ordination between the different branches of education: the regular school work has been extended to include more manual and vocational training for boys, and better opportunities in domestic science for girls, emphasising the application of school work to the daily life of the citizen by means of special courses; high school facilities have been increased; the system of training teachers has been reorganised; and progress has been made in regard to school hygiene.

STATE EXPENDITURE ON EDUCATION.

The expenditure by the State on education includes grants and subsidies to educational and scientific institutions, cost of maintenance of industrial schools and reformatories, as well as expenditure on premises, equipment, and maintenance of public schools.

In the following statement, the expenditure on buildings, equipment, sites, &c., representing capital expenditure, has been distinguished as far as practicable from expenditure for maintenance, including grants and subsidies, all of which constitute annual running costs:—

Year ended 30th June.	Expenditure.			Cost per head of population.
	Capital.	Annual.	Total.	
	£	£	£	s. d.
1915	258,044	1,691,348	1,949,392	20 11
1916	221,501	1,716,864	1,938,365	20 9
1917	294,270	1,873,926	2,168,196	23 3
1918	216,755	1,997,605	2,214,360	23 5
1919	204,904	2,170,426	2,375,330	24 7

These figures are exclusive of amounts spent by the State on the colleges, experiment farms, and societies for the promotion of agriculture and allied interests, concerning which reference should be made to the chapter relating to Agriculture. The following statement gives in more detail the expenditure in 1918-19:—

Object.	Expenditure.	
	Capital. £	Annual. £
Education Department, Schools, &c.	192,253	2,035,802
Educational Institutions, Schools of Arts, &c.	10,375	5,678
University, and Affiliated Colleges	19	68,087
Sydney Grammar School ... ..	.....	1,500
Industrial Schools ... ..	.....	11,399
Public Library ... ..	.....	12,789
Australian Museum ... ..	.....	10,378
Conservatorium of Music ... ..	.....	12,235
National Art Gallery ... ..	.....	6,115
Observatory ... ..	.....	3,797
Zoological Gardens, Taronga Park	2,257	.....
Grants and Subsidies to various Societies ... ..	.....	2,646
Total	£204,904	2,170,426

The University of Sydney, though a publicly endowed institution, was free from any measure of Governmental supervision until 1911, when the University Amendment Act was passed, under which the Government is represented on the Senate. The annual grants and subsidies to institutions, schools, and societies are conditional upon satisfactory fulfilment of functions.

SCHOOLS AND TEACHING STAFFS.

The total number of public and private schools in operation at the end of each of the past five years, and the aggregate teaching staff in each group, are shown in the following table—

Year.	Schools.			Teaching Staffs.		
	Public.	Private.	Total.	In Public Schools.	In Private Schools.	Total.
1914	3,258	717	3,975	7,404	3,674	11,078
1915	3,254	718	3,972	7,590	3,692	11,282
1916	3,188	701	3,889	8,300	3,678	12,047
1917	3,321	659	3,980	8,750	3,707	12,456
1918	3,152	698	3,850	9,022	3,806	12,828

These figures are exclusive of Technical Schools, the Sydney Grammar School, the Ragged Schools, and Free Kindergarten Schools, the New South Wales Institution for the Deaf and Dumb and the Blind, Institutional schools under denominational control, Shorthand and Business Colleges, Agricultural Schools, &c. In 1914 there was, on the average, one school to 22 children requiring education; and in 1918 one to 33 children.

The teaching staff per school was much greater for the private schools than for the public, but the staffs of the private schools include a number of visiting teachers who teach special subjects only, and do not devote their whole time to one school.

ENROLMENT.

A comparative review of the enrolment of children at public and private schools is restricted to the last quarter in each year, as the figures collected in regard to private schools relate only to that period. The following statement shows the recorded enrolment during the December quarter of each of the last five years—

Year.	Enrolment (December Quarter).			Proportion of Total Children Enrolled.	
	In Public Schools.	In Private Schools.	Total.	In Public Schools.	In Private Schools.
1914	252,607	64,577	317,184	79.8	20.4
1915	258,017	64,863	322,880	79.9	20.1
1916	264,719	67,704	332,417	79.6	20.4
1917	277,874	68,616	346,490	80.2	19.8
1918	280,235	73,560	353,795	79.2	20.8

The figures relating to enrolment are exclusive of the Evening Continuation Schools, the Sydney Grammar School for Boys, Business and Shorthand Schools, the School held in connection with the Deaf and Dumb and Blind Institution, the Ragged Schools, and Free Kindergarten Schools, Institutional Schools under denominational control, Agricultural and Technical Schools, &c.

AVERAGE ATTENDANCE.

The following comparison is based on the enrolment during the December quarter, and on the average daily attendance during the whole year:—

Year.	Public Schools.			Private Schools.		
	Enrolment, December Quarter.	Average Attendance during the year.	Ratio of Attendance to enrolment.	Enrolment, December Quarter.	Average Attendance during the year.	Ratio of Attendance to enrolment.
			per cent.			per cent.
1914	202,607	190,194	75.2	64,577	55,431	85.9
1915	208,017	194,344	76.2	64,963	55,163	85.0
1916	204,713	200,665	73.8	67,704	56,316	83.2
1917	277,874	221,945	79.9	69,516	55,423	80.9
1918	290,236	223,790	80.2	73,560	59,384	80.7

The quarterly enrolment, as the standard for comparison of children under tuition, and, by means of the average attendance, of the degree of constancy in the education of children, is an unsatisfactory test.

The weekly roll is clearly a better test, inasmuch as it more nearly approaches the basis (daily) on which the average attendance is computed; but preferably the average attendance of scholars should be compared with the total children who can be regarded as in need of education. Such comparison may be seen in the following statement which shows, for the last five years, the average attendance at public and private schools in comparison with the estimated number of children requiring education. The figures for attendance are exclusive of Technical schools, Sydney Grammar School, charitable schools, and shorthand and business schools and colleges, &c.—

Year.	Estimated children of school age.	Other children under 15 years of school age on roll.	Total Children requiring school time.	AVERAGE ATTENDANCE Public and Private Schools.	Proportion per cent. attending school.
1914	273,300	46,836	320,136	245,625	77.7
1915	296,300	46,859	343,159	249,407	72.9
1916	293,500	47,500	341,000	257,013	75.4
1917	300,600	81,578	382,178	277,370	81.0
1918	274,300	82,148	356,448	285,176	79.8

In the above table the figures represent the school age as that between 6 and 14 years for the period 1914 to 1916, and as between 7 and 14 years since 1916. Consequently there was a decrease in the number of children of school age in 1917 and an increase in the number on the roll who were under the statutory age. Owing to the amendments of the law relating to compulsory attendance there was an appreciable increase in 1917 in the proportion of children attending school. The improvement, however, was somewhat less than the table indicates, as the basis of comparison was

changed in that year by the exclusion of the children aged 6 years who were not enrolled; previously all children of that age were considered as requiring education as they were of statutory school age.

AGE DISTRIBUTION OF PUPILS.

The age distribution of pupils enrolled at schools during the last five years is shown in the following table. The figures represent the December quarter enrolment and are exclusive of Evening Continuation Schools—

Year.	Public Schools.				Private Schools.			
	Under 6 years.	6 years and under 14.	14 years and over.	Total.	Under 6 years.	6 years and under 14.	14 years and over.	Total.
1914	11,165	221,046	20,489	252,697	5,344	49,872	9,361	64,577
1915	11,120	216,222	20,675	258,017	5,498	49,969	9,366	64,833
1916	11,834	232,408	20,471	264,713	5,286	52,459	9,965	67,704
1917	37,215*	218,906*	21,661	277,874	13,755*	45,517*	9,344	68,516
1918	35,641*	222,370†	22,225	280,236	13,182*	46,97†	11,300	71,560

* Under 1 year. † 7 years and under 14.

RELIGIONS.

A comparative view of the aggregate enrolment in all schools (public and private) for the December quarter during the last five years is given hereunder, and the figures, being on the same planes of comparison for each year, may be accepted as illustrative of the progression of each type of school during the period:—

Year	Public Schools— Population of Children.					Private Schools— Denomination of Schools.			Total Enrolled in all schools.
	Church of England.	Roman Catholic.	Presbyterian.	Methodist.	Other.	Church of England.	Roman Catholic.	Other.	
1914	136,812	33,624	29,783	55,678	16,700	3,644	50,434	10,499	317,274
1915	139,317	33,355	30,257	56,897	17,579	3,619	51,369	9,875	322,890
1916	143,757	33,648	31,479	57,993	17,947	3,638	54,124	9,912	332,417
1917	151,808	34,438	33,091	59,795	18,684	3,841	55,337	9,339	346,390
1918	153,993	33,274	33,428	49,394	19,217	4,320	59,136	10,104	355,796

PER CENT. OF TOTAL ENROLMENT.

1914	40.1	10.6	9.4	11.7	5.3	1.2	15.9	3.3	100
1915	43.2	10.6	9.4	11.4	5.4	1.1	15.9	3.1	100
1916	43.2	10.1	9.6	11.4	5.4	1.1	16.3	3.0	100
1917	43.8	9.9	9.6	11.5	5.4	1.1	16.0	2.7	100
1918	43.5	9.4	9.6	11.4	5.4	1.2	16.7	2.9	100

It will be noticed that in the public school figures the column headings indicate the denomination of the children, and in the private school figures the denomination of the schools. In the former case the denomination of the child is ascertained, but not in the latter; and the pupil, although attending a school of stated denomination, is not necessarily of that denomination.

Religious Instruction in State Schools.

The Public Instruction Act, 1880, provides that religious instruction may be given in State schools by visiting ministers and teachers of religious bodies for a maximum period of one hour in each school day, and the following table indicates the number of lessons in special religious instruction during the past five years:—

Denomination.	Number of Lessons.				
	1914.	1915	1916.	1917.	1918.
Church of England	35,373	35,342	33,600	34,349	35,098
Roman Catholic	1,086	1,358	1,460	1,584	1,370
Presbyterian	8,313	8,485	7,517	8,411	9,122
Methodist	12,455	12,353	12,591	13,369	13,865
Other Denominations	7,472	7,326	6,908	7,334	8,260
Total	64,699	64,864	62,076	65,046	67,715

THE STATE SCHOOLS.

Annual Expenditure.

The following statement shows the expenditure by the Department of Education in each calendar year since 1914, for maintenance, administration, and school premises, on account of primary and secondary public schools and technical schools:—

Year	Primary and Secondary Schools.				Technical Education.	
	Maintenance and Administration.			School Premises.	Maintenance and Administration.	Land and Building, including Repairs.
	Maintenance and Salaries.	Administration and Training.	Total.			
£	£	£	£	£	£	
1914	1,269,835	179,979	1,449,814	271,627	54,303	5,686
1915	1,283,919	183,052	1,466,971	219,911	57,900	7,630
1916	1,378,619	168,346	1,546,965	313,553	69,934	21,480
1917	1,476,659	180,291	1,656,950	242,383	80,808	20,163
1918	1,545,526	190,649	1,736,175	279,863	85,471	10,651

The figures given above represent the annual normal expenditure. To estimate the total cost of State school education during any year would necessitate investigation of the capital value of buildings and equipment, the rate of depreciation to be allowed, &c. At the present time the Department of Education has not the necessary data to give an exact valuation, but in 1914 the estimated value of these properties, including the sites, was £2,400,000.

The relative cost per child enrolled is shown in the following table:—

Year.	Maintenance and Administration.	School Premises.	Total Expenditure.	Per Child—Mean Quarterly Enrolment.		
				Maintenance and Administration.	School Premises.	Total Expenditure.
	£	£	£	£ s. d.	£ s. d.	£ s. d.
1890	553,819	150,441	704,260	3 4 11	0 17 8	4 2 7
1895	597,430	104,397	701,827	3 2 3	0 10 10	3 13 1
1900	665,937	114,279	780,216	3 2 7	0 10 9	3 13 4
1905	781,156	58,820	839,976	3 13 9	0 5 6	3 19 3
1910	933,352	208,361	1,191,713	4 10 0	0 19 1	5 9 1
1915	1,466,971	210,911	1,686,882	5 10 6	0 16 7	6 7 1
1916	1,546,965	313,553	1,860,518	5 13 8	1 3 1	6 16 9
1917	1,656,950	242,383	1,899,333	5 17 2	0 17 2	6 14 4
1918	1,736,175	279,863	2,016,038	5 9 10	0 19 4	6 19 2

Distribution of Expenditure.

The following statement shows, in comparative form, the distribution of expenditure in connection with primary and secondary schools under the Department of Education in 1917 and 1918 :—

	1917. £	1918. £
School premises, buildings, repairs, rates	242,383	279,863
Maintenance of Schools—		
Teachers' salaries and allowances	1,321,794	1,408,954
Travelling expenses	16,657	14,420
Forage allowances	3,641	3,734
School fuel allowances	2,213	2,396
Cleaning allowances	46,302	45,670
Materials	62,374	43,272
Miscellaneous expenses	23,648	27,050
Training of teachers	44,205	47,199
Bursary Endowment Board	31,302	35,047
Administration—		
General management	51,845	54,291
Inspection	34,587	36,243
Chief Medical Officer's Branch	18,352	17,864
Total	1,899,333	2,016,038

STATE PRIMARY AND SECONDARY SCHOOLS.

The following table affords a comparison between the number of State schools in operation in 1881, the first full year in which the Department of Education was under immediate ministerial control, and the numbers open at later periods; the figures represent the gross number of schools in operation during the year :—

Type of School.	Schools in operation during year.					
	1881.	1891.	1901.	1911.	1917.	1918.
High		5	4	8	21	22
Public	1,100	1,697	2,049	1,945	2,012	2,020
Provisional	246	349	428	514	507	514
Half-time	93	300	276	303	174	160
House-to-house and Travelling		92	20	6	4	5
Subsidised				494	646	658
Evening, Primary	57	14	41	24		
" Continuation				18	46	43
Industrial and Reformatory	2	3	4	3	2	2
Total	1,498	2,460	2,822	3,315	3,412	3,424

Consolidation of Small Schools.

In 1904 the consolidation of small schools was initiated, the Department of Education granting a subsidy for the conveyance, to central schools, of children attending various small schools. The advantages of this system are that better buildings and equipment, as well as a larger teaching staff, can be provided, and a wider range of instruction imparted. During the year 1918, children were conveyed to 715 central schools at a cost of £17,767.

PRIMARY SCHOOLS.

Primary work in its various stages is undertaken in schools classified broadly in two groups—(a) Primary and Superior Schools in more or less populous centres, and (b) schools in isolated and sparsely settled districts, viz., Provisional, Half-time, House-to-house, and Subsidised Schools.

House-to-house teaching is restricted generally to English and mathematics.

In Half-time schools, one teacher divides his time between two schools, so arranging that homework and preparatory study shall occupy the time of the pupils in the absence of the teacher. The course of instruction follows that of full-time schools.

Classification of Primary Schools.

Public primary schools are classified according to average attendance, and in the largest schools there are separate departments for infants (up to about age 8), for boys, and for girls. A new classification scheme was brought into operation on 1st January, 1919, and the schools were graded as follows, each pair of Half-time schools being counted as one:—

Class.	Average Attendance.	Schools.	Class.	Average Attendance.	Schools.
I	Over 1200	27	V	41-200	236
II	901-1200	18	VI	21-40	826
III	601-900	47	VII	20 and under.	973
IV	201-600	148			

Subsidised Schools.

For the education of children resident in places remote from any State schools, the Subsidised School was instituted in 1903. The conditions upon which aid is granted are that two or more families must combine to engage a private teacher, who, after approval of the Minister as to qualifications, receives, in the Eastern portion of the State, a subsidy at the rate of £5 per pupil per annum, the maximum amount being £60 per school, and in the Western portion, a subsidy of £6 per pupil per annum, the maximum per school being £60. A subsidy may be granted to any family, with not less than four children of school age, living in complete isolation. Subject to certain conditions, subsidy at the stipulated rates may be paid as an aid towards boarding children in a township for the purpose of attending a public school.

The teachers of subsidised schools in the December quarter of 1918 numbered 499, of whom 29 were men; there were 2,328 boys and 2,182 girls on the roll, and the average daily attendance was 3,763 or 83.4 per cent. of enrolment. The amount paid towards salaries of teachers of subsidised schools during the year 1918 was £20,515.

During 1912, regulations and arrangements were made whereby subsidised school teachers could be examined, certified, and registered on passing the examination, the Department furnishing the names of such registered teachers to parents requiring their services.

Travelling Schools.

In order to supply means of education for families so isolated that even two could not readily combine to form a Subsidised School, Travelling Schools have been established. The first commenced operations in 1908; the teacher was provided with a vehicle to carry school requisites, and a tent for use as a schoolroom, in which to teach for a week at a time at each centre in his circuit. There are three travelling schools in operation.

Correspondence School.

At the beginning of 1916, further efforts were made by means of a correspondence school to extend educational facilities to children in remote localities. Two schools were in operation during 1918, and at the end of the December quarter 82 pupils were receiving instruction.

SECONDARY EDUCATION IN STATE SCHOOLS.

Provision is made in State Schools for education beyond the primary stage in Superior or Continuation, District, and High Schools, and in Technical Schools and Colleges. The number of pupils who received secondary education in 1917 and 1918 is shown below; the figures are exclusive of those in the schools of the Technical Education Branch, which are discussed on a later page:—

Schools.	1917.			1918.		
	Schools.	Total Enrolment.	Average Attendance.	Schools.	Total Enrolment.	Average Attendance.
High	21	6,088	3,011	22	6,513	5,284
Intermediate High	3	692	545	4	941	720
District	18	2,043	1,466	17	2,256	1,907
Superior Public (Day Continuation)—						
Commercial	20	2,068	1,248	24	2,541	1,440
Junior Technical	24	1,037	959	24	2,430	1,367
Domestic	43	3,119	1,793	45	4,229	3,301
Total... ..	135	15,647	11,011	136	18,910	12,779

In addition to the above Superior Public (Day Continuation) Schools, there are other Public Schools in which the course of study for certain subjects is the same as for the first and second year's course in the High School Syllabus, but no statistics of enrolment nor of attendance are available.

Superior and Day Continuation Schools.

Any Public School may be declared a Superior School if there is in one department a minimum attendance of 20 pupils who have completed the primary course.

Until 1912 the Superior Schools continued the work of the primary syllabus with such additional subjects as would enable pupils to compete at public examinations, but it was found desirable to reorganise these schools upon a vocational basis, and many of them have been converted into Day Continuation Schools.

In the Day Continuation Schools a course is provided for pupils who do not remain at school long enough to complete the High School course, but who desire special instruction to fit them for industrial or commercial pursuits. The schools are organised as (1) Junior Technical (boys), which supply preliminary groundwork for industrial careers, the course of study being fundamental to that of the Trades Schools of the Technical Education system; (2) Commercial for boys and girls, where the curriculum includes shorthand, book-keeping, business principles, &c; (3) Domestic for girls, the special subjects being those relating to home management.

The course in the Commercial Schools extends over a period of three years, and in the other Day Continuation Schools to two years.

Evening Continuation Schools

In January, 1911, the Director of Education was entrusted with a commission to inquire into the working of Continuation Schools in Great Britain and Europe, and to recommend for adoption whatever improvements might be of advantage in New South Wales. Following his report, issued in 1911, Evening Continuation Schools were organised, and Evening Primary Schools were converted into Continuation Schools.

Since the reorganisation of the secondary course the number of High Schools has increased from 5 in 1910 to 26 (including 4 Intermediate) in 1918; the average quarterly enrolment has risen from 894 to 6,793; the number of pupils holding bursaries from 408 to 1,319, and the cost per scholar from £7 13s. 3d. to £14 8s. 2d. This development may be attributed to the abolition of fees, dating from 1st January, 1911, and to the extension of scholarships and bursaries, as described later.

Arrangements are being made for the establishment of hostels in connection with the High Schools in country districts; the first hostel for girls was opened in Goulburn during 1918.

DISTRICT SCHOOLS.

In country centres where the enrolment of secondary pupils is not sufficient to warrant the establishment of a separate High School, "District" Schools have been established as a "top" to the local Primary School. These schools have special staffs, and the higher classes undertake the secondary course of instruction as followed in High Schools. At the close of 1918, seventeen of these schools were in operation, the average weekly enrolment of secondary pupils being 959 boys and 826 girls, and the average attendance was 865 boys and 742 girls.

STATE SCHOOL TEACHERS.

Training.

The ordinary course at the Teachers' College extends over two years, and qualifies for teaching in the various classes of primary and infant schools, and on its completion students may qualify for second-class certificates. Those who elect to withdraw at the end of the first year are eligible for third-class certificates. A period of practical work must be accomplished satisfactorily before classification is awarded. Special courses are arranged with reference to departmental requirements and to the capabilities of individual students, and evening extension courses in kindergarten and infant teaching are provided.

To obviate the necessity of admitting untrained teachers into the Service, short courses of training have been established for rural school teachers and assistants at Hereford House School, which was opened in 1911 as an adjunct to the Teachers' College. This training extends over twelve months, and about 350 teachers attend in each year.

Professional training is conducted at three Demonstration Schools—Blackfriars, North Newtown, and Darlington—and departments have been secured in several other schools for practical work in connection with the Teachers' College.

The minimum age of admission to the College is 17 years, that is, three years beyond the primary school age, and during this period boys who guarantee to become teachers may obtain an allowance to enable them to undergo a preparatory course in District or High Schools.

In addition to the teachers trained by the Department of Education qualified teachers are admitted from outside the Service; those appointed to primary schools are placed on probation for six months, and those appointed to secondary schools, if requiring additional professional training, must take the University course leading to the Diploma in Education.

A portion of land within the Sydney University has been acquired as a site for the Teachers' College, and the erection of the building is nearly completed. The new College will provide training for teachers for private

secondary and primary schools, as well as for the State service. A hostel for the accommodation of women students has been established in connection with the College.

In 1918, 859 students were enrolled at the Teachers' College.

Students	Men.	Women.	Total.	Senior holding Scholarships
First year	41	117	158	158
Second year	32	144	180	196
Third year	20	47	67	68
Fourth year	1	8	9	7
Fifth year	1	1	2	—
Graduate	—	4	4	4
Short course	36	280	345	339
Evening students	—	72	72	—
Cookery	—	6	6	6
Total	171	698	829	778

Particulars of scholarships tenable by students of the Teachers' College are shown on a later page.

The staff of the College consists of a Principal, Vice-Principal, 35 lecturers, 5 visiting lecturers, a warden of women students, and 6 clerical and library assistants. Members of the teaching staff are afforded opportunities to study abroad, and leave of absence, on full pay, may be granted for this purpose.

Conditions of Service

The salaries paid to the State school teachers depend upon their efficiency and upon the status of the schools in which they are employed. To qualify for a higher grade the teachers must pass a series of examinations, and to obtain promotion they must show the requisite degree of efficiency in practical work. The rates of salary payable to State school teachers during 1919 are shown below, but the figures do not include additional amounts—£44 per annum to men and £33 to women—payable as from 1st December, 1918, to teachers over 21 years of age, provided that no such increase raises the salary beyond £525 per annum. These increases were granted to compensate for the increased cost of living, the Government anticipating that teachers will secure right of access to the Industrial Arbitration Court in terms of recent legislation, of which details will be given in the chapter relating to industrial arbitration.

The salaries paid to High School teachers in 1919 were as follows:—

Teacher.	Men.		Women.	
	£	£	£	£
Principal—				
Boys' or Girls' School	328 to 600		251 to 450	
Mixed school	400			
Master and Mistress of Department	300 to 400		264 to 300	
Assistant	240 to 320		204 to 332	

The junior staff of the High Schools are paid at the same rates as assistants of the same classification in primary schools.

In determining the rates of salary for primary school teachers, two factors, viz., position and personal qualifications, are taken into consideration; a quota of salary is assigned to each and the teacher is paid the sum of the amounts. The positions are valued in accordance with the classification of the schools, which are graded according to the number of pupils in average

attendance, on the basis of a group unit of 40 pupils per teacher. The quota of salary allotted to the positions in schools of each category during 1919 are shown in the following table:—

Class of School.	Average Attendance.	Teachers in charge and Headmistresses.	Mistresses.		First Assistants.	
			Girls.	Boys.	Men.	Women.
VII	20 and Under	156	£	£	£	£
VI	21-40	180	.....	120	.....	.....
V	41-200	204	.....	144	.....	.....
IV	201-600	246	158	144 to 159	168	123 to 126
III	601-900	276	183	168	180	129 to 135
II	901-1200	312	207	192	192	138 to 144
I	Over 1200	348	231	216	204	147 to 153

The position quota for assistants was £156 for men and £117 for women. The teachers are classified in six grades according to attainments and teaching efficiency; the quota of salary attached to each grade in 1919 was as follows:—

Teachers.	Class 2.		Class 1.		Class 1.	
	B	A	B	A	B	A
Men	£ 36	£ 48	£ 72	£ 96	£ 144	£ 180
Women	33	39	48	63	96	120

Thus the salary payable to a headmaster classified as 1A in charge of a first class school was £528 per annum, and to a 3B teacher in charge of a seventh class school £192 per annum, until raised to £236 as from 1st December, 1919.

The salaries of unclassified teachers were men, £132-£156; women, £132-£144, junior assistants under 31 years, £72 if appointed to school within access of their homes, or £120 if appointed away from home.

Special rates are fixed for teachers of special subjects, such as Manual Training, Cookery, &c.

Subsidied teachers receive £5 per head of average attendance, with a maximum of £50 per annum; in the western districts the subsidy is £6, and the maximum £60 per annum.

A comparative statement of the teaching staff of the State schools for the years 1910 and 1918 is shown below; those in the Technical Education Branch are not included:—

Teachers.	1910.			1918.		
	Men.	Women.	Total.	Men.	Women.	Total.
Teachers and Assistants—						
First Class	257	71	328	298	97	395
Second Class	713	545	1,258	1,043	800	1,843
Third Class	1,310	498	2,008	1,440	1,230	2,670
Unclassified	791	1,019	1,810	461	1,760	2,221
Training Students	154	149	303	155	542	697
Pupil Teachers	8	28	36	.....	.....	.....
Cookery Teachers	.....	.....	.....	.....	59	59
Sewing Mistresses	.....	109	109	.....	132	132
High School Teachers	29	10	48	241	196	437
Subsidied School Teachers	28	324	362	29	470	499
Total	3,300	2,962	6,262	3,677	3,345	7,022

The proportion of unclassified teachers is large because there are included in this category ex-students of the College whose classification is deferred until they have proved their practical skill during a period of service as assistants; also in 1918, 57 men and 116 women who had completed the short-course of training at Hereford House.

During 1918, 427 teachers were enrolled as students in the University of Sydney, 174 attending in the evening; 226 were attending the Arts course, 129 Science, 45 Economics and Commerce, and 8 Agriculture; and 19 the post-graduate and diploma course in Education.

PRIVATE SCHOOLS.

Until the reorganisation of the State Secondary School system in 1911 there were only five Public High Schools with an average quarterly enrolment of less than 900 pupils, so that instruction beyond the primary stage of the Public Superior Schools was supplied to a large extent by private establishments. None of the private schools are subsidised, except the Sydney Grammar School; the majority are conducted under the auspices of the Roman Catholic church, and the remainder are chiefly undenominational.

The fees vary in accordance with the type of school, many of the Secondary Schools being residential, and in the denominational primary schools the payment of fees is to a large extent voluntary. Scholarships and bursaries have been provided by private subscription for the assistance of deserving students.

Up to the end of 1916 the Department of Education exercised no supervision over the private schools except those registered under the Bursary Endowment Act, but in order to comply with the compulsory attendance clauses of the Public Instruction (Amendment) Act, 1916, children between the ages of 7 and 14 years must attend schools certified as efficient by the Minister for Public Instruction. Applications for registration of schools (in accordance with the Act) are made to the Minister, and provisional registration granted pending inspection by Government officers. Appeals against the refusal or cancellation of certificates may be made to the Bursary Endowment Board. The Act authorises the inspection of all school premises, and proprietors may be compelled to bring the hygienic conditions of their schools up to the standard of State Schools similarly situated and circumstanced. Teachers and proprietors of certified schools are required to furnish returns to the Minister. An immediate effect of the Act was to close a large number of private schools.

The system of certificate examinations for pupils of State and private schools instituted by the Department of Education in 1911 tends to establish co-ordination between the curricula of both classes of schools.

A comparative statement relating to the private schools is shown below. Sufficient data are not available to permit the classification of these schools according to the standard of instruction supplied:—

Classification.	1908.				1918.			
	Schools.	Teachers.	Enrolment.	Average Attendance.	Schools.	Teachers.	Enrolment.	Average Attendance.
Undenominational ...	339	1,197	9,955	8,604	186	913	8,280	6,986
Roman Catholic ...	387	1,924	42,295	35,453	438	2,281	59,136	47,161
Church of England ...	56	285	3,415	2,844	56	444	4,320	3,670
Presbyterian ...	4	40	274	273	4	79	650	621
Methodist ...	2	35	332	307	2	46	454	427
Lutheran ...	1	1	35	32	3	3	74	62
Seventh Day Adventist ...	2	13	205	190	6	22	405	279
Salvation Army ...	...	...	...	...	2	4	184	132
Hebrew ...	1	6	600	500	...	...	...	...
Theosophical ...	...	...	...	...	1	14	57	48
Total ...	792	3,501	57,111	48,203	698	3,806	73,560	59,386

Included in the number of teachers as shown in the table are those who visit the schools to give tuition in special subjects only, the figures for 1918 being 2,628 permanently attached to the teaching staffs of the schools and 1,178 visiting teachers as compared with 2,604 staff teachers and 897 visiting teachers in 1908.

Sydney Grammar School.

The Sydney Grammar School was incorporated by an Act of Parliament in 1854, and opened in 1857; the Act authorised the payment of £20,000 for the erection of school buildings, and an annual endowment of £1,500.

In 1918 the total enrolment was 706 boys; the enrolment during the December quarter was 627, of whom 108 were under, and 519 were over 14 years of age; the average quarterly enrolment was 641 and the average attendance 600.

The income of the Sydney Grammar School during the year 1918 amounted to £13,416, including statutory endowment £1,500, school fees £11,783, and special prizes, &c., £133; the expenditure amounted to £12,679.

TECHNICAL EDUCATION.

The Technical College is under the direct control of the Department of Education, and technical education is administered by a superintendent, with financial and general procedure independent of other branches of the State Primary and Secondary education system.

Branch Technical Colleges have been established in suburban and country centres, and classes have been instituted in numerous other places; but technical classes at Public Schools are part of the ordinary Public School course.

Two main courses of technical instruction have been established—(a) Trades Courses, concurrent with the period of apprenticeship; (b) Higher Courses, embracing the technology of the various trades and technical professions. Important features of the scheme are: (1) that intending students are required to furnish evidence that they possess sufficient preparatory knowledge to take profitable advantage of the training; (2) that no student is admitted to a course unless actually engaged in the specific trade to which the course relates. Special provision is made for journeymen who desire to improve their knowledge to be admitted, without preliminary test, to any part of the courses relating to their trades.

Instruction is given under the technical education system in Domestic Science (which includes cookery and laundry work), Window-dressing, and Tailor's Cutting; these subjects are not included in the trade or diploma classes.

The State School of Aviation established at Richmond in 1916 has been placed under the control of the Technical Education Branch; until the signing of the armistice in 1919 the school was used solely for the training of aerial pilots for war service.

In 1918 there were three Technical Colleges, in the main industrial centres, viz., Sydney, Newcastle, and Broken Hill, and ten Trades Schools in suburban and country districts; classes for elementary technical instruction were held in various smaller localities. Special courses of instruction in Sanitary Science, Draining and Water Fitting, Meat Inspection, and Printing (composing) were carried on by means of correspondence.

The following table shows the number of classes and teachers and the enrolments at the Technical College and Trades Schools during the last five years; the figures do not include the technical classes in Public Schools:—

Year.	Classes.	Lecturers and Teachers.	Total Enrolments.*	Individual Students.	Average Weekly Attendance.	Fees Received.
1914	513	289	13,687	8,082	11,523	10,779
1915	519	294	13,900	7,719	9,257	9,431
1916	529	321	14,159	7,720	10,077	9,968
1917	544	343	15,065	8,401	11,072	9,354
1918	572	369	15,950	8,717	12,156	9,425

* Includes students who have joined more than one class.

The immediate effect of the reorganisation of the Technical system at the beginning of 1914 was to reduce the enrolment, a number of classes with no direct bearing upon any trade being discontinued; the entrance tests and the regulations as to occupation also caused a reduction in the number of students. The enlistment of students for military service has affected the attendance since the outbreak of the war.

KINDERGARTEN

Kindergarten methods have been adopted as far as practicable in the Infant Schools under the Department of Education, and in various parts of Sydney and suburbs. Kindergarten classes are conducted for the purpose of bringing young children under refining influences. During the year 1918 classes were in operation in 98 Public Schools; 15 were separate Infant Schools, and the remainder were Primary Schools with Kindergarten departments attached; the number of pupils enrolled for Kindergarten instruction was 5,912, the average attendance being 4,626.

These classes were conducted under Froebelian methods until 1912, when the Montessori system also was introduced, with very satisfactory results, into many of the Infant Schools. The underlying principle of the Montessori system is individual liberty, and its main benefits are independent work, more rapid progress, and a pleasure in work for both teacher and children.

Private Kindergarten Schools.

Free Kindergarten schools are conducted by the Kindergarten Union of New South Wales, which is assisted by a grant from the Government, amounting in 1918-19 to £1,000. In 1918 there were 11 Free Kindergarten schools with 37 teachers; the number of scholars on the roll during the December quarter was 698, all of whom were under 7 years of age. The average daily attendance was 582, and the gross enrolment for the year, 949.

At some of the ordinary private schools there are departments for Kindergarten work.

In connection with Kindergarten teaching a private institution supplies training in Froebelian methods, and the Free Kindergartens provide observation and practice schools.

COMMERCIAL EDUCATION.

Preparatory education for commercial life has been provided in the State primary schools, where the course of instruction, especially in the Commercial Continuation Schools, includes elementary training in many commercial subjects; economic and business principles and practice are included in the curriculum of the High Schools. Many private schools and colleges also

afford facilities for commercial training, both by day and evening classes; book-keeping, business methods, shorthand, and typewriting are the main subjects taught.

A complete return of the number of pupils taught in these special subjects is not available, but statistics of the State Commercial Continuation Schools have been supplied on a previous page, and particulars obtained from Business and Shorthand Schools under private management, show that fifteen were in operation in 1918 with 150 teachers, and a total enrolment of 3,032 boys and 4,590 girls; the average attendance during the year was 2,540.

Advanced preparation for commercial life has been provided in the University evening lectures in Economics and Commerce. This section of the University teaching was promoted originally by the Sydney Chamber of Commerce in the form of brief lecture courses available to the general public, and in examinations conducted for senior and junior commercial certificates issued by that body. The diploma course was converted in 1913 into a full degree course; separate Chairs for Applied Chemistry and for Economics have been provided, and it is hoped that means will be given for practical research work which will be of great benefit to Australian industries.

A special grant is paid from the Public Revenue to the University to assist in the teaching of languages serviceable to the development of commercial relations between Australia and other countries. By this means a lectureship in Japanese language and literature has been established.

DOMESTIC TRAINING.

In the reorganisation of Superior Public Schools provision was made for the establishment of Domestic Superior Public Schools for girls. The syllabus came into operation at the beginning of 1913, and the course includes household accounts, cookery, laundry work, dressmaking, millinery, garden, art of home decoration, music, and social exercises, morals and civics, physical training, as well as a course in English, designed to encourage a taste for wholesome reading.

Three hours per week are devoted to cooking and laundry, the course being practical and diversified. Personal hygiene, nursing of sick, and care of infants receive considerable attention.

Botany and gardening are taught, and while the course is designed primarily to train girls to manage a home, provision is made also for a training in commercial horticulture, and an alternative course of business lessons in the second year is intended to fit girls to take up work in the commercial houses in the city.

During 1918 sixty-nine schools for practical cookery were in operation, the enrolment being 4,898; in addition, demonstrations in cooking were given to 6,062 pupils; fifty-nine teachers of cookery were employed in 1918. The Technical College provides more advanced courses.

A School of Domestic Science was established recently at the Sydney University. The course for the degree of Bachelor of Science in Domestic Science covers a period of three years, and includes Physics, Chemistry, Physiology, and Botany or Zoology, Public Health, and the course in Domestic Science at the Sydney Technical College.

AGRICULTURAL AND RURAL TRAINING.

Education in subjects pertaining to rural industries commences in the primary schools with the teaching of the elementary principles of agriculture, both practical and theoretical. School gardens and experiment plots are adjuncts to many State schools, and grants are made of farms,

vegetable, and flower seeds. Instruction in general farm work is given at the Farm Schools at Gosford and Mittagong, conducted by the State Children's Relief Department.

A special Agricultural High School is situated at Hurlstone Park. The grounds, covering 26 acres, are used for teaching practical operations and for experimental work in the growth of crops, action of fertilisers, &c. The course at this school extends over two years, and covers a general English education in addition to science with laboratory practice, and agriculture with field work. During 1918 there were 120 students on the roll, and at the end of the year there were four bursars and one scholarship holder, For resident students the fee is £6 6s. per quarter; for day students no fees are charged.

The training at Hurlstone Agricultural High School forms a preparatory course to the more advanced work at Hawkesbury Agricultural College.

Supplementing the training given to pupils under the Department of Education, a graduated scheme of agricultural instruction is organised in connection with the development of rural industries, by the Department of Agriculture of New South Wales. Full particulars will be found in the chapter relating to agriculture.

The Diploma course at the Hawkesbury Agricultural College covers three years' work, but certificates may be obtained for shorter courses. Students holding the Diploma of the College may be permitted to complete the course for the degree of Bachelor of Science in Agriculture at the University in three years instead of four.

The final stages of agricultural education and training are reached at the University, where, in the beginning of 1910, a Department of Agriculture was instituted as a branch of the Faculty of Science. A four years course leads to the degree of Bachelor of Agricultural Science, and, in providing a higher training ground for teachers and experts, completes the whole system of preparation for rural industries. The Experiment Farms are available for the practical and experimental work in connection with the degree course.

SCHOOL SAVINGS BANKS.

A system of school savings banks in connection with the State schools was initiated in the year 1887, and by this means £660,475 have been received in deposits, and £139,613 transferred to the Government Savings Bank as children's individual accounts. The object of these banks is to inculcate principles of thrift during the impressionable ages.

In 1918 these banks numbered 826; the deposits amounted to £48,876, and withdrawals, £48,402; £6,390, representing individual sums of £1 and upwards, were transferred to the Government Savings Bank, leaving £16,511 as credit balances in the school banks.

DELINQUENT, DEFECTIVE, AND DEPENDENT CHILDREN.

Special provision has been made for delinquent, defective, and dependent children in several reformatories and industrial schools maintained by the State and in private charitable institutions.

The State Institutions are the Girls' Industrial School and Training Home at Parramatta and the Farm Home for Boys at Gosford, and the Cottage Homes established by the State Children's Relief Board; particulars regarding their operations will be shown in a later chapter of this Year Book.

Education of deaf and dumb and blind children is undertaken at a school in connection with the Institution for the Deaf and Dumb and the Blind. This institution receives periodical grants from the Government, and the school fees are remitted in cases where the parents are unable to pay. In 1918 the total income of the institution was £13,142. The expenditure for

the year was £8,086, including £7,975 for maintenance, salaries and wages, and £111 for buildings and repairs. The number of teachers employed was 16, of whom 7 were men. The gross enrolment during the year was 78 boys and 53 girls; the average daily attendance was 121. The December enrolment was 123, and of these, 82 were under and 41 were over 14 years of age.

Ragged Schools have been conducted since 1860 in Sydney, to provide education and attention for neglected children, meals and clothing being supplied when necessary. The operations of these schools have decreased in recent years, with the enactment of free education in State schools. During 1918, 4 schools were open, 4 women were employed as teachers, the gross enrolment was 239, and the average daily attendance 133. There were 160 children on the roll during the December quarter; 63 were under 7 years, and 97 from 7 to 14 years.

At charitable institutions in 1918 there were 13 schools with 51 teachers and a gross enrolment of 1,384. In December quarter the enrolment of 1,191 consisted of 227 under 7 years of age, 812 between 7 and 14 years, and 152 over 14. These were denominational institutions conducted by the Roman Catholic Church and the Church of England.

MEDICAL INSPECTION OF CHILDREN.

In 1907 arrangements were made for the medical inspection of children in the State schools in the populous centres of Sydney and Newcastle; in 1911 it was extended to the South Coast district and to a number of inland towns.

During 1913 the medical inspection was reorganised to include the pupils of all State Schools, and the majority of those attending the private schools; and arrangements were made to examine each child every three years, thus ensuring two medical examinations during school-life. To provide for the treatment of physically-defective children a travelling school hospital, a travelling ophthalmic clinic, and six travelling dental clinics have been established, also a metropolitan dental clinic. Details regarding the medical inspection of school children and the school clinics will be given in a later chapter of the Year Book.

The work of the medical officers of the Department of Education includes the investigation of epidemics of infectious diseases affecting school children; the inspection of school buildings; systematic courses of lectures at the Teachers' College; lectures to senior girls in all metropolitan schools on the care of babies, personal cleanliness, home hygiene, sick nursing, &c.; lectures to parents; examination of candidates for admission to the Teaching Service; first treatment of ophthalmia in the back-country schools; the following up of untreated cases by visits of school nurses to parents in order to secure the medical treatment of children.

PHYSICAL TRAINING OF BOYS AS CADETS.

The scientific physical training of boys under the universal defence training system commences when they reach the age of 12 years and become junior cadets. Of the junior cadets trained at State schools during 1918, 21,222 were-passed as efficient. Information as to the number of medical examinations of all junior cadets has been given in the chapter relating to Defence.

EDUCATION DEPARTMENT'S CERTIFICATE EXAMINATIONS.

Prior to 1911 students from public schools, superior and high, were competitors at public examinations conducted by the University. Since the introduction of a co-ordinated system of secondary education, designed to furnish adequate preparation for various types of vocation, and to institute State bursaries, the necessity for competing at such examinations

has vanished with the acceptance, by the University, of the certificates of the Department of Education, as indicating the attainment of satisfactory standards of education.

The regulations provide for three certificates to mark definite stages in the progress of school pupils, the examinations being open to students of State and private schools. The Qualifying Certificate indicates that the holder has completed the primary course, and is fitted to enter upon a secondary course; this standard is a condition precedent to admission to higher schools. The Intermediate Certificate marks the completion of the higher primary stage constituting the first three years of the secondary course. The Leaving Certificate is obtainable on graduation from the full five-years course of the High Schools, and is accepted as indicative of adequate preparation for the University, if it shows a *pass* in matriculation subjects.

The first examination for the Qualifying Certificate was held in December, 1911, at 600 centres in New South Wales. The following are particulars regarding the examinations held during each year, the candidates being pupils of Public and Private Primary Schools:—

Year	Candidates	Papers		Scholarships awarded.		Bursaries awarded.	
		Number.	Per cent.	Boys.	Girls.	Boys.	Girls.
1911	16,708	7,032	66.2	297	260	146	116
1912	14,376	5,484	38.2	230	184	108	102
1913	15,348	7,934	51.7	438	218	218	85
1914	16,084	11,137	68.9	1,252	745	195	106
1915	17,480	11,761	67.3	3	—	291	129
1916	18,908	12,155	64.1	5	—	268	129
1917	22,905	13,962	60.6	—	—	517	156
1918	26,489	17,452	65.4	6	—	227	124

In the allotment of certificates in connection with this examination, the teachers' reports and the record of school attendance are taken into account. In 1911 the number of Scholarships awarded as the result of the Qualifying Certificate Examinations was increased to 1,000, but the granting of Scholarships at State Schools was discontinued in the following year, arrangements having been made for supplying text-books free of charge to all pupils, & Scholarships tenable at the Sydney Grammar School were awarded in 1918.

The Examining Board in connection with the Intermediate and Leaving Certificates consists of the Director of Education, the Chief Inspector, the Principal of the Teachers' College, the Inspector of Secondary Schools, and four delegates appointed by the University.

The results of the Intermediate Certificate Examinations are shown below. The low percentage of passes in 1913 is due to the fact that in the initial year the full course had not been covered before the examination.

Year	Candidates	Papers		Scholarships awarded.		Bursaries awarded.	
		Number.	Per cent.	Boys.	Girls.	Boys.	Girls.
1912	1,571	865	54.7	42	2	26	62
1913	1,573	912	58.0	19	5	63	181
1914	2,244	1,369	60.9	5	—	74	210
1915	2,435	1,604	65.9	55	40	—	—
1916	2,781	2,014	72.4	80	4	—	—
1917	3,554	2,610	73.5	—	—	5	7
1918	3,324	2,796	84.2	31	4	2	22

The first Leaving Certificate Examination was held in November, 1913, and of 156 candidates, 123, or 79 per cent., were successful. In 1918 the percentage of passes was 83:—

Year.	Candidates.	Passes.		Scholarships awarded.	University bursaries awarded.	
		Number	Per cent.		Boys.	Girls.
1913	156	123	78.8	—	20	4
1914	337	280	83.1	—	20	9
1915	572	447	78.1	14	23	7
1916	806	680	79.7	22	27	8
1917	928	777	78.3	19	21	10
1918	1,051	870	82.8	16	29	5

On the results of this examination, the University bursaries, and the exhibitions instituted under the University Amendment Act are awarded, also scholarships for the Diploma Courses at the Technical College.

The Intermediate and Leaving Certificate Examinations have been adopted as standards for the admission of persons to the public service of the State.

The first examination for Superior Public School Certificates was held in December, 1914, 586 candidates who had completed the two-years course sat for examination, and 469 passed; in 1918 the candidates numbered 961 and the passes 834, viz.:—Commercial, 125 candidates and 90 passes; Junior Technical, 271 candidates and 216 passes; Domestic, 565 candidates and 528 passes.

Certificates of proficiency are awarded to pupils of Evening Continuation Schools whose attendance and work have been satisfactory throughout the course. In 1918 there were 311 candidates at the examination for certificates, and 196 passed; in the previous year 233 passed out of 349 candidates.

TECHNICAL EDUCATION EXAMINATIONS.

The following are particulars of examinations conducted in the Technical Branch during the last five years:—

Particulars.	1914.	1915.	1916.	1917.	1918.
Number examined	3,084	4,334	5,950	6,607	7,410
Number of passes	3,005	3,579	4,464	5,444	5,648
Percentage of passes	84.0	82.7	74.9	84.0	76.2
Number obtaining honours	408	675	870	512	785

STATE SCHOLARSHIPS AND BURSARIES.

It has been the policy of the State to assist promising students, especially to the High Schools and to the University, by means of scholarships and bursaries.

Scholarships tenable at State Schools were discontinued in 1915, when arrangements were made for the free supply of school material, but a few are provided to enable pupils to attend the Sydney Grammar School.

Three scholarships are awarded annually to students of the Agricultural High School, entitling the holders to free education for two years at the Hawkesbury Agricultural College, with monetary allowance and text-books. The holders commence on the second year's course at the College.

Boys who intend to become teachers may gain two-year scholarships at District Schools. Text-books are supplied and an allowance is granted during the second year.

Scholarships, admitting to courses of technical instruction, are provided to assist students to pass from the Day and Evening Junior Technical Schools to the Trades and Science Schools, from Lower to Higher Trades Courses, and from Trades to Diploma Courses. Students holding Leaving Certificates may obtain entrance by Scholarship to the Diploma Courses; and those who have gained the Intermediate Certificate at the Technical High School may obtain scholarships enabling them to enter the Higher Trades Courses. These technical scholarships carry a grant of text-books and appliances and exemption from fees, and holders must be engaged in the trade or profession for which the course has been established.

Students who pass through the Diploma Course with distinction are enabled to continue their education at the University by means of scholarships valued at £100 per annum.

Scholarships tenable at the Teachers' College, consisting of a money allowance, text-books, and exemption from college tuition fees, are awarded annually, three scholarships also in the longer course at the College, for competition amongst those who have completed the short course at Hereford House. Scholarships are awarded also in the training course for cookery. Travelling scholarships have been instituted in connection with the Teachers' College; former students of two or more years' standing are eligible for these scholarships, which are of the annual value of £200, and are tenable, at the discretion of the Director of Education, for one or two years. Holders of Travelling Scholarships are required to pursue a definite line of study or research into some branch of the theory, practice, or administration of education. The Women's College of the Sydney University awards three scholarships annually to women students of the Teachers' College who are matriculated students of the University.

Bursary Endowment.

In 1912 the Bursary Endowment Act was passed by Parliament providing public moneys for bursaries, tenable in public or private secondary schools and in the University of Sydney. This fund is administered by a specially constituted board, consisting of two representatives each of the University of Sydney, of the Department of Education, and of the Secondary schools registered under the Act. A representative of the Department of Education is chairman.

Schools desiring to benefit under the Act must register; and such registration, which is effective for two years, is conditional upon the suitability of school premises, the organisation and equipment of the school, the method and range of instruction, efficiency of the teaching staff, and the general conduct of the school. The inspection is conducted by the Inspector of Secondary schools under the Department of Education.

Under the general conditions attached to registration a school must be capable of providing a four-year course of instruction beyond the primary stage, to a standard not lower than that of the Leaving Certificate. As at 30th June, 1919, seventy-four schools were registered under the Bursary Endowment Act.

Bursaries admitting to a course of secondary instruction are awarded to pupils between the ages of 12 and 14 years, whose parents' income is less than £200 per annum, or not more than a quota of £50 per annum for each member of the family, exclusive of children earning 10s. or more weekly. One-third of the bursaries are available for pupils of metropolitan and suburban schools. Their award is determined upon the results of the Qualifying Certificate examination; the candidates are classified in two groups, viz., those from schools with less, or with more than 100 pupils in enrolment. Competition is restricted within the groups, and the bursaries

are divided in approximate ratio to the number of candidates from the two groups of schools who pass the Qualifying Certificate examination. The number of bursaries is determined by the Board in accordance with the amount available in the current account of the Endowment Fund.

Each bursary comprises a grant of text-books not exceeding £1 10s. per annum, and a monetary allowance of £30 for the first and second years, and £40 for the third and fourth years, to holders who live away from home in order to attend school, the allowance being reduced in the case of those who reside at home. The bursaries are tenable usually for a period of four years, but, under certain conditions, may be extended for a fifth year.

Bursaries tenable at the University of Sydney may be awarded to candidates at the Leaving Certificate examination who are under 19 years of age and whose parents' means are unequal to the expense of the University education. A full bursary entitles the holder to a grant for text-books not exceeding £5 per annum, and to free education. An allowance not exceeding £20 per annum is given to those who need not board away from home, in order to attend the University, and not exceeding £50 per annum to those who must do so. A bursar who wins and elects to hold a Scholarship or Exhibition offered by the Senate of the University is entitled to receive from the two sources conjointly an allowance not exceeding £100 per annum.

Bursaries are awarded upon the results of the Intermediate Certificate Examination. These bursaries are of the value of third and fourth year bursaries, and are tenable for two or three years.

The bursaries made available by the Bursary Endowment Board during 1918 were as follows :—

Classification.	Tenable at—	Number awarded, 1918.		
		Boys.	Girls.	Total.
Bursaries	Metropolitan High Schools	91	43	134
	Country High and District Schools	86	62	148
	Registered Secondary Schools	44	26	70
		221	131	352
Intermediate Bursaries	{ Metropolitan High Schools	2	8	10
	{ Country High Schools	1	1	2
	{ Registered Secondary Schools	2	3	5
		5	12	17
University Bursaries	Sydney University	29	5	34

At 30th June, 1919, excluding 214 holders of war bursaries, there were 1,538 pupils holding bursaries under the Bursary Endowment Act; 1,415 were attending courses of secondary instruction, and 123 were attending University lectures. The annual monetary allowances paid were as follow:—

Allowances.	Pupils.	Allowances.	Pupils.
£		£	
10	445	40	276
15	154	50	59
20	216		
30	388	Total	1,538

War bursaries are provided by the Bursary Endowment Board for children of incapacitated and fallen soldiers; and may be awarded to assist

holders during primary, secondary or University courses, or in technical trade or agricultural instruction; they may be applied also to augment the wages of apprentices. War bursaries are tenable for a period not exceeding two years, but are subject to renewal. Up to 30th June, 1919, war bursaries had been awarded in 240 cases; the number in operation at that date was 214, and the expenditure for the year amounted to £1,703.

In addition to the bursaries made available by the Bursary Endowment Board, three bursaries, tenable for three years, may be awarded at the Hawkesbury Agricultural College; three, tenable for two years, at each of the Farm Schools at Bathurst and Wagga Experiment Farms; and one, tenable for one year, at the Apprentice School at Wollongbar Experiment Farm.

University Exhibitions.

The University Amendment Act, 1912, provides for the allotment of Exhibitions by the Senate to students desirous of entering the University. The Exhibitions are awarded on the results of the Leaving Certificate Examinations, and exempt the holders from payment of matriculation, tuition, and degree fees; they are tenable in all faculties and departments. The number awarded yearly is at the rate of one for every 500 persons in the State between the ages of 17 and 20 years, as shown by the latest census records. The exhibitions are open for competition to students of State High Schools and registered schools who have completed the secondary course. A small number of exhibitions, not exceeding 5 per cent. of the total number awarded, are open to competitors other than school students, provided they have been residents of New South Wales for three years.

As a result of the Leaving Certificate Examination, held in November, 1918, the Senate allotted 200 exhibitions in the following faculties:—Arts, 39; Medicine, 80; Science, 16; Engineering, 31; Law, 10; Economics, 8; Dentistry, 5; Architecture, 2; other, 3. One hundred and twelve were allotted to the State schools, and eighty-eight to the registered secondary schools.

THE UNIVERSITY OF SYDNEY.

An Act to incorporate and endow the University of Sydney was passed by the Parliament of New South Wales on 1st October, 1850.

By the Act of foundation, the University is required to be un denominational, religious tests for admission to any privilege being prohibited expressly; degrees in Theology or Divinity are not conferable. Authority was given to examine, and to grant degrees in Law and Medicine as well as in Arts. In 1884 the benefits and advantages of the University in all respects were extended to women equally with men.

In 1900 the various enactments relating to the University were consolidated by means of the University and University Colleges Act; of the amending Acts passed subsequently the most important, passed in 1912, made radical alterations in the constitution of the Senate.

The Senate of the University consists of 24 members, viz. —

- 4 Fellows appointed by the Governor.
- 1 Fellow elected by the Legislative Council.
- 1 " " " Assembly.
- 5 Fellows representing the Teaching Staff of the University, *i.e.*, one elected by the Professorial Board, and one each by the four Faculties.
- 10 " " elected by Graduates.
- 3 " " the aforesaid Fellows.

A State endowment of £30,000 per annum is payable to the University, with the proviso that when any census is taken it will be increased at the rate of £1 for each 15 persons between ages 17-20, added to the population of the State; an additional endowment of £2,000 per annum has been granted for the maintenance of a Chair of Architecture.

Under the University Amendment (Exhibitioners' Fees) Act, 1918, the Senate has been authorised to defray from the statutory endowment the fees, at Universities and educational institutions abroad, for or on behalf of any person holding a public exhibition at the University of Sydney who has been engaged on war service.

Colleges of residence for the association of students in the cultivation of secular knowledge may be established within the University; a Government grant up to a maximum of £20,000 may be paid in aid of the building fund of each college, also an annual endowment of £500 for the principal's salary. Four colleges in connection with religious denominations have been established adjacent to the University, namely, St. Paul's (Church of England), St. John's (Roman Catholic), St. Andrew's (Presbyterian), and Wesley (Methodist). A college of residence for women was established in 1892 on a strictly undenominational basis, and a teachers' college has been established in connexion by the Department of Education. The colleges provide tutorial assistance to students in preparing for the University lectures and examinations.

Within the University there are four Faculties, viz., Arts, Law, Medicine, and Science, and there are seven Departments, viz.—Engineering, Dentistry, Economics and Commerce, Veterinary Science, Agricultural Science, Architecture, and Domestic Science. A Dean for each Faculty is appointed for a period of two years. The Professors, with the Chancellor and Vice-Chancellor, form the Professorial Board, which superintends matters relating to study and discipline.

Endowment

During the year 1918 the University received from the Government of New South Wales a statutory endowment of £32,000, including £1,000 for a Chair of Architecture. The total amount of State aid received during the year was £66,232, including the following sums for the services mentioned—

	£		£
Scientific apparatus	2,800	Chair of Pharmacology	200
Evening Lectures	2,300	“ Chemistry	2,500
Towards reduction of Lectures Fees	2,500	“ Mechanical Engineering	200
Extensions of existing departments	1,500	Tutorial Classes and University Extension	3,370
Chair of Agriculture	2,300	Instruction in Modern Languages	1,000
“ Veterinary Science	2,000	Science Research Scholarships	500
“ Botany	2,000	Library	500
“ Economics and Commerce	2,000	Retiring allowances	800
“ Astronomy	200		

Private Benefactions

Many benefactions have been bestowed on the University by private persons. Some prizes have been exhausted by award, but by careful investment, increases in value, unawarded scholarships, and other means, these private foundations showed at 31st December, 1918, credit balances to the extent of £581,605. These endowments include the Challis Fund, of which the cash balance at 31st December, 1918, amounted to £317,492; the P. N. Russell Funds, £104,551, and the Fisher Estate, £45,724.

University Finances.

The following statement shows the amounts derived by the University from each of the principal sources of revenue, and the total expenditure, during each of the last five years. Under the items are included sums received for special expenditure and amounts from benefactors to establish new benefactions.—

Year	Receipts.					Disbursements.	Private Endowment Funds Credit. Balance at end of Year.
	Government Aid	Fees.	Grants from and other Private Foundations.	Other Sources.	Total.		
	£	£	£	£	£	£	£
1914	41,523	26,121	23,043	3,356	94,043	98,944	506,450
1915	44,673	19,181	29,397	1,028	94,279	93,688	363,062
1916	54,392	13,707	29,981	1,389	99,469	98,253	375,882
1917	61,654	12,489	27,409	1,000	102,552	98,944	379,321
1918	66,232	15,798	22,429	1,260	115,719	116,317	389,369

The Government aid received during the year 1918 included £800 for Retiring Allowances Account. The receipts from private foundations, £32,139, included £3,000 for annual prizes and new foundations, fees amounted to £15,798, and other receipts to £1,360, including £377 interest on investment of Retiring Allowances Account. The credit balance of private endowment funds amounted, at 31st December, 1918, to £589,369, including Retiring Allowances Account, £8,362.

The principal item of disbursements in each year is for salaries. In 1917 and 1918 the total expenditure was distributed as follows:—

Classification.	Amount.		Percentage of Total.	
	1917.	1918.	1917.	1918.
	£	£		
Salaries	66,705	71,576	67.4	62.4
Maintenance, Apparatus, &c.	16,612	18,723	16.8	16.1
Buildings and Grounds	4,948	8,762	5.0	7.5
Scholarships and Bursaries	5,627	3,787	5.7	3.2
Other	7,557	12,517	7.7	10.8
Total	98,944	116,317	100.0	100.0

Lectures and Lecturers.

Non-matriculated students are admitted to lecture and laboratory practice but are not eligible for degrees. Lectures are given during the daytime in all subjects necessary for degrees and diplomas, and evening lectures are provided in the Faculty of Arts, the Department of Economics and Commerce, and in Japanese. The Government Astronomer of New South Wales is Professor of Astronomy in the University, and lectures are given in connection with this subject.

In 1918, the Teaching Staff included 26 professors, 6 assistant professors, and 136 lecturers and demonstrators; there were, in addition, 13 honorary lecturers and demonstrators. Professors and most of the lecturers are paid fixed salaries, and the remainder receive fees. Provision is made for a pension scheme for professors appointed since 1895; the benefit will commence after twenty years' service, and after attaining the age of 50 years.

The University has no power to confer honorary degrees, but may admit *ad eundem gradum* graduates of approved Universities, viz., Oxford, Cambridge, London, Durham, Victoria, St. Andrew's, Edinburgh, Glasgow, Aberdeen, and Dublin, Queen's of Ireland, Royal of Ireland, Melbourne, New Zealand, and Adelaide, and of such other Universities as the Senate may determine.

The number of individual students attending lectures during 1918 was 1,995, viz., 1,354 men and 641 women; 1,415 were matriculated and 580 non-matriculated.

Scholarships, Bursaries, and Fellowships.

Scholarships, exhibitions, and bursaries have been founded as rewards for proficiency and to place the advantages of a University education within the reach of students in straitened circumstances. They are awarded only when the examinations disclose a satisfactory degree of proficiency, and no student may hold more than two scholarships.

Candidates for bursaries are required to show that they do not possess sufficient means to attend the University. Bursaries to the number of eighteen have been provided by private foundations; they are tenable only in the Faculties of Arts or Science (not including Engineering), and are supplemented, on the part of the Senate, with exemption from fees. In addition, bursaries are provided annually by the Government for pupils of State schools and schools registered under the Bursary Endowment Act.

A Rhodes Scholarship of the value of £300 per annum, tenable for three years at the University of Oxford, is awarded annually to students of Sydney University; also a commission in the British Army is offered every year.

The number of students who attended University Lectures as non-paying students during 1918 was 1,067, including 608 public exhibitors, 401 students of the Teachers' College and teachers in schools, and 41 State and University bursars.

Since 1912 Parliament has made an annual grant for Scientific Research Scholarships. Fellowships available to graduates in Science of the University include four annually under the Macleay bequest of £35,000 made in 1904 to the Linnean Society of New South Wales. These Fellowships are intended to encourage research in Natural Science, by means of post graduate work; each is of the annual value of £400.

The Walter and Eliza Hall Engineering Fellowship, awarded annually to a graduate in Engineering of the University of Sydney of not more than four years' standing, is of the annual value of £300 for a maximum period of three years. Similar Fellowships were founded for graduates in Agriculture, Veterinary Science, and Medicine.

The University enjoys the privilege, bestowed through the Orient Steam Navigation Co. (Ltd.), of allotting three first-class return passages to Europe to graduates desiring to continue studies abroad.

Clinics.

The Royal Prince Alfred Hospital is a General Hospital and Medical School for the instruction of University students and for the training of nurses. Students must pass through the hospital curriculum of study and practice in order to obtain the certificate of hospital practice necessary to qualify for admission to final degree examination in medicine and surgery. All appointments to the Medical and Surgical Staff of the Hospital are made conjointly by the Senate of the University and the Directors of the Hospital.

Sydney Hospital, founded in 1811, also provides a Clinical School under the direction of a Board of Medical Studies, and all appointments of clinical lecturers and tutors are subject to the approval of the Senate.

Other hospitals recognised as places where studies may be undertaken in connection with the Faculty of Medicine are:—The Royal Hospital for Women, Royal Alexandra Hospital for Children, St. Vincent's Hospital, the Gladesville and Callan Park Mental Hospitals, the Women's Hospital, the Renwick Hospital for Infants, and the South Sydney Hospital for Women.

In connection with the Department of Dental Studies, the United Dental Hospital of Sydney was established in 1901, and provides facilities for instruction of students. It was amalgamated with the Dental Hospital of Sydney in 1905. The University lecturers in Surgical and Mechanical Dentistry are, *ex officio*, honorary dental surgeons of the Hospital.

Extension Lectures.

University Extension Lectures were inaugurated in 1885, and have been conducted since that date under the direction of a University Extension Board of eighteen members appointed annually by the Senate, and including at least four members of that body, and four of the teaching staff. Courses of lectures are given in various centres upon topics of literary, historical, and scientific interest. At the conclusion of a course, which consists of a minimum of three lectures, an examination may be held and certificates awarded to successful candidates.

Tutorial Classes.

In accordance with the provisions of the University Amendment Act of 1912, the Senate has established evening Tutorial classes, which are open to unmatriculated as well as to matriculated students; diplomas are issued to persons who have studied in these classes for at least one year in any one subject. Tutorial classes, which may be established in particular branches of study upon specific requisition by intending students, have been formed in suburban and country centres as well as at the University. During 1918 there were about 800 students in regular attendance at systematic courses of study.

University Buildings.

The University buildings consist of the main building, containing the great hall, lecture rooms, and offices, all built of Pyramont sandstone; the Medical School, which is in the same style; the Fisher Library, adjacent to the main building, and designed to form part of the main quadrangle, is of modern design, with bookstacks of steel and glass for 200,000 volumes, and with ample reading-room accommodation for students.

Separate buildings for the Departments of Chemistry, Physics, Geology, Biology, Botany, Veterinary Science, Agricultural Science, and the Macleay Museum are distributed over the grounds, which, including lands vested by the Senate in the Affiliated Colleges, &c., cover an area of 126 acres. The Peter Nicol Russell School of Engineering has a separate building, provided by the State at a cost of £25,000. A building for the Teachers' College is nearly completed.

MEDICAL AND LEGAL PROFESSIONS.

In New South Wales physicians, dentists, and pharmacists are bound by statute to register before they can proceed to practice, and barristers and solicitors must be formally admitted to their profession. For the medical and legal professions and in various branches of science the University provides the requisite training.

The practice of medicine is restricted to persons registered by the New South Wales Medical Board under the Medical Practitioners Act. During the last five years the average number of registrations of medical practitioners by the Medical Board has been 106 per annum, and at 31st December, 1918, there were 2,310 registrations in force.

In order to practise dentistry persons must be registered by the Dental Board of New South Wales, in terms of the Dentists Act. At 31st December, 1918, there were 1,605 registrations in force.

Pharmacists are registered under the Pharmacy Board appointed under the Pharmacy Act, and dealers in poisons are required to obtain annual licenses. At the end of 1918 the registrations of pharmacists numbered 1,256, and 495 licenses for the sale of poison were in force.

Members of the nursing profession are registered and certificated by the Australasian Trained Nurses' Association, which was established in New South Wales in 1899. For the year ended 30th June, 1919, the number of members on the register in New South Wales was as follows—Nurses: general, 2317, obstetric, 1,299, and mental, 47; Medical Members, 95; Honorary Members, 28.

Barristers and solicitors may proceed through the courses provided in the Law School at the University, or they may qualify for admission by the Bar examinations. Barristers practising in New South Wales at the end of 1918 numbered 169, solicitors at the same date numbered 1,058, viz., 429 in the country, and 629 in Sydney.

Men desirous of entering into articles of clerkship with attorneys, and who have not taken a University Degree, nor passed the preliminary examination required in England, Scotland, and Ireland, are required to pass a preliminary examination conducted by the University. During 1918, 30 candidates were examined and 13 passed.

Public Accountants, Clerks, &c.

The profession of public accountant has not been regulated by law in New South Wales; there are, however, a number of accountants' societies which conduct examinations for the admission of members. At the end of 1918 the number of members was 2,372.

Examinations for bank clerks are conducted by the Institute of Bankers; 188 candidates were examined during 1918, and 109 passed.

Persons desirous of acting as clerks, auditors, engineers, and overseers, in connection with the Local Government Services are required to furnish evidence of their efficiency, in accordance with the provisions of the Local Government Acts.

EDUCATIONAL AND SCIENTIFIC SOCIETIES.

Various organisations exist which have for their objective the encouragement of professional interests, and the advancement of Science, Art, and Literature. The Commonwealth Government has afforded a measure of recognition to the efforts of Australian men of letters by establishing in 1908 a Commonwealth Literary Fund to provide pensions and allowances to literary men and their families.

As far back as the year 1831 a scientific society, under the title of the Philosophical Society of Australasia, was founded in Sydney, and after many vicissitudes of fortune was merged, in 1866, into the Royal Society of New South Wales. Its objects are the advancement of science in Australia, and the encouragement of original research in all subjects of scientific, artistic, and philosophic interest, which may further the development of the resources of Australia, draw attention to its productions, or illustrate its natural history.

The study of the botany and natural history of Australia has attracted many enthusiastic students, and the Linnean Society of New South Wales was established for the special purpose of furthering the advancement of these particular sciences. The Society has been richly endowed, and possesses a commodious building at Elizabeth Bay, Sydney, attached to which are a library and museum. The proceedings are published at regular intervals, and contain many valuable papers, with excellent illustrations of natural history.

Other important scientific societies are the Royal Zoological Society of New South Wales, inaugurated in 1879; a branch of the British Medical Association, founded in 1881; a branch of the British Astronomical Association; the Australian Association for the Advancement of Science; the Royal Geographical Society; the University Science Society; Australian Historical Society, and the Naturalists' Society of New South Wales.

All the learned professions are represented by associations or societies.

The Royal Art Society holds an annual exhibition of artists' work at Sydney; and of the many musical societies, mention may be made of the Royal Sydney Apollo Society, and the Royal Sydney Philharmonic Society:

MUSEUMS, LIBRARIES, AND ART GALLERIES.

Recognising that Museums, Libraries, and Art Galleries are powerful factors in promoting the intellectual wellbeing of the people, the Government of New South Wales has been active in founding and maintaining such establishments. The expenditure by the State on buildings for Museums, Libraries, and Art Galleries to 30th June, 1919, amounted to £423,016.

Museums.

The Australian Museum, the oldest institution of its kind in Australia, was founded in Sydney in 1836 as a Museum of Natural History; it contains fine specimens of the principal objects of natural history, and a valuable collection of zoological and ethnological specimens of distinctly Australian character. The specimens acquired during 1918 numbered 15,128, of which 2,237 were purchased, and the remainder collected, exchanged, or donated. A fine library, containing many valuable publications, is attached to the institution. Lectures and gallery demonstrations are given in the Museum, and are open to the public. During the year 1918, visitors to the Museum numbered 215,713. On Mondays students and artists only are admitted.

In 1853 the Museum, till then managed by a committee, was incorporated under control of trustees, with a State endowment, which is now supplemented by annual Parliamentary appropriations. The expenditure during the year 1918 amounted to £11,314.

A Technological Museum was instituted in Sydney at the close of 1879 under the administration of a committee of management appointed by the trustees of the Australian Museum. The whole original collection of some 9,000 specimens was destroyed in 1882 by fire. Efforts were at once made to replace the lost collection, and in December, 1883, the Museum was again opened to the public. In 1890 it was transferred to the Department of Education, as an adjunct to the Technical College, and now contains a valuable series of specimens illustrative of various stages of manufacturing, and an excellent collection of natural products acquired by purchase, gift, loan, and exchange. Technological Museums are established also at Goulburn, Bathurst, West Maitland, Newcastle, and Albury.

Research work is conducted by the scientific staff of the Technological Museum in connection with the development of the natural vegetable resources of Australia, particularly in respect of the pines and eucalypts.

The functions of the Mining and Geological Museum include the preparation of collections of minerals to be used as teaching aids in schools and in other institutions.

The Agricultural and Forestry Museum is an adjunct of the Department of Agriculture.

The public have access to the "Nicholson" Museum of Antiquities, the "Macleay" Museum of Natural History, the Museum of Normal and Morbid Anatomy, attached to the Sydney University, and the National Herbarium and Botanical Museum at the Botanic Gardens. Housed in the Macleay Museum is the Aldridge collection of Broken Hill minerals.

PUBLIC LIBRARY OF NEW SOUTH WALES.

The Public Library of New South Wales was established, under the designation of the Free Public Library, on 1st October, 1869, when the building and books of the Australian Subscription Library, founded in 1826,

were purchased by the Government. The books thus acquired formed the nucleus of the present Library. In 1890 the Library was incorporated with a statutory endowment of £2,000 per annum for the purchase of books.

The scope of the Public Library, which is essentially a reference institution, is extended by a loan system, under which books are forwarded to country libraries, schools of arts, progress associations, lighthouses, individual students in the country, and to Public School Teachers' Associations, and branches of the Agricultural Bureau.

In 1918 the Reference Department of the Public Library contained 220,257 volumes, including volumes for country libraries under the lending system. The attendance of visitors during 1918 numbered 160,005.

In 1899 Mr. David Scott Mitchell donated to the trustees of the Public Library a collection of 10,024 volumes, together with 50 valuable pictures, and at his death, in 1907, bequeathed to the State the balance of a unique collection, principally of books and manuscripts relating to Australasia, and containing over 60,000 volumes, and 300 framed paintings of local historic interest, valued at £100,000. He endowed the Library with an amount of £70,000, from which the income amounting to about £2,750 per annum is expended on books and manuscripts. In 1918 there were 98,187 volumes in the Mitchell Library, which is located in a separate building, opened in March, 1910. There were 17,513 visitors during the year.

The total cost to the State of the Public Library buildings was £28,957 and of the Mitchell Library £43,118.

The following statement shows the expenditure of the Public Library, including the Mitchell Library, during the last five years:—

Year.	Salaries.			Books, &c., and Binding.	Miscel- laneous.	Mitchell Library Endowment Account.	Total.
	Reference.	Mitchell.	Country Libraries.				
	£	£	£	£	£	£	£
1914	4,641	2,421	200	1,920	2,235	5,209	16,626
1915	4,897	2,438	229	2,826	2,181	2,025	14,556
1916	4,895	2,494	347	3,380	1,500	2,035	14,621
1917	4,961	2,650	584	2,124	1,837	2,705	14,861
1918	4,805	2,964	700	2,702	2,327	1,593	15,091

SYDNEY MUNICIPAL LIBRARY.

The Sydney Municipal Library was formed by the transfer to the City Council in 1908-9 of the lending branch of the Public Library. An "open access" system was introduced, and a new classification adopted.

Maintenance costs during 1918 amounted to £8,206, made up as follows:—Salaries, &c., £4,475; books, periodicals, binding, and electric lighting, £3,731.

OTHER LIBRARIES.

Local libraries established in the principal population centres throughout the State, may be classed broadly under two heads—Schools of Arts, receiving an annual subvention in proportion to the amount of monetary support accorded by the public; and Free Libraries, established in connection with municipalities. Under the provisions of the Local Government Act, any shire or municipality may establish a public library, art gallery, or museum.

The library of the Australian Museum, though intended primarily as a scientific library for staff use, is accessible to students, and about 22,700 volumes may be found on the shelves.

On 31st December, 1918, the library in connection with the Technological Museum, at the Central Technical College, and its branches, contained 8,436 text-books, &c.

The Parliamentary Library contains over 52,000 books, and large numbers of volumes are in the libraries of the Law Courts and Government Offices.

NATIONAL ART GALLERY OF NEW SOUTH WALES.

The National Art Gallery contains a good collection of paintings and statuary, including some works of prominent modern artists, and some valuable gifts from private persons; there is also a fine collection of water colours.

The present value of the contents of the Gallery is £153,000, and the cost of the building to 30th June, 1919, was £94,437.

The number of paintings, &c., in the Gallery at the end of year 1918 was 2,165, and the total amount expended in purchasing works of art during that year was £1,592 distributed as shown below:—

Classification.	Paintings, &c. in Gallery.	Expenditure during year.
	No.	£
Oil Paintings	449	990
Water Colours	422	248
Black and White Works	680	332
Statuary, Casts, and Bronzes	168	...
Various Art Works in Metals, Ivory, Ceramics, Glass, Mosaic, &c.	446	22
Total	2,165	1,592

The attendance at the National Art Gallery during 1918 was, on week-days, 167,670, and on Sundays 75,945.

Art students, under certain regulations, may copy any of the various works, and enjoy the benefit of a collection of books of reference on art subjects. In 1894 a system of loan exchanges between Sydney, Melbourne, and Adelaide was introduced, by which pictures are sent from Sydney to Melbourne and Adelaide and reciprocally, with results most beneficial to the interests of art. Since 1895 the distribution of loan collections of pictures to the principal country towns has been permitted for temporary exhibition, and during 1918, 153 pictures were so distributed among nine country towns.

The total disbursements in connection with the National Art Gallery during the year 1918 were £4,646, inclusive of £1,592 on account of works of art.

The Gallery has received but small support from private endowments, and, consequent upon its limited funds, is restricted mainly to the collection of specimens of contemporary art.

The Wynne Art Prize was instituted in 1897, and consists of the interest on approximately £1,000, which is awarded annually to the Australian artist producing the best landscape painting of Australian scenery in oils or water colours, or the best production of figure sculpture executed by an Australian sculptor.

CONSERVATORIUM OF MUSIC.

The State Conservatorium of Music, which was established in 1915, provides tuition in every branch of music, from the elementary to the advanced stages. The studies are divided into two sections; the Music School Section consists of three courses, viz., elementary, intermediate, and advanced—the last-mentioned extending over two years. A certificate is granted at the conclusion of each course. The advanced grade certificate of the Music School Section entitles the holders to admission to the Diploma Section, in which a course of two years' tuition, leading to the Professional Diploma, is given under the personal direction of the Director of the Conservatorium. A Preparatory Course in all subjects is available for juveniles who have not previously received musical tuition. The expenditure during 1918 amounted to £12,891, including salaries, £4,617.

PUBLIC FINANCE

THE STATE ACCOUNTS.

Since the 1st July, 1895, the State Accounts have been kept on a cash basis, and the financial position, therefore, can be ascertained readily from the annual statement prepared by the Treasurer; but this involves a consideration of the Consolidated Revenue Account, Chaser Settlement Account, Public Works Account, Loans Account, and the various Trust Accounts shown on page 136, which do not form part of the Consolidated Revenue Account. Some little difficulty, moreover, may be experienced in determining the actual position, as due regard must be given to such items as refunds, advances, cancellations, and cross entries.

THE CONSOLIDATED REVENUE ACCOUNT.

The Consolidated Revenue Account for each year shows the whole of the receipts and expenditure, exclusive of transactions under the Loans Account and the other accounts mentioned in the preceding paragraph. The total amount credited to Consolidated Revenue Account, however, cannot be used for general purposes, as, under section 15 of the Forestry Act, 1916, one-half of the gross proceeds received by the Forestry Commission must be carried to a special account and set apart for afforestation; also, under the Public Works and Chaser Settlement Fund Act, 1906, two-thirds of the net proceeds of the sale of Crown lands, exclusive of interest—less 20 per cent.—must be paid to the Public Works Fund.

The receipts during the year ended 30th June, 1919, amounted to £23,148,106, and the expenditure to £23,221,308, leaving a surplus of £214,708 available for reduction of the accumulated deficiency of earlier years. Similar details for each of the last ten years are shown in the following table, also the revenue and expenditure per head of population:—

Consolidated Revenue Account—Receipts and Expenditure.

Year ended 30th June.	Receipts including refunds.		Expenditure.		Surplus (+) or deficiency (-).	
	Total.	Per Inhabitant.	Total.	Per Inhabitant.	On operations of year.	Accumulated at end of year.
	£	£ s. d.	£	£ s. d.	£	£
1910	14,552,416	9 2 8	14,293,247	8 12 2	(+) 259,099	(+) 980,707
1911	13,891,486	8 9 8	14,470,667	8 15 8	(-) 588,952	(+) 401,705
1912	15,797,146	9 3 8	16,127,779	9 10 0	(-) 340,143	(+) 81,362
1913	16,660,521	9 8 1	17,778,809	9 10 11	(-) 1,228,379	(-) 1,167,017
1914	18,436,256	10 0 3	18,983,159	9 17 2	(+) 553,099	(-) 798,918
1915	18,049,227	10 2 4	18,219,124	9 16 8	(+) 430,049	(-) 368,030
1916	19,701,518	10 10 10	19,553,927	10 9 2	(+) 147,591	(-) 214,339
1917	20,022,097	11 0 2	20,799,805	11 3 0	(-) 788,798	(-) 483,137
1918	21,442,742	11 8 2	21,379,914	11 7 7	(+) 28,824	(-) 499,313
1919	23,148,106	12 0 19	23,221,308	12 0 7	(+) 214,708	(-) 244,045

Although there was a cash credit balance of £989,707 at 30th June, 1910, there were outstanding at that date Treasury bills amounting to £658,937, which had been issued to meet deficiencies in earlier years; the last of these bills was redeemed in 1913.

Heads of Revenue and Expenditure.

The following table shows the details of revenue and expenditure during the last five financial years:—

Revenue.	1915.	1916.	1917.	1918.	1919.
Governmental.	£	£	£	£	£
Revenue Received by Commonwealth	2,507,205	2,557,072	2,584,913	2,517,758	2,380,139
Main Taxation	2,065,870	2,117,021	2,023,454	2,200,401	2,022,000
Land Revenue— Abolition Encroachment and Non-Compliance	400,780 101,259	1,031,711 401,052	812,037 716,811	1,068,579 728,287	1,014,874 773,724
Total	£ 1,008,991	£ 1,001,815	£ 779,373	£ 807,977	£ 1,022,401
Revenue Borrowed	456,890	414,471	477,948	405,436	444,022
General Miscellaneous	161,769	307,226	345,926	318,224	322,000
Industrial Undertakings	10,348	9,080	12,719	22,848	11,281
Total Governmental	£ 1,638,897	£ 1,746,693	£ 1,616,967	£ 1,554,141	£ 1,800,704
Business Undertakings.					
Railways and Tramways	8,080,823	8,398,422	8,396,022	10,021,948	11,121,709
Edney Harbour Trust	468,000	498,722	513,381	575,429	516,263
Water Supply and Sewerage	465,754	542,755	563,781	1,128,178	1,229,140
Total Business Undertakings	£ 8,914,577	£ 9,440,899	£ 9,473,184	£ 11,725,555	£ 12,867,112
Advances Repaid	£ 27,828	74,826	26,162	145,256	29,100
Grand Total	£ 18,581,272	£ 19,702,518	£ 19,570,300	£ 21,549,747	£ 23,448,120
Expenditure.					
Governmental.					
Interest on Public Debt and Special Deposits	971,480	1,037,703	1,034,122	1,039,725	975,712
Redemption of Public Debt	5,865	5,554	9,898	6,019	8,422
Transfer to Public Works, Roads, Sea Walls, and Projects of such nature. (Act No. 3 of 1914)	228,426	224,918	228,045	626,761	500,779
Local Government					
Encroachment and General	591,240	544,022	539,420	522,143	522,504
Police and Prisons	655,197	611,119	604,514	738,191	736,210
Magistrates and Charities (including Coroner's Departments)	500,311	485,244	509,515	649,151	1,020,240
Proctor	166,259	171,074	181,823	97,800	99,273
Chief Secretary and Public Health	122,241	128,003	126,173	143,222	152,277
Treasurer	550,324	684,701	720,911	622,625	607,354
Attorney-General and Justice	323,065	324,019	321,250	329,867	345,157
Lands	451,123	414,511	394,524	394,288	311,545
Public Instruction	1,025,492	1,056,217	1,023,249	1,251,227	1,225,618
Labour and Industry	45,749	54,111	55,140	48,258	68,222
Relief	71,324	74,469	62,420	61,744	61,794
Agriculture	228,745	245,536	243,242	290,791	324,864
Local Government Administration	—	21,777	23,642	29,023	27,476
All Other Services	420,222	442,116	452,354	424,009	425,079
Total Governmental	£ 1,208,382	£ 1,267,536	£ 1,255,145	£ 1,609,693	£ 1,711,023
Business Undertakings (Working Expenses and Interest).					
Railways and Tramways	8,240,139	10,227,568	11,754,984	11,996,974	11,370,543
Edney Harbour Trust	302,422	420,823	454,244	499,129	515,785
Water Supply and Sewerage	725,280	841,374	864,913	1,068,412	1,132,758
Total Business Undertakings	£ 9,267,841	£ 11,489,765	£ 13,074,141	£ 13,564,515	£ 13,019,086
Transfer to Public Works and Class. Sec. Funds	£ 220,000	220,000	210,000	220,000	220,000
Advances made	£ 21,223	32,222	181,089	171,210	300,474
Grand Total	£ 18,836,178	£ 21,554,501	£ 23,025,694	£ 25,511,817	£ 27,737,730

From the foregoing figures the following rates per head of population have been determined:—

Revenue.	Per Inhabitant.				
	1915.	1916.	1917.	1918.	1919.
Governmental					
Revenue Returned by Companies, &c.	£ 4 6 0.	£ 4 6 0.	£ 4 6 0.	£ 4 6 0.	£ 4 6 0.
State Taxation	1 11 9	1 13 4	1 13 11	1 9 12	2 2 9
Land Revenue— Alienation, Occupation and Miscellaneous	0 3 4	0 11 4	0 20 4	0 11 4	0 20 20
	0 5 4	0 8 7	0 5 3	0 6 1	0 9 1
Total	£ 6 16 3	£ 7 19 12	£ 10 7 7	£ 10 8 3	£ 16 11
Services Rendered	0 4 0	0 4 0	0 4 0	0 4 0	0 4 0
General Maintenance	0 0 0	0 2 0	0 3 10	0 2 0	0 3 7
Industrial Undertakings	0 0 1	0 0 1	0 0 3	0 0 2	0 0 1
Total Governmental	£ 6 21 4	£ 7 23 2	£ 11 7 7	£ 11 10 5	£ 17 2
Business Undertakings					
Railways and Tramways	5 2 0	5 0 11	5 11 0	5 10 1	6 0 2
Rydny Harbour Trust	0 0 0	0 0 4	0 0 4	0 0 1	0 0 4
Water supply and Sewerage	0 0 0	0 10 1	0 10 5	0 11 5	0 12 4
Total Business Undertakings	£ 5 12 2	£ 5 11 1	£ 6 7 5	£ 6 12 1	£ 7 5 3
All-India Stamp	0 0 2	0 0 10	0 0 2	0 1 0	0 0 4
Grand Total	£ 16 2 8	£ 12 10 20	£ 17 0 2	£ 17 9 5	£ 22 2 10
Expenditure					
Governmental					
Interest on Public Debt and Special Loans	0 10 5	0 11 4	1 00 2	0 11 6	1 20 1
Redemption of Public Debt	0 0 1	0 0 1	0 0 1	0 0 1	0 0 1
Transfer to Public Works Fund—Addition of proceeds of land sales—Act No. 1 of 1914	0 2 3	0 2 0	0 0 4	0 2 15	0 2 10
Local Government					
Empowerment and Grants	0 3 0	0 3 0	0 3 0	0 3 0	0 3 7
Police and Prisons	0 2 0	0 2 0	0 2 1	0 2 0	0 2 7
Hospitals and Charities (including Lunacy)	0 5 3	0 5 2	0 10 1	0 10 0	0 10 5
Departments—					
Treasurer	0 1 0	0 1 11	0 1 1	0 1 0	0 0 11
Chief Secretary and Public Works	0 1 3	0 1 4	0 1 1	0 1 0	0 1 7
Treasurer	0 4 0	0 0 8	0 1 11	0 0 0	0 0 4
Attorney General and Justice	0 1 7	0 0 7	0 0 7	0 0 0	0 0 7
Lands	0 4 10	0 4 5	0 4 3	0 4 1	0 4 1
Public Works	0 4 0	0 4 0	0 4 11	0 4 0	0 4 0
Public Distribution	0 17 0	0 18 0	0 10 11	0 0 0	0 17 1
Labour and Industry	0 1 0	0 0 0	0 0 7	0 0 0	0 0 5
Minist.	0 1 0	0 0 12	0 0 4	0 0 0	0 0 5
Assembly	0 1 7	0 2 1	0 2 4	0 0 2	0 0 3
Local Government Commissioner	0 0 0	0 0 0	0 0 4	0 0 2	0 0 1
All Other Services	0 4 0	0 4 2	0 4 4	0 4 10	0 1 0
Total Governmental	£ 4 0 0	£ 4 4 9	£ 7 8	£ 10 5	£ 10 3
Business Undertakings (Working Expenses and Interest)					
Railways and Tramways	0 3 0	3 0 0	3 10 11	3 10 11	0 0 1
Rydny Harbour Trust	0 4 2	0 4 1	0 5 0	0 5 3	0 5 2
Water Supply and Sewerage	0 5 3	0 0 1	0 10 4	0 11 1	0 12 3
Total Business Undertakings	£ 0 12 12	£ 0 4 1	£ 11 5	£ 10 5	£ 7 4 1
Transfer to Public Works and General Funds	0 0 2	0 0 7	0 0 0	0 0 0	0 0 1
Advances made	0 0 10	0 0 4	0 1 0	0 0 0	0 0 2
Grand Total	£ 9 18 8	£ 10 9 21	£ 11 4 0	£ 11 7 1	£ 10 0 7

CLOSER SETTLEMENT ACCOUNT.

The Closer Settlement Account was established under Act No. 9 of 1906. It is not included in the operations of the Consolidated Revenue Fund, although grants from that fund have formed a considerable portion of its receipts. As its name implies, the moneys of the fund are devoted to the promotion of closer settlement.

The following statement shows the net receipts and expenditure during the financial year ended the 30th June, 1919:—

RECEIPTS.		£
Balance brought forward from previous year	.. .. .	240,722
Assurance Fees—Real Property Act	.. .. .	11,015
Repayments by Settlers	.. .. .	145,329
Repayments on account of Improvement Leases	.. .. .	4,384
		<u>£405,030</u>
EXPENDITURE.		£
Under Real Property Act	.. .. .	76
Purchase of Estates, including Contingent Expenses	.. .. .	189,175
Compensation for Improvement Leases, etc.	.. .. .	142
Interest on Loan Moneys (Recoup to Consolidated Revenue)	.. .. .	19,094
Interest on Closer Settlement Debentures, Act No. 53, 1916	.. .. .	54,386
Purchase Money	.. .. .	489
Balance, 30th June, 1919	.. .. .	141,847
		<u>£405,030</u>

During the period of thirteen years ended 30th June, 1919, fifty three estates had been purchased for closer settlement, exclusive of improvement leases, etc., resumed under Act 74 of 1912, the total area being 1,593,237 acres. Receipts from all sources amounted to £1,139,176, and the expenditure was as follows:—Purchase money, £4,280,174; contingent expenses, £120,537; total, £4,400,711. On the 30th June, 1919, there were 676 purchasers with overdue instalments, the amount outstanding being £144,973.

PUBLIC WORKS ACCOUNT.

The Public Works Account, like the Closer Settlement Account does not form part of the Consolidated Revenue Fund. It was opened in the year 1906, under the authority of the same statute which provided for the Closer Settlement Fund, and it receives two-thirds of the net proceeds of the sales of Crown lands, less 30 per cent., credited to the Consolidated Revenue Fund; the proceeds of land sales under the Public Instruction Act, 1885; and amounts voted from the Consolidated Revenue. Its moneys, like loan proceeds, may be applied in the construction or equipment of public works, but not to the repair or upkeep of such works. The transactions for the year ended the 30th June, 1919, are shown herewith.

Receipts	Amount.	Disbursements	Amount.
Two-thirds of Net Proceeds of Sale of Crown Lands, exclusive of Interest on Purchase Money—less 30 per cent. (Act No. 5, 1902)	£ 369,769	State Business Undertakings— Railways and Tramways Metropolitan Water and Sewerage .. Hunter Water, Water and Sewerage and the Beer Land	£ 2,640 13,095 4,771 20,679
Net Proceeds of Sale of Land, under Section 4, Public Instruction Act of 1885	795	State Industrial Undertakings— Sawmills, Cranes and Gloucester ..	4,411
Transfers from Consolidated Revenue Account	20,000	Water and Drainage Trusts Country Towns Water Supply Public Sewerage and Silt Roads and Bridges Harbours and Rivers Navigation	4,389 984 171,822 54,744 12,097
Net Repayments on account of previous years	13	Balance, 30th June, 1919	493,592 218,584
Balance, 30th June, 1918, brought forward	241,368		
Grand Total	£ 611,875	Grand Total	611,875

EXPENDITURE ON PUBLIC WORKS.

The total expenditure on Public Works during each of the last five years is shown in the following table, distinguishing the amount disbursed from

the Public Works Fund, the Consolidated Revenue Fund, and from Loans. The amounts shown for the Loans and Public Works Funds are exclusive of repayments of notes for previous years, and transfers from the Consolidated Revenue to the Public Works Fund are not included in the expenditure of the former fund.

Year ended 30th June.	Public Works Fund. (Est.)	Consolidated Revenue Fund.	Loans. (Est.)	Total Expenditure.	Per Inhabitant.
	£	£	£	£	£ s. d.
1915	554,237	532,922	8,396,167	8,084,276	4 6 10
1916	546,589	601,315	8,173,164	8,329,506	4 10 8
1917	623,447	576,652	6,867,179	8,056,378	4 6 4
1918	592,676	576,158	4,487,511	5,596,343	2 19 2
1919	493,293	562,164	3,914,887	4,974,343	2 11 8

GENERAL ACCOUNT.

Summarising the foregoing accounts, and adding the transactions on account of loans, it will be found that the aggregate receipts by the State during the year ended 30th June, 1919, amounted to £29,636,551, and the expenditure to £40,734,177. From the receipts of the Consolidated Revenue Account, however, should be deducted the sum of £369,769, transferred to the Public Works Fund under the provisions of Act No. 9 of 1906, while from the expenditure of the Consolidated Revenue Fund and the receipts of the Public Works Fund should be deducted a sum of £200,000, which was specially transferred from the former to the latter fund. Making these adjustments, the net receipts amounted to £29,066,782, and the expenditure to £40,534,177.

The aggregate receipts and expenditure during each of the last five years, after necessary adjustments, were as follow:—

RECEIPTS.

Account.	1914-15.	1915-16.	1916-17.	1917-18.	1918-19.
	£	£	£	£	£
Consolidated Revenue	18,946,227	19,763,518	25,022,097	21,543,742	23,445,196
Chamber Settlement	84,467	156,516	124,699	161,484	164,309
Public Works	560,972	590,478	564,854	623,162	570,573
Railways Loan	316,667	2,384,367	170,357		
General Loans	15,922,452	8,014,354	8,305,269	6,712,777	15,453,503
Total	37,270,765	30,849,093	39,667,260	29,041,165	29,636,551

EXPENDITURE.

Consolidated Revenue	19,516,179	19,533,927	20,790,895	21,619,618	22,223,298
Chamber Settlement	291,005	295,519	45,304	75,279	263,183
Public Works	554,237	546,589	623,447	592,676	493,292
Railways Loan	1,590,977	1,227,962	752,635	397,550	194,666
General Loans	5,942,256	6,979,466	6,150,845	4,199,083	3,732,914
Repayment of Loans	8,864,654	2,814,025	1,467,083	10,767	12,812,794
Total	35,828,409	31,320,478	39,830,209	29,709,293	40,734,177

The Audit Act provides that the Treasurer may arrange with any bank for the transaction of the general banking business of the State. The accounts are kept under the several headings detailed hereunder, and all amounts paid into any of the accounts mentioned are deemed to be "public moneys," and for interest purposes the several accounts are treated as one. The special accounts, which consist of "Supreme Court Moneys," are not controlled by the Audit Act, as they are operated on directly by the officers in charge of the Departments concerned.

The aggregate position of the General Account on the 30th June, 1919, is shown below.

Head of Account.	Ledger Balances on 30th June, 1919.		
	Invested in Securities.	Cash Balances.	Total.
Credit Balances—			
Special Deposits Account—	£	£	£
Government Savings Bank Deposits Account .. ..	.....	2,897,514	2,897,514
" " Advances Deposit Account .. ..	.....	600,000	600,000
State Debt Commissioners' Trust Accounts .. ..	.....	159,407	159,407
" " Deposit Account .. ..	.....	98,319	98,319
Fixed Deposits Account .. ..	.....	201,101	201,101
Sydney Municipal Council Sinking Funds .. ..	.....	2,553	2,553
Industrial Undertakings .. ..	.....	178,697	178,697
Railway Store Advances Account .. ..	.....	42,153	42,153
Broken Hill Water Supply Administration .. ..	.....	218,024	218,024
Treasury Fire Insurance Fund .. ..	.....	188,450	188,450
Other	120,582	1,117,345	1,237,927
Total Special Deposits Account.. Cr. £	120,582	8,853,563	8,774,145
Railways Loan Account .. ..	.....	44,042	44,042
Closer Settlement Account .. ..	.....	141,847	141,847
Public Works Account .. ..	.....	318,684	318,684
Special Accounts—			
Colonial Treasurer's Supreme Court Moneys .. ..	.....	447,140	448,146
Miners' Accident Relief Account	295,000	.....	295,000
London Remittance Account .. ..	.....	539,012	539,012
Total Cr. £	415,582	7,145,194	7,560,776
Less Debit Balances—	£		
Consolidated Revenue Account.. ..	214,545		
General Loan Account	1,963,676		
Loans Expenditure Suspense Account	295,123		
Public Works Expenditure Suspense Account	9,543		
Seed Wheat and Fodder Expenditure Suspense Account	70,980		
Coal Purchase Suspense Account	263,477		
Advances to Farmers' Suspense Account	16,992		
Advances for Hay Suspense Account	637		
Net Credit Balance in Sydney Cr.	415,582	4,280,315	4,095,897
Debit—London Accounts Cr.	.....	539,012	539,012
Net Balance Cr.	415,582	3,741,303	4,156,885

The cash balance on the 30th June, 1919, was £3,741,303, distributed as follows:—

Sydney—Net Credit	£ 4,280,315
London—Net Debit	539,012
	£3,741,303

TAXATION.

Land and Income Taxes, Stamp and Probate Duties, Motor Taxes, Totalisator and Betting Taxes, and License Fees, represent the various forms of State taxation, and they yielded a revenue of £4,083,990 during the year ended 30th June, 1919. In addition, the Commonwealth Government collected in this State taxes amounting to £14,621,096, and local bodies collected in rates and charges, £1,056,194.

The following statement shows in detail the taxation collected in New South Wales by the Commonwealth and State Governments, and the rates and charges levied by local bodies during the five years ended the 30th June, 1919:—

Head of Taxation, or Charge.	1915.	1916.	1917.	1918.	1919.
	£	£	£	£	£
COMMONWEALTH.					
Customs Duties	5,393,560	6,225,832	5,705,757	4,682,456	5,398,654
Excise	1,430,301	1,763,900	1,718,516	1,934,809	2,841,047
Probate and Succession Duties	19,232	257,303	606,311	388,095	310,454
Land Tax	*1,041,219	*1,064,881	*950,000	*1,094,222	*1,036,974
Income Tax ... .. .	...	†1,551,653	†2,239,206	†2,969,932	†4,430,035
War-time Profits Tax ... .. .	...	...	...	†148,250	†467,040
Entertainment Tax ... .. .	...	...	50,090	102,195	136,892
Total, Commonwealth Taxation	£ 7,884,312	10,863,569	11,269,886	11,319,959	14,621,096
STATE.					
Land Tax	3,346	3,190	3,215	2,921	2,800
Income Tax	1,653,923	1,707,403	1,973,477	2,182,117	2,355,243
Stamp and Probate Duties, Stamps	550,609	493,491	507,646	557,233	631,007
Bank-note Composition..	2,153	1,863	1,716	1,556	1,456
Betting Tickets.. .. .	...	27,638	40,849	57,391	54,841
Probate	543,459	642,445	814,813	673,711	574,950
Settlement and Companies' Death Duties	8,170	3,109	11,956	3,722	925
Total, Stamp Duties £	1,104,391	1,168,546	1,376,980	1,293,613	1,263,179
Motor Tax	45,055	54,868	67,044	79,169	90,716
Betting Taxes ... .. .	...	31,330	47,536	59,359	72,290
Totalisator Tax ... .. .	...	...	6,346	82,902	132,403
Licenses	148,955	151,884	154,806	160,520	167,359
Total, State Taxation	£ 2,955,670	3,117,221	3,629,404	3,860,501	4,083,990
LOCAL.					
Wharfrage and Tonnage Rates	277,760	298,612	290,454	316,186	365,033
Fees for Registration of Dogs	17,075	16,851	16,692	17,114	18,311
Municipal Rates—					
City of Sydney	285,024	295,520	525,648	455,040	465,988
" (Land Tax)	170,653	168,013			
Suburban and Country Municipalities	1,026,537	1,074,453	1,118,214	1,186,417	1,241,178
Shire Rates	625,501	626,514	651,437	691,593	729,966
Licenses (City Council)—					
Auctioneers, Hawkers, etc.	1,392	2,106	1,319	1,694	1,578
Water and Sewerage Rates —(Metropolitan and Hunter)	582,161	942,753	965,761	1,058,128	1,234,340
Total, Local Rates and Charges	£ 3,286,103	3,425,431	3,569,525	3,726,172	4,056,194
Grand Total	£ 14,126,085	17,406,221	18,468,815	18,906,632	22,761,280

* Estimated.

† Partly estimated.

Customs and excise duties are gross and do not take into account interstate credits and debits, which are not now available. The figures for municipal and shire rates and city licenses relate to the year ended the 31st December preceding the close of the financial year in which they are included.

TAXATION PER INHABITANT.

The previous figures would be incomplete without information respecting the rates per head of population, which are set forth hereunder:—

Head of Taxation, or Charge.	1915.	1916.	1917.	1918.	1919.
COMMONWEALTH.					
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Customs Duties	2 17 11	3 6 7	3 1 3	2 9 6	2 15 11
Excise " " " " " "	0 15 4	0 18 10	0 18 5	1 0 5	1 9 5
Land Tax	0 11 2	0 11 5	0 10 2	0 11 7	0 10 9
Income Tax ... ..	...	0 18 7	1 4 0	1 11 5	2 5 11
Probate and Succession Duties	0 0 2	0 2 9	0 6 6	0 4 1	0 3 2
Entertainment Tax ... ..	...	...	0 0 6	0 1 1	0 1 5
War-time Profits Tax ... ..	...	...	...	0 1 6	0 4 10
Total, Commonwealth Taxation ... £	4 4 7	5 16 2	6 0 10	5 19 7	7 11 5
STATE.					
Land Tax ... ..	...	...	...	...	...
Income Tax	0 17 9	0 18 3	1 1 2	1 3 2	1 4 5
Stamp and Probate Duties—					
Stamps	0 5 11	0 5 4	0 5 6	0 5 11	0 6 6
Bank-note Composition ... ..	...	...	...	...	...
Betting Tickets ... ..	...	0 0 4	0 0 6	0 0 7	0 0 7
Probate	0 5 11	0 6 10	0 8 9	0 7 2	0 5 11
Settlement and Companies' Death Duties	0 0 1	...	0 0 1	...	...
Total, Stamp Duties £	0 11 11	0 12 6	0 14 10	0 13 8	0 13 0
Motor Tax	0 0 6	0 0 7	0 0 9	0 0 10	0 0 11
Betting Taxes ... ..	...	0 0 4	0 0 6	0 0 7	0 0 9
Totalizator Tax ... ..	...	...	...	0 0 10	0 1 5
Licenses	0 1 7	0 1 8	0 1 8	0 1 9	0 1 9
Total, State Taxation £	1 11 9	1 13 4	1 18 11	2 0 10	2 2 3
LOCAL.					
Wharfage and Tonnage Rates ...	0 3 0	0 3 2	0 3 1	0 3 4	0 3 9
Fees for Registration of Dogs ...	0 0 2	0 0 2	0 0 2	0 0 2	0 0 2
Municipal Rates—					
City of Sydney	0 3 1	0 3 2	0 5 8	0 4 10	0 4 10
" " (Land Tax)	0 1 10	0 1 10			
Suburban and Country Municipalities	0 11 0	0 11 6	0 12 0	0 12 6	0 12 10
Shire Rates	0 6 9	0 6 9	0 7 0	0 7 4	0 7 7
Licenses (City Council)—					
Auctioneers, Hawkers, etc. ...	...	...	...	...	...
Water and Sewerage Rates—					
(Metropolitan and Hunter) ...	0 9 6	0 10 1	0 10 4	0 11 3	0 12 10
Total, Local Rates and Charges £	1 15 4	1 16 8	1 18 3	1 19 5	2 2 0
Grand Total £	7 11 8	9 6 2	9 18 0	9 19 10	11 15 8

New sources of State revenue have been provided during the last five years by the taxation of motor vehicles, racing clubs, bookmakers, betting on racecourses, &c.

In 1914 additional amounts were obtained by the Income Tax Acts of that year, which further increased the taxes, and reduced the exemption from £300 to £250; and since 1915 a super tax of 3d. in the £ has been levied, which has been re-imposed in each succeeding year.

In 1915 a Commonwealth Income Tax Act came into force, under the provisions of which all net incomes above £156, earned during the currency of the year ending 30th June, 1915, were subjected to taxation. In 1916 the amount of this tax was increased by 25 per cent., and the amount of income exempt from taxation was lowered in certain cases to £100; and in 1917 a tax of 10 per cent. was imposed upon cash prizes in lotteries, which was subsequently increased to 13 per cent.

Early in the year 1914 the State Stamp Duties Amendment Act, 1914, became law, which imposed additional stamp duties and considerably increased the probate duties.

State Land Tax.

The land tax of the State is levied on the unimproved value at the rate of 1d. in the £. A sum of £240 is allowed by way of exemption, and where the unimproved value is in excess of that sum, a reduction equal to the exemption is made; but where several blocks of land within the State are held by a person or company, only one amount of £240 may be deducted from the aggregate unimproved value.

Under the Local Government Act, 1906, when the council of a shire or municipality makes and levies a general rate, not less than 1d. in the £ on the unimproved value of land within its area, the land tax ceases to be collected by the State Government. A similar provision was extended to the City of Sydney under the operation of the Sydney Corporation (Amendment) Act, 1908.

The State land tax is now levied, therefore, only on the unincorporated portion of the Western Division.

State Income Tax.

The former Acts relating to income tax were amended by the Income Tax Act, 1911. Under its provisions a tax became payable by all persons other than companies in receipt of £300 per annum, derived from all sources within New South Wales. In the case of companies the total receipts became taxable.

Under amending Acts passed in 1914, further increases were imposed, and the exemption was reduced to £250, no deduction being allowed to companies. A taxpayer is entitled to a deduction of £50 in respect of each child under 18 years of age wholly maintained by him, and insurance and super-annuation premiums up to £50 are exempt.

The tax payable by any company is 1s. in the £ on the taxable income of the company, and the rates per £ for persons other than companies are as follow:—

On taxable income which does not exceed £700...	...	...	...	8d.
" " " exceeds £700 and does not exceed £1,700...	...	...	...	9d.
" " " " £1,700	"	"	£2,700...	10d.
" " " " £2,700	"	"	£4,700...	11d.
" " " " £4,700	"	"	£6,700...	1s.
" " " " £6,700	"	"	£9,700...	1s. 1d.
" " " " £9,700 ... ..	...	...	...	1s. 2d.

In each case an addition of one-third of the tax is made on so much of the income as is derived from the produce of property, and the amounts quoted are exclusive of a surer tax of 3d. in the £.

The exemptions from income-tax are as follow:—

Municipal corporations and other local authorities.

Mutual life assurance societies, and other companies or societies not carrying on business for purposes of profit or gain, except income from mortgages.

Societies registered under the Friendly Societies Act, or under any Act relating to trade unions.

Ecclesiastical, Charitable, and Educational Institutions of a public character, whether supported wholly or partly by grants from the Consolidated Revenue Fund or not.

Income arising or accruing to any person from Government debentures, inscribed stock, and treasury bills.

Dividends derived from shares in a company.

Starr-Bowkett Building Societies.

These exemptions do not extend to the salaries and wages of persons employed by any such corporation, company, society, or institution, whether paid wholly or in part from the revenues thereof.

Revenue from State Land and Income Taxes.

The revenue from land and income taxes since 1896, the year in which they were first imposed, is shown herewith. The amounts exclude refunds rendered necessary through correction of errors by the taxpayer, or through adjustments by the Department, but they include refunds brought about through the income of the year of assessment falling short of the amount of the income of the preceding year on which the assessment was made.

Year.	Land Tax.	Income Tax.	Year.	Land Tax.	Income Tax.
	£	£		£	£
1896	—	27,658	1908	178,809	215,283
1897	139,079	295,537	1909	86,794	202,369
1898	364,131	166,395	1910	8,865	219,977
1899	255,901	178,032	1911	7,433	259,142
1900	286,227	183,460	1912	6,472	644,671
1901	288,369	215,893	1913	5,738	682,625
1902	301,981	203,625	1914	4,692	1,290,870
1903	314,164	214,686	1915	3,346	1,653,923
1904	322,246	193,240	1916	3,180	1,707,403
1905	323,267	195,252	1917	3,216	1,973,477
1906	329,998	260,233	1918	2,921	2,182,117
1907	345,497	283,422	1919	2,500	2,353,243

The fluctuations shown in the first three years are due to the difficulties inseparable from the introduction of a system of direct taxation; the returns for 1899 and subsequent years, however, are under normal conditions, which have varied according to the rates imposed in the case of the income tax, and by the transfer of the land tax to shires and municipalities.

Motor Tax.

Motor vehicles must be registered annually with the Police Department, and on such registration a fee fixed at a minimum of £1 is payable in respect of a motor cycle, motor tricycle, or taxi-cab. On other motor vehicles the license fee ranges between £2 and £20, and the basis upon which it is payable is the "horse-power" of the vehicle. Motor cars used by medical practitioners or clergymen, public motor cars (except taxi-cabs), and trade motor vehicles pay half-rates. Government and ambulance motor vehicles, and those owned by municipalities and shires, or by the City of Sydney, are

exempt from taxation. The total number of motor vehicles licensed was 21,967, and the revenue benefited by the tax during 1918-19 to the extent of £90,716.

Betting Taxes.

The Finance (Taxation) Act, 1915, and amending Acts, imposed taxes on racing clubs and associations, on bookmakers, and on betting tickets.

With regard to the clubs, the taxes are levied on income and fees received from bookmakers. From the beginning of 1916 to 1st September, 1917, the rates ranged from 25 per cent. on racecourses within 40 miles of the General Post Office, Sydney, or 20 miles from the Post Office, Newcastle, to 10 per cent. on courses outside the latter mentioned. From 1st September, 1917, the rates were raised to 50 per cent. and 30 per cent. respectively.

The taxes payable by bookmakers are regulated according to the particular courses where operations are carried on, and vary considerably. The total amount received during the year ended 30th June, 1919, from the betting taxes, was £75,500.

The Act of 1915 further provided for the imposition of a stamp duty on all betting tickets issued by bookmakers, the amount being one penny in the saddling paddock, and one half penny for the other parts of the racecourse. In 1917 these rates were doubled. The revenue derived from this source during the year ended the 30th June, 1919, was £24,841.

Totalisator Tax.

The Government passed the Totalisator Act (No. 75, 1913), which became law on the 29th December, 1914, and which was amended by Act No. 29, 1916. The revenue derived from this source for the first six months during which it was in operation was only £8,345, but the return for the year 1918-19 amounted to £132,403.

All registered racing clubs and associations must establish an approved totalisator. The amount of commission to be deducted from the total amount invested is 10 per cent., with an additional 1 per cent. for a sinking fund to meet the cost of machines. Seven-tenths of the deductions must be paid to the State Treasurer by clubs running for profit, and five-tenths by other clubs, the balance being retained by the clubs for prizes and upkeep of the buildings.

Commonwealth Land Tax.

The first direct taxation by the Federal Government was imposed in 1915, when the Land Tax Act was passed, which levies a graduated tax on the unimproved value of the lands of the Commonwealth. In the case of owners who are not absentees, an amount of £5,000 is exempt, and the rate of tax is 1/25¹/₂ for the first £1 of value in excess of that amount, and increases uniformly to 5d. in the £ on a taxable balance of £75,000, with 6d. in the £ for every £ in excess of that amount. Absentee owners are required to pay 1d. in the £ up to £5,000, with a uniform proportion from 2/6¹/₂ to 6d. for the rest £75,000. On every £ in excess of £80,000, the rate payable is 10d. Amending legislation passed in 1918 imposed an additional tax of 20 per cent. on assessments made for the financial year 1918-19.

Lands exempt from taxation are those owned by a State, municipality, or other public authority, by savings banks, friendly societies, or trade unions, or such as are used solely for religious, charitable, or educational purposes.

The latest available statement issued by the Commonwealth Commissioner of Taxation shows that the land tax payable for New South Wales property by residents for 1918-19 was £1,071,437; for absentees, £18,977; total, £1,090,414. For the whole Commonwealth the corresponding figures were:—Residents, £1,067,230; absentees, £52,080; total, £1,119,310.

The area of country land in New South Wales included in taxable returns for 1915-16 was 62,383,178 acres, or 34.4 per cent. of the taxable land in the Commonwealth.

Commonwealth Income Tax.

In addition to the taxation of incomes imposed by the State, the Commonwealth levies a tax which is payable by residents and absentees in respect of income derived from sources within Australia (which includes Papua).

The exemptions from taxation include the revenues and funds of local governing bodies or public authorities; friendly societies; trade unions and kindred associations; religious, scientific, charitable, or public educational institutions, and interest on certain Commonwealth war loan securities. The Act excludes persons on active service with the forces of Great Britain or of her Allies, as regards income derived from personal exertion, from the date of enlistment to the date of discharge.

Resident taxpayers who are unmarried and have no dependents are allowed an exemption of £100 less £1 for every £5 in excess of £100, and other resident taxpayers are allowed an exemption of £150 less £1 for every £3 by which the income exceeds £150. Absentees are assessed on their total incomes from all sources in Australia.

Special deductions include £30 for every child under 16 years of age maintained by a resident taxpayer; payments up to £50 for friendly society benefits, superannuation, &c.; and up to £50 for life assurance and fidelity guarantee; and gifts over £5 each to public charitable institutions or war relief funds.

The rate of taxation upon incomes derived from personal exertion is $3\frac{1}{2}\frac{1}{2}$ d. per pound sterling up to £7,000, increasing uniformly with each increase of one pound sterling of the taxable income by three eight-hundredths of one penny, until an average rate of 2s. 7 $\frac{1}{2}$ d. per pound is reached at £7,000. Over £7,000 the rate per pound sterling is 5s.

The rate of taxation upon incomes up to £548 derived from property, is stated by the following formula:—

$$R = \left(3 + \frac{I}{181.058} \right) \text{pence,}$$

R being the average rate of tax in pence per pound sterling, and I the taxable income in pounds sterling.

Over the sum of £548, and up to £2,000, the tax increases continuously with the increase of the taxable income till it reaches 33.6 pence per pound sterling on £2,000 10s., thence up to a rate of 8s. for every pound sterling in excess of £6,500.

To these rates are added an additional tax equal to 25 per cent., and a super tax equal to 20 per cent. of the total amount of tax (including additional tax).

The minimum amount of tax payable by unmarried resident taxpayers having no dependents is £1.

Companies pay a flat rate of 8s. 6d. in the £ on such of the taxable incomes as have not been distributed to members or shareholders, and 8d. in the £ on dividends and interest paid to absentees.

Winners of prizes in lotteries pay a tax of 15 per cent.

Commonwealth Estate Duties.

The Estates Assessment Act (No. 22 of 1914) provided for the imposition of a duty on properties of all persons who died after the commencement of the Act. The rates are 1 per cent. where the total value does not exceed £2,000, and an additional one-fifth of a pound for every thousand pounds, or part thereof, in excess of two thousand pounds, the maximum being 15 per cent.

A reduction of two-thirds of the above rates is allowed if the estate is left to the widow, children, or grandchildren of the testator.

Estates of persons dying on active service in the present war, or as the result of injuries or diseases contracted while on active service, are exempt.

Commonwealth Entertainments Tax.

The Entertainments Tax is levied on tickets for admission to almost every class of amusement. The rates are as follow:—Payment for admission not exceeding one shilling, one penny on each ticket, for admission exceeding one shilling, one penny for the first shilling and one half-penny for every extra sixpence or part thereof. Payments not exceeding 3d. for the admission, on Saturday afternoons, of children under 12 years of age are exempt.

Commonwealth War-time Profits Tax.

The Commonwealth War-time Profits Act, 1917, imposes a tax on profits above the pre-war standard, which is taken to be the average profits of any two of the last three pre-war trade years, or 10 per cent. on the capital employed in the business. The rate of tax on war-time profits arising during the year ended 30th June, 1918, was 50 per cent., and in each succeeding year, 75 per cent.

LAND REVENUE OF THE STATE.

The receipts from the sale and occupation of Crown lands are treated as public income. Although the proceeds from occupation, being rent, can be reasonably regarded as an item of revenue, the inclusion of the proceeds of auction, conditional purchase, and other classes of sale as ordinary revenue is open to serious objection. It has been urged in justification of this course that the sums so obtained have enabled the Government to construct works, which enhance the value of the remaining public lands and facilitate settlement, and to endow local bodies, thus enabling them to carry out local improvements. Under the Act, passed in 1906, instituting the Public Works Fund, two-thirds of the net proceeds of the sale of Crown lands, less 20 per cent., equivalent to a clear 53½ per cent., are paid into the fund so created.

The revenue derived from lands may be grouped under three main heads—(a) auction sales and other forms of unconditional sale; (b) conditional sales under the system of deferred payments; (c) rents from pastoral, mining, and other classes of occupation. The receipts from each source in 1910 were £51,473, £978,448, and £827,023 respectively, while Miscellaneous Receipts amounted to £174,999, making a total of £1,961,885. Refunds amounting to £38,478 were made, leaving a net revenue of £1,828,407.

The land policy of the State, though largely connected with public finance, has been fully discussed in that part of this volume dealing with Land Settlement.

RECEIPTS FOR SERVICES RENDERED.

The net amount collected for services rendered by the State, other than for trading concerns, during the year ended 30th June, 1919, was £146,837. The principal sources of revenue were Pilotage, Harbour and Light Rates, &c., £73,941; Registrar-General, Fees, £88,978; Contributions for the Support of Patients in Mental Hospitals, £51,684; and other Fees of Office, £107,001.

GENERAL MISCELLANEOUS RECEIPTS.

All items which cannot be placed under one of the classes mentioned in the previous pages (Taxation, Land Revenue, and Receipts for Services Rendered) are grouped under the heading of "General Miscellaneous Receipts."

The total in 1919 amounted to 2632,000, the principal items being interest on value of properties transferred to the Commonwealth, £174,745; rent, £108,871; interest on advances under Country Towns Water Supply and Sewerage Act, 453,514, and other interest, £104,115.

The balance of the revenue for the year ended 30th June, 1919, consisted of the amount returned by the Commonwealth, £2,380,139, and interest and contributions from Industrial Undertakings (Act No. 27, 1912), £11,581.

EXPENSES OF GENERAL GOVERNMENT AND OF BUSINESS UNDERTAKINGS.

The following statement shows the expenditure classified under two headings—the ordinary expenditure of the General Government, including interest on the capital liability of the services connected therewith, and the expenditure on services practically outside the administration of General Government, including interest on their capital liability. The figures for the ten years ended the 30th June, 1919, and the rates per inhabitant, were as follow:—

Year ended 30th June	Governmental.			Business Undertakings.			Grand Total Expenditure (including Advances).
	General Services.	Interest and Redemptions.	Total.	Railways and Tramways.	Water Supply and Sewerage.	Sydney Harbour Trust.	
	£	£	£	£	£	£	£
1910	6,346,888	1,228,064	7,575,952	6,131,654	536,669	286,212	6,954,535
1911	5,809,784	1,211,103	7,020,887	5,765,942	576,078	307,765	7,649,800
1912	6,379,242	1,023,308	7,402,448	7,733,147	652,819	343,965	8,730,931
1913	6,879,802	1,066,528	7,946,330	8,754,400	888,943	389,237	9,532,579
1914	6,438,271	1,023,303	7,461,574	9,505,926	725,031	366,096	10,598,555
1915	6,830,169	977,123	7,807,292	9,540,159	783,300	383,435	10,708,994
1916	7,130,559	1,054,273	8,184,832	10,107,149	841,278	470,669	11,369,096
1917	7,532,774	1,011,000	8,543,774	10,794,096	934,805	464,565	12,244,001
1918	7,888,877	1,096,548	8,985,425	10,909,924	1,068,413	499,156	12,514,463
1919	8,237,417	982,184	9,219,601	12,370,845	1,132,709	710,782	14,214,336

Expenditure per Inhabitant.

	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1910	3 15 10	0 15 4	4 11 2	3 10 10	0 6 6	0 2 7	4 7 1	8 15 3
1911	3 8 6	0 14 10	4 3 4	4 2 6	0 7 1	0 3 1	4 12 4	8 16 4
1912	3 15 1	0 12 2	4 7 3	4 11 1	0 7 8	0 4 0	5 2 9	9 10 0
1913	3 17 3	0 12 0	4 9 3	4 18 5	0 7 9	0 4 0	5 10 7	9 19 10
1914	3 10 3	0 11 3	4 1 6	5 2 9	0 7 11	0 4 0	5 15 8	9 17 2
1915	3 13 3	0 10 6	4 2 9	5 2 5	0 8 5	0 4 1	5 18 12	9 18 8
1916	3 16 2	0 11 5	4 7 7	5 3 2	0 9 0	0 4 0	6 1 8	10 3 3
1917	4 0 9	0 10 10	4 11 7	5 12 11	0 10 6	0 5 0	6 11 3	11 3 0
1918	4 3 5	0 11 8	4 15 1	5 15 11	0 11 3	0 5 6	6 12 0	11 7 7
1919	4 4 7	0 10 11	4 15 8	6 2 1	0 11 9	0 5 3	7 5 1	12 0 7

Under the head of general services are included public health, education, police, and all other civil and legal expenditure, also the cost of public works paid out of the ordinary revenue, transfers to Public Works Fund, advances, etc.

INDUSTRIAL UNDERTAKINGS OF THE STATE.

In addition to the business undertakings, viz. Railways, Tramways, Harbour Trust, Water Supply and Sewerage, the State controls various industrial undertakings, the revenue and expenditure of which do not form part of the Consolidated Revenue Fund, but are principally included under the Special Deposits Fund.

The following table shows the transactions of these undertakings during the year ended 30th June, 1919, and the total capital expenditure at that date.

Service.	Total Capital Expenditure From Loans, Public Works Fund, and Consolidated Revenue to 30th June, 1919.	Expenditure, 1918.				Net Revenue or Expenditure.
		Revenue, 1918.	Working Expenses, including Rates and Taxes.	Interest, Sinking Fund, Depreciation, Insurance, and Reserves.	Total.	
Industrial Undertakings—						
Bribery	£ 11,901	£ 7,440	£ 14,000	£ 1,200	£ 23,640	£ 971
Blue Metal Quarries—Glasgow and Port Galloway	95,701	102,699	100,700	22,074	225,473	1,064
Embroidery—Hemel Hempstead, Herts.	22,114	20,210	20,200	20,100	60,710	9,200
Building Construction	11,000	113,987	709,047	800	1,824,834	1,699
Clothing Factory	11,720	44,289	42,340	840	88,289	(-) 43
Drug Depot	140	22,700	22,211	74	45,685	2,200
Glass Pipe Works	10,000	30,467	18,700	4,300	53,467	4,441
Water Works	8,100	20,200	10,177	1,940	31,517	1,221
Fewer Glass—Cher's Point	20,470	7,000	4,120	4,300	35,890	—
Sewerage—Glasgow and Glasgow City	40,120	44,700	20,000	7,700	112,520	2,200
Stone Quarry—Marble	12,000	24,107	22,000	1,000	49,107	100
Timber Yard, &c.—Cher's Point	77,300	220,400	401,000	14,400	1,012,100	(-) 20,200
Tramway	170,000	20,000	18,500	11,400	57,900	(-) 10,000
Total Industrial Undertakings	711,341	1,070,850	995,000	80,200	3,027,407	(-) 90,800
Other Services—						
Housing Board	179,000	15,000	4,700	7,700	202,400	7,000
Metropolitan Water Industry Obtaining Mill, Belmont Act —The Works	1,000,000	400,000	500,000	14,000	1,914,000	40,000
Total Other Services	1,179,000	555,000	504,700	21,700	2,117,400	47,000
Grand Total	£ 1,890,341	£ 1,625,850	£ 1,500,000	£ 101,900	£ 5,144,807	(-) 43,800

(-) denotes net expenditure.

The Newcastle Dockyard has not been proclaimed an industrial undertaking, and consequently does not appear in the table, as details regarding its operations cannot be obtained. With regard to the Murrumbidgee Irrigation Area, this undertaking is of a national character, and it has therefore been excluded.

The following table shows the transactions of all the State industrial undertakings during the years 1912-19, that is to say, excluding the business undertakings (Railways, &c.) and the Murrumbidgee Irrigation Area.

Year ended 30th June.	Capital Expenditure.	Revenue.	Expenditure.			Net Revenue or Expenditure.	Proportion of Net Revenue to Capital Expenditure.
			Working Expenses.	Interest, Sinking Fund, Depreciation, and Reserves.	Total.		
1912	£ 1,310,412	£ 71,300	£ 39,090	£ 40,215	£ 79,305	(-) 7,390	(-) 0.50
1913	1,497,072	208,571	220,140	62,115	272,255	(-) 4,722	(-) 0.22
1914	1,694,000	591,044	521,890	72,000	593,890	(-) 2,044	(-) 0.12
1915	1,975,251	853,434	750,494	92,019	842,513	(-) 2,301	(-) 0.12
1916	2,905,240	1,049,212	902,002	147,210	1,049,212	(-) 2,000	(-) 0.10
1917	3,421,887	1,200,395	1,083,776	136,619	1,220,395	(+) 41,544	(+) 1.22
1918	3,731,630	1,400,425	1,200,739	199,686	1,400,425	(-) 11,550	(-) 0.24
1919	3,013,020	1,475,025	1,310,020	165,005	1,475,025	(-) 19,640	(-) 0.55

(-) denotes net expenditure.

The capital expenditure fluctuated during the last few years owing to the establishment of new industries, and on account of adjustments made by a Committee appointed for the purpose of determining the values.

TRUST FUNDS AND SPECIAL DEPOSITS.

The Trust Funds and Special Deposits form a very important division of the public finances, not only from the nature and volume of the transactions, but also by reason of the manner in which they are used in connection with the general finances of the State. The following table shows the amount of these funds at 30th June in each year of the last decade:—

At 30 JUNE.	Amount.	At 30 JUNE.	Amount.	At 30 JUNE.	Amount.
1910	£ 2,745,150	1914	£ 2,341,000	1917	£ 2,619,703
1911	4,722,913	1915	2,758,715	1918	2,857,609
1912	5,547,741	1916	3,001,471	1919	3,222,291
1913	6,134,067				

The trust funds are divided into two classes, viz.—Special Deposits Account and Special Accounts. The total of all moneys under these headings on the 30th June, 1919, was £5,222,291, viz., the Special Deposits Account, £3,774,145, and the Special Accounts £1,448,146. The amount at the credit of each account is shown in the following table.

Special Deposits Account.

£	£
Government Savings Bank of New South Wales Deposit Account	2,397,314
Government Savings Bank of New South Wales Advances Deposit Account	695,960
State Debt Constructionary Deposit Account	94,319
State Debt D.D.-1 Accounts	148,491
Public Works and Railway Construction Stores Advances Account	214,115
Fixed Deposits—Account	795,500
Industrial Undertakings	178,897
Sundry Deposits Account	652,526
Municipal Council of Sydney, Sinking Funds	2,322
Government Railways Superannuation Account	14,480
Housing Fund	20,641
Revenue Suspense Account	21,544
Broken Hill Water Supply Account	218,054
Forestry Accounts Act No. 22 of 1916	11,540
Treasury Guarantee Fund	23,718
Treasury Fire Insurance Fund	130,470
Indian Fund	10,000
Water and Drainage Loan Redemption Fund	57,229
Union Trust—Company of Australia, Limited	20,000
Government Dock, Newcastle—Store Advances Account	55,429
Unclaimed Salaries and Wages Account	31,054
Public Trustee—Unclaimed Balances	50,500
Kurten Griffiths & Co.—Store Advances Account	17,183
Treasury Workmen's Compensation Fund	31,510
Commonwealth Advances re Settlement of Returned Soldiers	20,000
Metropolitan Water and Sewerage Board	10,035
Other Accounts	22,200
Total	£3,774,145

Special Accounts.

£	£
Master-in-Equity Account	36,793
Master-in-Law Account	21,062
Public Trustee Account	390,115
Prothonotary Account	4,900
Registrar of Probates' Account	20,361
Total	448,146

Grand Total, Special Deposits and Special Accounts, £5,222,291.

These Funds are of great assistance to the Consolidated Revenue, and they form a strong reserve on which the Government may draw in time of need. The great bulk of the funds bear interest, whether invested or not, and the power to use them enables the Government to effect a large saving in the interest which might otherwise be charged for accommodation from the banks.

Of the total sum of £6,222,291 at the credit of the Special Deposits and the Special Accounts on the 30th June, 1919, £120,582 was invested in securities; £4,527,578 was uninvested, but used in Advances and on Public Account at interest, the rates allowed ranging from 1 to 4½ per cent.: the remainder, £1,574,131, was similarly used, but without any interest allowance.

The rate of interest paid by the Treasurer on the 30th June, 1919, was 3 per cent., with the following exceptions:—

Crown Leases Security Deposit Account	4 per cent.
Government Savings Bank of N.S.W. Deposit Account ...	4 and 4½ „
„ „ Advances Deposit Account ...	4 „
Fixed Deposits Account	1 to 4 „
State Debt Commissioner's Trust Accounts, Municipal Council of Sydney Sinking Fund (50 Vic., No. 13) ...	4 „
State Debt Commissioners' Deposit Account	4½ „
Master-in-Equity and Master-in-Lunacy Accounts	1 „

On the 30th June, 1919, the trust funds in the custody of the State-Treasurer were held as follow:—

In Banks—	£
Special Deposits Account	5,653,563
Special Accounts	448,146
New South Wales Funded Stock	22,500
Treasury Bills	41,000
Commonwealth Inscribed Stock	6,000
Fixed Deposits	18,395
Miscellaneous Securities	32,687
Total	£6,222,291

The total amount of interest received by the Treasury during the year ended June, 1919, on bank deposits and other temporary investments of public moneys was £31,594.

LOAN APPROPRIATIONS.

All items of expenditure to be met by loan are authorised under an Appropriation Act, in the same manner as the ordinary expenditure chargeable to the general revenue. There is a restriction on the expenditure of money, whether from loans or from revenue, in the provisions of the Public Works Act. Under that Act the question of constructing all works estimated to cost more than £20,000, except those connected with the maintenance of railways, is referred by resolution of the Legislative Assembly to the Parliamentary Standing Committee appointed during the first session of each parliament. The Committee investigates and reports to Parliament, and the Assembly decides whether it is expedient to carry out the proposed work, and if the decision be favourable, a Bill based thereon must be passed before the authorisation is absolute.

The loan appropriations, in quinquennial periods since 1873, are shown in the following table, the amounts proposed to be expended on public works being distinguished from those required for the redemption of previous loans:—

Period.	Amount appropriated—		
	For Public Works and Services.	For Redemption of Loans.	Total.
	£	£	£
1873-9	10,708,768	—	10,708,768
1880-4	26,457,803	—	26,457,803
1885-9	11,123,304	2,113,800	13,237,104
1890-4	15,927,993	2,910,800	18,838,793
1895-9	13,651,016	2,275,200	15,926,216
1900-4	17,090,893	2,811,012	20,532,505
1905-9	10,509,593	7,480,034	17,989,627
1910-14	27,049,240	2,545,350	29,594,590
1915	7,560,792	—	7,560,792
1916	5,851,480	—	5,851,480
1917	3,992,130	—	3,992,130
1918	3,725,100	—	3,725,100
1919	13,110,400	—	13,110,400

RAILWAYS LOAN ACCOUNT.

The Railways Loan Account, which was opened under the authority of Act No. 4, 1910, together with subsequent Acts passed in the years 1913 and 1915, increased to £3,000,000 the maximum amount which could be borrowed. This account is applied to meet the cost of duplicating portions of main trunk lines, constructing deviation works, and providing additional rolling-stock.

The following were the transactions during the year 1918-19.

Receipts—	£	Expenditure—	£
Balance brought forward from 1917-18	238,708	Duplications—	
Repayment to Votes on Account of Previous Years	7,246	Southern Line	155,494
		South Coast Line	40,418
			201,912
		Credit Balance Carried Forward to 1919-20	44,042
	<u>£245,954</u>		<u>£245,954</u>

During the total period of nine years ended 30th June, 1919, the gross receipts were £8,342,771, viz. —Proceeds of loans, £7,959,731; repayment to credit of votes, £283,040; and advance from Consolidated Revenue, £100,000. The expenditure during the same period was £8,298,729, made up as follows:—Main Suburban line, £33,522; Southern, £3,454,235; Western, £1,182,028; Northern, £1,034,266; South Coast, £1,735,411; rolling-stock, £560,890; repayment to Consolidated Revenue, £100,000; and redemption of loans, £170,357. The credit balance carried forward is therefore £44,042, as shown above.

LOAN ACCOUNTS.

The following figures show the amount of loans raised from the commencement of the Loan Account, in 1855, to the 30th June, 1919, and the

proceeds available for expenditure, including the moneys credited to the Railways Loan Account:—

Treasury Bills, Debentures, Inscribed and Funded Stock sold to the 30th June, 1919	£222,340,928
Discount, Interest, Bonus, and Charges	5,869,373
Net amount raised	£216,471,555
Less Amount of Proceeds included in Public Debt, but not credited to Loan Accounts	5,107,863
Net amount available for Public Works, etc.	£211,363,692

The foregoing statement shows that a sum of £222,340,928 had been raised by loans to the 30th June, 1919, in connection with which the discount, interest, bonus, and other charges amounted to £5,869,373, leaving £216,471,555 available for expenditure. The effective value of the last cited amount was reduced by the sum of £5,107,863, and the net amount available for public works, &c., was, therefore, £211,363,692.

On the 30th June, 1919, an amount of £75,166,802 had been redeemed, of which £9,664,105 was a charge on the Consolidated Revenue, leaving £147,174,536 outstanding at the close of the last financial year. The aggregate amount of interest actually paid by the State on loans to the 30th June, 1919, was £109,834,908, the liability during 1918-19 being £6,037,496.

The services to which the available sum of £211,363,692 was applied are shown in the following table. The redemptions are included in the total, as although they are not items of expenditure on works and services, their inclusion is necessary to account fully for the total expenditure.

Reproductive Works:—	£	£
Railways...	81,377,841	
Tramways	9,027,197	
Water Supply	12,021,981	
Sewerage...	8,356,778	
Sydney Harbour Trust	8,288,426	
Darling Harbour Resumptions	1,310,614	
Industrial Undertakings	738,698	
Housing Fund	203,000	
Partly Productive Works:—		121,324,535
Conservation of Water, Artesian Boring, etc.	5,590,703	
Harbours and Rivers—Navigation	6,162,344	
Roads, Bridges, and Punts	1,834,546	
		13,587,593
Public Buildings and Sites	8,280,041	
Immigration	569,930	
Public Works in Queensland prior to separation	49,855	
Commonwealth Services—		8,908,826
Construction of Telegraph and Telephone Lines	1,297,582	
Post and Telegraph Offices	464,262	
Fortifications and Defence Works	1,457,536	
Lighthouses	144,288	
Customs Buildings	48,850	
Quarantine Buildings	18,099	
Government Dockyard—Cockatoo Island	502,988	
Naval Victualling Stores—Darling Harbour	26,450	
		3,960,085
Redemptions:—		£147,781,039
Loans repaid under various Acts	37,970,713	
Treasury Bills for Loan Services	27,531,574	
		65,502,287
		£213,283,326
Add Credit Balance of Railways Loan Account		44,042
		£213,327,368
Less Debit Balance, General Loan Account		1,963,676
Total		£211,363,692

The sum actually expended from loans on public works and services was £147,781,839, and an analysis shows that the proportional allocation of this amount was as follows:—Reproductive works, 82 per cent.; partly productive works, 9 per cent.; other, 6 per cent.; Commonwealth services, 3 per cent.

The loan expenditure on account of various services during each of the past five years is shown below:—

Head of Service.	1915.	1916.	1917.	1918.	1919.
	£	£	£	£	£
Railways	4,394,318	4,787,609	2,705,422	2,294,547	1,441,103
Tramways... ..	296,590	195,963	126,387	117,561	102,732
Water Supply	621,021	790,693	731,211	691,006	515,994
Sewerage	281,695	369,593	348,918	267,020	182,946
Water Conservation and Irriga- tion	362,544	355,078	355,420	239,776	329,779
Harbours, Wharves and Docks	684,368	1,045,741	1,027,444	451,844	290,329
Rivers ... ..	...	8,593	10,697	452	7,040
Dredges, Tugs, Pontoons, &c.	1,206	957	5,068	3,768	...
Roads and Bridges	8,609	421	5,428	22,374	12,346
Public Works, Buildings, &c.— Public Abattoirs, Homebush	315,510	201,669	249,435	152,892	16,329
Other	100,729	44,071	72,074	67,561	55,926
Pastures Protection Boards, for Wire-netting ... ..	...	...	...	...	7,206
Clearing Crown Lands and Pre- paring Farms ... ..	...	...	...	72,154	2,643
Grain Elevator and Bulk Wheat Handling ... ..	...	...	...	40,797	323,375
Promotion of Agriculture, Clear- ing Land for Wheat growing, &c.	48,188	28,856	60,008	7,506	7,329
Industrial Undertakings, includ- ing Housing Fund	115,613	61,229	87,856	65,564	43,429
Shires and Municipalities, for Works	17,310	...	...	...	...
Advances to Settlers—Wheat- growing	6,028	48,683	...	...	6,609
Advances to Settlers—Financial Assistance ... ..	...	12,446	...	...	...
Site of Horse-breeding Farm ... ..	...	53,389	1,956	2,504	2,150
Animal Industry—Depôts, &c. ... ..	...	...	...	...	7,134
Returned Soldiers' Settlement, &c. ... ..	...	...	65,328	236,654	417,967
Advances in connection with Agreement with Norton Graf- fiths & Co., including Stores, &c. ... ..	...	141,175	38,820	...	...
Mines—Great Cobar, Ltd.—Cer- tificates taken up by Govern- ment ... ..	...	40,000	...	...	...
Gross Expenditure... ..	7,355,617	8,226,226	6,916,261	4,528,077	2,975,046
Less Excess Repayments to Credit of Votes— Rivers	433	...	...	...	...
Dredges, Tugs, Pontoons, &c.	...	...	...	...	663
Public Instruction—School Buildings	21,103	17,532	25,156	25,000	25,000
Clear Settlements	300,000	...	...	...	...
Pastures Protection Boards, for Wire-netting	174	5,733	3,918	2,452	...
Public Works Fund— Amount received	39,000	19,500	19,500	19,500	19,500

Head of Service.	1915.	1916.	1917.	1918.	1919.
	£	£	£	£	£
Shires and Municipalities, for Works ... ..	..	10,457	1,322	7,364	5,743
Advances to Settlers— Wheat-growing ... ..	...	...	2,747	2,384	...
Advances to Settlers— Financial Aid ... ..	...	...	1,457	2,107	1,687
Advances in connection with Norton Griffiths & Co. ...	...	...	...	71,759	3,584
Mines—Great Cobar, Ltd.— Certificates taken up by Government ... ..	...	...	...	40,000	...
Total Excess Repayments	360,710	53,222	54,102	170,566	56,159
Net Expenditure on Public Works, etc.	£ 6,996,107	8,173,104	6,862,179	4,487,511	3,918,887
Loans repaid by New Loans (in- cluding Treasury Bills) ...	8,864,654	2,814,025	1,467,083	10,767	12,813,724
Total	£ 15,860,761	10,987,129	8,329,262	4,498,278	16,732,611

It will be seen that the proceeds of loans have been judiciously utilised, as most of the works are self-supporting, and have assisted materially in developing the State's resources, enhancing largely the value of the public estate.

The loan expenditure, exclusive of redemptions, conversions, and renewals, is shown herewith for 1842-1890, in decennial periods from 1891 to 1910, and from 1911 to 1919.

Years.	During Each Period.		At the End of Each Period.	
	Amount.	Per Inhabitant.	Amount.	Per Inhabitant.
1842-1890	£	£ s. d.	£ 43,955,551	£ s. d. 39 3 7
1891-1900	20,515,704	16 6 8	64,471,255	47 12 1
1901-1910	26,876,468	18 0 4	91,347,723	56 11 11
1911-1919	56,433,316	31 1 0	147,781,039	75 7 6

The total expenditure from loans now exceeds the public debt by £606,503. As a general rule, loans are renewed on maturity, and while the total actual expenditure increases each year, the outstanding debt may be increased or reduced according to the operations necessary to the flotation or redemption of loans.

PUBLIC DEBT.

The public debt outstanding at the end of each quinquennial period and at the close of the financial year 1918-19, is given in the following table.

Year.	Amount.	Year.	Amount.	Year.	Amount.
	£		£		£
1842	49,500	1870	9,681,130	1900	65,332,993
1845	97,900	1875	11,470,637	1905	82,321,998
1850	132,500	1880	14,903,919	1910	92,525,095
1855	1,000,800	1885	35,564,259	1915	127,735,405
1860	3,830,230	1890	48,383,833	1919	147,174,536
1865	5,749,630	1895	58,220,933		

The following table shows the position of the public debt as at 30th June, 1910, and annually thereafter. The amount at 30th June, 1918, includes £10,076,000 floated in February, 1918, being part of a loan of £12,648,477 for redemptions due 1st September, 1918, which will explain the difference in the amount per inhabitant for the years 1917 to 1919.

As at 30th June.	Authorised to date.	Raised.	Redeemed.			Public Debt on 30th June.	
			From Consolidated Revenue and Sinking Fund.	From General Loan Account, including Renewals.	Total.	Total.	Per Inhabitant.
	£	£	£	£	£	£	£ s. d.
1910	146,305,227	132,465,258	8,231,066	31,709,097	39,940,163	92,525,095	57 6 6
1911	153,188,227	138,797,372	8,475,887	34,797,559	43,273,446	95,523,926	57 9 9
1912	159,512,197	143,662,006	8,775,887	34,833,484	43,609,371	100,052,635	57 10 9
1913	169,186,717	154,464,714	0,519,705	38,774,262	48,293,967	106,170,747	58 13 9
1914	183,018,817	165,746,770	0,519,705	39,532,034	40,051,739	116,695,031	62 16 9
1915	207,445,569	185,651,798	0,519,705	48,396,688	57,916,393	127,735,405	68 7 8
1916	220,603,887	191,244,436	0,519,705	51,210,713	60,730,418	130,514,018	69 19 8
1917	228,636,874	200,340,248	9,524,105	52,677,796	62,201,901	138,133,317	73 19 5
1918	245,493,790	214,797,361	9,524,105	52,688,563	62,212,668	* 152,584,833	79 18 11
1919	249,677,612	222,340,928	9,664,105	65,592,287	75,166,392	147,174,536	75 1 4

* Includes £10,076,000 raised in 1918, and held to meet loans due in next financial year.

In former years the State Government depended largely upon the London money market for the flotation of its loans, but during recent times and until the outbreak of the War in August, 1914, the requirements were met to a much greater extent locally, as will be seen from the following statement, which shows the public debt on each register for quinquennial periods from 1900 to 1915, and for the year 1919. Stocks may be transferred at any time from London to Sydney. The amount registered in Sydney includes £7,400,000 advanced by the Commonwealth Government, which is repayable not later than 1925, and bears interest at 4½ per cent. approximately.

Year Ended 30th June.	Registered in London.		Registered in Sydney.		Total Public Debt.
	Amount.	Proportion to Total Debt.	Amount.	Proportion to Total Debt.	
	£	per cent.	£	per cent.	£
1900	55,060,650	84.28	10,272,343	15.72	65,332,993
1905	64,007,550	77.75	18,314,448	22.25	82,321,998
1910	67,154,805	72.58	25,370,290	27.42	92,525,095
1915	86,167,288	67.46	41,568,117	32.54	127,735,405
1919	98,989,892	67.26	48,184,644	32.74	147,174,536

From the foregoing figures it will be noted that the amount of liabilities held locally at the close of the financial year 1918-19 amounted to slightly less than one-third of the total indebtedness.

The annual payments under each head for interest and expenses of the public debt since 1910 are shown below:—

Year ended 30th June.	Interest.	Re-demptions.	Expenses Connected With Management of Inscribed Stock.	Commission Paid to Financial Agents in England and New South Wales.	Total Interest and Charges paid.		Average Rate of Interest Payable on Debt.
					Total.	Per Inhabitant.	
	£	£	£	£	£	£ s. d.	per cent.
1910	3,117,472	421,034	18,894	4,621	3,562,021	2 4 4	3.51
1911	3,227,315	409,319	19,095	4,159	3,659,918	2 4 8	3.52
1912	3,430,096	436,921	19,088	2,918	3,889,023	2 5 11	3.46
1913	2,516,233	450,602	19,990	1,511	3,988,336	2 4 10	3.54
1914	3,881,011	5,632	21,171	1,039	3,908,853	2 2 8	3.49
1915	4,125,600	5,688	21,394	1,492	4,154,174	2 4 7	3.60
1916	4,552,765	6,504	21,705	2,117	4,583,091	2 9 2	3.71
1917	4,914,211	6,868	22,297	1,991	4,945,367	2 13 1	3.81
1918	5,188,754	6,819	22,746	1,988	5,220,307	2 15 2	3.98
1919	5,462,991	6,833	20,861	2,382	5,493,067	2 16 11	4.10

The public debt is partly funded and partly unfunded, the former comprising debentures and inscribed and funded stocks; and Treasury bills constituting the latter. The amounts outstanding, and the annual interest payable on the 30th June, 1919, were as follow:—

Description of Stock	Amount Outstanding, 30th June, 1919.	Annual Interest Payable.
	£	£
Debentures—		
Matured	3,550	...
Still bearing Interest	14,701,200	686,575
Inscribed and Funded Stock—		
Matured	2,250	...
Still bearing Interest	120,923,116	4,854,026
Total, Funded Debt...	£135,630,116	£5,540,601
Treasury Bills—		
For Public Works	9,639,533	410,583
Renewals	1,904,837	86,312
Total, Unfunded Debt ...	£11,544,420	£496,895
Total, Public Debt	£147,174,536	£6,037,496

The following table shows the total outstanding at each rate of interest, and the annual amount payable thereon.

Rate per cent.	Amount of Stock and Bills.	Annual Interest payable.
	£	£
5½	16,076,000	924,370
5¼	6,000,000	330,000
5½	2,786,600	146,596
5	6,667,775	334,290
4½	12,034,319	541,547
4¼	7,400,000	305,250
4	28,148,491	1,165,740
3½	15,514,099	500,779
3¼	37,480,121	1,311,804
3	17,047,070	511,413
Total	£143,174,536	£6,087,406

The total debt shown in the foregoing table includes £3,900 not bearing interest, viz.:—£850 floated at 5 per cent. and £3,050 at 4 per cent. It should also be noted that the rate given for the £7,400,000 outstanding, at 4½ per cent., is approximate only, as it has not been definitely fixed.

DATES OF MATURITY.

The dates of repayment extend to 1962, and the sums falling due for redemption vary considerably, as detailed in the following table, which shows the due dates and the amount repayable in London and in Sydney—

Due Date	Registered in—		Total
	London	Sydney.	
	£	£	£
Overdue	2,780	2,000	4,780
1917	—	618,667	618,667
1918	—	6,782,333	6,782,333
1919	—	11,542,895	11,542,895
1920	1,723,200	4,009,930	5,733,130
1921	970,900	5,449,043	6,419,943
1922	6,900,000	229,400	7,129,400
1923	1,999,300	6,091,182	8,090,482
1924	16,432,543	323,250	16,755,793
1925	—	311,799	311,799
1926	—	415,000	415,000
1927	11,000,000	4,180,784	15,180,784
1928	—	36,000	36,000
1929	—	4,000	4,000
1932	13,064,000	12,000	13,076,000
1933	9,547,122	120,169	9,667,291
1935	12,474,165	75,835	12,550,000
1950	12,068,500	141,200	12,209,700
1962	10,500,000	—	10,500,000
Intermittent	1,300	321,690	322,990
Indefinite	—	7,370,158	7,370,158
Total	£ 98,898,892	45,154,544	144,053,436

The latest due date has been given in the above table, but in several cases the loans may be redeemed earlier, subject to the Government giving notice to that effect, at periods ranging from three to twelve months. The amounts shown as due in 1917 and in 1925 represent Treasury Bills, which, by arrangement with the Commonwealth Government, were extended to five

years after the end of the war, but not later than 1925; and those stated as "Indefinite" represent matured loans due in 1912, which may be paid off at any time at the option of the Government, on twelve months' notice.

COST OF RAISING LOANS.

The charges incidental to the issue of loans in London are heavy. Operations are conducted by the Bank of England and by the London and Westminster Bank. The former charges $\frac{1}{2}$ per cent. per £100 of stock on all loan issues, and £350 per million annually for the inscription and management of stock, including the payment of the half-yearly dividends; and the latter charges $\frac{1}{4}$ per cent. and £150 per million respectively for similar services. In Sydney the Bank of New South Wales and the Commercial Banking Company of Sydney (Limited) transact all Government banking business. The former acts as the financial agent for the State in Victoria, and undertakes the payment of the half-yearly dividends on local debentures and funded stock. The Treasury directly conducts the operations connected with the issue of New South Wales Funderd Stock and Treasury bills, and no local loan has been underwritten.

The following statement shows the charges for the negotiation of loans floated during the period from 1909-10 to 1918-19, inclusive of the accrued interest and bonuses allowed to investors. Local Debentures and Treasury bills have not been included, as those disposed of in Sydney are usually sold at par, and little expenditure, if any, is incurred, while the securities under these headings negotiated in London are generally for short periods pending the flotation of long-dated loans.

Year when Floated.	Amount of Principal.	Gross Proceeds.	Charges, etc.					Expenses per £100 of Gross Proceeds.
			Stamp Duty, Postage, and other Expenses.	Bank Commission.	Paid to Investors—Interest Bonus and Discount Bonus.	Brokerage and Underwriting.	Total.	
	£	£	£	£	£	£	£	£ s. d.
Issued (in London) as Debentures.								
1913	4,500,000	4,425,000	5,625	11,250	4,360	68,743	89,978	2 0 8
1915	*7,000,000	6,965,000	23,310	17,500	9,015	106,553	156,378	2 4
1917	2,500,000	2,500,000	3,095	6,250	14,399	38,650	62,384	2 9 11
1918	*6,000,000	5,925,000	30,895	15,000	15,598	88,749	150,242	2 10 9
	*13,076,000	13,076,000	11,240	32,690	25,621	184,278	203,829	1 11 2
1919	*3,000,000	2,935,000	2,385	7,500	7,881	44,386	62,662	2 2 0
Issued (in Sydney) as Funderd Stock.								
1910	3,473,523	3,473,523				4,927	4,927	0 2 19
1911	6,332,113	6,332,113				6,311	6,311	0 2 2
1912	2,864,634	2,864,634				2,327	2,327	0 1 8
1913	2,552,709	2,552,709				4,622	4,622	0 3 7
1914	532,056	532,056		Nil		1,300	1,300	0 4 11
1917	1,770,154	1,770,154				2,110	2,110	0 4 8
1918	979,313	979,313				....	....	....
1919	1,492,367	1,492,367				....	....	....
Issued (in London) as Inscribed Stock.								
1910	2,750,000	2,667,500	17,187	6,875	22,154	42,131	88,347	3 6 3
1913	3,000,000	2,985,000	18,750	7,500	9,334	48,220	81,804	2 14 10
1914	7,500,000	7,312,500	46,875	18,750	55,473	115,270	236,368	3 3 1

* Floated as Debentures, but portion subsequently converted into Stock.

The Sydney sales take place at the Treasury on the basis of £100 cash for every £100 of stock, and a commission of $\frac{1}{2}$ per cent. is allowed when a broker is engaged. The average cost of negotiation for all issues in Sydney since 1905 did not exceed 2s. 11d. per cent., whilst the charges for London loans, with the additional $\frac{1}{4}$ per cent. for underwriting, averaged £2 6s. 5d.

STOCK QUOTATIONS, 1918-19.

The average market prices of stock in Sydney are shown in the following table for each month of the year 1918-19, the figures being taken from the *Sydney Stock and Share List*.

Sydney—Average Market Price.

Date.	4½ per cent. Stock.	4 per cent. Stock.	3½ per cent. Stock.	3¼ per cent. Stock.	3 per cent. Stock.	Date.	4½ per cent. Stock.	4 per cent. Stock.	3½ per cent. Stock.	3 per cent. Stock.	3 per cent. Stock.
1918.	£	£	£	£	£	1919.	£	£	£	£	£
July ...	*	93½	*	91½	59½	January	*	*	98½	93½	*
August..	*	*	98	93	59½	Feb. ...	*	*	*	*	*
Sept. ...	*	93½	98	91	59½	March..	*	*	*	*	*
October.	*	*	*	*	61	April ...	*	*	*	*	*
Nov. ...	*	93	98½	94	60½	May ...	*	*	*	94½	58½
Dec.....	*	*	98½	93½	59½	June ...	*	*	*	*	58½

* No quotations.

The only London prices available for the twelve months ended 30th June, 1919, as shown in the *Economist*, relate to the 4½ per cent. stock, which was quoted at 92½ in July, 1918, and rose to 95½ in December of that year; but a decline to 92 was shown in June, 1919.

REDEMPTIONS AND SINKING FUNDS.

Under the provisions of the State Debt and Sinking Fund Act, 1904, a board called the "State Debt Commissioners" was constituted, the members of which were the Treasurer, the Chief Justice, the Speaker of the Legislative Assembly, and the Under Secretary for Finance and Trade, to administer, from the 1st July, 1905, various trust accounts and balances at credit of certain special accounts in connection with the Treasury Bills Deficiency Acts of 1895, 1900, and 1901, the Railway Loan Redemption Act of 1899, and the sinking funds created by various loan Acts passed from 1894 to 1899. The Act provided for a general sinking fund, and an annual appropriation of £350,000 was paid to the credit of the fund, together with such further amount as Parliament had to provide. Under the Treasury Bills Deficiency Act, 1905, an additional £50,000 was required to be transferred to the fund whenever the operations of a financial year left a sufficiently large surplus to enable this to be done. The Commissioners applied the amount at the credit of the fund in purchasing, redeeming, or paying-off Government stock, debentures, or Treasury bills; and they were empowered to invest the moneys under the Act. The State Debt and Sinking Fund (Amendment) Act, 1914, provided that where at the close of a year there was a deficiency on the Consolidated Revenue Account the Commissioners should repay any amount, not being greater than such deficiency, which had been issued from the fund to the Commissioners during the year. Since the Act was passed the amount has been paid to the Commissioners each year and has been returned to the Treasury.

The transactions under the Act for the financial year ended the 30th June, 1919, were as follow:—

RECEIPTS.		£
Annual Contribution from Consolidated Revenue Fund		350,000
Repayments—		
Country Towns Water Supply	7,097	
Country Towns Sewerage	2,128	
Closer Settlement under Crown Lands Act of 1895	6,833	
	16,058	
Interest—Funded Stock	12,249	
Deposit with Colonial Treasurer... ..	3,137	
	15,386	
Balance brought forward from 1917-18		494,163
Total		£875,607
EXPENDITURE.		
Repayments—		
Annual contributions from Consolidated Revenue Fund (in terms of section 2 of State Debt and Sinking Fund Amendment Act, 1914)		350,000
Redemption of 3½ per cent. Funded Stock matured 1st September, 1918 (face value £140,000)		137,348
Balance carried forward—	£	
Invested in N.S.W. Funded Stock	289,876	
On Deposit with Colonial Treasurer	98,319	
On Account Current	64	
	388,259	
Total		£875,607

LIABILITIES OF THE STATE AND AMOUNTS DUE FROM OTHER SOURCES.

On the 30th June, 1919, the liabilities of the State were as follow:—Debentures, £14,704,750; Inscribed and Funded Stock, £120,925,366; and Treasury Bills, £11,544,420; making a total of £147,174,536. This amount might reasonably be decreased by the sum of £1,889,996, which represents expenditure to be repaid by annual instalments of principal and interest under the headings shown below:—

	£
Country Towns Water Supply	1,336,820
Country Towns Sewerage and Drainage	389,878
Water and Drainage Trusts	118,862
Other Advances	44,436
Total	£1,889,996

There is also the property transferred to the Federal Government, on which interest is paid by the Commonwealth at 3½ per cent. per annum. The value of this property is £3,960,085, and a sum of £174,745 was received by the State as interest in 1918-19. The total amount of the public debt might therefore be reduced by £5,850,081.

EXPENDITURE BY THE STATE ON IMMIGRATION.

The following statement shows the amounts spent towards promoting immigration and advertising the resources of the State during the period extending from 1832 to 1919.

Period.	Amount.	Period.	Amount.	Period.	Amount.
	£		£		£
1832-50	1,192,193	1904	...	1912	59,186
1851-60	1,261,255	1905	...	1913	69,656
1861-70	278,980	1906	1,226	1914	33,158
1871-80	395,536	1907	8,079	1915	24,501
1881-90	533,849	1908	13,184	1916	13,571
1891-1900	14,200	1909	22,436	1917	3,690
1901	...	1910	26,815	1918	1,367
1902	245	1911	32,786	1919	2,140
1903	...				

The amounts expended from revenue and loans cannot be stated separately, as in earlier years the proceeds of loans were credited to Consolidated Revenue, and part of the immigration expenses was defrayed from "Territorial Revenue," which constituted a distinct account.

As a method of promoting immigration, the Commonwealth Government spends sums of money in advertising the attractions of Australia generally.

Further particulars relating to the encouragement of immigration will be found in the part of this Year Book dealing with Employment and Industrial Arbitration.

Special War Expenditure.

The expenditure of the State Government has been considerably increased by expenses directly attributable to the war. The following table shows the cost during 1919 and the total cost since 1915:—

Nature of Expenditure.	1915-16.	1918-19.	1919-20.
	£	£	£
Salaries of enlisted officers and substitutes ...	542,290	198,967	729,187
Work carried out without charge ...	139,078	46,388	185,464
Rates and charges foregone ...	419,374	151,637	570,911
Other expenditure ..	222,923	1,059,059	1,282,351
Total ...	1,323,665	1,456,051	2,777,913

The item "Other Expenditure" includes £1,005,999 spent in settling returned soldiers on the land.

FINANCIAL RELATIONS BETWEEN THE STATES AND THE COMMONWEALTH.

One of the most difficult problems to be solved in formulating a Constitution for the Commonwealth of Australia was the determination of the relative shares of the Commonwealth and States respectively in the proceeds of taxation from customs and excise. Each of the two governing powers was invested with authority to levy direct taxation, consequently no difficulty arose in this respect, but the power to impose tariffs through customs and excise duties was vested in the Commonwealth Parliament. Hence it became necessary to decide some proportion of the revenue derivable from these sources of indirect taxation which should constitute by legal rights the share of the States qua States in these imposts.

In the issue of this Year Book for 1913 the financial relations between the States and the Commonwealth were discussed fully, and a statement presented showing the degree to which the customs and excise taxation served to fulfil Commonwealth requirements. Information was given also regarding the relative magnitude of the functions of the State and of the Commonwealth Governments.

The arrangement made by the Commonwealth to pay 25s. per head to the States, in accordance with the Surplus Revenue Act of 1910, expires in 1920, and a conference of Treasurers was held in January, 1919, to discuss the matter. At that conference the Federal Treasurer stated that, in view of the heavy responsibilities due to the war, he was compelled to propose a reduction of the capitation allowance to 22s. 8d. for the year 1920, and a further reduction of 2s. 6d. per annum until 1925-6, when the amount payable would be only 10s. per head. After the year last mentioned the position would again be revised, and the Treasurer forecasted that the States would have to pay their way without further Federal assistance. These proposals, however, have not been dealt with finally, and the estimates for 1919-20 have been framed on the assumption that the States will receive 25s. per head from the Commonwealth. None of the State Treasurers views with favour the proposal of the Commonwealth Treasurer.

PRIVATE FINANCE.

CURRENCY AND COINAGE.

THE coins current in New South Wales in 1909, when the Commonwealth Coinage Act was passed, corresponded with those of the monetary system of the United Kingdom, and were issued by the Royal Mint of England through its Sydney Branch.

The Commonwealth Treasurer was given power under that Act to issue silver and bronze coin of specified denominations. A nickel coinage was also authorised, but has not been issued. The principal variation of the Australian from the British system is the elimination of the half-crown from the silver coinage of the Commonwealth.

A tender of payment made in British or Australian gold coins is legal for any amount, in silver coins for a maximum amount of forty shillings, and in bronze for a maximum amount of one shilling.

For gold coins the standard fineness is $\frac{1}{2}$ fine gold, $\frac{1}{2}$ alloy, or millesimal fineness 916.6; for silver coins, $\frac{3}{10}$ fine silver, $\frac{3}{10}$ alloy, or millesimal fineness 925; bronze coins are of mixed metal—copper, tin, and zinc.

Standard or sovereign gold of 22 carats fineness is worth £3 17s. 10½d. per ounce, which is the price paid for the gold contained in deposits sent to the Sydney Branch of the Royal Mint for melting, assaying, and coining; pure or 24-carat gold is worth £4 4s. 11½d. per oz.

The nominal value of one ounce of silver coined into eleven sixpences is 5s. 6d., and of one pound (avoirdupois) of bronze coined into pence 4s., and into halfpence or farthings 3s. 4d.

MINTING.

The Royal Mint of England has three branches in Australia, viz., one each at Sydney, Melbourne, and Perth. The earliest branch, at Sydney, was opened on the 14th May, 1855.

Only gold coins are struck at the Sydney Mint; silver and bronze Australian coins are struck at the London Mint and forwarded to the Sydney Branch, for distribution at the order of the Commonwealth Treasurer. The value of gold coin and bullion issued up to the end of 1918 was £144,977,752, of which £138,131,500 represented coin, the value of sovereigns being £133,350,500, and of half-sovereigns, £4,781,000. Coins of the latter denomination were not minted during 1917 and 1918.

The gold bullion issued from the Mint includes pure gold in small quantities for industrial use, but the bulk consists of bars of fine gold issued to local banks. The amount of gold bullion issued during 1918 was valued at £91,734, the total from 1855 to the end of 1918 being 1,660,079 ozs., valued at £6,846,252.

The first issue of bronze coin from the Sydney Mint took place in 1868, and of silver in 1879, the values of each to the end of the year 1910 being bronze £106,450, and silver £1,239,400. The issue of British silver and bronze coin in the Commonwealth ceased in 1910, and Australian coins were first issued in that year.

Australian silver and bronze coins issued to the end of 1918 from the Sydney Mint were valued at £1,395,540. The values of the several coins

issued in 1918 were—Florins, £25,000; shillings, £10,000; and sixpences, £17,000; the total value of the year's issue being £36,700.

The coinage or nominal value of silver per standard ounce is 5s. 6d., and the average London market price per ounce during 1918 was 3s. 11-77d., the difference, 1s. 5-23d. representing the seigniorage, or gross profit. After allowing for mint expenses, the net profit accrues to the Commonwealth Government, which received £190,179 and £14,774 respectively as net profits from Australian silver and bronze coinage in 1918. During 1919 the price of silver increased to such an extent that the value of the metal contained in a shilling is now greater than the nominal value of the coin.

Light gold coins in parcels of not less than £50 nominal value are received and recoined free of charge, but depositors are required to bear the loss by abrasion. The nominal value of the gold coin withdrawn from circulation during 1915 was £663, and for the whole period since the opening of the Mint £1,084,327. The influence of the War on the currency of the British Empire is evidenced in the fact that no gold coins were withdrawn from circulation during the years 1913 to 1918.

Worn British silver coin of the value of £103,100 was withdrawn from circulation through the Sydney Mint during 1918, and the aggregate value withdrawn to the end of that year was £265,572. No Australian silver coins have yet been withdrawn from circulation.

Mint Receipts and Expenditure.

The receipts of the Mint are paid into the Consolidated Revenue of New South Wales, and represent charges for coining gold, fees for assays, etc., and profits on the sale of silver. The Mint retains all silver contained in deposits, but payment is made for all silver in excess of 8 per cent. of the gross weight at a rate fixed by the Deputy Master. The price paid from the 17th September, 1917, was 3s. 6d.

For assaying and coining gold the charge is 1d. per ounce standard, and a charge is made for melting and refining gold insufficiently treated for direct conversion into coin, the maximum being at the rate of 3d. per oz. gross, and the minimum 1d., with an additional 1s. per oz. on deposits containing more than 5 per cent. of base metal. The minimum charge on any one deposit is 6s., except in the case of deposits containing more than 5 per cent. of base metal, when the minimum charge is 10s. 6d.

The cost of maintenance of the Sydney Branch of the Royal Mint is borne by the State Government, £17,000 being set apart annually for that purpose. Special additional votes for construction, repairs, and furniture have also been made. The expenditure from Consolidated Revenue during 1918 amounted to £18,161, and the total receipts from the Royal Mint amounted to £18,923, showing a net gain to the State of £762 on the year's transactions.

PAPER CURRENCY.

Bank Notes.

Prior to 1910 the control of paper currency was vested in private banking institutions which had used their right to issue bank notes. The original purpose of the note issue was to obviate the necessity for keeping gold reserves in branch banks, the circulation being confined practically to country districts. In New South Wales the note currency was subject to a tax at the rate of 2 per cent. per annum, but this has been replaced by a 10 per cent. Commonwealth tax, with the result of practically forcing the notes of the trading banks out of circulation.

The total liability in notes and bills of banking institutions operating in New South Wales at various periods prior to the issue of Australian notes in 1910, and at intervals since 1910, is shown in the following table, the figures being given as recorded for the quarter ended the 31st December of each year:—

Year	Circulation in—		Total.
	Notes.	Bills	
	£	£	£
1860	949,849	83,505	1,012,354
1870	305,368	50,515	745,881
1880	1,200,772	61,698	1,312,470
1890	1,557,808	127,442	1,485,947
1900	1,447,641	209,905	1,657,546
1910	2,242,128	370,199	2,613,327
1911	400,784	411,792	812,576
1915	91,550	426,597	518,146
1918	84,702	573,248	659,950
1917	76,355	646,332	722,687
1918	70,972	704,926	775,898

Australian Notes.

As a consequence of the Australian Notes Act passed in 1910 by the Federal Parliament, the Commonwealth Treasurer was authorized to issue notes, which are legal tender throughout the Commonwealth, and are redeemable in gold at the seat of the Federal Government. These notes are at present issued in the following denominations:—10s., £1, £5, and £10, and any multiple of £10; but the issue of 5s. notes is now under consideration. The Treasurer is bound to hold in gold coin a reserve of not less than 25 per cent. against all issues.

The value of the Australian notes in circulation on the 30th June, 1919, was £55,567,423, and the gold reserve held against this note issue was £24,273,622, representing 43.68 per cent. of the circulation. Of this amount the Commonwealth Bank holds on behalf of the Federal Treasurer gold coin and bullion to the amount of £12,043,843.

MONEY ORDERS AND POSTAL NOTES.

Exchange by means of money orders and postal notes is conducted by the Post and Telegraph Department of the Commonwealth. Remittances may be forwarded by money order from the principal post offices in New South Wales to other parts of the world, either direct to the place of payment if within the Commonwealth, or through intermediary agencies to places outside Australia. The money-order and postal-note systems are both effective with regard to small remittances within the State; but as public convenience is met by the postal note, the money-order system is confined almost entirely to amounts exceeding £1.

Money Orders.

The money-order system was initiated in January, 1863. In that year there were 3 orders issued for every hundred persons in New South Wales, and the total value of the orders was £53,682. During the year ended the

30th June, 1919, the total number of orders issued was 996,733, or 52 for every one hundred persons, and the total value £4,844,721, as shown in the following statement:—

Where Payable.	Issued in New South Wales.		Where Issued.	Paid in New South Wales.	
	No.	Value.		No.	Value.
In New South Wales	811,324	£ 4,088,483	In New South Wales	835,346	£ 4,192,206
In other States ...	100,144	477,915	In other States ...	114,714	611,033
Beyond the Commonwealth.	85,265	278,323	Beyond the Commonwealth.	52,667	208,825
Total ...	996,733	4,844,721	Total ...	1,002,727	5,012,064

Postal Notes.

Postal notes were first issued in New South Wales on the 1st October, 1893. The transactions for subsequent periods were as follow:—

Year.	New South Wales Postal Notes.			Postal Notes of Other Australian States Paid in New South Wales.
	Paid in New South Wales.	Paid in Other Australian States	Total Value.	
	£	£	£	£
1895	243,188	16,369	259,557	13,382
1900	462,087	26,396	488,483	25,362
1905	637,465	85,703	723,168	87,203
1910	910,136	182,000	1,092,136	129,304
*1916	1,155,445	266,770	1,422,215	123,057
*1917	1,125,817	347,296	1,443,113	120,372
*1918	1,090,582	307,054	1,397,636	122,419
*1919	1,110,501	289,956	1,400,457	117,422

* Year ended 30th June.

The total number of postal notes issued in New South Wales during the year ended the 30th June, 1919, was 4,145,882, of which 3,018,172 were for payment in the State, and 316,459 notes issued in other States were cashed in New South Wales. The poundage collected on postal-note issues in New South Wales during the same period was £27,583.

TRADING BANKS.

There are seventeen banking institutions, including the Commonwealth Bank of Australia, which transact ordinary business within the State.

Institutions which transact banking business are required under the Banks and Bank Holidays Acts, to furnish in a prescribed form quarterly statements of their assets and liabilities, from which returns, and from the periodical balance-sheets issued by the banking companies, the information contained in the following tables has been prepared.

These tables deal with the returns of fifteen banks, including the Bank of Adelaide, which opened a branch in Sydney in the early part of 1919.

BANKING INSTITUTIONS AND CAPITAL.

The paid-up capital of the banks doing business in New South Wales on the 30th June, 1919, exclusive of the Commonwealth Bank of Australia, the Comptoir National d'Escompte de Paris, and the Yokohama Specie Bank, was £20,751,314.

The following table shows the amount of the paid-up capital and reserve funds of the banks at intervals since 1895. The paid-up capital represents the amount contributed to each bank operating in New South Wales, irrespective of the countries in which it was subscribed:—

Year.	Banks.	Capital Paid up.	Reserve Funds.	Year.	Banks.	Capital Paid up.	Reserve Funds.
		£	£			£	£
1895	13	19,704,957	4,175,912	1916	15	18,953,756	13,614,142
1900	13	16,807,069	4,529,109	1917	15	19,685,604	14,082,000
1905	13	13,965,931	5,474,199	1918	14	19,360,499	14,657,000
1910	15	16,193,550	8,462,235	1919	14	20,751,314	16,002,000
1915	15	18,891,145	12,984,000				

The decrease in the year 1905 was due to the writing down of the capital of certain banks. During the next period the capital was materially increased by additional calls on shares, and by the commencement of operations in the State by two new banks. Against these increases must be placed the estimated deficiency in connection with the Special Assets Trust Company of the Commercial Bank of Australia.

LIABILITIES AND ASSETS OF BANKS.

The aggregate liabilities to the public, in New South Wales and elsewhere of the banks were £335,353,349 as at 30th June, 1919, against which were assets representing £375,730,973. The following table shows the liabilities at intervals since 1895, notes in circulation and deposits being separated from other liabilities:—

Year.	Notes in Circulation.	Deposits.	Other Liabilities.	Total Liabilities.
	£	£	£	£
1895	3,167,699	107,840,764	12,776,013	123,784,476
1900	3,826,839	103,044,715	13,236,988	120,108,542
1905	3,806,117	113,292,913	11,755,635	128,854,665
1910	4,540,833	143,311,149	16,941,363	164,793,345
1915	2,654,388	199,235,418*	20,418,742	222,308,548
1916	3,654,235	230,887,090*	29,950,474	263,891,849
1917	4,507,846	250,959,994*	24,816,139	280,283,979
1918	5,447,117	285,949,365*	27,341,746	318,738,228
1919	6,393,893	297,345,367*	31,614,089	335,353,349

* Includes Savings Bank deposits in Commonwealth Bank.

The assets in New South Wales and elsewhere of the banks are stated below. The amount of coin and bullion excludes the amount held by the Commonwealth Bank of Australia for the Treasurer, and the Australian notes include in some cases those of Fijian and Samoan issue.

Year.	Coin, Bullion, Cash, Balances, etc.	Australian Notes.	Advances.	Other Assets.	Total Assets.
	£	£	£	£	£
1895	23,601,179	.....	108,372,318	16,172,539	148,146,036
1900	23,014,656	.....	93,230,854	26,576,496	142,821,006
1905	23,078,649	.....	89,000,206	36,890,828	149,069,683
1910	33,501,042	.....	102,895,839	52,113,778	188,510,659
1915	63,107,567	11,879,966	133,490,640	67,110,030	255,649,117
1916	54,187,463	26,907,391	143,966,364	72,907,703	297,968,921
1917	53,993,739	15,977,098	148,669,312	97,642,443	316,682,610
1918	56,530,774	22,350,140	161,682,314	114,858,422	355,411,650
1919	53,125,421	20,255,656	201,847,411	100,502,550	375,730,973

The difference between the assets and liabilities as at 30th June, 1919, amounted to £40,377,624, and consisted of the paid-up capital and reserves (£39,176,334) and the dividends paid (£1,201,290).

LOCAL BUSINESS OF BANKS.

In order to institute a comparison between the figures of the various banks, necessary adjustments have been made by excluding from the assets the balances due from branches and agencies outside New South Wales.

The following statement shows the average liabilities within New South Wales, exclusive of those to shareholders. Up to 1905 the figures for December quarter are given; from 1910 onward those for June quarter are shown. Interest-bearing deposits in the last five years include savings banks deposits in the Commonwealth Bank of Australia:—

Year.	Notes	Deposits.			Other Liabilities.	Total Liabilities within N.S.W.
		At Interest.	Without Interest.	Total Deposits.		
	£	£	£	£	£	£
1890	1,563,404	28,114,127	9,932,310	35,049,437	278,792	36,828,633
1895	1,223,864	20,406,822	10,922,437	30,629,239	183,969	32,037,052
1900	1,447,641	20,909,081	12,324,510	32,233,591	288,499	33,969,731
1905	1,430,335	22,211,637	14,839,427	37,051,064	358,673	38,860,062
1910	1,861,807	24,812,712	26,612,873	50,155,585	471,233	52,428,055
1915	95,305	33,186,317	35,031,367	68,217,684	1,055,801	69,968,996
1916	87,316	43,610,878	36,435,167	80,046,045	2,650,099	82,783,460
1917	80,765	46,599,976	37,440,286	84,040,264	2,119,369	86,949,398
1918	73,616	46,125,775	40,303,818	86,489,593	2,417,424	88,980,832
1919	69,509	45,913,578	48,649,516	93,965,094	3,814,830	97,749,442

The value of notes in circulation has declined steadily since 1910, a result due to the issue of the paper currency of the Commonwealth, and the consequent recall of notes issued by trading banks.

Deposits represent 96 per cent. of the liabilities (exclusive of those due to shareholders), and deposits not bearing interest represent 52 per cent. of the total deposits.

Year.	Proportion of Deposits Not Bearing Interest to Total Deposits.	Proportion of Deposits to Liability (to Public).	Year.	Proportion of Deposits Not Bearing Interest to Total Deposits.	Proportion of Deposits to Liability (to Public).
	per cent.	per cent.		per cent.	per cent.
1890	28.4	89.1	1915	51.4	91.5
1895	33.4	93.5	1916	45.5	95.7
1900	37.9	94.9	1917	44.5	97.4
1905	40.1	95.4	1918	46.7	97.2
1910	53.1	95.7	1919	51.8	96.0

It is apparent that deposits in banks have increased very rapidly, while advances, though larger from year to year, have not increased in a similar proportion.

Coin and bullion together represent only 9.3 per cent. of the average assets of the banks within New South Wales, and advances represent in the aggregate 74.6 per cent. of the total assets held by the banks against their liabilities.

The following table shows the average assets within New South Wales, Australian notes being included with "other assets" since the year 1910:—

Year.	Coin and Bullion.	Advances.	Landed Property.	Other Assets.	Total Assets within N.S.W.
	£	£	£	£	£
1890	5,609,657	41,823,048	1,601,589	2,796,100	51,829,795
1895	7,516,275	35,707,153	1,919,017	479,881	45,622,326
1900	6,125,126	34,385,388	1,874,099	650,814	43,035,427
1905	8,823,200	32,447,659	1,799,231	623,987	43,694,137
1910	12,980,503	37,482,007	1,824,349	1,014,459	53,302,306
1915	14,829,081	51,379,741	4,105,833	9,090,432	77,397,887
1916	11,705,278	59,101,969	2,255,032	15,862,806	88,925,125
1917	11,364,032	63,031,127	2,348,946	14,140,400	91,084,505
1918	11,456,285	73,015,430	2,389,946	13,812,413	100,674,174
1919	11,039,691	68,805,710	2,378,900	16,799,889	119,046,281

The proportion of metallic reserves which banking institutions should keep constantly in stock is not fixed by any enactment, and consequently the amount of coin and bullion varies considerably.

Year.	Proportion of Metallic Reserves—		Year.	Proportion of Metallic Reserves—	
	To Total Liabilities.	To Deposits at Call and Note Circulation.		To Total Liabilities.	To Deposits at Call and Note Circulation.
	per cent.	per cent.		per cent.	per cent.
1890	15.4	40.5	1915	14.1	26.8
1900	18.9	44.9	1917	13.4	24.9
1910	24.5	51.2	1918	15.9	24.9
1915	21.2	44.6	1919	11.3	24.4

ADVANCES BY BANKS.

Under the head of advances are included notes and bills discounted, and all other debts due to the banks. The bulk of the advances are secured by the mortgage of real estate, or by the deposit of deeds over which the lending institutions acquire a lien, but the extent to which trade bills are discounted is not disclosed. The following table supplies a summary of these transactions at various dates from 1890:—

Year.	Advances.	Ratio of Advances to Deposits.	Advances per cent. of Total Assets.	Amount of Advances per Inhabitant.
	£	per cent.		£ s. d.
1890	41,623,049	118.8	80.5	37 2 0
1900	34,385,368	101.2	79.9	25 4 0
1910	37,882,907	74.7	70.2	23 4 6
1915	51,379,741	75.9	66.6	27 10 1
1916	52,101,999	72.9	66.5	21 12 10
1917	63,081,127	75.9	69.2	32 12 7
1918	73,015,430	84.4	72.5	34 5 1
1919	88,808,710	94.9	74.9	45 5 11

INTEREST, DISCOUNT, AND EXCHANGE RATES.

The interest on fixed deposits is from 2 to 3 per cent. for sums deposited for six months, for twelve months' deposits the rate is 4 per cent., and for two years, 4½ per cent. The rates quoted are low, and the strength of the deposits shows that money equal to requirements is freely subscribed.

Under normal conditions the annual rate of interest paid on fixed deposits is uniform for all banks, and discount and overdraft rates should correlate with the interest rates paid to depositors.

The bank exchange rate on London, at sixty days' sight, is on the average about 1 per cent., but it is subject to some fluctuation. In May, 1903, it was 3½ per cent., the banks at that date requiring all their available assets.

The interest rates allowed on deposits for twelve months, and charged on overdrafts, also the discount and exchange rates at intervals from 1890 to 1918 were as follow:—

Year.	Bank Rates of Interest.		Bank Discount Rates.		Exchange Rate on London at 60 Days' Sight.	
	Allowed on Deposits for Twelve Months.	Charged on Overdrafts.	Bills at Three Months.	Bills over Three Months.	Buying.	Selling.
	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.
1890	4½	3	7	8	99½ to 100	100½ to 101½
1900	3	2 to 7	5 to 5½	5½ to 6½	99½ .. 99½	100½ .. 100½
1910	3	6 .. 7½	5 .. 6	6 .. 7	99½ .. 99	99½ .. 99½
1915	2½ to 4	6 .. 8	5 .. 6	6 .. 7	99½ .. 99½	100½ .. 100½
1916	4	6 .. 8	5 .. 6	6 .. 7	99½ .. 99½	100½ .. 100½
1917	4	6 .. 8	5 .. 6	6 .. 7	99½ .. 99½	100½ .. 100½
1918	4	6 .. 8	5 .. 6	6 .. 7	99½	99½

BANKS' EXCHANGE SETTLEMENT.

The Banks' Exchange Settlement Office, which was established in Sydney on the 15th January, 1904, is not a clearing-house in the accepted meaning of the term, since the exchanges are effected daily at the banks by the staff

of each institution. The results of these operations are notified to the Secretary of the Banks' Exchange Settlement, who establishes the daily credit of each bank with the "pool," which is under the control of three trustees, and consists of £750,000 in gold. This money is deposited in the vaults of three of the banks, and may not be circulated or distributed. The contributions to the "pool" are graduated according to the volume of the operations of the individual bank. The secretary notifies each institution daily of the amount of its credit with the "pool," and it is not permissible for any balance to remain below 25 per cent. of the fixed contribution. In the event of it reaching this margin, the bank is required to make up the deficiency with gold. The payment, however, is not made to the "pool," but to such other banks as may happen to have to their credit with the "pool" a larger sum than is required by the agreement. This arrangement retains the "pool" intact.

The growth in the volume of exchanges is shown in the following table:-

Year.	Amount of Exchanges.	Year.	Amount of Exchanges.
	£		£
1895	108,509,860	1914	353,068,040
1900	144,080,314	1915	357,803,425
1910	274,343,666	1916	422,371,972
1911	304,488,435	1917	444,532,930
1912	330,621,122	1918	552,216,829
1913	348,741,175		

The transactions of this office have grown steadily since its establishment, and the large annual increases indicate a remarkable activity in trade, and afford an accurate commentary on the growth of the general prosperity of the State.

COMMONWEALTH BANK OF AUSTRALIA.

During 1911 the Federal Parliament passed an Act to provide for the establishment of a Government Bank, to be called the Commonwealth Bank of Australia. The Act confers on the Bank authority to carry on general banking business, but in accordance with the policy of conserving the control of the Australian note issue in the hands of the Federal Treasurer, the bank cannot issue notes. In every other respect it has the functions of an ordinary bank of issue.

The capital of the bank is fixed at £10,000,000, to be raised by the issue and sale of debentures, but no debentures have yet been issued. In addition to ordinary banking, a department for the transaction of savings bank business has been established.

The bank was inaugurated on the 15th July, 1912, by the opening of a postal savings bank department, but the ordinary banking business was not commenced until the 20th January, 1913.

The head office of the Commonwealth Bank is at Sydney but the bank has offices and agencies throughout the States and Papua, as well as in New Zealand, London, and Rabaul. Savings bank business is conducted at all the branches, and at agencies and post offices throughout the Commonwealth, Papua, and New Zealand.

SAVINGS BANKS.

Two Savings banks were in operation in New South Wales prior to the 1st May, 1914, namely, the Savings Bank of New South Wales and the Government Savings Bank of New South Wales. On that date these banks were amalgamated under the latter designation.

A notable change in the administration of the Government Savings Bank was made on the 1st January, 1907, when the bank was detached from the direct control of the Colonial Treasurer, and three commissioners were appointed to conduct the business, which included also the arrangement of loans to landholders, previously administered by the Advances to Settlers Board.

An agreement exists between the various savings banks in Australia for the transfer of the money of depositors, and similar arrangements are in existence with the United Kingdom.

On the 30th June, 1919, there were 134 branches and 500 agencies of the Government Savings Bank; the number of accounts was 821,498, the balance at the credit of depositors, £41,673,379; and the interest paid to depositors during the year, £1,363,235. Nearly one-fourth of the amount held to the credit of depositors represented deposits under £100, deposits between £100 and £500 about six-tenths, and sums over £500 about one-seventh. The rate of interest paid since 1st October, 1915, by the State Savings Bank has been 3½ per cent. on sums up to £500 for all accounts, and 3 per cent. on sums over £500 deposited by friendly and kindred societies without limitation.

Deposits in Savings Banks.

The following statement shows the particulars of deposits in the savings banks in New South Wales at the end of each year of the decennium ended the 30th June, 1919. The returns of the savings department of the Commonwealth Bank are included in the figures for the last seven years.

As at 30th June.	Number of Depositors.	Amount of Deposits.		
		Total.	Per Depositor.	Per head of Population.
		£	£ s. d.	£ s. d.
1910	478,006	29,823,764	62 11 2	12 18 0
1911	522,251	29,881,014	57 15 4	14 1 3
1912	577,222	26,539,640	45 19 6	13 3 3
1913	647,124	29,568,282	45 18 10	15 6 10
1914	717,737	32,167,529	45 4 2	17 17 2
1915	755,835	35,502,549	47 1 0	19 0 7
1916	806,882	37,363,272	46 0 1	20 2 7
1917	872,351	40,836,747	46 10 3	21 17 4
1918	920,337	43,080,012	46 15 3	22 12 2
1919	984,951	47,070,343	47 15 0	24 0 2

The deposits compare favourably with those of other States as the following table shows:—

State.	Depositors, 30th June, 1919.	Amount of Deposits in all Savings Banks.	Average Annual.	
			Per Depositor.	Per Inhabitant.
	No.	£	£ s. d.	£ s. d.
New South Wales	984,951	47,070,343	47 15 0	24 0 2
Victoria	968,543	28,772,024	40 2 3	26 8 6
Queensland	343,424	17,510,975	50 19 0	24 11 4
South Australia	357,310	14,803,237	41 9 7	32 9 4
Western Australia	192,879	5,846,508	29 19 6	21 3 8
Tasmania	90,565	3,284,590	37 19 0	15 11 8
Northern Territory	1,167	81,097	69 5 10	16 9 7
Total	2,945,829	128,363,975	43 11 6	24 19 5

In addition to the deposit branch, the Commissioners of the Savings Bank of New South Wales conduct the business in connection with advances to farmers and others. The work of the Advance to Settlers Board relating to loans was transferred to the Commissioners as from 1st January, 1907, and there are departments for advances in connection with Closer Settlement, Promotion, Irrigation Farms, and Homes. The conditions under which advances to settlers and to irrigation farmers are made are shown in the chapter relating to Agriculture.

The Irrigation Farms Advance Department provided financial aid to settlers in the irrigation areas, but these farmers may now obtain loans from the Commissioner for Water Conservation and Irrigation, and no advances were made by the bank during the year ended 30th June, 1919.

In the Closer Settlement Advance Department the loans were made to facilitate the purchase by intending settlers of subdivisions of privately-owned land suitable for closer settlement; the work of this department was, however, transferred to the Department of Lands as from 1st July, 1919, and details are shown in the chapter relating to Land Settlement.

The Advances for Homes are made to enable persons to acquire houses or to pay off existing mortgages on their houses; particulars are shown in the chapter relating to Social Conditions.

The loans current in each department of the bank at the end of the last four years were as follows:—

30th June.	Savings Bank.	Advances to Settlers.	Closer Settlement Pro-cession.	Advances for Homes.	Irrigation Farms.	Total Loans by Government Savings Bank.
	£	£	£	£	£	£
1916	2,472,613	2,513,232	1,819,709	482,118	16,767	7,317,523
1917	2,376,398	2,622,671	1,524,990	530,172	19,550	7,355,521
1918	2,293,379	2,344,054	2,188,320	983,180	15,609	7,901,679
1919	2,113,188	2,599,751	2,260,931	1,415,635	15,314	8,404,929

REGISTRATION OF FIRMS.

The Registration of Firms Act requires that every company or association of individuals carrying on business, or having any place of business in New South Wales, under a firm-name which does not consist of the full or the usual names of all the partners without any addition, and every person carrying on business or having any place of business in New South Wales under any firm-name consisting of, or containing, any name or addition other than the full or the usual name of that person, must register the name under which the business is conducted.

INCORPORATED COMPANIES.

The legislation relating to incorporated companies in New South Wales is contained principally in the Companies Act, 1899, the amending Acts of 1900, 1906, and 1907, the Companies (Death Duties) Act, 1901, and the Companies (Registration of Securities) Act, 1918. These enactments follow the general provisions of Imperial Acts relating to companies, with deviations embodying the results of local experience.

Under the Companies Act, 1899, the liability of members of limited companies may be fixed either by shares, or by guarantee; in unlimited companies no limitation is placed on the liability of members. A special feature of the Act is the embodiment of provisions for the formation and registration of companies in connection with the mining industry under the "No-Liability System," as previously defined in the No-Liability Mining Companies Act, 1898.

The formation of a company, association, or partnership of more than ten persons in a banking business, or of twenty in other businesses trading for profit, is prohibited, unless such company, association, or partnership is registered under the Act, or incorporated under some other enactment, by royal charter, or by letters patent. Special provision is made for associations formed to promote commerce, art, science, religion, charity, or other useful or beneficial objects.

An important amendment of the company law was made in 1918, when the Companies (Registration of Securities) Act was passed to provide for the registration of debentures issued by companies.

The following particulars relating to companies are recorded for the past five years.

Year.	Limited Companies.			No Liability Mining Companies.		
	New Companies.	Nominal Capital.	Total Fees received.	New Companies.	Nominal Capital.	Total Fees received.
		£	£		£	£
1914	334	7,382,472	4,825	15	190,630	59
1915	286	7,074,817	4,153	15	170,420	57
1916	156	4,157,075	3,058	7	125,000	40
1917	159	5,918,267	2,785	8	77,500	30
1918	221	6,478,907	4,013	13	228,300	51

Twelve of the limited companies accept money on deposit. The liabilities, assets, and paid-up capital during the quarter ended 30th June, 1919, were as follows:—

Companies.	Number.	Liabilities (Excluding Shareholders)			Assets			Paid-up Capital.
		Deposits.	Other Liabilities.	Total.	Landed Property.	Other Assets.	Total.	
Investment	10	1,000,000	14,375,000	15,375,000	195,000	14,380,000	15,375,000	1,000,000
Trading	2	44,000	4,479,000	4,523,000	100,000	7,715,000	8,238,000	4,500,000
Total	12	1,044,000	18,854,000	19,898,000	295,000	22,095,000	23,613,000	5,500,000

CO-OPERATIVE TRADING SOCIETIES.

Societies formed for the mutual benefit and advantage of the members only are registered under the Building and Co-operative Societies Act, 1901.

The transactions of co-operative societies during the last five years are given in the following table:—

	1914.	1915.	1916.	1917.	1918.
Number of Societies	45	46	46	44	44
Number of Members	33,854	36,868	38,370	40,791	43,239
Liabilities—	£	£	£	£	£
Share Capital	234,846	253,185	274,409	310,776	348,341
Reserves and Net Profits ..	153,314	151,492	156,468	171,542	194,914
Other Liabilities	101,972	119,675	168,254	166,256	184,100
Total Liabilities	£ 490,132	524,352	599,131	648,574	727,355
Assets—					
Freehold, Plant, etc.	155,298	168,217	188,518	202,880	211,342
Stock	197,090	225,448	231,746	313,826	352,327
Other Assets	137,744	130,687	128,867	131,868	163,686
Total Assets	£ 490,132	524,352	599,131	648,574	727,355

Considering the small amount of capital invested, the results are satisfactory, and afford inducement for the further development of these institutions. The majority of existing societies are engaged in the sale of groceries, provisions, boots, and clothing, or in the manufacture and supply of general commodities. Societies established outside the metropolitan and suburban districts are mostly in the mining districts.

During the year 1918 the sales amounted to £2,193,036, and the expenses, including interest and depreciation, to £293,426, equal to 13·4 per cent. on the amount of sales. The balances of profit amounted to £187,272, but in three cases there were losses amounting to £498. The profit on sales was at the rate of 8·4 per cent.

BENEFIT BUILDING AND INVESTMENT SOCIETIES.

Under the existing law any number of persons may form a benefit building and investment society to enable members to erect or purchase dwellings, etc., by loans secured to the society by mortgage until the amount of the shares has been fully paid. These institutions may be registered as permanent building societies or as Starr-Bowkett societies.

The aggregate liabilities, assets, &c., of permanent building societies for the years 1914–18 are shown in the following return.

	1914.	1915.	1916.	1917.	1918
Number of Societies	8	8	8	8	8
Liabilities—	£	£	£	£	£
Deposits	480,592	504,493	488,051	485,139	485,910
Share Capital	274,585	272,958	287,502	291,375	293,012
Reserves	103,896	133,986	146,469	143,125	138,102
Other Liabilities	47,584	23,915	34,362	43,791	53,117
Balance of Profit	53,113	33,390	27,465	31,557	52,826
Total	959,770	968,742	983,849	994,987	1,022,967
Assets—					
Advances	741,831	731,227	739,809	733,582	774,077
Other Assets	217,939	237,515	244,040	261,405	248,890
Total	959,770	968,742	983,849	994,987	1,022,967

The income of the eight societies operating in 1918 was £84,490, while the expenditure during the year amounted to £74,362.

Particulars relating to Starr-Bowkett Societies for the years 1914 to 1918 are shown herewith.

	1914.	1915.	1916.	1917.	1918.
Number of Societies.	108	109	109	100	114
Liabilities—	£	£	£	£	£
Members' Subscriptions.	855,272	995,749	1,076,112	1,221,961	1,333,832
Other Liabilities	23,617	36,892	37,210	42,127	38,898
Balance	75,996	94,759	115,000	130,624	146,410
Total	954,885	1,127,399	1,228,331	1,394,712	1,519,070
Assets—					
Advances	870,319	1,036,019	1,127,296	1,290,341	1,401,392
Other Assets	80,566	91,374	101,035	104,371	117,678
Total	950,885	1,127,393	1,228,331	1,394,712	1,519,070

FRIENDLY SOCIETIES.

The particulars relating to the membership, the sickness, and the mortality of Friendly Societies will be found in the chapter of this volume relating to Social Condition. The following tables will, therefore, deal with these societies from a financial standpoint only.

Receipts and Expenditure.

The receipts and expenditure of Friendly Societies during the ten years ended the 31st December, 1918, are shown in the following statement.

Year.	Receipts.				Expenditure.					
	Contributions.	Interest.	Other.	Total.	Sick Pay.	Funeral Expenses.	Medical Attendance and Medicines.	Expenses of Management.	Other.	Total.
	£	£	£	£	£	£	£	£	£	£
1909	332,580	60,100	25,502	418,182	106,838	27,131	125,207	66,546	14,471	339,192
1910	375,230	69,312	33,561	478,103	124,750	30,051	128,627	64,186	45,072	388,623
1911	415,077	94,201	38,034	547,312	149,570	36,229	141,040	69,714	45,980	481,513
1912	456,007	69,299	32,438	557,744	160,370	40,828	157,321	69,430	42,654	473,283
1913	489,669	75,038	37,385	602,092	173,461	45,622	176,504	69,226	41,918	501,127
1914	496,961	86,707	34,915	618,583	179,706	44,846	182,338	87,809	50,463	507,371
1915	491,623	87,321	34,997	613,941	173,109	50,121	182,701	86,410	53,767	506,217
1916	508,633	96,194	29,945	634,772	173,407	51,366	179,228	84,520	53,713	508,213
1917	524,841	106,947	33,433	665,221	168,088	50,371	178,789	96,800	46,349	506,378
1918	543,309	117,941	114,285	775,535	183,735	54,862	180,376	96,620	118,365	603,628

The total amount disbursed in 1918 on account of benefits amounted to £443,765. The figures afford convincing evidence of the importance of the societies and of their immense value to the community.

The apparent increase in the expenses of management since 1913 is due to the fact that the figures for those years include certain items of expenditure classified previously under the heading "Other."

Accumulated Funds.

The following comparative table shows the accumulated assets of all funds at the close of each of the last ten years.

Year.	Stinkys Fund.	Fovent Fund.	Nation and Management Fund.	Other Funds.	Total.
	£	£	£	£	£
1909	721,515	495,159	71,711	44,045	1,332,530
1910	797,548	535,409	75,048	49,080	1,457,085
1911	783,434	595,259	78,394	49,832	1,506,919
1912	808,016	666,400	82,539	51,715	1,598,710
1913	839,669	719,473	81,440	52,171	1,692,753
1914	876,121	765,583	88,356	54,971	1,785,031
1915	908,655	820,303	89,491	52,548	1,870,997
1916	1,830,738		101,000	49,471	1,981,209
1917	1,816,810		122,789	55,007	2,004,606
1918	1,851,083		190,995	63,102	2,105,180

INSURANCE.

In New South Wales Insurance Companies are subject to the Companies Acts, but there is no legislation dealing specifically with the conduct of insurance business. The Life, Fire and Marine Insurance Acts of 1902 and 1917 were passed to provide for the protection of life insurance policies and annuities against creditors, and the issue of special policies in substitution for those lost or destroyed. The section relating to marine insurance was amended by the Commonwealth Marine Insurance Act of 1909, and the amount of insurance payable on the death of children was limited by a Commonwealth Act passed in 1905.

LIFE ASSURANCE.

Particulars relating to life insurance institutions are obtained from the reports published by the companies and from official returns. During 1919 there were eighteen institutions operating in the State. Of these, nine were local, four had their head offices in Victoria, one in New Zealand, one in the United Kingdom, and three in the United States of America. Eight of the companies are mutual, and ten are partly proprietary, the profits being divided between the shareholders and the policyholders. Several companies, uniting life with other classes of insurance, have local branches or agencies, but their transactions in life risks in this State are unimportant.

Ordinary Branch—Total Business.

The following table shows the total business in force in the ordinary branch; all the institutions do not close their transactions on the same date, and the figures relate to business existing at various periods between 30th September, 1918, and 31st August, 1919. In the table the Australian

business only of the British company, the Liverpool and London and Globe Insurance Company, is given, but the bonus additions of this institution are not available.

Institutions with Head Office in—	Policies in Force, Exclusive of Annuities.	Amount Assured Exclusive of Bonuses and Re-assurances.	Bonus Additions.	Total.	Annual Premiums Payable.
	£	£	£	£	£
New South Wales ...	509,448	130,438,995	22,086,826	152,525,821	4,299,028
Victoria ...	255,587	57,588,592	4,465,511	62,054,103	2,170,821
New Zealand ...	4,444	656,190	.....	656,190	20,024
United Kingdom ...	258	99,691	.....*	99,691	2,762
United States ...	2,849,677	1,349,964,174	10,318,925	1,360,283,099	48,291,476
Total ...	3,619,414	1,538,747,642	36,871,262	1,575,618,904	54,784,111

* Not available.

The assurance business may be classified broadly in three categories (1), whole-life or simple assurance payable at death only; (2), endowment assurance payable at the end of a specified period or at death prior to the expiration of the period; (3), endowment payable only in case of survival for a specified period.

Particulars regarding each class of assurance in the ordinary branch in force in 1917 and 1918 are shown below :—

Classification.	1917.				1918.			
	Policies in Force.	Amount Assured Exclusive of Bonuses and Re-assurances.	Bonus Additions.	Annual Premiums Payable.	Policies in Force.	Amount Assured Exclusive of Bonuses and Re-assurances.	Bonus Additions.	Annual Premiums Payable.
	No.	£	£	£	No.	£	£	£
Assurance	2,587,445	1,218,397,184	25,665,316	40,586,991	2,544,139	1,245,835,032	29,414,978	43,647,612
Endowment	839,018	218,447,498	7,125,776	10,463,541	1,012,973	284,334,818	7,249,990	10,800,160
Assurance	57,706	7,550,490	204,049	304,670	62,302	8,577,792	206,294	836,309
Endowment								
Total ...	3,484,169	1,444,395,172	32,995,141	51,355,202	3,619,414	1,538,747,642	36,871,262	54,784,111

Ordinary Branch—New South Wales Business.

The business in force during the year 1918 in New South Wales only, under headings similar to those of the table in the preceding page, is given below :—

Institutions with Head Office in—	Policies in Force, Exclusive of Annuities.	Amount Assured Exclusive of Bonuses and Re-assurances.	Bonus Additions.	Total.	Annual Premiums Payable.
	No.	£	£	£	£
New South Wales ...	151,746	39,164,740	6,516,038	45,680,778	1,312,513
Victoria ...	44,263	9,320,248	168,807	9,489,055	353,182
New Zealand ...	511	55,275	...	55,275	2,174
United Kingdom ...	124	44,111	...*	44,111	1,331
United States ...	4,915	2,228,327	77,516	2,305,843	72,049
Total ...	201,559	50,812,701	6,762,361	57,575,062	1,741,249

Of the amount assured nearly 95 per cent. is with the Australasian societies, 77 per cent. being with institutions with head offices in New South Wales, and 18 per cent. with Victorian institutions; and 4 per cent. is with the American companies. The amount held by the British society is comparatively small as it does not now accept life business in New South Wales. The average amount of assurance, exclusive of bonuses and re-assurances, per policy held in Australasian societies is £247, in the British £356, and in the American £453.

A classification of the New South Wales business is shown below:—

Classifi- cation.	Policies in Force.		Amount Assured Exclusive of Bonuses and Re-assurances.		Bonuses Additions.	Annual Premiums Payable.		
	No.	£	£	£				
Assurance ...	79,989	28,872,993	4,779,557	916,326	84,327	21,377,336	4,869,040	920,879
Endowment Assurance ...	69,839	17,375,216	1,616,513	602,430	105,094	17,625,175	1,847,428	679,474
Endowment ...	12,134	1,486,128	34,347	61,794	14,128	1,712,190	33,963	71,896
Total ...	162,962	47,734,337	6,428,417	1,580,550	203,549	40,714,701	6,750,431	1,762,249

The majority of the policies, 51 per cent., are in the form of endowment assurance; whole-life policies represent 42 per cent. and endowment 7 per cent. of the total number. The amount assured under the whole-life policies represents 62 per cent. of the total amount (exclusive of bonus additions), the average per policy being £371; endowment assurance policies, with an average of £173 per policy, cover 35 per cent. of the total amount assured; and endowment policies, with an average of £121 per policy, 3 per cent.

Industrial Branch—Total Business.

In addition to the ordinary transactions in life assurance, a large industrial business has grown up during recent years. The policies in this class are usually for small amounts, and the premiums in most cases are payable weekly or monthly.

Industrial business in New South Wales is transacted only by Australasian companies, of which nine combine industrial with ordinary business, while one limits its operations to industrial and medical benefit transactions. The total industrial business of the ten companies cited, in force in Australasia during the year 1918 is shown in the following table:—

Institutions with Head Office in—	Policies in Force, Exclusive of Annuities.	Amount Assured, Exclusive of Bonuses.	Bonus Additions.	Total.	Annual Premiums Payable.
New South Wales	No. 536,405	£ 14,718,953	£ 71,084	£ 14,790,079	£ 861,751
Victoria	253,326	8,644,901	72,120	8,717,021	685,518
New Zealand	62,442	1,293,576	—	1,293,576	79,678
Total	852,273	24,657,472	143,204	24,790,676	1,627,947

In the industrial branch the largest proportion of the business relates to endowment assurance, and classification of the total industrial business in force in 1917 and in 1918 is shown below.

Classification.	1917.				1918.			
	Policies in Force.	Amount Assured Exclusive of Bonus Additions and Re-assurances.	Bonus Additions.	Annual Premiums Payable.	Policies in Force.	Amount Assured Exclusive of Bonus Additions and Re-assurances.	Bonus Additions.	Annual Premiums Payable.
Assurance	No. 707,519	£ 4,784,972	£ 29,024	£ 225,079	712,966	£ 4,422,805	£ 40,314	£ 235,107
Endowment Assurance	509,024	14,111,571	96,000	1,070,564	578,222	14,802,194	93,800	1,220,127
Endowment	11,220	1,271,561	—	68,189	51,521	1,160,590	—	61,713
Total	627,763	11,607,604	125,024	1,415,802	642,709	14,807,479	144,204	1,817,947

Industrial Branch—New South Wales Business.

The following table shows the industrial business in force in New South Wales during 1918.

Institutions with Head Office in—	Policies in Force, Exclusive of Assurances.	Amount Assured, Exclusive of Assurances.	Bonus Additions.	Total.	Annual Premiums Payable.
New South Wales	No. 187,920	£ 5,150,144	£ 700	£ 5,150,844	£ 312,362
Victoria	78,137	1,921,302	—	1,921,302	146,816
New Zealand	7,690	224,177	—	224,177	15,276
Total	273,747	7,901,713	700	7,902,413	474,454

The figures in the column assigned to bonus additions refer to one company only, because in some instances particulars under this heading are not available.

In the industrial branch 69 per cent. of the policies and 74 per cent. of the amount assured were held in the form of endowment assurance; whole-life policies represented 27 per cent. of the policies and 23 per cent. of the amount assured. The average amount per policy was less than £27, viz., assurance £22, endowment assurance £38, and endowment £25.

Classification.	1917.				1918.			
	Policies in Force.	Amount Assured Exclusive of Bonus Additions and Re-assurances.	Bonus Additions.	Annual Premiums Payable.	Policies in Force.	Amount Assured Exclusive of Bonus Additions and Re-assurances.	Bonus Additions.	Annual Premiums Payable.
Assurance	No. 70,020	£ 1,614,060	£ 32	£ 80,402	73,600	£ 1,623,480	£ 50	£ 90,500
Endowment Assurance	103,111	4,484,312	545	530,175	160,317	4,562,730	601	568,212
Endowment	32,020	279,089	—	20,020	15,071	314,281	—	25,700
Total	245,151	6,377,461	577	404,597	270,718	7,907,719	701	474,412

Summary.—Ordinary and Industrial Business.

A summary of the ordinary and industrial local business in comparison with the total business of the institutions operating in the State is shown in the following table:—

Branch.	Total Business.			New South Wales Business.		
	Policies.	Amount Assured (Including Deposits).	Annual Premiums Payable.	Policies.	Amount Assured (Including Deposits).	Annual Premiums Payable.
	No.	£	£	No.	£	£
Ordinary	3,619,418	1,638,747,602	54,784,111	201,359	50,812,704	1,741,249
Industrial	932,202	24,607,472	1,617,947	273,716	7,301,713	472,449
Total	4,551,620	1,663,355,114	56,402,058	475,075	58,114,417	2,213,697

In the ordinary branch the New South Wales business represents about 3 per cent., and the industrial branch about 30 per cent.

New South Wales Business.

The next statement shows the ordinary and industrial business in force in New South Wales in each of the last ten years.

Year.	Ordinary Branch.			Industrial Branch.		
	Policies.	Amount Assured.	Annual Premiums Payable.	Policies.	Amount Assured.	Annual Premiums Payable.
	No.	£	£	No.	£	£
1909	141,632	34,445,756	1,165,697	129,180	2,742,868	160,348
1910	155,531	35,972,590	1,184,548	143,209	3,123,666	184,607
1911	159,928	37,501,311	1,212,409	156,194	3,411,123	205,886
1912	167,399	39,652,660	1,274,797	173,941	3,918,090	236,809
1913	173,834	41,432,591	1,282,162	191,332	4,413,289	273,907
1914	178,480	42,692,310	1,432,301	202,420	4,712,117	290,507
1915	181,671	43,220,335	1,465,347	211,881	5,000,021	319,300
1916	187,514	45,460,333	1,550,311	229,721	5,399,879	368,126
1917	192,962	47,536,307	1,644,682	245,037	6,298,106	404,530
1918	201,538	50,832,798	1,741,249	273,716	7,301,713	472,448

A feature of this table is the large increase in industrial insurance; since 1909 the number of these policies per 1,000 of the population has increased from 81 to 142 and the amount assured from £1 14s. 10d. to £3 15s. 9d.

The number of ordinary policies per 1,000 of the population in 1918 was approximately 104, as compared with 92 in 1909, and the sum assured rose from £21 11s. 6d. to £26 7s. 1d. per head of the population as will be seen from the figures shown hereunder.

Year.	Policies per 1,000 of Population.		Amount Assured per Head of Population.		Year.	Policies per 1,000 of Population.		Amount Assured per Head of Population.	
	Ordinary.	Industrial.	Ordinary.	Industrial.		Ordinary.	Industrial.	Ordinary.	Industrial.
	No.	No.	£ s. d.	£ s. d.		No.	No.	£ s. d.	£ s. d.
1909	92	81	21 11 6	1 14 10	1914	98	109	22 12 7	2 10 7
1910	95	87	21 10 2	1 16 2	1915	97	113	22 5 4	2 12 8
1911	94	86	22 2 7	2 0 2	1916	103	124	24 6 3	2 0 3
1912	94	88	22 1 10	2 4 0	1917	102	121	25 4 4	1 9 4
1913	95	104	22 12 2	2 6 2	1918	104	142	26 7 1	2 15 9

New Assurance Business in New South Wales.

The new business, ordinary and industrial, effected in New South Wales during the last two years is compared in the following table:—

Institutions with Head Office in—	1917.			1918.		
	Policies.	Amount assured.	Annual Premiums payable.	Policies.	Amount assured.	Annual Premiums payable.
<i>Ordinary Branch.</i>						
	No.	£	£	No.	£	£
New South Wales	12,624	3,423,344	133,397	13,472	4,247,425	183,635
Victoria	5,147	1,581,871	54,820	5,307	1,627,653	64,968
New Zealand	147	16,150	624	146	14,375	600
United States	55	83,721	3,287	94	73,173	2,843
Total	18,010	4,914,996	192,308	21,643	6,972,926	252,032
<i>Industrial Branch.</i>						
	No.	£	£	No.	£	£
New South Wales	21,213	1,591,138	65,973	23,907	1,260,323	75,290
Victoria	18,280	607,176	62,392	20,350	763,389	63,406
New Zealand	3,987	122,476	7,373	3,422	114,547	6,934
Total	43,480	1,720,790	115,738	47,679	2,138,259	145,630

Of the new business effected in 1918 in the ordinary branch, 99 per cent. was with the Australasian societies, 71 per cent. being with the companies having head offices in New South Wales. The British company (Liverpool, London and Globe) does not accept new life assurance business in this State. In the industrial branch, 59 per cent. of the business was with New South Wales companies, 26 per cent. with Victorian, and 5 per cent. with the New Zealand company.

Details regarding the variety of new assurances effected during the last two years is shown in the following statement.

Classification.	1917.			1918.		
	Policies.	Amount assured.	Annual Premiums payable.	Policies.	Amount assured.	Annual Premiums payable.
<i>Ordinary Branch.</i>						
	No.	£	£	No.	£	£
Assurance	5,033	2,613,916	95,081	7,259	3,433,033	141,917
Endowment Assurance	11,259	2,102,910	87,895	11,862	2,136,073	93,071
Endowment	1,718	198,070	9,332	2,522	397,922	17,064
Total	18,010	4,914,896	192,308	21,643	5,972,028	252,052
<i>Industrial Branch.</i>						
	No.	£	£	No.	£	£
Assurance	10,850	355,097	19,386	10,546	349,222	19,928
Endowment Assurance	39,756	1,254,465	89,378	47,430	1,600,379	114,054
Endowment	2,885	111,228	6,974	4,303	188,658	11,648
Total	53,491	1,720,790	115,738	62,279	2,138,259	145,630

The following statement shows a comparison of the new business in New South Wales during the last five years.

Year.	Ordinary Branch.			Industrial Branch.		
	Number of Policies.	Amount Assured.	Annual Premiums Payable.	Number of Policies.	Amount Assured.	Annual Premiums Payable.
		£	£		£	£
1914	17,217	3,914,935	142,792	48,267	1,332,966	91,427
1915	15,976	3,784,103	147,554	45,188	1,258,683	86,959
1916	16,372	4,100,923	166,301	50,649	1,516,518	102,668
1917	18,010	4,914,896	192,308	53,491	1,720,790	115,738
1918	21,643	5,972,028	252,052	62,279	2,138,259	145,630

During the three years 1914-16 there was a decrease due to the War. However, the average insurance per policy and annual premium per £100 have been well maintained.

There was a noteworthy recovery in new business in 1917 and 1918, which was due also to the incidence of the War. Numbers of men who were prepared to enlist, in order to keep up the strength of the military force overseas by continuous reinforcements, were deterred by the claims of dependents. To meet their case a number of business firms and patriotic citizens subscribed the necessary funds to insure the lives of volunteers, the average policy being valued at £200 on the mortality risk of each soldier enlisting under this scheme; and, as a consequence, new insurance business proportionately benefited. In 1918 for the ordinary branch the average policy was £276, and the average annual premium per £100 was £4 4s. 5d.; and in the industrial department the average amount per policy was approximately £34, and the average weekly premium 2s. 7d. per £100.

Receipts and Expenditure—Australasian Societies.

The receipts of the societies are represented chiefly by the collections from premiums on policies, and by interest arising from investments. Payments on account of death claims, policies matured and surrendered, cash bonuses, and the expenses of management constitute the bulk of the disbursements, the excess of receipts over expenditure representing the additions to the funds.

Total Business.

The general direction of the total business of the Australasian societies is shown in the following table, which includes both ordinary and industrial departments.

Year.	Societies.	Policies	Receipts.	Expenditure.	Addition to Funds.
		in Force.			
	No.	No.	£	£	£
1894	10	338,249	3,392,423	2,354,481	1,037,942
1900	11	331,869	4,093,376	2,648,593	1,444,783
1905	14	756,563	5,437,589	3,834,972	1,602,617
1910	11	1,036,173	7,131,530	4,619,440	2,512,090
1915	14	1,424,196	9,474,128	5,084,592	3,389,536
1916	13	1,509,854	10,185,839	6,514,124	3,671,715
1917	14	1,596,656	10,916,728	7,742,300	3,174,428
1918	14	1,791,687	11,765,144	8,089,187	3,704,957

The following table shows the aggregate receipts and disbursements of the Australasian institutions during 1918 for both classes of business, though in the case of one company (the People's Prudential), which did not keep the accounts of such department separately, the figures relating to the ordinary have been included in those of the industrial branch.

	Ordinary Branch.	Industrial Branch.	Total.
	£	£	£
Receipts—			
Premiums—			
New	892,298	6,798	899,096
Renewal	2,096,970	1,631,227	3,728,197
Consideration for Annuities	47,250	—	47,250
Interest	3,215,247	233,727	3,448,974
Other (Rents, etc.)	138,930	13,274	152,204
Total Receipts	9,969,118	1,795,026	11,765,144
Expenditure—			
Claims	4,869,734	364,366	5,234,100
Surrenders	637,623	19,374	656,997
Annuities	117,781	200	118,000
Cash Bonuses and Dividends	184,743	69,311	254,054
Expenses	1,110,133	662,699	1,772,832
Amount written off to Depreciation, Reserves, etc.	53,907	3,250	57,157
Total Expenditure	6,969,942	1,079,240	8,089,187

New South Wales Business.

The following table shows the revenue and expenditure of the New South Wales business during the year 1918. The particulars relating to the ordinary and industrial departments are separated (with the exception mentioned above), and the transactions of the American companies have been included in order to give the total for the State.

	Ordinary Branch.	Industrial Branch.	TOTAL.
Receipts—			
Premiums—			
New	£ 232,704	£ 4,629	£ 237,333
Renewal	1,503,597	457,530	1,961,127
Consideration for Annuities	6,589	—	6,589
Interest	1,139,680	101,133	1,240,813
Other (Rents, etc.)	80,193	5,178	85,371
Total Receipts	2,963,063	568,470	3,531,532
Expenditure—			
Claims	1,224,480	104,806	1,329,286
Surrenders	296,607	4,078	300,685
Annuities	30,517	293	30,810
Cash Bonuses and Dividends	105,093	19,358	124,451
Expenses	317,334	181,802	499,136
Amount written off to Depreciation, Reserves, etc.	21,632	1,374	23,006
Total Expenditure	1,905,663	312,643	2,218,306

Accumulated Funds—Australasian Societies.

The annual additions to the funds have shown a considerable increase, as will be seen from the following table, which shows the yearly increment, total amounts, and interest thereon, with the average rate realised on investments. The figures relate to the total business, and include both ordinary and industrial branches.

Year.	Accumulated Funds Including Paid-up Capital.		Interest.	
	Additions During the Year	Total Amount at end of Year.	Amount Received.	Average Rate Realised on Mean Funds.
	£	£	£	per cent.
1890	1,404,215	14,580,210	527,209	5.97
1895	1,057,942	20,438,224	1,037,677	5.21
1900	1,445,073	26,491,023	1,161,696	4.51
1905	1,603,317	34,915,842	1,527,699	4.48
1910	2,511,310	46,238,405	1,963,425	4.65
1915	3,389,564	61,866,774	2,763,577	4.61
1916	3,571,715	65,438,489	3,011,666	4.73
1917	3,174,426	68,612,915	3,196,371	4.77
1918	3,704,967	72,317,872	3,440,074	4.89

The increase in earning power has been gradual since the year 1905, when it was 4.48 per cent., but the most recent rate (4.89 per cent.) is lower than that of 1895. A comparison with the bank rate of interest on fixed deposits,

given on a previous page, shows that diminished rates were general until a slight increase took place between the years 1910 and 1915, and continued during following years, and the interest earned by the insurance companies has held a correlation to the general tendency.

Expenses of Management—Australasian Societies.

The expenses of management of the ordinary business in 1918 represent in the aggregate 11·05 per cent. of the total receipts, and 16·65 per cent. of the premium income, and the industrial branch, 32·80 and 38·06 per cent. respectively. The ratio between management expenses and premium income must necessarily vary with the volume of new business transacted and the age of the society, quite apart from the intensity of competition for new business. The following figures show the cost of management, including commission, and the proportion of premium income and gross receipts, ordinary and industrial departments being included.

Year.	Management Expenses.	Premium Income.	Gross Receipts.	Management Expenses.	
				Per cent. of—	
				Premium Income.	Gross Receipts.
	£	£	£		
1895	438,524	2,380,167	3,392,423	18·42	12·93
1900	565,380	2,799,512	4,093,376	20·19	13·81
1905	858,741	3,500,448	5,437,589	24·53	15·79
1910	1,016,153	5,074,204	7,131,250	20·03	14·25
1915	1,252,438	6,591,572	9,474,126	19·00	13·22
1916	1,364,058	7,138,291	10,185,839	19·11	13·39
1917	1,535,242	7,575,821	10,916,726	20·26	14·06
1918	1,688,742	8,161,587	11,765,144	20·68	14·35

The management expenses of the ordinary and industrial branches can be stated separately for the five years 1914 to 1918, and the proportions are shown in the following table.

Year.	Ordinary Branch.		Industrial Branch.	
	Proportion of Management Expenses to—			
	Premium Income.	Total Receipts.	Premium Income.	Total Receipts.
	per cent.	per cent.	per cent.	per cent.
1914	16·35	11·09	41·85	37·30
1915	15·39	10·32	38·86	34·12
1916	15·45	10·28	33·82	33·82
1917	16·34	10·86	38·23	33·21
1918	16·65	11·05	38·06	32·80

In 1918 the lowest proportion of management expenses to premium receipts in the ordinary branch shown by any company was 13·26 per cent., and the highest was 75·32 per cent.; in relation to the total receipts, the highest and lowest proportions were 8·39 per cent. and 70·37 per cent. respectively.

The expenses of the industrial branch are necessarily very high in proportion to the receipts, on account of the house-to-house method of collection, which is an essential feature of the system; the proportion of

management expenses to premium receipts ranged from 33·09 per cent. to 85·33 per cent. and the proportion to the total receipts from 27·87 per cent. to 79·24 per cent.

Liabilities and Assets—Australasian Societies.

The following table gives a summary of the liabilities and assets of the Australasian societies for the year 1918.

Liabilities.	£	Assets.	£
Assurance Funds—		Loans—	
Participating in Profits ...	68,950,756	On Mortgage ...	22,378,738
Non-participating in Profits ...	896,149	„ Municipal and Other	
Claims Investment Fund ...	29,256	Local Rates ...	10,405,381
Other Assurance Funds ...	1,646,675	Reversionary, Life, and	
		Other Interests ...	555,623
Total ...	71,522,836	„ Policies ...	7,917,671
		„ Personal Security ...	13,256
Guarantee and Contingency		„ Government Securities..	123,247
Funds ...	27,541	„ Other Debentures and	
Investment Fluctuation Fund	150,490	Bonds ...	494,096
Claims admitted but not paid	1,758,597	„ Miscellaneous Loans ...	12,147
Outstanding Accounts...	3,225,655	Total ...	41,899,959
Other Liabilities—			
Paid-up Capital ...	447,526	Government Securities—	
Reserve Funds ...	154,910	British Stocks including	
Miscellaneous—including		War Loans ...	750,636
Deposits ...	1,087,193	N.S.W. Stocks ...	2,260,852
		Other Commonwealth	
		Stocks ...	19,978,378
		New Zealand Stocks ...	3,727,227
		Other Government Securities	
		including War Loans ...	2,097,168
		Total ...	28,814,251
		Real Estate—	
		Office Premises—	
		New South Wales ...	886,477
		Other Australian States	1,269,593
		Elsewhere ...	672,690
		Properties acquired by Fore-	
		closure and Other Real	
		Estate ...	535,910
		Total Real Estate..	3,364,670
		Other Assets—	
		Outstanding and Deferred	
		Premiums ...	779,998
		Accrued and Outstanding	
		Interest... ..	819,068
		Cash in Banks and in Hand	1,175,121
		Sundries	1,521,681
		Total	4,295,868
Total Liabilities...	£78,374,748	Total Assets ...	£78,374,748

The aggregate liabilities and assets of the Australasian societies for the period 1885 to 1918 are shown in the following table:—

Year.	Societies.	Liabilities.			Assets.		
		Paid-up Capital and Accumulated Funds.	Other Liabilities.	Total.	Loans on Mortgages, Policies, &c.	Reserves, Freehold Property, &c.	Total.
	No.	£	£	£	£	£	£
1885	10	21,497,059	-	21,497,059	18,001,228	3,896,830	21,497,059
1900	11	27,471,223	-	27,471,223	18,043,379	8,427,844	27,471,223
1905	11	33,867,362	-	33,867,362	25,072,061	13,795,301	33,867,362
1910	11	43,858,994	773,731	44,632,725	30,025,778	15,818,947	45,844,725
1914	13	51,775,570	1,112,768	52,888,338	42,528,480	16,369,858	58,898,338
1915	14	61,219,004	1,622,235	62,841,239	45,533,092	17,608,147	63,141,239
1916	15	64,866,998	3,308,131	68,175,129	45,029,219	23,045,910	68,075,129
1917	14	68,969,392	3,654,376	72,623,768	44,732,716	27,631,052	72,363,768
1918	14	72,303,305	6,071,445	78,374,750	41,499,926	36,474,724	77,974,650

Loans on mortgage, municipal securities, the policies of members, &c., represent over 53 per cent. of the total assets. In former years insurance companies sought only these forms of investment, but recently attention has been given to the Government securities and investments in shares, and considerable sums are deposited with banks, or invested in freehold and leasehold property; since 1913 large sums have been subscribed to the various War Loans. Investments on personal security are unusual, advances being generally combined with life policies, and the total amount invested under this heading in the year 1918 was only £13,254. In some of the States companies are obliged by law to deposit certain sums with the Treasury as a guarantee of good faith, and these amounts are included in their balance-sheets under the head of Government securities or of deposits. The ratio of loans on mortgages, policies, &c., to total assets for the years quoted in the previous table was as follows:—

Year.	per cent.	Year.	per cent.
1885	72.37	1915	72.06
1900	69.21	1916	66.15
1905	61.54	1917	61.34
1910	65.94	1918	53.48

FIRE, MARINE, AND GENERAL INSURANCE.

The Fire Brigades Act, 1909, and its amendment of 1910 apply to 79 districts. The equipment for fighting fire includes 33 permanent and 28 volunteer stations and brigades in the metropolitan area (of which 8 permanent stations and brigades are within the boundaries of the City of Sydney), and 94 brigades in the country or extra-metropolitan divisions of New South Wales. By proclamation the provisions of the Act may be extended to other areas.

BOARD OF FIRE COMMISSIONERS.

The Board of Fire Commissioners of New South Wales, representing the city and suburban area, the country area, the volunteer brigades, and the insurance companies, with a president appointed by the Government, exercises control in regard to fire prevention in declared districts, and may recover charges for attendance at fires outside such districts. On the passing of the Fire Brigades Act, 1909, all existing fire brigades boards were dissolved, and their property was vested in the Board of Fire Commissioners, subject to any trusts and liabilities attaching to such property. The Board is charged with the establishment and maintenance of permanent fire brigades, and the authorisation and subsidising of volunteer bodies; the funds are raised by contributions of one-third individually of the estimated requirements for each district, by insurance companies, by municipalities, and by the Government; and a *pro rata* contribution is charged against each owner of property assured in any company, as defined, which is not registered within the State. To ensure efficient operation of these provisions periodical returns are required by the Board from municipalities, insurance companies and property owners.

The following table shows the revenue account and balance-sheet of the Fire Commission Board for the year ended the 31st December, 1918.

Revenue Account, 1918.

Revenue.		Expenditure.	
£		£	
Balance from 1917	14,426	Administration	3,611
Subsidy from Government	47,581	Salaries and Payments to Volunteers	65,655
Subsidy from Municipalities and Shires	47,581	Buildings, Equipment, and other expenses	31,843
Subsidy from Fire Insurance Com- panies and Firms	47,581	Equipment and Property Charges, and Reserves	22,870
Other Sources	4,000	Other	242
		Balance	10,201
Total	162,193	Total	162,193

Balance-Sheet, 1918.

Liabilities.		Assets.	
£		£	
Fund Account	65,655	Land and Buildings	182,655
Reserves, and Trust Accounts	2,129	Plant Accounts and Fire Appliances	87,592
Debiture and Accrued Interest	101,500	Stocks on Hand	10,878
Revenue and Expenditure Account	12,201	Bank Balances and Cash Account	6,144
Property and Equipment Fund	60,097		
Administration Account	1,477		
Other	1,263		
Total	266,193	Total	266,193

The estimates of revenue adopted by the Board for 1919 amounted to £143,440, being £102,594 for the Sydney Fire District, and £40,851 for the seventy-eight Country Fire Districts. The ratio of municipal contributions to the Assessed Annual Value in Sydney, suburbs, and shires included in the Sydney Fire District was 7s. per £100 in 1914, 5s. 9d. per £100 in 1915, 5s. 5d. in 1916, 6s. 1d. in 1917, 5s. 10d. in 1918, and 5s. 7d. in 1919.

Under the Act the contributions payable by insurance companies are proportionate to the premiums received by or due to the companies during the year; in 1918 contributions amounting to £47,198 were received from 87 insurance companies, and in addition contributions amounting to £383 were received from 76 individual firms who insured goods with companies not registered in New South Wales. The contributions to the Sydney Fire District in 1918 represent £5 11s. 3d. per £100 of premium, and in the remaining districts the percentage ranged from £1 19s. to £16 12s. 10d.

GENERAL INSURANCE—NEW SOUTH WALES BUSINESS.

There were 88 companies transacting general insurance (as distinct from life assurance) business in New South Wales during 1918, and the nature of the insurance effected during the year ended 30th June, 1919, is shown in the following table.

Nature of Insurance.	Revenues in New South Wales.		Expenses in New South Wales.			Proportion of Premium Income.		
	Premiums less Re-insurances and Retentions.	Lesses, less Re-insurances.	Expenses of Management.		Total.	Losses.	Com-mission and Agency Charges.	Other Management Expenses.
			Com-mission and Agency Charges.	Other.				
£	£	£	£	£	per cent.	per cent.	per cent.	
Fire	1,227,814	222,394	262,222	277,569	1,278,271	43.44	13.63	10.71
Marine	680,149	146,629	24,727	26,599	837,272	35.69	7.56	19.56
Accident	28,122	28,247	16,126	22,222	37,644	47.39	21.94	51.34
Employers' Liability and Workmen's Compensation	226,222	126,222	22,222	42,222	509,222	10.21	11.72	20.60
Public Risk, Third Party	24,222	4,222	7,222	4,222	11,222	19.48	12.90	20.12
Plate-glass	22,222	11,222	4,222	5,222	55,222	40.92	15.88	23.80
Motor Car and Motor Cycle	22,222	22,222	4,222	16,222	63,222	43.95	10.21	29.84
Hallways	22,222	2,222	3,888	6,222	12,222	11.74	10.29	29.84
Boiler Explosions	2,222	2,222	222	4,222	4,222	20.82	9.26	67.07
Live Stock	22,222	12,222	3,222	6,444	72,222	17.55	19.15	31.62
Burglary	2,222	2,222	1,222	2,444	4,222	20.28	12.20	22.19
Guarantee	2,222	772	1,196	2,222	4,222	9.26	12.72	22.25
Loss of Profit	22,222	2,222	2,222	2,222	12,222	14.98	11.07	22.00
Elevator	222		222	44	44		20.96	12.70
Shrinkage	222	22	24	222	222	2.28	12.22	22.18
Other	222		22	222	222	1.05	7.66	24.08
Total Premiums	1,987,742							
Total Income, &c.	72,420							
Total	1,987,742	227,127	282,247	614,227	1,768,221	40.96	12.10	22.28

The total premiums amounted to £2,165,742, and the losses to £887,127, the latter being 40.96 per cent. of the premiums. The expenses for commission and agency charges were £262,247, and for general management £614,227, making a total of £876,804, being 40.57 per cent. of the premium income, or 39.63 of the gross revenue.

According to the local statements, fire business comprises about 57 per cent. of the total general insurances. The premiums received for fire risks during 1918-19 were £1,227,914, and the losses amounted to £533,394, or 43.44 per cent.

Of all classes of general insurance against risk, the highest proportionate loss was sustained by companies which undertook to furnish indemnities in the event of losses of live stock, employers' liabilities in compensating injured workmen, incapacitation by accident, and motor-car and motor-cycle disaster, in the order named; and all these took precedence of loss by fire.

The succeeding table shows the total revenue and expenditure during the last five years. The transactions of the fire branch have been shown separately, as they comprised considerably more than half of the total business. The interest receipts could not be distributed under the various headings, and have been included in one item.

Year ended 30th June.	Revenue.			Expenditure.			
	Premiums.	Interest.	Total Revenue.	Losses.	Management.		Total Expendi- ture.
					Commis- sion and Agents' Charges.	Other Manage- ment Ex- penses.	
	£	£	£	£	£	£	£
1915 { Fire ...	856,000	54,308	1,492,131	{ 662,381	120,503	247,423	1,030,312
{ Other ...	581,814			{ 224,650	59,820	135,590	420,060
{ Total ...	1,437,823			{ 887,031	180,328	383,013	1,450,372
1916 { Fire ...	973,134	49,600	1,718,737	{ 452,549	137,596	262,099	852,244
{ Other ...	696,003			{ 287,515	71,671	147,785	506,971
{ Total ...	1,669,137			{ 740,064	209,267	409,884	1,359,215
1917 { Fire ...	1,043,871	53,616	1,815,784	{ 588,194	132,300	301,877	1,622,350
{ Other ...	718,297			{ 516,060	76,100	168,857	761,017
{ Total ...	1,762,168			{ 1,104,254	208,400	470,734	1,783,397
1918 { Fire ...	1,117,849	65,148	2,100,325	{ 415,707	153,373	314,918	883,998
{ Other ...	917,328			{ 253,108	94,128	225,524	672,760
{ Total ...	2,035,177			{ 768,815	247,501	540,442	1,556,758
1919 { Fire ...	1,227,914	72,590	2,238,332	{ 533,394	165,812	377,065	1,076,271
{ Other ...	937,828			{ 353,733	96,435	237,492	687,660
{ Total ...	2,165,742			{ 887,127	262,247	614,557	1,763,931

The following statement shows the proportion of expenditure to premium income for the same years.

Year ended 30th June.	Losses.	Management.		Total Expenditure.
		Commission and Agents' Charges.	Other Management Expenses.	
	per cent.	per cent.	per cent.	per cent.
1915 { Fire ...	77.38	14.08	28.90	120.36
{ Other ...	38.60	10.23	23.30	72.18
{ Total ...	61.69	12.54	26.64	100.87
1916 { Fire ...	46.50	14.14	26.93	87.57
{ Other ...	41.31	10.29	21.23	72.83
{ Total ...	44.34	12.54	24.56	81.44
1917 { Fire ...	56.35	12.67	28.93	97.95
{ Other ...	71.84	10.60	23.51	105.95
{ Total ...	62.66	11.83	26.71	101.20
1918 { Fire ...	37.19	13.72	28.17	79.08
{ Other ...	38.49	10.26	24.58	73.33
{ Total ...	37.77	12.16	26.55	76.48
1919 { Fire ...	43.44	13.50	30.71	87.65
{ Other ...	37.72	10.28	25.32	73.32
{ Total ...	40.96	12.19	28.33	81.53

BANKRUPTCY.

Transactions in insolvency were conducted by the Chief Commissioner of Insolvent Estates prior to 1888, but under the Bankruptcy Act of 1887 and subsequent amending Acts, which were consolidated under the Act of 1908, the law is now administered by a Supreme Court Judge in Bankruptcy. The following statement shows the number of bankruptcy petitions for each of the last five years.

Year.	Petitions in Bankruptcy.			Petitions Withdrawn, Returned, etc.	Receivables Orders Granted.
	Voluntary.	Compulsory.	Total.		
1914	282	123	405	30	375
1915	301	147	448	43	405
1916	246	145	391	43	348
1917	178	123	301	34	267
1918	164	113	277	25	254

The estates freed from sequestration during the currency of the Act number 3,450, being only 16·8 per cent. of the total sequestrations. Occasionally applications for certificates are refused, and, taking these into consideration, it would appear that out of 100 bankrupts 83 are unable, or too indifferent, to take the necessary steps to free themselves from bankruptcy.

The property of an uncertificated bankrupt, even if acquired subsequently to sequestration, is liable to seizure on behalf of unsatisfied creditors. The number of sequestrations during the years the Act has been in force is 20,578, and of these 17,128 remain uncertificated.

During 1918 the liabilities, according to the bankrupts' schedules, amounted to £221,928, and the assets to £115,776. The qualification "according to the bankrupt's schedules" is necessary, as the assets and liabilities established after investigation by the Court differ widely from those furnished.

The following statement shows the number of bankruptcies and the nominal liabilities and assets from 1888 to 1918.

Period.	Sequestrations.	Nominal—		
		Liabilities.	Assets.	Ratio of Asset per £1 of Liability.
	No.	£	£	s. d.
1888-1892	5,720	5,682,680	2,644,382	9 4
1893-1897	6,235	5,760,282	3,466,148	11 10
1898-1902	2,864	2,159,659	994,803	9 3
1903-1907	2,064	1,339,121	751,106	11 6
1908-1912	1,676	986,976	590,470	12 0
1913	359	308,755	144,638	13 10
1914	375	323,111	141,669	8 9
1915	405	428,700	166,746	7 10
1916	330	383,448	303,893	15 10
1917	287	227,863	208,093	18 3
1918	264	221,928	115,776	10 5

TRANSACTIONS IN REAL ESTATE.

The Real Property Act, commonly known as the "Torrens" Act, was passed in 1862 to regulate the procedure in regard to land transfers. This Act and its amendments were consolidated in 1900, and its main features are the transfer of real property by registration of title instead of by deeds, the absolute indefeasibility of the title when registered, and the protection afforded to owners against possessory claims—as the title issued under the Act stands good, notwithstanding any length of adverse possession. All lands sold by the Crown since the passage of that measure have been conveyed to purchasers under its provisions, the transactions under the old law being restricted to grants issued prior to 1862, and governed by the Deeds Registration Act. The area for which such grants were issued amounted to 7,478,794 acres; 2,367,019 acres have since been brought under the provisions of the "Torrens" Act, hence 5,111,775 acres still remain under the old tenure. Lands may be placed under the Real Property or the "Torrens" Act only when the titles are unexceptional.

The area of conveyed Crown lands and of private estates brought under the Act during the five years ended 1918 was as follows:—

Year.	Area.			Value.		
	Crown Lands.	Private Lands.	Total.	Crown Lands.	Private Lands.	Total.
	acres.	acres.	acres.	£	£	£
1914	434,817	46,381	471,008	397,855	1,199,817	1,597,672
1915	354,268	36,188	390,456	317,208	948,520	1,265,028
1916	423,303	23,352	446,655	393,749	674,678	1,068,427
1917	400,978	31,878	422,856	371,549	853,673	1,226,022
1918	388,672	36,628	415,300	371,330	1,229,593	1,600,633

For the whole period during which the "Torrens" system has been in operation, 36,712,912 acres, valued at £36,382,023, have been conveyed under its provisions; and 2,367,019 acres, valued at £43,909,153, have been brought under it, the deeds under the old Act thus being automatically cancelled.

The following table shows for each year of the past decade the amount paid as money consideration on sales of private lands, estates sold on long terms being excluded.

Year.	Conveyances or Transfers (000 omitted).			Year.	Conveyances or Transfers (000 omitted).		
	Under Deeds Registration Act.	Under Real Property (Torrens) Act.	Total.		Under Deeds Registration Act.	Under Real Property (Torrens) Act.	Total.
	£	£	£		£	£	£
1909	2,312	9,417	11,729	1914	3,613	16,535	20,198
1910	4,058	11,959	16,017	1915	3,153	11,850	15,003
1911	4,602	16,426	21,028	1916	3,370	12,188	15,559
1912	5,562	18,380	23,942	1917	3,979	11,619	15,593
1913	4,728	16,079	20,806	1918	3,995	16,635	20,630

As already mentioned, the Real Property Act provides that on the issue of a certificate the title of the person named on the certificate is indefeasible. Provision is made, however, for error in transfer, by which persons might be deprived of their property; as, should the transfer be made to the wrong person, the holder of the certificate cannot be dispossessed of his property unless he has acted fraudulently. To enable the Government to compensate persons who, through error, may have been deprived of their properties, an assurance fund was created by means of a contribution of one halfpenny in the pound on the declared capital value of property when first brought under the Act, and upon transmission of titles of estates of deceased proprietors.

It is a sterling testimony of the value of the Act, and of the facility and accuracy of its working, that payments from the assurance fund to the 31st December, 1907, in respect of titles improperly granted, amounted only to £16,326. In 1907 this fund, as a separate account, was closed, and the amount at credit, £255,059, was transferred to the Closer Settlement Account, in accordance with the provisions of section 6 of the Public Works and Closer Settlement Funds Act, 1906, and all assurance contributions under section 119 of the Real Property Act, 1900, and all claims for compensation, are now dealt with under the Closer Settlement Act.

The estimated unimproved capital value of land in the State in the year 1917 was £209,985,000, and the improved value was £509,365,000. The total area alienated (exclusive of Federal Capital transactions) amounted on the 30th June, 1918, to 41,794,364 acres, of which, as already stated, 39,079,931 acres are held under the Real Property or "Torrens" Act. The total alienated area of 41,794,364 acres is subject to all the operations of lien and mortgage, to State municipal rating, and to State and Federal taxation.

MORTGAGES.

Mortgages, except those regulated by the Bills of Sale Acts and the Merchant Shipping Act, may be registered at the Registrar-General's office, but there are a large number of unregistered mortgages of which no record is obtainable.

In the case of the registered mortgages, the amount of consideration for which a mortgage stands as security is not always stated in the deeds, the words "valuable consideration" or "cash credit" being inserted in cases where the advances are liable to fluctuation; and, as this frequently occurs when the property mortgaged is of great value, an exact statement of the total advances against mortgages cannot be made.

The figures in the following table relate only to cases in which a specific amount is stated in the deeds, whether that amount be the sum actually advanced or not.

Mortgages of land are registered under the Deeds Registration Act or the Real Property Act, according to the title of the property at the date of mortgage. The consideration given generally represents the principal owing; in some cases, however, it stands for the limit within which clients of banks and of other loan institutions are entitled to draw.

Liens on wool, mortgages on live stock, and liens on growing crops are registered under special Acts. Mortgages on live stock are current till discharge, and liens on wool mature at the end of each season, terminating without formal discharge. The duration of liens on agricultural and horticultural produce may not exceed one year. Such advances do not usually reach large sums, as there is an element of uncertainty in the security offered.

Particulars regarding the registered mortgages of land, liens on crops and on wool, and mortgages of live stock during the last five years are shown below.

Year.	Mortgages of Land		Mortgages of Crops, Wool, and Live Stock.			
	Number.	Consideration.	Number.			Consideration.
			Crops.	Wool.	Live Stock.	
		£				£
1914	24,491	20,874,748	1,370	1,174	3,206	2,061,261
1915	22,873	16,049,750	4,484	800	3,074	2,120,800
1916	21,919	17,075,978	2,492	774	2,688	1,668,613
1917	19,011	15,720,185	1,641	809	2,419	3,019,902
1918	22,723	16,801,063	1,490	1,023	3,017	1,764,928

As stated above, the particulars in this statement relate to registered mortgages only.

Mortgages on Ships.

Mortgages of registered British vessels are arranged under the Imperial Merchant Shipping Act of 1894. Transactions of this nature are divided into two classes, one in which the vessel is the sole security, and the other in which the advances are made on the security of the "account current," which may consist of ships, wharfage appliances, land, and other properties. The deed of mortgage is generally executed for the full amount of the advance. Registrations are effected at the two ports of registry, Sydney and Newcastle, and the combined returns are given in the following statement.

Year ended 30th June.	Mortgages on Ships only.				Mortgages on Account Current.			
	Sailing Vessels.		Steam and Motor Vessels.		Sailing Vessels.		Steam and Motor Vessels.	
	No.	Amount.	No.	Amount.	No.	Amount.	No.	Amount.
		£		£		£		£
1915	...	...	8	14,113	...	...	2	126
1916	1	100	8	6,291	1	1	7	2,655
1917	2	1,600	4	15,300	...	...	2	1,001
1918	1	200	10	187,762	...	...	18	14,012
1919	1	500	3	5,535	...	...	4	25,500

Bills of Sale.

All mortgages on personalty other than ships and shipping appliances, wool, live stock, and growing crops, are filed at the Supreme Court. A bill of sale is ineffective as to certain household furniture unless the consent of the wife or the husband of the maker or the giver of the bill is endorsed thereon. The law requires that each document must be filed within thirty days after it is made or given, otherwise the transaction is void as against execution creditors and against the official assignee or the trustee of a bankrupt estate; also that the registration must be renewed every twelve months; to prevent fraud and imposition the records are open to the inspection of the public. The total amount of advances made annually on the bills of sale is not readily available, but according to the number of bills

that the sum must be considerable. No complete record is made of bills terminated voluntarily, or by seizure, the official records showing only those discharged in the ordinary way. There are frequent seizures of the security given, which consists generally of household furniture and stock-in-trade, and it is regrettable that no record is kept of them; but neglect of registration of foreclosures is a weakness in procedure under all Acts regulating mortgage transactions. The bills filed and the discharges registered during the five years ended 1916 were as follow:

Year	Registrations		Returns in Order Bills of Sale Act of 1908.
	Filed in Supreme Court.	Satisfied, or Orders for Discharge Made.	
1914	3,194	402	9,179
1915	2,931	392	2,489
1916	2,511	365	2,478
1917	2,513	275	2,606
1918	3,066	353	2,414

REGISTRATION OF MONEY-LENDERS.

Under the Money-lenders and Infants Loans Act, 1905, money-lenders must be registered at the Registrar-General's Office, and they may conduct their business only under their own or their firm name, and at their registered offices. The term "money-lender" includes every person or company the business of whom or which is that of money-lending, but it excludes licensed pawnbrokers, registered friendly societies, institutions incorporated by special Act of Parliament to lend money, and banking and insurance companies. The number of registrations and renewals during the year 1915 was 66.

ESTATES OF DECEASED PERSONS.

The following table shows the number of estates and the amount on which stamp duty was paid during the ten years ended the 30th June, 1919. The figures for the two years ended June, 1911, are exclusive of properties administered by the Curator of Intestate Estates, for which particulars are not available.

Year ended 30th June.	Estates	Amount	Year ended 30th June.	Estates	Amount
	No.	£		No.	£
1910	3,187	10,417,169	1915	4,454	9,997,613
1911	3,363	7,397,375	1916	5,107	10,783,406
1912	4,372	12,445,639	1917	6,309	11,554,726
1913	4,749	8,669,070	1918	6,476	11,839,375
1914	4,831	10,439,256	1919	6,873	11,818,322

According to the foregoing figures, stamp duty was paid during the ten years ended the 30th June, 1919, on 46,445 estates, valued at £106,651,753, representing an average value per estate of £2,217.

The following table affords a comparison of the proportion of persons dying possessed of property per hundred of the total deaths in each quinquennium since the year 1880. The figures shown in this, and in the succeeding tables for the years prior to 1911, are exclusive of properties administered by the Curator of Intestate Estates.

Period.	Proportion of Deceased Persons with Estates per 100 Deaths.	Period.	Proportion of Deceased Persons with Estates per 100 Deaths.
1880-84	11.0	1910-14	22.9
1885-89	11.6	1915	23.7
1890-94	13.2	1916	25.4
1895-99	14.9	1917	32.2
1900-04	17.0	1918	37.5
1905-09	19.1		

The preceding figures indicate a widely diffused condition of prosperity, but a more convincing illustration of the wide distribution of property in New South Wales is afforded by the next table, which shows the proportion of estates per 100 deaths of adult males, and per 100 death of adult males and females. The latter method of comparison is frequently neglected, but it is worthy of consideration, as large numbers of women are possessors of valuable property in their own right. The following figures are given for quinquennial periods, commencing with the year 1880.

Period.	Ratio of Estates per 100 Deaths of Adult Males.	Ratio of Estates per 100 Deaths of Adult Males and Females.
1880-84	34.6	22.3
1885-89	37.5	23.8
1890-94	41.2	25.8
1895-99	42.7	26.2
1900-04	45.0	27.8
1905-09	48.8	29.2
1910-14	56.6	34.0
1915	56.1	33.6
1916	62.5	37.2
1917	76.0	44.8
1918	88.1	51.8

The proportions shown in the preceding tables have been increased during the last two years by reason of the fact that the figures relating to the estates include a large number—about 1,500 in 1917 and nearly 2,500 in 1918—left by members of the naval and military forces, and as the majority of these deaths occurred abroad they have not been included in the number of deaths. In 1915 there were 131 naval and military estates, and in 1916, 457.

The statement regarding the wide distribution of property in New South Wales must be taken relatively, and the following table, which shows the number of persons dying in possession of estates during the ten years ended June, 1919, affords a basis for testing the extent of its application.

Category.	Number of Deceased Persons leaving Property.	Proportion in Each Group.	Value of Estates of Deceased Persons.	Proportion in Each Group.
		per cent.	£	per cent.
£50,000 and over ...	228	·47	34,102,006	31·97
£25,000 to £50,000 ...	365	·75	12,494,118	11·71
£12,500 to £25,000 ...	726	1·50	12,627,347	11·84
£5,000 to £12,500 ...	2,137	4·41	16,410,398	15·39
£200 to £5,000 ...	27,862	57·51	29,538,955	27·70
Under £200 ...	17,127	35·36	1,478,929	1·39
Total ...	48,445	100·00	106,651,753	100·00

EMPLOYMENT AND INDUSTRIAL ARBITRATION.

EMPLOYMENT.

Complete information regarding the occupations of the people is obtained only at the Census, and statistics relating to the periods between the Census dates are restricted to employment in certain primary industries and in manufacturing establishments.

At the last Census, on 2nd April, 1911, there were 718,920 breadwinners and 916,211 dependents, classified as follows:—

Occupation	Males	Females	Total	Proportion to total		
				Males	Females	Total
Breadwinners—						
Professional	26,762	19,577	46,339	4.34	2.46	3.44
Domestic	18,898	64,482	83,380	9.23	6.91	4.49
Commercial	84,228	18,112	102,340	14.22	2.36	8.26
Transport and Communication	66,867	1,567	68,434	7.12	.26	3.79
Industrial	171,021	27,002	198,023	29.34	4.08	12.72
Primary Producers—						
Agricultural	77,069	1,626	78,695	9.17	.21	4.93
Pastoral	45,194	209	45,403	5.34	.07	2.90
Dairying	94,536	2,687	97,223	11.90	.34	6.66
Mining	39,551	29	39,580	4.67	.00	2.47
Others	12,069	22	12,091	1.45	.00	.75
Independent	5,507	2,401	7,908	.85	.33	.54
Total Breadwinners	580,807	128,012	708,819	82.41	17.59	63.96
Dependents	283,721	630,490	914,211	31.39	82.40	56.04
Not stated	11,160	543	11,703	—	—	—
Total	875,688	759,045	1,634,733	100.00	100.00	100.00

For details regarding occupations and ages of breadwinners at the Census of 1911, readers are referred to the 1913 issue of the Year Book.

ANNUAL RECORDS OF PRIMARY AND MANUFACTURING INDUSTRIES.

The number of persons permanently employed in the principal industries of the State at intervals since 1900 is shown in the following table, those employed in manufacturing establishments with fewer than four persons being excluded unless machinery is used. The figures for 1910 and subsequent years relate to the twelve months ended 30th June, except those for mining, which are for the calendar year.

The majority of women and girls engaged in agriculture (inclusive of poultry, pig, and bee-farming) and in dairying are only partly so employed, in conjunction with, or in addition to, their usual domestic duties:—

Year.	Agricultural.		Dairying.		Pastoral.	Mining.		Manufacturing.	
	Males.	Females.	Males.	Females.		Metal.	Coal and Shale.	Males.	Females.
					Males.	Males.			
1900	62,869	4,267	15,015	12,156	26,619	32,154	11,591	50,516	10,263
1905	62,419	5,608	19,287	14,209	29,919	24,795	14,137	56,111	16,064
1910	59,091	5,239	27,449	19,393	40,003	19,369	18,044	75,419	24,327
1911	58,299	5,782	27,488	19,422	43,387	19,360	17,657	82,083	26,541
1912	58,984	5,779	26,537	18,439	41,893	19,807	18,051	88,178	27,383
1913	61,525	6,950	25,961	18,478	40,543	19,914	18,966	93,036	27,364
1915	59,944	7,875	23,435	15,917	39,131	13,190	18,221	90,409	26,262
1916	59,256	8,743	21,979	15,404	38,042	14,412	16,892	87,724	28,677
1917	55,122	9,433	22,363	16,644	38,607	15,479	17,338	88,910	29,087
1918	50,490	8,161	21,071	15,938	43,793†	16,737	16,926	90,025	30,529
1919	45,528	5,353	24,561	17,160	46,899†	14,281	18,178	96,884	30,707

†Includes 2,805 females in 1918 and 3075 in 1919.

The manufacturing industry has shown the greatest progress, as indicated by the increase in the number of employees since 1900. The increase is most marked in regard to female employees, the number in 1919 being 30,707, as compared with 10,263 in 1900; the males increased by over 90 per cent. The dairying and pastoral industries also have made great progress. The number of persons engaged in agriculture has decreased, but the area under cultivation has extended considerably, and the decline in labour has been more than counteracted by the use of machinery. In the mining industry the number of coal and shale miners rose from 11,591 in 1900 to 18,044 in 1910, but there has not been much progress during the last nine years. Metal mining and particularly gold mining has declined steadily; in 1919 the number of gold miners was only 1,656, as compared with 17,958 in 1900; the marked decrease during 1919 was the result of industrial dislocations in the Broken Hill district.

The decline in employment generally between 1913 and 1919 was due to the combined effects of the War and drought.

During the war period the number of men engaged in the agricultural industry declined in each year, from 61,525 in 1913 to 50,490 in 1918, and there was a further decrease of 4,962 in 1919 owing to the unfavourable season; the number of women increased up to 1917, but declined in the following years. In the dairying industry there was a decrease of 4,890 men and 2,540 women between 1913 and 1918, and though a marked improvement took place in 1919, the numbers were lower than in 1913 by 2,718, viz., 1,400 men and 1,318 women. In the pastoral industry there was a slight increase in the number of men during the war period, and in 1919 the figure increased by 2,836; in 1918 for the first time the records show that

women, numbering 2,806, were engaged; in the following year there were 3,078 women. In the rural industries, as a whole, there has been a decrease of 14,116 men and an increase of 140 women since 1913.

After a marked decline in the years 1913-17, employment in the manufacturing industry rose in 1918 to the pre-war level, a decrease of 3,911 men men being compensated by increased employment of women. In 1912 there was an increase of 6,859 men and 178 women, the number of employees being the highest on record.

Grouping the figures shown above in Primary and Secondary Industries, the following results are obtained:—

Year.	Primary			Secondary— Manufacturing	All Industries		
	Rural.	Mining.	Total.		Males.	Females.	Total.
1900	120,036	43,743	164,671	60,779	199,794	26,686	226,480
1905	131,442	38,982	170,424	72,173	266,665	30,881	347,546
1910	151,175	27,418	188,593	91,745	230,325	48,950	289,274
1911	161,878	37,017	198,895	108,678	248,774	51,745	300,519
1912	161,832	37,858	199,690	115,561	253,430	51,401	304,831
1913	155,457	58,880	214,337	120,400	239,945	52,793	292,738
1915	146,302	31,411	177,713	116,611	244,393	49,594	293,987
1916	143,424	31,304	174,728	118,404	238,300	52,804	291,104
1917	142,169	32,817	174,986	117,997	237,819	52,164	292,983
1918	139,453	53,603	173,116	130,354	266,337	57,433	323,770
1919	139,501	32,459	171,960	137,561	243,258	56,285	299,543

The primary industries form the most important source of the wealth of Australia, and the necessity for continuous expansion has been afforded practical recognition in numerous schemes formulated by the State with the object of encouraging rural settlement. Among the most important measures, of which details are given in various parts of this Year Book, are the subdivision of large estates, financial and other assistance to settlers, assistance to immigration of rural workers, the extension of railway lines, the conservation of water for irrigation, &c., and the provision of means for marketing products. Other measures which tend to make country life more attractive and to remove disabilities from families in remote districts are the extension of postal services, telegraphs and telephones, the improvement of educational facilities, and subsidies for hospitals and to medical practitioners and nurses. Settlement on the land is an important feature of the policy for the repatriation of returned sailors and soldiers.

UNEMPLOYMENT.

At the census in April, 1911, the unemployed, *i.e.*, persons out of work for more than a week, in New South Wales numbered 16,310 males and 2,700 females; of these, 15,439 males and 2,698 females were under 65 years of age, and represented 4 per cent. of the males and 2.6 per cent. of the females in receipt of wages or salary.

Returns relating to the condition of various industries are supplied to the Department of Labour and Industry by secretaries of trade unions, but owing to lack of records a large number of unions do not supply information regarding unemployment. In December, 1912, returns were received from 89 unions; of these, 53 with an aggregate membership of 56,309 reported that 3,644 or 6.5 per cent. of the members were unemployed, *viz.*, 3,050 on account of lack of work, 281 on account of sickness or accident, and 313 from other causes. An industrial dispute in regard to miners in Broken Hill was the cause of extensive unemployment.

RELIEF OF UNEMPLOYMENT.

Labour Exchanges.

The organisation of the labour market is conducted in accordance with the provisions of the Industrial Arbitration Act and of the Returned Soldiers and Sailors Employment Act, 1919.

The Industrial Arbitration Act provides for the administration by the Department of Labour and Industry of State labour exchanges, and for the licensing and regulation of private agencies.

The Returned Soldiers and Sailors Employment Act provides for preference to returned men; employers are required to reinstate them in their pre-war employment, and, if desiring to obtain employees, to apply to a State labour exchange or a committee dealing with the repatriation of soldiers and sailors. A Board has been appointed to assist returned men to obtain employment or re-employment.

The functions of the State labour exchanges are to bring together intending employers and persons seeking employment, to encourage industrial training in skilled trades, to provide suitable training for migrant and other persons unsuited for ordinary employment, and to co-operate for these purposes with private employment agencies.

Since 1st January, 1919, the office dealing with State aided immigration has been amalgamated with the labour exchanges. The expenses of the exchanges are borne by the State; no fees are charged, and advances by way of loan may be made to enable persons to avail themselves of employment offered.

The operations of the State labour exchanges during the last five years are shown below:—

Year ended 30th June.	Applications for employment.	Applications from Employers.	Persons sent to work.
1915	24,838	11,542	10,028
1916	18,996	19,017	13,668
1917	19,372	16,771	11,428
1918	23,140	16,201	11,679
1919	22,151	28,997	19,921

The Industrial Arbitration (Amendment) Act, 1918, provides that persons conducting private employment agencies must be licensed and must keep registers of persons applying for labour or employment, and of engagements made. The scale of fees chargeable is fixed by regulation, and where an applicant has paid a registration fee and does not obtain labour or employment within fourteen days, the fee must be repaid, less out-of-pocket expenses. Licensees are prohibited from sharing fees with employers, and from keeping as lodgers persons seeking employment.

From 2nd August, 1918, to 30th June, 1919, 110 applications for licenses were made, of which 93 were granted, 3 were refused, 9 were withdrawn, and 5 were under consideration; during the period 3 licenses were cancelled.

State Labour Depot.

For the relief of unemployed persons seeking temporary shelter and assistance the State Labour Depot is maintained at Randwick in proximity to the city; a pig, poultry, vegetable, and flower farm, and a dairy have been established, and destitute men unable to maintain themselves are given lodging, food, and a small money allowance in exchange for labour. Con-

potent tradesmen, if employed at their trade, are paid extra. The period of residence must not exceed three months, nor re-engage without a similar interval. A certain amount of training is given, and whenever possible trainees are sent to employment.

Insurance against Unemployment.

Under the provisions of the Industrial Arbitration (Amendment) Act, 1918, payments may be made from the Consolidated Revenue Fund to assist in the creation of funds for insurance against unemployment or loss of work due to adverse weather or sickness, or the casual nature of the employment offering in any industry. No fund may be created unless the Board of Trade certifies that contributions by employers and employees are in proper proportions, and that the fund is administered by a suitable committee representative of employers and employees.

There have been no operations under this section of the Act.

IMMIGRATION IN RELATION TO EMPLOYMENT.

Under the Imperial Act constituting the Australian Commonwealth, power to legislate with regard to immigration and emigration is conferred upon the Federal Parliament. The legislation under this section is contained in the Immigration Act, 1901-1912, the Pacific Island Labourers Act, 1901-06, the Contract Immigrants Act, 1905, and the Emigration Act, 1910. The enactments relating to immigration restrict the right of entry of persons to the Commonwealth. They define the classes of persons who come under the heading of prohibited immigrants, including persons who fail to pass proscribed dictation tests or do not possess the proscribed certificate of health, criminals, and persons immoral or otherwise undesirable.

Contract Immigrants.

The Contract Immigrants Act, 1905, regulates the admission of immigrants under contract to perform manual labour. Contracts must be in writing, made by or on behalf of some native named and resident in Australia. They are subject to Ministerial approval which may be withheld if the fulfilment of the contract is likely to be prejudicial to the public welfare, either as affecting an industrial dispute, or as to the conditions of and standards prevailing in, local industry. Approval may be withheld also, if there is insufficient evidence of difficulty in obtaining a worker of equal skill and ability within the Commonwealth. This latter provision is not applicable to contract immigrants who are British subjects, born in the United Kingdom or descended from a British subject there born; nor does the Act apply to domestic servants and personal attendants accompanying their employers.

During the nine years, 1908-16, the number of contract immigrants admitted to Australia was 916, and of these the excess is of 240 related to New South Wales. Of the total number, 893 were described as British and 113 as non-British. In 1916, the last year during which contract immigrants were admitted, owing to the incidence of the War, 33 persons, of whom 2 only were British, landed in Australia, and of the total contracts 30 related to this State.

ENCOURAGEMENT OF IMMIGRATION.

The Commonwealth.

During the war all activities for the encouragement of immigration were suspended by the Commonwealth, though previously its operations in this

connection were confined to advertising the attractions of Australia generally, with a view to promoting voluntary immigration to the different States.

At a conference of the Premiers of the Commonwealth and of the States held in May, 1920, it was proposed that the Commonwealth should assume full control of the overseas organisation for immigrants and the responsibility for their transport to Australia, the Agents-General of the several States forming a consultative committee in London; that the States should be responsible for the immigrants on arrival; and that the States and the Commonwealth should co-operate and consult as to the number and class of immigrants to be absorbed in the various States. The conference approved the proposals, and the Premiers will submit them to their respective Cabinets for approval.

The State Policy.

State-assisted immigration was inaugurated in New South Wales in the year 1882, and was maintained until 1885, when it was discontinued except in respect of members of the family of persons already assisted to immigrate. After an interval of twenty years, the policy was resumed in 1905.

The following statement shows the expenditure on immigration by State grants, and the number of assisted immigrants who arrived in New South Wales; since 1905 the number of immigrants nominated by residents of the State and the number selected by the Immigration Office abroad are shown separately.

Year ended 30th June.	Expenditure, exclusive of Administration.	Immigrants assisted.				
		Nominated.	Selected.	Total.		
				Males.	Females.	Total.
1832-1904	£ 2,518,687	—	—	104,106	107,866	211,972
1905-1909	44,934	6,144	2,713	—	—	8,857
1910-1914	221,691	32,406	12,444	23,816	21,034	44,850
1915	24,501	2,399	1,109	1,498	2,010	3,508
1916	13,579	888	132	354	656	1,040
1917	3,690	526	69	168	418	586
1918	1,307	191	1	28	166	192
1919	1,060	119	—	21	28	119

With the outbreak of the war assisted immigration to New South Wales was limited mainly to domestic servants, and even this class of immigration had almost ceased before the end of 1918.

In April, 1919, the Imperial Government arranged to grant free passages to the overseas Dominions for ex-service men and women and their dependents who could produce evidence that they would be acceptable in the Dominions and that provision would be made for them. The Government of New South Wales has provided for the acceptance, under this scheme, of immigrants approved by the Agent-General, preference being given to agriculturists, domestic servants, and persons nominated by residents of New South Wales. The grants by the Imperial Government to dependents are limited to sons and stepsons, who were under 16 years of age on 8th April, 1919, and to daughters and stepdaughters, who were under 28, but the State

has arranged to assist other children and the widowed mothers of approved ex-service immigrants. This scheme will cease to operate at the end of the year 1921.

Prior to the war arrangements existed with various steamship companies for reductions in the ordinary rates for passages from the United Kingdom to £14 per adult, of which the Government paid from £4 to £8; but when accommodation became available after the war the shipping companies increased the cost to £32 8s. per berth, and the Government raised its contribution by £4.

Farmers and agricultural labourers under 45 years of age and of good general character, who are capable of furnishing proof of their suitability as settlers, are carried to New South Wales for a minimum net fare of £22 8s., and aid is given to their wives and families.

Persons nominated for assisted passage by relatives in the State may be granted a reduction on each full fare, the lowest net fares to nominated immigrants being £20 8s. per adult for wives and families of farm workers, £22 8s. for wives and families of other workers, and £24 8s. for all other nominees.

Nominators are required to lodge the reduced steamer fare, and to guarantee that employment awaits nominees, or that adequate provision will be made for their maintenance.

The following statement shows the distribution of selected immigrants in their respective occupational classes in each financial year:—

Year ended 30th June.	Rural Workers.			Domestic Servants.	Other.	Families of foregoing.
	Farmers.	Farm Labourers.	Total.			
1910	11	1,428	1,439	434	...	108
1911	12	1,831	1,843	387	...	320
1912	11	2,472	2,483	520	205	767
1913	10	1,662	1,672	549	3	275
1914	13	529	542	567	...	321
1915	11	486	497	477	...	135
1916	1	7	8	126	...	18
1917	...	3	3	51	...	6
1918	...	...	...	1	...	...
1919	...	...	...	...	...	...

The Government guarantees employment for selected immigrants, and in January, 1919, the Immigration Office in Sydney was amalgamated with the State Labour Exchanges, so that State aided immigration may be regulated in accordance with local industrial conditions.

Any immigrant who settles upon the land as owner, lessee, or labourer, within a reasonable time of his arrival, may be granted concessions in regard to railway fares and freight when travelling to the district in which he settles. These concessions may be granted also to nominated immigrants proceeding to the homes of their nominators, or travelling to take up farm work or domestic service.

The following statement shows the proportion of British subjects, in comparison with foreign-born, among assisted immigrants, in the period 1910-1919:—

Year ended 30th June.	Immigrants from—						Total.		
	Fall of Kingdom.		Other British Possessions.		Foreign Countries.		Nominat- ed.	Selected.	Total.
	Nominat- ed.	Selected.	Nominat- ed.	Selected.	Nominat- ed.	Selected.			
1910	2,210	1,958	20	12	22	11	2,250	1,981	4,231
1911	4,670	2,324	4	3	60	32	4,730	2,350	7,298
1912	8,781	3,953	1	...	69	17	8,881	3,970	12,850
1913	10,697	2,482	3	...	150	17	11,150	2,499	13,649
1914	5,197	1,306	23	8	164	26	5,384	1,430	6,814
1915	2,347	1,087	9	5	43	17	2,399	1,109	3,508
1916	869	145	7	...	13	7	898	122	1,040
1917	515	60	2	...	9	...	526	60	586
1918	191	1	...	...	2	...	193	1	194
1919	118	...	1	...	...	...	119	...	119

TRADE UNIONS.

The Trade Union Act, 1881, defines a "trade union" as "any combination, whether temporary or permanent, for regulating the relations between workmen and employers, or between workmen and workmen, or between employers and employers, or for imposing restrictive conditions on the conduct of any trade or business, whether such combination would or would not, if this Act had not been passed, have been deemed to have been an unlawful combination by reason of some one or more of its purposes being in restraint of trade."

The Industrial Arbitration Acts provide for the incorporation of trade unions as industrial unions, and the Industrial Arbitration (Amendment) Act, 1918, extended their powers by authorising them to acquire, own, and deal with property, to sue members for payment of subscriptions, fines, &c., in accordance with their rules, and to apply money and property to the furtherance of political objects, provided that such payments be made out of a separate fund maintained by purely voluntary contributions. Under the Act all persons of good character who are qualified by the nature of their occupation are entitled to be admitted to membership.

Incorporation and Dissolution.

In the thirty-seven years, 1883-1918, 570 unions were incorporated under the Trade Union Act, the maximum number of registrations in any year being 46 in 1902.

The following statement exhibits the number of new unions registered, and other particulars, in decennial periods from 1882 to 1911, and for succeeding years:—

Period.	Trade Unions Registered.	Unions Existing at 31 Dec., 1918.	Period.	Trade Unions Registered.	Unions Existing at 31 Dec., 1918.
1882-1891	141	31	1916	13	7
1892-1901	65	23	1917	45	23
1902-1911	221	53	1918	17	16
1912	20	9	Total to 31st Dec., 1918	570	226
1913	17	11			
1914	13	6			
1915	11	6			

The majority of unions are of comparatively recent formation, 189 of those existent having been registered since the beginning of 1900. The number existent at the end of 1918 represents approximately 40 per cent. of the total unions formed under the Act. The average life of all extinct unions was about seven years.

Cancellations for the most part have been directly consequent upon non-compliance with the law in regard to making returns as to the membership and funds, a default usually attributable to the moribund condition of the union. A number of unions have disappeared by amalgamation with kindred unions.

Accounts Funds and Membership.

The following statement shows the position of all trade unions (i.e. for employers and employees) for the five years 1914 to 1918, as regards finances and membership:—

Particulars.		1914.	1915.	1916.	1917.	1918.
Trade Unions	No.	218	279	315	333	225
Total receipts	£	297,214	297,098	228,572	239,416	249,712
Total expenditure	£	271,570	257,297	256,909	296,114	242,820
Total funds	£	146,568	293,899	205,394	132,377	158,693
Membership	No.	240,779	220,602	224,208	225,392	216,186
Receipts per member		2s. 6d.	2s. 2d.	2s. 7d.	2s. 1d.	2s. 1d.
Expenditure per member		2s. 7d.	2s. 4d.	2s. 11d.	2s. 2d.	2s. 7d.
Amalgamated funds per member		15s. 5d.	17s. 9d.	17s. 9d.	13s. 6d.	14s. 8d.

The unions are classified in two groups according to their constitution, viz., of employers and of employees. The following table shows their relative positions as at 31st December, 1918.

Classification.	Trade Unions.	Membership.			Funds.		
		Males.	Females.	Total.	Per Union.	Per Union.	
Employers	10	2,929	190	3,121	195	£ 3,911	£ 244
Employees	209	197,408	15,639	213,045	1,019	154,774	741
Total	229	200,337	15,829	216,166	961	158,689	705

Employers' Unions.

Sixteen associations of employers have formed trade unions; the total receipts during the year 1918 amounted to £9,092; the total expenditure to £8,223; and the total funds at the end of the year to £3,911.

EMPLOYEES' UNIONS.

Development.

The conception of trade unionism has undergone radical revision in recent years, and the constitution of unions has been increasingly directed to centralisation. Until about 1890, separate unions were constituted for the various branches of industries, and for male and female workers in those branches. Since 1900, however, there has been a movement towards consolidation of allied interests, so that few local unions retain their absolute autonomy, and the sphere of influence of the majority has extended throughout the State, and even beyond it. This movement received an impetus during 1912 from the rearrangement of boards under the Industrial Arbitration Act, 1912, on the basis of craft unionism, which made allied interests subject to the oversight of one chairman.

The following statement shows the receipts, expenditure, accumulated funds, and membership of trade unions for employees only, for the year 1918 :-

Industrial Classification	Receipts	Expenditure	Funds at end of year	Membership at end of year.			Funds per member.
				Males	Females	Total	
Unions of Employees--	£	£	£	No.	No.	No.	s. d.
Building	15,411	16,120	20,370	19,860	60	19,920	20 5
Clothing	5,631	5,282	8,302	4,082	4,817	8,900	18 8
Engineering and Metal Working	49,900	38,628	21,374	21,446	12	21,458	19 11
Food, Drink and Narcotics	14,006	13,714	9,648	13,618	4,157	17,776	10 10
Land Transport, exclusive of Railways and Tramways	4,676	4,024	2,293	6,827	---	6,827	6 9
Mining and Smelting	59,996	58,550	13,316	15,400	---	15,400	17 3
Pastoral	36,049	36,542	23,325	28,662	101	28,763	16 3
Printing, Bookbinding, &c.	6,640	5,845	12,949	3,458	777	4,235	61 2
Railways and Tramways ..	7,846	9,168	4,170	25,946	---	25,946	3 4
Shipping and Sea Transport	12,679	12,330	4,590	14,091	---	14,091	6 6
Manufacturing, n.e.i.	11,977	12,076	15,029	14,379	2,080	16,609	18 1
Miscellaneous--							
Labour Councils and Federations of Employees	1,567	1,530	516	---	---	---	---
Eight-hour Committees ..	2,468	2,602	5,073	---	---	---	---
Other Miscellaneous	20,983	19,220	13,817	30,276	3,705	33,977	8 2
Total Unions of Employees ..	340,621	235,087	154,774	107,406	15,699	123,065	14 6

The strongest unions financially are those connected with the printing and bookbinding trades. Next in order of importance, measured by accumulated funds per member, are the building, the engineering and metal-working, the clothing, and the manufacturing (n.e.i.) groups.

The numerical strength of employees' unions in 1918 is shown in the following statement:—

Membership.	Em- ployees' Unions.	Membership.	Em- ployees' Unions.
Less than 100	43	5,000 to 6,000	2
100 to 500	66	6,000 .. 7,000	2
500 .. 1,000	27	8,000 .. 9,000	1
1,000 .. 1,500	15	11,000 .. 12,000	1
1,500 .. 2,000	11	Over 25,000	1
2,000 .. 3,000	13	Not stated	17
3,000 .. 4,000	8		
4,000 .. 5,000	3	Total	209

INDUSTRIAL ARBITRATION.

The term "Industrial Arbitration" is used here in a broad sense to embrace all provisions made by legislation for the adjustment of industrial relations between employers and employees, by arbitration, by conciliation, or by co-operation of employers and employees.

The necessity for legislative action to obviate dislocations of industry and to regulate the conditions of employment became urgent during the period of industrial unrest which followed the curtailment of public and private expenditure in 1885, and culminated in the maritime and sheeniers' strikes of 1890. Acts were passed in 1892 and in 1899 with the object of providing means for the settlement of industrial disputes, but they proved ineffective, because the parties to a dispute were not compelled to submit their cases to arbitration nor, after submission, to abide by the award. The principle of voluntary arbitration was abandoned, therefore, and in 1901 the Industrial Arbitration Act was passed to constitute a Court of Arbitration to which the submission of trade disputes was compulsory. The jurisdiction of the Court extended to all industrial matters arising between employers and employees, including wages and working conditions. Provision was made for the registration of industrial unions, and of industrial agreements between employers and unions; strikes and lock outs were prohibited.

This Act expired by effluxion of time in 1904, and was replaced in that year by the Industrial Disputes Act, which provided for the constitution of wages boards, as subsidiary tribunals, to determine the conditions in specified industries, their awards being subject to revision by the Court.

This system of regulation by a Court and industrial boards, each empowered to make awards, was continued by the Industrial Arbitration Act of 1912, which is the basis of the existing State legislation; but the system has been modified by subsequent amendments of the Act.

In addition to the arbitration system under the law of the State of New South Wales the Commonwealth Parliament legislates with respect to industrial disputes extending beyond the limits of one State. A description of both systems is given:

THE STATE SYSTEM OF INDUSTRIAL ARBITRATION.

The Industrial Arbitration Act of 1912 provides for the regulation of conditions of industries by means of industrial conciliation and arbitration, and the powers of the Court and its subsidiary tribunals are not limited to cases in which a dispute has occurred.

Under this Act the range of industries and callings for which boards might be constituted was defined by schedule, and the boards were arranged upon the basis of craft or calling, those relating to allied industries being grouped under one chairman. The objective of this arrangement was the maintenance of a number of subsidiary arbitration courts, each having power to deal with a group of allied industries, but subject to the general control of the Court of Industrial Arbitration, which, in its supreme direction, would co-ordinate their work.

Experience showed, however, that this system failed to remedy serious defects of the machinery established under earlier legislation, viz., delay in hearing and determination, and the overlapping of awards owing to the multiplicity of boards. The Act was amended, therefore, in 1916 to provide for the appointment of additional judges to undertake the work of the boards, and the Court was empowered to codify awards. This amending Act repealed the schedules of the previous Act and thus extended to all industries the right of regulation by award. The law was further amended in 1918 to provide for the appointment of special Courts and of deputy Courts and

for the establishment of a Board of Trade; other important amendments were made with the object of encouraging mutual co-operation between employers and employees for the adjustment of industrial matters, and the provisions for the repression of strikes were modified.

The Industrial Arbitration Amendment Act of 1919 relates mainly to the extension of the arbitration system to the employees in the public service of the State.

Industrial Unions.

Provision is made for the registration of industrial unions of employers and of employees; registration is granted only to trade unions registered under the Trade Union Act of 1881, and it may be refused if the applicant organisation is not a *bona fide* trade union, or, if registered, would not be a *bona fide* industrial union, or if the interests of the members, unless they are employees of the Crown, may be protected by a previously registered union.

A union of employees must obtain registration as an industrial union before applying for an award to regulate the conditions of an industry, and organisation for this purpose has been effected or is proceeding in connection with practically all the industries of the State except domestic service in private houses and certain rural occupations.

The Court of Industrial Arbitration.

The Court of Industrial Arbitration is a superior Court and a Court of Records, governed in procedure and decisions by the dictates of equity and good conscience. Judges of the Court are permanently appointed by the Governor, and the Court is constituted by a single judge or, in certain cases, by two or more judges sitting together.

In order to facilitate the determination of technical trade matters the Court may elect to sit with assessors representing the interests of each of the parties, and matters relating to any log of prices or other basis for payment may be committed for determination and report to the assessors, sitting without a judge; the Court must sit as a Special Court with assessors when hearing matters exclusively affecting the Crown as employer, or persons employed exclusively by the Crown, or by shire or municipal employees.

In any district proclaimed by the Governor a deputy Court may be constituted by a judge, or by a chairman nominated by the Court, with or without assessors. A deputy Court has been constituted for the district of Newcastle.

Industrial Boards.

An Industrial Board, consisting of a chairman and two or four other members equally representing the employers and employees, may be constituted for any industry or group of industries on the recommendation of the Court, and the Court may constitute special boards to determine questions of demarcation.

Where employers or employees in the industries or callings consist chiefly of women, members may be appointed who are not engaged in those industries or callings; otherwise the representative board members are men, for the most part intimately connected with the particular industry or calling.

At 30th June, 1919, there were 238 boards; during the year 241 expired by effluxion of time or were dissolved, and 242 were constituted.

Jurisdiction of the Court and Boards.

Proceedings before a board may be commenced by reference to the board by the Court or by the Minister; or by application to the board by

employees of 20 employees, or by an industrial union of employers or employees in the industries or callings for which the board has been constituted. Since December, 1916, the work of the boards has been transferred to the Court, to which all applications are referred, and the boards exercise their functions only in respect of applications and references, which for special reasons the Court returns to them. An exception is made in regard to cases in the district of Broken Hill where, on account of distance from the Court, the local boards continue their activities.

The Court may exercise the powers, jurisdictions, and functions of industrial boards, special boards for demarcation, chairmen of boards and conciliation committees, and of industrial registrar and industrial magistrates; and it may amend and codify into one award all awards affecting any employer or class of employers, or the members of an industrial union employed by the same employer or class of employers. The Court may adjudicate also in respect of industries for which boards have not been constituted.

Where the public interests are likely to be affected the Crown may intervene in any proceedings before a board or the Court, or may appeal from an award of a board.

A Board may make an award—

- (v) fixing the lowest prices for work done by employees, and the lowest rates of wages payable to employees, other than aged, infirm, or slow workers: Provided that no award shall be made for persons occupying managerial positions except by the special court for Crown matters, or for payment of any wages in excess of £10 per week, or salary in excess of £225 per annum;
- (A) fixing the number of hours and the times to be worked in order to entitle employees to the wages so fixed: Provided that after 1st October, 1920, the hours for cessation of employment in shops under the Early Closing Acts shall be the hours fixed by such Acts for closing such shops;
- (r) fixing the lowest rates for overtime and holidays and other special work, including allowances as compensation for overtime, holidays, or other special work;
- (r) fixing the number or proportionate number of apprentices and improvers and the lowest prices and rates payable to them;
- (+) determining any industrial matter;
- (i) extending or varying any award made in respect of any of the industries or callings for which it has been constituted;
- (j) declaring that preference of employment shall be given to members of any trade or industrial union of employees upon such terms and conditions as the Court may prescribe, so long as the members thereof, after the passing of the Industrial Arbitration (Amendment) Act, 1918, shall not have taken part in, aided, or abetted an illegal strike. Where any declaration giving such preference of employment has been made in favour of an industrial or trade union of employees, such declaration must be cancelled by the Court of Arbitration if at any time such union, or any substantial number of its members, takes part in a strike or instigates or aids any other persons in a strike; and if any lesser number takes part in a strike, or instigates or aids any other persons in a strike, such court may suspend such declaration for such period as to it may seem just;
- (k) declaring what deduction may be made from wages for board, residence, or customary privileges or payments in kind.

Awards affecting employees under the State Public Service Acts may be made only with respect to wages, payment for overtime, deductions for board, etc., and the rescission and variation of awards.

In pursuance of the policy of encouraging co-operation between employers and employees it is provided by the Amending Act of 1918 that so far as is consistent with the maintenance of industrial peace, the Court or a board may deal with wages and hours of employment only, leaving all other matters to shop committees, conciliation committees, industrial councils or voluntary committees formed for the purpose of adjusting the industrial relationship of employer and employee.

In prescribing minimum wages the Court may fix the quantity of work to be done. No award may be made for wages lower than the living wages declared by the Board of Trade; and whenever the minimum wage in relation to a skilled occupation is fixed at a higher rate than the living wage, the amount of excess must be the same in the case of males and females doing the same class of work. Employees in the rural industries are entitled to be paid the living wage as determined after separate inquiry, but with the exception of those whose conditions of employment have been regulated by award, they are not otherwise subject to the provisions of the Industrial Arbitration Act.

Aged, infirm, or slow workers unable to earn the minimum wage prescribed by an award may obtain permits to work for less.

Awards are binding on all persons engaged in the industries or callings and within the locality covered for the period not exceeding three years specified therein, and after such period until varied or rescinded. Variations of awards may be made only on application to a board or by the Court. It is a general rule of the Court that awards should not be varied during their currency, except in special cases, or by consent; the Amending Act of 1919 provides that applications for variation may be made whenever a living wage declaration has been made by the Board of Trade.

Where an institution, carried on wholly or partly for charitable purposes, provides for the food, clothing, lodging, or maintenance of any of its employees, or of any of its inmates who are deemed to be employees, the board must make due allowance in its award as to the wages of such persons. The institution may be exempted from any terms of the award, where the food, clothing, lodging, and maintenance provided by the institution, together with the money paid by the institution to such employees or inmates as wages, are at least equal in value to the value of their labour.

With regard to employees of the Government, the wages fixed must be not less than those paid to other employees doing substantially the same class of work; but the fact that the employment is permanent, and that additional privileges are allowed in the service of the Government may not of itself be regarded as a substantial difference.

Appeal from an award of a board lies to the Court, but the pendency of an appeal does not suspend the operation of the Award. Appeal from an award of a single Judge lies to the Court constituted by three judges. Decisions of the Full Court are final.

Awards by Boards and by the Court.

During the year ended 30th June, 1919, the Industrial Boards made three principal awards and two awards of variation, and the Court of Industrial Arbitration made 106 principal awards and 85 variations; at the end of the period there were 312 awards in force.

In the seven years since the commencement of the Industrial Arbitration Act of 1912, the industrial boards have made 1,196 awards, viz., 691 principal awards, and 505 variations, at a total cost of £66,192, which represents an average of £55 6s. 1d. per award. A considerable saving was effected by the transfer of the work to the Court, in accordance with the provisions of the amending Act of 1916. During the five years ended June, 1917, the average annual cost of the boards was nearly £13,900; in 1917-18 it was £1,548; and in the following year £277; meanwhile the work has been done by the Court at an annual cost of £3,700 approximately. Portion of the expenditure by the Board of Trade should, however, be taken into consideration, as since June, 1916, the Board has dealt with matters relating to awards, such as the determination of the living wage. The total cost of the Board during 1918-19 was £8,100.

The number of awards made by the boards and by the Court during each of the last five years is shown below:—

Year ended 30th June.	Industrial Boards		Awards made by Boards.		Awards made by Court of Industrial Arbitration.	
	In existence of 30th June.	Cost during the Year.	Principal.	Variations.	Principal.	Variations.
		£				
1915	310	9,154	116	90	1	90
1916	233	14,211	131	139	—	68
1917	237	12,900	169	99	7	127
1918	237	1,548	18	15	75	118
1919	234	277	3	2	106	88

Industrial Agreements

The practice of collective bargaining first received statutory sanction under the Industrial Arbitration Act, 1901, when industrial unions were empowered to make with employers written agreements, which became binding between the parties when filed in the prescribed manner.

The authority to make agreements was continued under later enactments. Under the Industrial Arbitration Act of 1912, the provision for the making and registration of agreements relating to industrial matters, previously limited to industrial unions, was extended to trade unions of employees. The maximum term for which an agreement may be made is five years, but it continues in force after the expiration of the specified term until varied or rescinded, or terminated after notice by a party thereto. No industrial agreement may be made providing for wages lower than the living wages declared by the Board of Trade, and whenever a living wage is declared by the Board during the currency of an agreement, the Court may vary its wage provisions.

The following statement shows the number of agreements filed in each year since 1902:—

Year.	Agreements Filed.	Year.	Agreements Filed.	Year.	Agreements Filed.
1902	} 29	1908	12	1914	50
1903		1909	28	1915	33
1904	18	1910	31	1916	51
1905	8	1911	37	1917	43
1906	13	1912	45	1918	39
1907	11	1913	39	1919	48

In December, 1919, sixty-six agreements were in force.

Enforcement of Awards and Industrial Agreements.

Since 1901, breaches of awards and industrial agreements have constituted grounds for prosecution of offences in the Arbitration and lower Courts of the State, the penalties recoverable being subject to some limitations.

In May, 1911, an Investigation Officer was appointed in the Department of Labour and Industry to receive and record complaints as to breaches of awards and agreements, and as to failures to comply with obligations imposed under the Act, to review the reports of inspectors, and to direct prosecutions consequent thereon.

During the year ended 30th June, 1919, 989 complaints as to breaches of awards, etc., were received at the Investigation Office; 148 prosecutions were initiated; and 138 convictions were recorded. A total amount of £4,931 was paid as wages to employees in cases of non-payment of full award rates which were settled before court proceedings were taken.

Proceedings before the Court of Industrial Arbitration for the enforcement of the provisions of the Industrial Arbitration Act included 7 cases in respect of strikes during 1918-19, and 4 convictions were recorded.

The following statement relates to cases under the Industrial Arbitration Acts, heard by the Industrial Magistrates during the two years ended 30th June, 1919:—

Classification	1918.		1919.	
	Cases.	Convictions.	Cases.	Convictions.
Non-payment of wages awarded	95	30	169	41
Non-payment of fines and subscriptions to unions	274	181	320	925
Breach of award or industrial agreement	168	120	492	330
Failure to keep time-sheets and pay-sheets of employees	44	29	38	37
Failure to exhibit copy of award	16	15	19	18
	597	341	1,006	651

Conciliation.

In October, 1911, an active policy of conciliatory intervention between industrial disputants was inaugurated, and concurrently with the procedure for the enforcement of awards, etc., the Investigation Officer of the Department of Labour and Industry was engaged in mediatory services wherever disputes or dislocations were known to be pending.

Statutory authority was given to this process of intervention with the initiation of the Industrial Arbitration Act, 1912, and a Special Commissioner for Conciliation was appointed on 1st July, 1912; but the range of his work was limited on account of a judgment delivered in the Industrial Court in March, 1912, to the effect that parties to a dispute could not be compelled to meet in conference when a strike or a lockout had actually occurred. This limitation was removed by the amending Act of 1918.

The Industrial Arbitration Act provides for the notification by proclamation of certain industrial districts for which may be constituted conciliation committees, consisting of a chairman and two or four members equally representing employers and employees. The chairman

may be a judge appointed by the Minister, or a person chosen by the unanimous agreement of the other members, or appointed by the Governor.

Conciliation committees may be constituted also for any other district in which more than 500 employees are engaged in the mining industry, and for any other occupation in which more than 100 employees are employed.

A conciliation committee may inquire into any industrial matter within its district; it has no compulsory powers, but if an agreement is made and registered it has the effect of an industrial agreement.

During the year ended 30th June, 1919, three conciliation committees were constituted for the following industries:—Employees of Shire and Municipal Councils, outside the city of Sydney; Wharf Labourers, Port Jackson; and the Iron and Steel Works Employees, Port Waratah. Four agreements were made and registered.

THE BOARD OF TRADE.

Under the terms of the Industrial Arbitration (Amendment) Act, 1918, a Board of Trade was created in June, 1918. It is composed of a president (who is a judge of the Court), a deputy president, four commissioners, and four additional commissioners to represent rural industries. The last-mentioned sit with the Board only when matters directly affecting rural industries are under consideration. The Minister, as an associate commissioner, may take part in the deliberations of the Board, but may not vote in connection with its determinations. In its investigations the Board has the powers of a Royal Commission.

The Board, after public inquiry as to the increase or decrease in the cost of living, declares annually the rates of living wage for adult employees of each sex.

The Acts prescribe that a separate public inquiry must be made into the cost of living of employees engaged in rural occupations, and a separate declaration as to living wage of such employees and deductions therefrom for board and residence, and for any customary privileges or payments in kind.

The Board must take into consideration the condition of the rural industries and their ability to bear additional burdens in wages, and should it think fit, it may refrain from declaring the living wage for these employees.

The Board of Trade has the administration of matters relating to apprenticeship, and the Act requires it to encourage and create councils of employers and employees to provide for proper apprenticeship, and the welfare of juvenile labour; to acquire and disseminate knowledge with a view to improving the industrial relationship between employers and workers; to propound schemes for welfare work; to report as to insurance against loss by unemployment or sickness or accident, prices of commodities, the existence of monopolies, the productivity of industries, the operation of the labour market, better housing, and any other matter referred to it by the Minister; to encourage the establishment of mutual welfare committees and industrial councils in different industries, and of subsidiary shop committees for individual enterprises; to assist schemes for mutual co-operation and profit sharing between employers and employees; to encourage the establishment of hostels for women workers, and workmen's clubs and libraries; to collect statistics of industrial and other matters.

THE COMMONWEALTH SYSTEM OF INDUSTRIAL ARBITRATION.

The Constitution of the Australian Commonwealth empowers the Federal Parliament to make laws with respect to conciliation and arbitration for the prevention and settlement of industrial disputes extending beyond the limits of any one State. The first Act was passed in 1904, and the existing legislation is embodied in the Commonwealth Conciliation and Arbitration Act 1904-18, and the Arbitration (Public Service) Act, 1911.

The main objects of the Conciliation and Arbitration Act are:— (a) To prevent lockouts and strikes in relation to industrial disputes; (b) to constitute a Court of Conciliation and Arbitration having jurisdiction for the prevention and settlement of industrial disputes, (c) to provide for the exercise of the jurisdiction of the Court by conciliation, with a view to amicable agreement between the parties; (d) in default of amicable agreement between the parties to provide for the exercise of the jurisdiction of the Court by equitable award; (e) to enable States to refer industrial disputes to the Court, and to permit the working of the Court and of State industrial authorities in aid of each other; (f) to facilitate and encourage the organisation of representative bodies of employers and of employees, and the submission of industrial disputes to the Court by organisations, and to permit representative bodies of employers and of employees to be declared organisations for the purposes of this Act; (g) to provide for the making and enforcement of industrial agreements between employers and employees in relation to industrial disputes.

Strikes and lockouts in relation to industrial disputes are prohibited, but the prohibition does not apply to anything proved to have been done for good cause independent of a dispute.

Organisations of employers and of employees, representing at least 100 employees, may be registered under the Act on compliance with prescribed conditions, registration being a necessary qualification to entitle unions to submit disputes to the Court, or to be represented in proceedings relating to disputes.

The Court of Conciliation and Arbitration consists of a President appointed from among the Justices of the High Court; any Justice of the High Court or Judge of the Supreme Court of a State may be appointed as deputy to the President.

The Court or the President acts according to equity, good conscience, and the substantial merits of the case, without regard to technicalities or legal forms, and is not bound by any rules of evidence.

The President is charged with the duty of endeavouring to reconcile the parties to industrial disputes, and to prevent and settle industrial disputes in all cases in which it appears to him that his mediation is desirable in the public interest. In the discharge of these duties he may convene compulsory conferences.

The Court has cognisance, for the purposes of prevention and settlement, of industrial disputes certified by the Industrial Registrar as proper to be determined by it in the public interest, or submitted by an organisation or plaintiff or by a State industrial authority, or referred by the President after a compulsory conference at which no agreement has been reached.

When a case is submitted to the Court application may be made to the High Court of Australia to determine questions of jurisdiction and of law. This provision was made in 1914 to obviate difficulties which had arisen when these matters were challenged subsequent to the determination of a case by the Industrial Court.

The Court endeavours to induce the settlement of disputes by amicable agreement, or, failing an agreement, determines the disputes by award. Industrial agreements, when filed, are binding on the parties thereto. The awards and agreements are made for a specified period up to a maximum of five years, and after the expiration of the definite period an award continues until a new award is made, unless the Court orders otherwise; agreements continue unless rescinded, or terminated by notice.

Awards are binding only on the parties to a dispute, and the Court has no power to make an award a common rule of the industry, as the clause of the Act authorising it to do so was declared by the High Court to be unconstitutional.

Thus the State and Federal systems differ in regard to these important factors, viz.: A dispute is not necessary to bring an industrial matter within the jurisdiction of the State tribunals, which may make awards for the regulation of industrial conditions to be observed by all persons engaged in the industry; but the Commonwealth Court deals only with disputes, actual or impending, and makes awards as to wages, &c., merely as incidental to the preservation of industrial peace, and its determinations apply only to employees who are members of a union involved in a dispute and the employers who employ them.

A State law or an award or order of a State industrial authority becomes invalid if inconsistent with an award or order of the Commonwealth Court of Conciliation and Arbitration.

The extensive powers conferred upon the Federal Court include the power to vary orders or awards, to impose penalties for breach or non-observance of orders, &c., and to refrain from determining a dispute if it appears that it should be dealt with by a State industrial authority, or that further proceedings by the Court are not desirable in the public interest. The Court is authorised to grant preference for members of organisations, but it is the usual practice to refuse to order preference in cases of respondents who undertake not to discriminate against members or officials of the associations. No award, order, or agreement may operate to prevent the employment of returned soldiers or sailors.

The Court may appoint Boards of Reference to deal with matters relating to an award, and though the Boards may determine specified matters only, their appointment tends to promote mutual understanding between employers and workers for the adjustment of industrial relations.

The determination of rates of pay and conditions of employment in the Public Service of the Commonwealth is also a function of the Commonwealth Court of Conciliation and Arbitration, in terms of the Arbitration (Public Service) Act, 1911. Associations of the employees may obtain registration, and when registered, an organisation may submit a claim to the Court to be dealt with as if it were an industrial dispute within the meaning of the Conciliation and Arbitration Act. Awards relating to the Public Service do not operate until the expiration of thirty days after they have been laid before both Houses of the Federal Parliament.

At 30th June, 1919, there were 90 Commonwealth awards and 583 industrial agreements in force, of which 67 awards and 150 agreements applied in New South Wales.

ARBITRATION AND CONCILIATION IN OTHER STATES AND COUNTRIES.

In view of the widespread interest taken in the subject of State intervention in the adjustment of industrial relations between employers and workers, the following notes have been prepared to indicate the systems

of arbitration and conciliation in operation in the other States of the Commonwealth, and in New Zealand, Great Britain, Canada, and the United States of America.

Other Australian States

Victoria.—The system in Victoria may be described as conciliation. Wages and other conditions of employment are regulated by wages boards, which arrive at determinations by collective bargaining. The boards, which are known as Special Boards, are constituted with a membership not exceeding ten persons equally representing the employers and the workers in the industry, and a chairman nominated by the other members, or, if they fail to agree as to a nominee, by the Governor-in-Council. A special board may be appointed for an industry upon the resolution of both Houses of Parliament, the proposal being introduced usually at the request of persons engaged in the trade.

A board may fix rates of wages for piece and time workers, hours of work, rates of payment for overtime, and the number and proportions of apprentices and improvers: its determinations are binding on all persons engaged in the industry in the whole State or within a specified area, and they remain in force until varied or rescinded.

Appeals against the determinations of boards are made to a Court of Industrial Appeals, which consists of a President, appointed for a fixed period, and two other members appointed for each case on the nomination of the parties.

No special provision is made for the registration of industrial agreements nor for the prohibition of strikes and lock-outs; but if a strike or lock-out occurs in relation to any matter which is the subject of a determination of a wages board, the determination may be suspended for a period of twelve months.

Tasmania.—In Tasmania there is a Wages Board system modelled upon the Victorian scheme, but a Court of Appeal is not provided, and a determination of a board may be challenged in the Supreme Court, only on the ground of illegality. Strikes and lock-outs are prohibited in respect of any matter which has been determined by a board.

Queensland.—The Queensland system is primarily compulsory arbitration, but certain provision is made for conciliation in industrial disputes. Industrial conditions are regulated by a Court of Industrial Arbitration and by industrial boards constituted on the recommendation of the Court. The provisions of the Act do not apply to State children nor to persons engaged in domestic service, or in farming operations on dairy, fruit, or agricultural farms, but these restrictions do not exclude employees on farms in the sugar industry or engaged in butter or cheese factories.

The judges of the Court, not exceeding three in number, are appointed by the Governor-in-Council for a period of seven years, one being the President. A single judge may constitute the Court, which is empowered to regulate the conditions of any industry by award upon reference by an industrial union, or employer, or any twenty employees in any calling, or by the Minister, or on its own motion; and to remit any industrial cause to an industrial board for determination and award.

The industrial boards are constituted of two or four members equally representing the employers and the employees, and a chairman chosen by the other members; failing an election within fourteen days the chairman may be appointed by the Minister. The boards deal only with cases remitted to them by the Court. The awards of the tribunals are binding on all persons engaged in the industry in the locality specified.

Judges of the Court are empowered to convene compulsory conferences of the parties to industrial disputes, and, if possible, to bring about a settlement by amicable agreement; and conciliation committees, consisting of a chairman and two or four nominees of the employers and the employees, may be appointed to deal with industrial causes in proclaimed districts. Agreements arrived at by conciliation may be registered, and thus become binding on the parties.

Government employees, including members of the State Railway service and the police force, are specifically empowered to form industrial unions, in order to enter into agreements and to refer disputes to the Court for settlement.

Strikes and lock-outs are prohibited unless authorised, as the result of a ballot, by a majority of the employees or employers in the industry concerned.

South Australia.—In South Australia industrial matters are dealt with under a combined system of conciliation and compulsory arbitration by means of wages boards and a Court.

The Industrial Court is constituted by a single judge, permanently appointed as President, and, when finally adjudicating upon an industrial dispute, he may be assisted by two assessors. The President is empowered to summon compulsory conferences of parties to disputes, and the Court has jurisdiction over industrial matters submitted by the Minister or the Registrar of the Court, by employers of at least twenty employees or by twenty employees in any industry, or by a wages board when the board has failed to determine a matter, also over matters not settled at a compulsory conference. The Court does not exercise jurisdiction, except by way of appeal, over any matter under the jurisdiction of a wages board unless submitted by the board or by the Minister. In dealing with industrial matters the Court endeavours to conciliate the parties, and if an agreement is made and registered it has the effect of an award. Awards of the Court are binding on the parties, and may be made common rules in the industries concerned.

Wages boards may be appointed for specified industries and for other trades upon the resolution of both Houses of Parliament. The boards, consisting of representatives of employers and employees and a chairman elected by two other members, are empowered to fix rates of payment, hours, and the number or proportion of improvers, also to prescribe conditions of apprenticeship; the determinations apply to all persons engaged in the industry in the specified districts, and remain in force until varied or rescinded.

Strikes and lock-outs are prohibited.

Western Australia.—In Western Australia provision is made for the prevention and settlement of industrial disputes under a system of compulsory arbitration, which applies to all occupations except domestic service; members of the police force and of the public service of the State also are exempted. The Arbitration Court is constituted of a judge as President and two other members, one nominated by the employers' unions and one by the unions of employees. The President is empowered to convene a compulsory conference of parties to a dispute; if a settlement is effected the agreement, upon registration, becomes binding on the parties thereto, and may be declared by the Court a common rule in the industry. If no agreement is made the case is referred by the President to the Court.

Cases may be submitted to the Court also by any party to a dispute, and industrial unions and associations are required to insert in their rules a provision that disputes shall be referred for settlement in accordance with the Industrial Arbitration Act.

The Court is empowered to fix wages and hours, and to determine other industrial matters, and its awards are binding on all persons engaged in the industry.

Strikes and lock-outs are prohibited under a penalty of £100 in the case of an employer or a union, and of £10 in other cases.

Other Countries.

New Zealand.—In New Zealand, the machinery for the adjustment of industrial relations provided by the Industrial Conciliation and Arbitration Acts combines conciliation with compulsory arbitration. The Dominion is divided into eight industrial districts, each being placed under the jurisdiction of a Conciliation Commissioner, appointed for a term of three years. When a dispute arises in any district it is referred, upon the application of either party, to a Council of Conciliation, constituted by the Commissioner for the district and two, four, or six assessors nominated by the parties, a new council being arranged for each dispute as it arises.

The Court of Arbitration consists of a judge permanently appointed, and two other members, the respective nominees of the unions of employers and of employees, appointed for a term of three years; the judge and one member constitute a quorum.

Organisations of employers and of workers may be registered as industrial unions, and any two or more industrial unions may combine and obtain registration as an industrial association. Associations are usually formed for the whole or the greater part of New Zealand by the combination of unions registered in the various districts. Registration entitles an organisation to make industrial agreements specifying the conditions of employment, and to bring a dispute before a Council of Conciliation, and, if necessary, before the Court. Employers may be cited individually by a union or association of employees, but employees may be cited only when they are voluntarily registered as an industrial union or association.

All disputes must be heard by a Council of Conciliation before being referred to the Court, except disputes extending beyond the limits of a single district, which may be referred by an industrial association direct to the Court. A Council of Conciliation has no compulsory powers, but if it brings about a settlement of a dispute the terms are filed as an industrial agreement binding on the parties thereto; in most cases, however, when the terms of settlement have been agreed upon, the parties prefer to have the dispute formally referred to the Court, in order to have the terms embodied in an award, which is binding also on any other employers subsequently commencing business in the same trade in the district. If a complete settlement is not arrived at, the Council refers the dispute to the Court of Arbitration for award. The Court has full power to deal with industrial matters brought before it, and its decisions are final. Since December, 1918, it has been empowered to amend awards and agreements in regard to wages or hours in order to meet alterations in conditions of employment or the cost of living.

Strikes or lock-outs are prohibited under the Act only in the case of persons bound by an award or agreement, or during the hearing of a dispute by a Council of Conciliation or the Court of Arbitration; in industries affecting the supply of necessary commodities or the working of public ferries, tramways, or railways, fourteen days' notice must be given of an intended strike or lock-out.

The Labour Disputes Investigation Act, 1913, provides for the investigation of disputes which do not come within the scope of the Industrial Conciliation and Arbitration Act. Conferences of the parties may be arranged, or Labour Disputes Committees may be formed, for the investigation of the disputes. Agreements may be registered and enforced as if they were industrial agreements under the Industrial Conciliation and Arbitration Act. A strike or lock-out may not be commenced until a secret ballot of the workers or employers is taken, and the result publicly notified.

Ireat Britain.—In Great Britain, industrial conditions are being organised in accordance with the proposals of the Committee on Relations between Employers and Employed—known as the Whitley Committee—appointed in 1916. With the object of establishing self-government of industry on the basis of co-operation between the employers and the employees, the committee recommended the formation in each industry of a national joint industrial council composed of representatives of employers and employees, supported by district councils, representative of the employers' associations and the trade unions, and by works committees representing the management and the workers in individual workshops.

In accordance with the underlying principle of the Whitley scheme, the constitution and functions of the councils and committees are not fixed by regulation, but are arranged by the persons engaged in each industry. Generally the national council of an industry deals with the following:—Means of securing to the workers a greater share in and responsibility for the determination and observance of working conditions; the settlement of wages and other conditions of employment; the establishment of machinery for the speedy determination of industrial issues; means of assuring to employees security of employment and of remuneration; utilisation of practical knowledge and experience of employees, and of inventions; industrial research; technical training; the co-operation of the workers for the improvement of processes, machinery, and organisation; proposed legislation affecting the industry; the establishment of district councils and works committees; and co-operation with national councils of other industries.

The main functions of a district council are to consider and take executive action within the district in regard to matters deputed by the national council or referred by a works committee; and, subject to the veto of the national council, to deal with wages, hours, working conditions, and other matters in so far as they affect only the particular district.

The general objects of works committees are that the work people be given a wider interest in, and greater responsibility for, the conditions under which they work; that the terms of collective agreements arranged by the national and district councils be enforced in the works; and that friction and misunderstanding be prevented as far as possible.

The Whitley Committee recommended also that a permanent joint national industrial council, consisting of representatives of all industries, be established to deal with matters of common interest, and to co-ordinate the work of the councils of the different industries.

In December, 1919, fifty-one joint industrial councils had been established, representing about 4,500,000 workers, and interim industrial reconstruction committees, which are similar in nature and functions to the industrial councils, were in operation in twenty-four industries.

The industrial councils are purely voluntary organisations created by agreement between employers and organised labour, and the system is not applicable to unorganised trades; therefore provision has been made for the establishment of Trade Boards to regulate conditions of employment in such industries. Trade Boards are composed of representatives of employers and of workers and a small number of persons (usually three) unconnected with the trade. A board may be appointed for any industry by order of the Minister; its primary function is to fix minimum rates of wages, and it may make recommendations to the Government concerning industrial conditions in the trade. The determinations of the Trade Boards are enforceable by law.

The Whitley Committee was opposed to compulsory arbitration for the settlement of industrial issues, and it recommended the establishment of a permanent arbitration council to deal with disputes under a system of voluntary arbitration. This tribunal, the Industrial Court, has been constituted under the Industrial Courts Act, 1919, the members being appointed by the Minister of Labour. Disputes may be referred to the Court only after the exhaustion of means for conciliation already existing in the trade and by consent of both parties, except in certain cases relating to wages, which may be submitted by the Minister upon the application of one party. Should the parties desire, a dispute may be referred to a single arbitrator appointed by the Minister, or to a special Board of Arbitration, composed of members selected by the parties from panels of persons appointed by the Minister to act on these boards.

In order to prevent a sudden decline in wages the Industrial Courts Act contained provisions which practically continued the existing rates until 30th September, 1920. New rates may be awarded by the Industrial Court in settlement of a dispute, but the award will not be enforceable except by moral obligation.

When a dispute occurs or appears likely to occur, the Minister may appoint a court of inquiry to investigate the case, in order to obtain for publication an impartial account of the merits of the dispute; this power may be exercised without the consent of the parties.

Two bills relating to industrial conditions were introduced recently into the Imperial Parliament; one to provide for the establishment of a maximum working week of forty-eight hours in nearly all industries, except domestic service and agricultural labour, and the other for the constitution of a commission to inquire into the minimum rates of wages.

Canada.—The federal law of Canada provides for the settlement of industrial disputes under a system of conciliation.

The Industrial Disputes Investigation Act of 1907 provides machinery for conciliation in disputes in connection with transportation companies, public utilities, and mines; in 1916 the provisions of the Act were extended by proclamation to industries concerned in the supply of war materials of all kinds and the construction and repair of ships. By the mutual consent of the parties disputes in other industries may be referred for settlement in accordance with this Act.

When a dispute occurs which is likely to lead to a strike or lock-out, the Minister of Labour, on the application of either party, appoints a board of conciliation and investigation, consisting of a nominee of each party and a chairman selected by these two; if the parties fail to agree as to nominations a board may be selected by the Minister.

An amendment of the Act in 1918 authorises the Minister, when a strike or lock-out has occurred, to appoint a board without application by either of the parties. A new board is constituted to deal with each dispute.

The board endeavours to effect conciliation, and if a complete settlement is not arranged a report of its investigations and its recommendations for a settlement according to the merits of the case is forwarded to the Minister for publication. A board has no power to enforce its decisions, and its success depends largely upon the pressure of public opinion, therefore publicity is an important feature of the system.

Strikes and lock-outs are prohibited prior to or during an investigation, but, after an investigation has been concluded, the parties are free to declare a lock-out or a strike, unless they have agreed to be bound by the decisions of the board.

Disputes between the railroad companies and their employees may be adjusted under the provisions of the Conciliation and Labour Act of 1906, which empowers the Minister of Labour to appoint boards of conciliation to deal with such cases, upon the request of either party without the consent of the other.

With the object of preventing industrial dislocations during the period of the war an order-in-council was issued in 1918, constituting a Labour Appeal Board, representing employers and workers, to which either party to a dispute might appeal if dissatisfied with the recommendations of a board of conciliation; and a Board of Adjusters was constituted of representatives of the railway companies and of the organisations of railway workers for the settlement of disputes arising in the railway services. The Labour Appeal Board was abolished in May, 1919.

United States of America—No general scheme of industrial organisation has been devised in the United States. Under the Federal law the Secretary of the Department of Labour is empowered to act as mediator, and to appoint commissioners of conciliation in industrial disputes whenever in his judgment the interests of industrial peace may require it, and the United States Bureau of Mediation and Conciliation was appointed for the settlement of disputes arising in the transport services.

The National War Labour Board was created in March, 1918, to settle by mediation and conciliation disputes in fields of production necessary for the effective conduct of the war and in other fields of national activity. The Board dealt with disputes which remained unsettled after other means of settlement had been invoked. It was authorised to provide by direct appointment or otherwise for committees and boards to act in various parts of the country to secure the settlement of disputes by local mediation and conciliation, and, in the event of the failure to secure a settlement by local mediation, to summon the parties for hearing and action. The Board was terminated in August, 1919.

In October of that year a national industrial conference of representatives of employers, employees, and the public met in Washington to discuss problems relating to industrial conditions, and to initiate measures for the improvement of relations between capital and labour. The conference did not achieve its object, owing to the withdrawal of the labour representatives upon the rejection of a proposal to recognise the right of collective bargaining. A second Industrial Conference, called in December, formulated a tentative proposal for the settlement of industrial disputes which cannot be settled by existing machinery. It was proposed to divide the United States into twelve districts, in each of which a board would be provided,

the members to be chosen from panels of employers and of employees, with an impartial chairman, and to appoint a national industrial tribunal composed of nine members, equally representing the employers, the employees, and the public. Cases in which a unanimous decision was not reached by the district tribunal would be referred to an umpire or to the national tribunal, and decisions would have effect as industrial agreements.

Some of the American States have provided machinery for the regulation of wages and other conditions of women and juvenile workers, and for the settlement of industrial disputes by conciliation. In many large industries industrial agreements have been arranged by collective bargaining, and in a number of individual establishments shop committees are in operation.

INDUSTRIAL DISLOCATIONS.

The Industrial Arbitration Act of 1908 prohibited acts of strike or lock out before a reasonable time had elapsed for reference to the Court of a matter in dispute, or during the pendency of proceedings in the Court in relation to an industrial dispute.

This limited prohibition was made absolute under the provisions of the Industrial Disputes Act, 1908, and the penalties were made more severe in 1909, when the Industrial Disputes Amendment Act provided for a penalty of twelve months' imprisonment for any attempt to instigate or aid in anything in the nature of a strike or lock out or discontinuance of work in any industry.

The Industrial Arbitration Act, 1912, repealing previous Acts, aimed at the repression, and not at the absolute prohibition, of strikes and lock-outs, and substituted a pecuniary penalty instead of imprisonment. Any person, including a union, taking part in a strike or lock-out, became liable to a fine, the maximum for lock-out being £1,000, and for strike £50 against a person, and £1,000 against a union. The Court was authorised to grant a writ of injunction to restrain any person from continuing to instigate or to aid in a lock-out or strike, the maximum penalty being imprisonment for six months.

The Industrial Arbitration Amendment Act, 1918, repealed the provisions of the 1912 Act regarding strikes and established the principle that, with certain exceptions, strikes may be recognised as lawful, the following, and no others, being illegal:—

- (a) Any strike by employees of the Government or its Departments, or of any city, shire, or municipal council, or by employees engaged in military or naval contracts.
- (b) Any strike by employees in an industry of which the conditions are regulated by award or industrial agreement: Provided that where an award has been in operation for at least twelve months a union of employees may decide to withdraw from its conditions by a majority vote taken at a secret ballot, in which not less than two-thirds of the members take part.
- (c) Any strike which has been commenced prior to the expiry of fourteen days' notice to the Minister.

When a strike is contemplated or at any time during the currency of a strike the Minister may direct that a secret ballot be taken of the members of any industrial or trade union, or of any association of employees, in order to ascertain whether the majority is or is not in favour of the strike.

Any trade union whose members are taking part or aiding or abetting an illegal strike may be fined £500, and a penalty not exceeding £50, or six months' imprisonment, may be imposed on any person aiding or instigating

an illegal strike or obstructing a ballot. Penalties are imposed also for picketing in connection with an illegal strike or for inducing persons to refrain from handling any commodity during the currency of a strike.

Under the Commonwealth Conciliation and Arbitration Act, strikes and lock-outs in relation to industrial disputes are prohibited, the prohibition does not apply to anything proved to have been done for good cause independent of the dispute; but in case of prosecution, the onus of such proof lies on the defendant. No prosecution for strike or lock-out can be instituted without the leave of the President of the Court.

The following statement shows, so far as can be ascertained, the number of workers involved, and the time lost by industrial dislocations contingent upon disputes in each year since 1914. In calculating the working days lost, only actual working days, viz., days on which work would ordinarily be performed, have been counted, but apparently no allowance has been made for intermittency of employment. Particulars are shown separately regarding dislocations which originated during the year specified, and those which commenced at an earlier date—

Year.	Dislocations.			Workers involved.			Working days lost during year.		
	As- Anter.	New.	Total.	Anterior.	New.	Total.	Anterior.	New.	Total.
1914	6	313	319	431	75,236	75,867	9,418	747,737	757,155
1915	7	314	321	3,716	94,340	98,056	164,035	470,207	634,242
1916	6	344	350	5,144	157,102	162,246	261,887	895,338	1,157,225
1917	5	259	264	1,294	144,704	146,008	18,813	2,857,515	2,876,328
1918	1	154	155	349	88,652	88,992	4,090	186,344	190,434
1919	7	206	213	1,840	53,174	55,014	19,484	2,113,114	2,132,598

The total loss of working time during 1919 amounted to 2,132,598 days, of which 19,484 days were in respect of dislocations which originated in 1918. Of the 306 new dislocations in 1919, the most important dispute commenced at Broken Hill, in May, with the mine engine-drivers, firemen, &c., and afterwards extended to the miners; 6,375 workers were involved, and up to the end of the year 1,241,563 working days had been lost, and the dispute remained unsettled.

Further particulars regarding the new dislocations in each year are shown below—

Year.	Dislocations.			Workers involved.			Working days lost.		
	Mining.	Non- mining.	Total.	Mining.	Non- mining.	Total.	Mining.	Non- mining.	Total.
1914	220	93	313	56,372	18,864	75,236	673,641	174,096	747,737
1915	225	89	314	66,211	28,129	94,340	309,507	160,700	470,207
1916	209	135	344	129,920	27,182	157,102	649,292	246,046	895,338
1917	185	104	289	77,147	67,557	144,704	1,184,594	1,672,921	2,857,515
1918	106	48	154	20,246	8,406	28,652	101,990	84,354	186,344
1919	228	78	306	66,778	26,396	93,174	1,480,416	632,698	2,113,114

Information is not available to enable a reliable estimate to be made as to the cost of the dislocations especially during a period of abnormal industrial conditions and frequent changes in rates of wages, &c. The records are deficient in regard to the sex and age of the workers involved, and the extent to which losses of wages during a dislocation are compensated by higher rates of pay after resumption.

Duration of Dislocations.

The number of workers affected by dislocations lasting one day or less during 1919 was 72,059, and the loss of working days 64,599. Thus these brief dislocations accounted for approximately 58 per cent. of the total number, 59 per cent. of the workers involved and 3 per cent. of the working days lost.

More complete information is given in the following table regarding the duration of the dislocations in 1919 —

Duration in Days	Dislocations	Workers involved	Working days lost
No time lost	3	1,065	—
Under 1 day	12	22,478	8,191
One day	362	58,518	53,518
Over 1 and not exceeding 7	96	25,373	99,307
.. 7	14	5,961	27,766
.. 14	21	2,522	25,629
.. 21	25	680	14,784
.. 25	35	253	11,254
.. 35	42	450	17,309
.. 42	3	1,061	47,714
87	2	144	7,488
89	1	6,000	490,000
138	1	170	21,460
278	1	6,375	1,241,532
Total	306	123,174	2,113,114

Causes of Dislocations.

An analysis of the causes, as set down by the participants, reveals that nearly one-third of the dislocations during 1919 were the result of disagreement as to wages. The following statement shows the causes, the workers affected, and the time lost. Dislocations arising from the employment of non-union labour are included in the category, employment of persons, etc.; but those pertaining to the recognition of a union and the enforcement of union rules are classified under the head of "Trade Unionism."

Cause.	Mining.			Non-Mining.			All Industries.		
	Disloc. cases.	Workers involved.	Working days lost.	Disloc. cases.	Workers involved.	Working days lost.	Disloc. cases.	Workers involved.	Working days lost.
Wages	75	18,377	77,389	84	28,497	469,705	94	35,284	487,321
Hours	12	2,437	25,998	1	36	91	14	1,370	26,050
Working conditions	22	25,862	29,919	8	853	4,713	14	17,722	33,661
Employment of persons or classes of persons.	17	14,304	44,329	14	1,204	5,401	73	15,676	54,847
Trade unionism	34	21,798	1,366,276	3	128	328	19	15,582	1,560,917
Responsibility	4	1,261	26,322	—	—	—	—	7,591	10,389
Special causes	27	22,279	29,363	11	22,859	5,493	26	16,841	39,042
Not stated	4	2,327	7,729	—	—	—	4	2,027	2,729
Total	225	82,775	1,486,624	126	32,388	525,656	146	122,174	2,132,114

Settlement of Dislocations.

Of the 306 dislocations during 1919, 264 were brought to a conclusion by direct negotiation between the parties; 4 were settled by arbitration, 17 by replacement, and 21 by other methods.

Results of Settlements.

Of the dislocations in 1919, 58, or 19 per cent., resulted in resumption of work with modified conditions, more or less in accordance with the workers' claims. In 214, or 70 per cent., no modifications were granted, while the results of the remaining 84 cases were not recorded.

The following statement shows the workers involved and the time lost classified according to the results of the dislocations. In 1919, nearly 76 per cent. of the workers involved, and 71 per cent. of the time lost, was in respect of dislocations in which no modifications were granted.

Year.	Modification.			No Modification.		
	Dislocations.	Workers involved.	Working days lost.	Dislocations.	Workers involved.	Working days lost.
1914	120	23,822	230,306	155	40,205	613,483
1915	171	31,063	306,186	130	42,365	402,441
1916	152	40,709	621,017	156	69,600	244,234
1917	94	19,343	82,554	153	118,745	2,582,460
1918	31	7,889	17,351	90	22,481	151,374
1919	58	19,303	692,627	214	93,329	1,493,323

WAGES.

The rates of wages for practically all classes of adult workers are now fixed by industrial tribunals exercising statutory authority.

Juvenile labour also is protected to some extent by the law, which provides that a minimum wage of not less than 4s. per week must be paid to factory workers, shop assistants, and others, and has thus prevented the threatened development of a system under which young workers were being employed without remuneration.

In fixing the rates of wages the industrial tribunals distinguish between the basic or living wage for unskilled labour and the secondary wage, which is remuneration for skill or other special qualifications. The principle has been adopted that the lowest rate must be sufficient to secure to the worker a reasonable standard of living, and the rule has been given statutory force in the State system by the Industrial Arbitration Amendment Act of 1918. For this reason the question of the cost of living is of primary importance to the wage-regulating tribunals, and investigations have been conducted from time to time in order to determine a standard living wage to be used as a basis for their determinations.

The Living Wage.

The first inquiry into the cost of living wage was conducted by the President of the Commonwealth Court of Conciliation and Arbitration in 1907, when in order to obtain a remission of excise duties, the manufacturer of "Harvester" machines at Sunshine, Victoria, was required to show that the wages of his employees were "fair and reasonable." The minimum wage for unskilled labourers was then fixed at 42s. per week, the standard being based on the "normal needs of the average employer regarded as a human being living in a civilized community," and the average family was taken as "about five."

For some years this rate, known as the "Harvester wage," was used as a basis by the State tribunals, but in November, 1911, the Industrial Court of

New South Wales decided that on account of the increased cost of necessities the wage should be increased to 4s. per week, and later in 1913 decided to conduct an inquiry in order to fix the living wage for the guidance of the wages boards.

The standard wage was defined as that which will do neither more nor less than enable a worker of the class to which the lowest wage would be awarded, to maintain himself, his wife, and two children—the average dependent family—in a house of three rooms and a kitchen, with food, plain and inexpensive, but quite sufficient in quantity and quality to maintain health and efficiency, and with an allowance for the following other expenses:—fuel, clothes, boots, furniture, utensils, rates, life insurance, savings, accident or benefit societies, loss of employment, union contributions, books and newspapers, train and tram fares, sewing machine, mangle, school requisites, amusements and holiday, intoxicating liquors, tobacco, sickness and death, domestic help, unusual contingencies, religion or charity.

As the result of the inquiry the Court, in February, 1914, assessed the sum of 4s. per week as the standard living wage for adult males in Sydney, but suggested that in view of the prosperous condition of the industries that the boards should award more than the living wage, viz., 8s. 6d. per day for unskilled labour, 8s. 9d. for ordinary work, and 9s. for heavy work. In December, 1915, the Court raised the minimum wage to 5s. 6d. per week to the boards to increase to 6s. per week all wages under that amount. In December, 1915, the Court raised the minimum wage to 7s. 6d. per week (8s. 9d. per day or 1s. 1½d. per hour), the decision being applicable only to future awards. In August, 1916, the Court fixed the basic wage for future awards at 8s. 6d. per week (8s. 3d. per day, or 1s. 1½d. per hour), and directed that any wages in existing awards below 1s. 1d. per hour should be raised to 2s. per week (9s. a day or 1s. 2d. an hour).

In 1918 the determination of the living wage for purposes of industrial arbitration became one of the functions of the Board of Trade. Its first inquiry as to the increase or decrease in the average cost of living was made in September, 1918, and the living wage for men in the metropolitan area was fixed at £2 per week, or 10s. per day, or 1s. 3d. per hour. The Board arrived at this decision by adopting, as a starting point, the living wage of 6s. per week declared by the Court in 1914, and increasing it in proportion to the cost of living as indicated by the depreciation in the purchasing power of money.

In 1919 the Board departed from its former method. The cost of the food regimen, 19s. 1d. as at 10th February, 1914, which had been accepted in the preceding year, was increased by the addition of 1s. 1d. as a further allowance for fruit and vegetables at that date, and the total £1 0s. 2d. was brought to date and calculated at £1 11s. 4d. by the application of price index numbers. Rent also was reconsidered and the former basis discarded. The allowances previously accepted for clothing, for fuel and light, and for miscellaneous items were considerably increased. The Board stated that it seemed impossible to reject the supposition that miscellaneous items represented at least 20 per cent. of the total expenditure of a civilized family, and finally allowed 12s. 1d., a sum equal to 17 per cent. of the whole.

Accordingly the Board found that the average cost of living had increased to £3 17s. per week and declared the living wage of adult males in the metropolitan area to be £3 17s. per week or 12s. 10d. per day or 1s. 7½d. per hour.

The following statement shows the living wage for men in the metropolitan area, as fixed by the Court of Industrial Arbitration, or as declared by the Board of Trade, since 1914:—

Date.	Living Wage for Adult Males in Metropolitan Area.	Date.	Living Wage for Adult Males in Metropolitan Area.
	Per week.		Per week.
	£ s. d.		£ s. d.
1914. February	2 9 0	1918. September	3 0 0
1915. December	2 12 0	1919. October	3 17 0
1916. August	2 15 0		

In view of the various issues affected by the large increase of 17s. per week in the living wage as declared in October, 1919, the Government introduced the "Maintenance of Children Bill," by which it was proposed that the Board of Trade should calculate the living wage for adult males as based on the needs of a man and his wife, instead of the needs of an "average family," and should make separate declarations as to the further sum required to maintain a single child and each additional child in the same household. To provide for the children of employees it was proposed to create a fund to be derived from contributions of employers, whose payments were to be in proportion to the number of their employees. From the fund payments were to be made to the mothers of the children—that is, boys under 14 years of age and girls under 12—the amounts being in accordance with the Board of Trade's declaration, but reduced by one-twelfth for each five shillings by which the employees' wage exceeded the declared living wage. Payments were not to be made in respect of children of employees taking part in a strike or of those whose net income exceeded £400 per annum. The bill, after passing through the Legislative Assembly, was rejected in the Legislative Council and its further consideration was postponed indefinitely.

Inquiries as to the cost of living in country districts were commenced in 1919, the same principles being pursued and the same methods adopted, as far as possible, as in assessing the living wage for the metropolitan area in October, 1919. The living wage for the district of Newcastle was declared on 19th April, 1920, as £2 16s. 6d. per week, 12s. 9d. per day, and 1s. 7½d. per hour; for the South Coast area on 11th May, 1920, at £2 17s. 6d. per week, 12s. 11d. per day, and 1s. 7½d. per hour; and for the Central Tablelands area on 8th July, 1920, at £2 18s. per week, 13s. per day, and 1s. 7½d. per hour.

The amounts allowed for each element of the cost of living in the declarations now in force are shown below:—

Elem. of—	Metropolitan. Oct., 1919.	Newcastle. April, 1920.	South Coast. May, 1920.	Central Tablelands. July, 1920.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Food and groceries	1 11 4	1 13 0	1 14 2	1 14 4
Rent	0 15 7	0 13 2	0 12 0	0 11 1
Light and fuel	0 3 0	0 2 9	0 2 9	0 4 0
Clothing and boots	0 14 0	0 14 0	0 15 0	0 15 0
Other items	0 13 1	0 13 1	0 13 1	0 13 1
Total	2 17 0	3 16 0	3 17 0	3 18 0

In regulating industrial conditions the State and Federal Courts have overlapping jurisdiction, both Courts act broadly on the same principles, but in fixing the minimum wages different basic rates have been used. Though it is a guiding principle of the State Court not to interfere in cases subject to the jurisdiction of the Commonwealth Court, there are some

industries in which awards of both Courts are in operation; for instance, if having secured a Federal award which binds only the persons cited before the Court, it is desired to bind all the persons engaged in the industry, application is made to the State industrial authority. In such cases the State award usually embodies the terms of the Federal, but if the State award prescribes higher rates of wages they must be paid by all employers, including the parties to the Federal award.

In the Commonwealth Court the basic rate is calculated for each case as required; the Harvester wage is used as a standard, and allowance for increased cost of living is made in accordance with the Commonwealth Statistician's index numbers showing the variation in the average cost of food, groceries, and rent combined; the assumption that the cost of other necessities has increased to the same extent is accepted unless proved by the evidence in any particular case to be inapplicable. The Judges of the Court have frequently expressed their dissatisfaction with the method of assessing the basic wage, and have recommended the appointment of a Royal Commission to inquire and report as to the question of a Federal living wage. A Commission has been appointed for this purpose, and the inquiry is in progress.

The Harvester wage referred to the cost of living for a man, his wife, and three children, i.e., one more than the average adopted by the State Court, and until 1919 the basic rate allowed by the Commonwealth Court for Sydney was usually about 9s. per week higher than the living wage fixed by the State tribunal. In August, 1919, however, the President of the Commonwealth Court, delivering judgment in the *Gas Employees' case*, indicated that the basic rate for Sydney at that time was £3 11s. 6d. a week, which is 5s. 6d. less than the living wage declared by the Board of Trade in October.

Secondary Wage.

Having ascertained the basic rates of wages for unskilled labour the assessment of the secondary wage is a matter to be considered separately in connection with each occupation. It is the usual practice, under both State and Federal systems, when increasing wages on account of the increased cost of living, to preserve unaltered the recognised margin between the skilled and the unskilled workmen in an industry, and to increase all rates of wages by the same amount as had been added to the basic wage.

During the period of the war the State Court decided to depart from this practice, and new rules for the guidance of the industrial boards were contained in the "margin judgment" delivered in November, 1916; the following extracts indicate the procedure adopted:—

"We have resolved that where an industry appears to be benefiting by or during the war, the abnormal conditions created by the war shall be taken not to affect it, and the general rule to be observed as to its wage scale shall be that the current living wage shall be the basic wage for male adults, and, unless good reason appears to the contrary, all their wages appearing in the former award shall be increased by the same amount as has been added to the living wage. Thus: If upon hearing any claims it shall appear that the living wage has been increased by 3s. a week, all adult male wages in that industry will ordinarily be also increased by 3s. a week. Where, however, an industry has not benefited by or during the war, it must be taken to come under war conditions, and the scale must be subject to diminishing rates of increase."

"The Board in these cases should diminish the increases throughout the scale in rates above the living wage, or fix the amount of wage at which the

increases should vanish, and then arrange in their scale of wages, according to their discretion, increases diminishing in amount, so as to vanish at the ascertained point."

These rules were general rules and were not intended to restrict the right of the Court or the Boards to consider any special circumstances which appeared to affect particular wages, either upwards or downwards.

The "margin judgment" was discontinued by a judgment of the Full Bench of the Court of Industrial Arbitration in November, 1918, and the former rule was restored. At the present time, when a living wage declaration is made, the Court increases to the amount of the living wage all wages in current awards below that rate, and the other wages remain unaltered, unless a proviso has been inserted in the award to entitle the employees to have the whole award reopened. This proviso has been inserted in a number of recent awards, and in such cases all the rates are raised by the same amount as the living wage.

Women's Wages.

The principle of a living wage was not applied to women's wages under the State industrial arbitration system until the provisions of the amending Act of 1918 came into operation, and the Board of Trade conducted its first inquiry into their cost of living in 1918.

The standard adopted was the minimum wage which would cover the cost of living of the adult female worker of the poorest class, but having no other responsibility and living away from home in lodgings. Accordingly the living wage for women workers in the metropolitan area was fixed in December, 1918, at 38s. a week, or 1s. a day, or 7½d. an hour. In 1919 the living wage was increased to 40s. a week, or 1s. 2d. a day, or 8½d. per hour. The amounts allowed in respect of each element of the cost of living was as follows:—

Cost Item	Living Wage—Adult Female.	
	December, 1918.	December, 1919.
	£ s. d.	£ s. d.
Board and lodging	0 16 0	1 1 0
Clothes, boots, and other expenses	0 8 8	0 10 8
Miscellaneous	0 0 4	0 1 0
Total	£ 1 10 0	1 19 0

The item "miscellaneous" includes allowances for train fares, friendly societies, union fees, church and charity, newspapers, stationery and stamps, amusements, laundry, and dental treatment.

Following upon the determination of the living wage in December, 1918, regulations were issued under the Industrial Arbitration Act which prescribe that the living wage as assessed by the Board of Trade in each year must be paid to all adult female employees in the metropolitan district, except in cases where they are provided by their employers with board or lodgings or any customary privileges or payments in kind, the amount of which has not been assessed by the Court of Industrial Arbitration. Thus all women workers, with the exceptions noted above, are entitled to have their wages raised to the living wage, even if engaged in occupations which are not subject to awards, and without application to the Court.

In some industries the wages of women are stated in the awards as a definite proportion of the rates for males. For example, cooks and kitchen

maids in hotels and restaurants were awarded three-fifths of the corresponding rates for males, chemists four-fifths, picture-framers eleven-twelfths; and in laundries and boot factories women engaged in certain processes must be paid the same rates as adult males.

A living wage for women workers has not been fixed by the Commonwealth Court except in particular industries. In September, 1914, employees in the felt hat factories of New South Wales, Victoria, and South Australia were awarded 30s. a week—the full amount claimed—for work generally recognised as woman's work, for which rough working clothes only were necessary, the minimum rate for men in this case was 51s. per week. But in reviewing the award the Deputy-President of the Court stated that "Thirty shillings per week for a woman who has to board and clothe herself properly cannot possibly allow for any provisions to be made for illness, want of work, or future needs." In May, 1917, a minimum Federal wage of 35s. per week was awarded for unskilled labour by women employed as ticket-sellers, cloakroom attendants, &c., in theatres and picture shows; the basic rate for men being 53 per week. In July, 1919, the basic rate for women in the clothing trades was fixed at 35s. per week for all States except Western Australia, the basic rate for men being 65s. per week.

Aged, Infirm, and Slow Workers.

Under the Industrial Arbitration Act permits may be granted to pay less than award rates to aged, infirm, and slow workers. During the year ended 30th June, 1919, 709 permits were granted and 53 were refused; the number in force at the end of the year was 531.

Rates of Wages.

Details showing the actual rates of wages payable in respect of the principal industries will be given in a later chapter of this Year Book.

HOURS OF WORK.

Eight Hours Act, 1916.

This Act, which is construed with the Industrial Arbitration Acts, regulates the hours of work and the payment of overtime, and must be observed by the Court of Industrial Arbitration and by the Industrial Boards in making awards, and by parties in making industrial agreements. The working hours are limited as follow:—

Mining Industries—workmen underground—Coal: Fireman, examiner, &c., 96 hours in 14 days; men engaged in handling and transit of coal, 48 hours in 6 days; others, 8 hours during 24. Metalliferous: 8 hours during 24 hours, or 88 hours in 14 days. In underground occupations a shift may not exceed 6 hours if, during 4 hours, the temperature is above 81 degrees Fahrenheit.

Other Industries.—(1) 8 hours per day on 6 days, (2) 48 hours per week, or (3) 96 hours in 14 days—as determined by agreement or award.

Overtime in excess of the above must be paid at prescribed rates, or it may be prohibited or restricted in any industry by the Court of Industrial Arbitration. The number of days or hours to be worked may be increased by award if the Court or Board considers that in the public interest an increase should be allowed. Subject to this provision the ordinary time of work in any industry or calling as fixed by agreement, award, or well-established practice, at the commencement of the Act, may not be exceeded in any future award or agreement.

The majority of industrial awards have declared 48 hours as a normal working week, but there are cases in which a shorter working week has been prescribed. The shortest week fixed is 25 hours, which applies to sewer miners tunnelling in sandstone without explosives, and 36 hours is prescribed for other sewer miners and rockchoppers in sewer trenches, and for employees engaged on night-duty for the Metropolitan Board of Water Supply and Sewerage, and for the Sydney Municipal Council.

In several awards relating to transport services the hours are limited by fortnightly computation to ninety-six, but subject to a provision that such hours are to be worked, as far as practicable, in twelve shifts of eight hours each.

Of the trades working more than forty-eight hours per week, the most prominent are those connected with transport services and domestic service in hotels and restaurants.

Early Closing of Shops.

The Early Closing Act came into operation on 1st January, 1900. It was applicable to the Metropolitan and Newcastle districts and to all municipalities, while its operation might be extended to unincorporated areas. The Act and its amendments provide for the closing of shops at 1 o'clock on either Wednesday or Saturday.

Universal Half-holiday.

In August, 1910, the Saturday Half Holiday Act was passed, its provisions apply to the metropolitan and Newcastle districts and to country shopping districts in the county of Northumberland, and they may be extended to other districts upon resolution by both Houses of Parliament.

Shops are permitted to remain open till 10 p.m. on Friday, 6 p.m. on other week nights, and 1 p.m. on Saturday.

Many factories complete the full week's work within five days, so leaving the Saturday a full holiday.

PREFERENCE TO UNIONISTS.

In the majority of the State industrial awards a clause has been inserted granting, unconditionally, preference to unionists, all other things being equal. In occasional cases preference has been made subject to restrictions providing that the existing employment of non-unionists should not be prejudiced, and that preference should not be extended to women. In a few cases the preference clause is in the nature of a prohibition of discrimination against unionists. Preference may not be granted to members of a trade or industrial union who shall have taken part in, aided, or abetted an illegal strike after the passing of the Industrial Arbitration (Amendment) Act, 1918; and any declaration granting preference may be cancelled or suspended by the Court if the unionists take part in a strike.

The Commonwealth Court considers preference only when industrial peace is prejudiced by discrimination against unionists, and refuses to grant the claim when employers undertake not to discriminate.

In accordance with the Returned Soldiers and Sailors Employment Act of 1919, preference in employment must be given, notwithstanding any industrial award or agreement, to members of the military and naval forces who have returned from active service abroad.

APPRENTICESHIP.

Under the Apprentices Act, 1901, any person resident and trading in New South Wales may take apprentices under certain conditions regulating the apprenticeship, *e.g.*, as to age limitation and probation before completion of indentures. The Act limits the working time of apprentices to forty-eight hours per week, with saving clauses as to rural industries and domestic service. An amendment of the Apprentices Act was made in 1915 to protect the interests of apprentices enlisting for active naval or military service.

The minimum age of apprentices is 14 years, and limitations upon the proportion of apprentices to adults are fixed in many cases in industrial awards. Information is not available as to the total number of persons now serving in this State under indentures of apprenticeship (which are three-party contracts binding the employer, the employee, and his guardian), nor as to the extent of instruction imparted, and premiums usually paid.

The Board of Trade is authorised, under the provisions of the Industrial Arbitration (Amendment) Act, 1918, to exercise the powers previously vested in the Industrial Arbitration Court in regard to apprenticeship, and the provisions of awards relating to such matters will cease to have effect upon the publication of regulations by the Board.

The Board is empowered to determine in what occupations and industries apprenticeship shall be a condition of employment to fix the hours, wages, and proportionate number of apprentices and the conditions of apprenticeship, and to facilitate technical education. It is required also to maintain an apprenticeship register, and to protect the interests of apprentices and trade-learners.

The Board appointed a committee to consider the question of apprenticeship and to report as to the principles to be adopted in organising the system; the report was presented recently.

INSPECTION OF FACTORIES, &c.

The inspection of factories and shops in order to enforce the requirements of the law as to sanitation, safeguarding of machinery, provision of fire-escapes, and the conditions of employment of women and juveniles, is entrusted to the inspectors of the Department of Labour and Industry. In addition to the supervision of factories the inspectors undertake the work in connection with the Early Closing Acts, the Shearers' Accommodation Act, and the Industrial Arbitration Act, and can be called upon to deal with complaints relating to any phase of industrial legislation. A legal officer is attached to the administrative staff of the Department for the purpose of advising and assisting the officer in control of the inspectors.

Outworkers.

Under the Factories and Shops Act, 1912, occupiers of factories are required to keep, and to supply to the factory inspectors, full records regarding outworkers employed. Permission to engage outdoor workers is required by certain awards.

Shearers' Accommodation.

The Shearers' Accommodation Act, 1901, applies only to shearing sheds where at least six shearers are employed. During the year ended 31st March, 1919, 1,800 stations were visited, and 1,892 huts were inspected, of which 1,696 were regarded as satisfactory.

INDUSTRIAL ACCIDENTS.

Factories.

In regard to the factories, accidents, fatal or otherwise, are reported from year to year, the responsibility resting upon factory inspectors of seeing that all dangerous portions of machinery are properly and securely fenced and guarded.

The following table shows in comparative form the accidents reported in factories during the years 1917-18, and the accident rate per 10,000 employees.—

Accidents	Number		Rate per 10,000 Employees	
	1917.	1918.	1917.	1918.
Fatal	4	11	·43	1·04
Partial disablement	89	100	9·24	10·00
Temporary incapacitation	427	540	44·82	54·81
Total	520	651	54·59	65·85

On the figures shown above, temporary incapacitation is the result of approximately 82 per cent. of the accidents; records are not available to show the time lost through these mishaps. The remaining accidents resulted in death or disablement.

Scaffolding and Lifts Act.

The Scaffolding and Lifts Act, 1912, which regulates the construction and use of scaffolding, lifts, cranes, hoists, and derricks, is administered by the Department of Labour and Industry. The Act operates in the Metropolitan Police District and in the Newcastle District. Eight fatal and 48 non-fatal accidents were reported during 1918 in connection with lifts, scaffolding and cranes. The following table shows the type and number of lifts at 31st December, 1918:—

Type	Number.	Type	Number.
Passenger	318	Service	228
Goods	318	Wings, etc.	471
Passenger-Goods	129	W/D Hoists	4
		Total	2,376

The number of lifts in the metropolitan district was 2,319 and in Newcastle 54, while three were in unincorporated districts. The total number 2,376, includes 240 lifts owned by the Government. During 1918 certificates were issued to 367 persons to operate electric lifts, 53 for hydraulic lifts, and 24 for electric-hydraulic lifts, and to 43 persons for driving power-operated cranes and hoists.

Boiler Inspections.

Under the Factories and Shops Act, 1912, regulations have been made regarding precautions against the risk of accidents arising from or by the use of steam boilers and other pressure vessels in factories, and inspections are made by officers of the Department of Labour and Industry. No accidents were reported during 1918.

INDUSTRIAL DISEASES.

No reliable records relating to industrial diseases are available; but serious callings are, with good reason, regarded as unhealthy, and the incidence of the conditions is being investigated under the supervision of the Board of Trade. In this connection, the use of white phosphorus in the manufacture of matches is prohibited by the White Phosphorus Matches Prohibition Act, 1915.

In the majority of unhealthy or noxious trades there are the compensating advantages of short hours and high wages. The Workmen's Compensation Act, 1916, makes provision with respect to certain industrial diseases.

In 1918 the Board of Trade conducted an investigation into the prevalence of miners' phthisis and pneumoconiosis; an interim report was issued in December, 1918, and it was recommended that a plan for the compensation of stonemasons and quarrymen should be instituted in New South Wales, and that a technical commission should be appointed to report upon the dust conditions of operations carried out in sandstone, metalliferous mines, and ore treatment works.

The technical commission was appointed, and has issued an interim report regarding the metalliferous mines at Broken Hill.

WORKMEN'S INSURANCE.

State Legislation.

The State law relating to employers' liability is contained in the Workmen's Compensation Act of 1916, which repealed the Employers Liability Act, 1897, and the Workmen's Compensation Act, 1910.

The Employers Liability Act, 1897, gave to a workman the common law rights of the ordinary citizen. The Workmen's Compensation Act, 1910, provided for compensation to workmen for injuries suffered in the course of their work. This Act applied only to specified industries, viz., railways, tramways, factories, mines and quarries other than those provided for by the Miners Accident Relief Act, wharves, vessels, engineering, building, and wool stores.

When the Act of 1916 came into operation on 1st January, 1917, the Miners' Accident Relief Fund was closed, and allowances in connection with mining accidents which occurred before that date became a charge upon the Consolidated Revenue.

The Workmen's Compensation Act, 1916, relates to all employees whose remuneration does not exceed £312 per annum, the exception being casual hands employed otherwise than for the purpose of the employer's trade or business, members of the Police force, outworkers, and members of the employer's family dwelling in his house.

It applies in respect of certain industrial diseases, as specified in a schedule, and in respect of accidents to seamen employed on ships whose first port of clearance and whose destination are in New South Wales, but seamen who claim compensation under this Act must agree not to proceed also under the Seamen's Compensation Act of the Commonwealth. The amount of compensation shall be—

(a) Where death results from the injury—

- (i) if the workman leaves any dependents wholly dependent upon his earnings, a sum equal to his earnings in the employment of the same employer during the three years next preceding the injury, or the sum of £300, whichever of those sums is the larger, but

not exceeding in any case £500; Provided that the amount of any weekly payments made under this Act and any lump sum paid in redemption thereof shall be deducted from such sum, and if the period of the workman's employment by the said employer has been less than the said three years, then the amount of his earnings during the said three years shall be deemed to be 150 times his average weekly earnings during the period of his actual employment under the said employer;

- (ii) if the workman does not leave any such dependents, but leaves any dependents in part dependent upon his earnings, such sum, not exceeding in any case the amount payable under the foregoing provisions as may be agreed upon, or, in default of agreement, may be determined, on arbitration under this Act, to be reasonable and proportionate to the injury to the said dependents; and
- (iii) if he leaves no dependents, the reasonable expenses of his medical attendance and burial not exceeding £20.

- (b) Where total or (partial) incapacity for work results from the injury, a weekly payment during the incapacity not exceeding 50 per cent. of his average weekly earnings during the twelve months, if he has been so long employed, but if not, then for any less period during which he has been in the employment of the same employer, such weekly payment not to exceed £2, and the total liability in respect thereof shall not exceed £750.

Provided that as respects the weekly payments during total incapacity of a workman who is under 21 years of age at the date of the injury, and whose average weekly earnings are less than 20s., 100 per cent. shall be substituted for 50 per cent. of his average weekly earnings, but the weekly payment shall in no case exceed 15s.

The following statement shows particulars regarding compensation paid under the Workmen's Compensation Acts during the five years, 1914 to 1918:—

Year.	Accidents				Compensation.			
	Death.	Disablement compensation by—		Total.	Death.	Disablement compensation by—		Total.
		Lump Sum.	Weekly Payments.			Lump Sum.	Weekly Payment.	
1914	66	136	6,289	6,431	£ 15,256	£ 8,043	£ 30,159	£ 53,458
1915	52	76	5,778	5,906	12,072	5,426	27,073	44,571
1916	52	123	8,154	8,329	12,431	10,036	29,635	52,102
1917	34	96	4,689	4,821	12,724	7,172	32,462	52,308
1918	60	127	11,671*	11,712	27,311	17,716	77,961	117,384

*Includes 63 cases who received a lump sum, having first received weekly payments.

Commonwealth Legislation.

In addition to the general enactments of the State, specific enactments of the Commonwealth provide for compensation to men in a particular class of work which is subject to special risks, and to officers in the service of the Commonwealth Government. Particulars regarding war pensions in connection with military and naval services are shown in another chapter.

Seamen's Compensation.

The Seamen's Compensation Act, 1911, provides against injuries incurred in the course of employment. It is applicable to seamen (a) on ships in the service of the Commonwealth, other than naval or military service, (b) on ships trading with Australia or engaging in any occupation in Australian waters, and being in territorial waters of any territory which is part of the Commonwealth; and (c) on ships engaged in trade and commerce with other countries or among the States. In the case of ships not registered in Australia, the two last clauses apply only in relation to seamen shipped under articles of agreement entered into in Australia, and while the ships are subject to the law of the Commonwealth. Compensation is not payable in respect to any injury which does not disable the seaman for at least one week; in the case of death, the amount of compensation, when deceased leaves dependents, is the equivalent of three years' wages in the particular employment, or £300, to a maximum amount of £500.

The compensation is reducible with the measure of dependence, but the minimum for a seaman leaving no dependents is the cost of medical attendance and burial to the value of £30.

In the case of total or partial incapacity, the amount of compensation is a weekly payment during the incapacity not exceeding 50 per cent. of the average weekly earnings during the twelve months, or for any less period, previous to the injury.

MINING INDUSTRY.

SUPERVISION AND REGULATION OF MINING, &C.

The Department of Mines in New South Wales, created in 1874, is controlled by a Minister of the Crown. The functions of the Department include the general supervision of the mining industry, geological and mining surveys and assays, the examination of coal-fields, the inspection of collieries and mines, the administration of the Prospecting Vote, and of legal enactments relating to mining.

Miners' Rights and Business Licenses.

Authority must be obtained for all operations for the mining of gold or other minerals. A miner's right, for which a fee of 5s. per annum is charged, entitles the holder to occupy Crown land for the purpose of mining for gold or other minerals, to construct works for mining purposes, to conserve water or obtain timber in connection with mining, except within exempted areas, and for residence. A business license, the fee for which is 20s. per annum, entitles the holder to occupy one-quarter of an acre of Crown land in a town or one acre outside town boundaries.

During the year 1919 there were 12,656 miners' rights and 531 business licenses issued, the fees received amounting to £2,179 and £355 respectively.

Leases of Crown Lands.

The annual rent for mining leases is 1s. per acre. A royalty of 1 per cent. of the gross value of gold and other minerals, except coal and shale, won from the land leased, and a royalty of 6d. per ton on all coal and shale, is payable to the Crown. No royalty is payable, except on coal and shale, unless the gross value exceeds £500 during the year.

Mining on Private Lands.

Upon payment of a fee, and under certain conditions, holders of miners' rights may obtain authority to enter upon any private land to prospect for minerals and may apply for a lease for the whole or any part of the land.

Dredging.

Leases of Crown or of private land may be granted for the purpose of mining for gold or any mineral by dredging, sluicing, or other method.

Labour Conditions.

The minimum labour conditions are as follow :—

For gold : One man to 5 acres for the first year, and thereafter one man to 2 acres. For minerals other than gold, coal, or shale : One man to 20 acres for the first year, and thereafter one man to 10 acres.
For coal or shale : Two men to 640 acres, or fraction thereof.

The Mining Act provides for the suspension of the labour conditions under certain circumstances.

Examinations for Mine Managers, &c.

Certificates of competency are issued by the Minister upon the report of the examining boards to managers, under-managers, engine-drivers, and electricians.

In 1919, certificates were issued under the Coal Mines Regulation Act to 7 managers, 10 under-managers, 65 deputies, and 4 mine electricians. Under the Mines Inspection Act, 8 certificates were issued to managers, 5 permits to act as managers, 217 engine-drivers' certificates, and 9 licenses to test and examine boilers.

AREA UNDER MINING OCCUPATION.

The area under mining occupation in New South Wales at 31st December, 1919, was approximately 344,191 acres, made up as follows:—

	Acres.
Crown Lands under lease	229,686
" " " application for lease	23,332
" " " roads, machine sites, &c.	292
Reserved Lands under authority to mine	2,171
Private Lands under application for lease	9,897
" " " roads, machine sites, &c.	89
" " " authority to enter	12,787
" " " agreement, Mining on Private Lands Act	13,985
" " " agreement, Mining Laws Amendment Act	4
" " " agreement, Mining Act, 1909	9,475
" " " permit to remove minerals	689
Dredging Lands under application for lease	1,719
Miner's Right and Business License	18,039
Authority to Prospect	708
Under application for Authority to Prospect	21,809
Total	344,191

The total number of applications received during 1919 by the Department of Mines for leases and authorities to prospect was 1,928 relating to 126,763 acres. Of these, 728 applications, covering 59,563 acres, related to Crown lands, and 1,200 applications, covering 67,201 acres, related to private lands.

The applications approved during 1919 under the Mining Act were as follows:—

Classification.	Applica- tions.	Aggregate Area.	Classification.	Applica- tions.	Aggregate Area.
	No.	Acres.		No.	Acres.
Crown & Reserved Lands—			Crown, Private, and Re- served Lands—		
Gold Leases	179	1,325	Dredging Leases	54	2,301
Mineral Leases, coal and shale	20	2,694	Private Lands—		
Other	213	10,183	Leases to Mine for coal and shale	8	1,897
Sites for dams, &c., mining purposes	15	408	Other minerals	128	1,774
Authorities to prospect coal and shale	1	540	Leases for dam sites, machinery areas, &c.	10	81
Other	15	598		155	3,752
	442	13,758	Total	651	21,711

The following is a statement of the expenditure by the State from the Consolidated Revenue Fund on account of services in connection with mining, during the years ended 30th June, 1915-19.

Head of service.	1915.	1916	1917.	1918.	1919.
	£	£	£	£	£
Department of Mines	81,292	80,011	89,690	69,242	59,163
State Colliery, Lithgow ... ..	.....	.....	942	325	170
Geological Survey Laboratory	108	181	196	178	190
Miners' Accident Relief Branch	1,508	1,303	1,351	1,389	1,309
Administration of the Act for Regulation of Coal Mines and Collieries	623	575	613	321	321
To promote prospecting for gold and other minerals*	11,541	8,093	7,162	8,328	8,375
To acquire, erect, work, and maintain and to assist in the erection of crushing batteries†	358	265	221	5	210
Bore to prove coal seams under Reserves	1,942	984	52	—	—
Detonators and explosives ... ..	.....	10,306	2,086	354	54
Miscellaneous	2,649	1,795	320	455	636
	93,810	73,213	92,427	61,744	62,741
Endowment Miners' Accident Relief Act	11,973	11,613	11,361	2,275	.....
State Coal Mines Act ... ..	.....	.....	825	1,000	1,001
Total	81,783	84,826	74,811	65,019	63,743

* These amounts are to be repaid if, in the opinion of the Prospecting Board, minerals are not in payable quantities, or if the mines otherwise prove payable to the prospectors.

† To be repaid in accordance with agreements.

PROSPECTING.

Subsidies are granted by the Government to encourage prospecting for minerals. The Prospecting Board, consisting of the Under Secretary for Mines, as Chairman, the Government Geologist, the Chief Inspector of Mines, and three Inspectors, the Chief Mining Surveyor, and a Geological Surveyor, deals with all applications for aid, and miners desiring a grant from the Prospecting Vote must satisfy the Board that the locality to be prospected is likely to yield the mineral sought, and that the mode of operation is suitable for its discovery. Miners assisted from the vote are not entitled to claim any reward that may be offered for the discovery of a new gold or mineral field.

Under the regulations governing the distribution of the vote, the amount advanced must be refunded in the event of the discovery of payable mineral by means of the aid granted.

The following statement summarises the amounts allotted to prospectors for the various minerals; the figures are for calendar years from 1887,

when the information is readily available, to 1895 and thereafter for the years ended 30th June :—

Period.	Amounts allotted to Prospectors for—						Total.
	Gold.	Silver and Lead.	Copper.	Tin.	Coal.	Other Minerals.	
	£	£	£	£	£	£	£
1887-1889	26,332	886	138	34	338	283	28,011
1890-1894	111,878	7,254	1,367	1,261	3,752	3,283	128,795
1895-1900	107,581	4,886	7,762	3,389	.....	4,021	127,639
1901-1905	80,636	5,108	10,136	7,828	40	1,430	105,178
1906-1910	38,822	7,986	20,765	3,146	310	871	71,900
1911-1915	50,209	7,557	8,939	5,870	.....	4,837	77,412
1916	5,548	481	1,148	705	.....	1,395	9,277
1917	9,152	890	1,869	944	.....	667	13,522
1918	8,172	1,061	2,542	869	.....	1,126	13,770
1919	5,489	1,198	2,656	447	.....	1,815	11,605
Total—							
1887-1919	443,819	37,307	57,322	24,493	4,440	19,728	587,109

No large payable field has yet been discovered through the agency of the Prospecting Vote, but several rich mines have been opened with the aid granted, notably the Mount Boppy Gold-mine.

In addition to the employment of labour, the proving of a lode or reef invariably leads to the development of large areas of adjoining land under the Mining Act, from which increased revenue is derived by the State.

EMPLOYMENT IN MINES.

The extent to which mining industries provide employment is indicated in the following statement of the approximate number of men employed as at 31st December, 1915-1919 :—

Year.	Metalliferous.						Coal and Shale.	Total number of men employed.
	Gold.	Silver, Lead, and Zinc.	Copper.	Tin.	Other.	Total.		
1915	2,888	5,564	914	1,648	2,176	13,190	18,221	31,411
1916	2,317	6,461	1,661	1,938	2,035	14,412	16,892	31,304
1917	1,823	7,619	2,074	1,779	2,184	15,479	17,338	32,817
1918	2,540	7,585	1,529	2,352	2,731	16,737	16,926	33,663
1919	1,656	6,556	1,148	2,171	2,750	14,281	18,178	32,459

These figures do not include persons employed in works manufacturing lime, cement, or coke. Comparing the figures for 1919 with those of the previous year, there was a decrease of 1,204 in the total number employed, though there were increases in coal and shale miners.

Coal and shale mines are subject to supervision under the Coal Mines Regulation Act, and during the year 1919 there were 134 coal-mines and 1 shale-mine, a total of 135 working under the provisions of this statute. The employees in 1919 numbered 18,178 of whom 13,696 were below ground.

The employment of boys under 14 years of age or of women and girls in or about a mine is prohibited, and restrictions are placed upon the employment of youths. In 1919 the total number of boys between 14 and 16 years of age employed in coal and shale mines was 628, of whom 384 were below ground, and 244 on the surface.

WAGES OF COAL-MINERS.

The employees in the coal-mines in New South Wales are at present working under Commonwealth Government Orders, Agreements, or Awards. The rate paid to miners varies according to the conditions of the seams or places where the coal is mined.

The average rates at 31st December, 1919, were as follows:—

	Northern District.	Southern District.	Western District.
Miners	£11/6 to £11/3 per ton	3/22 per ton	19½ to 2/3½ per ton.
Deputies	18/7 to 18/1 per day	25 10/- per week	18/7 per shift.
Overman (underground)	.....	£5 10/- to £7 10/- p. wk.	.....
Deputy Overman	.....	£3 10/8 per week	.....
Shot-fires	17/7 to 18/1 per day	17/7 per day	.....
Waste-examiners	17/7 .. 18/1 .. ..	.....	.....
Engineers and mechanics	1/9½ .. 2/22 per hour	14/4½ to 16/2 per day	.....
Engine-drivers—			
Loco engines	18/- to 17/- per day	17/- per day	.....
Winders	17/- .. 18/-	18/-	18/- per shift.
Haulage	.....	15/6 .. ..	.....
Other engines	14/7 to 17/- per day	.....	15/7 per shift.
Stokers and firemen	13/6 .. 14/7	13/6 to 14/7 per day	11/1½ per hour
Motor attendants or drivers	4/2 .. 4/1 .. ..	.....	.....
Shiftmen	18/- .. 18/1	16/8 per day	18/6 to 18/7 per day.
Whealers	13/- .. 14/2	14/7	16/2 per day, 4½ per score, 3½ per ton.
Flatmen	1/12 .. 1/12 per day	14/7 .. ..	.....
Water-carriers	12/6 per day	14/7	8/9 to 11/3½ per day
Sat stokers	14/5 .. ..	.....	.....
Roller-wal man	18/11 to 18/8 per day	.....	.....
Roadways	18/11 .. 18/8 .. ..	.....	.....
Wagon pickers	22/6 per day	.....	.....
Pank-makers	17/2	14/9½ per day	14/7 per day.
Shunters	15/6 .. ..	.....	.....
Screenmen	15/6	12/6 per day	.....
Conveyors	12/6 to 12/2 per day	12/1 .. ..	.....
Platelayers	.....	12/6 .. ..	.....
Flame-makers	11/9 per hour	24/1 .. ..	.....
Sablomen	11/9	18/6 .. ..	.....
Trappers	.....	17/2 .. ..	.....
Labourers	1/8½ to 1/9½ per hour	15/6	13/6 to 14/7 per day.
Boys and Youths	5/2 .. 12/10 per day	6/4 (average)	6/- .. 11/8

MINERAL PRODUCTION.

The statistics of production are incomplete, and in many instances the export trade is taken as the measure of the output. Comparison of the output of the several minerals is difficult also, as regards quantity, by reason of the variety of the units of measurement employed in the different branches of the mining industry, and, as regards value, by the difference in the stages of production at which the values are assessed. For instance, the value of the tin output represents the values of ingots and of ore, and with other metals, the export, which is accepted as representing the production, is mainly in ore.

Measured by the aggregate output, coal is the most valuable mineral in New South Wales, followed by silver and gold.

The summary given below shows the output and the value of the production during the year 1919 and to the end of 1919:—

Minerals	During 1919.		To the end of 1919.	
	Quantity	Value.	Quantity.	Value.
<i>Metals.</i>	oz. fine.	£	oz. fine.	£
Gold—Domestic ore	65,520	279,660	14,749,637	62,648,187
Silver—	oz.		oz.	
Silver Ingots and Matte	1,020,710	292,888	42,321,622	82,130,425
Sulphide and Silver-lead	.....	.....	582,974	
Lead ore, Concentrates, &c.	77,669	1,639,825	9,747,947	
Lead—Pig. &c.	51,427	224,515	297,742	5,774,918
Zinc—Spelter and Concentrates	72,594	347,385	4,259,159	12,100,323
Copper—Ingots, Matte, and Ore	1,465	139,596	259,822	15,159,100
Tin—Ingots and Ore	2,092	416,622	121,482	11,928,500
<i>Iron—</i>				
Pig iron—from domestic ore	80,941	445,175	629,929	2,645,162
Iron oxide	2,726	5,406	41,109	23,292
Ironstone flux	2,124	2,073	121,201	94,659
<i>Tungsten—</i>				
Wolfram	133	92,818	2,946	365,258
Scheelite	60	15,143	1,000	188,570
<i>Platinum—</i>	oz.		oz.	
.....	213	5,150	14,693	47,734
<i>Molybdenite</i>	tons.		tons.	
.....	81	39,308	730	197,068
<i>Antimony—Metal and Ore</i>	oz.		oz.	
.....	87	5,342	18,707	241,183
<i>Bismuth—Metal and Ore</i>	oz.		oz.	
.....	25	20,215	684	189,042
<i>Chromite</i>	tons.		tons.	
.....	223	636	93,190	205,613
<i>Magnesian</i>	tons.		tons.	
.....	9,294	8,022	25,280	21,820
<i>Manganiferous</i>	tons.		tons.	
.....	4,651	13,952	72,284	95,077
<i>Non-metals.</i>				
<i>Fuels—</i>	tons.		tons.	
Coal	8,631,554	5,459,846	245,964,533	98,144,288
Coke	424,773	880,127	5,959,697	5,300,555
Shale (oil)	35,453	37,988	1,840,876	2,502,514
<i>Structural Materials—</i>				
Limestone—flux	83,032	22,779	1,616,951	854,039
Marble	.....	3,131	.....	38,343
Slates	.....	1,500	.....	3,653
<i>Alumina</i>	tons.		tons.	
.....	2,488	14,910	53,733	190,971
<i>Glass Blowing—</i>				
Noble Opal	.....	27,552	.....	1,474,584
<i>Diamonds</i>	oz.		oz.	
.....	1,774	1,706	196,413	123,947
<i>Silica</i>	tons.		tons.	
.....	10,140	39,637	42,012	83,707
<i>Other Minerals and Ores</i>	.....	33,875	.....	250,356
Total value	.....	9,445,059	.....	300,744,307
<i>Other—</i>				
Iron made from scrap	.....	.....	.....	1,416,090
*Portland Cement	126,941	379,896	1,091,705	4,606,654
*Lime	21,473	27,411	519,190	391,100

* Quantity manufactured and value. † Includes value of quantity exported (only) to end of 1919.

‡ Includes quantity exported (only) up to end of 1919.

The value of the mineral production in quinquennial periods since 1856 is shown in the following table; the figures are exclusive of iron made from

wrap, Portland cement, and lime, which are included in the production of the manufacturing industry—

Period.	Value of Production.	Period.	Value of Production.
	£		£
1850-59	6,069,118	1895-1900	25,159,491
1861-65	9,280,297	1901-05	22,520,914
1866-70	7,001,454	1906-10	42,450,339
1871-75	10,798,290	1911-15	51,930,832
1876-80	9,184,015	1916	10,229,706
1881-85	12,331,942	1917	12,229,140
1886-90	18,681,048	1918	12,941,164
1891-00	26,324,780	1919	9,445,029

VALUE OF MACHINERY.

The following statement shows the estimated value of the plant and machinery used in mining during the years 1916 to 1919—

Classification.	1916.	1917.	1918.	1919.
	£	£	£	£
Coal and Shale	3,673,000	3,719,800	3,995,000	4,039,000
Gold	458,923	441,624	426,719	369,904
Silver, Lead, and Zinc	1,977,613	1,528,072	1,298,623	1,677,314
Copper	709,490	579,321	554,632	643,199
Tin	185,022	173,789	328,636	364,099
Other Minerals	563,202	567,034	1,013,974	1,094,679
Total	7,568,250	6,943,833	7,531,604	9,184,395

The value of plant and machinery used in connection with coal and shale mines includes the value of plant used for conveying coal and shale from the mines to wharf or railway station: the amount in 1918-19 was £1,613,000.

QUARRIES.

The quantities and values of building stone, except stone exported, do not appear in the statements of mineral production, but are given hereunder in the return of quarries for the year 1918-19:—

Description of Quarry.	Quantity of Stone raised.	Value of Stone raised.	Description of Quarry.	Quantity of Stone raised.	Value of Stone raised.
Building Stone—	tons.	£	Macadam, Ballast, &c.—	tons.	£
Sandstone	85,730	55,582	(continued).		
Granite	500	1,800	Gravel	34,659	5,315
Syenite (Trachyte)	70	232	Sand	41,243	7,417
Marble	607	2,512	Ironstone	73,299	9,092
Limestone	2,453	973	Shale and Clay	30,752	4,220
Other	2,215	2,642	Quartzite	27,692	3,927
Macadam, Ballast, &c.—			Limestone, crude	224,113	49,438
Sandstone	979,713	68,562	Granite	3,894	902
Bluestone, Basalt, &c.	448,938	94,071	Clays—		
Limestone	64,851	13,193	Kaolin	876	675
			Fireclay	6,200	1,550

PRICES OF MINERALS.

In the case of the minerals which contribute any considerable value to the production, the prices of all are regulated by the world's production in relation to the world's demands, as, with the exception of coal, the local demand is small.

The quotations in the following table for silver, lead, copper, and tin are the average f.o.b. prices, Sydney, based on the London prices. In the case of zinc, the averages are those quoted by the Department of Mines in connection with the Broken Hill field:—

Year.	Silver.	Lead.	Zinc.	Copper.	Tin.
	per oz. s. d.	per ton. £ s. d.	per ton. £ s. d.	per ton. £ s. d.	per ton. £ s. d.
1913	2 3 $\frac{1}{2}$	18 15 0	22 13 6	68 13 4	202 5 0
1914	2 1 $\frac{1}{2}$	19 1 8	21 0 0	60 16 8	153 0 0
1915	1 11 $\frac{1}{2}$	22 19 2	68 19 7	73 0 0	164 17 1
1916	2 7 $\frac{1}{8}$	31 1 8	71 18 6	115 15 0	181 15 0
1917	3 4 $\frac{1}{2}$	30 10 0	54 0 0	125 3 4	237 16 8
1918	3 11 $\frac{1}{2}$	30 11 8	54 3 11	115 16 8	322 6 8
1919	4 9	28 10 2	42 5 2	90 18 2	259 5 3

In regard to coal, average prices are quoted in connection with the values of production elsewhere in this Chapter.

GOLD.

Amongst the metals which occur in the State, gold occupies an important place, both on account of the quantity which has been raised and of the influence of its discovery on the settlement of the country.

The following table shows the quantity and value of the gold produced during each decennial period since 1851:—

Period.	Quantity.	Equivalent in oz. fine.	Value.
	oz. crude.	oz. fine.	£
1851-1860	3,280,963	2,714,531	11,530,583
1861-1870	3,542,912	3,219,628	13,676,102
1871-1880	2,253,259	2,019,116	8,576,655
1881-1890	1,173,885	1,013,846	4,306,541
1891-1900	2,867,337	2,432,387	10,332,120
1901-1910	2,669,670	2,252,851	9,569,492
1911-1916	1,036,761	861,223	3,658,247
1917	85,954	82,171	349,038
1918	91,033	87,045	369,743
1919	67,443	65,839	279,666
Total ..	17,069,237	14,748,637	62,648,187

Prospecting for gold has been neglected in recent years owing to the remunerative employment to be obtained in connection with other branches of the mining industries. New South Wales gold which was received at the Sydney Mint for coinage in 1919 amounted to 16,597 oz., of the gross value of £70,498.

GOLD AND TIN DREDGING.

Dredging is in operation on practically all the rivers of New South Wales which drain auriferous country. In addition, alluvial tin deposits are exploited, and the value of stream-tin won annually exceeds the value of gold recovered by dredging.

In 1919 there were 77 dredges, of a total value of £416,459; 14 bucket dredges and 1 pumping plant were employed in the recovery of gold, and 2 bucket dredges and 60 pumping plants in the winning of stream-tin.

The following table demonstrates the value of the metals recovered by dredging since its inauguration in this State :—

Period.	Area under Lease at end of period.	Gold Dredged.			Stream-tin Dredged.		Total Value.
		Quantity.		Value.	Quantity.	Value.	
	acres.	oz. crude.	oz. fine.	£	tons.	£	£
1900	6,943	8,882	7,924	33,660	.....	.....	33,660
1901-05	52,852	144,028	129,850	551,568	1,254	109,026	660,594
1906-10	75,900	185,140	168,566	716,025	7,570	732,134	1,448,159
1911-15	8,210	120,082	110,284	468,459	7,551	907,582	1,376,041
1916	7,878	20,165	18,797	79,846	1,272	146,880	226,726
1917	...	27,364	25,349	107,674	1,207	183,156	290,830
1918	...	21,039	19,779	84,016	1,253	282,388	366,404
1919	10,144	19,273	18,047	76,658	1,083	174,013	250,671

SILVER, LEAD AND ZINC.

The output of lead and zinc in New South Wales is obtained principally from the silver-lead mines of the Broken Hill district, and for that reason the mining of these metals is discussed conjointly.

Assessment of the total output and value of production of silver-lead ores mined in New South Wales is hampered by the fact that the process of extracting the metallic contents has been conducted for the most part outside the boundaries of the State, a proportion being treated within the Commonwealth, while large quantities of concentrates are exported to Europe for treatment. For this reason the value of the output credited to New South Wales does not represent the value of the finished product, but the estimated net value of the ore, concentrates, bullion, &c., as declared by the several companies to the Customs Department at the date of export from the State.

Calculated on this basis the quantity and value of New South Wales silver and silver-lead ore exported to the end of 1919 are shown in the following table :—

Period.	Silver.		Silver-sulphide, Silver-lead, Ore, &c.			Total Value Exported.
	Quantity.	Value.	Quantity.		Value.	
			Ore Concentrates, &c.	Metal.		
	oz.	£	tons.	tons.	£	£
To 1885	1,730,297	382,884	7,073	191	237,810	620,694
1886-1890	2,481,253	464,081	165,756	94,002	6,478,515	6,942,596
1891-1895	3,009,187	445,873	663,754	231,847	12,615,432	13,061,305
1896-1900	2,352,092	269,663	1,771,983	86,005	9,592,856	9,862,519
1901-1905	4,154,020	445,051	1,877,515	108,353	8,910,586	9,355,637
1906-1910	8,310,962	892,414	1,709,173	42,578	11,561,794	12,454,208
1911-1915	12,460,553	1,302,510	1,694,834	...	14,302,570	15,605,080
1916	2,801,507	349,367	249,849	...	2,935,624	3,284,991
1917	1,782,004	328,241	231,881	...	4,165,324	4,493,565
1918	2,007,037	419,498	295,045	...	4,711,669	5,131,167
1919	1,232,710	292,838	77,989	...	1,030,825	1,323,663
Total	42,321,622	5,592,420	8,747,852	562,976	76,543,005	82,135,425

Similar information regarding the export of lead (pig, in matte, also lead-carbonate and lead-chloride), the product of New South Wales, is shown below; but 1907 and subsequent years the quantity as recorded represents the contents, based on average assays, of bullion produced within the State:—

Period.	Lead—Pig, in matte, &c.		Period.	Lead—Pig, in matte, &c.	
	Quantity.	Value.		Quantity.	Value.
	tons.	£		tons.	£
1889-1890	648	8,288	1916	35,466	799,032
1891-1895	729	7,413	1917	29,817	618,951
1896-1900	13,293	258,874	1918	31,929	608,342
1901-1905	17,530	355,368	1919	11,497	234,915
1906-1910	71,450	996,646			
1911-1915	114,375	1,699,931	Total	297,742	5,774,918

The following statement shows the quantity and value of zinc (spelter and concentrates), the product of domestic ores, exported since 1889. These exports represent practically the total production:—

Period.	Zinc (Spelter and Concentrates).		Period.	Zinc (Spelter and Concentrates).	
	Quantity.	Value.		Quantity.	Value.
	tons.	£		tons.	£
1889-1890	307	3,366	1916	209,741	961,949
1891-1895	663	7,677	1917	113,031	441,486
1896-1900	197,931	146,033	1918	87,019	395,413
1901-1905	183,785	440,402	1919	72,284	247,396
1906-1910	1,460,138	3,761,923			
1911-1915	2,093,783	4,861,489	Total	4,325,135	13,168,263

The production of silver, lead, and zinc is seen in the following summary of the values during the last five years:—

Year.	Silver, Silver-lead, Concentrates, Ores, &c.	Lead (Pig. &c.)	Zinc (Spelter and Concentrates).	Total Production.
	£	£	£	£
1915	2,631,662	689,439	1,111,009	4,432,110
1916	3,284,961	739,032	961,949	5,045,942
1917	4,438,565	616,531	441,486	5,511,582
1918	5,131,167	936,342	395,413	6,462,922
1919	1,523,863	234,915	247,396	1,806,174

In 1918 the value of production was the highest on record owing to the favourable metal market and to the settled industrial conditions which prevailed throughout the year, but the rate of production was not maintained during 1919, on account of industrial troubles in the Broken Hill District, and the value of production dropped to £1,806,174.

As previously stated, the bulk of the ores produced in the silver-lead mines is exported for treatment outside the State and the figures shown in the preceding tables do not convey an adequate idea of the importance of the mines of New South Wales. The Department of Mines has collected independent records from the various mining and smelting companies and ore-buyers with the object of ascertaining the actual value accruing to the Commonwealth from the silver-lead mines of this State. Thus particulars have been obtained regarding the quantity and value of the silver, lead, and zinc extracted within the Commonwealth, and the gross metallic contents of concentrates exported overseas have been estimated on the basis of average assays as follows:—

Year.	Metal obtained within Commonwealth from ores mined in New South Wales.				Concentrates exported.					Total Value of Production from Silver-lead Ores of New South Wales.
	Silver.	Lead.	Zinc.	Aggregate Value.	Quantity of	Contents by average assay.			Assayed Value.	
						Silver.	Lead.	Zinc.		
oz. fine.	tons.	tons.	£	tons.	oz. fine.	tons.	tons.	£	£	
1913	1,009,826	104,422	4,123	1,798,267	147,255	2,292,523	117,269	526,349	3,756,692	2,625,558
1914	1,461,250	62,207	1,254	1,893,309	421,262	7,579,540	69,272	165,459	1,594,549	3,269,570
1915	2,021,190	122,020	4,268	1,207,726	198,784	1,726,559	9,919	71,564	1,221,949	4,212,520
1916	1,982,519	126,440	3,777	1,586,370	173,627	1,722,274	16,420	69,141	1,329,627	3,277,563
1917	7,245,296	126,029	6,629	1,722,324	26,222	222,622	9,142	63,272	692,024	6,251,075
1918	3,724,019	126,260	6,227	2,724,024	68,469	226,242	2,278	21,222	222,222	3,976,264
1919	5,826,267	66,274	7,119	4,226,497	28,780	421,471	2,425	18,146	222,721	6,246,217

In connection with the above figures, although the metallic contents are based on average assays, it is impossible to give the proportions of the bulk quantities which was recovered. In the case of the lead and zinc contents, the quantities have been estimated only when payment was allowed for them.

It is estimated that the quantity of silver yielded by the mines of New South Wales to the end of 1919 amounted to 359,938,398 oz. fine, valued at £24,831,698.

	oz. fine.	£
Metal obtained in Commonwealth	180,398,397	27,676,425
Contained in concentrates, &c., exported	179,540,001	27,255,273
Total	359,938,398	54,931,698

Broken Hill Field.

The mines on the Broken Hill field are the chief contributors to the silver and silver-lead and zinc output of Australia. The argentiferous lead ores of the Warner Range and Broken Hill districts were discovered in 1883. The field extends over 2,500 square miles of country, and has developed into one of the principal mining centres of the world. It is situated in western New South Wales, beyond the River Darling, and on the confines of South Australia.

The Broken Hill lode is the largest yet discovered; it varies in width from 10 feet to 200 feet, and may be traced for several miles, the country having been taken up all along the line of lode, and subdivided into numerous leases, held by mining companies and syndicates.

During 1919 the output of ore from the Broken Hill mines amounted to 415,400 tons, viz., 16,464 tons of oxidised and 398,936 tons of sulphide ore; and 72,294 tons of zinc (spelter and concentrates), valued at £247,395, were exported.

The total value of the mineral output of the Barrier district during 1919 was estimated at £2,562,748, as compared with £6,232,931 in 1918. In addition, the treatment of zinc tailings in 1919 yielded an output valued at £191,715, and returned to shareholders £208,963, bringing the total production of the Broken Hill field to £2,754,763 for the year; the amount distributed to shareholders was £832,317.

To the end of the year 1919 the value of production by the mines on the Broken Hill field from the inception of operations was nearly 105 millions sterling, and the dividends and bonuses paid amounted to £23,984,877.

Yerranderie Division.

Next in importance to the Broken Hill field is the Burragorang in the Yerranderie Division. In this field rich galena occurs in bunches, but the deposits are very variable in width and composition. Owing to the excessive cost of transport, only high-grade ore is sent away, and a considerable quantity of second-grade is left in the mines or dumped at the surface for future treatment. During 1919, 5,495 tons of ore were raised and sold; the metallic contents were gold 715 oz., silver 286,555 oz., and lead 861 tons; the net value received was £78,528.

Other Fields.

The other fields which contributed to the output of silver-lead ores include the mines in the Sunny Corner Division, where the treatment of 3,000 tons of ore and concentrates in 1919 resulted in the production of 60,000 oz. silver, valued at £12,050; 35 tons of copper, valued at £3,500; and 300 oz. of gold, worth £1,200. The Lewis Ponds mine in Orange Division produced 4,950 tons of ore, yielding 292 oz. gold, valued at £1,169; 29,122 oz. of silver, valued at £5,983, and 252 tons of lead, valued at £6,170.

The Cobar copper-mines, of which details are given in connection with copper-mining, yield large quantities of silver and lead.

COPPER.

Ores of copper are worked chiefly in the central part of the State, the Macquarie, Boyan, and Darling Rivers. Deposits occur also in the New England and Southern districts, as well as at Broken Hill, thus showing a wide distribution.

The copper lodes of New South Wales contain ores of a high grade as compared with those of many well-known mines worked in other parts of the world; and, given a fair price and transportation facilities, are capable of yielding satisfactory returns. The net export of copper ingots, matte,

regulus, and ore, is taken as the production of the State. The quantities and values are shown below from the year 1858:—

Period.	Quantity.		Value.
	Ingots, Matte, and Regulus.	Ore.	
	tons.	tons.	£
1858-1879	14,877	2,102	1,067,670
1880-1884	23,715	19	1,554,326
1885-1889	15,160	537	778,804
1890-1894	10,195	1,738	454,765
1895-1899	25,408	852	1,286,094
1900-1904	32,173	8,791	2,014,040
1905-1909	41,425	3,057	2,972,253
1910-1914	42,277	9,815	2,529,554
1915	2,463	4,510	234,437
1916	5,617	554	586,127
1917	6,576	.....	814,154
1918	6,510	.....	696,580
1919	1,460	.....	139,296
Total ...	227,856	31,975	15,128,100

The great decrease in value of output in 1919 was due to causes mainly not connected with the productive capacity of the mines. In addition to the collapse of the copper market in the early part of 1919, and to industrial and shipping troubles, the Cobar district, in which most of the copper is produced, suffered severely from drought.

During 1919 the Electrolytic Refining and Smelting Company of Australia, Ltd., Port Kembla, produced 1,130 tons of copper from domestic ores, valued at £102,773.

Cobar Field.

The Cobar mines constitute the chief centre of the copper-mining industry. From the point of view of combined output, the gold-copper mines worked in the Cobar district rank next, in value of production, to the silver-lead mines of the Broken Hill field.

In 1919 the output was valued at £161,889, and comprised the following:—Gold, 7,240 oz., valued at £30,755; silver, 18,340 oz., valued at £4,543; copper (metal and ore), 1,319 tons, valued at £126,591.

The operations of the Great Cobar Mine, the principal mine in the Cobar Field, came to an end during 1920. The closing of the mine, was due to the fall in the price of copper in 1919, higher wages, increased shipping and railway freights, exchange, and the high cost of treatment of copper matte.

TIN.

Tin, unlike copper, is restricted in its geographical and petrological range, and is the rarest of the common metals in commerce.

In addition to alluvial deposits, tin ore occurs *in situ* in granite and adjacent contact rocks, usually occupying fissures or penetrating walls; the majority of the tin lodes discovered in the State are on a small scale, but the lodes, developed or undeveloped, are very numerous. The maximum depth attained in the tin lodes of New South Wales is about 360 feet.

Tin ore occurs in the extreme Northern, Southern, and Western divisions, but the proved area of workable quantities is limited practically to the western fall of the New England Tableland, with Eumsville and Tingha as the chief centres. It has been discovered also in small quantities in the Barrier district, at Poolamacca and Euriowie; near Bombala, in the Monaro district; at Gundle, near Kempsey; at Jingellie and Dora Dora, on the Upper Murray; in the valley of the Jachlan; and in fine particles in beach sands along the coast, in association with gold, platinum, and monazite.

Output of Tin.

Since 1902 the activity which has characterised tin-mining on the various fields throughout the State, owing to the satisfactory prices obtained, has resulted in a steadily increased value of output, so that tin has contributed in a very considerable degree to the total production of the mineral wealth of the State, its aggregate yield, in point of value, standing in the sixth place, after coal, silver, gold, copper, and zinc.

The output and the value of production of tin since 1872 have been as follows:—

Period.	Ingots.	Ore.	Aggregate Value.
	tons.	tons.	£
1872-1879	13,364	12,995	2,015,407
1880-1884	22,342	2,703	2,194,533
1885-1889	12,974	1,635	1,415,374
1890-1894	7,195	1,040	877,392
1895-1899	4,608	197	342,503
1900-1904	4,220	1,222	617,440
1905-1909	5,587	3,712	1,161,655
1910-1914	4,258	6,952	1,661,741
1915	857	1,331	266,780
1916	909	1,220	306,497
1917	1,109	963	373,696
1918	1,182	738	548,876
1919	1,146	1,546	416,623
Total	85,232	36,351	11,925,503

In 1919 the value of ingots was £265,260, and of ore £151,363, making the total as above, £416,623.

IRON AND IRON ORES.

Iron is known to occur throughout New South Wales, principally in the form of magnetite, hematite or goethite, limonite, and bog-iron; deposits of chrome iron also are found.

Hematite or goethite occurs in very extensive deposits in the Blue Mountains and Macquarie Ranges, the principal centres explored being situated at Mittagong, Picton, Berrima, Cadia, Lithgow Valley, Wallerawang; in the Rylstone and Mudgee districts; and in the vicinity of Port Stephens. The result of a number of analyses of this kind of ore denote that it is very rich in metallic iron.

Limonite—a variety of brown hematite—occurs principally at Lithgow, Eskbank, and Bowenfels, in the Blue Mountains; in several parts of the Hunter River coal-field; and at Bulli, in the Illawarra district.

Iron and steel works have been established in the Lithgow and Newcastle districts.

Ironstone Flux.

Varying quantities of iron ore have been despatched from the different producing centres to the smelting and iron works for use as flux, the gold contents of the ore helping to defray the cost of railway carriage. The estimated quantity and value of ironstone flux raised during the years 1899 to 1919 was 121,321 tons, valued at £94,659. During the years 1913-15 no ironstone flux was raised for fluxing purposes.

Iron Oxide.

Parcels of iron oxide are sent from the Port Macquarie, Mittagong, and Goulburn districts to various gas-works for use in purifying gas, the output of iron oxide during 1919 being 2,725 tons, valued at £3,408.

The total recorded output to the end of 1919 was 41,108 tons, valued at £53,292.

Production of Iron and Steel, and Bounty paid.

Under the Manufactures Encouragement Act, 1903, the Commonwealth Government provided a bounty, to a total amount of £150,000, on all pig-iron from Australian ore, and on puddled bar iron and steel made from Australian pig-iron within the Commonwealth, from 1st January, 1909, to 30th June, 1914; the bounty was payable at the rate of 12s. per ton produced, and the maximum amount payable in any year was £30,000. This bounty rate was extended until 30th June, 1915, but was subsequently replaced by a bounty of 8s. per ton on pig-iron manufactured between 30th June, 1914, and 31st December, 1916. No bounty has been paid since 1917. The following table shows the production and bounty paid during the years 1909-17:—

Year.	Pig-iron.		Puddled Bar-iron.		Steel.	
	Production.	Bounty Paid.	Production.	Bounty Paid.	Production.	Bounty Paid.
	tons.	£	tons.	£	tons.	£
1909	23,180	13,908	1,929	1,163	1,855	1,113
1910	40,326	24,196	3,384	2,036	3,410	2,046
1911	24,658	14,795	1,789	1,073	2,633	1,580
1912	31,104	18,663	549	329	...	...
1913	40,490	24,294	...	...	1,988	853
1914	58,328	35,117	...	...	14,929	8,957
1915	75,000	30,000	...	...	...	...
1916	68,512	27,405	...	...	...	...
1917	21,284	8,514	...	...	...	...

The output and value of finished iron, pig-iron, &c., for the last ten years are shown in the following statement:—

Year.	Quantity.	Value.	Year.	Quantity.	Value.
	tons.	£		tons.	£
1910	40,487	161,948	1915	76,318	267,000
1911	30,354	145,410	1916	52,556	197,085
1912	32,677	130,798	1917	45,025	247,637
1913	46,563	186,252	1918	68,072	350,000
1914	75,150	254,257	1919	80,041	445,175

The recorded output of pig-iron, &c., to the end of 1919 was 782,070 tons, valued at £4,061,192. The bulk was made from scrap-iron until 1907, when the smelting of iron ore was resumed, and the figures given above include the following production from ores mined in the State :—

Year.	Minerals Used.			Pig-iron.		Steel Ingots.
	Iron Ore.	Coke.	Limestone.	Production.	Value.	
	tons.	tons.	tons.	tons.	£	tons.
1912	55,170	51,102	20,399	32,677	130,708	.....
1913	71,577	60,854	26,251	46,563	186,252	13,608
1914	135,316	97,224	45,938	75,150	234,257	24,420
1915	134,684	96,316	42,379	76,318	267,000	25,040
1916	90,182	79,518	37,565	52,556	197,085	20,762
1917	91,927	77,871	35,377	45,025	247,637	19,667
1918	110,169	124,095	55,160	68,072	350,000	31,891
1919	141,926	119,895	60,004	80,941	445,175	38,644

OTHER METALS.

Platinum.—Platinum occurs in several districts of New South Wales, but platinum mining, in comparison with other branches of mining, and for less valuable ores, is unimportant. The quantity produced to the end of 1919 amounted to 14,893 oz., valued at £47,734, of which 213 oz., valued at £3,150, were obtained during 1919.

Chromite.—Chromite, or chromic iron ore, is the only commercially important ore of chromium which is an accessory constituent of a variety of minerals; it has been found usually associated with serpentine in the northern portion of New South Wales. The quantity exported to the end of 1919 was 33,190 tons, valued at £105,613; the yield recorded in 1919 was 250 tons, valued at £616.

Cobalt and Nickel.—Cobalt and nickel are usually associated in the same minerals, and traces of both metals have been found in several districts in New South Wales, but workable quantities have been located in very few places. The value of the total production of cobalt to the end of 1919 was £8,065, representing 885 tons of ore. No production of nickel is recorded.

Tungsten ores.—These ores are generally associated in New South Wales with tinstone (cassiterite), bismuth, and molybdenite. The quantity of scheelite exported during 1919 amounted to 80 tons, valued at £15,193, and of wolfram, 135 tons, valued at £22,818. From the year 1903 the exports of scheelite were 1,669 tons, valued at £188,570, and wolfram, 2,246 tons, valued at £265,238.

Antimony.—The principal source of supplies is at Hillgrove. For the whole State in 1919 there were 87 tons raised, the value being £2,342. The total output to the end of the year 1919 was 18,707 tons, valued at £341,183.

Manganese.—Manganese ores have been discovered in various places but generally in localities lacking transport facilities. During the year 1919 the quantity obtained was 4,651 tons, valued at £13,953.

Bismuth.—Bismuth has been found associated with molybdenite, tin, and gold, in quartz veins, chiefly in the neighbourhood of Glen Innes, and in other districts bismuth is associated with molybdenite and wolfram ores. The total quantity exported in 1919 was 20 tons, valued at £20,215, the quantity exported to the end of 1919 being 684 tons of ore, valued at £189,042.

Molybdenum.—The quantity of molybdenite, the principal ore of molybdenum, produced in New South Wales during 1919 was 66 tons, valued at £30,308. From 1902 the quantity was 759 tons, valued at £197,053.

Mercury.—Cinnabar, the most important ore of mercury, occurs in numerous localities but it has not been discovered in a sufficiently concentrated form to enable it to be profitably wrought. No production of quicksilver was recorded in the year 1919, but the total production to the end of 1919 is stated to be 2,970 lb., valued at £541.

COAL.

The coal fields of New South Wales are the most important in Australia, both as regards extent and the quantity and quality of coal produced.

The main coal basin extends along the coast from Port Stephens on the north, to Ulladulla on the south, and thus has a seaboard of 200 miles, which enhances the value of the deposits by conducing to easy shipment and the development of overseas trade. From Ulladulla the basin trends inland to the west, and north-west as far as Rylstone, whence the boundary line extends northward beyond Gunnedah, and then runs in a south-easterly direction to Port Stephens. The widest part of this area is between Rylstone and Newcastle—100 miles; the basin is deepest in the neighbourhood of Sydney, where the uppermost seam is nearly 3,000 feet below the surface.

From Sydney the measures rise gradually in all directions, and emerge to the surface at Newcastle on the north, at Bulli in the Illawarra district to the south, and at Lithgow, in the Blue Mountain region, to the west.

The upper or Newcastle coal measures show the greatest surface development. Their seams outcrop at Newcastle, Bulli, and Lithgow, and extend continuously under Sydney, the deepest portion of the basin.

In the northern coal-field twelve seams have been discovered in these measures, five being worked; in the southern, five distinct seams are known, but two only have been worked; of the seven seams traced in the western field three only have proved of commercial value. After many unsuccessful boring operations, the uppermost seam of the Newcastle measures was located under Sydney Harbour in 1891, and is now worked at a depth of nearly 3,000 feet.

The coal obtained at Newcastle is especially suitable for gas making and for household use; the coal from Bulli and Lithgow is essentially steam coal—the southern produces a strong coke, especially suitable for smelting purposes by reason of its capacity for sustaining the weight of the ore burden in a blast furnace, and it contains less ash than the western. The coal obtained at the Sydney Harbour Colliery is also a good steam coal, and may be loaded direct into overseas steamers from a wharf near the jetty mouth.

In the western and southern fields the upper coal measures contain deposits of keroseene shale, a variety of torbanite, cannel coal, or boghead mineral. It is used extensively for the manufacture of keroseene oil, and for the production of gas. Deposits of keroseene shale, though much less extensive, occur in the upper and Greta measures of the northern coal-field.

The middle coal measures outcrop near East Maitland, but do not appear in the western field; their occurrence in the southern field has not been definitely proved.

The lower or Greta measures outcrop over an irregular area in the neighbourhood of Maitland, and have been traced with intervening breaks as far north as Wingen; they occur as an isolated belt to the north of Leverell, and extend through Axford, almost to the Queensland border. These measures have been located in the Clyde Valley, in the extreme southern portion of the Illawarra field, but do not occur in the western. The coal of the Greta

measures is contained in two seams, and in the present and generally the most useful obtained in the State, being of a good quality, hard, and economical as regards working. The Greta seams are worked extensively between West Maitland and Gosbrook, in the most important coal-mining district in Australia. There were 124 coal-mines and 1 shale-mine working under the provisions of the Coal and Shale Mines Regulation Act during the year 1919.

Production of Coal.

The following table shows the quantity and value of coal taken in New South Wales from the earliest record to the close of 1919, the total production being 245,964,533 tons, valued at £95,144,266.

The figures are exclusive of coal used in the manufacture of coke, particulars as to which are quoted elsewhere in this Chapter:—

Period.	Quantity.	Value at 10s a ton.	Average per ton.
	tons.	£	s. d.
Prior to 1800	46,802,362	22,787,120	5 0
1800-4	17,620,177	6,811,268	7 8
1805-9	24,324,976	6,968,281	5 8
1900-4	29,792,580	10,269,699	7 0
1905-9	30,882,329	12,254,710	6 9
1910-4	47,355,714	17,344,973	7 4
1915	5,448,098	3,121,620	7 5
1916	8,127,161	3,226,419	5 2
1917	8,202,862	4,122,740	10 8
1918	9,602,126	4,941,867	10 11
1919	6,621,534	5,422,566	12 7
Total	245,964,533	95,144,266	5 0

The bulk of production is obtained from the northern coal-fields. The output of each district during 1919 was: Northern, 5,620,255 tons, valued at £3,795,544; Southern, 1,221,674 tons, (£1,075,905); Western, 4,175,727 tons, (£540,599).

The following statement shows the quantity of New South Wales coal consumed in Australia and New Zealand, including lumber coal taken by interstate vessels, and the overseas exports, during the last ten years:—

Year.	Consumption		Total.	Exported		Total Production.
	Domestic Consumption.	Sent to other Australian States and New Zealand.		to Overseas Countries (excluding New Zealand).	to Overseas.	
1910	3,483,073	2,475,497	5,958,572	2,211,956	3,178,808	
1911	3,667,324	2,225,776	5,893,100	2,459,204	3,093,894	
1912	3,832,697	3,096,179	6,928,876	2,836,920	3,857,815	
1913	4,162,441	3,465,787	7,628,228	2,760,977	4,414,163	
1914	4,322,980	3,221,780	7,544,772	2,668,230	4,790,662	
1915	4,760,614	2,661,076	7,421,694	2,067,254	5,449,698	
1916	4,603,963	2,503,613	7,107,576	1,230,420	6,127,161	
1917	5,020,070	2,295,226	7,315,296	1,038,560	6,290,867	
1918	5,641,360	2,697,032	8,338,392	724,643	6,063,170	
1919	5,128,126	1,891,217	7,019,343	1,614,704	6,834,554	

* The figures from the year 1917 are for the Australian States only.
the year 1917.

† Including New Zealand from

It appears from the above table that the quantity of coal consumed locally has increased from year to year, but that on the other hand the export trade to other Australian States, New Zealand, and Oversea Countries has shown a more marked decrease, resulting in decreased annual production.

The variations in the proportion of the total production used for domestic consumption is shown in the following percentages:—

Year	Used for Domestic Consumption.	Sent to other Australian States and New Zealand.	Exported to other Countries.
	Per cent.	Per cent.	Per cent.
1910	43.42	50.32	27.96
1911	42.39	59.96	28.74
1912	38.77	31.82	29.91
1913	40.16	33.25	36.56
1914	43.33	34.55	31.63
1915	50.60	27.52	21.88
1916	57.74	27.12	15.14
1917	60.63	26.63	112.32
1918	63.25	28.76	47.90
1919	59.42	21.91	118.67

* Australian States incl. † including New Zealand.

Calculated on the total value of the production during the decade, the average quantity of 694 tons extracted yearly by each person employed underground represents a value of £203. In 1919 the average value of production was £359 for each person employed below ground:—

Year	Persons employed.		Quantity of Coal raised.		Value of Coal raised.		
	Above and below ground.	Below ground.	Total.	Per person employed below ground.	Total value.	Average value per ton.	Average value per person employed below ground.
	No.	No.	tons.	tons.	£	s. d.	£
1910	17,619	13,290	8,173,008	615	5,009,657	7 4	226
1911	17,373	12,673	8,091,904	636	5,167,163	7 3	250
1912	17,795	13,089	8,883,813	735	5,060,013	7 3	280
1913	18,843	14,164	10,414,165	735	5,770,375	7 3	308
1914	19,238	13,007	10,390,622	692	5,737,761	7 2	250
1915	17,959	13,476	9,448,608	701	5,428,539	7 3	254
1916	18,764	12,443	8,127,161	653	5,330,419	8 2	268
1917	17,107	12,791	8,293,807	653	4,425,740	10 8	348
1918	16,771	12,396	9,025,176	731	4,943,807	10 11	399
1919	15,641	13,376	8,631,534	636	5,425,846	12 7	399

Coal-cutting by Machinery.

Of the machines in use in 1919, 104 were classed as percussive, and 178 as chainbreast: 178 were driven by electricity, and 104 by compressed air.

The quantity of coal obtained during 1919 by machines driven by electricity was 1,812,556 tons, and that by machines driven by compressed air 611,233 tons, the total 2,423,791 tons representing 28 per cent. of the total output.

State Coal-mines.

The State Coal-mines Act, 1912, empowers the Government to purchase or resume coal-bearing lands or coal-mines and to open and work coal-mines upon Crown land or private land containing coal reserved to the Crown. The coal obtained from a State mine is to be used only by the State Departments.

A State coal mine was opened at Lithgow, in the Western district, in September, 1916; the area of the land containing coal reserved for the Crown amounts to about 40,200 acres, and the available supply of coal is estimated at 240,000,000 tons. Work at this mine has been entirely suspended since 10th July, 1917.

Prices of Coal.

The average price of coal per ton in the various districts for the last ten years is shown below; in the average for New South Wales allowance has been made for the quantity raised in each district.

District.	1910.	1911.	1912.	1913	1914.	1915.	1916.	1917.	1918.	1919.
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Northern	8 1	8 0	8 1	7 10	7 8	7 7	9 1	11 5	11 8	13 6
Southern	6 2	6 2	6 1	6 1	6 4	6 11	7 2	10 0	9 10	11 10
Western...	5 6	5 1	5 0	5 2	5 6	5 6	5 7	8 0	8 8	9 4
New South Wales	7 4	7 3	7 5	7 3	7 2	7 3	8 2	10 8	10 9	12 7

COKE.

Coke-making is carried on in each of the three coal-mining districts of the State, but the bulk of the output comes from the southern district, where it is manufactured from coal drawn from the mines in the locality of Wollongong.

All the coke produced is suitable for use in blast furnaces, but the products of the northern and southern districts are harder, better able to carry a load in the furnace, and contain less ash than the coke of the western district. The plants in the southern district, being closer to Sydney, have advantage in railway transit of a lower transport cost than the plants in the northern and western districts.

The quantities of coke manufactured in New South Wales during the last five years were as follows :—

Year.	Quantity.				Total Value at Ovens.	Average Value per ton
	Northern District.	Southern District.	Western District.	Total.		
	tons.	tons.	tons.	tons.	£	s. d.
1915	84,134	305,584	28,035	417,753	313,241	14 11
1916	101,662	288,911	47,014	437,587	387,571	17 9
1917	111,803	297,904	45,880	455,587	541,093	23 9
1918	184,209	376,289	47,994	608,492	647,798	21 4
1919	168,885	236,546	19,342	424,773	550,127	25 11

The various districts contributed as follows to the total value of coke manufactured during the year 1919:—Northern, £256,384; Southern, £271,916; Western, £21,827.

The average values per ton at the ovens were:—Northern, 30s. 4d.; Southern, 22s. 11d.; Western, 22s. 6d.

The following statement shows the number of coke ovens and the persons engaged in the manufacture of coke in each district during 1919:—

District.	Coke Ovens.				Persons engaged in manufacture of coke.
	Working.	Not Working.	In course of Building.	Total.	
Northern	190	170	29	389	184
Southern	539	64	.....	603	290
Western	92	73	.....	165	41
Total	821	307	29	1,157	515

OIL SHALE.

The production of oil shale, from the opening of the mines in 1865 to the end of 1919, is shown in the following table:—

Period.	Quantity.	Total Value at Mines.	Average Price per ton at Mines.	Year.	Quantity.	Total Value at Mines.	Average Price per ton at Mines.
	tons.	£	£ s. d.		tons.	£	£ s. d.
1865-84	370,217	828,194	2 4 9	1915	15,474	12,890	0 16 8
1885-89	186,465	406,255	2 3 7	1916	17,425	17,772	1 0 5
1890-94	247,387	451,344	1 16 6	1917	31,661	36,565	1 3 1
1895-99	191,763	222,690	1 3 3	1918	32,395	39,676	1 4 6
1900-04	213,163	177,245	0 16 8	1919	25,453	37,968	1 9 10
1905-09	213,024	131,456	0 12 4				
1910-14	296,449	149,758	0 9 6	Total ...	1,840,876	2,502,813	1 7 2

In 1919 the output was obtained from the mines in the western district.

The Shale Oils Bounties Act, passed by the Commonwealth Government during 1910, to make provision for the payment of bounties on the manufacture of kerosene and paraffin wax from Australian shale, expired on 30th June, 1913, and no further bounty was payable until 1917, when a bounty on crude shale oil produced in Australia from mined kerosene shale was provided for a period of four years dating from 1st September, 1917. The maximum amount payable in any one year is £67,500, the rate per gallon to each producer being as follows:—3,500,000 gallons and under, 2½d.; 3,500,000 to 5,000,000, 2d.; 5,000,000 to 8,000,000, 1½d.; each additional gallon, 1½d. In the year 1917-18 the bounty paid amounted to £15,008 on 1,600,904 gallons of shale oil, and in 1918-19 to £26,407 on 2,816,718 gallons.

Large quantities of oil manufactured at Hartley Vale have been supplied to the Australian warships.

DIAMONDS.

Diamonds and other gem-stones in New South Wales were noted as early as 1851 by both Hargraves and Stutchbury, and have since been found to be widely distributed, but no extensive industry has yet been developed, mining operations being restricted to very few localities. The finest of the New South Wales diamonds are harder and whiter than the South Africa diamonds, and are classified as on a par with the best Brazilian gems.

The following table, compiled from the available information, is believed to understate considerably the actual output of diamonds in New South Wales. The majority of the diamonds have been obtained from the mines in the Bingera and Copeton districts; in recent years the whole output has been from the latter district:—

Period.	Carats.	Value.	Period.	Carats.	Value.
		£			£
1867-1886	2,856	2,952	1911-1915	16,603	13,373
1886-1890	8,120	6,390	1916	1,901	1,375
1891-1895	19,743	18,245	1917	2,991	2,000
1896-1900	69,384	27,948	1918	1,784	1,201
1901-1905	54,206	46,434	1919	4,774	4,706
1906-1910	16,651	12,574			

The closing of the market consequent on the War has had a serious effect on the industry.

OPAL.

Common opals occur in many parts of New South Wales, and particularly in the locality of Orange. The precious or noble opal has been found in two geological formations in New South Wales, viz., in vesicular basalt and in sedimentary rocks of the Upper Cretaceous age. Only from the latter formation have gems in quantity and value been obtained hitherto, the finest opal known being located in the Upper Cretaceous formation at White Cliffs, near Wilcannia. Black opal, remarkable for colour, fire, and brilliancy, is obtained at Lightning Ridge, near the Queensland border.

The following table shows the estimated value of precious opal won in New South Wales to the end of 1919:—

Period.	Value.	Period.	Value.
	£		£
1890	15,800	1916	21,273
1891-1895	25,999	1917	12,522
1896-1900	415,000	1918	20,600
1901-1905	476,000	1919	27,552
1906-1910	303,300		
1911-1915	154,738	Total	1,478,584

ALUNITE.

Alunite, or alunitone, occurs at Bullabdelah, about 35 miles from Port Stephens, in a narrow mountain range which for more than a mile of its length is composed almost entirely of alunite, of greater or less purity.

Four varieties of alunite are recognised at the mines, but working is confined mainly to the light-pink ore, the yield averaging about 80 per cent. of alum.

During 1910 and 1911, prospecting by means of diamond-drilling was carried on at Bullahdelah, with a view to locating further bodies of alunitic of payable grade, so as to maintain the export trade; as a result there was a large increase in the quantity exported. In 1919 the production was 2,485 tons, valued at £14,910, and since the year 1890 the quantity and value of alunitic, the produce of New South Wales, exported have been 53,733 tons, value £180,971. Particulars are not available as to the amount of alum of local production used within the State.

OTHER MINERALS.

Marble.—Beds of marble of great variety of colouring, and with highly ornamental markings, are located in many districts of New South Wales. Much of the marble is eminently suitable for decorative work, and in recent years has won the favour of builders. During 1919 marble valued at £3,151 was obtained.

Limestone.—The quantity of limestone raised for flux in 1919 was 83,032 tons, valued at £22,772.

Fireclays.—Fireclays of good quality are found in the Wianamatta shales and in the Permian-carboniferous measures, and excellent clays for brick-making purposes may be obtained in all parts of the State.

Kaolin.—Kaolin or China clay derived from the decomposition of the feldspars in granite, is found in many granitic districts.

Magnetite.—Magnetite is found at Fifield and a large quantity is procurable easily. The output during 1919 was 9,264 tons, valued at £ 532.

Diatomaceous earth occurs in large deposits in several localities.

Other Mineral Deposits.—Other mineral deposits known to exist but not worked extensively include asbestos, barytes, fluor spar, fuller's earth, ochre, graphite, slate and mica. The production of the minerals as recorded in 1919 was as follows:—

Mineral.	Quantity.	Value.	Mineral.	Quantity.	Value.
	tons.	£		tons.	£
Asbestos	144	1,996	Limestone for Flux	83,032	22,772
Barytes	801	1,979	Magnetite	9,264	8,082
Diatomaceous Earth	55	253	Marble	—	3,151
Dolomite	22,371	7,089	Pigments	381	857
Fluor spar	900	550	Silica	10,000	30,507
Graphite	1,014	7,454	Slate	—	1,500
Kaolin	100	100	Steatite	358	593
Mica, and Clays	4,783	4,072			

Health of Miners in Metalliferous Mines.

Under instructions from the Minister for Labour and Industry, the Board of Trade made inquiry during 1918 into the prevalence of phthisis among miners, and upon the Board's recommendation a Technical Commission was appointed to inquire into the dust conditions in the metalliferous mines of the State, and into the health of employees in such mines. The interim

report of the Commission was published in July, 1920, and their recommendations and conclusions with reference to Broken Hill mines were briefly as follow:—

No person infected with tubercular disease or pneumonococci should be allowed to work in the mines, either on the surface or below ground, and any person infected with pneumonococci should be placed in an occupation in the open air, either pastoral or agricultural, without any obligation on his part to find a fresh avenue of employment. Further, compensation should be given to any person affected with progressive tubercular disease. Mine workers, too, should be medically examined from time to time, and those affected with dust withdrawn from the mine, and kept under observation so that they might receive compensation should they become infected with tuberculosis. Finally the Commission was of the opinion that if all those affected with tuberculosis and fibrosis, were withdrawn from the mines, and a system of medical inspection instituted, mining at Broken Hill might be carried on with perfect safety so far as material injury to the lungs of the miners was concerned.

The medical examination of the miners also showed that large numbers were suffering from lead poisoning, but as the mines were not in operation during the inquiry of the Commission it was not possible to state what numbers were absorbing lead by exposure to dust. The Commission recommended that a thorough investigation of the ventilation and dust conditions of the mines should be undertaken when the mines resumed work.

MINEING ACCIDENTS.

The number of fatalities during the last five years in the more important branches of mining, and the rates per 1,000 employees are shown below:—

Year.	Metaliferous Mines.						Coal and Shale Mines.	Total.
	Gold.	Silver, Lead, and Zinc.	Copper.	Tin.	Other.	Total Metaliferous.		
<i>Number of Fatalities.</i>								
1915	...	9	3	2	...	14	23	37
1916	1	14	5	1	...	21	13	34
1917	...	7	4	2	...	13	34	37
1918	1	9	1	...	1	12	11	23
1919	...	6	...	...	...	6	17	23
<i>Per 1,000 Employees.</i>								
1915	...	1.02	3.28	1.21	...	1.06	1.26	1.18
1916	.43	2.17	3.01	.52	...	1.46	.77	1.09
1917	...	.92	1.93	1.12	...	.84	1.38	1.13
1918	.30	1.19	.65	...	.37	.76	.65	.68
1919	...	.92	...	...	...	.42	.94	.71

During 1919 there were 17 fatalities in coal and shale mines. In proportion to the number of persons employed the rates were highest in coal and shale mines.

The number of persons seriously injured in mining operations during the last five years, and the ratio per 1,000 persons employed, are shown in the following statement:—

Year.	Metaliferous Mines.					Total Metaliferous.	Coal and Shale Mines.	Total.	Ratio per 1,000 persons employed.
	Gold.	Silver, Lead and Zinc.	Copper.	Tin.	Other.				
1915	1	29	—	3	2	35	49	84	2.67
1916	1	24	1	2	3	31	58	89	2.71
1917	—	31	3	1	9	37	55	92	2.80
*1918	—	41	9	—	2	52	132	184	5.47
*1919	2	14	—	1	1	18	100	118	3.64

Number of Persons Seriously Injured.

* Includes persons slightly injured.

Many of these accidents and fatalities occurring on the surface can scarcely be regarded as true mining accidents. The following table shows the number of surface and under-surface accidents in connection with metaliferous mining during 1919.—

Metaliferous Mines.	Under-surface Accidents.		Surface Accidents.	
	Total.	Serious.	Total.	Serious.
Silver, Lead, and Zinc	4	3	2	6
Tin	—	1	—	—
Limestone	—	—	—	1
Gold	—	—	—	2
Total	4	3	2	9

The number of persons killed and seriously injured in the coal and shale mines of New South Wales, during the last five years, with the proportion of miners and the quantity of mineral raised, is given below:—

Year.	Coal and Shale Mines.					
	Number of persons		Number of employes		Quantity of Mineral raised	
	gone.	injured.	killed.	injured.	killed.	injured.
1915	23	49	792	372	411,882	193,153
1916	13	56	1,299	307	626,507	144,683
1917	24	55	722	315	346,856	171,265
1918	11	*132	1,625	197	823,925	68,660
1919	17	*100	1,130	180	507,738	86,316

* Includes persons slightly injured.

During 1919, one accident resulted from explosion of fire-damp in coal dust.

The experience of coal-mining in this State with respect to accidents bears very favourable comparison with that of other countries.

A recent estimate shows that 45.6 per cent. of the total output of coal in New South Wales is obtained from collieries where miners use safety-lamps; and as the workings get deeper this proportion is likely to increase since with greater depth there is more likelihood of fire-damp.

Considerable improvements have been made in portable electric safety-lamps during late years, and their use for underground purposes has been much increased.

Ambulance classes are trained and corps exist in New South Wales for the purpose of promoting among miners a knowledge of first-aid principles. From 1897-1919, 154 classes were enrolled, the minimum termship being 10. The classes formed during 1919 numbered 5.

Interesting information regarding the sickness experience of Friendly Societies in mining districts is given in the section of this book dealing with Social Condition.

LAW COURTS.

In New South Wales legal processes may be grouped within the original jurisdiction of the Lower or Magistrates' Courts, or of the Higher Courts presided over by appointed Judges. The subject of appellate jurisdiction will be discussed separately.

ORIGINAL JURISDICTION—LOWER COURTS.

The Lower or Magistrates' Courts include Petty Sessions, Small Debts, Licensing, Children's Courts, and Coroners' Courts.

All persons arrested and charged with offences at the various Police stations—also all summoned persons—must be brought before the Magistrates' Courts to answer charges, indictable or summary, or complaints of any nature; and are either dealt with summarily, or committed to take their trial at the Court of Quarter Sessions, or at the Supreme Court in its criminal jurisdiction. Persons may be committed also to take their trial at such higher Courts by a Coroner or by a Judge.

The First Offenders' (Women) Act, 1918, provides that when any woman of or above the age of sixteen years, who has not been previously convicted of any offence, is charged before any Court with a minor offence, the hearing shall be in private, unless the defendant elects to be tried in open court. Persons, other than those directly concerned, are not allowed to remain in the Court, and a report of the proceedings must not be published.

Certain indictable offences (larceny, stealing from the person, embezzlement, &c.) are punishable summarily by Magistrates—by consent of the accused person—if the subject matter of the charge, or value of the property involved, does not amount to £20. Persons convicted by the Magistrates under such circumstances are liable to imprisonment for six months, or to a fine of £20. The period of imprisonment that may be awarded by Magistrates for purely summary offences is fixed in each case by Statute; in some cases sentences up to two years may be imposed. Most summary offences are punishable by fine, or by imprisonment, not exceeding seven days, in default of payment, if the amount of fine and costs does not exceed 10s., and not exceeding twelve months, if the amount payable exceeds £100.

If a person is sentenced to be imprisoned, while undergoing imprisonment for another offence, the Magistrate may order that the sentence for the subsequent offence shall commence at the termination of the period the person is then serving. Justices have no power to impose more than one sentence of imprisonment to commence at the expiration of the first sentence.

By the Small Debts Recovery Act, 1912, the jurisdiction of Magistrates' Courts is extended to include action for the recovery of a debt or liquidated demand not exceeding £30, or where the Court is constituted by a Stipendiary or Police Magistrate sitting in some place appointed in that behalf by the Governor, to an amount not exceeding £50, whether on balance of account or after admitted set-off or otherwise.

COURTS OF PETTY SESSIONS.

Courts of Petty Sessions are held by Stipendiary Magistrates in the Sydney, Parramatta, Newcastle, Broken Hill, Bathurst, and Wollongong districts, and in other districts by Police Magistrates, or Justices of the Peace, the latter being honorary officers.

The total number of offences charged at all Courts of Petty Sessions and Children's Courts during the last five years, are shown in the following table:—

Courts.	1914.	1915.	1916.	1917.	1918.
Courts of Petty Sessions ...	92,289	83,228	77,873	63,872	65,589
Children's Courts ...	2,477	3,348	4,163	4,343	5,479
All Magistrates' Courts ...	94,766	86,576	82,036	68,215	71,068

The following table summarises the operations of these Courts during 1918:—

Procedure.	Charged before Magistrates.	Treated summarily.			Committed to higher Courts.
		Convicted.	Withdrawn or Discharged.	Total.	
By arrest... ..	34,661	29,258	4,194	33,452	1,209
By summons	36,407	28,751	7,557	36,308	99
Total	71,068	58,009	11,751	69,760	1,308

The cases (1,308) committed to higher Courts represent 1·8 per cent. of the total charges; the remainder, representing 98·2 per cent., were summarily treated, convictions resulting from 81·6 per cent. of the charges. A division of accused persons, according to sexes, shows that the charges against females numbered 7,125, being only 10 per cent. of the total:—

Sex.	Charged before Magistrates.	Treated summarily.			Committed to higher Courts.
		Convicted.	Withdrawn or Discharged.	Total.	
Males	63,943	52,429	10,313	62,742	1,201
Females	7,125	5,580	1,438	7,018	107
Total	71,068	58,009	11,751	69,760	1,308

The following table shows the proportion of summary convictions by Magistrates, of acquittals and discharges, and the committals to higher Courts at intervals since 1870:—

Year.	Summary Convictions.	Acquittals and Discharges.	Committals to higher Courts.
	per cent.	per cent.	per cent.
1870	69·0	24·7	6·3
1880	76·9	18·4	4·7
1890	80·4	16·0	3·6
1900	83·1	14·9	2·0
1910	86·1	12·3	1·6
1915	84·6	13·6	1·8
1916	83·6	14·3	2·1
1917	82·9	15·1	2·0
1918	81·6	16·6	1·8

Only a small proportion of the offences for which summary convictions were effected during 1918 were really criminal offences, viz., offences against person or property. Following is a classification of summary convictions, showing also their ratio to the general population, during each of the last five years :—

Year.	Against the Person.	Against Property.	Against Good Order.	Under Defence Act.	Other Offences.	Total Summary Convictions.
SUMMARY CONVICTIONS.						
1914	2,023	4,068	51,609	3,210	20,307	81,217
1915	1,849	4,439	41,548	2,957	22,455	73,248
1916	1,785	4,480	37,407	2,383	22,560	68,615
1917	1,460	4,033	30,211	2,668	18,184	56,556
1918	1,542	4,805	27,109	3,064	21,489	58,009
PER 1,000 OF MEAN POPULATION.						
1914	1·09	2·19	27·85	1·73	10·96	43·82
1915	·99	2·38	22·24	1·58	12·02	39·21
1916	·96	2·40	20·04	1·28	12·09	36·77
1917	·78	2·15	16·12	1·42	9·70	30·17
1918	·81	2·52	14·20	1·60	11·25	30·38

In many instances the offences shown under the heading of "Other" offences are committed in ignorance of the law, and are met with small or nominal penalties. For instance, during 1918 there were 3,518 cases under Local Government; traffic regulations accounted for 3,928 cases, and 633 cases were for breaches of the Commonwealth Electoral Law.

In each of the last five years the total number of summary convictions at Courts of Petty Sessions and Children's Courts, and the proportion per 1,000 of population, were as follows :—

Year.	Summary Convictions.			Per 1,000 of mean Population.		
	Males.	Females.	Total.	Males.	Females.	Total.
1914	74,572	6,645	81,217	76·81	7·53	43·82
1915	65,675	7,573	73,248	68·33	8·35	39·21
1916	60,410	8,205	68,615	64·26	8·86	36·77
1917	50,377	6,179	56,556	54·33	6·52	30·17
1918	52,429	5,580	58,009	55·46	5·79	30·38

Summary convictions in 1918 resulted in penalties as classified below :—

Offences.	Fines Paid.	Imprisoned in default.	Imprisoned without option.	Bound and released on probation.	Other Punishments.	Total.
Against the person	1,082	154	146	142	18	1,542
Against property	1,841	412	786	1,432	334	4,805
Against good order	16,285	8,073	791	412	1,548	27,109
Other offences	20,560	410	399	174	3,100	24,553
Total	39,768	9,049	2,032	2,160	5,000	58,009

Included under the heading, "Other punishments," are a number of cases of drunkenness in which the defendants took a pledge to abstain from intoxicating liquors, and numerous cases under the universal training section of the Defence Act in which offenders were transferred to the military authorities.

Sentences of imprisonment in default are usually commuted by subsequent payment of fine; the extent to which this practice operates is shown on a subsequent page in connection with the prison services. Per 100 cases, fines were paid in 69; imprisonment in lieu of fine, 15; imprisonment without option, 3; bound over, &c., 4; and other punishments, 9.

The fines paid amounted to £66,628, of which £30,756 were paid into Consolidated Revenue, £6,140 to Commonwealth Government Departments, £16,132 to the Police Reward Fund, £4,300 to municipalities and shires, £3,860 to Pastures Protection Boards, £1,888 were paid to hospitals, the Railway Commissioners, &c., and £3,552 to informers.

CHILDREN'S COURTS.

Children's Courts under the Neglected Children and Juvenile Offenders Act, 1905, were established throughout the State with the object of removing children as far as possible from the atmosphere of a public court. Magistrates exercise powers in respect of children and of offences committed by and against children. They possess also the authority of a Court of Petty Sessions or Justice under the Children's Protection Act, the Infant Protection Act, and the Deserted Wives and Children Act.

Offenders against the universal training section of the Defence Act are prosecuted in the Children's Courts as far as practicable; magistrates are empowered to fine or commit them to the custody of the military authorities.

The Neglected Children and Juvenile Offenders Act is designed to remove children from association with reputed thieves, and otherwise provides for the protection and reformation of neglected or uncontrollable children, also for the supervision of the children engaged in street trading.

Information as to the number of licenses for street trading, under the Neglected Children Act, and as to permits under the Children's Protection Act to take part in public exhibitions, at theatres, &c., will be found in another section of this Year Book.

During the year 1918 the charges investigated in Children's Courts numbered 5,479. In addition to these cases, there were 3,350 applications for orders relating to the disposal of neglected and uncontrollable children, and to the maintenance of children, and 2,234 cases of non-compliance with orders.

The following table shows the cases taken at Children's Courts during 1918; and as offences committed against children are dealt with by these Courts the figures include many cases of adult offenders:—

Offences.	Summarily treated.				Committed to higher Courts.		Total.		
	Convicted.		Discharged or Withdrawn.		M.	F.	M.	F.	Total.
	M.	F.	M.	F.					
Against the person ...	47	18	88	23	48	...	183	41	224
Against property ...	1,522	40	987	24	1	...	2,510	64	2,574
Against good order ...	333	14	112	4	...	...	445	18	463
Other offences... ..	1,787	30	366	34	...	1	2,153	65	2,218
Total ...	3,689	102	1,553	85	49	1	5,291	188	5,479

The following table shows the number of convictions at Children's Courts recorded in each class during the last five years :—

Offences.	Convictions.				
	1914.	1915.	1916.	1917.	1918.
Against the person	73	82	62	58	65
Against property	734	990	1,356	1,224	1,562
Against good order	237	211	172	207	347
Under Defence Act	218	781	909	951	921
Other offences	227	229	196	482	896
Total	1,489	2,293	2,695	2,922	3,791

The figures shown above and other particulars of Children's Courts are included in the aggregate tables relating to Courts of Petty Sessions.

SMALL DEBTS COURTS.

The total number of cases dealt with by the Small Debts Courts during 1918 was 37,731 ; in only 333 cases was the amount claimed in excess of £30. The transactions during the last two years are shown in the following table :—

Transactions.	1917.			1918.		
	Up to £30	£30 to £50	Total.	Up to £30	£30 to £50	Total.
Cases brought before the Registrar—						
Judgments given for plaintiff...	8,737	108	8,845	9,125	132	9,257
Not proceeded with	10,200	48	10,248	12,726	43	12,769
Verdicts given by Court—						
For plaintiff	4,657	36	4,693	4,231	46	4,277
For defendant	264	...	264	270	4	274
Withdrawn or struck out	6,807	28	6,835	5,185	76	5,261
Nonsuits	286	1	287	292	5	297
Cases pending... ..	5,050	32	5,082	5,569	27	5,596
Total cases	36,001	253	36,254	37,398	333	37,731
Amount of judgments for plaintiff £	59,302	4,053	63,355	64,843	4,754	69,597
Amount of verdicts for plaintiff £	23,932	1,289	25,221	22,758	1,671	24,429

In garnishee cases the Court may order that all debts due by a garnishee to the defendant may be attached to meet a judgment debt, and by a subsequent order, may direct the garnishee to pay so much of the amount owing as will satisfy the judgment debt. In respect of wages or salary, garnishee orders may be made only for so much as exceeds £2 per week. The garnishee cases in 1918 numbered 1,405.

Oral examinations of judgment debtors as to debts due to them, ordered on the application of a judgment creditor, numbered 581 in 1918. Interpleader cases, as to claims made to goods held under a writ of execution, by a person not party to the suit, numbered 36.

CORONERS' COURTS.

Under the Coroners Act, 1912, every stipendiary or police magistrate has the powers and duties of a coroner in all parts of the State, except the Metropolitan Police District, which is under the jurisdiction of the City Coroner.

Inquiries are held in all cases of violent or unnatural death; and, at the discretion of the Coroner, in cases of destruction or damage to property by fire; and on the evidence the Coroner is empowered to commit for trial persons judged guilty of manslaughter, murder, or arson.

The transactions of Coroners' Courts during 1918 resulted in 36 persons, 25 males and 11 females, being committed for trial to higher Courts; the offences charged being murder, 8 males and 7 females; manslaughter, 13 males and 1 female; arson, 4 males and 3 females.

Inquests upon Deaths.

Under the Coroner's Court Act, 1904, a Coroner may hold an inquest, sitting alone; but upon request of a relative, of the secretary of any society of which the deceased was a member, or on the order of the Minister of Justice, a jury of six is called. The number of deaths of which the causes were investigated by Coroners or Magistrates, during 1918, was 1,215—males 954, and females 261; the verdicts were that 957 deaths were caused by violence. The deaths of 527 males and 121 females were the results of accidents, and 159 males and 38 females were found to have committed suicide.

Inquests upon Fires.

During 1918 inquiries were held into the origin of 87 fires; accident was ascribed as the cause in 5 cases, arson in 17; in 65 instances there was insufficient evidence.

DISTRICT COURTS.

District Courts are held for the trial of civil causes where the property involved or the amount claimed does not exceed £400, and in cases where a title to land not exceeding £200 in value is in question. These Courts are presided over by Judges, who also perform the duties of Chairmen of Quarter Sessions for the trial of prisoners, except those charged with capital crimes. District Courts are held during ten months of the year in the metropolis, and three or four times a year in important country towns. The Judge is not usually assisted by a jury; but in cases where the amount in dispute exceeds £20, either of the parties, by giving notice to the Registrar of the Court, may have a jury consisting of four men, and under the Matrimonial Causes Act, 1899, twelve men. On questions of law, and in respect of admission or rejection of evidence, appeal lies to the Supreme Court. At the end of 1918 there were 60 District Courts in the State.

The several District Court Judges are also Chairmen of Courts of Quarter Sessions and Judges of the Court of Review within their respective districts, as well as Judges of the Court of Marine Inquiry.

Particulars of suits brought in District Courts during the last five years are given in the following table :—

Year.	Total Suits.	Causes tried.		Causes discontinued or settled without hearing.	Judgment for Plaintiff by default, or confession, or agreement.	Causes referred to Arbitration.	Causes pending and in arrear.	Total amount of Claims.	Court Costs of Suits.
		Verdict for Plaintiff.	Verdict for Defendant (including non-suit, etc.)						
1914	6,788	464	242	1,868	2,295	7	1,912	£ 328,429	£ 18,062
1915	6,180	427	224	1,698	2,174	2	1,655	293,697	16,846
1916	6,126	440	195	1,655	2,266	7	1,563	290,642	21,072
1917	5,568	429	205	1,539	1,882	2	1,511	274,646	14,570
1918	5,572	388	214	1,605	1,837	5	1,523	259,902	18,253

Of the causes heard during 1918, only 51 were tried by jury. During the same period there were 13 appeals from judgments given in District Courts; there was 1 motion for new trial, which was granted. The amount of judgment for plaintiffs during the year was £84,200.

INDUSTRIAL ARBITRATION.

The Court of Industrial Arbitration is a superior court, and a court of record, having jurisdiction and powers conferred on it by the Industrial Arbitration Act, 1912. There are four judges of the Industrial Court.

The Court or an Industrial Board exercising the jurisdiction under the Act is governed in its procedure and in its decisions by equity and good conscience, and is not bound to observe the rules of law governing the admissibility of evidence.

Particulars of the transactions of the Court will be found in the chapter relating to Employment and Industrial Arbitration.

THE SUPREME COURT.

The Supreme Court of New South Wales, which was constituted under the Charter of Justice of 13th October, 1823, is under the presidency of the Chief Justice, who is assisted by not more than seven Puisne Judges.

The Court and its Judges have, in effect, the same jurisdiction as the Courts and Judges at Westminster had on 25th July, 1828, together with any additional jurisdiction conferred since that date by State, Federal and Imperial legislation. The jurisdiction conferred upon the Court may be exercised by two or more Judges in all cases unless otherwise provided, and in certain specified cases may be exercised by one Judge.

The Chief Justice and three Puisne Judges are engaged ordinarily in matters in the Common Law and Criminal jurisdictions, the other Judges attending to matters in the Equity, Bankruptcy, Probate, and Matrimonial Causes jurisdictions.

A Puisne Judge must be a barrister of at least five years' standing, and his commission is dependent upon his good behaviour, revocable only upon address of both Houses of the Legislature.

Any Judge of the District Court, or any barrister or solicitor of at least seven years' standing, may be appointed as Acting Judge for a period not exceeding six months.

The procedure and practice of the Court are defined by statute or regulated by rules which may be made by any three or more Judges.

COMMON LAW JURISDICTION.

Actions are tried usually before a judge and jury; but no jury is required where both parties consent to the cause being tried by a Judge alone, or where in accordance with the provisions of certain statutes the right to have a jury has been taken away. Ordinarily a jury consists of four persons but either party may require a jury of twelve. The jury find only as to the facts of the case, being bound by the ruling of the Judge on points of law. From the Court thus constituted appeal lies to the Full Court, sitting *in Banco*, which is composed generally of at least three of the Judges. The Chief Justice, or in his absence the senior Puisne Judge, presides over the Full Court, which gives its decision by majority. New trials may be granted where the Judge has erroneously admitted or rejected material evidence; where he has directed the jury wrongly on a point of law; where the verdict of the jury is clearly against evidence; or where, from some other cause, there has been a miscarriage of justice.

An appeal to the High Court may be made in cases where the amount involved exceeds £300, or, in any case, with the permission of the High Court.

Provision is made for appeal by a suitor to the Privy Council, subject to leave from the Supreme Court. The dispute must involve a minimum amount of £500. In other cases, application for leave to appeal must be made directly to the Privy Council.

The following table gives the number of causes set down and writs issued in the Supreme and Circuit Courts (Common Law Jurisdiction) during the last five years. The number of writs issued includes cases which were settled subsequently by the parties.

Particulars.	1914.	1915.	1916.	1917.	1918.
Causes tried—					
Verdict for plaintiff	122	146	120	102	114
„ defendant	32	43	32	36	28
Jury disagreed ... ..	.....	.....	1	.....	.....
Non-suit	4	4	8	10	5
Total	158	193	161	148	147
Not proceeded with	103	96	104	77	95
Referred to arbitration	5	.....	2	3	2
Total	266	299	267	228	244
Writs issued	3,103	2,884	2,677	2,304	2,486
Fees paid into Consolidated Revenue Fund	£ 9,508	£ 9,510	£ 8,675	£ 7,925	£ 8,276
Cost of litigation—					
Brought in at	52,030	44,549	39,673	36,256	33,514
Taxed off	18,454	11,986	11,317	9,620	8,766
Amount allowed	33,576	32,563	28,356	26,636	24,748
Court costs of taxation	675	649	596	538	449

The small number of causes set down for hearing in comparison with the number of writs issued indicates the extent to which judgment is obtained before trial or cases are settled out of Court.

The Commercial Causes Act, 1903, provided an expeditious method for the trial of commercial causes, which include matters relating to the ordinary transactions of merchants and traders, the construction of mercantile documents, affreightment, insurance, banking, and mercantile usages. The parties to a Supreme Court common law action may secure the Judge's order to have it brought upon the list of Commercial Causes, and from this order there can be no appeal. To secure speedy settlement in accordance with the aim of the Act the Judge is empowered to dispense with juries, pleadings, and technical rules of evidence, and with proofs of writing and documents, and to order inspections and admissions; he may also settle the issues for trial, and state a case on points of law for the Full Court.

ADMIRALTY COURT.

The Supreme Court of the State has been constituted a Colonial Court of Admiralty, with power to hear and determine matters which, prior to 1st July, 1911, had been determined by the Vice-Admiralty Court. During 1918, three causes for loss by collision, one for salvage, and one for necessities were taken in the Admiralty Court.

SHERIFF'S OFFICE.

The transactions of the Sheriff's Office during 1918 included the service of 1,551 writs of summons issued in the Supreme Court, as against 1,430 in 1917; the money value involved is not recorded. Other writs issued included 313 *feri-facias*, involving amounts aggregating £51,969, and fines and estreats, 267, amounting to £5,048 in value.

EQUITY JURISDICTION.

The Equity Act, 1901, consolidated enactments relating to the practice, procedure, and powers of the Supreme Court in matters calling for equitable relief, including the appointment of guardians of infants and the administration of their estates. Equitable relief may be given on an originating summons in respect of the construction of wills, foreclosure of mortgages, disputes between vendor and purchaser, and matters of account and administration. When the Judge in Equity has the assistance of two other Judges, the decision of the majority has the effect of a Full Court decision. The Court, in making binding declarations of right, may call for the assistance of actuaries, engineers, merchants, or any other persons; has power to grant injunctions or specific performance, or to award damages in addition to or in place thereof; and exercises all the powers of the Common Law Jurisdiction of the Supreme Court in deciding legal rights which arise incidentally; also the Court may delegate investigations to the Master in Equity, who is also the Master in Lunacy. There is an appeal to the High Court or Privy Council as in the case of Common Law matters. On 31st December, 1918, the Master in Lunacy held Trust Funds amounting to £309,514. The following is a statement of the transactions in Equity jurisdiction during the last five years:—

Year.	Statements of Claims.	Statements of Defence.	Petitions.	Summonses.	Motions.	Decrees, Orders, and Certificates.
1914	222	122	87	150	204	1,100
1915	175	108	66	93	149	800
1916	180	107	84	132	152	980
1917	189	85	95	92	209	1,048
1918	191	108	62	73	125	1,172

The amount of Trust Funds invested under Equity Jurisdiction in 1918 was £660,314, the investments being made at interest rates ranging from 3 to 6 per cent.

PROBATE JURISDICTION.

The jurisdiction of the Supreme Court in respect of the estates of deceased persons is vested in and exercised by the Probate Judge, formal duties in the granting of probates and letters of administration being delegated to the Registrar of Probates, subject to right of appeal to the Judge. In estates of less value than £300 the intervention of a solicitor is unnecessary; in 1918 probate or letters of administration were granted for 594 such estates valued at £97,869.

The number of probates and letters of administration granted by the Supreme Court in its testamentary jurisdiction for the last five years is shown in the following table; the figures include estates administered by the Public Trustee:—

Year.	Probates granted.		Letters of Administration.		Total.	
	Number of Estates.	Value of Estates.	Number of Estates.	Value of Estates.	Number of Estates.	Value of Estates.
		£		£		£
1914	2,767	10,973,225	1,656	1,004,219	4,423	11,977,444
1915	3,028	10,703,553	1,762	1,282,750	4,790	11,986,303
1916	3,535	11,891,119	2,314	1,771,554	5,849	13,662,673
1917	6,036	12,583,840	2,083	1,477,852	8,119	14,061,692
1918	4,128	12,335,103	3,140	1,666,256	7,268	14,001,359

These figures represent the gross values of estates, inclusive of those not subject to duty.

PUBLIC TRUST OFFICE.

On 1st January, 1914, the functions of the Curator of Intestate Estates were taken over by the Public Trustee, who may act as executor or trustee either by will or by appointment, also as agent or attorney.

The Public Trustee is not allowed to make profits, and the commission and fees chargeable against estates are arranged from time to time to produce an annual amount sufficient to defray working expenses. Special provision has been made for the deposit of wills with the Public Trustee, and transfers of property to him as Public Trustee are exempt from stamp duty.

In the following table is shown the business transacted at the Public Trust Office during the last five years:—

Particulars.	1915.	1916.	1917.	1918.	1919.
New estates administered—					
As administrator ...	1,790	2,110	3,187	4,353	1,599
As Executor or Trustee ...	86	80	101	135	78
As Attorney or Agent ...	8	21	27	37	12
	£	£	£	£	£
Amount received ...	266,277	325,966	438,995	711,000	740,612
Amount paid ...	205,181	337,524	413,641	601,878	644,566
Commission and fees ...	7,890	10,126	13,789	16,378	18,036
Unclaimed Money—					
Paid into Treasury ...	8,408	16,343	7,056	4,814	7,375
Subsequently claimed ...	783	448	562	274	241

BANKRUPTCY JURISDICTION.

Any person unable to meet his debts may surrender his estate for the benefit of his creditors, or the latter may apply for a compulsory sequestration under certain specified conditions, the case coming under the Bankruptcy Jurisdiction of the Supreme Court.

Certain of the powers vested in the Judge in Bankruptcy are delegated to the Registrar in Bankruptcy, and in country districts to Police Magistrates and Registrars of District Courts; but appeal from a decision of the Registrar, or of a District Registrar, lies to the Judge in Bankruptcy, who deals also with questions relating to priority of claims.

An official assignee, deputed by the Judge to manage the estates of insolvents, receives $2\frac{1}{2}$ per cent. commission on the amount realised, and $2\frac{1}{2}$ per cent. on the amount of dividends declared, and in some cases special remuneration awarded by the Court. Creditors may accept, and the Court endorse, a proposal for a composition, or for a scheme of arrangement, subject to the approval of a majority representing three-fourths of the value of all approved claims. Such a proposal having been accepted, one or two trustees may be appointed in place of, or in addition to, the official assignee. After acceptance of a composition, or approval of a scheme of arrangement, a bankrupt's estate may be released from sequestration. Release may be effected when all creditors have been paid in full, or when they have given a legal quittance of the debts due. In other cases, a bankrupt may give notice, by advertisement, three months from the time of sequestration, of his intention to apply for a certificate of discharge, whereupon the Court receives a report from the official assignee, and may either grant or refuse an absolute order of discharge, suspend the operation of the order for a certain time, or grant an order subject to conditions respecting the future earnings or income of the bankrupt. Operations in the Bankruptcy Court are discussed in detail in the chapter of this volume relating to Private Finance.

The sequestrations during the year 1918 numbered 264; according to Bankrupts' Statements of Affairs, the liabilities of the estates sequestrated amounted to £221,928, and the assets to £115,776, thus leaving a deficiency of £106,152.

The Court Fees paid to the Treasury were £3,394.

DIVORCE AND MATRIMONIAL CAUSES JURISDICTION.

The Supreme Court of New South Wales has jurisdiction in divorce, dating from the Matrimonial Causes Act, 1873, under which the principal grounds for divorce were adultery on the part of the wife, and adultery and cruelty on the part of the husband. The present law is contained in the Matrimonial Causes Act, 1899, under which jurisdiction is vested in the Supreme Court in respect of all causes, suits, and matters matrimonial, excepting in respect of marriage licenses. Dissolution of marriage may be granted on petition as under—

Husband v. Wife.—Adultery, desertion, or habitual drunkenness and neglect of domestic duties for three years; refusal to obey an order for restitution of conjugal rights; imprisonment for three years and upwards at date when petition is presented and under sentence for at least seven years; conviction for attempt to murder or to inflict grievous bodily harm; repeated assaults and cruel beatings during one year preceding the date of the filing of the petition.

Wife v. Husband.—Adultery; desertion, or habitual drunkenness coupled with neglect to support or cruelty, for three years; refusal to obey an order for restitution of conjugal rights; imprisonment for three years and upwards

at date when petition is presented and under sentence for at least seven years; imprisonment under frequent sentences aggregating three years, within a quinquennial period preceding the presentation of the petition; conviction for attempt to murder or to inflict grievous bodily harm; repeated assaults and cruel beatings within one year of petition.

The petitioner must have been domiciled in the State at the time of instituting the suit, and in most cases must have been so domiciled for three years. No relief is, however, granted to a petitioner who has resorted to New South Wales for the purpose of instituting proceedings.

Judicial separation may be sought on grounds of cruelty or desertion without cause extending over two years, and nullity may be declared in cases of marriages which are void.

Suits may be instituted for the purpose of obtaining restitution of conjugal rights, and failure to comply with a decree made in such a suit constitutes desertion upon which a suit for divorce may be brought. Marriages may be declared null and void on the grounds that the respondent is incapable of consummating it, that the parties to the marriage are within the prohibited degrees of consanguinity, or that the parties are unable to contract a valid marriage. Such inability may arise from one of the parties being already married, having acted under duress, or being under marriage age.

PETITIONS FOR DIVORCE, &c.

The first Divorce Act in New South Wales was passed in 1873.

The following statement shows the divorces, judicial separations, and decrees of nullity of marriage granted in New South Wales in the last five years:—

Year.	Divorces.		Judicial Separation granted.	Nullity of Marriage.	
	Decrees <i>visi.</i>	Decrees absolute.		Decrees <i>visi.</i>	Decrees absolute.
1914	370	298	6	4	2
1915	416	358	7	...	3
1916	386	359	11	5	1
1917	434	380	13	5	3
1918	382	376	11	4	4

In 1914 one decree for jactitation was granted.

The following statement shows the sexes of petitioners for divorce in the cases of decrees made absolute during the past ten years:—

Year.	Petitions for Divorce.		Year.	Petitions for Divorce.	
	Husband.	Wife.		Husband.	Wife.
1909	85	202	1914	127	171
1910	81	176	1915	138	220
1911	64	142	1916	140	219
1912	116	227	1917	145	235
1913	129	184	1918	163	213

The majority of petitions are lodged by the wife, the proportion being approximately 63 made by the wife to 37 lodged by the husband.

In regard to judicial separations during the same period, 12 were granted on petition of the husband, and 93 on petition of the wife.

The grounds of suits in which decrees were made absolute during each year since 1914 were as follow :—

Ground of Suit.	1914.	1915.	1916.	1917.	1918.
Adultery	104	119	104	104	104
„ coupled with bigamy, cruelty, and desertion	5	6	4	4	5
Cruelty and repeated assaults ... ..	...	2	...	1	2
„ „ habitual drunkenness... ..	5	3	7	10	4
Desertion	158	192	199	208	188
Habitual drunkenness and neglect to sup- port	11	9	12	8	3
Habitual drunkenness and neglect of domestic duties	3	1	5	2	5
Inprisonment of husband for three years... ..	...	...	1	2	1
Non-compliance with order for restitution of conjugal rights	12	35	27	41	64
Total	298	358	359	380	376

As to the grounds in support of applications for divorce, the majority of petitions were made on issues of desertion, a lesser proportion including habitual drunkenness as a causative factor in the conditions upon which the application was based. The following statement shows the proportions of petitions based on these grounds, viz., desertion and habitual drunkenness, during the six years, 1913-1918 :—

Year.	Causes based on—			All Causes.	Year.	Causes based on—			All Causes.
	Desertion.	Drunkenness	Other.			Desertion.	Drunkenness	Other.	
1913	200	8	105	313	1916	226	24	109	359
1914	170	19	109	298	1917	249	20	111	380
1915	227	13	118	358	1918	252	12	112	376

It will thus be seen that 68 per cent. of divorces granted are allowed on these two counts. In cases of judicial separations, cruelty and repeated assaults are prominent factors.

COURTS OF MARINE INQUIRY.

A Court of Marine Inquiry is constituted of one or more District Court Judges assisted by assessors appointed under the Navigation Act, who have power only to advise, and not to adjudicate, upon any matter before the Court.

Such a Court hears and determines inquiries as to wrecks, shipping casualties, charges of incompetency or misconduct of officers, and appeals and references under the Navigation Act. Inquiries held during 1918 numbered 4, of which 1 was as to collision, 1 grounding, and 2 stranding. The Courts found in one case that blame was not attachable to any particular person; in one case the master was exonerated; in 3 cases masters were found at fault, and one certificate was suspended.

CRIMINAL JURISDICTION.

A Judge of the Supreme Court presides over the Central Criminal Court of Gaol Delivery held quarterly at Sydney, when all accused persons are tried by a jury of twelve, chosen by lot from the panel provided by the Sheriff. In capital cases the right to challenge, both by the Crown and by the accused, is limited to twenty jurors, except for cause shown; and in cases other than those in which the sentence of death may be imposed, whether felonies or misdemeanours, the number challenged may not exceed eight. At the close of the case for the prosecution, an accused person may give evidence on his own behalf without rendering himself liable to examination thereupon either by counsel for the Crown or by the Court, or make a statement in his defence. The Accused Persons Evidence Act, 1898, provides that it shall not be lawful to comment at the trial of any person upon the fact that he has refrained from giving evidence on oath on his own behalf. The verdict of the jury must be unanimous, and they may be detained until they give a verdict or are discharged by the Court. If no verdict is returned, the accused may be tried again before another jury.

CIRCUITS.

Formerly the Supreme Court Judges had sittings in various country towns as a Circuit Court, which was distinct from the Supreme Court, although the powers and jurisdictions of the two Courts were practically identical. Since the Supreme Court and Circuit Courts (Amendment) Act of 1912, Circuit Courts have been abolished, and sittings of the Supreme Court in civil and criminal jurisdictions at country towns have been substituted. The places and times of such Courts are fixed by proclamations.

QUARTER SESSIONS.

The Courts of Quarter Sessions are held by Chairmen, who perform also the duties of Judges of the District Courts. There are six Chairmen of Quarter Sessions; two of these preside over the Courts in the metropolitan district, and one each in the following districts:—Southern and Hunter, south-western, northern, and western. All offences, except those involving the capital penalty, are within the jurisdiction of the Court. On the trial of prisoners at Quarter Sessions, at the request of the prisoner's counsel, the Chairman must reserve questions of law for the consideration of the Supreme Court.

CHARGES BEFORE HIGHER COURTS.

During the year 1918 there were 742 persons, viz., 680 men and 62 women, charged before the higher Courts of the State. The following table shows the results in the cases of these accused persons for 1917 and 1918 in comparison:—

Sex.	1917.			1918.		
	Charged.	Convicted.	Withdrawn, discharged, &c.	Charged.	Convicted.	Withdrawn, discharged, &c.
Males	680	602	78	629	563	66
Females	62	59	3	67	59	8
Total	742	661	81	696	622	74

Classifying accused persons according to the nature of the offences, it is found that, in cases both of males and females, offences against property are the most numerous. A statement is given below of the principal offences of the persons convicted in higher Courts:—

Offences.	1914.	1915.	1916.	1917.	1918.		
					Males.	Females.	Total.
Against the person	180	160	129	163	108	9	117
Against property	537	564	584	426	406	43	449
Forgery and offences against the currency	61	59	51	33	26	3	29
Against good order	7	11	4	3	1	...	1
Other offences	25	49	47	36	22	4	26
Total	810	843	815	661	563	59	622

POOR PERSONS' LEGAL EXPENSES.

Under the Poor Prisoners' Defence Act, 1907, any person committed for trial for an indictable offence may apply for legal aid for his defence before the jury is sworn. If the judge or committing magistrate considers that the person is without adequate means, and that such legal aid should be supplied, the Attorney-General may arrange for the defence of the accused and for payment of expenses of all material witnesses.

The Poor Persons' Legal Remedies Act, 1918, authorises Judges to make rules regulating the practice and procedure, and the costs and fees payable in respect of proceedings to which poor persons are parties. Such proceedings may not be instituted without permission, and Judges to whom applications for permission are made are authorised to act as conciliators. The rules made under this Act do not apply to criminal proceedings.

LAND APPEAL COURT.

For the year ended 30th June, 1919, the cases referred to the Court numbered 35, of which 30 were referred by the Minister for Lands, and 5 by local Land Boards. Of the cases heard during the period, 25 resulted in the appeal being upheld, and 11 were sent back for rehearing, 20 were dismissed, and 6 were withdrawn.

HIGH COURT OF AUSTRALIA.

Under the Commonwealth Constitution Act, the judicial power of the Commonwealth, both in original and appellate jurisdiction is vested in the High Court of Australia. Its original jurisdiction extends to matters in which the Commonwealth is a party, or which lie between States or residents of States. Its appellate jurisdiction extends to the hearing and determination of appeals from all judgments, decrees, orders and sentences of any justice exercising the original jurisdiction of the High Court or any other Federal Court, or from judgments, &c., of the Supreme Court or any other Court of any State from which an appeal lay previously to the King in Council. The judgment of the High Court, in all such cases, is final, subject to the right of the Privy Council to grant leave to appeal to it; its sittings are held in the capitals of the States, as may be necessary. Hitherto the majority of actions brought before the High Court have related to its appellate jurisdiction.

APPELLATE JURISDICTION.

Courts having Appellate Jurisdiction are the following:—Courts of Quarter Sessions, the Supreme Court, the Full Court, the High Court of Australia, and, finally, the Privy Council. A Court of Criminal Appeal was established in 1912.

Courts of Quarter Sessions.

The right of appeal from Courts of Petty Sessions to Courts of Quarter Sessions lies against all convictions or orders by Magistrates, excepting adjudication to imprisonment for failure to comply with an order for the payment of money, for the finding of sureties for entering into a recognisance or for giving security, and orders for the payment of wages and convictions for breaches of discipline under the Seamen's Act, 1898. The Appeal Court rehears the cases, deciding questions of fact as well as of law.

The results of appeals from Courts of Petty Sessions during the last five years are shown below:—

Year.	Not concluded.	Conviction or order.			Total.
		Confirmed.	Varied.	Quashed.	
1914	80	208	39	71	398
1915	93	240	55	89	477
1916	64	298	44	91	497
1917	93	305	34	106	538
1918	99	365	55	106	625

Appeals to Supreme Court.

In connection with appeals from Magistrates and Wardens' Courts, applications for prohibition or mandamus are made either to a Judge in Chambers or to the Full Court; appeals from decisions of District Court Judges sitting in the Mining Appeal Court are made to the Supreme Court, and appeals by way of special case from Warden's Courts are determined by a Judge in Chambers.

During 1918, applications for writs of prohibition and mandamus numbered 29, of which 18 were to Judges in Chambers, and 11 to the Full Court. Writs granted were 20, viz., 3 of mandamus and 17 of prohibition.

The special cases numbered 15; decisions were sustained in 4 and reversed in 8 from the Magistrates' Courts, and 3 cases were not proceeded with. There were no appeals in land cases.

Appeals to Full Court.

In Common Law 28 cases were taken during 1918, all of which were civil cases, consisting of new trial motions; 7 were granted and 17 refused, and 4 were not proceeded with. There were 5 appeals in Equity; 1 was sustained and 4 disallowed. One appeal in Divorce was disallowed, and 2 were not proceeded with. There were no appeals in Bankruptcy or Probate. Appeals from District Courts numbered 13, of which 3 were allowed, 6 refused, and 4 were not proceeded with.

Court of Criminal Appeal.

The Court of Criminal Appeal was established by the Criminal Appeal Act of 1912, which prescribes that the Supreme Court shall be the Court of Criminal Appeal, constituted by three or more Judges of the Supreme Court as the Chief Justice may direct. Any person convicted on indictment

may appeal to the Court against his conviction (1) on any ground which involves a question of law alone, or (2) with the leave of the Court or upon the certificate of the judge of the court of trial, on any ground which involves a question of fact alone, or of mixed law and fact, or any other ground which appears to the Court to be sufficient. A convicted person may also, with the leave of the Court, appeal against the sentence passed on conviction; in such appeal the Court may quash the sentence and substitute another either more or less severe.

In addition to determining appeals in ordinary cases the Court has power, in special cases, to record a verdict and pass a sentence, in substitution for the verdict and sentence of the court of trial; it may also grant a new trial, either on its own motion or on application of the appellant.

The result of appeals since the inception of the Court are shown hereunder:—

Year.	Applications to Judge.		Applications to Court.				Sentences Varied (included with Convictions Affirmed).
	Granted.	Refused.	Convictions.		New Trials Granted.	Total Cases.	
			Affirmed.	Quashed.			
1913	3	20	46	2	8	56	2
1914	1	18	42	4	...	46	1
1915	1	11	50	1	6	57	...
1916	3	12	55	6	12	73	2
1917	1	8	62	4	3	69	2
1918	1	1	19	3	4	26	2

Appeals to High Court of Australia.

During 1918 appeals made from decisions of Judges of the Supreme Court of New South Wales were decided as follows:—In Equity, 2 allowed and 2 dismissed; in Bankruptcy, 1 dismissed; in Divorce, 1 allowed and 1 dismissed; and in Probate, 1 dismissed.

In addition, appeals from the Full Court of the Supreme Court of New South Wales numbered 11, of which 2 were allowed, 7 dismissed, and 2 settled. Of the 3 appeals from assessments under the Federal Land Tax Assessment 1 was referred to the Full Court, 1 dismissed, and 1 set down for hearing.

Eight applications for leave to appeal from judgments of the Supreme Court of New South Wales were refused.

Appeals to Privy Council.

During 1918, 3 applications for leave to appeal in Common Law were granted, and 1 appeal to the Privy Council dismissed, and 1 in Admiralty was dismissed.

WOMEN'S LEGAL STATUS.

The Women's Legal Status Act, 1918, provides that women shall not by reason of sex be disqualified from holding any of the following positions:—Member of the Legislative Assembly, Mayor or Member of a Local Government Council, judge of the Supreme Court or of a District Court, chairman of Quarter Sessions, stipendiary or police magistrate, justice of the peace, barrister or solicitor of the Supreme Court, or conveyancer.

SOLICITORS AND BARRISTERS.

A solicitor has the right of audience in all Courts of New South Wales. The Supreme Court may suspend or remove from the roll any solicitor who has been guilty of misconduct or malpractice.

At the end of 1918 there were 169 barristers practising in New South Wales, and the number of solicitors was 1,058; of the latter, 629 were in the Metropolis.

PATENTS.—COPYRIGHTS.—TRADE MARKS AND DESIGNS.

The administration of the statutes relating to Patents, Copyrights, Trade Marks and Designs devolves upon the Federal authorities, and a patent granted under the Commonwealth law is thus afforded protection in all the States, and in the Territory of Papua, for fourteen years. The copyright in a book, the performing right in a dramatic or musical work, and the lecturing right in a lecture, continue for the author's life and fifty years after his death. The British Copyright Act, subject to certain modifications, is in force in the Commonwealth under the Copyright Act, 1912.

The registration of a trade-mark protects it for fourteen years, but may be renewed from time to time. An industrial design may be protected for five years, and the period extended to fifteen years, provided it is used in Australia within two years of registration.

Under the various Federal acts, arrangements may be made for the protection in other countries of patents, copyrights, trade-marks, and designs. In all cases the rights of holders under the legislation of a State were conserved.

The Patents Trade Marks and Designs Act, 1914-15, empowers the Minister to suspend the registration of any patent or trade mark, the proprietor whereof is a subject of a State at war with the King; a large number of such registrations have been suspended in favour of the Minister for Trade and Customs, and other persons approved by the Attorney-General of the Commonwealth.

Cost of Administration of Justice.

A table showing the cost of administration of justice in New South Wales during the past five years appears on page 280.

POLICE AND PRISON SERVICES.

POLICE FORCE.

In 1918 there were 676 police stations and a force numbering 2,521 was maintained under the immediate control of an Inspector-General. The following statement shows the distribution of the establishment at 31st December, 1918:—

Classification.	Inspector Gen. and Superintendents.	In-spectors.	Ser-geants.	Con-stables.	De-tectives.	Track-ers.	Total.
Police: General	15	57	559	1,759	...	40	2,430
Detective	1	1	14	14	5	...	35
Water ... ..	...	1	9	24	...	...	34
Traffic	1	1	5	15	...	...	22
Total	17	60	587	1,812	5	40	2,521

In addition to the above, there are four women attached to the police stations as searchers.

Two women police were appointed during 1915; they perform useful duty in regard to women and children.

The Police Regulation (Superannuation) Act, provides that the age of retirement from the police force shall be 60 years, except in the case of the Inspector-General of Police. Under certain circumstances, however, any member of the force may be retained until he reaches the age of 65 years.

The following statement shows that the increases in the strength of the police establishment, exclusive of trackers, have not been proportionate to the extension of population; the ratio of one policeman to 640 inhabitants in 1906 has changed gradually, so that in 1918 the ratio was one policeman to 770 inhabitants:—

Year.	Police.*	Inhabitants to each Policeman.	Year.	Police.*	Inhabitants to each Policeman.
1896	1,874	682	1914	2,627	709
1901	2,172	635	1915	2,613	716
1906	2,342	640	1916	2,586	718
1911	2,487	683	1917	2,557	739
1912	2,554	696	1918	2,481	770
1913	2,582	710			

* Exclusive of Trackers.

Rates of Pay and Pensions.

The salaries paid to the police are as follow:—Superintendents, £493 to £593 per annum; inspectors, £387 to £445 per annum; sergeants, 16s. 11d. to 18s. 11d. per day; constables, 13s. 5d. to 16s. 5d. per day; detectives, 19s. 5d. and 20s. 5d. per day.

In addition Officers not provided with quarters receive lodging allowances as follow:—Superintendents, £110 per annum; inspectors, £80 per annum. Other ranks—married men, 2s. 6d. per day; single men, 1s. 6d. per day. A clothing allowance of £20 per annum is made to plain-clothes police in lieu of uniform.

A deduction of 4 per cent. is made on account of contributions to a Pension Fund.

Pension and gratuity rights are as follow:—To police appointed before 1st February, 1907, with less than 15 years' service, a gratuity not exceeding one month's pay is payable for each year of service, and a further gratuity of a month's pay for each year of service after the tenth year; to officers with 15 years' and less than 20 years' service, a pension equal to half-pay, less 3 per cent., is payable; from 20 years' and less than 25 years' service, a pension equal to two-thirds, less 3 per cent.; from 25 years' and less than 30 years' service, a pension equal to three-quarters, less 3 per cent.; and from 30 years and upwards, a pension equal to full pay, less 3 per cent. To officers appointed after 31st January, 1907, with less than 20 years' service, a gratuity not exceeding one month's pay for each year of service is payable; to officers with 20 years' service and upwards, a retiring allowance not exceeding one-fortieth of salary for each complete year of service, less 3 per cent., provided that such allowance shall not exceed three-quarters of salary, less 3 per cent.

REGULATION OF TRAFFIC.

In the metropolitan district the Traffic Police inspect public vehicles, test taximeters, regulate and control the use of motor vehicles upon public streets, besides exercising a general control over all street traffic. The number of persons taken to hospitals by the police in the Metropolitan District as the result of accidents, or illness in the streets, was 1,018.

As regards the services of the police in cases of accident, it is of interest to note that of the total police force of 2,481 men, 575 held First Aid Certificates, and 277 held Life saving Certificates.

Traffic Licenses.

The following table shows licenses granted for vehicles and drivers under the Metropolitan Traffic Act and the Motor Traffic Act during the years 1917 and 1918:—

License.	1917.	1918.	License.	1917.	1918.
Metropolitan Traffic Act—			Metrop. Traffic Act— <i>ctd.</i>		
Horse cab... ..	706	709	Motor-van driver ...	69	88
Motor cab... ..	311	331	Horse-bus driver ...	46	48
Horse van	1,457	1,470	Motor-bus driver ...	57	131
Motor van	44	61			
Horse omnibus ...	26	30	Motor Traffic Act—		
Motor omnibus ...	28	68	Motor vehicle	18,844	21,387
Horse-cab driver ...	772	791	Motor vehicle driver ...	27,958	32,678
Motor-cab driver ...	481	460	Motor cycle	8,087	8,755
Horse-van driver ...	1,690	1,695	Motor cycle rider ...	10,967	12,280

The revenue obtained under the Metropolitan Traffic Act was £3,879 in 1917 and £3,850 in 1918; under the Motor Traffic Act £29,986 in 1917, and £34,075 in 1918.

PRISONS.

Grading of Establishments.

The prison establishments are graded with a view to the concentration of prison population in institutions large enough to ensure efficiency of supervision with economy of administration, and the maintenance of a strict and disciplinary organisation conducive to the highest ideals of reform.

The State Reformatory for Women at Long Bay is occupied by prisoners of all classes, and the State Penitentiary for Men at Long Bay is used as a place of detention for incapables from the city, and as a centre from which long-sentence prisoners are distributed to the principal country establishments, while at the police gaols and lock-ups are detained only prisoners with sentences of less than fourteen days. The Prisoners' Afforestation Camp, Tuncurry, receives selected prisoners (first offenders) after portion of their sentence has been served; and at the Emu Plains Prison Farm, young industrious prisoners, with suitable qualifications are treated on somewhat similar lines.

Classification of Prisoners.

In all the large establishments an inter-classification system is operative which assures the segregation of the inmates in various classes as to age and conduct.

For several years the principle of restricted association has been in operation, and has yielded results which demonstrate its success. Under present conditions association while at work, at exercise, and at religious instruction, is subject to the closest supervision. Cells are lighted, and literature is provided from the prison libraries.

PRISON POPULATION.

At the end of 1918 there were 25 gaols in New South Wales; of these, 4 were principal, 7 minor, and 14 police gaols.

The number of prisoners in gaol, exclusive of Inebriates, at the close of each year, during the last five years, will be found below:—

Year.	Under Sentence.		Awaiting Trial.		Total.		
	Males.	Females.	Males.	Females.	Males.	Females.	Total.
1914	1,497	146	86	11	1,583	157	1,740
1915	1,397	185	88	6	1,485	191	1,676
1916	1,251	200	64	10	1,315	210	1,525
1917	1,154	138	81	4	1,235	142	1,377
1918	854	105	59	7	913	112	1,025

The following comparison shows that though the general population has more than trebled since 1875, the gaol population has decreased by 5 per cent.

The gaol entries shown in the table represent convicted persons, persons awaiting trial, debtors, naval and military offenders, and persons on remand:—

Year.	General Population at 31st December.	Gaol Entries during Year.	Gaol Population at 31st December.	
			Number.	Per 1,000 of General Population.
1875	594,297	11,832	1,453	2·44
1885	949,570	20,740	2,562	2·70
1895	1,262,270	18,552	2,460	1·95
1905	1,469,153	13,380	1,678	1·14
1910	1,638,220	9,849	1,323*	·81
1915	1,870,415	10,928	1,676*	·90
1916	1,857,920	9,999	1,525*	·82
1917	1,889,129	8,169	1,377*	·73
1918	1,928,174	7,804	1,025*	·53

* Exclusive of inebriates detained.

TERMS OF SENTENCES.

The following statement shows the terms of sentences of convicted persons received into penal establishments during the year 1918 :—

Term of Sentence.	Males.	Females.	Total.
1 month and under	2,664	1,030	3,694
From 1 to 3 months	780	361	1,141
“ „ 3 to 6 „	423	80	503
„ „ 6 to 12 „	238	14	252
„ „ 1 to 2 years	141	2	143
„ „ 2 to 5 „	61	1	62
„ „ 5 to 10 years	8	...	8
Death and Death recorded	4	...	4
Unspecified	269	1	270
Total	4,588	1,489	6,077

Cumulative sentences have been taken as in the aggregate, and concurrent sentences as equal to the longest term. It is noticeable that 61 per cent. of sentences are for periods not exceeding one month; and 92 per cent. do not exceed one year. The majority of short sentences have been imposed for breaches of good order, the imprisonment being served in default of fines.

On 31st December, 1918, there were 59 men serving life sentences and 23 men serving sentences of various periods over 10 years. In most of these cases the sentences have been imposed by the Executive authority in lieu of capital punishment. A life sentence is not a fixed term, but a prisoner may petition for release after serving twenty years; if at the time of conviction his expectation of life is less than twenty-two years, the date of petition is in accordance with a fixed scale.

Prisoners Released on License.

Persons eligible for remission of sentence for good conduct and industry may be released on license to be of good behaviour.

Licenses operate for the unexpired portion of the sentence and sureties are required. The licensee is required to report periodically, and a breach of the conditions of release may be punished by the cancellation of the license, and recommittal to gaol for the balance of the sentence. During 1918 licenses were granted to 486 men and 22 women.

IMPRISONMENT IN LIEU OF FINE.

Imprisonment for non-payment of an amount adjudged to be paid on order of a Justice may be curtailed by payment of a portion of the fine, for which a proportionate part of the sentence may be remitted, and provision is made for the payment of fines in instalments. The following table shows the extent to which diminution in the term of confinement was commuted by money payment during the past five years:—

	1914.	1915.	1916.	1917.	1918.
Persons committed to gaol in default of payment of fines	6,299	5,050	4,403	3,732	3,637
Prisoners subsequently released after paying portion of fines	1,461	1,193	1,082	876	709
Days prisoners would have served if portion of fines had not been paid ...	57,914	40,505	47,824	27,322	21,910
Days remitted by part-payment of fines ...	25,134	25,950	23,054	17,864	14,590
Amount received at gaol as part-payment of fines £	3,343	2,913	2,721	2,253	2,039

IMPRISONMENT FOR DEBT.

During 1918, 23 men were imprisoned for debt, but the time of detention, as a rule, extended over a short period, and the number of debtors in confinement at any given time was not large. There were no debtors in gaol at the end of the year.

CAPITAL PUNISHMENT.

The following table shows the total number of death sentences pronounced, and sentences of death recorded, also executions during the years 1913-1918:—

Year.	Death Sentences Pronounced and Sentences of Death Recorded.	Executions.	Year.	Death Sentences Pronounced and Sentences of Death Recorded.	Executions.
1913	10	...	1916	5	2
1914	13	...	1917	8	2
1915	9	...	1918	4	...

SPECIAL TREATMENT.

Upon the recommendation of the Judge before whom they have been tried, prisoners convicted of a misdemeanour under sentence of imprisonment without hard labour may be placed in a special class and treated similarly to those confined under civil process. Such prisoners are segregated and are allowed privileges regarding food, clothing, &c.

First Offenders.

When any person, not previously convicted of an indictable offence is convicted for a minor offence and sentenced, the Court may suspend the sentence upon a recognisance, without sureties, for good behaviour during the period covered by the sentence, the probationary term being, however, not less than one year. An examination is made for purposes of identification, and the offender is required to report himself periodically. If his conduct be not satisfactory he becomes liable to imprisonment for the unexpired portion of the sentence; but good behaviour during the whole probationary period will cancel the conviction.

During 1918, there were 389 persons, viz., 269 at Magistrates', and 120 at Higher Courts, released as first offenders; of these, 297 were men, and 92 women. These figures do not include children released on probation from the Children's Court, under the Neglected Children and Juvenile Offenders Act, 1905.

The records of 630 persons convicted at the higher courts during 1918 show that 340 had not been convicted previously.

At Goulburn Gaol special reformatory treatment is provided for first offenders—useful employment, educational facilities, physical drill, and strict classification in order to prevent the association of prisoners of vicious tendencies. That this plan is an important factor in the deterrent influence of the prison system, is evinced by the small proportion of re-convictions of prisoners passing through the treatment.

Youthful Offenders.

In England, the ages between 16 and 21, or in certain cases 23 years are regarded as the critical period during which temptation is hardest to resist, and young offenders may reap most benefit from disciplinary and moral influences and industrial training. In New South Wales the upward limit is set at age 25, and a strict line of demarcation is drawn between offenders over and under that age. Offenders under age 25 are classified in age-groups, also according to length of sentence over or under 12 months, and divisional treatment is accorded. Special disciplinary, scholastic, religious, physical training and industrial courses are provided, for the last of which facilities in the form of workshops are available. Great discrimination and special care are necessary to prevent such youthful offenders from becoming confirmed criminals.

Maintenance Confinees.

The Deserted Wives and Children Amending Act, 1913, empowers the Comptroller-General of Prisons to direct a prisoner committed to prison under the Deserted Wives and Children Act, 1901, or the Infant Protection Act, 1904, to perform any specified class of work. An estimate is made of the value of the work performed, and after a deduction for the prisoner's keep, the remainder is applied towards satisfaction of the order for maintenance under the Deserted Wives and Children Act 1901, or for maintenance or expenses under the Infant Protection Act, 1904.

During 1918 the number of maintenance confinees received into gaol was 240, as compared with 245 in the previous year.

WOMEN IN PRISONS.

In August, 1909, the State Reformatory for Women was opened at Long Bay, and to this central institution are sent all prisoners from the metropolitan district, and all long-sentence prisoners from extra-metropolitan districts. At Long Bay an exhaustive system of classification is in force, accommodation being provided by means of 290 separate rooms.

During 1918, 1,760 women were received and 1,790 discharged from Long Bay, the number remaining at end of the year being 103.

The industrial activity of the institution resulted in an output of manufactures, which, with the work of gardening and domestic services, was valued at £2,226. During 1918 the daily average at the Long Bay State Reformatory for Women was 140.

In 1918, at all gaols of New South Wales, 1,489 female prisoners were received under sentence, the daily average number, including untried prisoners, being 150.

Approximately 69 per cent. of the women received at all gaols were committed on sentences of one month and less, and consequently presented little opportunity for the application of reformatory measures.

HABITUAL CRIMINALS AND PREVENTIVE DETENTION.

The Habitual Criminals Act, 1905, empowers a judge to declare as an habitual criminal any person convicted for the third or, in some cases, the fourth time, on account of certain criminal offences, as specified in the Act. A definite sentence is served on account of the offence charged, and subsequently the offender is detained for an indefinite term, until he is deemed fit for freedom.

This system of treatment acts as a deterrent to the existence of professional criminals, and moreover confers an incalculable benefit on society by removing the force of example of criminality. The benefits accruing from the system of indeterminate sentences, as initiated in New South Wales, have led to its adoption in other communities.

Three men were declared to be habitual criminals during 1918—making a total of 74 men and 1 woman so declared since the inception of the Act. Of this number, 36 men and 1 woman were released on probation, 7 being recommitted to gaol, 2 died, 3 were released on medical grounds, 1 was removed to the Hospital for Criminal Insane, and in 6 cases the declaration of an habitual criminal was remitted. At the end of 1918 there were under detention 13 men who had not yet completed the definite period, and 14 men who had passed into the indeterminate stage.

On the completion of the definite term under the ordinary prison regulations, the habitual criminal passes to the indeterminate stage, which is divided into three grades—intermediate, higher, and special; a minimum period of 4 years and 8 months must be spent in the lower grades before the prisoner can gain admission to the special grade wherein cases may be brought under consideration with a view to release. At the end of 1918, 6 prisoners were in the intermediate grade, and 8 were in the higher grade.

An important proviso of the Habitual Criminals Act prescribes that while under detention as an habitual criminal every prisoner must work at some useful trade, and receive at least one-half of the proceeds of his work. As the majority of these persons have not been trained in any branch of skilled labour, facilities are afforded them, while serving the definite term, to acquire training in some remunerative employment.

DRUNKENNESS.

During 1918 the total convictions for drunkenness numbered 14,728. The following table shows the total convictions—that is cases in which convictions were recorded, not distinct persons convicted—during each of the last ten years, and their ratio to the mean population. In September, 1916, a new method of dealing with persons charged with drunkenness was adopted in the metropolitan police district. Such persons may now be released upon depositing an amount equal to the usual penalty imposed, and in the event of non-appearance at the Court the deposits are forfeited and no further action is taken. In 1916 there were 446 cases (407 men and 39 women) and in 1917 there were 3,443 cases (3,130 men and 313 women) in which bail was estreated. These have been excluded from the table:—

Year.	Total Convictions.			Convictions per 1,000 of—		
	Males.	Females.	Total.	Male Population.	Female Population.	Total.
1908	23,730	4,087	27,817	29·59	5·49	18·00
1909	23,616	3,747	27,363	28·86	4·94	17·35
1910	24,450	2,930	27,380	29·10	3·78	16·94
1911	26,295	3,004	29,299	30·28	3·77	17·60
1912	29,264	3,456	32,720	32·05	4·19	18·82
1913	29,153	3,314	32,467	30·65	3·86	17·94
1914	30,135	3,073	33,208	31·04	3·48	17·92
1915	23,224	2,639	25,863	24·16	2·91	13·84
1916	20,579	2,438	23,017	21·89	2·63	12·33
1917	15,421	2,038	17,459	16·63	2·15	9·31
1918	13,016	1,712	14,728	13·77	1·78	7·71

It will be seen that there has been a decided decrease in the convictions of women; this has been most marked in the years immediately succeeding the enactment of the Liquor Amendment Act of 1905, and the establishment of State institutions for treatment of inebriates in 1907. There is no doubt that the proportions have been appreciably lowered by the detention of women who, though few in number, swelled the record of cases by repeated convictions on the charge of drunkenness.

With regard to the men, the rate in 1918, viz., 13·77 per 1,000, was the lowest during the period. The offences of soldiers, dealt with by military authorities, are not included in these figures.

THE TREATMENT OF INEBRIATES.

The Inebriates Act was designed to provide treatment for two classes of inebriates—those who have been convicted of an offence and those who have not in this way come under the cognisance of the law.

For the care and treatment of the latter class, the Act authorises the establishment of State institutions under the control of the Inspector-General of Insane. Judges, police magistrates, and the Master-in-Lunacy may order that an inebriate be bound over to abstain, or that he be placed in a

State or licensed institution, or under the care of an attendant controlled by the Master-in-Lunacy, or of a guardian, for a period not exceeding twelve months. Provision is made also to enable an inebriate to enter voluntarily into recognisances to abstain.

With regard to inebriates of the criminal class, the records of the State over a period of years show that practically half the persons who constitute the gaol population at any given date have commenced their criminal career on a charge of drunkenness, and there are many offenders frequently convicted on this charge for whom the short sentence or the imposition of a fine is quite useless as a deterrent.

To meet such cases the Acts provide that where an inebriate is convicted of an offence of which drunkenness is a factor, or, in certain cases, a contributing cause, he may be required to enter into recognisances for a period not less than twelve months, during which he must report periodically to the police; or he may be placed in a State institution under the direction of the Comptroller-General of Prisons.

* Any person detained in a State institution may be released on license, the conditions imposed on the licensee being good behaviour and abstinence for a stated period; if re-convicted within a year an inebriate may be committed to an institution for a period ranging up to three years.

Special provision has been made at the State Penitentiary for men, and at the State Reformatory for women, detained under the Inebriates Act, who have been convicted previously for other offences; since March, 1915, those of the non-criminal class have been treated at a separate establishment, the Shaftesbury Inebriate Institution.

In 1917 arrangements were made for the admission of voluntary paying patients to the Shaftesbury Institution; these patients may, under certain conditions, leave the Institution daily to follow their usual occupation. During 1918 13 men and 6 women were admitted as voluntary patients, and 2 men were remaining on 31st December.

Transactions at State Inebriate Institutions.

The power of detaining inebriates in State Institutions was first exercised in 1907, and the majority of admissions have been of chronic offenders over 40 years of age who for many years prior to admission had served frequent sentences under the repeated short sentence system, and who in consequence had drifted into a condition from which reformation seemed almost hopeless. In view of this fact the results attained by the operation of the Acts may be considered encouraging.

During the period dating from the first reception in August, 1907, to 31st December, 1918, the total number of original receptions amounted to 817—358 men and 459 women; 1,025 licenses for release were issued—394 to men, and 631 to women; 145 issued to men, and 275 to women, have been cancelled, and the licensees recommitted to institutions.

At the beginning of the year 1918 there were, exclusive of voluntary patients, 48 persons (18 males and 30 females) in custody at the inebriate institutions; 128 were received during the year, 5 were discharged, 82 were released on license, and 1 died, leaving 88 at the end of the year.

Of the 82 persons released on license during 1918 from the institutions, 23 obtained employment, 32 were admitted to homes, 3 to hospital, 22 were released to care of friends, 1 was sent to another State, and 1 remained at Shaftesbury as a paying patient.

The total expenditure on inebriate institutions during the year amounted to £2,391.

INDUSTRIAL ACTIVITY IN PRISON ESTABLISHMENTS.

Ability to perform useful and remunerative labour is recognised as of equal importance with good conduct in demonstrating fitness for freedom; and, to encourage some degree of skill, employment at industries calculated to inspire interest, and subsequently to prove remunerative, is provided under the supervision of competent instructors.

In 1918 the value of prisoners' labour amounted to £48,875, viz.: manufactures for gaols £13,470, and for other Government departments £12,133; in buildings £10,979, and domestic employment £12,293.

SICKNESS AND MORTALITY IN GAOLS.

Visiting surgeons are attached to the various important establishments of which the sanitation and hygiene are on modern lines. Among the persons received into the institutions are included many whose physical condition is deplorable, persons in the last stages of disease, and aged and infirm persons, for whom a hospital or asylum is the befitting destination. Prisoners suffering from tuberculosis receive special treatment.

The medical statistics of prisons show that, with an average daily number of 1,282 inmates during 1918, the total number of cases of sickness treated in hospital was 413; 9 prisoners died, and 39 were released on medical grounds. One prisoner committed suicide. The death rate per 1,000 of the average number of inmates was 7·8.

CONTAGIOUS DISEASES.

Under the Prisoners Detention Act, 1908, prisoners found to be suffering from certain contagious diseases may be detained in Lock Hospitals attached to the gaols. In cases of imprisonment without option of fine, a stipendiary magistrate may cause the prisoner to be detained until certified by the medical officer as free from disease even after the definite sentence is served; but in the case of imprisonment in lieu of payment of a fine, the Act did not provide for detention beyond the specified term of imprisonment.

Owing to this limitation of the Act, no less than 525 cases, or more than 28 per cent., were discharged from prison while possibly in a contagious state. In 1918, however, an Act was passed to remedy this defect, and all such prisoners may now be treated in the Lock Hospitals until free from contagion.

During 1918, orders for detention in the Lock Hospitals were obtained in the cases of 50 men and 14 women, and, in addition, treatment was given to 56 men and 12 women, for whom orders were not obtained; 31 men and 6 women were discharged uncured.

FUGITIVE OFFENDERS AND EXTRADITION.

The Imperial statutes in force in New South Wales for the surrender of fugitive criminals are the Fugitive Offenders Act, 1881, and the Extradition Act.

Under the Fugitive Offenders Act, 1881, provision is made for the surrender from the United Kingdom to a British possession or *vice versa*, or from one British possession to another, of fugitives charged with the perpetration of crimes which, in the part of His Majesty's dominions where they are committed, are punishable by a minimum penalty of imprisonment with hard labour for twelve months. Persons apprehended under this Act are brought before a Magistrates' Court, and their cases are included in the figures relating to the business transacted at such courts.

During 1918, 25 persons—24 males and 1 female—were arrested in other countries as fugitive offenders, and returned to New South Wales. Of these 4 were discharged, 5 were summarily convicted, and 6 were committed to higher courts; in 6 cases maintenance orders were made, and the remaining cases were otherwise treated.

The number of persons arrested in New South Wales during 1918 as fugitives from other parts of the British Empire was 33, of whom 30 were males. Of the total, 30 were remanded to other States of the Commonwealth, and 2 were discharged.

The Extradition Act provides for the surrender to foreign States of persons accused or convicted of committing crimes within the jurisdiction of such States, and for the trial of criminals surrendered to British dominions. Treaties for the extradition of fugitives subsist between the United Kingdom and the majority of foreign countries. In proceedings taken in New South Wales under the Extradition Act the fugitive may be brought before a Stipendiary or Police or Special Magistrate, who hears evidence on oath, and, if satisfied, makes out a warrant for the extradition. At the hearing, the Consul for the country of which the person charged is a subject, the Crown Solicitor, and the Inspector-General of Police are represented. If a warrant be granted, the prisoner is detained for fifteen days prior to extradition, during which interval he may apply to the Supreme Court for a writ of *habeas corpus*. There were no extraditions to foreign countries during 1918.

PREVENTION OF INFLUX OF CRIMINALS.

In the Commonwealth Immigration Act, 1912, special clauses have been inserted vesting powers in the States to prevent the landing of criminals.

AUXILIARY AGENCIES.

The Prisoners' Aid Association assists released persons to find suitable employment, acts as trustees of gratuities and moneys earned while in prison, and assists first offenders with advice or help in obtaining sureties; and the principal religious bodies delegate special officers for police court duty.

Upon external agencies depend the provision of lectures, entertainments, &c., at the various institutions, but religious and educational work, as already noted, are functions of the system.

The *Compendium*, a monthly newspaper for issue to well-conducted prisoners in the gaols of New South Wales, has been published since 1912. This paper is edited and compiled under the supervision of the Comptroller-General of Prisons.

COST OF ADMINISTRATION OF JUSTICE.

The following table shows the amount expended in the administration of justice, and in the protection of property and punishment of criminals, in New South Wales during the last five years, also the amount of fines and fees paid into the Consolidated Revenue, and net returns from prisoners' labour:—

Expenditure and Revenue.	1914-15.	1915-16.	1916-17.	1917-18.	1918-19.
	£	£	£	£	£
Expenditure—					
Law Administration—					
Judicial Salaries and Pensions...	40,645	39,010	39,381	37,604	37,387
†Department of Attorney-General and of Justice ...	250,730	252,205	248,682	244,535	250,844
	291,375	291,215	288,063	282,139	288,231
Police—					
Administration ...	560,374	558,881	600,369	645,622	645,828
Rewards ...	623	709	2,232	900	1,127
*Other ...	31,000	43,500	47,000	63,000	72,000
	591,997	603,090	649,601	709,522	718,955
Prisons ...	92,288	92,520	91,913	90,570	87,875
Total Expenditure ...	975,657	986,834	1,629,577	1,082,231	1,095,061
Revenue—					
Fees ...	63,317	63,531	60,397	65,508	69,174
Fines and Forfeitures ...	34,576	32,420	31,234	31,015	35,280
Value of Prisoners' Labour ...	77†	772	754	705	499
Total Revenue ...	100,604	96,523	92,385	98,228	104,953
Net Cost ...	875,053	890,311	937,192	983,903	990,108
Per Head of Mean Population—	s. d.	s. d.	s. d.	s. d.	s. d.
Police ...	6 4	6 6	7 0	7 6	7 5
Law Administration ...	2 1	2 1	2 1	1 11	1 11
Prisons ...	1 0	1 0	1 0	1 0	0 11

* Payments made to the Police Pension Fund under the Police Regulation (Superannuation) Act (No. 28 of 1906). † Excluding Public Service Board, Prisons, and Registrar-General's Department.

LOCAL GOVERNMENT.

THE Act of 1842, under which the City of Sydney was incorporated, was the first provision in this State for conferring municipal privileges. In 1843 a further step was taken by the incorporation of Campbelltown, Appin, Camden, Narellan, and Picton as one district council, which was subdivided into three, during the same year, by the formation of Campbelltown and Appin into separate councils. Various Amending Acts were passed from 1844, and the Municipalities Act of 1897 consolidated all previous Acts and Amending Acts, but did not alter their main features. The voluntary principle of incorporation was retained, but this was not conducive to the adoption of a general system of local government, as it was natural that, so long as the central Government continued to construct local works, the persons benefited would submit to the absence of local management of their affairs.

Legislation passed in the years 1905 and 1906 gave the State of New South Wales full local government, except in the Western Division, where, however, eight municipalities are incorporated, viz.:—Balranald, Bourke, Brewarrina, Broken Hill, Cobar, Wentworth, Wilcannia, and Wrightville.

The Local Government Act of 1919 repealed the former Acts, but all existing regulations, ordinances, and proclamations remain in force until amended or cancelled. The city of Sydney, the whole of the Western Division, the Quarantine Station, Lord Howe Island, and the islands in Port Jackson are excepted from its operation.

The Act provides for the payment to shires of a minimum sum of £150,000 annually, as endowment from the Consolidated Revenue Fund, in the following proportions, viz.:—First-class shires, from nil up to 10s. per £; second-class, 15s. per £; third-class, 20s.; fourth-class, 25s.; fifth-class, 30s.; and sixth-class, 40s. or more. These endowments are payable on the amount of general rates received during the preceding year, the amount of endowment being fixed triennially, according to the area, revenue, and expenditure of the shires.

The municipal and shire councils are authorised to exercise the following powers:—The care, control, construction, fencing, and maintenance of all public places, except those vested in the Railway Commissioners, or other public bodies or trustees, and except national works; regulation of traffic; street and road lighting; prevention of bush fires; flood relief and prevention; construction and maintenance of streets, jetties, wharfs, and buildings for the transaction of business; town planning; prevention of nuisances; water supply; regulation and licensing of public vehicles and hawkers; management of parks and commons; control of public gates; providing, controlling, and regulating infants' milk depôts, maternity and infant welfare centres, wash-houses and laundries, civil ambulance, public conveniences, disinfecting chambers, lethal chambers, temporary hospitals and nursing for epidemics, boarding and lodging houses, barbers' establishments, removing dead animals, and many other services.

Other important provisions are the power to borrow up to 20 per cent. of the unimproved value in municipalities, such loans to be guaranteed by the Government; redistribution and reconstruction of existing areas, so that the municipalities may form portions of shires; acquisition of land and works; control of cattle-slaughtering and public health; dealing with noxious animals and plants; safety of the public; regulation of hoardings and other structures; the appointment of auditors, and the inspection of accounts by Government examiners.

The Act also provides for the division of the municipalities and shires into wards and ridings, respectively, and triennial elections are prescribed. All owners and occupiers of ratable property of annual value not less than £5, over 21 years of age, male and female, unless not naturalised, are entitled to be entered on the electors' roll, and any person enrolled is qualified for nomination for a civic office. The usual conditions as to disqualification are provided, and also the penalties for acting while not properly qualified.

Under an important provision in the Act rates are charged on the unimproved value of the land, and not on the annual rental. The general rate levied must be not less than 1d., nor more than 2d. in the £, unless the minimum rate is more than sufficient to meet the requirements of the council, in which case a lower rate may be levied. Having levied the general rate of 1d. on the unimproved value, a council is empowered to impose, either on the improved or on the unimproved value, such additional rate as may be required. Special, local, and loan rates may be imposed on the improved or unimproved value, at the option of the council. The ratable value of coal-mines is fixed at 50 per cent. of the gross value of the average annual output for the preceding three years, and of other mining properties at 40 per cent. for the same period. Commons, public reserves and parks, cemeteries, public hospitals, benevolent institutions, churches and other buildings used exclusively for public worship, free public libraries, and unoccupied Crown lands are exempt from taxation.

An important clause of the Act provides for the establishment of cities, and a municipality which has had during a period of five years a population exceeding 20,000 persons and a revenue of £20,000, and which is an independent centre of population, may be proclaimed a city. At the end of 1919, the following municipalities had been proclaimed cities:—Armidale, Bathurst, Broken Hill, Goulburn, Grafton, and Newcastle; but, with the exception of Broken Hill, the other districts were proclaimed under previous Acts.

It is further enacted that all municipalities not receiving statutory endowment under former Acts, if found to be in necessitous circumstances, shall be entitled to a sum not exceeding 3s. 4d. in the £ on the general rate collected; but if the revenues are sufficient to meet the reasonable requirements under proper management of the corporations, endowment cannot be claimed. The rate in the £ may be increased under special circumstances, but advantage has not been taken of this allowance, except in a few cases.

Under the Act of 1919 councils must cause a valuation of all ratable land to be made at least once in every three years, provided that they may adopt for any period the whole or any part of the valuations in force at the close of the preceding period.

Prior to the passing of the Local Government Act, 1906, only a very small portion of the State had been incorporated, as will be seen in the statement below, which gives the area incorporated and unincorporated in 1906 in the three great land divisions of the State, exclusive of the Federal Territory:—

Division.	Incorporated.	Unincorporated.	Total.
	sq. miles.	sq. miles.	sq. miles.
Eastern	1,932	92,881	94,813
Central	571	88,579	89,150
Western	282	125,216	125,498
Total	2,785	306,676	309,461

The area incorporated on 31st December, 1918, excluding Lord Howe Island and the federal territory of Canberra and Jervis Bay, is shown below. The only part of the State unincorporated was the portion of the Western Division not included in municipalities. The population in the different groups is also given:—

	Area (sq. miles).	Population.
Metropolitan Municipalities... ..	149	777,140
In Country Municipalities	2,673	463,500
In Shires	180,708	673,860
Total (incorporated)... ..	183,530	1,914,500
Western Division (portion unincorporated) ...	125,909	13,674
Total	309,439	1,928,174

The area of Lord Howe Island is 5 square miles, and the area transferred to the Federal Government was 928 square miles. These amounts added to the total incorporated shown above, viz.:—309,439 square miles, give a total of 310,372 square miles for the whole State.

GREATHER SYDNEY.

The amalgamation of the metropolitan municipalities is a question which has attracted considerable attention, and various schemes have been suggested. Particulars relating to proceedings and results of Select Committees and Royal Commissions which have considered the question of Greater Sydney will be found in a former issue of this publication.

CITY OF SYDNEY.

The City of Sydney was incorporated on 20th July, 1842, and was originally divided into six wards.

Great dissatisfaction soon arose as to the manner in which the affairs of the Corporation were conducted, and following upon the recommendation of a Select Committee of the Legislative Assembly, the Council was dissolved, and the administration transferred to a commission of three persons, who controlled the affairs of the city from the beginning of 1854 to the end of 1857, when a new Council, consisting of sixteen aldermen—two for each ward—came into existence.

In 1900 an Amending Act was passed, dividing the city into twelve wards, each returning two aldermen. The innovation of retiring the whole of the aldermen simultaneously was introduced, with a provision for the election of a new Council on the 1st December in every second year, re-election of qualified persons being permitted. Important changes were effected under this Act as to the franchise, sub-tenants and lodgers being placed on the rolls; and extended powers were conferred on the Council as to resumption of lands for city improvements.

In 1902 an Act was passed consolidating statutes previously passed in regard to the City of Sydney. In 1905 an amending Act was passed to provide for the better government of the city, especially with regard to the control of hoardings, the proper cleansing of footways, the prevention or regulation of the smoke nuisance from furnaces and chimneys, the regulation and control of refreshment stalls and stands, the control of juvenile hawkers and shoeblacks, the prevention of betting in public places, while the tenure of office of the aldermen was altered to three years.

The Municipality of Camperdown was amalgamated with the City of Sydney as from 1st January, 1909, and the Council now consists of twenty-six aldermen elected every third year by thirteen wards, the boundaries of which coincide with those of the electoral divisions of the City existing under the Parliamentary Electorates Act of 1912. The Lord Mayor is elected by the aldermen from their own number, but under an Act passed in 1916, in the event of an equal number of votes being polled, the Governor in Council may appoint one of the aldermen to the position. The Act also regulated the election of the city members of the Metropolitan Board of Water Supply and Sewerage, and of the Fire Brigades Board, and extended the power of the Council as regards resumptions, in order to provide workmen's dwellings, and further provision was made for the extension of the city boundaries.

In 1908 a further Amending Act was passed, containing several important provisions. Commencing with the year 1909, the Council was compelled to levy a rate, not less than 1d. in the £, upon the unimproved capital value, in addition to any rate imposed under the Act of 1902. Under the former Act the rate levied in 1915, the last year affected by the 1908 Act, was 1½d. in the £ on the unimproved capital value, and under the 1902 Act 21d. in the £ on the assessed annual value. It is provided, however, that the total amount leviable shall not exceed the amount which would be yielded by a rate of 3d. in the £ on the unimproved capital value, and 2s. in the £ on the assessed annual value, taken together, of all ratable property. On the Council imposing such rate on the unimproved capital value, the State land tax is suspended automatically. The valuation of the unimproved capital value is to be made at least once in every five years. The Council was empowered also to establish public libraries and milk depôts, to control certain parks, and to widen certain streets. The Lending Branch of the Public Library, and various parks and public ways were vested in the Council by the Government under certain conditions.

The Sydney Corporation (Dwelling-houses) Act, 1912, enables the City Council to erect and let dwelling-houses, and for that purpose to acquire land.

Another amending Act, passed in 1916, empowers the Council to levy rates on persons owning pipes, wires, cables, and rails on, under, over, or through any public places under the control of the Council, excepting properties owned by the Crown. Also, under the same Act, the Sydney Council may levy a general rate, not exceeding 6d. in the £, on the unimproved value of all ratable property in the city. This Act amends the 1908 Act so far as the latter relates to the land tax on the unimproved capital value and the city rate on the assessed annual value.

VALUATIONS.

The Unimproved Capital Value of land is the amount for which the fee-simple estate in such land could be sold under such reasonable conditions as a *bonâ-fide* seller would require, assuming that the actual improvements had not been made.

The Improved Capital Value is the amount for which the fee-simple estate of the land, with all improvements and buildings thereon, could be sold.

The Assessed Annual Value is nine-tenths of the fair average rental of land with improvements thereon.

In the following table the unimproved and improved values for 1917 and 1918 are compared:—

Division.	Unimproved Value.			Improved Value.		
	1917.	1918.	Increase, 1918.	1917.	1918.	Increase, 1918.
Sydney—City ...	£ 31,130,368	£ 31,880,295	2·41 per cent.	£ 81,976,260	£ 82,027,200	0·06 per cent
Suburbs ...	36,808,755	38,176,261	3·72	101,493,562	106,647,308	5·08
Metropolis ..	67,939,123	70,056,556	3·12	183,469,822	188,674,508	2·84
Country ...	24,350,474	24,629,668	1·15	62,055,080	63,368,253	2·12
Total Municipalities	92,289,597	94,686,224	2·60	245,524,902	252,042,761	2·65

The value of improvements is shown in following statement, and it will be seen that increases occurred in all divisions, with the exception of the City of Sydney:—

Division.	Value of Improvements.		
	1917.	1918.	Increase.
Sydney—City ...	£ 50,845,892	£ 50,146,905	per cent. *1·4
Suburbs ...	64,684,807	68,471,047	5·8
Metropolis ..	115,530,699	118,617,952	2·7
Country ...	37,704,606	38,733,585	2·7
Total Municipalities	153,235,305	157,356,537	2·7

* Decrease.

The capital and annual values of properties in all municipalities show a great increase since 1908, which was the year when the Local Government Act was fully applied to municipalities. The expansion is shown in the following table:—

Municipalities.	1908.			1918.		
	Unimproved Capital Value.	Improved Capital Value.	Assessed Annual Value.	Unimproved Capital Value.	Improved Capital Value.	Assessed Annual Value.
City of Sydney...	£ 20,207,812	£ 49,060,600	£ 2,249,760	£ 31,880,295	£ 82,027,200	£ 3,691,224
Suburbs...	23,799,856	56,441,828	3,803,338	38,176,261	106,647,308	7,765,709
Metropolis ...	44,007,668	105,502,428	6,053,098	70,056,556	188,674,508	11,456,933
Country ...	20,104,983	44,784,238	2,997,762	24,629,668	63,368,253	4,632,435
Total Municipalities.	64,112,651	150,286,666	9,050,860	94,686,224	252,042,761	16,089,368

The increases, both absolute and relative, during the ten years from 1908 to 1918, were as follow:—

Municipalities.	Unimproved Capital Value.		Improved Capital Value.		Assessed Annual Value.	
	Total Increase.	Increase per cent.	Total Increase.	Increase per cent.	Total Increase.	Increase per cent.
City of Sydney ...	£ 11,672,483	57·8	£ 32,966,600	67·2	£ 1,441,464	64·1
Suburbs ...	14,876,405	60·4	50,205,480	89·0	3,962,371	104·2
Metropolis ...	26,048,888	59·2	83,172,080	78·8	5,403,835	89·3
Country ...	4,624,685	22·5	18,584,015	41·5	1,634,673	64·5
Total Municipalities	30,573,573	47·7	101,756,095	67·7	7,038,508	77·8

The ratio of increase in the unimproved capital value was highest in the Suburbs of Sydney, and lowest in the country municipalities. The suburbs also show the highest ratio for the improved capital value, and for the assessed annual value, while the lowest for these values appear in the country districts.

A comparison of the improved and unimproved capital values with the assessed annual value is given below. With regard to the ratio of the improved capital value, the suburban and country municipalities were practically the same, with 7.3 per cent. The highest ratio of the unimproved capital value occurred in the suburban municipalities, which yielded 20.3 per cent., followed by the country areas, with 18.8 per cent. The corresponding rates for the City of Sydney were only 4.5 per cent. and 11.6 per cent., the average for the whole of the municipalities being 6.4 per cent. and 17.0 per cent. respectively:—

Municipalities.	Assessed Annual Value.	Ratio of Assessed Annual Value to Improved Capital Value.	Ratio of Assessed Annual Value to Unimproved Capital Value.
	£	per cent.	per cent.
City of Sydney	3,691,224	4.5	11.6
Suburbs	7,765,709	7.3	20.3
Metropolis	11,456,933	6.1	16.4
Country	4,632,435	7.3	18.8
Total Municipalities...	16,089,368	6.4	17.0

The value of improvements in municipalities was £157,357,000, or 166 per cent. of the unimproved value. The total for the City of Sydney was £50,147,000, or 157 per cent.; for the suburbs, £68,471,000, or 179 per cent.; and for the country, £38,739,000, or 157 per cent. The value of improvements is not available for all the shires, but it has been assumed that it is the same proportion of the unimproved value as the average in those which are known. In the Western Division it may be placed at £10,000,000, so that for the whole of the State the following values for 1918 are obtained:—

Division.	Unimproved Value of Land.			Value of Improvements.		
	Total.	Per Head.	Per Acre.	Total.	Per Head.	Per Acre.
Sydney—City	£ 31,880,000	£ 301	£ 9,582 4 2	£ 50,147,000	£ 473	£ 15,072 14 9
Suburbs	38,176,000	57	415 5 3	68,471,000	102	744 16 0
Metropolis	70,056,000	90	735 8 6	118,618,000	153	1,245 4 4
Country Municipalities	24,630,000	53	14 7 11	38,739,000	84	22 12 11
Shires	109,133,000	162	0 18 10	137,507,000	204	1 3 9
Western Division (part unincorporated).	10,000,000	731	0 2 6	10,000,000	731	0 2 6
Total State	213,819,000	111	1 1 7	304,864,000	158	1 10 8

CITY OF SYDNEY RATINGS.

The Sydney Corporation Act of 1902 directed that improved property within the city should be assessed at a fair average annual value, with an allowance for outgoings not exceeding 10 per cent., and the unimproved property at a maximum of 6 per cent. on its capital value. On the value of such assessment a city rate not exceeding 2s. in £ might be levied, exclusive of lighting. In 1902, the rate was reduced from 24d., which had been imposed in 1901, to 22d., and still further reduced to 21d. in 1903, which was also levied from 1904 to 1915. The Act provided for a special local rate not exceeding 6d. in the £ of annual value, for any work for the particular benefit of one locality, but only if two-thirds of the ratepayers of such locality petitioned for the same, and occasional advantage of this power was taken for street-watering, though not of late years. As already mentioned, the amending Acts of 1908 and 1916 repealed the former provisions, and the rate for 1918 was 3½d. in the £ of unimproved capital value, which covers all services.

The following table shows the rate struck in the £, and the total amount levied, for various years from 1901 to 1918:—

Year.	Rate struck in the £.	Total Amount Levied.
1901	pence. 24 on A.A.V.	£ 195,164
1911	21 on A.A.V. 1 on U.C.V.	} 319,073
1916	4 on U.C.V.	
1917	3½ on U.C.V.	520,537
1918	3½ on U.C.V.	455,040
		465,988

SUBURBAN AND COUNTRY RATINGS.

The other municipal councils were formerly empowered to raise revenue by rates not exceeding 1s. in the £ for ordinary purposes and the same amount for special purposes, with 6d. in addition for street-watering. The amount of each rate was calculated upon the rental value, which was represented by nine-tenths of the fair average annual rental of all buildings and cultivated lands, or lands let for pastoral, mining, or other purposes, plus 5 per cent. of the capital value of the fee-simple of all unimproved lands.

Municipalities and shires which avail themselves of the provisions of the Country Towns Water and Sewerage Acts are empowered to levy a rate for each service not exceeding a maximum of 2s. in the £ on the assessed annual value of land and tenements, in addition to the ordinary municipal rates.

In order to aid municipalities in their formative stages, the 1897 Act provided for endowment by the State during a period of fifteen years, and this right has been preserved in the Act of 1919. In each of the first five years after incorporation, every municipality is entitled to a sum equal to the whole amount actually received from general rates; in each of the next succeeding five years, a sum equal to one-half; and in each of the next five years, a sum equal to one-fourth of such receipts. After the expiry of fifteen years, the State assistance ceases, and any further aid from the State is in the nature of a special grant. At the close of the year 1918 there were only three Municipalities entitled to the original statutory endowment.

Suburban and country municipalities are obliged to levy a general rate on the unimproved capital value of all ratable land, and may levy additional, special, local, or loan rates on either the unimproved or the improved capital

value. The only rates based on the annual value are those charged by the Metropolitan and the Hunter District Water Supply and Sewerage Boards.

As previously stated, the general rate must be not less than 1d. in the £ on the unimproved capital value of all ratable land, and the total amount to be derived from the general rate and additional rates taken must not exceed the amount yielded by a rate of 2d. in the £ on the unimproved value and 2s. in the £ on the assessed annual value of all ratable land. In 1918 only nine municipalities levied additional general rates, the remainder confining themselves to one general rate. The variation in the rates is rather remarkable, as in the suburbs of Sydney for 1918 they ranged from 2½d. to 5½d., and in the country from 1d. to 16d.

The majority of suburban councils in 1918 levied general rates between 4d. and 5d., the next in number being between 5d. and 6d., while in the country the highest proportion was between 4d. and 5d., the next in order being between 3d. and 4d., and between 5d. and 6d., followed by those between 2d. and 3. The councils which levied 6d. and over in the £ during 1918 were Aberdeen, Ballina, Bathurst, Braidwood, Mudgee, Murrurundi, Nyngan, and Warialda, each 6d.; Lambton, 7d.; Cobar and Murrumburrah, each 7½.; Scone and Wentworth, each 8d.; Broken Hill, 8½d.; Bourke, 10½d.; Hillgrove, 12d.; and Wrightville 16d. These rates are exclusive of the amounts levied on mines. None of the suburban councils levied 1d. in the £; but this rate was imposed in three country municipalities.

The first year in which the general rate was levied on the unimproved capital value was 1908, and a comparison of the general rate struck for various years since then, is shown below:—

Year	Number of Municipalities which levied a General Rate of—					
	1d. and under 2d.	2d. and under 3d.	3d. and under 4d.	4d. and under 5d.	5d. and under 6d.	6d. and over.
1908—						
Suburban Municipalities ...	1	11	17	9	3	...
Country " ...	31	36	42	26	9	5
1911—						
Suburban " ...	...	4	16	18	2	...
Country " ...	23	29	43	30	17	7
1916—						
Suburban " ...	...	2	6	26	5	1
Country " ...	13	17	42	42	17	13
1917—						
Suburban " ...	...	2	6	26	6	...
Country " ...	12	19	35	44	18	16
1918—						
Suburban " ...	...	2	5	25	8	...
Country " ...	11	18	27	44	27	17

One hundred and thirteen municipalities levied special, local, and loan rates on the unimproved capital value, ranging from ½d. to 24d. in the £, and twenty-four on the improved capital value, ranging from ¼d. to 2½d. in the £.

FINANCES.

The Local Government Act, 1919, prescribes that there must be a general fund in each area, to which must be paid the proceeds of all general and additional general rates, moneys received by way of grant, endowment, &c., from the Government, and miscellaneous income not required by law to be carried to other funds. The expenditure from the general fund must be on administration, health, roads, and other public services.

In addition, there must be a special fund for each special rate levied, and for each work or service carried on by the council in respect of which the special rate has been made, and the fund may be used only for the purposes of such work or service. A local fund also must be kept for each local rate levied, with restrictions similar to those in the case of special funds. The expenditure of the local fund is restricted to works in the specified portion of the area.

Where any borrowed money is owing by a council, a separate loan account must be kept for each work or service on which the amount has been spent. If the Loan fund has no revenue from rates, the attendant obligations, such as provision for the repayment of principal and interest, may be met by transfers from the General fund or other appropriate fund. The object of the loan, as a rule, determines the source from which the Loan fund shall obtain its necessary revenue. When the loans have been raised for general purposes, transfers are made from the General fund, and the profits of trading concerns provide for the disbursements of their corresponding loan funds.

The foregoing remarks have reference more particularly to those loan funds which must be kept in respect of loans raised before the present Act came into operation, that is to say, when the law did not require (as it does now) a loan rate to be levied to pay interest and provide for the extinction of each loan within a fixed period. It is apparent, therefore, that all new loans will be self-supporting, whether the undertakings are profitable or not. In these latter cases the councils may either use profits to swell the amount which is being provided for repayment, or retain them in the working accounts of the Special, Local, or Trading Funds.

The revenue of special and local funds may be used in a similar manner; for example, the Street Lighting Special Fund must provide the money to meet not only the ordinary cost of maintaining the street lighting for the year, but also the obligations of the Street Lighting Loan Fund; and similarly with regard to other Special and Loan Funds.

The Regulations under the Act prescribe the system of accounts to be adopted. The accounts must be "Income and Expenditure Accounts," kept by double entry, and each "Fund" must have a separate banking account. Thus there is shown for each General, Special, Local, Loan or Trading Fund a Revenue Account, or Profit and Loss Account, giving the total expenditure chargeable for the period, whether paid or unpaid, and the total income for the same period, whether received or outstanding. A balance-sheet is also required for each fund with appropriate liabilities and assets. Only "realisable" assets may be shown, so that the whole of the roads, bridges, drains, and other constructive work, are excluded.

CITY OF SYDNEY ACCOUNTS.

The Council of the City of Sydney conducts its affairs under the City Corporation Acts, and therefore is not bound by the provisions of the Local Government Act. The various accounts of the city were formerly kept on a "cash" basis, except those relating to the Electricity Fund, but from the year 1913 the system has been altered, and the Revenue and Capital transactions are shown separately in the same manner as those of all other Local Bodies. As details cannot in many instances be allocated to the headings of expenditure and income as set out in the system of accounts prescribed under the Local Government regulations, it is obvious, when discussing the financial transactions of the whole municipal area of the State, that an endeavour to collate similar information from two different sources would serve no useful purpose, and the figures for statistical comparison would be of doubtful value. For these reasons, the following particulars relating to

municipal accounts are divided into two parts, one dealing with the City of Sydney, and the other with the suburbs of Sydney and country municipalities.

City of Sydney—Receipts.

The receipts from the various funds, exclusive of the Electric Lighting Fund, in 1918, amounted to £720,352; the City Fund contributing £554,262, the Public Markets Fund, £87,370, and the Resumption Account £78,720. Although abstracts of receipts and disbursements in respect of the Public Markets Fund and the Resumption Account are shown separately in the city accounts, these funds are really subsidiary to the City Fund, their balances at the end of the year being transferred to the last-mentioned fund.

The following is a statement for the year 1918 of the receipts of the City Fund under appropriate headings:—

	£
General Purposes	468,413
Works	5,753
Health Administration	25,596
Public Services... ..	33,718
Municipal Property	14,213
Miscellaneous	6,569
Total	£554,262

City rates, £466,558, which include interest, form by far the greater part of the receipts under the heading "General Purposes." As provided by the amending Act of 1908, rating on the unimproved value of land was first brought into force in 1909, and that such a large amount should be realised with the minimum rating of 1d. in the £ shows the importance of the transfer of the State Land Tax as an addition to the city finances. Under the amending Act of 1915, the City rate is now levied on the unimproved capital value only.

City of Sydney—Disbursements.

The disbursements in 1918 amounted to £777,181, viz.: City Fund, £526,083; Public Markets Fund, £89,891; and Resumptions Account, £161,207. Shown under the same headings as the receipts, the following were the disbursements of the City Fund:—

	£
General Purposes	50,675
Works	121,718
Health Administration	133,780
Public Services... ..	80,801
Municipal Property	21,896
Miscellaneous (Interest, Sinking Fund, &c.)	117,213
Total	£526,083

Salaries, which amounted to £34,537, absorbed a very large share of the expenses for General Purposes. Of the sum spent on Public Works, street maintenance accounted for £59,981, footpaths for £20,364, and wood-paving for £34,251. On city cleansing £88,595 was expended, and this was the main item in Health Administration. The large amount shown under "Miscellaneous" includes the Annual Debenture indebtedness, which in 1918 was £46,806 for interest, commission, &c., and £16,869 for Sinking Fund contributions.

The receipts and disbursements of the Public Markets Fund were £87,370 and £89,891 respectively, the latter amount being inclusive of interest and sinking fund, showing a deficit of £2,521 on the year's transactions, which has been included in the City Fund. The Queen Victoria Markets brought in revenue to the extent of £16,461, or nearly 19 per cent. of the total; and the receipts from the Municipal Markets amounted to £29,223, or about one-third of the whole.

The receipts and disbursements of the Resumption Account were £78,720 and £161,207 respectively, showing a debit of £82,487 after paying interest and contribution to sinking fund, and this deficit was also transferred to the City Fund.

City Electricity Undertaking.

The next account to be considered is the Electricity Works Fund, and the expenditure and income for the year ended 31st December, 1918, are shown below:—

Expenditure.		Income.	
	£		£
Generation of Electricity ...	128,090	Private Lighting	257,351
Distribution	69,190	Public Lighting	53,297
Management	68,583	Power Supply	197,020
Bad debts written off ...	446	Rentals—Meters, Motors, Lamps, &c.	29,246
Total	£266,309	Miscellaneous	5,904
Balance carried to Net Revenue Account	276,509		
Total	£542,818	Total	£542,818

Generation forms the largest item of expenditure, accounting for 48·1 per cent. of the whole. Distribution cost 26·0 per cent., Management 25·7 per cent., and amounts written off 0·2 per cent.

The sales of current to the public for light and power amounted to £475,472, and to the Council £32,196.

The gross profit carried to the Net Reserve Account was £278,300, viz., £276,509 for 1918, as shown above, and £1,791 brought forward from 1917. The charges against the profits were:—Interest on Debentures and Overdraft, £104,169; Sinking Fund contribution, £18,980; Depreciation Reserve Account, £74,948; and written off, flotation expenses, &c., £4,543, making a total of £202,640. It will be seen from the foregoing that the net gain for the year 1918, after paying interest and Sinking Fund, was £75,660, which is carried forward to profit and loss account for 1918.

Below is a summary of the balance-sheet of the Electricity Works Fund on 31st December, 1918:—

Liabilities.	Assets.
	£
Debenture Loans... ..	2,076,744
Sinking Fund	164,037
Reserve Accounts	617,938
Sundry Creditors... ..	50,312
Deposits (Consumers) ...	21,571
Commonwealth Bank ...	461,968
Balance—Net Revenue Account	75,660
	£3,468,230
	£
Capital Expenditure — Land, Buildings, Machinery, Plant, &c.	2,997,912
Sinking Fund Investments— Commonwealth War Loan ...	69,360
New South Wales Treasury...	18,014
Debentures—Sydney Municipal Council	74,078
Stores, Materials, Cables, Coal, &c.	206,130
Sundry Debtors, Consumers' Balances, &c.	80,459
Other	22,277
	£3,468,230

The loan capital, which forms 59·9 per cent. of the liabilities, returned about 13 per cent. profit for the year; and consideration of the fact that the interest payments and Sinking Fund contribution for the year amounted to £123,149, that £74,948 was allowed for depreciation, and that the Sinking Fund was represented by an investment of £161,452 in Commonwealth War Loan, State Government Stock, and Sydney Municipal Council Debentures, will show that the finances of the Sydney Electricity Works Fund were in a healthy condition.

The following table serves to emphasise the rapid growth of the electric lighting undertaking. The figures quoted show the actual profit made each year, excluding the accumulated profits brought forward from previous years:—

		1906.	1911.	1916.	1917.	1918.
Quantity Sold	Units.	3,927,330	17,768,210	48,532,901	57,260,795	66,135,312
Expenditure ...	£	21,567	95,428	211,263	267,149	266,309
Income ...	£	40,984	172,693	433,996	464,968	542,818
Surplus ...	£	19,417	*94,861	222,733	197,819	276,509
Charges against Surplus	£	20,602	66,470	192,071	217,690	202,640
Net gain ..	£	(-) 1,185	28,391	30,662	(-) 19,871	73,869

* Includes surplus of a purchased company, £17,596.

The lights were used for the first time on 8th July, 1904, when parts of the city were illuminated, and since that date great progress has been made, and the public parks, as well as the remainder of the streets under the control of the council, are now included, and the majority of the suburbs are supplied from the city.

The following is a Summary of Liabilities and Assets of all funds of the City of Sydney as at 31st December, 1918:—

Liabilities.		Assets.	
	£		£
Debentures current ...	7,502,559	Bank Balances, Cr. ...	592,401
Bank Balances, Dr. ...	498,289	Landed Properties, Baths, and Sundrys ...	6,311,599
Sundry Creditors ...	786,331	Machinery, Plant, Furniture, Stores, &c. ...	2,709,221
Sinking Funds ...	731,732	Sundry Debtors ...	254,434
Reserves ...	1,145,922	Sinking Funds ...	721,121
	£10,664,813	Other Investments ...	259,728
Excess of Assets ...	456,161	Flotation Expenses and Sundrys	187,463
		Revenue Accounts ...	85,007
	£11,120,974		£11,120,974

Notwithstanding the large Loan indebtedness the assets exceed the liabilities by £456,161. It should be noted that the Debentures include £2,076,744 borrowed in connection with Electric Lighting, and £1,079,430 for Public Markets, and as the proceeds of those loans have been spent on reproductive municipal works, such works should provide the annual interest charges and sinking fund contributions. The Electricity Works Fund is quite self-supporting; but the deficiency in the Public Markets Fund becomes a charge on the city rates. Landed properties, baths, &c., which comprise about 57 per cent. of the assets, include such large

LOCAL GOVERNMENT.

243

items as Public Markets, £1,416,089; Town Hall, &c., £385,156; Resumptions, £2,952,707; Electric Light, Land, and Buildings, £544,413. The accumulated Sinking Fund, £721,121, as against a Debenture Debt of £7,502,559, must be regarded as a satisfactory cover.

PROGRESS OF SYDNEY.

The following table shows the progress of the City of Sydney during the five years ended 1918:—

Particulars.	1914.	1915.	1916.	1917.	1918.
Area Acres	3,327	3,327	3,327	3,327	3,327
Population ... No.	110,700	104,200	106,000	106,000	106,000
	£	£	£	£	£
Unimproved Capital Value	27,395,826	27,226,233	31,168,904	31,130,368	31,880,295
Improved Capital Value ...	75,786,580	78,580,300	80,264,720	81,976,260	82,027,200
Assessed Annual Value ...	3,271,102	3,391,759	3,466,550	3,533,779	3,691,224
City Fund—					
Income—Rates ...	285,024	295,529	525,869	456,612	466,558
Land Tax ...	170,653	168,703			
All other sources ...	62,255	76,962	80,790	74,195	87,704
Total ...	517,932	541,194	606,659	530,807	554,262
Expenditure	419,970	442,303	454,711	493,903	526,083
Public Markets Fund—					
Income	52,055	69,924	72,362	80,583	87,370
Expenditure	71,827	76,640	88,654	88,860	89,891
Resumption Account—					
Income	64,098	75,470	84,968	85,048	78,720
Expenditure	114,596	127,448	140,574	160,585	161,207
Electricity Works Fund—					
Income	350,146	388,559	433,996	464,968	542,818
Expenditure	287,296	323,800	403,334	484,839	463,949
Total Income—All Funds	984,231	1,075,147	1,197,985	1,161,406	1,263,170
Total Expenditure—All Funds	893,689	970,191	1,087,273	1,228,187	1,246,130
Excess of Income	90,542	104,956	110,712	(—) 66,781	17,040
Liabilities—All Funds ...	8,142,616	8,877,853	9,751,011	10,469,229	10,664,813
Assets—All Funds	8,397,918	9,124,125	10,005,232	10,734,793	11,120,974
Excess of Assets	255,302	246,272	254,221	265,564	456,161
Loans outstanding	6,163,800	6,715,100	7,050,100	7,478,960	7,502,558
Sinking Fund	471,403	550,633	637,313	729,447	821,121

(—) Denotes excess of Expenditure.

SUBURBS OF SYDNEY AND COUNTRY MUNICIPALITIES.

Expenditure.

The net expenditure during 1918 by the various municipalities under the Local Government Act amounted to £1,863,149, which was £120,954 less than the income. The following statement shows the expenditure allocated to the various funds in 1908 and 1918.

Funds.	1908.			1918.		
	Suburbs of Sydney.	Country.	Total.	Suburbs of Sydney.	Country.	Total.
	£	£	£	£	£	£
General Fund	348,765	330,327	679,092	809,400	518,010	1,327,410
Trading Accounts	7,078	50,167	57,245	...	147,806	147,806
Special and Local Funds	4,856	67,629	72,485	56,027	320,571	376,598
Loan Funds	33,288	25,133	58,421	45,967	45,407	91,374
Reserves and Renewals Account ... ..	...	...	...	872	12,676	13,548
Gross Expenditure	393,987	473,256	867,243	912,266	1,044,470	1,956,736
Deduct Transfers... ..	44,358	29,657	74,015	49,615	43,972	93,587
Net Expenditure	349,629	443,599	793,228	862,651	1,000,498	1,863,149
Per head of Population	14s. 7d.	19s. 11d.	17s. 2d.	£1 5s. 8d.	£2 3s. 2d.	£1 12s. 10d.

The greatest expenditure was naturally from the General Fund, which in 1918 accounted for 71 per cent. of the whole. The trading concerns of the municipalities are gas and electricity; the special and local funds relate to water supply, sewerage, sanitary and garbage, street-watering, street-lighting, old loans interest, and other miscellaneous matters.

The Act provides that, except when exemption has been granted, the cost of night-soil and garbage removal must be paid out of a Special Fund, and not out of the General Fund; and the cost of lighting streets and roads must also be defrayed from a Special Fund. When, however, the whole area is within 20 miles of the General Post Office, or when the whole area is benefited by the expenditure on street lighting, the council, in its discretion, may pay such costs out of the General Fund. The effect of this provision is reflected clearly in the figures given in the next table, which show an increased expenditure on Health Administration and Public Services.

Details of the expenditure from the General Fund are shown below:—

Head of Expenditure.	1908.			1918.		
	Suburbs of Sydney.	Country.	Total.	Suburbs of Sydney.	Country.	Total.
	£	£	£	£	£	£
General Purposes—						
Rates and interest abandoned ... ..	...	...	...	170	284	454
Administrative expenses	45,187	60,385	105,572	60,641	66,911	127,552
Public Works	150,404	115,036	265,440	505,593	294,355	799,948
Health Administration ...	39,930	68,709	108,639	88,362	51,192	139,554
Public Services	59,766	43,219	102,985	108,407	58,072	166,479
Municipal Property	6,591	7,875	14,466	21,994	32,314	54,398
Transfers	44,358	29,657	74,015	18,430	11,515	29,945
Other	2,529	5,446	7,975	5,803	3,367	9,170
Total expenditure	348,765	330,327	679,092	809,400	518,010	1,327,410

The proportion of expenditure under each head to the total expenditure was as follows:—

Head of Expenditure.	1908.			1918.		
	Suburbs of Sydney.	Country.	Total.	Suburbs of Sydney.	Country.	Total.
General Purposes—	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.
Rates and interest abandoned	...	...	...	...	0·1	...
Administrative Expenses ...	13·0	18·3	15·5	7·5	12·9	9·6
Public Works	43·1	34·8	39·1	62·5	56·8	60·3
Health Administration	11·5	20·8	16·0	10·9	9·9	10·5
Public Services	17·1	13·1	15·2	13·4	11·2	12·5
Municipal Property	1·9	2·4	2·1	2·7	6·2	4·1
Transfers	12·7	8·9	10·9	2·3	2·2	2·3
Other	0·7	1·7	1·2	0·7	0·7	0·7
Total	100·0	100·0	100·0	100·0	100·0	100·0

In 1918, of the expenditure by municipalities from the General Fund, 9·6 per cent. was spent on administrative expenses, and 60·3 per cent. on public works. Of the administrative expenses, salaries were the largest, and the actual and relative expenditure under each heading is shown below. The total amount for all funds was £157,797, of which 40 per cent. was incurred in the suburbs, and 60 per cent. in the country districts. Salaries comprised 51 per cent. of the total:—

Services.	Total Administration Expenses.			Proportion to Total.		
	Suburbs.	Country.	Total.	Suburbs.	Country.	Total.
	£	£	£	per cent	per cent.	per cent.
Salaries	32,038	48,405	80,443	50·2	51·5	51·0
Elections (including Rolls) ...	279	616	895	0·4	0·7	0·6
Office Expenses (Rent, Lighting, &c.)	3,917	7,291	11,208	6·1	7·8	7·1
Printing, Stationery, Advertising, &c.	10,802	15,139	25,941	16·9	16·1	16·4
Audit Fees	1,630	4,010	5,640	2·6	4·3	3·6
Valuation Fees	3,595	3,319	6,914	5·6	3·5	4·4
Law Costs	3,523	2,924	6,447	5·6	3·1	4·1
Mayoral Allowance	2,718	5,098	7,816	4·3	5·4	4·9
Sundries	5,326	7,167	12,493	8·3	7·6	7·9
Total... ..	63,823	93,969	157,797	100·0	100·0	100·0

The ratios of Administrative expenses to the total Income and Expenditure for the year ended 31st December, 1918, are given in the subjoined statement, the various districts being shown separately:—

District.	Gross Income from all sources.	Gross Expenditure on all services.	Administrative Expenses on all funds.		
			Total amount.	Proportion to—	
				Gross Income.	Gross Expenditure.
	£	£	£	per cent.	per cent.
City of Sydney	1,263,170	1,246,130	50,675	4·01	4·06
Suburbs	935,108	912,266	63,823	6·83	7·00
Metropolis	2,198,278	2,158,396	114,503	5·21	5·31
Country	1,141,795	1,043,633	93,969	8·23	9·00
Total	3,340,073	3,202,029	208,472	6·24	6·51

The relative cost of administration is largest in the country, being 9 per cent. of the total expenditure; the suburban municipalities spend only 7 per cent. under the same heading. The high relative cost of administration in the country is due, no doubt, to the sparse population and small revenue of many of the municipalities, as in such cases the expenses on account of salaries, &c., would naturally be larger proportionately than in the more closely-settled localities in the City and suburbs.

Public services for 1918 include—Pounds, £4,030; street-watering, £14,808; street lighting, £83,732; and all other services, £63,909. The greatest part of the expenditure on Public Works was for roads, streets, &c., as will be seen below:—

Services.	1908.			1918.		
	Suburbs of Sydney.	Country.	Total.	Suburbs of Sydney.	Country.	Total.
	£	£	£	£	£	£
Supervision	*	*	*	16,726	10,301	27,027
Roads, streets, culverts, &c....	147,472	108,316	255,788	443,533	252,149	695,682
Bridges	148	2,717	2,865	1,625	7,406	9,031
Drains, sewers, &c. ...	1,583	2,028	3,611	21,134	6,842	27,976
Ferries, wharfs, and jetties	986	1,801	2,787	5,539	3,338	8,877
Sundries	215	174	389	17,036	14,319	31,355
Total	150,404	115,036	265,440	505,593	294,355	799,948

* Included in Roads, Streets, &c.

Of the expenditure on roads, streets, &c., in 1918, the amount spent on maintenance, renewals, and repairs was £350,102; £98,660 was expended on construction, £59,752 on street and gutter cleaning, £61,927 on kerbing and guttering, £83,915 on footpaths and gutter bridges, £32,218 for interest on loans, and £9,108 on sundries.

The Trading Accounts, which relate to the supply of gas or electricity, will be treated later under those headings, and the special Water and Sewerage Funds will also be discussed separately.

INCOME.

The net income in 1918 of all the municipalities brought under the provision of the Local Government Act was £1,984,103, including £36,437 received as endowments or grants from the Government. Under the same funds as shown in the expenditure, the income for 1908 and 1918 was as follows:—

Funds	1908.			1918.		
	Suburbs of Sydney.	Country.	Total.	Suburbs of Sydney.	Country.	Total.
General Fund	£ 382,739	£ 360,039	£ 742,778	£ 789,773	£ 517,959	£ 1,307,732
Trading Accounts	6,863	59,814	66,677	.....	190,568	190,568
Special and Local Funds	3,192	70,312	73,504	61,536	334,771	396,307
Loan Funds	43,601	39,082	82,683	79,918	65,712	145,630
Reserves and Renewals Account ... ..	.....	.....	.....	3,881	33,572	37,453
Gross Income	436,395	529,247	965,642	935,108	1,142,582	2,077,690
Deduct Transfers... ..	44,358	29,657	74,015	49,615	43,972	93,587
Net Income	392,037	499,590	891,627	885,493	1,098,610	1,984,103

Details of the items of the General Fund for 1908 and 1918 are as follows:

Source of Income.	1908.			1918.		
	Suburbs of Sydney.	Country.	Total.	Suburbs of Sydney.	Country.	Total.
General Purposes—	£	£	£	£	£	£
Rates levied (including interest)	327,255	235,396	562,651	671,080	393,758	1,064,838
Government Endowments, &c.	606	4,791	5,397	... ..	1,734	1,734
Sundries	4,398	4,932	9,330	8,809	9,137	17,946
Public Works*	18,247	19,605	37,852	59,303	41,207	100,510
Health Administration*	19,462	60,069	79,531	19,113	13,874	32,987
Public Services*	2,678	16,765	19,443	11,779	14,908	26,687
Municipal Property	7,306	17,516	24,822	17,476	35,493	52,969
Miscellaneous	2,787	965	3,752	2,213	7,848	10,061
Total	382,739	360,039	742,778	789,773	517,959	1,307,732

* Including Government grants.

To the income from public works and other services in 1918 the Government contributed £28,772 as grants for roads, streets, &c., £321 for ferries, £2,610 for Parks and Reserves, £2,810 for portion of sanitary inspectors' salaries, and £190 for other purposes, making a total of £34,703.

Stating the receipts under each head as a percentage of the total income of the General Fund, the following results are obtained:—

Source of Income.	1908.			1918.		
	Suburbs of Sydney.	Country.	Total.	Suburbs of Sydney.	Country.	Total.
General Purposes—	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.
Rates levied (including interest)	85·6	65·4	75·7	85·0	76·0	81·4
Government Endowments, &c.	0·2	1·3	0·8	...	0·3	0·1
Sundries	1·1	1·4	1·3	1·1	1·8	1·4
Public Works*	4·8	5·4	5·1	7·5	8·0	7·7
Health Administration*	5·1	16·7	10·7	2·4	2·7	2·5
Public Services*	0·6	4·6	2·6	1·5	2·9	2·0
Municipal Property	1·9	4·9	3·3	2·2	6·8	4·1
Miscellaneous	0·7	0·3	0·5	0·3	1·5	0·8
Total	100·0	100·0	100·0	100·0	100·0	100·0

* Including Government grants.

The bulk of the general income was received from rates, the average in 1918 for all municipalities being 81·4 per cent., the proportion in the suburbs being 85 per cent., and in the country 76 per cent. The next important source of income was from Public Works, but it should be remembered that about 30 per cent. of the contribution was provided by the Government as grants. By the transfer of the Sanitary and Garbage Services from the General Fund, as provided by the Act, Health Administration lost its most important factor of revenue, contributing only 2·5 per cent. of the total for 1918 as against 10·7 per cent. in 1908. The difference is still more marked in the country, where the proportion was 16·7 per cent. in 1908 and 2·7 per cent. in 1918. In the suburbs, the Metropolitan Board of Water Supply and Sewerage levies charges in addition to those made by the municipalities, reference to which is made later on.

SPECIAL AND LOCAL FUNDS.

The expenditure and income of the Special and Local Funds for the years 1908 and 1918 are shown in the following table:—

Funds.	1908.			1918.		
	Suburbs of Sydney.	Country.	Total.	Suburbs of Sydney.	Country.	Total.
Expenditure—	£	£	£	£	£	£
Water Supply ... ..	...	51,139	51,139	...	111,619	111,619
Sewerage ... ..	...	4,468	4,468	...	18,439	18,439
Sanitary and Garbage ... ..	...	...	...	44,088	153,668	197,756
Street Lighting	2,270	6,342	8,612	163	29,459	29,622
Street Watering	1,887	208	2,095	468	608	1,076
Old Loans Interest	327	2,182	2,509	1,867	1,060	2,927
Cemetery ... ..	...	...	...	7,980	...	7,980
Miscellaneous	372	3,290	3,662	1,461	5,718	7,179
Total	4,856	67,629	72,485	56,027	320,571	376,598
Income—						
Water Supply ... ..	...	53,991	53,991	...	114,048	114,048
Sewerage ... ..	...	3,159	3,159	...	24,152	24,152
Sanitary and Garbage ... ..	...	...	...	46,747	158,838	205,585
Street Lighting ... ..	...	5,996	5,996	146	29,835	29,981
Street Watering	2,724	308	3,032	260	526	786
Old Loans Interest	442	2,217	2,659	1,905	1,323	3,228
Cemetery ... ..	...	...	...	10,096	...	10,096
Miscellaneous	26	4,641	4,667	2,382	6,049	8,431
Total	3,192	70,312	73,504	61,536	334,771	396,307

The Sanitary and Garbage fund is the most important of those mentioned above, both in the suburban and country districts. The Water and Sewerage Services are next in order, as far as the country is concerned, the suburbs of Sydney being supplied by the Metropolitan Board of Water Supply and Sewerage.

BALANCE-SHEET.

The financial position of the municipalities, at 31st December, 1908 and 1918, is shown by the following statement of liabilities and assets of the various funds:—

Funds.	1908.			1918.		
	Suburbs of Sydney.	Country.	Total.	Suburbs of Sydney.	Country.	Total.
Liabilities—	£	£	£	£	£	£
General Fund	60,468	97,884	158,352	226,130	115,038	341,168
Trading Accounts ...	2,337	22,492	24,829	...	97,144	97,144
Special and Local Funds	254	766,653	766,907	12,429	1,602,986	1,615,415
Loan Funds	784,585	628,341	1,412,926	809,708	587,087	1,396,795
Reserves and Renewals Account ... ..	...	...	...	3,142	26,067	29,209
Total	847,644	1,515,370	2,363,014	1,051,409	2,428,322	3,479,731
Assets—						
General Fund	230,562	510,251	740,813	433,676	546,097	979,773
Trading Accounts ...	1,890	65,151	67,041	...	226,400	226,400
Special and Local Funds	2,639	791,382	794,021	46,935	1,801,104	1,848,039
Loan Funds	153,698	402,854	556,552	165,368	612,080	777,448
Reserves and Renewals Account ... ..	...	...	...	3,142	26,067	29,209
Total	388,789	1,769,638	2,158,427	649,121	3,211,748	3,860,869

As already stated, every municipality must keep a general fund, the liabilities of which consist mostly of amounts due to temporary and other loans, and sundry creditors, the latter being chiefly advances from the State Departments; but the assets are more than sufficient to meet them, and in only eight municipalities in 1918 was there an excess of liabilities.

The principal asset of the general fund consists of land and buildings, which were at the end of 1918 valued at £501,061, or 51.1 per cent. of the total assets. Outstanding rates and interest amounted to £151,550, while bank balances and cash in hand were equal to £73,252.

LOANS.

Under the Local Government Act a municipality may borrow to an amount which, with existing loans, does not exceed 20 per cent. of the unimproved capital value of ratable lands. If any municipality has exceeded the statutory maximum it cannot borrow further until the total amount owing falls below the limit.

The total amount of loans raised during 1918 was £583,945, including £436,350 borrowed by the City of Sydney, £80,550 by the Suburbs, and £67,045 by Country municipalities. The sinking funds of the City of Sydney were increased by £91,673; while a decrease of £851 in the Suburbs and of £780 in the Country is shown, due to the application of the funds in redemption of the loans. Apart from the liability to the State under the Country Towns Water and Sewerage Act, the total amount of loans outstanding at the close of the year was £9,089,784, and towards this amount there was at the credit of the sinking funds a sum of £853,819.

Rates of interest ranged from 3½ per cent., which was carried by £170,904, to 7 per cent., which, however, was payable only on £1,400, and the amount

paid and due as interest on loans during the year was £360,768. The total indebtedness was £9,089,784, bearing an average rate of interest of 3·97 per cent., viz., 3·95 per cent. on the loans of the City of Sydney, 4·05 per cent. on those of the suburban municipalities, and 4·05 per cent. on those of the country municipalities.

The average rate of interest payable on all loans is hardly, however, an index of the true value of municipal debentures to the investors, as out of a total debt of £9,089,784, the sum of £4,755,911 pays interest at 4 per cent., and £2,124,400 at 3½ per cent., and of these amounts the metropolitan municipalities are responsible for £4,699,583 at 4 per cent., and the whole floated at 3½ per cent. The country municipalities borrowed £158,589 at 4½ per cent., £145,403 at 5 per cent., and £94,304 at 5½ per cent.

The total debt per head of population in municipalities amounted to £7 6s. 6d., without allowance being made for sinking funds, while the yearly charge for interest is 5s. 10d. per head. These sums, compared with the resources of the municipalities, appear by no means formidable.

The following are the outstanding loans on 31st December, 1918, and the sinking funds set apart to meet them; the New South Wales figures include £10,314 raised in Victoria:—

Division.	Municipal Loans Outstanding.			Sinking Funds.	Interest paid and due on Loans, 1918.
	New South Wales.	London.	Total.		
	£	£	£	£	£
Sydney—City	6,702,558	800,000	7,502,558	821,121	296,490
„ Suburbs	931,795	...	931,795	5,922	37,703
Country	634,972	20,459	655,431	26,776	26,570
Total	£ 8,269,325	820,459	9,089,784	853,819	360,768

Temporary loans, amounting altogether to £208,513, which bear interest at current bank rates, and loans payable on demand amounting to £87,998, are included in the above table.

The loans are redeemable at various periods after 1918, and the amount to be repaid in London was £820,459, or about 9 per cent. of the total, and the amount of debentures held locally was £8,269,325.

SHIRES.

From the 1st January, 1907, 135 shires worked under the Local Government Act, 1906, but the number was raised to 136 during 1915, by the establishment of the Nambucca Shire, which was separated from Bellingen. Wunnamurra Shire was amalgamated with Jerilderie Municipality on 12th December, 1918, and is now called Jerilderie Shire. These shires are all in the Eastern and Central Land Division, 98 being in the former, and 38 in the latter.

The shires vary in area from 36 square miles in Ku-ring-gai, immediately north of the City of Sydney, to 5,730 square miles in Lachlan, the headquarters of which are at Condobolin, and the smallest shires are in the most closely settled parts of the State.

A general rate, not less than 1d. in the £, and not more than 2d. in the £, may be levied by shires on the unimproved capital value of all ratable land. If, however, the general rate of 1d. is more than sufficient to meet requirements it may be reduced, and in 1918 eight shires levied a general rate less than 1d.

The general rates levied in 1918 and the unimproved capital value in each case were as follow:—

No. of Shires.	General Rate levied in £.	Unimproved Capital Value.
	d.	£
1	$\frac{1}{2}$	1,280,356
2	$\frac{3}{4}$	2,494,332
3	$\frac{1}{2}$	3,508,282
2	$\frac{3}{4}$	1,925,847
15	1	19,892,925
9	$1\frac{1}{4}$	9,675,613
1	$1\frac{1}{2}$	1,125,000
24	$1\frac{3}{4}$	20,452,016
3	$1\frac{1}{2}$	2,573,867
76	2	46,204,977
136	...	109,133,215

The number of shires which levied general rates at each individual rate from 1907 to 1918 is shown in the following table:—

General Rate levied in £.	Number of Shires.				
	1907.	1911.	1916.	1917.	1918.
d.					
$\frac{1}{2}$	1	1	1	1	1
$\frac{3}{4}$	1	3	2	2	2
$\frac{1}{2}$	3	2	5	4	3
$\frac{3}{4}$	...	...	...	...	2
1	104	64	20	18	15
$1\frac{1}{4}$	...	3	1	2	...
$1\frac{1}{2}$	10	23	15	11	9
$1\frac{3}{4}$	...	1	...	1	1
$1\frac{1}{2}$	12	22	33	27	24
$1\frac{3}{4}$	...	1	...	...	...
$1\frac{1}{2}$	...	...	6	4	3
$1\frac{3}{4}$	...	...	...	...	...
2	3	14	53	66	76
Total ...	134	134	136	136	136

The unimproved capital value of shires from 1909 to 1918 is shown below. The total increase during the period mentioned was £25,668,769, or over 27 per cent.

Year.	Unimproved Capital Value.	Year.	Unimproved Capital Value.
	£		£
1909	83,464,446	1914	103,451,177
1910	89,935,912	1915	104,745,633
1911	94,189,939	1916	105,697,791
1912	97,661,454	1917	107,695,315
1913	99,452,191	1918	109,133,215

It is not possible to give the improved capital value, or the assessed annual value, as the shires are not compelled to make those valuations, and only a few record them.

In addition to the general rates, additional general, special, and local rates were also levied by thirty-five shires, ranging from one-tenth of a penny to 5d. in the £.

The purposes for which these special and local rates were imposed were:— Roads and street improvements and maintenance, footpaths, kerbing and guttering, water supply, drainage, street lighting, street watering, bridges, parks, fire brigade, and foreshores improvement.

The total amount of general and additional general rates levied was £708,449, and of special and local rates £21,515. These figures represent the rates actually levied in respect of the year 1918, and do not agree with the amount shown later, the difference being due to the inclusion of interest on unpaid rates.

In many shires the general rate was not sufficient to meet the requirements, and the State granted subsidies in these cases. Endowments are fixed every third year, and are determined according to the extent of the shire, the probable revenue from a rate of 1d. in the £, the necessary expenditure, the extent of roads and other public works to be constructed and maintained, and other matters. The endowment is paid on the general rates actually collected in the preceding year. There are six classes into which the shires are divided for endowment purposes, the classification for the three years 1916-18 being as follows:—

52 shires in 1st class	receive no endowment.
63 " 1st " "	from 1s. to 10s. in the £ on General Rate.
5 " 2nd " "	15s. in the £ on General Rate.
8 " 3rd " "	20s. " "
4 " 4th " "	25s. " "
3 " 5th " "	30s. " "
1 shire in 6th " "	receives 40s. " "

Under the provisions of the Act of 1919 these rates remain in force until December, 1921.

The highest endowment allotted in 1918 was 40 shillings in the £ to Bellingen shire, but on the whole the endowments are considerably lower than those paid in the preceding three years. In 1918 the Government paid £162,188 as endowment to the shires, and a further sum of £137,717 was paid as grants for special purposes, making the total subvention from the State £299,905.

EXPENDITURE.

The following statement shows the expenditure of shires during 1918 in comparison with the year 1908.

Particulars.	1908.		1918.	
	Expenditure.	Per cent.	Expenditure.	Per cent.
	£		£	
General Fund—				
Rates and interest abandoned ...	...	...	1,016	0·1
Administrative expenses ...	116,932	17·7	39,391	8·5
Public works ...	516,072	78·7	916,351	78·7
Health administration ...	4,604	0·7	9,292	0·8
Public services ...	11,703	1·8	19,370	1·7
Shire property ...	397	0·1	16,884	1·4
Miscellaneous ...	6,453	1·0	14,510	1·2
Special and local funds ...	58	...	79,816	6·9
Loan Funds ...	...	...	8,229	0·7
Total Expenditure ...	£ 656,219	100·0	1,164,859	100·0

The administrative expenses in 1918 were £99,391, or 8·5 per cent. of the total expenditure. Of the administrative expenses, £46,829 were on salaries, £17,087 on advertising, stationery, printing, etc., £4,671 on valuation fees, and £14,757 on presidents' allowances and councillors' travelling expenses. It should be mentioned, however, that the amount stated for salaries (£46,829), although charged to the general account, includes payments for the special and local services. The gross administrative expenses were £106,164, so that salaries actually comprised about 44 per cent. of the total cost. The salaries paid ranged from £125 to £965, the average being £344, and all salaried officers are included, in addition to the shire clerks, but engineers' salaries are charged to works. The expenditure on works accounted for 78·7 per cent. of the total. The principal expenditure was £764,177 on roads, streets, footpaths, kerbing and guttering, culverts, etc., of which £423,116 were on maintenance, repairs, and renewals, £337,225 on construction, and £3,836 on sundries. For other public works—bridges, punts, ferries, wharfs, etc.—£44,666 were spent on maintenance and repairs, and £26,499 on construction. Supervision expenses (salaries of engineers, etc.) amounted to £55,023.

The total receipts from all sources were £1,161,093, and as the administrative expenses, as already stated, amounted to £99,391, the cost of collection amounted to 8·6 per cent.

INCOME.

The principal heads of income of shires in 1918 were as follow, and for purposes of comparison the 1908 figures are attached.

Particulars.	1908.		1913.	
	Income.	Per cent.	Income.	Per cent.
General Fund—	£		£	
General rates (including interest) ...	382,336	61·0	710,983	61·2
Government endowment ...	162,859	26·0	162,188	14·0
Public works ...	65,781	10·5	157,737	13·6
Health administration ...	2,979	0·5	3,865	0·3
Public services ...	7,038	1·1	11,487	1·0
Shire property ...	517	0·1	14,258	1·2
Miscellaneous ...	4,198	0·7	7,427	0·6
Special and local funds ...	1,160	0·1	84,460	7·3
Loan funds ...	.....	...	8,688	0·8
Total Income ...	£ 626,868	100·0	1,161,093	100·0

The income from public works in 1918 increased largely compared with 1908, owing to the fact that the Government grants in aid of roads, streets, bridges, etc., in the last-mentioned year were very large. The greater revenue from Government endowment in 1908 is due to the higher rates granted in the earlier years. The income from special and local funds has increased, owing principally to the establishment of the Sanitary and Garbage Fund, and to the expansion in the transactions of the other funds.

Of the total income in 1918, Government assistance, exclusive of grants for public works, provided 14·0 per cent., as against 26·0 per cent. in 1908. The principal items in public works were contributions to roads, bridges, etc., £16,540, Government grants for roads, etc., £124,734; and receipts from ferries, which, including Government grants, amounting to £11,169, were £12,598. The principal item in public services was rent, etc., from public watering places, £8,649. The income derived from special and local funds, consisting of the proceeds of special and local rates and sanitary and garbage fees, claimed 7·3 per cent. of the total.

BALANCE-SHEET.

The financial position of the shires on 31st December, 1918, was strong, as there was an excess of assets of £402,243. The combined balance-sheet of the shires on 31st December, 1918, appears as follows:—

Liabilities.		Assets.	
General Fund—	£	General Fund—	£
Temporary Loans	73,319	Outstanding Rates	54,880
Due to Trust Fund	227	Stores and Materials	19,147
Sundry Creditors	47,236	Bank Balance and Cash	109,324
Due on Contracts	2,120	Sundry Debtors	19,965
Other	900	Land and Buildings	122,354
		Plant and Property	163,749
		Furniture, &c.	15,415
Total, General Fund	£123,802	Other	257
Special or Local Funds	27,263		
Loan Funds... ..	28,756	Total, General Fund	£505,091
		Special or Local Funds	66,379
Total, all Funds... ..	£179,821	Loan Funds... ..	10,594
Excess of Assets	402,243		
		Total	£582,064
Total	£582,064		

It will be observed that a large proportion of the assets of the General Fund—£109,324, or nearly 19 per cent.—consists of cash in bank or in hand. The liabilities of the Special or Local funds consist for the most part of amounts due to general and other funds, and sundry creditors; while the assets comprise land, buildings, outstanding fees and rates, and bank balances.

LOANS.

The Local Government Act, 1919, empowers Shire Councils to borrow money, not exceeding in the aggregate a sum equal to thrice the amount of the annual income. The loans may be secured and charged upon the income of the general funds of the shire, and are repayable in annual or half-yearly instalments of principal and interest. At the 31st December, 1918, there were twelve shires which had loans current, viz., Ashford, Bannockburn, Coolamon, Culcairn, Hornsby, Ku-ring-gai, Kyeamba, Murrungal, Nepean, Sutherland, Urana, and Warringah. The original amount of the loans was £45,213, and £17,262 had been paid off, leaving a balance due of £27,951. The loans were raised for the purpose of making improvements to roads, footpaths, etc., except those of Ashford and Hornsby, where the amounts were floated for the construction of office premises, and of Sutherland for the building of a wharf at Cronulla. In addition to the foregoing fixed loans, ninety-five shires had temporary loans amounting, with accrued interest, to £134,946 on the 31st December, 1918.

TAXATION BY LOCAL GOVERNING BODIES.

The total revenue collected by all the local governing bodies from rates and charges amounts to £3,681,154, equal to £1 18s. 5d. per head of the population residing in the taxable districts. This includes £1,708,572, rates collected by the municipalities; £729,964, rates collected by shires; and

£1,242,618, rates collected by the various Water and Sewerage Boards referred to later. The distribution of the total amount is as follows:—

Local Bodies.	General Rates.	Special and Loan Rates.	Total.	Per head of population living in local areas.
	£	£	£	£ s. d.
Municipalities (including City of Sydney)	1,523,755	184,817	1,708,572	1 7 7
Shires	708,449	21,515	729,964	1 1 8
Metropolitan water and sewerage charges	1,124,693	...	1,124,693	1 2
Hunter District water and sewerage charges.	117,925	...	117,925	0 19 7
Total	£ 3,474,822	206,332	3,681,154	1 18 5

WATER SUPPLY FOR COUNTRY TOWNS.

The Country Towns Water Supply and Sewerage Acts of 1880, 1894, and 1905 were passed with the object of assisting councils to construct general systems of water supply and sewerage, and these Acts were repealed by the Local Government Act of 1919, but all liabilities to the Government incurred under the former Acts are not affected, and all by-laws made are still in force. At the end of June, 1919, fifty-six municipal councils had availed themselves of the privilege offered as regards the water service, and works were under construction in other municipalities.

The amount required for carrying out the works is advanced by the State. The Council, however, has the option of supervising and constructing the works, failing which the Government undertakes these duties. The sum advanced is repayable by instalments, with interest at a rate to be fixed, on the unpaid balances, the first payment to be made twelve months after the date of the transfer of the works, and the number of yearly repayments was fixed at a maximum of 100. The Act also provides for the issue of licenses, for the recovery of rates, for making by-laws for the assessment of lands, and for other purposes. The total amount of debts owing by municipalities on the 30th June, 1919, was £1,336,820, and the aggregate annual instalment repayable was £49,352. The last-mentioned sum is approximate only, as in a few cases the payment has not been definitely fixed.

The combined revenue accounts of the municipalities which maintain waterworks, for the year ended 31st December, 1918, are shown below:—

Expenditure.				Income.			
£				£			
Management ... ..	...	...	16,696	Rates levied... ..	...	...	75,983
Working and maintenance	...	...	40,745	Meter rents ... ..	...	...	1,362
Repairs and renewals	...	...	7,639	Water sales ... ..	...	...	29,873
Interest payable to Government...	...	...	39,822	Garden charges, &c.	...	...	6,830
Other... ..	...	...	6,717				
Balance ... ..	...	...	2,429				
Total ... ..	...	...	£114,048	Total ... ..	...	...	£114,048

With regard to the expenditure, management charges accounted for 15 per cent., working and maintenance for 36·3 per cent., repairs and renewals 6·9 per cent., interest payable to Government 35·7 per cent., and miscellaneous items 6·1 per cent.

The income figures show that rates contributed 66·8 per cent. of the receipts, meter rents 1·2 per cent., water sales 26·2 per cent., and garden charges, &c., 5·8 per cent.

The combined balance-sheet on 31st December, 1918, was as follows:—

Liabilities				Assets.			
			£				£
Capital Debt due to Government	1,115,220			Waterworks—plant, buildings, &c.	...	...	1,183,362
Interest due to Government	...	35,649		Outstanding rates...	...	...	20,221
Sundry creditors	...	29,018		Bank balances and cash in hand	...	...	20,066
Excess of Assets	...	96,664		Stores and materials	...	...	5,589
				Sundry debtors	...	...	30,611
				War Loans, Fixed deposits (including interest)	...	...	16,702
Total	...	...	£1,276,551	Total	...	...	£1,276,551

The total amount advanced by the Government practically represents the present value of the services; but where the works were not constructed by the Government, the value is included as an asset of the loan fund. The amount of rates outstanding on the date mentioned was £20,221, while the bank balances, cash in hand, investment in war loans, and fixed deposits were £36,768. On the whole, the assets exceeded the liabilities by £96,664.

SEWERAGE AND DRAINAGE WORKS.

Only eighteen municipal councils have taken advantage of the Act providing for the construction of sewerage and drainage works in country towns, and the capital debt and annual repayments on 30th June, 1919, were, £389,878 and £16,434 respectively. Other sewerage systems are in existence in several places, but they have been constructed apart from the Act, and, with few exceptions, the operations have been on a minor scale.

Some of the municipalities do not levy special sewerage rates, and therefore do not keep a separate account. The revenue accounts of the other municipalities for the year ended 31st December, 1918, are shown below:—

Expenditure.				Income.			
			£				£
Management	...	...	2,916	Rates levied	...	...	22,527
Working and maintenance	...	...	4,158	Other	...	...	1,625
Repairs and renewals	...	...	286				
Interest payable to Government	...	...	10,796				
Other	...	...	283				
Balance	...	...	5,713				
Total	...	...	£24,152	Total	...	...	£24,152

Practically the only source of income is from rates, the other receipts representing contributions to works, sales of fittings, &c. Of the expenditure, management charges represented 15·8 per cent., working and maintenance 22·6 per cent., repairs and renewals 1·6 per cent., interest payable to Government 58·5 per cent., and other expenses 1·5 per cent.

The combined balance-sheet was as follows:—

Liabilities.			Assets.		
	£			£	
Capital Debt due to Government	378,004		Works and Plant	383,637	
Interest due to Government ...	11,486		Outstanding rates	5,398	
Sundry creditors	3,857		Bank balance and cash	10,232	
Excess of Assets	9,750		Stores and materials	1,190	
			Sundry debtors	2,640	
Total	£403,097		Total	£403,097	

DRAINAGE TRUSTS.

In addition to the water and sewerage works shown in the foregoing tables, thirty-two trusts for reclamation of swamp and other lands were in operation on the 30th June, 1919, with a total length of 123 miles, the total area served being 134,275 acres. The total cost as gazetted was £118,862. and the annual payments were £6,960. The owners of the lands improved by these works are responsible for the repayment of the capital expenditure, and are also required to provide for the cost of maintenance and administration.

GAS-WORKS.

The Local Government Act authorises the construction of works for public lighting, and enables municipalities to provide private consumers with gas. In addition to the twenty-one municipalities supplying coal-gas, acetylene and other gas plants have been established in a number of other municipalities.

The operations of the municipalities with coal gas-works in 1918 will be seen from the subjoined statements showing the Gasworks Trading Undertaking revenue account and balance-sheet, and the loan fund balance-sheet. The following is the revenue account, and particulars for 1908 are appended for purposes of comparison:—

Expenditure.	1908.		1918.		Income.	1908.		1918.	
	£		£			£		£	
Manufacture	22,714		57,178		Private lighting	33,867		78,539	
Distribution	1,525		6,285		Public lighting	7,652		13,144	
Management expenses	3,904		16,485		Sale of residual products	4,142		10,188	
Public lighting	1,700		4,167		Other	1,742		512	
Other	2,457		2						
Balance	15,103		18,266						
Total	£ 47,403		102,383		Total	£ 47,403		102,383	

On the total operations for 1918 there was a gross profit of £18,266, none of the municipalities showing a loss. The manufacture of gas accounted for 68 per cent. of the expenditure, as compared with 70·2 per cent. in 1908, and private lighting for 76·7 per cent. of the income, as against 71·5 per cent. in 1908.

The gross profit in 1918 was reduced in the Net Revenue Appropriation Account by charges amounting to £12,046. Transfers to loan and other funds included £4,502 for payment of interest, and £7,544 for other purposes, and the credit balance carried forward amounted to £36,461.

The balance-sheet of the Gasworks Trading Undertakings, exclusive of loans, for 1918, is given below:—

Liabilities.				Assets.			
				£			
Due to other Funds	...	...	25,327	Buildings, land, stock, plant, &c.	117,652		
Sundry creditors	...	...	21,636	Sundry debtors, including amounts			
Reserves	...	...	14,493	due from other funds	...	22,096	
Excess of Assets	...	...	90,953	Fixed deposits	...	1,197	
				Bank balance and cash	...	11,464	
Total	...	...	£152,409	Total	...	£152,409	

The total excess of assets amounted to £90,953, to which each municipality, with one exception, contributed.

The following balance-sheet of the Loan Fund shows the position of the Gasworks Trading Undertakings for 1918:—

Liabilities.				Assets.			
				£			
Loans current	...	...	111,699	Land and buildings	...	31,251	
Interest accrued not paid, &c.	...	...	1,088	Plant, mains, lamps, &c.	...	148,263	
Excess of Assets	...	...	86,793	Due from other funds	...	15,223	
				Fixed deposits, investments, bank			
				and cash balances	...	4,551	
				Other	...	292	
Total	...	...	£199,580	* Total	...	£199,580	

Against a total loan indebtedness for Gasworks of £111,699, the municipalities had assets valued at £199,580, the excess of assets being £86,793, exclusive of the assets of the trading account proper, shown above. Land, buildings, plant, &c., made up 90 per cent. of the assets of the Loan Fund; amounts due from other funds, chiefly trading accounts, 7·6 per cent.; investments, &c., 2·3 per cent., and other assets 0·1 per cent.

ELECTRICITY WORKS.

The following councils have erected electric lighting plants:—Sydney, Albury, Broken Hill, Corowa, Goulburn, Inverell, Moss Vale, Narrandera, Newcastle, Penrith, Tamworth, Temora, Tenterfield and Young. These works were erected under separate Acts, as electric lighting could not formerly be undertaken without special legislation, but future works may be constructed under the authority of the Local Government Act, 1919.

The following statement shows the results of the operations of the electricity works in 1908 and 1918 in respect of the municipalities mentioned above, with the exception of the City of Sydney electric lighting undertaking, which has already been dealt with:—

Income.	1908.	1918.	Expenditure.	1908.	1918.
	£	£		£	£
Private lighting	6,779	48,807	Generation	6,878	37,539
Public lighting	9,366	13,258	Distribution	1,468	7,226
Power supply	504	19,168	Management, &c.	943	15,051
Rents of meters, &c.	133	2,908	Special charges	952	854
Other	1,819	4,044	Public lighting	690	2,659
			Other	2,469	360
			Balance	5,201	24,496
Total	£ 18,601	88,185	Total	£ 18,601	88,185

Generation of electricity is the largest item of expenditure, accounting in 1918 for 58·9 per cent. of the whole. Distribution of the current cost 11·4 per cent., management 23·6 per cent., and other expenses 6·1 per cent. The gross profit of this concern to the combined municipalities was £24,496, and after deducting amounts transferred to the net revenue appropriation account, viz., interest £3,128, redemptions and sinking funds £4,917, and miscellaneous £6,830, a total of £14,875, the net profit was £9,621.

The balance-sheet of the Trading Fund for 1918, exclusive of loans, was as follows:—

Liabilities.		Assets.	
	£		£
Due to other funds	27,167	Materials, stock, &c.	24,195
Sundry creditors	8,521	Sundry debtors	23,206
Excess of Assets	36,303	Fixed deposits, bank balance, and cash	26,590
Total	£ 73,991	Total	£ 73,991

Only four municipalities showed an excess of liabilities, small in each case, and the position is therefore satisfactory.

The final statement is the balance-sheet of the loan fund for 1918:—

Liabilities.		Assets.	
£		£	
Loans current	155,614	Land and buildings	14,758
Interest accrued not paid	1,645	Steam plant	6,940
Other	14,003	Dynamos... ..	9,175
Excess of Assets	52,896	Cables, poles, &c.	132,160
		Due from other funds	23,164
		Fixed deposits, bank balances, and cash	23,464
		Other (including outstanding rates)	14,497
Total	£ 224,158	Total	£ 224,158

It will thus be seen that against a loan liability of £155,614, the municipalities with electric plants had assets amounting to £224,158 (excluding assets of the Trading Account), of which £163,033, or 72·7 per cent., represents the value of land, buildings, and plant.

BOARDS AND TRUSTS.

In addition to the ordinary forms of municipal local government, there are various boards and trusts with local jurisdiction. The control of the water supply and sewerage of the Metropolitan and Hunter districts is placed under separate Boards. The Metropolitan and the Country Towns Water Supply and Sewerage Acts, the Fire Brigades Act, the Sydney Harbour Trust Act, the Metropolitan Traffic Act, and the Motor Traffic Act, were all passed with the object of extending the principle of local government, and Boards have been established to carry out the provisions of some of these Acts.

The Metropolitan Board of Water Supply and Sewerage was established in 1887, the Hunter District Board in 1892, and the Sydney Harbour Trust in the year 1900.

In 1900 the Metropolitan Traffic Act was passed, which gives the complete control of street traffic and the licensing of public vehicles, drivers, and conductors to the Inspector-General of Police, and the Motor Traffic Act of 1909 places the supervision of motor vehicles under the same authority. Further information regarding licenses and fees is published in the chapter of this Year Book treating of "Police and Prison Services."

BOARD OF FIRE COMMISSIONERS.

The Fire Brigades Act, 1909, which repealed the Act of 1902, applies to the City of Sydney, to forty suburban municipalities, to eighty-six country municipalities, and to parts of eleven shires, and the operations of the board may be extended to other districts by proclamation. At the end of 1918 the districts embracing the municipalities and shires numbered seventy-nine. Particulars relating to the financial transactions of the board will be found in the chapter of this publication dealing with "Private Finance."

The calls attended during 1918 numbered 2,553, of which 1,792 were in the Sydney district. Particulars are shown below:—

Calls.	Sydney District.	Country Districts.	Total.
False alarms	203	70	273
Chimney alarms	29	28	57
Fires—Slight	1,523	579	2,102
„ Serious	6	3	9
„ Total destruction... ..	31	81	112
Total	1,792	761	2,553

METROPOLITAN BOARD OF WATER SUPPLY AND SEWERAGE.

In March, 1888, the Government passed an Act establishing a Board of Administration, under the title of the Metropolitan Board of Water Supply and Sewerage, to regulate the water supply and sewerage services in the county of Cumberland, including those under the control of the City Council. The management of the water service was transferred to the Board in May, 1888, and of the sewerage in September, 1889. The total length of water mains taken over was 355 miles, and on 30th June, 1919, this had increased to 2,652 miles, inclusive of trunk and arterial mains. There were 70½ miles of sewers in 1889, lengthened to 1,131½ miles of sewers, and 60 miles of stormwater drains in 1919.

The Board consists of seven members, three of whom are appointed by the Government, two by the City Council, and two by the suburban and country municipalities within the county of Cumberland supplied with water. The Board is subject to the general control of the Minister for Works—a provision considered necessary, as the Government advances the whole of the money for the construction of the works, the amount so advanced constituting part of the public debt of the State.

METROPOLITAN WATER SUPPLY.

As early as 1850 authority was given by the Legislative Council to the City Corporation for the construction of water and sewerage works, and a system of water supply from the Lachlan, Bunnerong, and Botany Swamps was adopted. This service has since been superseded by the Upper Nepean system.

The sources of supply under the existing system are the waters of the Nepean, Cataract, and Cordeaux Rivers, draining an area of 347 square miles, a catchment enjoying a copious and regular rainfall. The off-take works are built at a height of 437 feet above the level of the sea, and the water flows by means of tunnel, open canal, and wrought-iron aqueducts to Prospect Reservoir, a distance of 40 miles from the farthest source of supply. The conduits above Prospect Reservoir have a maximum delivery of 150,000,000 gallons per day, and for 10 miles below this reservoir the capacity of the canals and pipes is 50,000,000 gallons. For the last 11 miles the water is conveyed by two 48-inch mains. In this work there are 63½ miles of tunnels, canals, and pipes.

Notwithstanding the size of Prospect Reservoir, it was found in 1902—a very dry year—that the supply was not sufficient for the growing needs of the metropolis. The Government therefore decided to build the Cataract Dam, which was completed in 1908, the catchment area above the dam being about 50 square miles. The water flows from this dam down the Cataract River to a weir at Broughton's Pass, where it enters a tunnel previously existing, and is conveyed by a system of open canals to the Prospect Reservoir. The total distance from Cataract to Sydney, *via* Prospect, is 66½ miles.

In addition to the works referred to, further contracts have been made especially with regard to the completion of the Cordeaux and other dams, and extensions and duplications of existing mains, which will considerably benefit the existing supplies, especially the western suburbs and Manly systems.

The dimensions of the Prospect and Cataract reservoirs are as in the following statement:—

Dam.			Height above Sea-level.	Area.	Capacity.	Length of Dam.	Width at top.	Height.
Prospect	...	...	ft. 196·7	acres. 1,266½	gallons. 11,029,180,000*	ft. 7,300	ft. 30	ft. 85½
Cataract	...	...	950	2,200	20,743,196,475	811	16½	160

* When full, about half this quantity is available by gravitation.

From Prospect the water flows 5 miles by open canal to the Pipe Head Basin, thence 5 miles by 6-foot wrought-iron and steel pipes to the Potts' Hill Balance Reservoir, which has a capacity of 100,000,000 gallons, and covers 24½ acres. This reservoir was designed to tide over any interruption in the supply from Prospect, as well as to prevent fluctuation at the head of pressure. A by-pass is laid along the floor to enable mains to deliver water to Sydney direct.

At Potts' Hill the water passes through a series of copper-gauze screens, and is then conducted by two 48-inch mains and three smaller mains to the reticulated area south of Port Jackson. At Lewisham a bifurcation takes place in one of the 48-inch mains; one branch supplying the Petersham Reservoir, the other continuing to Crown-street. The Petersham Reservoir is 166 feet above high-water mark, is built of brick, and has a capacity of 2,157,000 gallons. The other 48-inch main, laid in 1893, delivers water direct from Potts' Hill to Crown-street. These two trunk mains are connected at Petersham as an intermediate spot. The Crown-street Reservoir is 21 miles from Prospect. It is of brick, and contains 3,250,000 gallons, the top water-level being 141 feet above high-water mark.

On account of the elevation of parts of the reticulated area, pumping is necessary for the purpose of supplying the upper zones, and no less than 9,911 million gallons were raised at the various stations during the twelve months ended June, 1919, representing 62 per cent. of the Prospect Reservoir consumption. At Crown-street is situated the main pumping station, where are erected three sets of compound high-duty pumping engines. A covered reservoir, of a capacity of 18,500,000 gallons, has been constructed in the Centennial Park at a height of 245 feet, for the purpose of ensuring a larger bulk of water within the city limits. At Ashfield there is a wrought-iron tank at an elevation of 223 feet above high water, with a capacity of 1,000,000 gallons. This tank is supplied from the Centennial Park Reservoir by a main, and provides for the higher part of the district. Vacluse Reservoir, at a height of 313 feet, is connected with Waverley, and supplies a district of about 1,200 acres around Vacluse and South Head. It has a diameter of 107 feet, a depth of 18 feet, and its capacity is 1,000,000 gallons. The No. 1 reservoir at Waverley has a capacity of 1,087,000 gallons; but the new reservoir erected in the Waverley Park, and occupying the highest point in the eastern suburbs of Sydney, has a capacity of 4,260,000 gallons; and surmounted on this structure, at an elevation of 396 feet above sea-level, is a smaller reservoir of 500,000 gallons capacity, for the service of residents in the high zone of the immediate vicinity.

North Sydney receives its supply from Potts' Hill, *via* Ryde, where there is a reservoir containing 2,000,000 gallons, from which the water is pumped into a 1,000,000-gallon tank at Ryde village, 234 feet above sea-level, and, by a continuation of the same main, into a pair of tanks, of a joint capacity of 3,000,000 gallons, at Chatswood, at an elevation of 370 feet above high-water mark. Water can be lifted direct from Ryde to Wahroonga and Pymble, or may be re-pumped from Chatswood, where a small pumping station has been erected. There are three tanks (one of them being of 1,000,000 gallons, one of 250,000 gallons, and one of 40,000 gallons capacity) at Wahroonga, $7\frac{1}{2}$ miles distant, whence the water flows as far as Hornsby, where there is a tank of 1,000,000 gallons capacity, 13 miles to the north-west of Port Jackson. At a height of 567 feet a concrete reservoir of a capacity of 500,000 gallons has been constructed at Pymble, and during the past year a second reservoir with a capacity of 6,905,160 gallons was brought into operation. From these reservoirs the districts between Pymble and Chatswood are served, thus reducing the abnormal pressure by reason of the supply being from so great a height as Wahroonga.

From the Ryde tank the districts of Ryde, Gladesville, and Hunter's Hill are supplied; while a 9-inch main extends over the Parramatta and Iron Cove bridges to supply Balmain, at which suburb there is now a reservoir with a storage capacity of 2,376,250 gallons. An elevated tank, at a height of 354 feet, with a capacity of 72,800 gallons, and a reservoir, with a capacity of 1,925,000 gallons, 302 feet above sea-level, have been erected at Mosman.

The districts of Campbelltown and Liverpool are supplied from the main canal by gravitation. At the latter place, a 4,000,000-gallon earthen reservoir has been constructed, and a tank with a capacity of 250,000 gallons, for the purpose of tiding over any interruption in the flow from the canal. Other districts lying nearer Sydney, *viz.*, Smithfield, Granville, Auburn, and Rookwood, are also supplied *en route*; and at Smithfield there is a 100,000-gallon concrete tank, the top water of which is 175 feet above sea-level. At Penshurst there is a tank 270 feet above sea-level, with a capacity of 1,000,000 gallons, and one 300 feet high, capable of holding 1,500,000 gallons. Works for the supply of water to the towns of Camden and Narellan, from a point on the canal near Kenny Hill, were completed in October, 1899. In 1893, the Board assumed control of the Richmond waterworks, in 1902 of the Manly works, and in 1903 of the Wollongong works. Manly is also connected with the metropolitan system by a main from Mosman, crossing Middle Harbour.

The following statement shows the number of houses in the metropolitan area supplied with water during the last ten years.

Year ended 30th June.	Houses Supplied.	Average Daily Supply.	Total Supply for Year.	Average Daily Supply	
				Per House.	Per Head.
	No.	gallons.	gallons.	gallons.	gallons.
1910	133,788	26,903,200	9,819,652,000	201	40·2
1911	139,237	29,006,700	10,587,434,000	208	41·7
1912	146,236	30,354,800	11,079,500,000	207	41·5
1913	155,213	32,594,200	11,897,000,000	209	42·0
1914	166,112	36,539,700	13,337,000,000	220	44·0
1915	175,758	35,909,589	13,107,000,000	204	40·9
1916	183,598	39,380,000	14,374,000,000	214	42·9
1917	193,643	39,637,128	14,467,352,000	204	40·9
1918	196,685	41,358,989	15,096,031,000	208	41·6
1919	204,308	45,557,101	16,628,342,000	223	44·6

From 1910 to 1917 inclusive, the water rate levied on the assessed annual value was 6d. in the £ and the meter charges were 11d. per 1,000 gallons up to 10,000,000, 10d. from 10 to 20 millions, and 9d. over 20 millions. During 1918 the first-mentioned rate was increased to 6½d., but the meter charges were not altered. During 1919 a further increase of 1d. in each case was imposed, and in 1920 another addition was made, and the rate now levied is 9d. in the £ on the assessed annual value, while the charge per meter is 13d. per 1,000 gallons. The revenue from the Water Service Branch during the year ended 30th June, 1919, was £627,287, and the expenditure, including interest on capital, £597,208. The net revenue showed a return of 4·58 per cent. on the capital debt of £8,900,391.

The following statement gives the financial transactions of the Metropolitan Water Supply for each of the last ten years, and for the years 1917, 1918, and 1919 it includes the Richmond and the Wollongong water supply systems, the accounts of which were previously kept separately.

Year ended 30th June.	Capital cost.	Revenue.	Working expenditure.	Interest.	Net return after paying working expenses.	Net profit after paying working expenses and interest.
	£	£	£	£	per cent.	£
1910	5,286,917	284,943	93,027	184,486	3·63	7,430
1911	5,420,813	299,442	99,355	192,486	3·69	7,601
1912	5,606,268	329,605	112,958	198,443	3·86	18,204
1913	5,907,125	361,187	126,795	200,918	3·96	33,474
1914	6,257,976	410,823	145,948	223,145	4·23	41,730
1915	6,644,289	441,966	159,687	235,949	4·24	46,330
1916	7,192,472	470,744	165,210	261,335	4·24	44,199
1917	7,979,124	479,290	182,087	314,659	3·72	17,456*
1918	8,472,700	523,979	195,448	343,716	3·87	15,185*
1919	8,900,391	627,287	219,322	377,886	4·58	30,079

* Loss.

THE HUNTER DISTRICT WATER SUPPLY.

The water supply works of the Lower Hunter were constructed by the Government under the provisions of the Country Towns Water Supply and Sewerage Act of 1880. In 1892, under the authority of a special Act, a Board was established on similar lines to those of the Metropolitan Water and Sewerage Board, the number of members being the same—three being nominated by the Governor, one elected by the Municipal Council of Newcastle, two by the adjacent municipalities, and one by the municipalities of East and West Maitland and Morpeth. The following districts are within the area of the Board's jurisdiction:—

Municipalities—

Adamstown, Carrington, Greta, Hamilton, Lambton and New Lambton, East and West Maitland, Merewether, Morpeth, Newcastle City, Wallsend, Waratah, Wickham.

Shires—

In Bolwarra Shire: Bolwarra, Lorn.

In Cessnock Shire: Aberdare, Abermain, Abermain Government Township, Cessnock, South Cessnock, Bellbird, Church Hill, Hebburn, Heddon Greta, Homeville, Kearsley, Kurri Kurri, Mayfield, Neath, Oakhampton, Rutherford, Telarah, Weston.

In Lake Macquarie Shire: Argenton, Boolaroo, Spier's Point, Teralba, Toronto, West Wallsend.

In Tarro Shire: Hexham and Ash Island, Minmi, Morpeth Road, Pelaw Main, Stanford Merthyr, Tenambit.

The Government Railways and Tramways properties, eleven in number, are also served by the Board.

The supply of water for the district is pumped from the Hunter River, about a mile and a half up stream from the Belmore Bridge, West Maitland. The pumping engines are situated above flood-level, on a hill about 44 chains from the river. At the pumping station there is a settling tank of 1,390,500 gallons; also six filter-beds, 10,000 square feet each, and one of 15,000 square feet, a clear-water tank of 589,500 gallons capacity, and a storage reservoir of 172,408,100 gallons available capacity. The filtered water is pumped from the clear-water tank into two summit reservoirs, one at Rutherford and one at Buttai. The former, connected by a 10-inch and 12-inch main, with a capacity of 500,000 gallons, supplies East Maitland, West Maitland, Morpeth, Lorn, Bolwarra, Campbell's Hill and neighbouring places. Buttai Reservoir is fed by two rising mains, one a riveted steel pipe, 20½ inches diameter, the other a 15-inch cast-iron main, 5½ miles in length; it has a capacity of 1,051,010 gallons, and supplies Newcastle and environs. Fourteen district reservoirs, which are supplied from Buttai, ten by gravitation and four by re-pumping, receive water for distribution.

The length of the mains when the Board was established was 134 miles; at 30th June, 1919, it had been increased to 438 miles.

Particulars relating to the water supply of the Board for the past ten years are given below. A water rate of 10d. in the £ is payable on the assessed annual value of all properties over £12, but if valued at less than £12, the rate is 10s. per annum. The charge by meter is 2s. per 1,000 gallons, and extra charges are made for water used for other than domestic purposes, the rates on which services range from 10s. to 40s. per annum.

Year ended 30th June.	Properties Supplied.	Supply.		Average Daily Supply	
		Daily average.	Total.	Per Property.	Per Head.
	No.	gallons.	gallons.	gallons.	gallons.
1910	16,446	1,650,700	602,497,000	100	20·1
1911	17,164	1,849,900	675,214,000	108	21·5
1912	17,907	2,026,100	739,539,000	114	22·7
1913	18,405	2,366,300	863,692,000	129	25·7
1914	19,575	2,791,300	1,018,810,000	143	28·5
1915	20,709	2,859,000	1,043,547,000	138	27·6
1916	22,056	3,507,500	1,283,754,000	159	31·8
1917	22,604	3,435,336	1,253,898,000	152	30·3
1918	23,257	3,442,816	1,255,628,000	148	29·6
1919	24,079	4,065,223	1,483,807,000	169	33·8

The funds necessary for the maintenance and management of the water supply and sewerage services, as well as the sum required to pay interest on the capital debt, are obtained by rates levied on the properties situated in the districts benefited by the systems. The assessments of the Municipal Councils are generally accepted by the Boards as the values on which to strike their special rates. In cases of heavy consumption of water, a charge is made according to the quantity used; but fixed

charges are imposed for the use of water in certain trades and callings, for gardens, and for animals. The following table shows the financial position for the period 1910 to 1919:—

Year ended 30th June.	Estimated Capital Debt.	Revenue.	Expenditure.*	Return or Estimated Capital Debt.
	£	£	£	per cent.
1910	485,967	46,767	43,126	4·17
1911	495,747	45,711	45,420	3·55
1912	510,897	47,788	47,920	3·53
1913	531,969	53,673	49,042	4·42
1914	567,842	66,323	52,993	5·73
1915	601,983	68,611	55,344	5·53
1916	634,265	79,507	58,321	6·75
1917	704,305	78,040	64,434	5·44
1918	832,064	80,607	69,933	4·43
1919	939,685	91,204	76,297	4·76

* Including Interest and Instalments to Sinking Funds for Renewal of Works.

METROPOLITAN SEWERAGE WORKS.

The first sewerage works at Sydney were begun in 1853; and in 1889, the date of transfer to the Board, there were $70\frac{1}{4}$ miles of old city sewers in existence. The original scheme was designed on the "combined" system, by which street-surface water as well as sewage was removed. The works comprised five main outfalls discharging into the harbour at Blackwattle Bay, Darling Harbour, Sydney Cove, Fort Macquarie, and Woolloomooloo Bay. The pollution of the harbour, consequent on these outlets, led to the appointment of a Commission of Inquiry, and the result was the adoption of the present system.

This system consists of three main outfalls—the northern, southern, and western; the northern discharges into the Pacific Ocean near Bondi, and the southern and the western discharge into the sewage farm at Webb's Grant, near Botany Bay. The northern system receives sewage from Waverley, Bondi, Woollahra, Double Bay, Darling Point, Rushcutter's Bay, Elizabeth Bay, and parts of Woolloomooloo.

The southern main outfall commences at a point on the north side of Cook's River, near Botany Bay, and receives the drainage from Alexandria, Waterloo, Erskineville, Newtown, and portions of the Surry Hills district. The inlet-house, into which the sewage passes, is fitted with the latest machinery for straining the sludge, and for ejecting the fluid after filtration. Storm-water channels are also constructed at various points to carry off the superfluous water after heavy rainfalls.

The western outfall starts at a receiving chamber in the Rockdale end of the sewage farm, from which it runs to another chamber about a quarter of a mile to the north-east of Muddy Creek, and thence to a penstock chamber at Marrickville on aqueducts over Wolli Creek and Cook's River. The latter chamber receives the discharges from the eastern, northern, and western branch sewers, and drains part of Marrickville, Petersham, Stanmore, Newtown, Leichhardt, Annandale, Camperdown, Summer Hill, Ashfield, Canterbury, Enfield, Burwood, Five Dock, and Concord. A branch outfall has been constructed at Coogee, which discharges into the ocean, and serves the districts of Randwick, Kensington, and Coogee. On the northern side of the city extensive works have been completed; in the borough of North Sydney septic tanks were built in 1899 to deal with the sewage matter; and at Middle Harbour, Mosman, and Manly, ample provision has been made for the sanitation of the districts.

The length of sewers in the Metropolitan District and the houses served during the last ten years are shown below:—

Year ended 30th June.	Houses connected.	Length of Sewers.	Length of Storm-water Drains.	Length of Ventilating Shafts.	Length of Sewers Ventilated.
	No.	miles.	miles.	feet.	miles.
1910	104,029	793·55	47·82	361,200	761
1911	108,012	825·20	48·85	376,900	795
1912	110,737	863·29	49·69	382,654	809
1913	114,690	890·53	52·24	401,344	853
1914	118,643	930·06	53·15	408,778	870
1915	124,759	972·14	53·65	429,364	915
1916	130,638	1,022·19	54·98	443,134	953
1917	135,588	1,085·45	59·55	475,474	1,030
1918	139,777	1,113·34	60·07	479,464	1,039
1919	141,798	1,131·72	60·11	484,798	1,052

The following statement gives the financial transactions relating to Metropolitan Sewerage during the ten years ended 30th June, 1919:—

Year ended 30th June.	Capital cost.	Revenue.	Working expendi- ture.	Interest.	Net return after paying working expenses.	Net profit (+) or loss (-) after paying working expenses and interest.
	£	£	£	£	per cent.	£
1910	4,351,381	223,131	70,851	151,943	3·49	(+) 337
1911	4,496,290	234,208	79,636	159,070	3·43	(-) 4,498
1912	4,769,449	250,826	82,246	166,771	3·53	(+) 1,809
1913	5,083,263	268,292	91,094	171,957	3·48	(+) 5,241
1914	5,448,968	297,840	104,543	193,389	3·54	(-) 92
1915	5,775,094	344,489	111,809	205,928	4·02	(+) 26,752
1916	6,114,072	363,799	120,244	224,551	3·98	(+) 19,004
1917	6,722,313	387,333	138,417	269,723	3·70	(-) 20,807
1918	6,870,927	429,668	147,444	283,661	4·10	(-) 1,437
1919	6,963,573	497,406	151,951	291,346	4·96	(+) 54,109

The sewerage rate for the city of Sydney and the eastern suburbs up to 1903 was 7d. in the £, the northern and the western suburbs being rated at 1s., but in 1904 a uniform rate of 11d. was imposed. In 1907 it was reduced to 10d. in the £, and in 1908 to 9½d., the latter being the rate ruling up to the 30th June, 1917; on the 1st July, 1917, it was increased to 10d., and a further increase to 11d. was made on 1st July, 1918, and this rate continued during 1919, but from the 1st July, 1920, the amount levied was 12d. In addition to the sewerage rate already mentioned, storm-water drainage rates are imposed in certain proclaimed areas, the amounts ranging from ½d. to 7d. in the £.

NEWCASTLE AND SUBURBS SEWERAGE WORKS.

The sewerage scheme for the Hunter District has its outfall at Merewether Gulf, some distance south from Newcastle. Two gravitation sewers which branch from the main, one at Merewether and the other in the city of Newcastle, have been completed and transferred to the control of the Hunter District Water and Sewerage Board, also the reticulation sewers for the areas capable of being drained by gravitation. The districts served so far are Newcastle, Adamstown, Hamilton, Lambton, New Lambton, Merewether, Waratah, and Wickham. The following table shows information relating to sewers under the control of the Board during the last ten years:—

Year ended 30th June.	Properties connected.	Length of Sewers.]	Ventilating Shafts.	Length of Sewers Ventilated.
	No.	miles.	No.	miles.
1910	661	29.50	183	17.28
1911	1,465	29.91	285	17.68
1912	2,424	37.14	418	37.14
1913	3,457	51.30	623	51.30
1914	4,887	56.75	733	56.75
1915	6,151	63.23	791	63.23
1916	7,240	83.81	808	83.81
1917	8,284	103.10	815	103.10
1918	9,333	117.50	819	117.50
1919	10,365	123.00	830	123.00

The particulars of cost, revenue, and expenditure for the ten years to 30th June, 1919, are shown below:—

Year ended 30th June.	Capital cost— interest- bearing.	Revenue.	Working expendi- ture (including Sinking Fund).	Interest.	Net return after paying working expenses.	Net profit (+) or loss (-) after paying working expenses and interest.
	£	£	£	£	per cent.	£
1910	128,655	6,192	2,303	2,799	3.02	(+) 1,090
1911	170,151	8,975	4,217	2,902	2.79	(+) 1,856
1912	246,915	10,999	6,002	5,845	2.45	(-) 848
1913	301,809	12,472	7,722	7,013	1.79	(-) 2,263
1914	331,694	14,622	8,743	8,495	1.77	(-) 2,616
1915	358,480	17,212	9,045	8,710	2.28	(-) 543
1916	411,732	18,582	9,820	11,623	2.13	(-) 2,861
1917	454,638	21,408	12,051	14,512	2.05	(-) 5,155
1918	475,239	24,215	13,866	18,831	2.17	(-) 8,482
1919	514,951	26,721	14,607	20,383	2.35	(-) 8,260

The sewerage rate—1s. in the £ on the annual rental value—came into force on 1st January, 1909, and this was the rate ruling in 1919.

The position of the combined Water and Sewerage services of the Metropolitan and of the Hunter Districts for the five years ended 30th June, 1919, are shown below. For the years 1917, 1918, and 1919 the figures of the Metropolitan District include the Richmond and the Wollongong water supply systems, the accounts of which were both formerly kept separate. The working expenses for the Hunter District include the instalment paid to Sinking Fund for reconstruction of renewable works.

Year ended 30th June.	Capital Cost.	Revenue.	Working Expenses.	Interest on Capital.	Net return after paying working expenses.	Net profit after paying working expenses and interest.
-----------------------	---------------	----------	-------------------	----------------------	---	--

Metropolitan District.

	£	£	£	£	per cent.	£
1915	12,419,383	786,455	271,496	441,877	4.15	73,082
1916	13,306,544	834,543	285,454	485,886	4.13	63,203
1917	14,701,437	866,623	320,504	584,382	3.71	(-)38,263
1918	15,343,627	953,648	342,892	627,377	3.98	(-)16,621
1919	15,863,964	1,124,693	371,273	669,232	4.75	84,188

Hunter District.

1915	960,463	85,823	44,320	28,779	4.32	12,724
1916	1,045,997	98,089	46,454	33,310	4.93	18,325
1917	1,158,943	99,448	51,746	39,251	4.12	8,451
1918	1,307,303	104,822	57,611	45,019	3.61	2,192
1919	1,454,638	117,925	61,099	50,188	3.91	6,638

(-) Denotes net loss.

ROADS AND BRIDGES.

Main roads in New South Wales were first formed to connect the towns of Parramatta, Liverpool, Windsor, and Penrith with Sydney. All access to the interior of the country was considered barred by the apparently insurmountable sandstone precipices rising on the farther side of the Nepean, and until the year 1813 no effort to cross the mountains was attended with success. In that year, however, after a protracted season of drought, involving heavy losses of stock, the settlers recognised that the future of the country depended on an extension of the pastoral area, and three explorers, Blaxland, Lawson, and Wentworth, again essayed the task of finding a way over the mountains. After encountering great difficulties, they succeeded in crossing the range, and discovered the rich pastures of the Bathurst Plains. Shortly after their

return, Governor Macquarie despatched a party of surveyors to determine whether a road were practicable. The report was favourable, the construction of a track was at once begun, and the Great Western Road was completed as far as Bathurst on 21st January, 1815.

The access to the fertile lands surrounding Bathurst, by means of this mountain road, gave such an impetus to settlement that it was found impossible to keep pace in the matter of road-making with the demands of the settlers. The authorities, therefore, for many years confined their attention to the maintenance of roads already constructed, and extended them in the direction of the principal centres of settlement. Had the progress of settlement subsequent to 1850 been as slow as that of the preceding years, this system would have sufficed; such, however, was not the case. The discovery of gold completely altered the circumstances, and during the period of excitement and change which followed, so many new roads were opened, and traffic increased to such an extent, that the general condition of the public highways was by no means good. The modern system of road-making may be said to have begun in the year 1857, consequent on the creation of the Roads Department; it was not, however, until 1864 that the whole of the roads, both main and subordinate, received consideration by the Government.

The principal main roads are:—

Northern Road—length, 405 miles, from Morpeth to Maryland, on the Queensland border.

Western Road—length, 513 miles, from Sydney, through Bathurst, and many other important townships, to the Darling River, at Bourke.

Southern Road—length, 385 miles, from Sydney through Goulburn and other important townships to the Murray River to Albury.

South Coast Road—length, 250 miles from Campbelltown, through Coal Cliff, and along the South Coast generally, as far as Bega, whence it extends as a minor road to the southern limits of the State.

None of the roads has so great an importance as it possessed before the opening of the railways, which for the greater part follow the direction of the main roads, and attract nearly all the through traffic. Thus many roads on which heavy expenditure has taken place have been more or less superseded, and the opening of new roads has been rendered necessary to act as feeders to the railways from outlying districts.

CONTROL OF ROADS AND BRIDGES.

Prior to 1906, when the first Local Government Act came into effect, the State was divided into road districts, each of which was placed under the supervision of an officer directly responsible to the Commissioner for Roads. These officers had under their care the greater part of the roads and bridges of the State outside the incorporated areas, as well as a portion of those within such limits. The road trusts had the supervision of the expenditure of certain grants for the maintenance of roads in districts chiefly of minor importance, as well as some important roads in the vicinity of the metropolis.

The administration of the works under the control of the Roads and Bridges Department (with the exception of those in the unincorporated areas of the Western Division, and certain bridges and ferries proclaimed as "national works") is transferred by the operation of the Local Government Act to the shires and municipal councils.

The Act authorises payments by way of endowment to municipalities and shires, the minimum endowment payable to shires being fixed at £150,000 per annum, to be distributed in accordance with a classification made every third year. The Minister may withhold payment of endowment from a council if his requirements in respect of main roads are not satisfied.

Between 1906 and 1912 the amount of endowment allotted to shires rose from £150,000 to £360,000 approximately, but the expenditure on the important roadways has not been sufficient to maintain them in a serviceable condition. It was decided, therefore, to amend the conditions under which Government assistance is granted, by reducing the amount of general endowment for each of the years 1915-18, and distributing an additional sum as a special endowment for the upkeep of the main roads.

LENGTH OF ROADS.

The length of roads under Government control on 30th June, 1906, prior to the transfer to the councils, was 48,311 miles, while 195 miles were under the care of road trusts, and 1,338 miles within the municipal areas were subsidised by the Government, making a total of 49,844 miles. There were also about 8,000 miles of roads and streets belonging to the municipal councils. Since 1906, statistics of roads, streets, bridges, and public ferries have been collected triennially, the date of the latest available returns being 1918. In that year the length of roads in the State was, approximately, 99,539 miles, of which 58 miles in shires were controlled by the Government, 10,214 miles by the municipalities, 83,309 miles by the shires, and 5,958 miles were in the unincorporated areas of the Western Division. The nature of these roads may be seen in the following statement:—

Divisions.	Metalled, Gravelled, Ballasted, &c.	Formed only.	Cleared only.	Natural surface.	Total.
	miles.	miles.	miles.	miles.	miles.
National	31	25	2	.....	58
Municipalities	4,262	1,931	2,120	1,901	10,214
Shires	15,427	11,949	25,522	30,411	83,309
Western Division	176	117	2,999	2,666	5,958
Total	19,896	14,022	30,643	34,978	99,539

BRIDGES AND FERRIES.

Many of the earliest bridges erected in the State were built of stone, and are still in existence. Those erected in the period following the extension of settlement to the interior were principally of timber, and have since been replaced after an average life of about twenty-five years. Nearly all the large bridges of recent date are of iron and steel, and some of them have been erected under difficult engineering conditions, owing to the peculiarity of the river flow in certain parts of the country. The Councils are now empowered to control these bridges, with the exception of those classified as National works, which may be transferred by the Government at any time to the Council.

On 1st January, 1907, the bridges of 20 feet span and over, including those in course of construction, numbered 3,575. Of these, 256 bridges, with an aggregate length of 101,416 feet, which by reason of their cost, size, and extra-local importance constitute a strain on the resources of the local councils, were proclaimed as "national works," to be maintained by the Government.

Where local conditions and limited traffic have not favoured the erection of a bridge, a punt or ferry has been introduced. The most important ferries which are worked otherwise than by hand, have been proclaimed as national services. Prior to 1st December, 1907, it was the practice to charge a small fee for ferry transit; but on that date tolls were abolished, and public ferries are now free.

The latest particulars of the bridges, culverts, and ferries of the State are shown below:—

Classification.	Bridges over 20 feet span.		Culverts.		Ferries.
	Number.	Length.	Number.	Length.	Number.
		ft.		ft.	
National Works	282	108,034	...	...	17
Municipalities	729	39,761	4,367	131,471	11
Shires	3,567	219,643	34,557	314,079	98
Western Division (unincorporated)	97	13,165	209	2,035	4
Total	4,675	380,604	39,133	447,585	130

GOVERNMENT EXPENDITURE ON ROADS, BRIDGES, &C.

Although the main roads have been largely superseded by the railways, they are still the sole means of communication throughout a large part of the interior, and serve as valuable feeders to the railway system. No revenue is derived directly from roads, but their indirect advantages to the country are very great.

In the following statement the expenditure by municipal and shire with the exception of those noted previously, from direct State to local government control, the following return will be of interest. It shows the Government expenditure on works of a local character, such as roads, bridges, punts, ferries, public watering-places, &c., during the last five years.

Year ended 30th June.	Expenditure on Services.	Endowments and Grants, including Main Roads.			Total Expenditure.
		Shires.	Municipalities.	Total.	
	£	£	£	£	£
1915	175,726	288,053	40,314	328,367	504,093
1916	114,011	353,048	62,457	415,505	529,516
1917	100,667	300,258	46,144	346,402	447,069
1918	102,896	305,445	44,870	350,315	453,211
1919	93,794	333,262	35,112	368,374	462,168

EXPENDITURE ON ROADS, &c., BY MUNICIPAL AND SHIRE COUNCILS.

In the following statement the expenditure by municipal and shire councils on behalf of roads, etc., is shown for the year 1918:—

City of Sydney—							£
Salaries—Road Maintenance and City Cleansing	...	...	...	...	...	...	2,897
Streets	...	...	...	...	...	...	59,981
Footpaths	...	...	...	...	...	...	20,364
Woodpaving	...	...	...	...	...	...	34,251
Gullies	...	...	...	...	...	...	6,103
Street Cleaning	...	...	...	...	...	...	88,595
Street-lighting	...	...	...	...	...	...	24,663
Street Watering and Sanding	...	...	...	...	...	...	9,479
						Total	£ 246,333
Municipalities (other than Sydney)—							
Supervision	...	...	...	...	...	...	27,027
Maintenance, Construction, &c.	...	...	...	...	...	...	450,979
Bridges	...	...	...	...	...	...	9,031
Drains	...	...	...	...	...	...	28,108
Street and Gutter Cleaning	...	...	...	...	...	...	59,753
Kerbing and Guttering	...	...	...	...	...	...	67,007
Footpaths and Gutter Bridges	...	...	...	...	...	...	84,674
Street-watering	...	...	...	...	...	...	15,988
Street-lighting	...	...	...	...	...	...	113,354
Other, including Tree-planting, &c.	...	...	...	...	...	...	9,108
						Total	£ 865,029
Shires—							
Supervision	...	...	...	...	...	...	55,023
Roads, Streets, Culverts, Footpaths, Kerbing, Guttering, Drains, Sewers, &c.	...	...	...	...	...	...	770,845
Bridges	...	...	...	...	...	...	51,783
Street Lighting	...	...	...	...	...	...	10,109
Other	...	...	...	...	...	...	2,583
						Total	£ 890,343
						Grand Total	£ 2,001,705

The amount expended by municipalities, other than Sydney, on account of bridges was £9,031. In the shires the maintenance, repairs, renewals, etc., of bridges cost £21,881, whilst £26,499 was spent on construction. The cost of the upkeep of Pyrmont Bridge, previously a charge on the City Council, is now defrayed by the New South Wales Government.

PARKS AND RECREATION RESERVES.

It has always been the policy of the State to provide the residents of municipalities and shires with parks and reserves for public recreation, and the city of Sydney contains within its boundaries a large extent of parks, squares, and public gardens. The most important are:—Moore Park (including Sydney Cricket Ground, Royal Agricultural Society's Ground, and Sports Ground), Botanic Gardens and Garden Palace Grounds, with the adjoining Domain, and Hyde Park. The total area covered is 654 acres, or 20 per cent. of the whole of the city proper. This does not include the Centennial Park, 552 acres in extent, formerly reserved for water supply; but now used for recreation by the inhabitants of Sydney, and which has been cleared, planted, and laid out with walks and drives.

The suburban municipalities are also well served, as they contain, including the Centennial Park, and the Zoological Gardens, Taronga Park (48½

acres in the municipality of Mosman), about 4,074 acres of public parks and reserves, or about 4.4 per cent. of their aggregate area, dedicated to, and in some cases purchased for, the people by the Government.

In addition to these parks and reserves, the National Park, situated about 16 miles south of Sydney, was dedicated to the people in December, 1879. This park, with the additions subsequently made in 1880 and 1883, contains a total area of 33,747 acres, surrounding Port Hacking, and extending towards the district of Illawarra.

Another large tract of land, designated Kuring-gai Chase, was dedicated in December, 1894, for public use. The area of the Chase is 35,322 acres, and contains portions of the parishes of Broken Bay, Cowan, Gordon, and South Colah. This park lies about 15 miles north of Sydney, and is accessible by railway at various points, or by water *via* the Hawkesbury River, several of whose creeks, notably Cowan Creek, intersect it.

In 1905 an area of 248 acres was proclaimed as a recreation ground at Kurnell, on the southern headland of Botany Bay, a spot famous as the landing-place of Captain Cook; and the Parramatta Park (252 acres) although outside the metropolis, may be mentioned on account of its historic interest.

In country districts, reserves have been proclaimed as temporary commons, and considerable areas have been dedicated from time to time as permanent commons attached to inland townships, which are otherwise well provided with parks and reserves within their boundaries.

State Nurseries are maintained at Campbelltown and Gosford, from which plants, trees, and shrubs are distributed to the various parks and reserves.

Under the Public Parks Act the Governor may appoint trustees of any lands proclaimed for the purposes of public recreation, convenience, health, or enjoyment. The trustees are empowered to frame by-laws for the protection of shrubs, trees, &c., upon the land vested in them, and to regulate the use and enjoyment of such land by the public.

COMMERCE.

POWER to make laws with respect to trade and commerce with other countries and among the States was vested in the Commonwealth Parliament, and control of the Customs and Excise Department was transferred to the Commonwealth in the year 1901. Following on alterations in the financial arrangements between the Commonwealth and the States, the Federal Government ceased to collect particulars of the interstate trade from 13th September, 1910; consequently the figures shown in this chapter relate only to oversea trade—that is, to the trade of New South Wales with countries beyond Australia.

The Customs Act of 1901 provided the necessary machinery to administer matters relating to Customs, and prescribed the manner in which duties were to be computed and paid. The Customs (Inter-State Accounts) Act, 1910, repealed the sections of the Customs Act, 1901, which necessitated the keeping of accounts of dutiable goods passing between the States. The Customs Act, 1910, assigns to the Customs Department control over all goods for export, and, subject to restrictions under any enactment, extends the provisions of earlier Acts in regard to prohibited goods, payments of duty, weight and measurement, &c. It provides also for supervision of preparation or manufacture for export of articles used for or with food or drink for human consumption, and establishes conditions as to the purity and soundness of goods designed for export.

The various Customs Tariff Acts provide general and special tariffs, uniform for all the States. Preferential rates of duty apply to certain goods imported from, and being produced within, the Union of South Africa; and the Customs Tariff, 1908, provides preference rates of Customs duties for certain goods the produce or manufacture of the United Kingdom.

Since 25th March, 1920, duties have been levied in accordance with a proposed tariff, which has not yet been confirmed by Parliament. The new rates are generally higher than the old, but in instances where such is not the case, the old rate is collected and the difference is deposited in a suspense account.

There are three tariff rates, British Preferential, Intermediate, and General. The first is for Great Britain, but, by reciprocal agreement, the Minister for Customs may extend to other dominions on individual items the British preferential rate or the intermediate rate; to countries other than the Dominions, he can extend the intermediate rate only.

In the 1911 Tariff, Great Britain received preference on 251 items, and in the 1914 tariff, on 426 items, ranging from 5 to 10 per cent—in most cases the 5 per cent. rate prevailed, while under the proposed tariff, Great Britain receives preference on 583 items, ranging from 5 to 20 per cent.

The value of goods imported, as shown in the tables throughout this section, represents the amount on which duty is payable, or would be payable if the duty were *ad valorem*. The value of goods subject to duty is taken to be the fair market value in the principal markets of the country whence exported, plus 10 per cent. to cover the cost of packing, insurance, freight, and all other charges. The value of goods exported is the value in the principal markets of the State.

IMPORTS AND EXPORTS.

The total values of oversea imports and exports and the values per head of population for each year since 1910, are quoted below:—

Year ended 30th June.	Imports.	Exports.	Per head of Population.		
			Imports.	Exports.	Total Oversea Trade.
	£	£	£ s. d.	£ s. d.	£ s. d.
*1910	23,238,993	32,035,451	14 7 7	19 16 5	34 4 0
*1911	27,343,428	32,161,401	16 8 7	19 6 5	35 15 0
*1912	32,303,630	32,958,529	18 11 7	18 19 1	37 10 8
*1913	32,350,663	32,839,789	17 17 7	18 3 0	36 0 7
†1914	16,677,336	15,738,313	9 0 9	8 10 8	17 11 5
1915	27,323,243	28,107,025	14 13 6	15 1 11	29 15 5
1916	33,379,698	40,975,416	17 17 3	21 18 6	39 15 9
1917	32,742,297	50,290,824	17 11 1	26 19 2	44 11 2
1918	29,519,986	39,619,093	15 12 2	20 18 11	36 11 1
1919*	46,013,102	51,027,359	23 16 6	26 8 4	50 4 10

* Year ended 31st December.

† Half-year ended 30th June.

The value of the exports from year to year in normal times forms a sure index of the progress of this country, the result of a rise or fall in the value of the staple commodities, or of a depression in production, being readily traceable in the corresponding rise or fall in the export values.

Difficulty in connection with freights on account of war conditions was a disturbing factor in trade during the years 1914 to 1919.

The following table shows the chief countries from which New South Wales imported goods, also those to which goods were exported:—

Country.	Imports.		Exports.	
	1913.	1918-19.	1913.	1918-19.
	£	£	£	£
United Kingdom	18,107,138	15,223,547	11,904,424	23,584,416
Canada	675,502	1,202,228	145,875	479,613
Fiji	403,623	157,425	379,476	397,265
Hong Kong... ..	165,664	370,605	553,740	1,266,178
India	1,175,707	4,135,217	220,260	3,195,491
New Zealand	1,632,184	1,589,450	1,321,989	2,381,757
South African Customs Union ...	53,350	561,612	339,207	386,210
Bismarck Archipelago ... ..	...	349,827	...	256,929
Other British Possessions... ..	698,011	2,153,329	801,087	5,564,450
Total, British Countries	£ 22,911,179	25,743,240	15,666,058	37,512,309
Bismarck Archipelago	1,659	...	65,091	...
China	41,653	115,526	114,121	201,155
France	310,050	37,111	4,649,474	230,771
Germany	1,880,042	27	3,659,676	1,608
Italy... ..	198,876	80,004	510,433	296,107
Japan (including Formosa)... ..	464,057	4,107,095	1,113,915	2,846,517
Java	259,482	581,656	353,837	1,069,393
New Caledonia	33,184	136,515	144,107	440,313
Philippine Islands... ..	51,281	50,881	192,675	478,054
United States of America	4,251,541	14,301,060	1,831,470	6,715,133
South Sea Islands	143,992	108,258	396,685	134,583
Other Foreign Countries	1,803,665	751,729	4,142,247	1,101,416
Total, Foreign Countries	£ 9,439,484	20,269,862	17,173,731	13,515,050
Total, all Countries	£ 32,350,663	46,013,102	32,839,789	51,027,359

The table shows very clearly the extent to which the trade with various countries has been affected by the War. Trade with Germany has practically ceased, while there has been an enormous development of trade with the United States and Japan, and the trade with Java has assumed important dimensions.

DISTRIBUTION OF TRADE.

Of oversea imports in 1919, according to country of origin, 52 per cent. were of British manufacture or production. Approximately 33 per cent. of the total imports were shipped from the United Kingdom, 23 per cent. from British possessions, or a total of 56 per cent. from British countries, the difference in favour of British shipments as against those of foreign countries being attributable to the advantages of Great Britain as a transshipping country. The imports shipped from foreign countries direct represented 44 per cent. of the total. Of the exports from New South Wales, 74 per cent. were shipped to British countries, while of the total trade, 65 per cent. was British.

The trade of the State is greater with the United Kingdom than with any other country. The real trade with the United Kingdom is not shown, however, because, in addition to foreign goods sent to Australia *via* London, a proportion of the goods sent from New South Wales to Victoria and South Australia is shipped eventually to the United Kingdom, also some of the goods shipped to the United Kingdom are destined for transshipment to foreign ports. The extent of the export trade with the United Kingdom may be gauged by the relation between the values of goods originating in, and the value of goods shipped from, the United Kingdom.

The volume of oversea imports divided under the heads of British Empire—*i.e.*, United Kingdom and other British countries—and Foreign countries is shown in the following table for the pre-war year, 1913, and for each year of the five years ended 30th June, 1919.

Year ended 30th June.	Direct Imports from—			Total Imports.
	British Empire.		Foreign Countries.	
	United Kingdom.	Other British Countries.		
	£	£	£	£
*1913	18,107,138	4,804,041	9,439,484	32,350,663
1915	15,367,746	4,571,885	7,383,612	27,323,243
1916	15,608,510	6,434,638	11,336,550	33,379,698
1917	15,722,209	6,285,552	10,734,536	32,742,297
1918	10,514,972	6,394,533	12,610,431	29,519,986
1919	15,223,547	10,519,693	20,269,862	46,013,102

* Year ended 31st December.

War conditions have caused a diminution in the imports from the United Kingdom since 1913, and an increase in the trade from other British possessions and from foreign countries, notably the United States of America and Japan.

Stated as proportions per cent. of the total imports, the following results are obtained.

Year ended 30th June.	British Empire.			Foreign Countries.
	United Kingdom.	Other British Countries.	Total.	
	per cent.	per cent.	per cent.	per cent.
*1913	56·0	14·8	70·8	29·2
1915	56·3	16·7	73·0	27·0
1916	46·7	19·3	66·0	34·0
1917	48·0	19·2	67·2	32·8
1918	35·6	21·7	57·3	42·7
1919	33·1	22·9	56·0	44·0

* Year ended 31st December.

The two tables just given relate to "direct" imports, but in the following table the imports have been assigned to the country of origin:—

Country of Origin.	1913.		1918-19.	
	Value.	Percent- age.	Value.	Percent- age.
	£		£	
United Kingdom	15,367,428	47·5	13,978,376	30·4
Canada	359,022	1·1	1,380,743	3·0
India	1,221,849	3·7	4,420,586	9·6
New Zealand	1,457,335	4·5	1,345,801	2·9
Other British Countries	1,247,102	3·9	2,593,062	5·6
Total, Empire	19,652,736	60·7	23,718,568	51·5
Germany	2,834,038	8·8	8,232	...
Japan	467,666	1·4	4,104,326	8·9
United States of America	5,329,850	16·5	14,069,529	30·6
Other Foreign Countries	4,066,373	12·6	4,112,447	9·0
Total, Foreign Countries	12,697,927	39·3	22,294,534	48·5
Total	32,350,663	100·0	46,013,102	100·0

The oversea exports from New South Wales were:—

Year ended 30th June.	Exports to—			Total Exports
	British Empire.		Foreign Countries.	
	United Kingdom.	Other British Countries.		
	£	£	£	£
*1913	11,904,424	3,761,634	17,173,731	32,839,789
1915	16,258,252	4,580,536	7,268,237	28,107,025
1916	15,320,054	5,076,785	20,578,577	40,975,416
1917	23,906,117	12,098,164	14,286,543	50,290,824
1918	17,267,342	10,661,804	11,689,947	39,619,093
1919	23,584,416	13,927,893	13,515,050	51,027,359

* Year ended 31st December.

The proportions per cent. of the total exports are as follow:—

Year ended 30th June.	British Empire.			Foreign Countries.
	United Kingdom.	Other British Countries.	Total.	
	per cent.	per cent.	per cent.	per cent.
*1913	36·2	11·5	47·7	52·3
1915	57·8	16·3	74·1	25·9
1916	37·4	12·4	49·8	50·2
1917	47·5	24·1	71·6	28·4
1918	43·6	26·9	70·5	29·5
1919	46·2	27·3	73·5	26·5

* Year ended 31st December.

In consequence of the war there have been great variations in the proportion of trade with British and with foreign countries during the last five years. In the year ended 30th June, 1919, the exports of New South Wales to the British Empire represented 74 per cent of the total, of which 46 per cent. were exports to the United Kingdom. The proportion to foreign countries was 26 per cent.

ARTICLES OF IMPORT.

To show concisely the class of goods imported into New South Wales, oversea imports during the pre-war year, 1913, and the years ended 30th June, 1918-19, have been summarised, as shown in the table below. The figures represent direct imports only, as the interstate transfers are not available.

Classification of Imports.	1913.	1917-18.	1918-19.
	£	£	£
Foodstuffs of Animal origin	367,881	599,082	333,022
Foodstuffs of Vegetable Origin, and Salt ...	1,450,580	1,105,464	852,726
Beverages (non-alcoholic) and substances used in making.	790,189	897,188	1,222,750
Spirits and Alcoholic Liquors, including Spirits for Industrial Purposes, and Pharmaceutical Preparations subject to duty as spirits ...	927,644	666,592	666,288
Tobacco and Preparations thereof	609,570	418,057	1,310,846
Live Animals	86,131	70,053	27,172
Animal Substances (mainly unmanufactured) not Foodstuffs... ..	185,376	235,232	610,116
Vegetable Substances and non-manufactured Fibres	539,288	1,683,275	2,119,496
Apparel	2,325,935	1,695,044	2,504,035
Textiles	4,745,852	6,570,382	10,751,050
Manufactured Fibres	881,466	861,728	1,643,621
Oils, Fats, and Waxes	800,873	1,314,462	1,809,338
Paints and Varnishes	243,613	230,707	301,363
Stones and Minerals used Industrially... ..	102,292	56,895	71,939
Specie	160,955	296,482	24,760
Metals, unmanufactured, and Ores (including Bullion)	1,091,321	1,003,204	2,898,496
Metals, partly manufactured	578,897	198,119	
Machines and Machinery... ..	2,218,755	1,279,483	1,961,108
Other Manufactures of Metals	4,907,880	2,548,659	6,100,523
Indiarubber and Indiarubber Manufactures ...	278,263	460,609	657,650
Leather and Manufactures of Leather and Substitutes therefor	252,344	197,367	289,920
Wood and Wicker, raw and manufactured ...	1,598,287	999,297	1,318,637
Earthenware, Cements, China, Glass and Stone-ware	647,706	406,406	743,833
Paper	891,984	955,757	2,014,250
Stationery	458,079	398,143	567,265
Jewellery, Timepieces, and Fancy Goods ...	705,937	604,165	841,731
Optical, Surgical, and Scientific Instruments ...	495,204	547,578	520,442
Drugs, Chemicals, and Fertilisers	863,936	1,317,721	1,970,374
Miscellaneous	3,141,425	1,902,835	1,880,351
Total Imports	32,350,663	29,519,886	46,013,102

In 1919 the principal articles imported from abroad were apparel, textiles, and manufactured fibres. Dyed or printed cotton, £3,180,566, was by far the largest item, then followed white and unbleached cotton, £1,820,694; silk piece-goods, £1,389,681; woollens, £1,106,565; woolpacks, £643,830; corn and flour sacks, £596,921; sewing silks, £466,897; lace, £375,868; hessians, £361,557.

The classes next in importance comprised machines and machinery, and other manufactures of metals, in which the most important items were tinned plates, £880,370; other metal manufactures, £681,048; chassis for motor cars, £606,067; machines and machinery n.e.i., £543,622; pipes and tubes, £462,517; tools of trade, £412,529; corrugated galvanised iron, £369,467; sheet iron, £339,217; corrugated iron, not galvanised, £235,575; electric appliances n.e.i., £222,128.

In the class comprising metals (unmanufactured) and ores, and metals partly manufactured, the most important items were gold (bar), dust, ingot, and sheet, £2,025,766; gold, in matte, £394,604.

The classes relating to paper and stationery included several important items, viz., printing paper, £901,377; writing and typewriting paper, £410,128; books, £305,697; wrapping paper, £214,406.

Among vegetable substances and non-manufactured fibres, the fifth class, the chief items were copra, £797,993; linseed, £521,621; kapok, £104,516; flax and hemp, £102,884.

Drugs and chemicals came next in importance, the chief items being cream of tartar, £267,352; chemicals, n.e.i., £194,354; proprietary medicines, £165,086; sodium carbonate, £146,067; drugs and medicinal preparations, £106,211; toilet preparations n.e.i., £104,113.

ARTICLES OF EXPORT.

Exports from New South Wales consist chiefly of goods produced or manufactured in the State. Re-exports include produce of other Australian States and produce of other countries.

A classification of the total exports to oversea countries during the pre-war year, 1913, and the years ended 30th June, 1918-19 is shown below:—

Classification of Exports.	1913.	1917-18.	1918-19.
	£	£	£
Foodstuffs of Animal origin	3,677,455	4,766,509	5,026,919
Foodstuffs of Vegetable origin, and Salt ...	3,547,145	4,316,471	6,522,295
Beverages (non-alcoholic) and substances used in making	38,054	133,400	127,702
Spirits and Alcoholic Liquors, including Spirits for Industrial Purposes and Pharmaceutical Preparations subject to duty as spirits ...	64,264	165,944	249,099
Tobacco and Preparations thereof	56,504	151,539	158,694
Live Animals	78,832	121,178	107,063
Animal Substances (mainly unmanufactured), not Foodstuffs	14,051,907	14,526,414	21,373,550
Vegetable Substances and non-manufactured Fibres	64,565	289,488	610,323
Apparel	81,363	323,125	559,555
Textiles	82,649	413,037	337,495
Manufactured Fibres	34,510	93,224	80,774

ARTICLES OF EXPORTS—*continued.*

Classification of Exports.	1913.	1917-18.	1918-19.
	£	£	£
Oils, Fats, and Waxes	1,167,088	754,362	1,295,164
Paints and Varnishes	10,612	67,888	119,167
Stones and Minerals used Industrially	1,132,287	321,198	441,077
Specie	905,217	2,775,516	2,244,096
Metals, unmanufactured, and Ores	6,089,162	7,697,263	7,290,437
Metals, partly manufactured	25,743	124,728	366,089
Machines and Machinery	111,592	174,282	257,906
Other manufactures of Metals	209,129	354,017	666,085
Indiarubber and Indiarubber Manufactures	33,304	78,801	86,666
Leather and Manufactures of Leather, and Substitutes therefor	387,118	527,691	1,194,941
Wood and Wicker, raw and manufactured	305,212	206,038	185,245
Earthenware, Cement, China, Glass, and Stone- ware	19,850	46,110	69,488
Paper... ..	14,984	35,820	38,245
Stationery	63,629	46,540	61,872
Jewellery, Timepieces, and Fancy Goods	54,883	22,800	66,642
Optical, Surgical, and Scientific Instruments	61,534	100,526	83,008
Drugs, Chemicals, and Fertilisers	176,845	493,614	784,375
Miscellaneous	294,352	491,570	623,397
Total Exports	£ 32,839,789	39,619,093	51,027,359

The principal articles of export during the year ended 30th June, 1919, consisted of staple animal substances, metals, animal and vegetable food, and specie and bullion.

EXPORTS OF AUSTRALIAN AND OTHER PRODUCE.

During the year ended 30th June, 1919, the exports of Australian produce represented 95·3 per cent., and other produce 4·7 per cent. of the total exports. The following statement shows, for each of the years, 1909-1911, the values of oversea exports under the three heads of "New South Wales produce," "Produce of other Australian States," and of "Other countries." Since 1911 the distinction between New South Wales produce and produce of other Australian States has not been made by the Customs Department. The two have been included together as Australian produce; consequently the table shows, after 1911, only the exports of Australian produce.

Year ended 30th June.	New South Wales Produce.	Produce of Other Australian States.	Produce of Other Countries.	Total.	Percentage of total.	
					Australian.	Other.
	£	£	£	£		
*1910	27,677,088	2,660,263	1,698,100	32,035,451	94·7	5·3
*1911	27,491,326	2,447,089	2,222,986	32,161,401	93·1	6·9
*1912	30,661,028		2,297,501	32,958,529	93·0	7·0
*1913	31,135,169		1,704,620	32,839,789	94·8	5·2
†1914	14,518,309		1,220,004	15,738,313	92·2	7·8
1915	26,176,233		1,930,792	28,107,025	93·1	6·9
1916	38,656,163		2,319,253	40,975,416	94·3	5·7
1917	47,871,705		2,419,119	50,290,824	95·2	4·8
1918	37,243,979		2,375,114	39,619,093	94·0	6·0
1919	48,621,036		2,406,323	51,027,359	95·3	4·7

* Year ended 31st December. † Half-year ended 30th June.

EXPORTS OF AUSTRALIAN PRODUCE.

The countries to which the most important articles of Australian produce were exported direct during the year ended 30th June, 1919, may be seen in the following statement :—

	Breadstuffs.	Butter.	Preserved Milk.	Wool.
	£	£	£	£
United Kingdom	692,222	393,609	16,978	13,177,712
Ceylon	191,549	9,149	6,444	...
Egypt	701,277	44,310	132,273	562,111
India... ..	269,769	...	51,790	14,331
Hong Kong... ..	150,147	18,036	46,161	...
Straits Settlements	162,089	63,756	331,319	...
Italy... ..	...	...	...	256,563
Japan	390,273	...	16,462	1,061,805
Java	144,308	11,194	14,377	...
Peru	144,376	...	...	...
Philippine Islands... ..	343,596	39,239	7,743	...
United States	614,603	...	...	3,571,448
Other Countries	1,145,571	51,895	89,533	74,083
Total	4,949,780	631,188	713,080	18,718,053
	Meats.	Leather.	Skins and Hides.	Other Pastoral Products.
	£	£	£	£
United Kingdom	1,686,196	857,107	1,063,090	433,423
Canada	5,644	...	292,080	65,211
Egypt	453,866	5,661	...	41,302
Hong Kong... ..	11,214	25,426	...	1,247
India	885,695	1,575	...	945
New Zealand	29,966	51,734	11,189	18,257
South Africa	17,043	45,325	...	61,550
Straits Settlements	44,393	16,650	...	3,185
China	3,109	24,600	...	...
France ... ..	...	69,502	2,242	42,453
Japan	1,180	10,437	95,677	272,363
Java	25,531	13,091	...	1,915
United States	3,511	11,428	958,544	11,586
Other Countries	111,837	8,913	740	43,435
Total	3,279,185	1,141,449	2,423,562	996,902
	Coal.	Gold.	Silver and Lead.	Other Minerals.
	£	£	£	£
United Kingdom ... ..	...	...	1,865,171	2,256,555
Egypt ... ..	...	1,300,000	41,970	65,950
Hong Kong... ..	6,079	866,423	74,225	20,468
India... ..	14,438	480	1,238,744	343,915
New Zealand	208,432	...	12,119	62,796
South Africa ... ..	...	...	...	32,584
Straits Settlements	25,174	...	250	721
China ... ..	...	...	29,999	30,974
Japan ... ..	...	...	513,423	92,552
Java	31,533	...	800	8,055
New Caledonia	22,542	...	912	4,105
United States ... ..	...	...	...	667,026
Other Countries	79,181	1,939	26,000	20,867
Total	387,379	2,168,842	3,803,613	3,606,568

RE-EXPORT TRADE.

There is a large re-export of wool, chiefly the produce of Queensland, and a fairly large trade in provisions and manufactured articles of British and foreign production with New Zealand, New Caledonia, Fiji, and other islands of the Pacific.

The returns do not disclose the value of the produce of the other Australian States, but the value of the other produce re-exported during the year ended 30th June, 1919, was £2,406,323. The principal items were—copra, £487,090; piece-goods, £293,218; rice, £150,370; tea, £89,558; tobacco £85,992; oils, £82,328; silver (bar), &c., £29,000; silver, specie, £53,131; machines and machinery, £80,807; tinned fish, £69,708; spirits, £61,698; metal manufactures, £61,402; drugs and chemicals, £58,426; tinned meat, £40,584; films for kinematographs, £33,798; apparel and attire, £32,704; sugar, £27,496.

SHIPS' STORES.

In addition to the values of oversea exports shown already, considerable quantities of goods are sent away from New South Wales each year in the form of ships' stores. The value of ships' stores exported during 1918-19 was £1,041,596, of which £920,981 was Australian produce, and £120,615 other produce.

Following are details of the most important items of Australian produce exported as Ships' Stores during the year 1918-19:—

Quantity.	Value.	Quantity.	Value.		
	£		£		
Bunker coal tons	491,384	457,935	Potatoes ... cwt.	24,257	15,644
Meats	170,944	Jams and jellies lb.	653,954	14,678	
Butter ... lb.	474,486	36,436	Fish, fresh ... lb.	388,543	14,147
Flour ... centals	42,272	29,789	Cigarettes ... lb.	32,800	11,070
Milk, preserved lb.	1,747,665	26,062	Sugar... ... cwt.	7,003	10,408
Fruits, dried and in liquid... ..	16,526	Ale gals.	35,622	8,535	

SEA CARRIAGE OF GOODS.

The Sea Carriage of Goods Act, 1904, nullifies any clause in a Bill of Lading or similar document, covenanting or agreeing—(a) that the owner, charterer, master, or agent of any ship, or the ship itself, is relieved from liability for loss or damage to goods arising from the harmful or improper condition of the ship's hold, or any other part of the ship in which the goods are carried, or arising from negligence, fault, or failure in the proper loading, stowage, custody, care, or delivery of goods which are to be carried in or by the ship; (b) to lessen any obligations of owner or charterer to exercise due diligence, and to properly man, equip, and supply the ship, to make and keep it seaworthy, and to make and keep the hold, refrigerating and cool chambers, and all other parts of the ship in which goods are carried, fit and safe for their reception, carriage, and preservation; (c) or to lessen the obligations of master, officers, agents, and servants of any ship carefully to handle and stow goods, and to care for, preserve, and properly deliver them.

Regulations under the Commerce (Trade Descriptions) Act, 1905, prohibit the import and export of specified goods unless a trade description is applied to such goods; thus, a high standard quality of goods is assured.

Goods are inspected and examined, and in certain cases a declaration by the exporter must accompany the notice of intention to export. Approved goods for export are marked with an official stamp, butter and cheese are graded, and carcase meat, rabbits, and hares are classified and marked. Special instructions are issued to meat inspectors regarding supervision and inspection for export, and standard requirements are set for abattoirs and premises where meat is preserved for export.

AUSTRALIAN INDUSTRIES.

It is an offence for any person or corporation to make or engage or continue in any combination "to restrain trade or commerce to the detriment of the public, or to destroy or injure by means of unfair competition any Australian industry, the preservation of which is advantageous to the Commonwealth, having due regard to the interests of the producers, workers, and consumers." Monopoly of, or attempt or conspiracy to monopolise, any part of the trade of the Commonwealth, so as to control to the detriment of the public the supply or price of any service, merchandise, or commodity, is an offence, as also the payment of rebates, or the refusal to sell so as to promote exclusive dealing.

The Inter-State Commission Act, 1912, provides for the appointment by the Commonwealth Government of three Commissioners, who are charged with the duty of investigating any matter affecting trade and commerce.

CUSTOMS AND EXCISE REVENUE.

The following statement shows the gross amounts collected in New South Wales under each division of the tariff during the year ended 30th June, 1919, also the drawbacks, refunds, and the net collections:—

Tariff Division.	Gross Collections paid into Revenue.	Draw-backs Paid.	Refunds.	Net Collections.
	£	£	£	£
1. Stimulants, Ale, Beer, &c.	574,498	86	125	574,287
2. Narcotics	877,344	..	133,304	744,040
3. Sugar	98,784	12,762	48	25,974
4. Agricultural Products and Groceries	242,144	16,395	1,455	224,296
5. Apparel and Textiles	1,476,885	35,221	12,244	1,431,420
6. Metals and Machinery	807,302	9,906	13,804	783,592
7. Oils, Paints, and Varnishes	170,132	10,237	1,918	157,977
8. Earthenware, &c.	126,576	1,293	1,316	123,967
9. Drugs and Chemicals	125,109	4,554	1,686	118,869
10. Wood, Wicker, &c.	108,163	1,068	871	106,124
11. Jewellery and Fancy Goods	203,135	4,300	1,429	197,406
12. Leather and Rubber	240,936	7,944	1,717	231,275
13. Paper and Stationery	251,874	3,051	3,443	245,380
14. Vehicles	152,461	711	3,169	148,581
15. Musical Instruments	69,283	331	876	68,076
16. Miscellaneous	209,267	4,278	2,689	202,300
Customs Miscellaneous	15,144	..	54	15,090
Total, Customs Duties	£ 5,689,037	110,135	180,248	5,398,654
Excise—				
Beer	1,034,467	9,119	10	1,075,338
Spirits	392,362	376	73	391,913
Tobacco	374,653	..	..	374,653
Cigars	11,198	..	..	11,198
Cigarettes	983,581	..	..	983,581
Licenses—Tobacco	2,614	..	..	2,614
" Other	1,750	..	..	1,750
Total, Excise Duties	£ 2,850,625	9,495	83	2,841,047
Total, Customs and Excise Duties	£ 8,539,662	119,630	180,331	8,239,701

Sydney is a distributing centre for the whole of Australia, consequently the figures for New South Wales include customs receipts for goods which were, in the course of trade, transferred to and consumed in other

States. On the other hand, they do not include receipts for goods which were transferred from other States and consumed in New South Wales.

The following table shows the oversea trade at each port and customs station in New South Wales, with customs and excise revenue collected for the year ended 30th June, 1919 :—

Port or Station.	Oversea Trade.			Customs and Excise Revenue Collected.
	Imports.	Exports.	Total.	
	£	£	£	£
Sydney	45,351,477	49,300,861	94,652,338	8,384,056
Newcastle	661,625	1,715,855	2,377,480	161,797
Clarence River ... ..	.....	1,518	1,518	.....
Port Kembla ... ..	.....	9,125	9,125	.....
Allandale ... ..	.....	.....	.....	826
Broken Hill ... ..	.....	.....	.....	.....
Corowa (Wahgunyah) ... ..	.....	.....	.....	2,983
New South Wales	£46,013,102	51,027,359	97,040,461	8,539,662

COMMERCIAL COMMISSIONERS.

New South Wales is represented in Eastern Asia by a Commercial Commissioner, with headquarters at Kobe, Japan. The Commissioner is engaged in fostering the trade of the State in the important markets of eastern countries, and makes periodical tours of Japan, China, India, Philippine Islands, Netherlands India, and other portions of the East, closely watching for new opportunities for trade as well as taking steps to ensure the maintenance of the existing trade.

Reports are furnished by the Commissioner, giving in much detail the market prices, &c., for each commodity exported from New South Wales, also valuable advice to shippers and to the commercial community.

In addition to the assistance given to commerce the Commissioner does useful work in diverting the stream of tourists in the East towards Australia.

In connection with the British Board of Trade, a Trade Commissioner was appointed in 1908 for Australia, with an office at Sydney. He furnishes commercial information, and advises the British Board of Trade generally with regard to openings for Imperial trade.

CHAMBERS OF COMMERCE.

Chambers of Commerce have been formed in New South Wales at eighteen important trading centres, namely Sydney, Newcastle, Albury, Ballina, Bega, Bellinger River, Casino, Coff's Harbour, Cootamundra, Goulburn, Grafton, Inverell, Kempsey, Lismore, Liverpool, Maitland and District, Orange and Parramatta. The membership of the Sydney Chamber of Commerce as at June, 1919, was 1,530, including 135 firms and public companies.

SHIPPING.

The shipping of New South Wales is regulated generally by the Navigation Department, but within Port Jackson control of shipping, and matters incidental thereto, are vested in the Sydney Harbour Trust.

In the shipping records account is not taken of ships of war, cable-laying vessels, and yachts, nor of vessels trading between ports in New South Wales; and the net tonnage is quoted. Vessels are entered at the first port of call in New South Wales, and cleared at the port from which final departure is taken from the State.

The aggregate number and tonnage of interstate and oversea vessels arriving in and departing from all ports of New South Wales at intervals since 1900, with the average tonnage per vessel, are as follows:—

Year ended 30th June.	Entries.		Clearances.		Average Tonnage per Vessel.
	Vessels.	Tonnage.	Vessels.	Tonnage.	
1900*	2,784	4,014,755	2,714	3,855,748	1,432
1905*	2,725	4,697,511	2,694	4,684,108	1,731
1910*	2,937	6,290,119	3,035	6,471,855	2,137
1913	3,393	8,117,501	3,375	8,071,101	2,392
1915	3,000	7,051,503	3,059	7,219,914	2,355
1916	3,045	6,552,235	3,062	6,574,582	2,149
1917	2,602	5,803,451	2,613	5,802,683	2,226
1918	2,226	4,407,399	2,235	4,417,390	1,978
1919	2,335	4,452,004	2,275	4,301,617	1,899

* Year ended 31st December.

In 1913, the year before the war, the tonnage of vessels entered was 8,117,501, and of vessels cleared, 8,071,101. These figures have not since been approached, and there has been a steady decline in the total tonnage, as well as in the average size of vessels entered and cleared since 1915. Vessels with cargo represented 77·56 per cent. of the total tonnage entered in 1919, and 96·99 per cent. of the tonnage cleared. Only about 4 per cent. of the total tonnage is in sailing ships, which represented 4·1 per cent. of the total tonnage entered in 1919, and 4·3 per cent. of the tonnage cleared. In 1900 sailing vessels represented 20·1 per cent. of the tonnage entered and 18·5 per cent. of the tonnage cleared.

Summarising oversea and interstate trade, the following figures are obtained for entries into and clearances from the different States and the

Northern Territory of Australia during 1919, and show the relative pre-eminence of New South Wales :—

State.	Oversea and Interstate.			
	Entries.		Clearances.	
	Vessels.	Tonnage.	Vessels.	Tonnage.
New South Wales	2,335	4,452,004	2,275	4,301,617
Victoria	1,730	2,870,974	1,709	2,815,938
Queensland	691	1,168,728	681	1,139,661
South Australia	704	1,598,887	691	1,575,985
Western Australia	637	2,122,439	636	2,111,894
Tasmania	751	513,730	752	504,706
Northern Territory	43	88,928	43	88,928

NATIONALITIES OF VESSELS.

The trade of the State of New South Wales is carried, to a very great extent, under the British flag, the deep-sea trade with the mother country and British Possessions being controlled by shipowners of the United Kingdom, and the interstate trade chiefly by local shipowners. The table below distinguishes British and foreign shipping at intervals since 1900.

Year ended 30th June.	Tonnage Entered and Cleared.				Percentage.		
	Australian.	Other British.	Foreign.	Total.	Australian.	Other British.	Foreign.
1900*	3,590,284	3,111,822	1,168,397	7,870,503	45·6	39·5	14·9
1905*	3,559,239	4,474,704	1,347,676	9,381,619	37·9	47·7	14·4
1910*	4,463,079	6,259,961	2,038,934	12,761,974	35·0	49·0	16·0
1915	5,827,097	6,885,233	1,559,087	14,271,417	40·8	48·3	10·9
1916	5,503,406	6,079,371	1,544,040	13,126,817	41·9	46·3	11·8
1917	4,833,745	5,438,046	1,334,343	11,606,134	41·6	46·9	11·5
1918	4,265,496	3,348,204	1,211,089	8,824,789	48·4	37·9	13·7
1919	3,703,322	3,732,713	1,317,586	8,753,621	42·3	42·6	15·1

* Year ended 31st December.

In 1901, of vessels trading with this State, those owned in Australia represented 39·8 per cent. of the total, and in 1919, 42·3 per cent. of the total.

The war caused a material alteration in foreign tonnage, as may be gathered from the statement below, which shows the number and tonnage of shipping of the principal nationalities that entered and cleared the ports of New South Wales in the last two financial years, as compared with 1913 :—

Nationality of Shipping.	Entries and Clearances.						Tonnage— Percentage of each Nationality.		
	1913.*		1917-18.		1918-19		1913.*	1918.	1919.
	Vessels.	Tonnage.	Vessels.	Tonnage.	Vessels.	Tonnage.			
British—									
Australian	3,231	5,711,398	2,859	4,265,496	2,771	3,703,322	35·3	48·3	42·3
New Zealand	771	1,359,138	256	290,172	286	307,374	8·4	3·3	3·5
United Kingdom ..	1,589	6,081,117	711	3,000,673	857	3,408,383	37·5	34·0	·9
Other British	22	30,459	31	57,359	18	16,956	·2	·7	·2
Total	5,613	13,182,112	3,860	7,613,700	3,932	7,436,035	81·4	86·3	84·9
Foreign—									
France	150	313,252	97	127,015	94	75,040	1·9	1·4	·9
Germany	487	1,533,728	....	....	....	....	9·5	....	....
Norway	183	353,843	61	107,577	54	113,000	2·2	1·2	1·3
Sweden	23	57,643	20	54,129	32	66,199	·4	·6	·8
Netherlands	52	128,870	51	148,914	50	139,422	·8	1·7	1·6
Italy	29	47,770	....	....	4	12,978	·3	....	·1
Japan	103	332,471	162	432,525	219	552,312	2·0	4·9	6·3
United States of America	76	148,853	186	281,875	200	303,438	·9	3·2	3·5
Other Nationalities	52	90,060	24	59,054	25	55,197	·6	·7	·0
Total	1,155	3,006,490	601	1,211,089	678	1,317,586	18·6	13·7	15·1
Grand Total ..	6,768	16,188,602	4,461	8,824,759	4,610	8,753,621	100·0	100·0	100·0

* Year ended 31st December.

The most notable alterations in the foreign trade are the cessation of German shipping, which represented 9·5 per cent. in 1913, and the increases in the tonnage belonging to the United States of America and Japan; the percentage of foreign tonnage declined from 18·6 in 1913 to 15·1 in 1919.

DIRECTION OF SHIPPING TRADE.

Of the tonnage engaged in the outward trade of New South Wales, approximately half goes to other Australian States. The following table shows, for specified years, the tonnage entered from and cleared for the countries within the British Empire, and the principal foreign countries.

Although a vessel may have called at many ports on both the inward and outward voyages, the intermediate ports are not considered in the shipping records.

Country.	Entered from and cleared for various Countries.					
	1900.*		1910.*		1918-1919.	
	Vessels.	Tonnage.	Vessels.	Tonnage.	Vessels.	Tonnage.
British Empire—						
Australian States	3,082	3,861,154	3,413	6,275,901	2,863	4,498,897
United Kingdom	341	954,232	484	2,029,216	283	1,350,863
New Zealand	540	598,710	573	1,125,492	373	619,024
India and Ceylon	57	138,993	59	178,571	57	182,900
Union of South Africa—						
Cape Colony	152	240,755	16	30,127	} 17	30,572
Natal	40	60,701	19	46,434		
Fiji	65	64,125	66	101,754	48	111,069
Other British Possessions ...	188	287,723	218	453,878	321	792,001
Total, British Countries ...	4,465	6,206,393	4,848	10,241,373	3,962	7,585,326
Foreign Countries—						
France	44	100,793	51	148,137	2	7,348
Germany	70	234,817	155	510,510	...	.....
United States of America ...	157	303,187	183	403,343	257	457,115
Japan	34	83,179	93	239,713	109	273,247
New Caledonia	118	143,867	59	107,341	121	83,749
Java	45	89,129	46	104,488	38	99,917
Other Foreign Countries ...	565	709,138	537	1,007,069	121	246,919
Total, Foreign Countries ...	1,033	1,664,110	1,124	2,520,601	648	1,168,295
Total	5,498	7,870,503	5,972	12,761,974	4,610	8,753,621

*Year ended 31st December.

Of the total tonnage in 1919, vessels from and to other Australian States represented 51 per cent. The United Kingdom furnished the next largest tonnage, with 15 per cent., followed by New Zealand with 7 per cent. The United States had 5 per cent., Japan with 3 per cent., then India and Ceylon 2 per cent. In 1913 Germany headed the foreign tonnage. Several circumstances have contributed to the fall in the South American trade, of which the restriction of the export of coal is the most notable.

The advantage offered by the New South Wales trade to shipowners is illustrated by the large amount of tonnage entries in ballast, and the small number of clearances without cargo. Many vessels arriving in ballast come from ports of neighbouring States, where they have delivered a general cargo, and, having been unable to obtain a full return freight, have cleared for Newcastle, in this State, to load coal. In 1919 the tonnage entered in ballast amounted to 999,220 tons and the clearances to 129,304 tons.

SHIPPING ENTERED AT EACH PORT.

The following statement shows the number and tonnage of vessels, oversea and interstate, which entered the various ports of the State during the last five years :—

Year ended 30th June.	Port Jackson (Sydney).		Port Hunter (Newcastle).		Port Kembla.		Twofold Bay (Eden).		Other Ports.	
	Vessels.	Tonnage.	Vessels.	Tonnage.	Vessels.	Tonnage.	Vessels.	Tonnage.	Vessels.	Tonnage.
1915	2,032	5,399,836	765	1,487,487	50	72,990	65	64,390	88	26,800
1916	2,051	4,990,476	820	1,390,980	60	90,923	67	59,151	47	20,705
1917	1,735	4,502,758	692	1,170,368	38	59,875	49	54,607	38	15,843
1918	1,511	3,297,621	620	1,031,506	38	55,236	12	12,057	45	10,979
1919	1,573	3,223,631	676	1,172,724	41	43,709	4	2,552	41	9,388

Sydney is one of the chief ports of the world, as appears from a comparison of its oversea and interstate shipping entries (entirely exclusive of coastal trade) with the returns of other ports.

Including oversea, interstate, and coastwise shipping, 7,499 vessels, having a net tonnage of 5,152,666, entered Sydney Harbour in 1919.

Appended are the latest figures, including coastwise, for the principal ports of Australasia and the United Kingdom; the figures include tonnage which arrived at the respective ports, although not recorded as entered by the Customs Department :—

Port.	Tonnage. Arrivals incl. Coastwise.	Port.	Tonnage. † Arrivals incl. Coastwise.
<i>Australia—</i>		<i>England—</i>	
Sydney	5,152,666	London	12,709,111
Melbourne	5,513,968	Liverpool (including Birkenhead) ...	11,883,282
Newcastle	2,970,687	Cardiff	8,118,833
Port Adelaide	1,263,419*	Newcastle and Shields	7,778,511
Brisbane	1,263,817	Newport	3,016,817
Fremantle	1,526,951	Hull	2,812,409
Townsville	673,513	Falmouth	2,456,742
Albany	716,003	<i>Scotland—</i>	
Hobart	251,139	Glasgow	4,579,726
<i>New Zealand—</i>		Leith	1,413,516
Wellington	2,542,412	<i>Ireland—</i>	
Auckland	1,480,477	Dublin	2,846,428
Lyttelton	1,411,614	Belfast	2,734,036

* Exclusive of Coastwise Shipping—not available.

† Exclusive of tonnage used for war service.

RIVER TRAFFIC.

The extent of the waterways of New South Wales has been shown in the 1914 issue of this Year Book. Relatively to other countries New South Wales has few inland waterways, but is dependent upon railways and ocean shipping as the principal agencies of transportation. On the

coastal rivers, there is some traffic apart from the vessels trading between the river ports and Sydney, but its extent is not recorded.

On the inland rivers there is considerable traffic after a season of good rainfalls. The Murray River is navigable for 150 miles above Albury, or 1,590 miles from its mouth. Its tributaries, the Kyalite or Edwards River and the Wakool River, are navigable for 400 miles, as far as Deniliquin; the Murrumbidgee and the Lachlan Rivers combined provide 900 miles of navigable waterway; and the Darling is navigable in time of freshets as far as Walgett, 1,758 miles from its confluence with the Murray. Altogether, the Murray River system provides 4,200 miles of waterway more or less navigable. The volume of traffic on these rivers is not recorded.

WRECKS AND DISASTERS.

Wrecks and shipping casualties occurring to British merchant shipping on the coast of New South Wales are investigated by Courts of Marine Inquiry, of which some account is given in the chapter of this Year Book relating to Law Courts. The following statement shows such wrecks and casualties reported since 1915:—

Year ended 30th June.	British Vessels.				Total Tonnage.	Crews and Passengers.	Lives Lost.
	Steam.	Motor.	Sailing.	Total.			
1915	3	1	6	10	1,896	117	13
1916	5	6	4	15	3,466	81	4
1917	11	...	2	13	6,554	314	6
1918	4	...	...	4	7,522	208	4
1919	5	...	1	6	1,214	64	30

The majority of the vessels reported are small coasters under 200 tons. The figures given above do not include vessels which left the ports of the State and have been recorded as missing.

Two life-boat stations are maintained, one at Sydney and the other at Newcastle, and the whaleboats at the pilot stations are fitted for rescue service. Subsidised steam tugs are available also for the purpose of assisting vessels in distress, and life-saving appliances are kept at certain places along the coast. A considerable number of vessels trading in Australian waters are fitted with wireless telegraphy apparatus.

The Royal Shipwreck Relief and Humane Society of New South Wales is maintained by public subscriptions, unsubsidised by the State, to afford relief in cases of distress to dependents of seamen belonging to New South Wales who have lost their lives or sustained injury in the discharge of their duties, to relieve crews of vessels and necessitous passengers wrecked in New South Wales waters, and to encourage acts of bravery by granting awards for meritorious deeds in saving human life. The relief granted on account of maritime disasters during the year ended 30th June, 1920, amounted to £600.

PILOT AND ROCKET STATIONS.

Pilotage on the coast of New South Wales is a State service. The services of pilots must be engaged for all vessels not specifically exempted, and certificates of exemption from pilotage for the various ports of the State are granted, after examination, only to British subjects, and may be used only in respect of British ships registered in Australia or in New Zealand, and engaged in trade in Australasia and the South Sea Islands, or in whaling.

COASTAL AND HARBOUR LIGHTS.

On account of the unbroken regularity of the coast and the almost complete absence of islands, navigation along the coast of New South Wales is exceedingly safe. The coast line is 700 miles long, and there are no less than twenty-eight lighthouses—an average of one for every 25 miles of coast.

In addition, lighted beacons and leading lights are placed for the safety of harbour navigation in the ports of Sydney, Newcastle, Narooma, Port Kembla, Ulladulla, and Moruya, and on all Northern rivers.

In Port Jackson, the question of efficient lighting has received considerable attention; leading lights have been erected and lights on buoys mark the channels. Electric fog-bells are used in times of fog.

In Port Hunter, leading lights have been placed, also there are fog-bells.

Location of Lighthouse.	South Latitude.	Description of Light.	Colour of Light.	Distance visible (See note).
Green Cape	37 16	Flashing	White	Nautical miles. 19
Twofold Bay (Eden) (Lookout Point).	37 4	Fixed	Red	7
Montague Island—Summit.	36 15	Fixed and Flashing ...	White	20
Bateman's Bay	35 44	Fixed	White and Red ...	...
Ulladulla (Warden Head)	35 22	"	White	12
Jervis Bay (Point Perpendicular).	35 5	Group Flashing	"	24
Crookhaven River	34 54	Fixed	Red	7
Kiama	34 40	"	Green	9
Wollongong	34 25	Group Flashing	White	10
Bellambi	34 22	Occulting	White and Red ...	3
Cook's River (Botany Bay)	33 57	Fixed	White ... ..	...
Port Jackson, Sydney— Macquarie (Outer South Head).	33 51	Flashing	"	25
Hornby (Inner South Head).	33 50	Fixed	"	14
Broken Bay (Barrenjoey)	33 35	"	Red	10
Norah Head	33 17	Flashing	White	18
Port Hunter, Newcastle— Nobbys Head (Summit)	32 55	Double Flashing	"	17
Port Stephens— Stephens Point. }	32 45	Revolving	{ "White and Red }	W. 14 R. 8
Nelson Head (Summit)...	...	Fixed	White and Red ...	8
Sugarloaf Point (Seal Rocks) (same Tower)	32 26	Flashing	White	22
Forster, Cape Hawke (anchorage).	32 11	Fixed	Green	3
Crowdy Head (Summit)	31 51	"	"	6
Tacking Point	31 29	"	{ White and Red }	W. 12 R. 6
Smoky Cape	30 56	Group Flashing	White	12
Monument Rock, Trial Bay. }	30 53	Fixed	{ "White and Red }	W. 6 R. 3
Coff's Harbour Jetty ...	30 18	"	Red	5
South Solitary Island (Summit).	30 12	Flashing	White	20
Clarence River	29 26	Fixed	"	12
Richmond River (2) ...	28 52	{ "	"	12
Cape Byron	28 38	Flashing	"	7
" (same Tower) ... ..	...	Fixed	Red	26
Tweed River (Fingal Head)	28 11	"	White	8
				12

Distance visible.—The distance is calculated visible to an observer whose eye is elevated 15 feet from the sea-level.

DOCKS AND SLIPS.

As the shipping traffic, employing vessels of considerable size, is concentrated at Sydney and Newcastle, accommodation, provided by the Government and by private enterprise, for building, fitting, and repairing ships in the State, is available at these ports. At Sydney there are four graving docks, five floating docks, and six patent slips; at Newcastle there are three patent slips. Other docking and building yards are established along the coast to meet the necessities of the smaller vessels engaged in coastal trade.

At Cockatoo Island, which is under the control of the Department of the Navy, there are two graving docks "Fitzroy" and "Sutherland," the largest of which ("Sutherland") is 633 feet long, and can accommodate a vessel 84 feet in breadth, and a draught of 30 feet.

At Woolwich, the Morts' Dock and Engineering Company, Ltd., has a graving dock 850 feet long which at high tide, can take a ship drawing 28 feet. The same Company has three floating docks, the largest of which is 317 feet long, capable of lifting a vessel of 1,100 tons and drawing 13 feet. The Company also has three patent slips, the largest of which is 270 feet long, and able to take a vessel 36 feet wide, 1,500 tons in weight, and drawing 11 feet forward and 16 feet aft.

At Newcastle there are three privately-owned patent slips, the largest of which is 200 feet long, and can take a vessel 40 feet wide and 800 tons weight, drawing 8 feet forward and 12 feet aft.

At the Shoalhaven River and at five of the Northern rivers, there are graving docks under the control of the Public Works Department, the largest of which is 214½ feet long, 45 feet wide, and can accommodate a ship with a draught of 10 feet.

SHIP-BUILDING.

The numbers and tonnage of steam and sailing vessels built in New South Wales are shown in the following statement for the years 1876-1918 :—

Years.	Sailing.		Steam.		Motor.		Total.	
	Vessels.	Tonnage.	Vessels.	Tonnage.	Vessels.	Tonnage.	Vessels.	Tonnage.
1876-1885	328	16,722	297	24,778	.....	.....	625	41,500
1886-1895	144	5,742	129	7,211	.....	.....	273	12,953
1896-1905	160	7,160	137	8,529	.....	.....	297	15,689
1906-1915	20	931	126	7,799	24	334	170	9,094
1916	2	184	8	355	6	146	16	685
1917	4	365	5	8,032	8	104	17	8,501
1917-18	2	300	6	4,132	5	380	13	4,812
1918-19	1	256	9	4,085	4	226	14	4,567

All of the fourteen vessels built during the year ended 30th June, 1919, were of wood.

SHIPPING REGISTERS.

Although the Act, which controls the registration of shipping in New South Wales, does not require the registration of vessels under 15 tons burthen, few of such vessels remain unregistered. The rules of yachting clubs ensure the registration of the yachts, steamers, and motor boats of the members; and for the purpose of sale or mortgage, business is facilitated by such registration.

The only ports in New South Wales at which shipping registers are maintained are Sydney and Newcastle. :—

The aggregate numbers and tonnage of steam and sailing vessels on the registers at the close of each year, since 1915, are shown in the following statement :—

Year ended 30th June.	Steam.		Motor.		Sailing.		Total.	
	Vessels.	Tonnage.	Vessels.	Tonnage.	Vessels.	Tonnage.	Vessels.	Tonnage.
1915	564	104,450	169	2,036	427	38,220	1,160	144,706
1916	551	92,579	173	2,136	418	37,250	1,142	131,965
1917	542	99,445	180	2,199	395	34,724	1,117	136,368
1918	537	101,478	177	2,367	386	34,394	1,100	138,239
1919	522	97,954	178	2,555	361	31,117	1,061	131,626

Of the 1,061 vessels registered in New South Wales, the majority are of small tonnage. No less than 691 (65 per cent.) are under 50 tons, 310 (29 per cent.) are from 50 to 500 tons, 32 (3 per cent.) are from 500 to 1,000 tons, 15 (2 per cent.) are from 1,000 to 1,800 tons, and 13 (1 per cent.) are over 1,800 tons.

The following statement shows the number and value of vessels built outside Australia and brought into New South Wales for local trade during five years ended 30th June, 1919 :—

Year ended 30th June.	From United Kingdom.		From Other Countries.		Total.	
	Vessels.	Aggregate Value.	Vessels.	Aggregate Value.	Vessels.	Aggregate Value.
1915	3	£ 87,096	2	£ 2,206	5	£ 89,302
1916	4	74,913	1	3,843	5	78,756
1917	4	425,861	...	...	4	425,861
1918	...	.....	1	3,362	1	3,362
1919	...	.....	2	200,000	2	200,000

Changes on the register by sales during the last five years are summarised as follows. Sales to foreigners result in removal of the vessels from the registers :—

Year ended 30th June.	To British Subjects.						To Foreigners.					
	Steam.		Motor.		Sailing.		Steam.		Motor.		Sailing.	
	Vessels.	Tonnage.	Vessels.	Tonnage.	Vessels.	Tonnage.	Vessels.	Tonnage.	Vessels.	Tonnage.	Vessels.	Tonnage.
1915	16	2,328	13	305	11	758	1	1,168	...	...	1	14
1916	36	6,289	6	97	19	3,408	1	917	...	...	...	...
1917	27	10,235	6	156	12	2,449	1	705	...	...	1	13
1918	54	11,174	14	256	12	860	...	...	2	44	...	...
1919	31	5,268	12	132	22	409	1	2,280	...	...	1	15

QUARANTINE.

The administration of all matters relating to seaboard quarantine is under control of the Commonwealth. The Quarantine Act, 1908-1915, defines the vessels subject to quarantine, and provides for the exclusion, detention, observation, segregation, isolation, protection, sanitary regulation, and disinfection of vessels, persons, goods, things, animals, or plants, so as to prevent the introduction or spread of diseases or pests into the Commonwealth. Particulars of vessels examined by the Government Port Health Officers at Sydney and Newcastle, during each of the last five years, are shown in the following table:—

Year ended 30th June.	Vessels.		Persons.		
	Ex-aminated.	Vessels Fumigated.	Passengers.	Crews.	Total.
1915	532	900	20,394	33,266	53,660
1916	701	937	26,409	41,403	67,812
1917	612	816	21,466	41,241	62,707
1918	431	752	15,000	25,248	40,248
1919	922	808	44,488	54,801	99,289

Vessels arriving in Australian ports from oversea are examined at the first port of call, and in the case of vessels from places north of Australia, at the last port of call, and pratique is given ordinarily for the whole of the Commonwealth.

Stock quarantine is undertaken at Port Jackson, where 6 horses, 2 sheep, 5 dogs, and 1 pig were detained during the year ended 30th June, 1919.

Government Shipping Offices.

Government Shipping Offices are maintained at Sydney and at Newcastle to deal with matters relating to the engagement and discharge of seamen of British vessels. Following are the records of transactions at each of these shipping offices for the last five years:—

Year ended 30th June.	Engagements registered.			Discharges registered.			Licenses to ship.		
	Sydney.	New-castle.	Total.	Sydney.	Newcastle.	Total.	Sydney.	New-castle.	Total.
1915	32,370	4,844	37,214	31,419	4,150	35,569	2,551	395	2,946
1916	30,585	4,276	34,861	29,646	3,303	32,949	2,549	201	2,750
1917	26,679	4,555	31,234	27,901	3,900	31,801	1,615	214	1,829
1918	26,002	4,109	30,111	25,407	3,332	28,739	2,839	605	3,444
1919	21,199	3,120	24,319	24,208	2,908	27,116	1,605	358	1,963

During the year ended 30th June, 1919, seamen reported as deserters from British vessels, trading on foreign voyages, numbered 177, viz., 159 at Sydney, and 18 at Newcastle. The wages paid to seamen through these shipping offices amounted to £162,796, of which £152,753 was paid at Sydney. Wages issued in advance notes amounted to £2,348, of which £1,860 was recorded for Sydney.

Masters of foreign vessels engage and discharge seamen at the offices of the consuls representing the countries to which the vessels belong, and no particulars are available in regard to these transactions.

In regard to the crews of vessels which arrived from and departed to countries beyond the Commonwealth, there was an excess of departures of 2,618 in 1917, and 2,774 during the year 1918, and in 1919, the arrivals exceeded the departures by 2,425.

WAGES.

The wages paid to the officers and crews of vessels in the Australian trade are regulated by Awards of the Commonwealth Court of Conciliation and Arbitration. The average wages paid per month in March, 1920, were as follows:—

Occupation.	Inter-state and Inter-colonial.		Coastal.	
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Officers—Chief	19 0 0 to 31 0 0		22 0 0 to 25 10 0	
Second	16 10 0 „ 26 10 0		18 10 0 „ 21 10 0	
Third	17 0 0 „ 23 10 0		16 10 0 „ 18 0 0	
Junior	£16 10s.		.....
Engineers—Chief	30 10 0 to 51 0 0		} 19 10 0 to 42 0 0	
Second	25 0 0 „ 33 0 0			
Third	22 10 0 „ 27 10 0			
Fourth	19 10 0 „ 24 10 0			
Firemen	16 0 0 „ 16 10 0		16 0 0 „ 16 10 0	
Trimmers	£14		£14	
Seamen—Steamers	£14		£14	
Sailing Ships	12 0 0 to 13 0 0		8 0 0 to 10 0 0	
Cooks	9 15 0 „ 19 15 0		10 10 0 „ 17 10 0	
Stewards—Chief	£18		16 10 0 „ 21 0 0	
Assistant	13 0 0 to 15 10 0		12 10 0 „ 14 15 0	
Stewardesses	9 0 0 „ 10 0 0		9 0 0 „ 10 0 0	

SEAMEN'S COMPENSATION ACT.

The Seamen's Compensation Act, 1911, applies to ships in the service of the Commonwealth (exclusive of naval or military service), and to ships trading with Australia, or engaged in any occupation in Australian waters, or in trade and commerce with other countries or among the States. The schedules to the Act indicate the amount of compensation payable, in case of death or total or partial incapacity, resulting from personal injury by accident to seamen in the course of their employment. Regulations also indicate methods of procedure for recovery of compensation.

THE PORT OF SYDNEY.

The prominent position which Sydney enjoys as the chief distributing centre for Australasia, among other factors, is partly due to its natural harbour, wherein the largest ocean-liners can berth right at the wharves, and partly to its central position on the East Australian coast.

Sydney Harbour has every natural advantage for an ideal commercial centre.

On account of its narrow entrance it is almost land-locked, and resembles a lake rather than a sea-port. The entrance faces east, instead of south (whence bad weather comes), consequently the violence of the waves expends itself on the north headland instead of directly sweeping into the harbour to the inconvenience of shipping. The coast is generally sufficiently high to protect the harbour from the full force of violent winds.

The area is 14,284 acres (22 square miles) but on account of its irregularity the coast line is no less than 188 miles. The great length of coast line is a distinct advantage, as it provides unlimited facilities for wharves in close proximity to the centre of the city, while the comparatively small area prevents the formation of high seas within the harbour itself.

The remarkable irregularity of Sydney Harbour is due to the fact that it is what geologists term a "drowned valley," having been formed by the subsidence of the continent which thus allowed the waters of the ocean to enter what was once a valley.

There are no large rivers entering the harbour to bring down silt, consequently very little expense is incurred in dredging, other than for the purpose of deepening the harbour permanently. The depth of the water at the heads is 80 feet, and at the wharves from 30 to 50 feet, so that there is no necessity for the erection of long jetties.

The rise and fall of the tides only range from 3 to 6 feet; the average of ordinary tides being 3 ft. 4½ in., a variation too small to inconvenience ships moored at wharves or to affect their entrance.

There is a reef in the harbour fairway, but as the reef runs parallel to the direction of outgoing and incoming vessels, it is more of an advantage than a disadvantage, as it serves to create two channels, and when the western channel is deepened, the port will be unique in having separate incoming and outgoing deep-sea ship channels. The eastern channel has a depth of 40 feet at low water, and the western channel is being deepened to that extent.

Sydney already possesses extensive plant for loading and coaling ships and with the erection of wheat silos, will be completely equipped for storing and loading grain in bulk. At Ball's Head a private company has installed a plant which is capable of coaling vessels at the rate of 1,400 tons an hour, while in the same time an oil-burning ship can take in sufficient oil for a voyage of 6,000 miles.

A table showing the distances from Sydney by ordinary sea routes, to the principal ports of the world may prove interesting :—

Port.	Distance from Sydney.	Port.	Distance from Sydney.
	miles.		miles.
Adelaide	930	San Francisco	6,500
Albany	1,790	Vancouver	7,050
Brisbane	510	Hong Kong	4,400
Fremantle	2,100	Singapore	4,175
Hobart	630	Capetown	6,375
Melbourne	575	Aden	6,875
Darwin	2,435	Bombay	6,005
Thursday Island	1,685	Colombo	5,125
Auckland	1,280	Suez	8,187
Wellington	1,240	London (<i>via</i> South Africa)	12,625
New Caledonia	1,073	„ (<i>via</i> Suez)	11,490
Suva	1,775	„ (<i>via</i> Panama)	12,770
Samoa	2,354	Marseilles	9,795
Solomon Islands	1,662	Naples	9,375
Honolulu	4,425	New York (<i>via</i> Panama)	10,030

During the year ended 30th June, 1920, the oversea imports at the port of Sydney were valued at £42,252,916, and the interstate imports at £21,939,771, the total being £64,192,687; the value of imports from other ports of the State to Sydney is not obtainable.

The following table shows the number of oversea, interstate and State vessels with their tonnage which entered the port during the last ten years :—

Year.	Vessels Entered.	Net Tonnage.	Year.	Vessels Entered.	Net Tonnage.
1910	8,844	7,137,308	1915†	9,466	8,164,333
1911	9,216	7,769,040	1916†	9,285	7,535,277
1912	9,675	8,494,059	1917†	8,453	6,725,828
1913	9,922	9,018,785	1918†	7,538	5,320,400
1914*	4,881	4,710,577	1819†	7,499	5,152,666

* Six months ended 30th June.

† 12 months ended 30th June.

SYDNEY HARBOUR TRUST.

Up to the year 1901, the wharves of Sydney Harbour were in private hands, there was no system of laying out the foreshores, access to the wharves was difficult and intricate, and the insanitary condition of the wharves and adjoining property, and the general chaotic conditions called for drastic treatment.

The wharves were resumed by the Government in 1901, together with a large area of adjoining property, and the Sydney Harbour Trust was appointed with full power of administration over the harbour, and the resumed property, including power to levy and collect certain tolls, &c., and to purchase and resume lands. The exclusive control of the port and shipping, light-houses, beacons, buoys, wharves, and the preservation and improvement of the port generally was vested in the Trust.

The Harbour Trust, upon its creation in 1901, was debited with the cost of improvements made up to that time, as well as the cost of wharfage resump-tions; in 1900 these aggregated £4,700,000. In the last eighteen years, upwards of £4,000,000 more has been spent, making a grand total expended upon harbour improvements and foreshore properties of about £9,000,000.

The following table shows the number and length of berths under the control of the Harbour Trust, passenger ferries being excluded :--

Locality.	Number of Berths.	Length of Berths.
Woolloomooloo Bay	13	ft. 5,813
Circular Quay	10	3,353
Walsh Bay	13	7,005
Darling Harbour	98	34,659
Blackwattle Bay	27	3,191
Rozelle Bay	12	2,081
White Bay	10	4,200
Total... ..	183	60,332

As mentioned in the previous paragraph, these wharves are nearly all in the immediate vicinity of the business quarter of Sydney, which is a peninsular surrounded by Woolloomooloo Bay, Circular Quay, Walsh Bay, and Darling Harbour. In this respect the business part of Sydney bears a remarkable resemblance to Manhattan Island, the commercial centre of New York.

Most of these wharves are well provided with sheds, many of them of considerable dimensions, one at the grain loading wharf at Darling Island is 1,270 feet long and 80 feet wide, another at the grain loading jetty at Pyrmont is 1,060 feet long and 51 feet wide.

One of the latest improvements is the construction of a wharfage scheme in connection with the bulk handling of wheat at Glebe Island. The Govern-ment has erected silos, with a storage capacity of six million bushels, which can be unloaded from railway trucks at the rate of 80,000 bushels per hour. The wheat will be delivered to ships at the rate of 60,000 bushels per hour, and the stream can be split into four, thus feeding four different vessels simultaneously.

An efficient Harbour Trust Fire Brigade is stationed at Goat Island, consisting of three ships the "Hydra," "Pluvius," and "Cecil Rhodes," which can discharge 3,500, 2,500, and 3,500 gallons per minute respectively. These steamers are also fitted with heavy suction pipes for salvage purposes.

The Trust has a fleet of nine dredges, one mounting a 15-ton crane. During the year ended 30th June, 1919, 1,848,993 tons of sand, silt, mud, rock, &c., were removed. The cost of dredging, towing, and repairs during the same period amounted to £45,970.

The number of persons employed by the Trust in June, 1919, was 1,282, and their salaries for the same month amounted to £20,331.

The capital debt on 30th June, 1919, amounted to £8,691,972.

The Revenue and Expenditure during the year ended 30th June, 1920, were as follows:—

Revenue.		Expenditure.	
	£		£
Wharfage Rates	323,253	Commissioners' Salaries	3,300
Tonnage ,,	29,565	Head Office	34,027
Berthing Charges... ..	1,782	Supervising Wharves	10,735
Rents—Wharves, Jetties, Bonded Stores, &c.	147,787	Control of Harbour	4,471
Rents—Shops and Houses	58,619	Management of Property	26,424
Bond and Motor Lorry Charges	32,442	Lighting Property	1,849
License Fees	3,445	Watching	1,750
Other	22,008	Dredging	17,685
		Insurance	7,052
		Rates and Taxes	5,413
		Pensions	7,424
		Bonds and Motor Lorries	19,673
		Other	20,018
		Total, Working Expenditure	159,821
		Interest on Capital	336,823
		Disbursements from Public Works Fund	20,079
Total	618,901	Grand Total	516,723

The gross revenue for the year was £618,901, equal to 7·2 per cent. on the capital, and the net revenue was £459,080, equal to 5·3 per cent. After allowing for interest on capital at the rate of 4 per cent., and deducting disbursements from Public Works Fund there was a surplus of £102,178, equal to 1·2 per cent. on the capital.

MANUFACTURING INDUSTRY.

Compared with older countries, New South Wales cannot be considered an important manufacturing country. Nevertheless over £50,000,000 have been invested in these secondary industries, which give employment to nearly 130,000 persons. The industries are principally domestic, which have been called into existence by local requirements, or as the result of natural resources. There are many products which come into competition with imported articles, but of manufacture for export there is very little in the ordinary meaning of the term.

Returns relating to the manufacturing industry are collected under the authority of the "Census Act, 1901," and must be furnished by every proprietor of a factory. The returns are used for statistical purposes only, and may not be produced in any court of law even under subpoena.

Prior to 1896 there was no uniformity in the method of collection in the various States, but in that year uniformity was secured with Victoria by agreement between the Statisticians. A standard classification of factories was adopted at a conference of statisticians in 1902, and the statistics for all the States have since been compiled on the same basis.

The following table is a summary of the important facts relating to the manufactories of New South Wales in 1901, 1911, 1917-18, and 1918-19. The figures for the first two years relate to the calendar years, but the others are for the years ended 30th June.

Particulars.	1901.	1911.	1917-18.	1918-19.
Number of Establishments ...	3,367	5,039	5,414	5,460
Number of Employees ... { Male ...	54,556	82,083	90,025	96,884
... { Female ...	11,674	26,541	30,529	30,707
... { Total ...	66,230	108,624	120,554	127,591
†Salaries and Wages paid to Employees. { Male £	*	8,917,583	12,848,017	14,966,669
... { Female £	*	1,130,079	1,853,238	1,991,250
... { Total £	4,952,000	10,047,662	14,701,255	16,957,919
Capital invested in Land, Buildings, and Fixtures... £	7,838,628	13,140,207	20,533,171	22,081,877
Value of Plant and Machinery... £	5,860,725	12,510,600	21,739,739	23,651,152
Machinery—Average Horse-power in use ...	44,265	127,547	191,385	197,836
Value of Materials and Fuel used £	15,637,611	34,913,564	66,678,337	72,035,493
Value added to Raw Materials in process of Manufacture ... £	10,010,860	19,432,447	29,499,854	32,767,525
Total Value of Output ... £	25,648,471	54,346,011	96,178,191	104,803,018
Average per Factory—				
Employees ... No.	19·7	21·6	22·3	23·4
Horse-power of Machinery £	13·2	25·3	35·4	36·2
Land and Buildings ... £	2,328	2,607	3,792	4,044
Plant and Machinery ... £	1,740	2,482	4,015	4,332
Material and Fuel ... £	4,644	6,928	12,316	13,193
Value added in process of Manufacture ... £	2,973	3,856	5,449	6,001
Total Output... £	7,617	10,784	17,764	19,195
Average per Employee—				
Time Worked ... months	11·32	11·55	11·47	11·57
†Salaries and Wages { Male £	*	114	149	161
... { Female £	*	43	61	65
... { Total £	81	96	126	137
Value of Materials and Fuel £	236	321	553	564
Value added in Manufacture £	151	179	245	256
Total Output ... £	387	500	798	812

* Information not available. † Excluding drawings of working proprietors.

The foregoing statement shows that the number of establishments has increased since 1901 by 62 per cent., and the number of employees by over 92 per cent. In 1901 the capital invested in land, buildings, fixtures, plant and machinery amounted to £13,699,353, and in 1918-19 it had increased to £45,733,029, or by over 233 per cent. The value of the output, which includes the production of butter and cheese factories, was four times as great as in 1901; but this is due largely to the increase in the values of commodities during recent years. Side by side with this development the amount paid in wages had increased by 242 per cent., and the expenditure on materials and fuel by 360 per cent.

GOVERNMENT WORKSHOPS AND FACTORIES.

Until a comparatively recent period the establishments under Government control consisted almost entirely of railway workshops, dockyards, and other establishments engaged principally in the repair or renovation rather than in the actual manufacture of articles. Now, however, there are State factories producing such diverse articles as bricks and clothes. In view of the number and importance of State and Commonwealth industrial undertakings, the following table has been prepared to show the details of their operations in 1918-19, in comparison with those of other establishments:—

	Governmental.	Other.	Total.
Number of Establishments... ..	39	5,421	5,460
Number of Employees ... { Male	14,990	81,894	96,884
{ Female	469	30,238	30,707
{ Total	15,459	112,132	127,591
*Salaries and Wages paid to Employees. { Male	£ 2,625,671	12,340,998	14,966,669
{ Female	£ 28,146	1,963,104	1,991,250
{ Total	£ 2,653,817	14,304,102	16,957,919
Capital invested in Land, Buildings, and Fixtures	£ 2,611,918	12,141,649	14,753,567
Value of Plant and Machinery	£ 3,880,958	19,770,194	23,651,152
Machinery—Average Horse-power in use...	59,133	138,703	197,836
Value of Materials and Fuel used	£ 2,393,206	69,642,287	72,035,493
Value added to Raw Materials in process of Manufacture	£ 3,097,999	29,669,526	32,767,525
Total Value of Output	£ 5,491,205	99,311,813	104,803,018

* Excluding drawings of working proprietors.

In making comparisons between the results shown by Governmental and Other establishments, it should be noted that in the former repair work still constitutes the largest portion of the work done; also that in such establishments the profit would appear in reducing the price of the product rather than in showing a large margin over cost.

CLASSIFICATION OF MANUFACTORIES.

The manufacturing industries have been arranged for purposes of reference and comparison into nineteen classes, in accordance with a standard classification adopted at a Conference of Statisticians.

The classes are as follow:—

CLASS I.—TREATING RAW MATERIALS, &c.

Boiling-down, Tallow Refining, &c.
Sausage Skins, &c.
Tanneries.

Wool-scouring and Fellmongering.
Chaff-cutting, Corn-crushing, &c.

CLASS II.—OILS AND FATS, &c.

Oil and Grease. Soap and Candles.

CLASS III.—STONE, CLAY, GLASS, &c.

Bricks and Tiles Marble, Slate, &c.
 Glass (including Bottles). Pottery and Earthenware (including
 Glass (ornamental). Modelling, &c).
 Lime, Plaster, Cement, and Asphalt.

CLASS IV.—WORKING IN WOOD.

Boxes and Cases. Saw-mills.
 Cooperage. Wood-turning, Wood-carving, &c.
 Joitery.

CLASS V.—METAL WORKS, MACHINERY, &c.

Agricultural Implements. Railway and Tramway Workshops.
 Art Metal Works. Smelting.
 Brass and Copper. Stoves and Ovens.
 Cutlery. Tinsmithing.
 Engineering. Wire-working.
 Galvanized Iron-working. Other Metal Works (including Nail and
 Ironworks and Foundries. Lead Mills).
 Railway Carriages, Rolling Stock, &c.

CLASS VI.—FOOD AND DRINK, &c.

Bacon-curing. Jam and Fruit Canning.
 Butter-factories, Creameries, &c. Pickles, Sauces, and Vinegar.
 Butterine and Margarine. Sugar Mills.
 Cheese Factories. Sugar Refinery and Distilling.
 Condensed Milk. Aerated Waters, Cordials, &c.
 Meat-preserving. Breweries.
 Biscuits. Condiments, Coffee, Spices, &c.
 Confectionery. Ice and Refrigerating.
 Cornflour, Oatmeal, &c. Malting.
 Flour-mills. Tobacco, Cigars, &c.

CLASS VII.—CLOTHING AND TEXTILE FABRICS, &c.

Woollen and Tweed Mills Dyeworks and Cleaning.
 Hosiery and Knitted Goods. Furriers.
 Boots and Shoes. Hats and Caps.
 Clothing (Slop). Shirts, Ties, and Scarfs.
 Clothing (Tailoring). Rope and Cordage.
 Clothing (Waterproof and Oilskin). Sailmaking.
 Dressmaking and Millinery (makers' material). Tents and Tarpaulins.
 Dressmaking and Millinery (customers' material).

CLASS VIII.—BOOKS, PAPER, PRINTING, &c.

Electrotyping and Stereotyping. Photo-engraving.
 Paper-making, Paper Boxes, Bags, &c. Printing and Binding.

CLASS IX.—MUSICAL INSTRUMENTS, &c.

Musical Instruments and Sewing Machines.

CLASS X.—ARMS AND EXPLOSIVES.

Arms and Explosives

CLASS XI.—VEHICLES, SADDLERY, HARNESS, &c.

Coach and Waggon Building.	Saddlery, Harness, &c.
Cycles and Motors.	Spokes, &c.
Perambulators.	Whips.

CLASS XII.—SHIP AND BOAT BUILDING AND REPAIRING.

Docks and Slips.	Ship-building and Repairing.
------------------	------------------------------

CLASS XIII.—FURNITURE, BEDDING, &c.

Bedding, Flock, and Upholstery.	Picture Frames.
Chair-making.	Window Blinds.
Furnishing Drapery, &c.	
Furniture and Cabinet-making, and Billiard Tables.	

CLASS XIV.—DRUGS AND CHEMICALS.

Chemicals, Drugs, and Medicines.	Inks, Polishes, &c. (including Fertilisers).
Paints and Varnishes.	

CLASS XV.—SURGICAL AND OTHER SCIENTIFIC INSTRUMENTS.

Surgical, Optical, and other Scientific Instruments.

CLASS XVI.—JEWELLERY, TIMEPIECES, AND PLATED-WARE.

Electro-plating.	Manufacturing Jewellery, &c.
------------------	------------------------------

CLASS XVII.—HEAT, LIGHT, AND POWER.

Coke-works.	Gas-works and Kerosene.
Electric Apparatus.	Lamps and Fittings, &c.
Electric Light and Power.	Hydraulic Power.

CLASS XVIII.—LEATHERWARE (N.E.I.).

Leather Belting, Fancy Leather, Portmanteaux, and Bags.

CLASS XIX.—MINOR WARES (N.E.I.).

Basket and Wickerware, Matting, &c.	Toys.
Brooms and Brushware.	Umbrellas.
Rubber Goods.	Other Industries.

The returns relate to establishments employing four, or more than four, persons engaged directly or indirectly in working at certain handicrafts, or in preparing or manufacturing articles for trade or sale; and to establishments employing less than four persons, where machinery, operated by steam, gas, electric, water, wind, or horse power, is used.

The term "establishment" includes branches which, whether conducted in separate buildings or not, deal with separate branches of industry, and are therefore counted as industrial entities.

With the exception of tanneries, of bacon, butter, cheese, and soap and candle factories, of brickyards, of quarries, and of gas and lime works, establishments operating with manual labour only, and with fewer than four workers, are not included. If two or more Chinamen are employed, however, the place is considered to be a factory.

The foregoing definition, based on the number of workers, applies uniformly to all other industries, and includes all tailoring, bootmaking, dress-making, and millinery establishments. It does not, however, cover shops

engaged only in retail trade and in the distribution or importation of goods; nor does it apply to bakeries, butcheries in which sausages and smallgoods are made, laundries, monumental masonry yards, and waterworks.

With the exception of blacksmiths' and wheelwrights' shops, the definition covers establishments in which workers are engaged in repairing or assembling manufactured parts of an article.

If a manufacturing business is conducted in conjunction with an importing or a retail business, particulars relating to the manufacturing section only are required; and persons employed in the importing or retail branch of the business are not included. Where two or more industries are being conducted a return is furnished for each industry; and if power from the same generating plant is used for more than one industry, it is proportionately distributed. The generation of electric light and power for use in other manufacturing operations, even if carried out on the premises, is treated as an independent industry.

The value of production includes the products of educational, charitable, and reformatory or other public institutions, excluding penitentiaries.

MOTIVE POWER.

The power used for driving machinery in factories is derived almost entirely from steam. Other agencies, principally gas, are used only to a limited extent; and, although there are electric engines of considerable voltage, they are employed mainly for lighting and tramway purposes, and the generation of their power depends upon some other class of engine.

The following table shows the distribution of motive power through the various agencies of steam, gas, electricity (generated by steam-power), water and oil, expressed in units of horse-power, for the first and second quinquennial periods and succeeding years since Federation.

Year.	Establishments using Machinery.	Horse-power of Machinery (Average used).						Av'ge H.P. per Establishment.
		Steam.	Gas.	Electricity.	Water.	Oil.	Total ex-Electricity.	
1901	1,969	42,555	1,577	330	97	36	44,265	22.
1906	2,496	70,192	4,212	8,989	75	277	74,756	30
1911	3,550	113,939	12,201	20,671	222	1,185	127,547	36
1912	3,775	130,479	16,028	26,652	273	1,181	147,961	39
1913	3,974	141,025	13,802	35,885	307	1,478	156,612	39
1914-15	3,987	158,718	14,552	50,179	283	1,885	175,438	44
1915-16	4,077	177,162	13,926	58,075	319	1,689	193,096	47
1916-17	4,272	159,712	13,312	61,702	274	1,830	175,128	41
1917-18	4,444	175,232	14,110	67,719	248	1,795	191,385	43
1918-19	4,451	181,611	14,227	74,567	63	1,935	197,836	44

During the eighteen years under review the potential horse-power of the machinery in the State increased from 57,335 to 425,301; or, exclusive of electric or secondarily-produced power, from 56,669 to 304,275. The development of electrical power is characteristic of the period, the full capacity of machinery so equipped advancing from 666 h.-p. in 1901, to 121,026 h.-p. in 1918-19. In all statements of the comparative horse-power of machinery it is, however, advisable to eliminate the electrical agency, as it is a reproduced or transmitted force originating from some other primal source.

The actual average motive force employed in operating machinery, exclusive of electricity, amounted in all the factories of the State, in 1901, to 44,265 horse-power; and in 1918-19 to 197,836 horse-power, which reveals an increase of 347 per cent. during the eighteen years' period. The average horse-power per establishment increased from 22 to 44, or by 100 per cent. during the period.

Exclusive of electrical power the proportion of average motive force used in operating machinery to potential motive-force was about 78 per cent. in 1901, and about 65 per cent. in 1918-19. Broadly speaking, the motive power of machinery is capable of supplying a third more energy than that ordinarily operated.

ESTABLISHMENTS.

The following table shows the number of manufactories and works in the metropolitan district and in the remainder of the State, together with the number of establishments in which machinery was installed.

Year.	Metropolitan District.			Remainder of State.			New South Wales.		
	With Machinery.	Without Machinery.	Total.	With Machinery.	Without Machinery.	Total.	With Machinery.	Without Machinery.	Total.
1901	754	661	1,415	1,215	737	1,952	1,969	1,398	3,367
1906	1,136	635	1,771	1,360	730	2,090	2,496	1,365	3,861
1911	1,793	717	2,510	1,757	772	2,529	3,550	1,489	5,039
1912	1,964	686	2,650	1,811	701	2,512	3,775	1,387	5,162
1913	2,093	658	2,751	1,881	714	2,595	3,974	1,372	5,346
1914-5	2,154	709	2,863	1,832	573	2,405	3,987	1,282	5,269
1915-6	2,250	565	2,815	1,827	568	2,395	4,077	1,133	5,210
1916-7	2,416	589	3,005	1,856	495	2,351	4,272	1,084	5,356
1917-8	2,545	540	3,085	1,899	430	2,329	4,444	970	5,414
1918-9	2,575	578	3,153	1,876	431	2,307	4,451	1,009	5,460

Shipping facilities and an incomparable harbour have made Sydney the chief manufacturing centre of the State, though in some industries, notably in ship-building and the manufacture of steel, Newcastle may in the future prove an important rival. In the earliest days of the State's history, Sydney, as the first place of settlement, was of necessity the sole manufacturing town in the territory. In 1901, after more than a century of colonisation, the metropolitan area contained over 42 per cent. of the manufacturing establishments in the State, and in 1919 this proportion had increased to over 57 per cent.

The country manufacturing industries are mainly occupied with the direct handling of primary products, but at Lithgow there are the Commonwealth small arms and ammunition works and a large iron and steel foundry, while Newcastle has large iron and steel works and an extensive ship-building yard.

In the metropolitan area factories for the clothing and textile fabric industries head the list, followed in order by those treating metals and machinery. In the remainder of the State the industries dealing with food and drink are first in order of precedence, followed by those engaged in vehicles and harness; next come establishments working in wood.

The following table shows the principal facts relating to each class of manufacturing industry conducted in the State and in the metropolitan district during the year 1918-19.

Class of Industry.	Establishments.			Average Number of Employees.			Average time worked per Employee.	Horse-power of Machinery—Average used.	Value of Machinery, Tools, and Plant.	Total Salaries and Wages, exclusive of Drawings of Working Proprietors.
	Males.	Females.	Total.	Males.	Females.	Total.				
NEW SOUTH WALES.										
Treating Raw Material, etc.	244	3,994	151	4,145	months	h.-p.	£	£		
Oils, Fats, etc.	40	1,077	308	1,385	10.78	7,567	591,810	696,507		
Processes in Stone, Clay, Glass, etc.	290	6,431	100	6,531	11.72	1,772	441,387	200,534		
Working in Wood	696	8,236	138	8,374	11.35	14,760	1,299,588	951,203		
Metal Works, Machinery, etc.	630	27,563	566	28,129	10.93	17,519	1,011,460	1,078,295		
Connected with Food, Drink, etc.	805	12,777	5,178	17,955	11.61	56,481	6,394,314	4,563,495		
Clothing, Textile Fabrics, etc.	960	7,554	18,712	26,266	11.25	32,358	4,544,775	2,312,954		
Books, Paper, Printing, etc.	467	6,955	2,857	9,812	11.80	6,837	756,812	2,300,013		
Musical Instruments, etc.	18	402	43	445	11.91	6,702	1,405,943	1,285,931		
Arms and Explosives	5	1,113	6	1,119	12.00	344	17,622	71,630		
Vehicles and Fittings, Saddlery, etc.	469	4,497	200	4,697	12.00	1,044	152,040	230,467		
Ship and Boat Building, etc.	37	5,076	21	5,097	11.78	2,019	228,300	574,476		
Furniture, Bedding, and Upholstery	258	3,376	468	3,844	11.89	4,462	1,492,623	934,890		
Drugs, Chemicals, and By-products	115	1,345	928	2,274	11.67	2,455	98,626	434,230		
Surgical and other Scientific Instruments	18	140	46	186	11.76	2,290	379,817	263,995		
Jewellery, Timepieces, and Plated Ware	53	668	99	767	12.00	38	10,311	26,419		
Heat, Light, and Power	237	3,957	75	4,032	11.85	297	31,747	116,112		
Leatherware, N.E.I.	32	557	298	855	11.85	99,361	4,046,776	690,237		
Minor Wares, N.E.I.	36	1,165	513	1,678	11.97	265	18,728	86,952		
Total ...	5,460	96,884	50,707	127,591	11.54	852	124,489	178,929		
					11.57	287,403	23,651,152	10,957,913		
METROPOLITAN DISTRICT.										
Treating Raw Material, etc.	105	2,677	147	2,824	11.68	6,122	450,281	463,854		
Oils, Fats, etc.	26	748	258	1,006	11.95	1,342	361,647	148,587		
Processes in Stone, Clay, Glass, etc.	143	4,163	69	4,232	11.44	7,575	596,719	641,202		
Working in Wood	244	3,958	80	4,038	11.81	8,474	432,062	575,747		
Metal Works, Machinery, etc.	455	17,587	521	18,108	11.95	15,727	2,572,180	2,762,148		
Connected with Food, Drink, etc.	270	7,382	4,724	12,106	11.59	12,996	2,764,352	1,555,076		
Clothing, Textile Fabrics, etc.	746	6,439	17,103	23,542	11.81	5,504	644,501	2,068,960		
Books, Paper, Printing, etc.	276	5,770	2,743	8,513	11.92	5,996	1,123,056	1,115,290		
Musical Instruments, etc.	18	402	43	445	12.00	344	17,622	71,630		
Arms and Explosives	4	25	3	28	12.00	14	2,040	3,540		
Vehicles and Fittings, Saddlery, etc.	229	2,852	150	3,002	11.81	1,117	126,756	385,492		
Ship and Boat Building, etc.	31	3,638	10	3,648	11.86	3,638	1,129,528	673,465		
Furniture, Bedding, and Upholstery	232	3,139	459	3,598	11.65	2,269	89,479	451,043		
Drugs, Chemicals, and By-products	103	1,150	924	2,074	11.81	1,771	217,994	232,743		
Surgical and other Scientific Instruments	17	139	45	184	12.00	37	10,211	26,320		
Jewellery, Timepieces, and Plated Ware	51	654	98	752	11.85	297	31,067	114,104		
Heat, Light, and Power	94	2,134	54	2,188	11.94	67,363	2,807,452	343,776		
Leatherware, N.E.I.	32	557	298	855	11.97	265	18,728	86,952		
Minor Wares, N.E.I.	77	1,111	503	1,619	11.55	790	121,803	173,522		
Total ...	3,153	64,525	28,237	92,762	11.80	146,611	13,532,778	11,900,761		

The average number of employees per establishment is 29 in the metropolis, 15 in the remainder of the State, and 23 in the whole State; in 1901 the averages were 30, 12, and 20 respectively.

In districts outside the metropolitan area the proportion of the largest type of factory is increasing slightly, but not in the metropolitan district. The tendency is towards an increase of small workshops and factories, and a gradual decline in the proportion of larger establishments; nevertheless the proportion of hands employed in factories employing over ten hands has increased from 69.4 per cent. in 1901 to 75.6 per cent. in 1918-19.

Since 1913 the number of establishments in New South Wales has increased by 2.1 per cent., and the number of employees by 5.9 per cent. During the war there was a large withdrawal of male labour from industrial life, and the number of persons employed in manufactories and works fell below that of 1913, but the leeway has been recovered, and the persons now employed number nearly 7,200 more than in 1913.

CAPITAL INVESTED IN PREMISES.

With regard to capital invested in manufacturing industries, particulars are available only regarding the value of land, buildings, and fixtures which are the property of the occupier; if they are not the property of the occupier the rental value is recorded.

The following statement shows the extent to which, since 1901, the capital value of the premises used for manufacturing purposes has increased, also the advance in the value of plant and machinery installed.

Year.	No. of Establishments.	Capital Value of Premises (owned and rented).	Value of Machinery, Tools, and Plant.	Average per Establishment.	
				Value of Premises.	Value of Machinery, Tools and Plant.
		£	£	£	£
1901	3,367	7,838,628	5,860,725	2,328	1,741
1906	3,861	*9,335,963	8,407,337	2,418	2,178
1911	5,039	13,140,207	12,510,600	2,608	2,483
1912	5,162	14,395,026	13,795,195	2,789	2,672
1913	5,346	15,405,018	14,861,676	2,882	2,780
1914-15	5,269	16,843,698	16,866,982	3,197	3,201
1915-16	5,210	17,770,517	18,211,104	3,410	3,495
1916-17	5,356	18,920,057	20,364,122	3,532	3,802
1917-18	5,414	20,533,171	21,730,739	3,793	4,015
1918-19	5,460	22,081,877	23,651,152	4,044	4,332
Percentage increases, 1901-1919...	62.1	181.7	303.6	73.2	149.0

*Value in 1907.

The premises owned by the occupiers in 1918-19 were valued at £14,753,567 and rented premises at £7,328,310, the valuation of the latter being based on the rent paid, capitalised at fifteen years purchase.

It will be noted that the value of machinery and plant is now greater than that of the land and buildings. The great advance, particularly during the last five years, in the value of the former, does not imply an extraordinary increase in the employment of mechanical utilities, being due mainly to inflated values.

SALARIES AND WAGES.

The figures representing salaries and wages, as stated throughout this chapter, are exclusive of amounts drawn by working proprietors.

The salaries and wages paid to employees in manufactories and works amounted in 1818-19 to £16,957,919, male workers received £14,966,669, equal to £160 16s. 4d. per head, and female workers £1,991,250, or £65 9s. 3d. per head.

A comparison of the total amount of salaries and wages paid since 1901 is shown below, together with the average amount received and the average time worked per employee.

Year.	Salaries and Wages (exclusive of drawings by Working Proprietors).				Wages Levels. 1911 = 1000.			Average time worked per Employee
	Total.	Average per Employee.			Males.	Females.	Total.	
		Male.	Female.	Total.				
	£	£ s. d.	£ s. d.	£ s. d.	*	*		months.
1901	4,952,000	*	*	81 0 0	*	*	839	11·32
1906	5,591,888	*	*	77 9 7	*	*	804	11 45
1911	10,047,662	114 4 9	43 2 1	96 7 1	1000	1000	1000	11·55
1912	11,592,052	122 10 0	48 7 9	104 8 10	1072	1123	1085	11·59
1913	12,683,384	127 15 4	50 5 10	109 13 2	1118	1167	1138	11·62
1914-15	12,667,721	130 19 3	52 18 10	112 18 11	1146	1228	1172	11·46
1915-16	13,413,845	141 9 1	53 14 6	119 5 11	1238	1246	1238	11·56
1916-17	14,331,309	149 6 11	57 9 10	126 3 3	1307	1334	1309	11·55
1917-18	14,701,255	148 18 8	61 5 6	126 3 7	1304	1422	1309	11·47
1918-19	16,957,919	160 16 4	65 9 3	137 6 6	1408	1519	1425	11·57

* Not available.

Since 1911 the average wages of males have increased by nearly 41 per cent. and of females by 52 per cent.; it should be noted, however, that the proportion of juvenile labour was slightly greater in the earlier year, when boys under 16 represented 3 per cent. of the total males compared with 2·6 per cent. in 1919, and girls under 16 represented 8·5 per cent. of all females employed as against 8·3 per cent. in 1919.

Comparing the wages in 1919 with those of 1913, the year before the war, it will be seen that the average wage of males has risen from £127 15s. 4d. to £160 16s. 4d., and of females from £50 5s. 10d. to £65 9s. 3d.; the rates of increases are 25·9 per cent. and 30·2 per cent. respectively. The average time worked in each year was practically the same.

The average wage of males is highest in the arms and explosives industry, in which the average amount paid per worker in 1918-19 was £207 1s. 2d. This is due in a large measure to the inclusion of the Commonwealth Small Arms Factory, where a large proportion of highly-skilled labour is employed. No other industry pays an average wage approaching this amount; the next highest average wage received by those engaged in ship-building was £184 9s. 11d. only.

The lowest average wage, £134 17s. 5d., was received by leather workers.

Of the female workers, those employed in the clothing industries received an average wage of £66 6s. 4d. in 1918-19, being £4 8s. more than was paid to employees engaged in printing, book-binding, &c. The average wage of all female workers was £65 9s. 3d.

COSTS AND VALUE OF PRODUCTION FROM MANUFACTORIES.

In a previous table giving the value of production from manufactories, returns from establishments treating milk products were included.

The value of goods manufactured or of work done in 1918-19, excluding the production of establishments dealing with milk products, amounted to £99,710,544. Of this amount, £67,484,457 represents the cost of materials used and fuel consumed, the value added by processes of treatment, inclusive of salaries and wages, being £32,226,087.

The following table shows the proportion of each item combined in the process of production to the total output.

Heading.	Industries connected with Milk Products.	Other Industries.	All Industries.	Proportion of Total Output.
	£	£	£	per cent.
Materials	4,507,509	65,229,943	69,737,452	66·5
Fuel, including Motive Power rented ...	43,527	2,254,514	2,298,041	2·2
Salaries and wages...	165,767	16,792,152	16,957,919	16·2
Total	4,716,803	84,276,609	88,993,412	84·9
Goods manufactured or work done ...	5,092,474	99,710,544	104,803,018	...
Balance for general purposes and profit...	375,671	15,433,935	15,809,606	15·1

Thus, out of every hundred pounds' worth of goods produced in manufactories, the materials used and the fuel consumed in the manufacture thereof cost £68 14s., while the workers received £16 4s., leaving a balance of £15 2s. for the payment of overhead charges and for profits. There are, of course numerous items to be considered before profits accrue.

The cost of these cannot be determined accurately, but from the information available it is possible to make a fairly reliable estimate with regard to some very important items, namely, depreciation, and interest on invested capital.

Excluding Government workshops and factories from consideration, the capital invested in lands, buildings, and fixtures in 1918-19 amounted to £12,142,000. Municipal valuations would indicate that the unimproved value of property is about 37·5 per cent. of the improved value, and on this basis the value of the buildings and fixtures would be about £7,589,000. Factory buildings probably depreciate in value more quickly than any other class of buildings, and therefore 4 per cent. can be regarded as a moderate rate to be allowed yearly on that account.

Depreciation of plant is more rapid, and varies considerably in different industries. As a result of inquiries made of some of the largest manufacturers in various industries and of the managers of State undertakings, it is estimated that 6½ per cent. is a fair average allowance for depreciation of plant and machinery. The allowance to be made for depreciation of land, buildings and fixtures would therefore be about £303,500 and on plant and machinery £1,285,000, or a total of £1,588,500.

In addition to the allowance for depreciation, a further allowance should be made for interest on invested capital. The capital invested in machinery and plant is £19,770,000, and in land and buildings £12,142,000; to this must be added the capital represented by goods awaiting treatment and by manufactured goods awaiting disposal. It has been ascertained that the average value of materials on hand awaiting treatment represents about 21·5 per cent. (equal to about two and a half months' supply) of the value of all material used during the year, which would indicate that during 1918-19 approximately £14,515,000 were thus invested. The value of unsold stocks on hand is about 5 per cent. of the total value of the output, which would represent a further investment of capital to the extent of £4,966,000. The total capital invested in 1918-19, therefore, was about £51,393,000. Interest on this amount at 6 per cent., which is the rate payable on Government loans, would be £3,083,600. The estimated allowance to be made for depreciation and interest would therefore be £4,672,100, to which must be added cost of rented premises £484,300, so that £5,156,400 should be deducted in respect of charges which must be taken into account before profits can be estimated. This would reduce the balance remaining after payment of wages, material, and fuel to £10,209,000, or 10·3 per cent. of the total output; and such heavy items of expense as insurance, advertising, rates and taxes would still have to be paid.

The following table shows, in each class of industry, the value of goods manufactured and of work done, the cost of materials used and of fuel consumed, the amount paid in wages and salaries, and the proportion of the total value of output which each of these charges represents.

Class of Industry.	Goods Manufactured, and work done.	Materials used.	Fuel consumed, including motive power rented.	Salaries and Wages.	Proportionate Value of Manufactured Goods represented by—			
					Materials used.	Fuel, etc.	Salaries and Wages.	Balance.
Treating Raw Material, Pastoral Products	£ 9,706,230	£ 7,984,944	£ 87,109	£ 606,507	per cent. 82·3	per cent. 0·9	per cent. 6·3	per cent. 10·5
Oils and Fats, etc.	3,188,749	2,410,007	45,044	206,534	75·6	1·4	6·3	16·7
Processes in Stone, Clay, Glass, etc.	2,581,575	740,630	273,114	961,803	28·7	10·6	36·9	23·8
Working in Wood	4,560,888	2,955,548	36,488	1,078,295	64·8	0·8	23·4	10·8
Metal Works, Machinery, etc.	24,669,994	15,926,577	755,560	4,563,495	64·6	3·0	18·5	13·9
Connected with Food and Drink, etc.	31,991,329	25,644,382	355,504	2,312,954	80·2	1·1	7·2	11·5
Clothing and Textile Fabrics, etc.	9,719,421	5,779,622	58,548	2,300,613	59·5	0·6	23·7	16·2
Books, Paper, Printing, etc.	4,470,684	2,264,984	48,465	1,285,931	50·7	1·0	28·8	19·5
Musical Instruments, etc.	196,256	77,117	1,292	71,630	39·3	0·6	36·5	23·6
Arms and Explosives	424,085	58,916	2,931	230,467	13·9	0·7	51·3	31·1
Vehicles, Fittings, and Saddlery, etc.	1,488,239	647,970	19,154	574,476	43·5	1·3	38·6	16·6
Ship and Boat Building, etc.	1,732,149	679,202	21,700	934,890	39·2	1·3	54·0	5·5
Furniture, Bedding, and Upholstery	1,553,868	846,642	13,899	484,250	54·5	0·9	31·2	13·4
Drugs, Chemicals, and By-products	2,541,187	1,487,906	19,422	263,995	58·6	0·7	10·4	30·3
Surgical and other Scientific Instruments	78,081	26,067	545	26,419	33·1	0·7	33·6	32·6
Jewellery, Timepieces, and Plated Ware	291,902	127,422	2,567	116,112	43·2	0·9	39·4	16·5
Heat, Light, and Power	4,307,932	1,260,218	547,924	690,237	29·3	12·7	16·0	42·0
Leatherware, N.E.I.	516,655	351,685	1,771	86,952	68·1	0·3	16·8	14·8
Minor Wares, N.E.I.	780,191	467,613	6,904	178,929	59·9	0·9	22·9	16·3
Total	104,803,018	69,737,452	2,298,041	16,957,919	66·5	2·2	16·2	15·1

* Exclusive of drawings of working proprietors.

It is interesting to note the extent to which the value of materials is enhanced by the processes of treatment. For all industries materials were 66·5 per cent. of the value of the output, but there was great diversity

amongst the various classes, the proportion ranging from 28·7 per cent. in those industries dealing with stone, clay, and glass, to over 82 per cent. in those treating the raw material of pastoral and agricultural products. These variations can be understood readily when the wide difference between the operations of the industries is considered, and the value of the plant and machinery employed is taken into account. The extensive use of plant alone is not, however, a factor in the creation of high values, this being the result also of the extensive use of machinery, and the industries dealing with food and those engaged in shipbuilding may be cited as examples. In the former class materials represent over 80 per cent. and wages only 7·2 per cent. of the total value, while in the latter class the wages amount to nearly one and a half times the value of materials used, and represent 54 per cent. of the total cost. It must be noted that in local shipyards a very large proportion of the work consists of repairs and renovations in which the cost of materials is much less than in the actual manufacture, and owing to the nature of the employment little machinery is brought into requisition.

The following statement shows the progress of manufactories, inclusive of those connected with milk products, the value of production, and the amount paid in wages during the period 1901 to 1919.

Year.	Value of—					Salaries and Wages paid, exclusive of drawings of Working Proprietors.	Balance (Output, less Materials and Wages).
	Materials Used.	Fuel consumed, including Motive Power rented.	Goods manufactured, or work done.	Production, being Value added to Raw Materials.	Production per employee		
	£	£	£	£	£	£	£
1901	15,140,806	496,715	25,648,471	10,010,860	151·2	4,952,000	5,058,860
1906	22,102,685	609,998	34,796,169	12,033,486	155·3	5,591,888	6,491,598
1911	33,670,951	1,242,613	54,346,011	19,432,447	178·9	10,047,662	9,384,785
1912	37,122,441	1,380,141	61,163,328	22,680,746	198·5	11,592,052	11,088,694
1913	40,537,476	1,371,425	65,672,495	23,763,594	197·5	12,683,384	11,080,210
1914-15	42,559,370	1,364,186	68,253,332	24,329,776	200·0	12,667,721	11,662,055
1915-16	44,227,079	1,528,220	70,989,864	25,234,565	216·6	13,413,845	11,820,720
1916-17	57,044,667	1,709,664	85,944,320	27,132,989	229·7	14,381,309	12,751,680
1917-18	64,618,261	2,060,076	96,178,191	29,499,854	244·2	14,701,255	14,798,599
1918-19	69,737,452	2,298,041	104,803,018	32,767,525	256·2	16,957,919	15,809,606

The value of the output has grown from £25,648,000 in 1901 to £104,803,000 in 1919, and the value of production from £10,000,000 to over £32,760,000.

The following table shows the proportion per cent. which the cost of wages, materials, and fuel bore to the total output of manufactories and works in each year.

Year.	Wages.	Materials.	Fuel.	Balance for Profit and Overhead Charges.	Total.
1901	19·3	59·0	2·0	19·7	100·0
1906	16·1	64·0	1·8	18·1	100·0
1911	18·6	61·9	2·3	17·2	100·0
1912	18·9	60·7	2·2	18·2	100·0
1913	19·3	61·7	2·1	16·9	100·0
1914-15	18·6	62·3	2·0	17·1	100·0
1915-16	18·9	62·3	2·2	16·6	100·0
1916-17	16·7	66·4	2·0	14·9	100·0
1917-18	15·2	67·0	2·1	15·7	100·0
1918-19	16·2	66·5	2·2	15·1	100·0

Materials and fuel constitute a steadily increasing proportion of the total value of the finished product in practically every class of industry.

The cost of the materials treated per employee has risen from £349 in 1913 to £569, but this is indicative of an increase in prices rather than in quantities. In industries dealing with oils and fats, clothing, books, paper and printing, and in shipbuilding, the materials used in 1918-19 cost twice as much as in 1913, but the quantities used were certainly not twice as large, in fact the supply of many articles was limited, e.g., paper.

On the other hand, the cost of material used by manufacturing jewellers in 1918-19 was less than in 1913.

There has been a progressive increase in the cost of materials per employee since 1911; up to 1915-16 it was fairly regular, but in the next year there was a steep rise from £396 to £503; in 1918-19 the value was £569.

The average value of output per employee exhibits on the whole the same features as the cost of materials used, namely, a fairly consistent increase up to 1915-16, when it was £613·2 per employee, with a sudden rise to £733·3 per employee in 1916-17. There were more moderate increases in the next two years, and the value in 1918-19 was £825·2 per employee.

The value of production per employee, that is, the value added to raw materials by the process of manufacture, shows almost similar increases. There was a fairly consistent increase throughout the last ten year period, but the value for 1916-17 was 16 per cent. greater than in 1915-16. The values per employee were—in 1909, £160·4; in 1913, 197·5; in 1916-17, £229·7; and in 1918-19, £256·2.

The ratio of the total amount of wages to the value added to raw materials varied during the last ten years from 50·9 per cent. in 1910 to 53·3 per cent. in 1913, and in 1918-19 it represented 51·6 per cent.

The ratio of the annual expenditure in wages and salaries to the value of production, that is, the value added to raw material, varies considerably in different industries, as will be seen in the following table, which shows the proportion per cent. of the amount annually expended in this connection during 1913 and the four years 1915-19.

Class of Industry.	1913.	1915-16.	1916-17.	1917-18.	1918-19.
	per cent.	per cent.	per cent.	per cent.	per cent.
Treating Raw Material, etc.	48·2	42·2	37·6	30·2	37·1
Oils, Fats, etc.	24·7	31·5	32·8	22·7	27·3
Processes in Stone, Clay, Glass, etc.	57·0	56·8	58·7	62·4	60·7
Working in Wood	68·8	71·8	65·5	62·4	68·7
Metal Works, Machinery, etc.	57·9	57·0	56·7	51·4	57·1
Connected with Food, Drink, etc.	36·2	37·2	39·2	36·9	38·6
Clothing, Textile Fabrics, etc.	65·5	60·8	61·0	62·1	59·3
Books, Paper, Printing, etc.	61·6	61·9	61·2	56·6	59·6
Musical Instruments, etc.	56·8	65·3	64·5	60·4	60·8
Arms and Explosives	*61·8	*88·3	*22·4	*39·5	*38·3
Vehicles and Fittings, Saddlery, etc.	64·5	67·2	70·4	68·6	70·0
Ship and Boat-building, etc.	82·7	88·2	96·7	90·8	90·7
Furniture, Bedding, and Upholstery	69·3	70·9	71·7	68·9	69·8
Drugs, Chemicals, and By-products	28·7	30·7	30·0	25·4	25·5
Surgical and other Scientific Instruments	59·1	58·0	55·2	46·5	50·7
Jewellery, Time-pieces, and Plated Ware	65·6	65·2	69·8	72·4	70·4
Heat, Light, and Power	26·4	28·4	28·8	29·5	27·6
Leatherware, N.E.I.	55·3	53·7	53·8	53·7	53·3
Minor Wares, N.E.I.	57·8	60·5	64·8	65·5	58·5
Total	53·3	52·8	52·8	48·8	51·6

* Excluding Commonwealth Small Arms Factory.

EMPLOYMENT.

The relative importance of the different classes of manufacturing industries, based on their capacity to employ human labour, is shown in the following comparative statement of the average number of persons engaged.

Class of Industry.	Persons engaged, including Working Proprietors.				
	1901.	1911.	1913.	1917-18.	1918-19.
Treating Raw Material, etc.: Pastoral Products	2,981	3,890	3,992	3,973	4,145
Oils and Fats: Animal, Vegetable, etc. ...	698	889	923	1,405	1,385
Processes in Stone, Clay, Glass, etc. ...	3,102	5,695	6,563	6,040	6,531
Working in Wood	5,108	8,181	9,293	7,410	8,374
Metal Works, Machinery, etc.	13,831	22,862	27,619	26,188	28,129
Connected with Food, Drink, etc.	11,372	14,050	15,197	16,886	17,955
Clothing, Textile Fabrics, etc.... ..	14,497	26,504	26,565	26,399	26,266
Books, Paper, Printing, etc.	5,573	9,134	10,009	9,562	9,812
Musical Instruments, etc.	226	387	406	433	445
Arms and Explosives	11	33	379	1,192	1,119
Vehicles and Fittings, Saddlery, etc.... ..	2,541	4,416	4,550	4,299	4,697
Ship and Boat Building, etc.	1,541	2,429	3,358	3,619	5,097
Furniture, Bedding, and Upholstery	2,140	3,534	4,035	3,760	3,844
Drugs, Chemicals, and By-products	450	1,460	1,365	2,210	2,274
Surgical and other Scientific Instruments	69	96	97	162	186
Jewellery, Timepieces, and Plated Ware	165	753	816	728	767
Heat, Light, and Power	1,417	2,795	3,577	3,984	4,032
Leatherware, N.E.I.	117	461	525	723	855
Minor Wares, N.E.I.	391	1,055	1,131	1,581	1,678
Total	66,230	108,624	120,400	120,554	127,591

During the quinquennial period 1901-6, the increase in the number of persons engaged in manufacturing industries was 11,592; during the next quinquennial period, 1906-11, it amounted to 30,802; but during the period 1911-16 it was only 7,777. Owing to the withdrawal of a number of male workers capable of bearing arms, there was a decline of 3,789 persons during the two years 1913-15, and during 1915-16 a further decline of 210 persons; but in each succeeding year the number increased. In quinquennial periods the aggregate figures for all classes give the following increases:—

1901-1906	.. .. .	17.5 per cent.
1906-1911	.. .. .	39.6 „
1911-1916	.. .. .	7.1 „
1916-1919 (three years)	.. .. .	9.6 „

The following table shows the average number of persons engaged in manufacturing industries in the metropolitan area and in the remainder of the State since 1901.

Year.	Employees (including Working Proprietors).			Year.	Employees (including Working Proprietors).		
	Metropolitan District.	Remainder of State.	Total.		Metropolitan District.	Remainder of State.	Total.
1901	42,415	23,815	66,230	1914-15	84,971	31,640	116,611
1906	52,605	25,217	77,822	1915-16	85,365	31,036	116,401
1911	77,592	31,032	108,624	1916-17	85,404	32,593	117,997
1912	83,352	32,209	115,561	1917-18	88,019	32,535	120,554
1913	86,263	34,137	120,400	1918-19	92,762	34,829	127,591

Under the classification of "Remainder of State" are included such urban centres as Newcastle, Broken Hill, Parramatta, Granville, Lithgow, Goulburn, and Bathurst, yet it is significant that Sydney and the metropolitan suburbs constituted the chief manufacturing centre of the State, and that whereas the number of employees in the metropolitan district increased by 50,347, or 118.7 per cent., from 1901 to 1919, the increase in all other parts of the State was only 11,014 persons, or 46.2 per cent.

As already pointed out, the industrial supremacy of Sydney is due to priority of settlement, and to the incidence of development, combined with its situation on one of the finest and most accessible deep-water harbours in the world, which makes it the port of distribution and exchange for practically the whole State.

The following figures show the increase in the employees of both sexes during the decennium 1909-1919:—

Year.	Metropolitan District.		Remainder of State.	
	Males.	Females	Males.	Females.
1909	43,540	20,237	25,644	2,281
1918-19	64,525	28,237	32,359	2,470
Increase per cent.	48.2	39.5	26.2	8.3

During 1918-19 the increase in the metropolitan area amounted to 4,743 persons, of whom 4,689 were males and 54 were females; and in the remainder of the State there was an increase of 2,294 persons, of whom 2,170 were males and 124 were females. Hence the actual increase of workers on the figures of the preceding year was 6,983 for the whole of the State.

CHILD LABOUR.

The law regulating primary education prescribes that children must attend school until the completion of their fourteenth year, exception being made only in case of those who, prior to reaching that age, have obtained exemption certificates. The Shops and Factories Act of 1896 prohibited the employment of children under the age of 14 in any factory, unless by special permission of the Minister for Labour and Industry; but such special permission may not be given to a child under the age of 13 years. Since the 30th December, 1909, permission has not been granted, except under extreme circumstances, to any girl under the age of 14 years.

Of 5,147 juveniles engaged in manufacturing, 4,323 were employed in factories within the metropolitan area. Reviewing the statistics of juveniles

since 1896, it is noticeable that in the past boys formed consistently a larger body than girls, but the numbers now approximate very closely. Nearly 94 per cent. of the girls employed were working in Sydney and suburbs, but one-fourth of the boys were employed in establishments located outside the metropolitan area.

Certificates of Physical Fitness.

The employment in a factory of juveniles under the age of 16 years is conditional upon a medical certificate as to physical fitness being secured by the factory occupier under the Factories and Shops Acts.

During the year 1918 certificates were issued to 6,174 juveniles as follows:—Metropolitan District, 2,707 boys and 2,773 girls; Newcastle, 380 boys and 128 girls; Broken Hill, 27 boys; and in the rest of the State 130 boys and 29 girls. The number of certificates issued yearly is increasing.

Special Permits to Work.

Special permits to work in a factory were issued during 1918 to 165 children between the ages of 13 and 14 years in the following districts:—Metropolitan, 127 boys and 31 girls; Newcastle, 2 boys; Broken Hill, 2 boys; and in the rest of the State, 3 boys. The number of certificates issued in 1918 was approximately the same as in 1913, but in 1917 only 143 certificates were issued.

In addition to these special permits to work, 6,174 permits were granted "temporarily to children between 14 and 16 years of age," the number being distributed in factory districts as follows:—Metropolitan, 5,480; Newcastle, 508; Broken Hill, 27; "Rest of State," 159.

Sex and Age Distribution.

The following table shows the sex and age distribution of the persons engaged in manufactories from 1907, the first year for which statistics respecting child employment are available.

Year.	Persons Employed in Manufactories, including Working Proprietors.								
	Adults.			Children under 16 years of age.			Adults and Children.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
1907	63,547	18,634	82,181	2,406	1,880	4,286	65,953	20,514	86,467
1911	79,609	24,274	103,883	2,474	2,267	4,741	82,083	26,541	108,624
1912	85,953	25,290	111,243	2,225	2,093	4,318	88,178	27,383	115,561
1913	90,651	25,278	115,929	2,385	2,086	4,471	93,036	27,364	120,400
1914-15	87,972	23,876	111,848	2,437	2,326	4,763	90,409	26,202	116,611
1915-16	85,146	26,072	111,218	2,578	2,605	5,183	87,724	28,677	116,401
1916-17	86,306	26,638	112,944	2,604	2,449	5,053	88,910	29,087	117,997
1917-18	87,441	27,938	115,379	2,584	2,591	5,175	90,025	30,529	120,554
1918-19	94,298	28,146	122,444	2,586	2,561	5,147	96,884	30,707	127,591

It was shown on page 366 that during the year 1918-19 there had been an increase in the number of persons engaged in the manufacturing industries of the State amounting to 7,037, of which total 6,859 were males and 178 were females. There was a total increase of adult workers amounting to 7,065, of which number 6,857 were males and 208 were females; and there was a decrease of 28 in the number of children under 16 years of age, for whilst there was an increase of 2 in the number of the boy workers, there was a decrease of 30 in the number of the girl workers.

The employment in the manufacturing industries of children under 16 years of age increased during the war, though not to any considerable extent, and the tendency is now towards a reduction.

The following statement shows the variations in the proportion of adults and children of each sex to the total number employed at intervals since 1907.

	1907.	1911.	1913.	1915-16.	1916-17.	1917-18.	1918-19.
	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.
Adults—							
Males	73·49	73·29	75·29	73·15	73·14	72·53	73·91
Females	21·55	22·34	21·00	22·40	22·58	23·18	22·06
Total	95·04	95·63	96·29	95·55	95·72	95·71	95·97
Children under 16 years of age—							
Males	2·78	2·29	1·98	2·21	2·20	2·14	2·02
Females	2·18	2·08	1·73	2·24	2·08	2·15	2·01
Total	4·96	4·37	3·71	4·45	4·28	4·29	4·03
Grand total	100·00	100·00	100·00	100·00	100·00	100·00	100·00

The number of boys under 16 is about 3 per 100 male adults, and the proportion has varied very little in recent years; in 1907 there were 4 boys to 100 adult males employed. The proportion of boys is highest in biscuit factories, where there are usually more than 20 boys to 100 men employed, and in tobacco factories, where the proportion of boys to men is about 1 to 10.

The number of boys employed in various industries since 1907 and the proportion per 100 male adults in the same industries are shown below.

Industry.	Boys under 16 employed.				Number of Boys employed per 100 male adults employed.			
	1907.	1911.	1916-17.	1918-19.	1907.	1911.	1916-17.	1918-19.
Food, &c.—								
Aerated Waters, Cordials, &c.	64	58	13	19	5	5	1	2
Biscuits, &c.	123	178	157	154	27	37	26	22
Confectionery	50	42	43	68	7	6	5	6
Jam and Fruit Canning	60	50	14	12	14	15	3	2
Tobacco, Cigars, &c.	10	61	82	75	2	10	10	10
Clothing, &c.—								
Clothing (Slop)	54	52	33	27	6	5	4	4
Clothing (Tailoring)	61	47	47	41	3	2	3	2
Boots and Shoes	242	126	158	158	8	5	6	6
Bricks and Tiles	30	52	52	83	2	2	2	3
Joinery	51	77	40	37	5	4	2	2
Engineering	92	121	153	112	2	2	2	2
Ironworks and Foundries	59	84	56	86	3	4	2	2
Tinsmithing	59	44	59	49	10	6	8	6
Coach and Waggon Building	74	73	61	54	4	3	3	3
Arms, Explosives, &c. ... ..	...	...	54	73	...	...	4	7
Electric Apparatus	6	6	11	51	4	2	2	8
Leather and Belting, Port- manteaux, Bags, &c.	20	41	32	53	9	12	8	11
Furniture, Cabinetmaking, and Billiard Tables	53	51	68	52	3	2	3	2
Printing and Binding	354	330	339	262	7	6	6	5
Paper-making, Paper Boxes, Bags, &c.	56	37	50	58	14	8	9	8
Other Industries	888	944	1,079	1,062	2	2	2	2
Totals	2,406	2,474	2,604	2,586	4	3	3	3

Similar details relating to the employment of girls under 16 are given below. The proportion of girls to women is also highest in biscuit factories, where 18 girls were employed in 1918-19 to 100 adult females, and in confectionery works, where the proportion was the same.

Industry.	Girls under 16 employed.				Number of Girls employed per 100 female adults employed.			
	1907.	1911.	1916-17.	1918-19.	1907.	1911.	1916-17	1918-19.
Food, &c.—								
Biscuits	107	110	91	136	25	18	13	18
Confectionery	36	67	79	182	8	16	12	18
Tobacco, Cigarettes, &c. ...	40	71	93	93	9	10	10	9
Clothing, &c.—								
Dressmaking and Millinery ...	422	463	490	437	11	10	9	9
Hats and Caps	92	98	75	68	14	11	9	9
Shirts, Ties, and Scarfs ...	138	156	147	183	11	10	9	13
Clothing (Slop)	327	501	280	272	9	10	7	7
Clothing (Tailoring.) ...	104	103	165	178	5	4	6	6
Woollen and Tweed Mills ...	20	50	69	71	10	10	13	12
Hoisery and Knitted Goods ...	...	...	38	56	...	...	8	10
Boots and Shoes.	250	172	235	205	18	12	16	13
Chemicals, Drugs and Medicine	19	33	43	76	10	10	10	12
Printing and Binding ...	94	154	208	146	10	11	13	9
Paper-making, Paper-boxes, Bags, etc.	85	117	110	127	15	18	17	15
Other Industries	146	172	325	331	6	5	7	6
Totals	1,880	2,267	2,449	2,561	10	9	9	9

WOMEN AND JUVENILES.

The tendency of the factory system is for the employment of women and children to increase, and legislation has been introduced to resist this tendency within limits considered conducive to the total good of the community. Largely owing to such legislative restriction the proportion of juvenile to total labour in manufacturing industries declined between the years 1911 and 1915; but in 1914-15, due mainly to causes created by the war, with a consequent decrease in the number of male adults, the proportion of juveniles showed a corresponding increase—an increase, however, which was lessened somewhat in 1916-17 and further reduced in 1918-19.

The following table shows, at intervals since 1911, the industries in which women and girls have been employed in greatest numbers, and the proportion to every hundred males employed in the same industries.

Industry.	Average Number of Women and Girls.					Number of Women and Girls per 100 Males.				
	1911.	1913.	1916-17.	1917-18.	1918-19.	1911.	1913.	1916-17.	1917-18.	1918-19.
Food, &c.—										
Aerated waters ...	152	139	114	118	107	11	10	11	13	12
Baking Powder and Self-raising Flour ...	88	96	111	107	127	100	104	156	164	205
Biscuits ...	705	846	787	832	910	108	113	104	101	108
Condiments, Coffee, and Spices ...	216	237	419	454	469	102	101	129	135	115
Confectionery ...	483	489	715	904	1,171	64	52	74	86	97
Cornflour, Oatmeal	199	256	160	174	165	7	89	60	65	62
Jam and Fruit Canning ...	449	396	354	448	491	114	105	75	87	92
Meat Preserving ...	121	157	122	251	228	1	15	25	24	18
Pickles, Sauces, and Vinegar ...	174	184	207	242	201	125	102	127	140	122
Tobacco ...	755	805	1,062	1,155	1,125	112	116	122	132	133
Clothing, &c.—										
Dressmaking and Millinery ...	5,053	4,814	5,660	5,937	5,333	5,677	4,150	3,272	3,227	2,930
Hats and Caps ...	1,029	975	895	976	851	192	171	191	192	160
Waterproofs and Oilskins ...	98	77	185	180	195	377	233	370	346	336
Slurts, Ties and Scarfs ...	1,655	1,950	1,712	1,676	1,638	1,191	1,089	1,206	1,088	1,092
Slop Clothing ...	5,503	4,910	4,152	3,929	3,919	528	541	541	499	542
Tailoring ...	3,004	3,424	3,159	3,103	3,078	136	147	178	185	178
Woolen and Tweed Mills.	389	416	590	572	658	111	116	133	121	111
Hosiery and Knitted Goods.	180	320	514	540	612	529	533	547	545	382
Tents and Tar-paulins ...	241	268	273	306	364	178	203	184	203	235
Boots and Shoes ...	1,593	1,559	1,702	1,789	1,845	57	58	65	66	66
Chemicals, Drugs and Medicines ...	365	329	488	584	716	79	71	82	87	91
Bedding, Flock, and Upholstery ...	105	130	161	147	154	26	26	33	28	276
Brooms and Brush-ware ...	15	24	55	51	44	7	10	21	20	18
Furnishing, Drapery, etc. ...	166	227	283	275	218	231	311	393	377	300
Inks, Polishes, etc. ...	...	108	141	159	166	...	65	59	62	81
Leatherware ...	74	110	184	259	298	19	26	44	56	53
Manufacturing Jewellery ...	70	74	76	95	84	14	13	17	20	16
Paper, Paper Bags, and Boxes ...	754	778	775	924	969	157	154	124	142	127
Printing and Book-binding ...	1,539	1,821	1,772	1,819	1,831	26	27	29	31	31
Rubber Goods ...	62	80	182	219	248	29	37	53	51	59
Soap and Candles ...	169	190	263	279	291	34	36	38	41	52
Tinsmithing ...	38	49	238	253	209	5	6	28	32	25
Other Industries ...	1,097	1,126	1,576	1,772	1,951	2	2	2	3	8
Total ...	26,541	27,364	29,087	30,529	30,707	32	29	33	34	31

OCCUPATIONAL STATUS.

Of all the persons engaged in manufacturing industries during the year 1918-19, approximately 85 per cent. were actually employed in the different processes of manufacture, or in the sorting and packing of finished articles.

The following statement shows the occupational status of the persons engaged in each class of industry in 1918-19.

Class of Industry.	Working Proprietors, Managers, and Overseers.	Clerks, etc.	Engine-drivers, etc.	Workers in Factory, Mill, etc.	Carters, Messengers, and others.	Persons regularly employed at their own homes.	Total.
Treating Raw Material, &c. ...	382	121	186	3,313	142	1	4,145
Oils, Fats, &c. ...	70	76	24	1,196	15	4	1,385
Processes in Stone, Clay, Glass, &c. ...	436	229	166	5,570	128	2	6,531
Working in Wood ...	924	449	381	6,304	315	1	8,374
Metal Works, Machinery, &c. ...	1,438	1,038	484	24,988	172	9	28,129
Connected with Food, Drink, &c. ...	1,151	1,202	878	14,315	407	2	17,955
Clothing, Textile Fabrics, &c. ...	1,538	509	44	23,501	124	550	26,266
Books, Paper, Printing, &c. ...	840	818	34	7,984	132	4	9,812
Musical Instruments, &c. ...	22	26	1	396	...	...	445
Arms and Explosives ...	20	42	6	1,037	14	...	1,119
Vehicles and Fittings, Saddlery, &c. ...	605	266	13	3,764	45	3	4,697
Ship and Boat-building, &c. ...	112	168	31	4,766	20	...	5,097
Furniture, Bedding, and Upholstery ...	353	95	8	3,350	37	1	3,844
Drugs, Chemicals, and By-products ...	161	186	30	1,870	27	...	2,274
Surgical and other Scientific Instruments ...	23	13	1	144	5	...	186
Jewellery, Timepieces, and Platedware ...	64	54	...	629	20	...	767
Heat, Light, and Power ...	343	188	617	2,823	58	3	4,032
Leatherware, n.e.i. ...	53	64	2	733	3	...	855
Minor Wares, n.e.i. ...	140	56	7	1,462	11	2	1,678
Total ...	8,676	5,600	2,913	108,145	1,675	582	127,591
Males ...	8,036	3,764	2,913	80,450	1,653	68	96,884
Females ...	640	1,836	...	27,695	22	514	30,707

The occupational status of workers employed varied greatly in the nine-teen standard classes of manufacturing industry. The proportion per cent. of working proprietors, managers, and overseers was nearly 7 for all classes, but fell below 2 in arms and explosives, and rose to nearly 13 in vehicles, fittings, saddlery, and harness.

The workers actually employed in mill, workshop, and factory represented nearly 85 per cent. of the total number engaged, and about 74 per cent. were males.

Less than 5 per cent. of the employees were clerical workers, and of these nearly one-third were females. Less than 1 per cent. of workers are now employed in their own homes, and they are almost entirely women engaged by clothing factories.

BOUNTIES ON MANUFACTURED PRODUCTS.

In order to develop the manufactures, products, industries, and commerce of the Australian Commonwealth, and generally to promote its manufacturing interests, the Federal Government inaugurated a scheme of bounty endowment, the necessary powers being conferred by section 51 (iii) of the Constitution Act, under the provisions of which such payments could be made uniformly throughout the States of the Federation. Though these bounties were payable only on articles manufactured in Australia from Australian products, an exception was made in the case of wire-netting, if woven from wire manufactured in the United Kingdom.

The enactments in this connection include the Sugar Bounty Acts, 1903-13; the Bounties Act, 1907-12; the Manufactures Encouragement Act, 1908-14; the Iron Bounty Acts, 1914-15; the Iron and Steel Bounty Act, 1918; the Shale Oils Bounties Act, 1910; the Shale Oil Bounty Act, 1917; and the Wood Pulp and Rock Phosphate Bounties Acts, 1912-17. The periods for the payment of these bounties have expired except with relation to rock phosphate, shale oil, iron, and steel.

The Wood Pulp and Rock Phosphate Bounties Acts, 1912-17, conferred for ten years, from the 1st January, 1913, a bounty of 10 per cent. on the market value of rock phosphates manufactured into marketable phosphatic manure. On shale oil, the bounty is payable for a period of four years from 1st September, 1917, at the following rate per gallon:—Up to 3½ million gallons, 2½d.; 3½ to 5 million gallons, 2d.; 5 to 8 million gallons, 1½d.; each additional gallon, 1½d.

The bounty on iron and steel, up to a total amount of £200,000 is payable for a period of five years after 1st October, 1918; when the freight from the United Kingdom to Australia is £2 10s. per ton; or under the rate of bounty on black steel sheets is £1 10s. per ton; and on galvanised sheets, £2 per ton, including the bounty (if any) paid on the black steel sheets from which the galvanised sheets are made. When the freight exceeds £2 10s. per ton, the rates of bounty are decreased accordingly.

The only payments under Bounties Acts during the years 1918 and 1919 on the products of New South Wales were made under the Shale Oil Bounty Act. The total bounties paid in 1918 amounted to £26,407, and in 1919 £16,292.

INDIVIDUAL INDUSTRIES.

The information already given in this section relates only to the manufacturing industry as a whole or to groups of industries, and although it serves to show the general development of the industry it does not furnish particulars relating to individual industries. It is desirable that detailed information should be available for all the important industries, but the output of many of them, *e.g.*, engineering works, is not readily classifiable, and as this is perhaps the most interesting item it has been deemed advisable in the following pages to confine the remarks to industries whose importance merits special mention, and whose output may be shown in detail with regard to both quantity and value.

TANNERIES.

Although skins and hides are still exported in large quantities, the tanning industry is steadily extending its operations; two-thirds of the leather produced is sole leather, but the production of the finer sorts is receiving more attention.

Two-thirds of the number of tanneries in operation in the State are situated within the boundaries of the metropolitan area.

The following table gives particulars of the industry for the year 1901 and at intervals thereafter:—

Items.	1901.	1911.	1913.	1917-18.	1918-19.
Number of Establishments ...	108	76	72	74	74
Number of Employees ...	1,059	1,039	949	1,073	1,159
Average Horse-power used ...	711	1,044	1,269	1,538	1,812
Value of Land and Buildings £	91,047	84,510	102,723	129,895	149,503
Value of Plant and Machinery £	47,274	82,241	89,010	106,971	117,731
Total Amount of Wages paid £	80,757	104,695	102,116	155,054	189,346
Value of Fuel ...	£ 4,893	7,160	6,469	11,946	14,454
Value of Materials used ...	£ 578,164	786,817	865,021	1,403,384	1,710,212
Value of Output ...	£ 735,231	982,023	1,060,049	1,779,832	2,149,198
Value of Production ...	£ 152,174	188,046	188,559	364,502	424,532
Materials treated—					
Hides—					
Calf and yearling ... No.	*	214,681	130,445	113,488	154,951
Other ... No.	*	317,025	323,297	430,202	454,593
Hide-pieces ... cwt.	*	2,537	4,050	4,160	5,600
Sheep pelts ... No.	*	4,642,865	3,693,515	3,479,395	2,922,510
Other skins ... No.	*	125,576	148,121	281,439	384,127
Bark ... tons	*	11,706	9,633	12,053	11,600
Articles produced—					
Leather ... lb.	*	13,945,005	12,724,000	16,546,946	18,093,302
Basils ... lb.	*	4,324,139	3,821,434	3,019,542	3,570,825
Pelts, pickled ... No.	*	357,333	355,938	624,437	298,858
Other skins, selling value £	*	17,151	33,075	117,179	147,505
Fleshings ... cwt.	*	*	*	39,024	41,756

* Not available.

WOOLSCOURING AND FELLMONGERING.

The wool-scouring and fellmongering industry has made rapid progress during recent years, but it is probable that much greater development will take place in the near future, particularly in woolscouring. As will be seen from the following table, the quantity of greasy wool treated in 1918-19 was twice as large as in 1913:—

Items.	1901.	1911.	1913.	1917-18.	1918-19.
Number of Establishments ...	73	59	62	50	50
Number of Employees ...	1,459	1,603	1,553	1,896	1,786
Average Horse-power used ...	997	2,009	2,436	3,239	3,540
Value of Land and Buildings £	74,521	117,818	103,342	121,492	143,810
Value of Plant and Machinery £	66,391	160,200	183,388	278,666	294,628
Total amount of Wages paid £	77,429	126,215	147,268	232,833	279,551
Value of Fuel... ...	£ 9,059	18,277	19,079	35,599	41,537
Value of Materials used ...	£ 25,244	2,151,713	2,496,029	5,486,004	5,060,216
Value of Output ...	£ 150,614	2,393,883	2,808,198	6,396,060	5,926,764
Value of Production ...	£ 116,311	225,893	293,090	874,457	825,011
Materials treated—					
Greasy wool ... lb.	*	34,023,054	31,241,578	65,173,008	63,108,238
Scoured wool ...	*	*	*	5,768,228	4,004,708
Skins... ... No.	*	5,180,335	4,930,409	3,233,946	4,022,464
Articles produced—					
Scoured wool ... lb.	*	33,283,378	31,677,853	45,079,355	42,964,824
Wool-tops and noils ...	*	*	*	5,475,550	3,783,039
Pelts... ... No.	*	4,655,524	4,397,680	2,788,789	3,276,656

SOAP AND CANDLE FACTORIES.

Of the industries in which oils and fats are treated, soap and candle making is by far the most important. The following table exhibits the chief particulars of the industry since 1901:—

Items.	1901.	1911.	1913.	1917-18.	1918-19.
Number of Establishments ...	44	37	31	26	26
Number of Employees ...	533	658	725	962	849
Average Horse-power used ...	503	785	764	758	820
Value of Land and Buildings £	65,738	147,368	159,535	183,541	196,180
Value of Plant and Machinery £	89,147	150,453	170,995	226,927	260,947
Total amount of Wages paid £	37,681	49,555	59,117	95,296	102,945
Value of Fuel ... £	5,932	12,205	11,081	31,126	29,100
Value of Materials used ... £	208,676	359,096	406,113	776,608	837,240
Value of Output ... £	322,036	597,544	610,175	1,074,952	1,139,417
Value of Production ... £	107,428	226,243	192,981	267,218	273,077
Materials Treated.—					
Tallow cwt.	*	117,423	143,593	164,890	166,801
Alkali lb.	*	6,370,007	6,623,006	932,701	4,632,648
Wax "	*	£	£	2,376,854	2,328,642
Resin cwt.	*	180,697	203,957	28,993	28,140
Copra Oil "	*			29,728	37,149
Sand "	*			15,000	20,230
Articles Produced.—					
Soap cwt.	233,600	277,449	278,899	343,770	312,020
Soap Extract, Powders, &c. lb.		965,807	1,873,403	4,618,410	3,735,378
Candles (including wax) "	3,895,468	5,388,848	5,563,404	4,228,947	4,070,811
Glycerine "	631,680	*	*	1,751,605	1,715,244
Soda Crystals £	*	14,014	19,153	508	1,401
Oilene £	*	*	*	31,012	33,246
Stearine £	*	*	*	38,619	62,050

*Not available.

It should be noted that the alkali used and the soda crystals produced in other factories are included in the figures shown above for the years 1911 and 1913.

BRICKWORKS.

Brickworks employ approximately equal numbers of persons in the metropolitan district and in the remainder of the State, but the output of the metropolitan kilns is much greater and more varied. The following figures present detailed information concerning the industry in 1901 and later years:—

Items.	1901.	1911.	1913.	1917-18.	1918-19.
Number of Establishments ...	182	222	217	162	165
Number of Employees ...	1,823	3,017	3,665	2,597	2,875
Average Horse-power used ...	1,228	4,865	7,677	6,942	7,259
Value of Land & Buildings £	148,945	344,475	525,998	505,728	576,530
Value of Plant & Mach'ry £	108,589	449,100	666,470	687,011	735,861
Total Am't Wages paid £	149,342	322,781	428,106	320,293	410,965
Value of Fuel ... £	46,355	101,267	125,342	111,276	135,994
Value of Materials used ... £	32,199	70,881	83,653	79,120	101,376
Value of Output ... £	364,251	726,620	872,322	662,868	891,815
Value of Production... £	285,697	554,472	663,327	472,472	654,445
Articles Produced.—					
Bricks No.	157,999,000	327,864,000	389,435,000	217,870,000	257,177,682
Tiles £	*	24,857	27,422	88,931	153,793
Pipes £	*	52,241	67,593	3,911	3,966
Pottery £	*	51,763	48,407	522	680
Hollow Building Blocks £	*	3,864	3,940	855	1,350
Fire Bricks, &c.	*	*	*	48,716	52,888

* Not available.

Owing to the partial suspension of building operations during the war years there was a much smaller demand for bricks; but with the resumption of building operations the output improved during 1918-19. A number of establishments, chiefly in the metropolitan district, also make tiles, pottery, &c., and the manufacture of roofing tiles has developed to such an extent that about 80 per cent. of the tiles now used in the State are of local production.

State Brickworks, Homebush.

In the latter part of 1911 the Government established State Brickworks at Homebush, near Sydney, where a considerable area of suitable clay had been found.

The business results of the past and previous years are regarded as highly satisfactory, the undertaking having been enabled to repay £20,000 on account of capital expended, and to set apart £20,000 for purposes of renewals, replacements, and new works. Besides supplying the requirements of the different Government Departments at a much reduced cost, the State Brickworks sell bricks to the public at prices greatly below those ruling outside. The sale prices given were for bricks loaded into trucks, and at the yard, Homebush Bay.

The following table gives particulars of the State Brickworks at Homebush Bay since 1914:—

Particulars.	1914.	1915.	1916.	1917.	1918.	1919.
Number of Bricks manufactured	27,110,056	32,331,801	38,137,384	29,720,259	28,936,715	35,439,684
Used for Public Works	1,922,083	27,999,787	35,287,615	22,255,645	13,912,968	20,896,882
Sold to Private Purchasers	5,102,817	3,616,009	2,828,262	6,127,621	15,879,945	14,863,730
Stocks at 30th June .. ..	.....	321,317	282,521	1,472,876	588,397	257,067
Balance used at Works	85,156	719,005	60,303	146,638	28,281	10,402
Cost of manufacture per 1,000 £	1 6 10	1 5 7	1 5 4	1 12 1	1 14 5	1 14 9
Sale price per 1,000 £	1 19 6	1 15 0	.....	.....	.....	.....
Seconds .. .. .. £	.....	.....	1 10 0	1 15 0	1 15 0	1 18 6
Commons .. .. .. £	.....	.....	1 15 0	1 17 6	1 17 6	2 1 0
Face .. .. .. £	.....	.....	3 0 0	3 5 0	3 5 0	3 10 0

SAWMILLS.

Sawmilling is an important industry both in the metropolitan and country districts.

Sawmills are classified as metropolitan, country town, and forest. To the first category belong only about one-twelfth of the total number, to the second about three-eighths; and to the last somewhat more than a half, of which the great majority are in the country division. Besides general sawmilling, some mills undertake moulding, planing, and the cutting of wood-paving blocks. In the more important centres sawmills are associated with yards dealing with imported timbers and joinery.

Details concerning the sawmilling industry at intervals since 1901 are as follow:—

Items.	1901.	1911	1913	1917-18.	1918-19.
Number of Establishments...	345	452	477	409	427
Number of Employees ...	4,088	5,205	5,788	4,258	4,892
Average Horse-power used...	5,189	10,280	12,521	11,844	12,155
Value of Land and Buildings ...	£ 160,173	269,003	363,862	359,456	374,122
Value of Plant and Machinery.	£ 273,883	526,909	619,264	623,263	709,787
Total Amount of Wages Paid.	£ 304,826	456,520	589,736	506,064	586,106
Value of Fuel	£ 17,601	6,503	9,230	13,166	16,212
Value of Material used	£ 824,065	1,309,549	1,668,221	1,546,640	1,914,019
Value of Output ...	£ 1,333,153	2,057,807	2,517,103	2,401,756	2,867,775
Value of Production.	£ 494,487	741,755	839,652	841,950	937,544
Materials Treated—					
Logs.. sup. ft.	213,228,000	213,007,000	259,030,000	187,797,000	203,573,831
Articles Produced—					
Sawn Timber sup. ft.	180,028,000	151,471,000	180,704,000	134,997,000	141,684,344

METAL WORKS, MACHINERY, &C.

The industries included in this class are by far the most important to the industrial workers in the State, although the clothing trade employs a greater number of persons, of which number, however, nearly 73 per cent. are females.

Details of the production of these industries are not available, but in view of their great importance the following particulars relating to their operations in 1918-19 are included.

Items.	Engineering Works.	Ironworks and Foundries.	Railway and Tramway Workshops	Smelting.	Other.	Total.
Number of Establishments ...	210	109	34	25	252	630
Number of Employees ...	7,052	4,915	8,148	3,163	4,851	28,129
Average Horse Power used ..	7,325	24,318	4,903	14,804	5,081	56,431
Value of Lands and Buildings	£ 692,486	622,328	1,091,568	303,754	452,567	3,162,703
Value of Plant and Machinery	£ 1,252,306	2,217,966	1,105,892	1,237,649	580,505	6,394,318
Total amount of Wages paid	£ 1,057,245	831,397	1,376,945	637,862	660,048	4,563,485
Value of Fuel	£ 49,984	398,915	26,485	227,121	53,055	758,560
Value of Material used	£ 1,552,111	5,740,175	943,221	5,612,197	2,278,873	15,926,577
Value of Output	£ 2,851,910	7,415,366	2,349,359	8,513,435	3,539,924	24,669,994
Value of Production	£ 1,449,815	1,276,276	1,379,653	2,674,117	1,207,996	7,987,857

Smelting.

Smelting, as a distinct industry, is carried on in several centres in New South Wales, the most important works being at Cockle Creek, Boolaroo, in the Newcastle District, and at Port Kembla in the Southern. At Cockle Creek portion of the Broken Hill ores are treated, as well as ores from mines in other parts of the State; but a large portion of the ores from the Barrier mines are treated in South Australia.

The smelting and treatment of ores occupied 25 plants or establishments, of which 4 were in the metropolitan division. Of the 21 plants in the remainder of the State, 12 were in the neighbourhood of Broken Hill.

The following statement shows the operations of New South Wales smelting companies in connection with both local and imported ores during 1918-19:—

Metal.	Quantities of metals extracted from ores, concentrates &, the produce of							
	N.S.W.	Victoria.	Queens-land.	South Australia.	Western Australia.	Tasma-nia.	N. Ter-ritory.	
Silver Ozs.	2,213,874	2,376	44,553	46	16,950	14	48	
Lead Tons	62,235	...	...	...	...	...	.....
Copper „	3,669	10	771	3	355	1	4	
Tin „	1,031	...	502	...	216	...	10	
Iron—Pig „	63,136	...	...	155,172	...	...	...
Molybdenite ... Cwt	125	4	...	..	...	...	...
Wolfram „	86	...	...	...	...	...	...
Bismuth „	52	34	...	...	...	...	...
Scheelite „	2	...	...	...	...	...	...

BUTTER FACTORIES.

Of the many industries engaged in the preparation of articles of food few are more important than butter-making, which gives employment to over 900 persons, and has an annual output valued at £5,000,000. More than 90 per cent. of the butter produced within the State is factory made.

Details concerning butter factories for the year 1901 and other years, including 1918-19, are as follow:—

Items.	1901.	1911.	1913.	1917-1918.	1918-1919.
Number of Establishments ...	130	150	140	125	126
Number of Employees ...	909	968	898	925	929
Average Horse-power used ..	1,765	2,161	2,578	3,149	3,104
Value of Land and Build-ings £	208,184	162,263	154,824	205,931	247,689
Value of Plant and Machin-ery £	172,767	230,485	240,133	300,910	350,886
Total Amount of Wages paid £	74,176	110,617	123,401	151,560	153,633
Value of Fuel... .. £	13,924	23,599	24,807	35,733	41,985
Value of Materials used .. £	1,260,920	3,205,863	3,035,041	4,816,201	4,373,045
Value of Output £	1,535,398	3,475,890	3,324,377	5,208,993	4,923,143
Value of Production... .. £	260,554	246,428	264,529	357,059	508,113
Materials Treated—					
Milk gals.	*	1,019,151	580,749	111,759	96,052
Cream lb.	*	176,402,048	63,262,439	167,175,000	142,581,983
Articles Produce—					
Butter lb.	34,282,214	78,421,512	73,245,383	75,867,550	61,943,210

* Not available.

In addition to these factories which are exclusively engaged in making butter there are a number of other factories also engaged in connection with dairy produce.

Particulars relating to all factories dealing with dairy products are given in the following table:—

Year.	Factories.							Estimated Value of Plant and Machinery.	Machinery in use.						Persons employed.	
	Butter only.	Cream and Milk.	Cheese only.	Bacon and Hams only.	Butter and Cheese.	Butter and Bacon.	Total.		Engines.		Butter Workers.	Churns.	Cream Separators.	Cheese Presses.	Males.	Females.
									Number.	Horse-power.						
1914-15	142	609	66	21	4	1	843	£ 446,507	963	6,947	109	258	704	146	1,949	33
1915-16	151	652	58	19	2	..	882	434,956	1,002	7,041	93	258	730	126	1,909	43
1916-17	128	846	60	21	5	..	1,060	506,968	1,205	7,946	73	238	914	143	2,167	49
1917-18	122	961	59	22	6	..	1,170	568,757	1,353	8,294	57	227	989	131	2,374	59
1918-19	124	927	58	23	8	..	1,140	537,291	1,344	8,309	46	224	1,003	149	2,349	66

Bacon, hams, butter, and cheese are made largely also on farms; the special chapter in this Year Book dealing with the Dairying Industry should, therefore, be consulted for complete information regarding these branches of agricultural and manufacturing production.

MEAT PRESERVING AND REFRIGERATING.

There were 14 establishments and 1,526 persons employed in connection with meat-preserving during 1918-19. Two establishments in the country division were rabbit canneries, and 6 meat preserving factories were within the metropolitan area. The following table shows the number of carcasses treated in establishments dealing with meat by canning and chilling at intervals since 1901.

Year.	Meat Preserving Works.				Refrigerating Works.	
	Cattle.	Sheep and Lambs.	Meat and Tongues and Sundries.		Cattle.	Sheep and Lambs.
			Quantity.	Value.		
	No.	No.	lb.	£	No.	No.
1901	16,538	732,094	*	*	18,195	963,614
1906	9,995	274,950	*	*	5,352	1,283,862
1911	61,596	925,475	3,023,931	31,978	10,188	1,469,923
1912	50,941	616,435	2,301,418	37,079	11,552	1,191,711
1913	100,827	374,523	7,305,113	81,807	29,887	2,160,484
1914-15	103,778	415,397	7,356,501	90,293	53,605	2,423,638
1915-16	11,466	76,008	4,993,226	195,464	11,835	762,034
1916-17	25,963	28,474	686,652	20,631	27,977	791,752
1917-18	38,223	399,833	9,295,428	178,895	29,168	337,234
1918-19	41,517	648,435	9,989,757	240,819	25,386	583,695

* Not available.

The total output was valued at £2,253,007, the principal item being tinned meat, 24,188,796 lb. valued at £1,514,078.

The detailed figures relating to the freezing and chilling of carcase meat at refrigerating works during the year 1918-19 were as follow:—

Live Stock Treated.	Frozen for Export.	Chilled.	Total.
	No.	No.	No.
Bullocks and Cows	20,898.	4,488	25,386
Calves	1,450	90	1,540
Total	22,348	4,578	26,926
Sheep	397,426	38,246	435,672
Lambs	146,623	1,400	148,023
Total	544,049	39,646	583,695
Pigs	458	2,901	3,359
Total : Carcases	566,855	47,125	613,980

BISCUIT FACTORIES.

There were in the State 9 establishments engaged in the manufacture of biscuits, 6 of which were within the metropolitan area. The industry is making rapid progress, and the value of the annual output now exceeds £1,000,000. Details for the last five years are given below:—

Items.	1914-15.	1915-16.	1916-17.	1917-18.	1918-19.
Number of Establishments	7	7	9	9	9
Number of Employees	1,410	1,386	1,546	1,658	1,749
Average Horse-power used	672	797	810	712	1,274
Value of Land, Buildings, &c. £	112,341	104,516	120,180	122,922	126,174
Value of Plant and Machinery £	105,970	110,290	112,089	101,900	112,342
Total Amount of Wages paid £	78,010	91,187	107,472	147,821	173,563
Value of Fuel £	9,616	9,646	11,296	13,210	17,641
Value of Materials used... .. £	428,520	516,684	518,114	689,222	725,284
Value of Output £	681,142	773,900	805,940	1,057,402	1,071,757
Value of Production £	243,006	242,546	276,530	354,970	328,832
Materials Treated—					
Flour... .. tons	10,674	10,825	11,486	16,561	12,654
Sugar tons	2,058	2,101	2,227	2,533	2,968
Other—Value only £	287,145	323,288	325,750	438,340	507,253
Articles Produced—					
Biscuits lb.	3,139,234	34,016,790	28,604,495	40,145,600	43,055,326
Cakes—Value only £	16,900	15,589	15,517	26,361	21,572
Other— „ „ £	9,253	5,024	11,020	16,859	16,274

FLOUR-MILLS.

The amount of mill-power for grinding and dressing grain is ample for treating the flour consumed in the State, and prior to the declaration of war an export trade was progressively developing, though it experienced a set-back from causes sufficiently detailed in other portions of this Year Book.

Details concerning flour-milling at intervals since 1901 are as follow:—

Item:	1901.	1911.	1913.	1917-18.	1918-19.
Number of Establishments ..	89	73	68	61	63
Number of Employees ...	889	967	1,035	1,236	1,326
Average Horse-power used ...	3,149	4,670	4,708	5,090	5,482
Value of Land and Buildings £	262,052	262,496	283,684	308,044	343,265
Value of Plant and Machinery £	254,335	340,316	342,367	371,852	411,637
Total Amount of Wages paid £	77,321	123,491	137,514	208,787	229,690
Value of Fuel ...	18,977	24,648	25,455	43,770	47,619
Value of Materials used... £	1,215,420	2,211,263	2,530,840	4,148,576	4,650,713
Value of Output ...	£ 1,514,512	2,538,331	2,957,947	4,665,301	5,171,446
Value of Production ...	£ 280,115	302,420	401,652	472,955	473,114
Materials Treated—					
Wheat bus.	9,369,534	12,616,111	13,963,806	17,530,907	18,648,403
Articles Produced—					
Flour tons	191,504	253,556	285,425	355,843	377,107
Bran "	*	65,182	69,855	78,980	86,202
Pollard "	*	45,276	52,739	78,090	92,765
Sharps and Screenings .. "	*	2,308	3,508	5,311	4,754
Wheat Meal, etc. ... cwt.	*	21,840	33,900	48,426	10,908

* Not available.

SUGAR MILLS.

The manufacture of sugar has long been an important industry. As far back as 1878 there were 50 mills in the State, but there are now only 3, and employment is afforded to a smaller number of persons than were engaged ten years ago.

The reason for the decline in the manufacture of sugar is to be found in the decrease of the area under sugar-cane in New South Wales. The cultivation of sugar-cane is confined practically to the Richmond, the Tweed, the Brunswick, and the Clarence Rivers, and the area farmed is diminishing yearly, as other more profitable crops can be grown. Queensland is the great sugar centre of Australia, on account of its immunity from the frosts which retard the cultivation of the cane in higher latitudes.

The raw sugar manufactured in 1918-19 was valued at £270,116, and the molasses at £2,064.

Items.	1901.	1911.	1913.	1917-18.	1918-19.
Number of Establishments ...	4	4	3	3	3
Number of Employees ...	529	469	486	367	432
Average Horse-power used ..	2,578	3,000	2,750	2,235	2,273
Value of Land and Buildings £	12,177	52,480	54,000	105,823	106,112
Value of Plant and Machinery £	509,242	467,976	470,183	423,289	424,450
Total amount of Wages paid £	31,764	38,004	51,476	54,090	45,818
Value of Fuel ...	4,854	8,102	5,280	5,460	5,095
Value of Materials used .. £	95,394	107,600	208,899	285,274	180,336
Value of Output ...	£ 197,137	206,277	354,742	436,202	271,270
Value of Production ...	£ 96,889	90,575	140,563	145,438	85,839
Materials Treated—					
Cane crushed tons	131,033	147,799	185,910	174,881	105,234
Articles produced—					
Raw sugar cwt.	296,200	345,978	443,840	397,500	245,560
Molasses gals	1,072,400	796,440	966,000	975,770	586,925

Sugar Refinery.

There is but one sugar refinery in the State which treats both local and imported raw product. During the year 1918-19 it handled 2,408,000 cwt. of raw sugar, which gave an output of 2,338,080 cwt. of the refined article, valued at £3,088,043.

The three mills, which were situated respectively at Harwood Island, on the Clarence River, at Broadwater, on the Richmond, and at Condong, on the Tweed, together with the refinery at Pymont, Sydney, during the year 1918-19 furnished with employment 1,070 persons, the greatest number at one time during the year being 1,139.

BREWERIES.

There were in the State 18 establishments classed as breweries, of which 3, the largest and most important, were within metropolitan boundaries. In 1908 there were 37 breweries in New South Wales, but though the number is decreasing, the output is steadily increasing.

Items.	1901.	1911.	1913.	1917-18.	1918-19.
Number of Establishments ...	51	37	31	21	18
Number of Employees ...	1,016	912	1,043	950	950
Average Horse-power used ...	1,105	1,035	1,593	2,577	2,880
Value of Land and Buildings £	571,494	278,617	300,502	635,437	743,750
Value of Plant and Machinery £	190,710	281,316	382,290	729,322	786,312
Total Amount of Wages paid £	119,099	120,540	159,227	188,703	199,699
Value of Fuel ...	£ 13,849	17,794	23,232	43,501	50,141
Value of Materials used...	£ 282,128	494,219	671,157	737,658	906,589
Value of Output...	£ 1,022,247	1,140,151	1,423,586	1,535,669	1,822,375
Value of Production ...	£ 726,270	628,138	729,197	754,510	865,645
Materials Treated—					
Malt bshls.	532,930	667,457	809,171	687,702	737,229
Hops lb.	665,345	790,866	909,116	771,078	876,182
Sugar tons	3,927	4,421	5,218	5,430	6,039
Other Materials ...centals	...	7,705	9,404	1,292	110
Articles produced—					
Ale, Beer, Stout ... gals.	13,973,751	19,804,540	24,212,202	23,166,180	24,521,349

TOBACCO FACTORIES.

Sixteen factories under this classification were in operation during the year 1918-19, all situated within the metropolitan area. Of these, 9 were engaged in the manufacture of cigars, 4 in that of tobacco, 1 in that of cigarettes, and 2 in the manufacture of tobacco and cigarettes.

About a tenth of the tobacco manufactured in New South Wales is grown in the State. In 1918-19 tobacco was grown on 1,680 acres, and the year's crop was 20,952 cwt., valued at £176,000.

The following table shows details of the operations of tobacco factories in New South Wales at intervals since 1901:—

Items.	1901.	1911.	1913.	1917-18.	1918-19.
Number of Establishments ...	20	26	24	16	16
Number of Employees ...	1,061	1,462	1,497	2,032	1,973
Average Horse-power used ...	151	630	602	524	557
Value of Land and Buildings £	115,627	166,774	73,673	173,836	179,358
Value of Plant and Machinery £	69,124	92,133	100,298	140,849	147,074
Total Amount of Wages paid £	55,149	131,323	149,129	237,484	238,150
Value of Fuel ...	1,288	1,067	919	7,863	8,441
Value of Materials used £	389,148	776,302	910,713	1,600,387	1,912,970
Value of Output ...	£ 561,991	1,250,748	1,379,048	2,222,751	2,513,839
Value of Production ...	£ 171,555	473,379	467,416	614,501	592,428
Materials Treated—					
Australasian Leaf ... lb.	833,615	745,405	727,759	917,291	742,365
Imported Leaf	2,114,456	4,617,756	5,085,083	6,864,428	7,089,213
Articles produced—					
Tobacco lb.	2,524,231	3,996,471	3,985,562	5,529,376	5,145,793
Cigars	67,128	87,818	86,264	118,521	131,701
Cigarettes	457,276	1,899,462	2,526,130	3,018,319	3,437,405

WOOLLEN AND TWEED MILLS.

Although New South Wales is one of the greatest wool-producing countries in the world, those engaged in the manufacture of woollen materials numbered only 1,253 in 1918-19, which was 208 more than in 1917-18. Woollen mills were amongst the earliest established in the State, but the industry has progressed very slowly.

The output of local tweed, however, is now nearly twice as great as in 1913, and it is probable that there will be greater expansion when the necessary machinery is available from oversea.

Details of employment, output, and other items at intervals since 1901 are shown in the following table:—

Items.	1901.	1911.	1913.	1917-18.	1918-19.
Number of Establishments ...	4	5	5	6	6
Number of Employees ...	234	738	776	1,045	1,253
Average Horse-power used ...	255	937	1,549	2,513	2,590
Value of Land and Buildings £	16,100	68,771	97,759	113,417	134,875
Value of Plant and Machinery £	26,650	122,927	170,693	188,437	242,403
Total amount of Wages paid £	12,459	66,536	71,852	111,714	136,931
Value of Fuel ...	£ 1,727	4,632	5,672	13,843	16,419
Value of Materials used £	30,272	143,915	156,364	446,483	538,498
Value of Output ...	£ 57,039	271,465	289,726	731,185	945,624
Value of Production ...	£ 25,040	122,918	127,690	270,859	390,707
Materials Treated—					
Scoured Wool ... lb.	685,240	1,225,470	1,242,223	2,833,326	3,384,642
Cotton	†	†	†	281,699	221,320
Articles produced—					
Tweed and Cloth ... yds.	525,020	1,054,845	1,312,363	2,044,745	2,162,486
Flannel and Blankets £	*	95,313	62,050	119,840	145,256
Rugs and Shawls ... £	*			11,800	14,000
Noils	£ †	†	†	7,514	11,192
Tops	£ †	†	†	19,134	57,147
Yarn	£ †	†	†	65,140	45,756

* 3,428 yards flannel, 5,000 pairs blankets, 800 rugs. † Not available.

BOOT AND SHOE FACTORIES.

Particulars of the operation of these factories since 1901 are shown in the following table.

Items.	1901.	1911.	1913.	1917-18.	1918-19.
Number of Establishments ...	100	106	105	111	111
Number of Employees ...	3,979	4,411	4,262	4,481	4,622
Average Horse-power used ...	300	855	989	1,293	1,357
Value of Land and Buildings £	56,898	108,308	122,610	173,690	180,229
Value of Plant and Machinery £	85,571	156,643	158,916	160,490	168,514
Total Amount of Wages paid £	216,869	367,605	382,223	498,674	553,234
Value of Fuel ...	£ 2,978	5,298	5,818	9,617	9,599
Value of Materials used..	£ 398,309	709,818	754,744	1,249,137	1,333,919
Value of Output...	£ 692,253	1,221,748	1,284,489	1,977,376	2,132,285
Value of Production ...	£ 290,966	506,632	543,927	718,622	788,767
Materials Treated—					
Sole Leather lb.	*	5,189,000	4,467,927	5,085,726	5,261,069
Upper sq. ft.	•	8,010,000	8,070,590	7,464,228	7,554,448
Articles produced —					
Boots and Shoes .. pairs	2,821,724	3,730,760	3,640,068	3,773,523	3,605,002
Slippers, &c. „	512,584	439,428	310,026	473,464	453,199
Uppers (N.E.I.). „	...	71,135	53,295	51,644	114,259

* Not available.

The number of establishments occupied during the year 1918-19 in various branches of boot and shoe manufacture was 111, of which 90 were situated within the metropolitan area, and 21 in the remainder of the State.

HAT AND CAP FACTORIES.

There has been considerable expansion in the industry organized for the manufacture of hats and caps. Until 1898 it employed fewer than 100 persons, but in 1918-19 there were 1,383, of which number nearly 62 per cent. were females.

There were 30 establishments listed under this classification, of which 1 only was outside the metropolitan area. Particulars of the operations since 1901 are as follow:—

Items.	1901.	1911.	1913.	1917-18.	1918-19.
Number of Establishments ..	10	32	38	36	30
Number of Employees ...	330	1,566	1,545	1,485	1,383
Average Horse-power used ...	21	433	651	666	837
Value of Land and Buildings £	3,681	61,146	74,686	69,396	86,246
Value of Plant and Machinery £	7,034	60,807	69,396	72,553	77,929
Total Amount of Wages paid £	15,055	96,498	104,879	129,761	132,509
Value of Fuel £	314	4,376	5,096	6,177	6,126
Value of Materials used... .. £	28,662	127,494	157,391	230,904	262,354
Value of Output... .. £	54,698	293,591	355,064	485,376	522,831
Value of Production £	25,722	161,721	192,577	218,295	254,351
Hats & Caps Manufactured No.	563,976	2,692,778	3,084,959	2,257,291	2,099,144

ELECTRIC LIGHT AND POWER WORKS.

Few industries have made greater progress than that engaged in the production and supply of electric light and power. The development since 1901 is clearly shown by the details given in the next table:—

Items.	1901.	1911.	1913.	1917-18.	1918-19.
Number of Establishments ...	51	104	115	125	131
Number of Employees ...	245	929	1,118	1,249	1,268
Average Horse-power used ...	3,494	54,734	76,054	104,722	107,682
Value of Land and Buildings £	34,897	444,052	509,695	1,004,606	1,057,656
Value of Plant and Machinery £	192,842	1,257,173	1,391,007	2,160,568	2,228,624
Total amount of Wages paid £	28,862	134,884	170,745	219,613	237,212
Value of Fuel ...	£ 17,166	183,248	219,080	425,033	455,671
Value of Materials used ...	£ 21,123	69,484	41,884	60,435	83,446
Value of Output ...	£ 87,241	896,607	1,266,801	1,321,112	1,545,942
Value of Production ...	£ 48,952	643,875	1,005,837	835,644	1,006,825
Materials treated—					
Coal tons	*	259,239	303,441	403,555	453,252
Articles produced—					
Electric Light ... units	*	20,727,000	27,834,225	38,965,000	42,116,274
Power units	*	114,610,000	165,873,147	213,478,000	230,330,132

* Not available.

GASWORKS.

Despite the substantial progress that has been made in the installation of electric lighting plants, the use of gas for purposes of illumination, power, and cooking is also extending continuously, as will be seen in the following table:—

Items.	1901.	1911.	1913.	1917-18.	1918-19.
Number of Establishments ...	38	47	52	44	45
Number of Employees ...	650	1,053	1,351	1,378	1,316
Average Horse-power used ...	711	1,314	1,722	2,643	2,661
Value of Land and Buildings £	445,910	538,782	477,562	623,454	615,755
Value of Plant and Machinery £	480,533	888,711	1,112,828	1,687,860	1,752,480
Total amount of Wages paid £	80,654	154,426	194,683	213,673	231,366
Value of Fuel ...	£ 18,000	57,372	69,081	83,477	84,189
Value of Materials used ...	£ 123,410	277,861	305,592	513,909	560,417
Value of Output ...	£ 583,815	910,972	1,035,257	1,529,886	1,756,219
Value of Production ...	£ 442,375	575,739	660,584	932,500	1,111,613
Materials treated—					
Coal tons	*	323,910	369,424	447,814	550,354
Shale tons	*	55,621	37,965	3,353	32,748
Oil gals.	*	...	...	1,322,810	1,624,409
Articles produced—					
Gas 1,000 cub. feet	2,138,631	4,275,859	5,536,139	6,555,945	7,319,821
Coke tons	*	176,728	209,980	649,233	280,897
Tar gals	*	3,650,000	4,180,054	6,726,449	7,927,127
Ammoniacal Liquor gals.	*	3,365,000	2,459,188	3,751,047	4,076,903
Sulphate of Ammonia tons	*	...	...	...	3,961

* Not available

OUTPUT PER EMPLOYEE AND PER UNIT OF HORSE-POWER.

Only in a few industries can any attempt be made to compare the volume of output in different years, and even in these it is attended with great difficulties. Due weight must be given to the numbers, ages, and sexes of the workers, the hours of labour, the time worked by the factory, overtime work, also to the number and the power of the machines in average use, while the extent to which the industry has been affected by trade and labour conditions, favourable or otherwise, must not be overlooked.

The following statement has been prepared to show the average yearly output per employee and per unit of horse-power in certain industries, for which the quantities of the articles manufactured are available.

The figures showing the yearly output represent the production for a full period of twelve months, based upon the output during the period the factory was in operation. A much more detailed analysis would be necessary, however, before they could be accepted as indicating accurately the relative productive activity in the several years, but in view of the importance of the subject a further investigation is being made, and the results will appear in the next issue of the Year Book.

Industry.	Year.	Output for Twelve Months.				
		Per Employee.	Per Unit of Power Used.	1911 = 100.		
				Per Employee.	Per Unit of Power Used.	
Gas Works	1911	1000 c. ft. 4,158	1000 c. ft. 3,141	100	100	
	1913	4,232	3,320	102	106	
	1917-18	5,692	2,968	137	94	
	1918-19	6,499	3,214	156	102	
Electric Light and Power	1911	Units. 153,000	Units. 2,485	100	100	
	1913	176,050	2,588	115	104	
	1917-18	209,447	2,498	137	101	
	1918-19	221,699	2,610	145	105	
Sugar Mills	1911	Sugar, cwt. 1,810	Sugar, cwt. 283	100	100	
	1913	1,729	305	96	108	
	1917-18	2,083	342	115	121	
	1918-19	2,312	439	128	155	
	1911	Molasses, Gals. 4,167	Molasses, Gals. 651	100	100	
	1913	3,762	665	90	102	
	1917-18	5,113	840	123	129	
	1918-19	5,527	1,050	133	161	

Output per Employee and per Unit of Horse-power—continued.

Industry.	Year.	Output for Twelve Months.				
		Per Employee.	Per Unit of Power Used.	1911 = 100.		
				Per Employee.	Per Unit of Power Used.	
Tobacco Factories		Tobacco. lbs.	Tobacco. lbs.			
	1911	2,738	6,354	100	100	
	1913	2,606	6,481	95	102	
	1917-18	2,744	10,641	100	167	
	1918-19	2,689	9,524	98	150	
			Cigars. lbs.	Cigars. lbs.		
	1911	60	140	100	100	
	1913	58	144	97	103	
	1917-18	59	228	98	163	
	1918-19	69	244	115	174	
			Cigarettes. lbs.	Cigarettes. lbs.		
	1911	1,301	3,020	100	100	
1913	1,694	4,214	130	139		
1917-18	1,498	5,808	115	192		
1918-19	1,796	6,362	138	211		
Woollen and Tweed Mills ...		Yds.	Yds.			
	1911	1,444	1,137	100	100	
	1913	1,691	847	117	74	
	1917-18	2,054	854	142	75	
	1918-19	1,726	835	120	73	
Breweries		Ale, Beer, etc. Gals.	Ale, Beer, etc. Gals.			
	1911	21,880	19,280	100	100	
	1913	23,214	15,199	106	79	
	1917-18	23,326	8,599	107	45	
	1918-19	26,007	8,579	119	44	
Flour Mills		Flour. Tons.	Flour. Tons.			
	1911	282	58	100	100	
	1913	289	64	102	110	
	1917-18	305	74	108	128	
	1918-19	303	73	107	126	
Boot and Boot Factories ...		Boots, Shoes, Slip- pers, etc. Pairs.	Boots, Shoes, Slip- pers, etc. Pairs.			
	1911	951	4,906	100	100	
	1913	933	4,021	98	82	
	1917-18	957	3,315	101	68	
	1918-19	885	3,013	93	61	

Output per Employee and per Unit of Horse-power—continued.

Industry.	Year.	Output for Twelve Months.			
		Per Employee.	Per Unit of Power Used.	1911 = 100.	
				Per Employee.	Per Unit of Power Used.
Hat and Cap Factories		No.	No.		
	1911	1,752	6,354	100	100
	1913	2,034	4,827	116	76
	1917-18	1,545	3,444	88	54
	1918-19	1,537	2,540	88	40
Soap and Candle Works... ..		Soap, Cwt.	Soap, Cwt.		
	1911	425	356	100	100
	1913	387	367	91	103
	1917-18	360	456	85	128
	1918-19	368	381	87	107
		Candles, lbs.	Candles, lbs.		
	1911	8,259	6,922	100	100
	1913	7,725	7,331	94	106
	1917-18	4,425	5,616	54	81
	1918-19	4,803	4,973	58	72
Brickworks... ..		Bricks. No.	Bricks. No.		
	1911	115,506	71,630	100	100
	1913	114,461	54,643	99	76
	1917-18	98,086	36,694	85	51
	1918-19	96,869	38,366	84	54
Distilleries		White Spirit. Gals.	White Spirit. Gals.		
	1911	65,218	12,268	100	100
	1913	62,278	10,138	95	83
	1917-18	66,427	12,301	102	100
	1918-19	36,681	9,236	56	75

As the sugar-crushing season does not extend over six months, the output shown above must not be taken as representing the actual average production per employee during the season.

Seven of the eleven industries mentioned show an increase in the output per employee.

The quantity of gas produced per worker in 1918-19 was 56 per cent. more than in 1911, but the horse-power of the plant used was more than four times as great. It is somewhat of a coincidence that electric light and power works also show a large increase (45 per cent.) in the output per worker.

Sugar mills show an increase of 28 per cent. in the output of raw sugar per worker; and the increases in other industries were—Tobacco factories, cigarettes 38 per cent., cigars 15 per cent. (but there was a decrease of 2 per cent. in the quantity of tobacco made); woollen mills, 20 per cent.; breweries, 19 per cent.; and flour mills, 7 per cent.

There was a decreased output, as shown in each of the following industries:—Boot and shoe factories, 7 per cent.; hat and cap factories, 12 per cent.; soap and candle works—soap, 13 per cent.; candles, 42 per cent.; brick-works, 16 per cent.; and distilleries, 44 per cent.

It is noteworthy that, with one exception, in every case where plant of a much greater capacity was installed, there was a decreased output per unit of horse-power used; the exception was in electric power works, where the capacity of the plant in use was nearly doubled and the output per unit increased by 7 per cent.

NEW INDUSTRIES.

Many branches of the manufacturing industry were stimulated owing to the restriction of importations during the war, and while the greater part of the resultant growth was in the extension of the field of operations of existing industries, a number of entirely new industries were also started. Perhaps the greatest development was in engineering and metal works, which now produce lathes and other machinery of a very high class, but considerable development also took place in such widely separated industries as chemicals, paints, &c., hosiery and knitting, fibro cement and fibro plaster, and materials for sports and games. In 1919 several new industries were started, of which the most important was the manufacture of coal tar dyes. Among others was the manufacturing of reinforced concrete tubs, and it is interesting to note that a factory was also opened for the manufacture of composite cricket balls.

RAILWAYS AND TRAMWAYS.

CONTROL OF STATE RAILWAYS AND TRAMWAYS.

THE management of the State Railways and Tramways is in the hands of a Chief Commissioner and three Assistant Commissioners, the duties of the latter being allotted by the Governor upon the recommendation of the Chief Commissioner.

RAILWAY CONSTRUCTION.

Since the commencement of the Government Railways Amendment Act, 1916, the authority to construct or complete all lines authorised by Parliament has been vested in the Railway Commissioners.

On 26th September, 1855, the first railway line, 14 miles in length, was opened for traffic between Sydney and Parramatta, and communication was established between Newcastle and East Maitland on 11th April, 1857.

The progress in construction of the State railways of New South Wales may be traced in the table given below, the figures covering the period ending on 30th June, 1920. Included in the mileage are the Campbelltown-Camden, and Yass tramways, which are worked with the railways.

Period.	Opened during the period.	Total opened at end of period.	Period.	Opened during the period.	Total opened at end of period.
	miles.	miles.		miles.	miles.
1855-9	55	55	1900-4	575	3,281
1860-4	88	143	1905-9	342	3,623
1865-9	175	318	1910-14	344	3,967
1870-4	85	403	1915	167	4,134
1875-9	331	734	1916	54	4,188
1880-4	884	1,618	1917	249	4,437
1885-9	553	2,171	1918	242	4,679
1890-4	330	2,501	1919	146	4,825
1895-9	205	2,706	1920	190	5,015

In addition to the mileage shown above there were at 30th June, 1920, 981 miles of sidings and crossovers.

EXTENSION OF RAILWAY FACILITIES.

The progress of the State railways can be gauged fairly by comparing the population and area of territory to each mile of line open for traffic at different periods. In 1900 the average population per mile of line was 482, and in 1920 it was 404. The decrease in the area of territory to each mile of line open has been very rapid, ranging from 4,434 square miles in

1860 to 62 square miles in 1920. The following statement shows the extension of railway facilities since 1860:—

Year.	Population to each Mile of Line open.	Area to each Mile of Line open.	Year.	Population to each Mile of Line open.	Area to each Mile of Line open.
	No.	sq. miles.		No.	sq. miles.
1860	4,979	4,434	1905	443	95
1865	2,861	2,170	1910	443	85
1870	1,471	916	1915	452	75
1875	1,360	710	1916	445	74
1880	831	366	1917	422	70
1885	548	179	1918	408	66
1890	523	142	1919	406	64
1895	501	123	1920	404	62
1900	482	110			

Duplication of Main Lines.

In addition to increasing the facilities by the construction of new lines, provision for the rapidly extending traffic is made by the duplication of existing main lines.

Works now in progress will duplicate the western line to Orange, 196 miles from Sydney; the southern to Cootamundra, 267 miles; and the South Coast line to Wollongong, 48 miles. The northern line has been duplicated as far as Singleton, and it is intended to continue the duplication to Werris Creek.

The following statement shows the length of line laid with one or more tracks at intervals since 30th June, 1900:—

At 30th June.	Single.	Double.	Triple.	Quadruple.	Total.
	miles.	miles.	miles.	miles.	miles.
1900	2,644	158½	...	8½	2,811½
1905	3,079½	193	...	8½	3,280½
1910	3,393	241½	...	8½	3,643
1915	3,692½	406½	8	27½*	4,134½
1916	3,654	492½	7½	34*	4,188
1917	3,863½	532	7½	34*	4,437
1918	4,103½	533½	7½	34½*	4,679
1919	4,245	537	7½	35½*	4,825
1920	4,405	567	7½	35½*	5,015

* Includes 1 mile 9 chains with five tracks.

RAILWAY SYSTEMS.

The railways of the State are divided into three branches, each constituting a separate system.

Southern Lines.

The southern system has several offshoots serving the most thickly-populated district, and places the capital cities, Sydney, Melbourne, Adelaide, and Perth in direct communication.

Numerous branches traverse the fertile Riverina district. From Culcairn there are two branch lines, one connecting with Corowa on the Murray River, and the other with Holbrook; from The Rock a line extends to Oaklands, and from Wagga Wagga a branch to Humula is being extended to Tumberumba, and from Henty a branch extends to the Rand. From Junee a branch runs to Narrandera, where it bifurcates, one branch extending westerly to the town of Hay and the other in a southerly direction to connect with the Victorian railways at Tocumwal. From Cootamundra a southerly branch carries the line to Tumut, while an off-shoot is being made from Gilmore to Batlow; another branch, in a north-westerly direction, carries the line through Temora and Wyalong to Cudgellico, and a branch is under construction from Barmedman to Rankin's Springs. A branch line from Temora extends to Griffith, in the Murrumbidgee Irrigation Area, and a line connecting Griffith with Yanko and Hillston is being laid. From Stockinbingal, between Cootamundra and Temora, a cross-country line connects with the western system at Forbes.

From Murrumburrah a branch has been constructed to Blayney, on the western line, and from Koorawatha, on this connecting line, a branch joins Grenfell with the railway system, and there is a branch line from Cowra to Canowindra, which is being extended to Eugowra. From Galong there is a branch to Burrowa.

Nearer the metropolis, a branch from Goulburn to Nimmitabel brings the rich pastoral district of Monaro into direct communication with the metropolis. An extension from Nimmitabel to Bombala, a distance of 40 miles, has been commenced. From Goulburn also a branch line has been opened to Crookwell.

A small offshoot from the main southern line joins Campbelltown with Camden, and on the main suburban section of the southern system there are branch lines from Clyde to Carlingford, and from Lidcombe to Regent's Park.

The South Coast, or Illawarra line, which forms part of the southern system, has been constructed to Nowra, connecting the metropolis with the coastal district of Illawarra, which is rich in coal and in the produce of agriculture. From the Illawarra line a branch extends between Sydenham and Bankstown, with Liverpool as the objective.

Western Lines.

The western system of railways extends from Sydney over the Blue Mountains, and has its terminus at Bourke, a distance of 511 miles. Leaving the mountains, the western line throws out a branch from Wallerawang to Mudgee and Coonabarabran, which is being extended to join the north-western branch of the northern system at Burren Junction, and enters the Bathurst Plains, connecting with the metropolis the rich agricultural lands of the Bathurst, Orange, and Wellington districts.

At Blayney, as before stated, the western line is joined with the southern system by a branch line to Murrumburrah; at Orange a branch runs through Parkes to Condobolin; an extension from Condobolin to Broken Hill, a distance of 373 miles, has been commenced, and has been completed as far as

Trida. A section from Menindee to Broken Hill has been laid. At Bogan Gate a branch line has been opened to Tottenham with two short extensions to the Mount Royal Mine and the Caroline Mine. Further west, branch lines extend from Dubbo to Coonamble, from Nevertire to Warren, and from Nyngan to the important mining district of Cobar. A line joining Dubbo with Molong is being laid. There is a connecting line from Narromine, on the main western line, *via* Parkes to Forbes, which is connected with Stockinbingal on the southern line. From Byrock a line branches off to Brewarrina. A line from Dubbo connects with the Wallerawang-Coonabarabran branch at Merrygoen, and a connecting line between this branch and the main northern line is under construction.

The western system includes also a short line from Blacktown to Windsor and Richmond, and a branch has been built from Craboon to Coolah.

Northern Lines.

The northern system originally commenced at Newcastle, but a connecting line crosses the Hawkesbury River by means of the Hawkesbury Bridge, thus making Sydney the centre of the whole of the railway systems of the State, and affording direct communication between the five State capital cities of Perth, Adelaide, Melbourne, Sydney, and Brisbane, a distance of 3,476 miles.

The northern system has a branch from Tamworth to Barraba, and there is a north-westerly branch from Werris Creek, *via* Narrabri and Moree, to Inverell, placing the Namoi and Gwydir districts in direct communication with the ports of Newcastle and Sydney. A branch runs from Moree to Mungindi, on the border of the State of Queensland. There is also a branch line from Narrabri to Walgett, with a further branch at Burren Junction to Collarenebri East.

From Muswellbrook a branch has been constructed to Merriwa, a distance of 51 miles. There is a short line connecting Newcastle with the tourist district of Lake Macquarie, and another line runs from East Maitland to Morpeth.

At West Maitland the North Coast railway branches from the main northern line; the construction is now proceeding in sections to meet a line which connects Murwillumbah, on the Tweed River, with Grafton, on the Clarence River; the sections from West Maitland to Macksville, from Raleigh to Coff's Harbour, and from Glenreagh to Grafton have been opened for traffic. On the Murwillumbah-Grafton line there is a branch from Casino to Kyogle. To provide an outlet for the produce of the fertile Dorrigo district, a branch of the North Coast line, from Dorrigo to Glenreagh, has been commenced. A short line, 13 miles in length, branches off the main northern line at Hornsby, and connects with the north shore of Port Jackson at Milson's Point, whence passengers are conveyed to the city by commodious ferry steamers.

Goods Lines.

A short line from the Central Station at Sydney connects with the wharves at Darling Harbour, and a line has been constructed from the stock salesyards at Flemington on the main suburban line to the Abattoirs at Homebush Bay; these lines are used for goods and live-stock only.

On account of the rapid growth of the traffic it has been found necessary to provide a means of access to the wharves, independent of the Central Station, by the construction of a line from Flemington to join the Sydenham-Bankstown branch of the South Coast line at Campsie, and a line from Wardell-road, also on this branch, to Darling Island, with a new shipping depôt at Glebe Island.

An extension from Sydenham has been commenced to serve the important manufacturing district of Botany.

Commonwealth Railways in New South Wales.

A short railway, 5 miles in length, has been constructed from Queanbeyan, on the Cooma-Nimmitabel branch, to connect Canberra, the Federal Capital, with the State railway system. The work of construction was undertaken on behalf of the Commonwealth Government by the Public Works Department of New South Wales, at a charge of 5 per cent. in addition to capital outlay. The line was opened for departmental goods traffic in May, 1914, and is worked by the New South Wales Government on behalf of the Commonwealth. A trial survey of a line from Canberra to Yass has been made.

Under the "Seat of Government Acceptance Act" the Commonwealth Government has the right to construct a line from Canberra to Jervis Bay, 140 miles; a preliminary survey of the route has been made.

SYDNEY AND SUBURBAN PASSENGER SERVICE.

A portion of the passenger traffic between Sydney and suburbs is conducted by suburban railways and ferry services, but the tramways form the most important means of communication.

The railway suburban traffic is conducted principally on the main trunk line, which runs in a westerly direction from Sydney to Granville, where the main southern and western railway systems separate; the main northern system being at Strathfield (8 miles from Sydney). The South Coast railway, which has a branch from Sydenham (3 miles) to Bankstown (11 miles), brings passengers from the suburbs situated south of Sydney on the western shore of Botany Bay. The passengers travelling by these lines, however, are conveyed to and from the Central Station by trams running through the city streets.

The populous suburbs of the north-western, central, and eastern divisions of the metropolitan area are served entirely by the tramways. On the north shore of Port Jackson there is a railway to connect the ferry service at Milson's Point with Hornsby on the main northern line; with this exception all the passengers from the northern suburbs connect by tramway at various points with the ferry services to the Circular Quay.

On account of the expansion of the commercial interests of New South Wales, and the consequent growth of population in and around Sydney, where the trade of the State is centralised, the tramway system has been extended steadily, but the requirements of suburban traffic are gradually outgrowing the capacity of the main city thoroughfares, which were not originally designed for this class of traffic. Thus the extension of the tramway system, combined with the increase in the mercantile vehicular traffic, has resulted in a state of congestion in some of the city streets that demands remedy. The urgent necessity is now recognised of supplying a more effective method of dealing with the rapidly increasing traffic than is possible under any system of surface tramways.

Proposed Improvements.

In October, 1913, a Bill to authorise the construction of a city railway was submitted to Parliament. The design included an underground loop railway around the city, joining the existing railway system near Redfern Station, and comprising three up and three down tracks; and double lines of tramway to connect the eastern and western suburban tram services with

the city railway, the total length of the connection for the eastern suburbs being 1 mile 18½ chains, and for the western suburbs 1 mile 15½ chains. The cost of the work was estimated at £4,800,000.

This Bill was rejected by the Legislative Council, but in 1915 the City Railway and portions of the Eastern and Western Suburbs Railways to Bondi Junction and Weston-road, Balmain, respectively, were included in the list of works to be carried out by the Norton Griffiths Company under contract with the New South Wales Government, and the City and Suburban Electric Railways Act was passed. The design, as outlined in the Schedule of the Act, includes the city railway, with two up and two down tracks forming a loop round the city, the total length is 16 miles 52 chains of single track, of which 8 miles 66 chains are below ground; the Eastern Suburbs Railway, double track throughout of a total length of 8¾ miles of single track; and the Western Suburbs Railway, double track throughout, connecting with the main suburban line between Stanmore and Petersham Stations, the total length being 5 miles 44 chains of single track. The estimated cost, exclusive of land resumption, was £6,400,000.

The Norton Griffiths contract was cancelled in May, 1917, and work on the City Railway has been suspended.

GRADIENTS OF RAILWAYS.

In many cases the railways of New South Wales pass through mountainous country, and have been constructed with a large proportion of steep gradients, some of the heaviest being situated on the trunk lines.

In the southern system, the line at Roslyn, near Crookwell, reaches an altitude of 3,225 feet above sea level; and at Nimmitabel, the terminus of the Goulburn to Nimmitabel railway, the height is 3,503 feet. In the western system, at Newnes Junction, on the Blue Mountains, a height of 3,503 feet is attained; and on the northern line the highest point, 4,473 feet, is reached at Ben Lomond.

Numerous deviations have been made during recent years in order to secure easier grades and curves, with the result that considerable economy in working and expedition in traffic have been effected.

The following statement shows the number of miles on different gradients in June, 1919:—

Gradients.	Southern System.	Western System.	Northern System.	Total.
1 in	miles.	miles.	miles.	miles.
18 to 30	3½	...	...	3½
31 „ 40	46½	62½	33	142½
41 „ 50	59½	51	85½	195½
51 „ 60	55½	72½	59½	188
61 „ 70	52½	58½	38½	149½
71 „ 80	146½	99½	154½	400
81 „ 90	40½	44½	44½	129½
91 „ 100	109½	14½	85½	339
101 „ 150	151½	169½	148½	469½
151 „ 200	100½	86½	83½	270½
201 „ 250	52½	47	41	140½
251 „ 300	71½	75½	60	207½
301 „ level	732½	741½	674½	2,148½
Total ..	1,622	1,652½	1,508½	4,783½

The above table is exclusive of the Government line from Broken Hill to Tarrawingee, measuring 40 miles 7 chains, and that at Wollongong of 1 mile 8 chains, the total length of these lines being 41 miles 15 chains.

COST OF RAILWAY CONSTRUCTION.

The average cost per mile open for traffic of the Government Railway lines, excluding expenditure for rolling-stock, machinery, furniture, and workshops and stores, has been £12,394—an amount which is by no means high considering the character of some parts of the country through which the lines have been carried, and the cost of labour. Some of the extensions through pastoral country have been constructed at a comparatively low cost per mile; these are known as the "pioneer" class, and are of a light and cheap kind, on which the produce of the settlers may be conveyed to the trunk lines at a reasonable speed, and at a cheaper rate than carriage by road. The average cost of the line from Parkes to Condobolin was £2,135 per mile; Burren Junction to Pokataroo, £2,464 per mile; from Byrock to Brewarrina, £2,760 per mile; and from Dubbo to Coonamble, £2,843 per mile.

The amount expended on rolling-stock, &c., to 30th June, 1920, was £17,157,887:—Rolling stock, £13,850,707; machinery, £1,024,423; workshops, £896,387; furniture, £10,370; stores advance account, £1,376,000. The total capital expenditure amounted to £79,318,917, an average of £15,815 per mile. The growth of the capital expenditure may be seen in the following table:—

Period.	Capital expended during period.	Total capital expended to end of period.	Period.	Capital expended during period.	Total capital expended to end of period.
	£	£		£	£
1855-9	1,278,416	1,278,416	1900-4	4,296,241	42,288,517
1860-4	1,353,374	2,631,790	1905-9	5,324,149	47,612,666
1865-9	2,049,539	4,681,329	1910-14	13,652,203	61,264,869
1870-4	2,163,217	6,844,546	1915	4,318,405	65,583,274
1875-9	3,561,949	10,406,495	1916	3,242,318	68,825,592
1880-4	9,673,643	20,080,138	1917	3,181,029	72,006,621
1885-9	9,759,029	29,839,167	1918	3,043,829	75,050,450
1890-4	6,016,104	35,855,271	1919	1,551,141	76,601,591
1895-9	2,137,005	37,992,276	1920	2,717,326	79,318,917

Of the £79,318,917 expended to 30th June, 1920, an amount of £659,930 has been provided from the Consolidated Revenue of the State, leaving a balance of £78,658,987 which has been raised by the issue of debentures and other stock. The net revenue for the year ended 30th June, 1920, after paying working expenses, was £3,512,863, which gave a return of 4.5 per cent. upon the total capital expenditure.

WORKING EXPENSES AND EARNINGS.

While the primary object of State railway construction has been to promote settlement, apart from consideration of the profitable working of the lines, the principle has nevertheless been kept in view that the railways should be self-supporting.

A statement of the capital cost of the State Railways and Tramways, and the result of working during the last two years, is shown below:—

Particulars.	1919.			1920.		
	Railways.	Tramways.	Railways and Tramways.	Railways.	Tramways.	Railways and Tramways.
	£	£	£	£	£	£
Cost of Construction and Equipment at 30th June ..	76,601,591	8,568,138	85,169,729	79,318,917	8,768,548	88,087,465
Year ended 30th June—						
Earnings	9,958,173	2,237,701	12,195,874	13,083,847	2,881,797	15,965,644
Working Expenses	6,904,450	1,850,724	8,755,174	9,570,984	2,486,121	12,057,105
Balance after paying Working Expenses	3,053,723	386,977	3,440,700	3,512,863	395,676	3,908,539
Interest on Capital	3,265,540	368,529	3,634,069	3,641,968	404,125	4,046,113
Deficit	211,817	*18,448	193,360	129,125	8,449	137,574

* Surplus.

A statement of the working expenses and earnings of the railways during the year ended 30th June, 1920, is shown below:—

Working Expenses.	Earnings.
	£
Maintenance of Way, Works, and Buildings	1,589,472
Locomotive Power	3,726,101
Greasing and Oiling Carriages and Waggon	13,726
Carriage and Waggon Repairs and Renewals	863,948
Traffic Expenses	2,535,814
Compensation	27,210
General Charges	443,606
Refreshment Rooms	352,616
Gratuities, &c.	11,491
Fire Insurance Fund	7,000
	9,570,984
Balance, Net Earnings	3,512,863
	£13,083,847
	£
Passengers	5,137,247
Mails, Parcels, Horses, &c.	576,884
Total Coaching... .. .	5,714,131
Refreshment Rooms	426,323
Goods—	
Merchandise	3,801,555
Live Stock	1,340,520
Wool	371,146
Minerals	1,294,571
Total Goods	6,807,792
Rents	70,493
Miscellaneous	65,108
	£13,083,847

The expenditure on locomotive power amounted to 39 per cent. of the total; traffic expenses to 26 per cent.; and maintenance of way, works, and buildings to 17 per cent. Of the earnings 39 per cent. was derived from the carriage of passengers, 4 per cent. from mails, parcels, &c., 3 per cent. from refreshment rooms, and 52 per cent. from the conveyance of goods.

As the carriage of goods and live stock constitutes the principal source of railway revenue, the earnings fluctuate in each year in accordance with the type of seasons experienced in the agricultural and pastoral districts. In unfavourable seasons the carriage of fodder and the transfer of live stock at reduced rates cause a diminution in the earnings, and at the same time

an increase in the working expenses. The extension of the lines into sparsely settled districts also causes an increase in the proportion of working expenses to total earnings, as several of these lines earn little more than cost of maintenance.

The following table shows the gross earnings, working expenses, and the proportion of the expenditure to receipts, in stated years from 1890 up to 30th June, 1920:—

Year ended 30th June.	Gross Earnings.	Working Expenses.	Proportion of working expenses to gross earnings.	Year ended 30th June.	Gross Earnings.	Working Expenses.	Proportion of working expenses to gross earnings.
	£	£	per cent.		£	£	per cent.
1890	2,633,086	1,665,835	63·3	1916	8,006,078	5,661,168	70·7
1895	2,878,204	1,642,589	57·1	1917	8,380,084	5,915,360	70·6
1900	3,163,572	1,844,520	58·3	1918	8,954,880	5,940,447	66·3
1905	3,684,016	2,216,442	60·2	1919	9,958,173	6,904,450	69·3
1910	5,485,715	3,276,409	59·7	1920	13,083,847	9,570,984	73·2
1915	7,616,511	5,311,162	69·7				

The working expenses during the year ended 30th June, 1920, represented 73·2 per cent. of the gross earnings. In 1907 the proportion was 53·0 per cent., the lowest since the control of the railways was vested in Commissioners, but the percentage has risen steadily since that year, the increase being due mainly to advances in the salaries and wages of the staff and in the prices of necessary materials.

COMPARISON OF WORKING COSTS.

An interesting comparison of the working costs of the State railways for the year 1919 and earlier years is available from figures supplied by the Chief Commissioner.

Before comparing the results of various years, due regard must be given to the volume of work done in each year. The accepted basis of measurement for this purpose is the gross ton mileage, that is, the sum of the products obtained by multiplying the weight of each load (passenger and goods traffic) by the number of miles over which it travelled. The gross ton miles in the various years quoted were as follows:—

Gross Ton Mileage—Passenger and Goods Traffic.

Year.	Gross Ton Miles.	Business Unit 1898=1,000.
1898	1,185,000,000	1,000
1908	2,780,000,000	2,346
1914	4,500,000,000	3,797
1919	5,123,885,000	4,324

The volume of business in 1919, therefore, was approximately four and one-third times as great as in 1898.

Even after having established the business unit, it is still impossible to make an effective comparison of the expenditure in the various years until due allowances have been made for the different rates of pay and prices of materials prevailing in the various years.

Applying the rates and prices in 1919 to the expenditure in other years, the following results are obtained:—

Permanent-Way—Maintenance.

Year.	Track Miles.	Cost in each year after conversion to 1919 rates of pay and purchase price of materials.	Cost per Mile.	Train Miles.	Cost per train mile.
		£	£		s. d.
1898	3,071	525,000	171	8,340,338	1 3·1
1908	4,215	960,800	223	14,251,052	1 4·2
1914	5,149	1,509,800	293	20,549,695	1 5·6
1919	6,464	1,126,100	174	19,935,202	1 1·6

The cost per train mile in 1919 was 11·5 per cent. lower than in 1898, and it must not be overlooked in comparing those years that the number of train miles in 1919 was only about 2·4 times as great as in 1898, while the ton mileage was 4·3 times as great, which indicates that the train mile which cost 1·5d., or 11·5 per cent. less in 1919, was 80 per cent. heavier than the train mile in 1898.

Locomotive Running.

Year.	Cost after conversion to 1919 rates of pay and purchase price of materials.	Business Unit (1898 = 1,000).	Fair cost on 1898 business basis.	Percentage of fair cost (on 1898 business basis) actually absorbed in later years.
	£		£	Per cent.
1898	620,000	1,000	620,000	...
1908	1,092,100	2,346	1,455,000	75·1
1914	2,025,600	3,797	2,354,000	86·8
1919	1,810,500	4,324	2,681,000	67·5

The cost of locomotive running is in close relation to the business done. Applying the business unit of 1919 to the fair cost in 1898, it will be found that there was a saving of approximately £870,000.

Locomotive Repairs.

Year.	Cost after conversion to 1919 rates of pay and purchase price of materials.	Number of engines.	Cost per engine.	Business Unit (1898 = 1,000).	Fair cost on 1898 business basis.	Percentage of fair cost (on 1898 business basis) actually absorbed in 1919.
	£		£		£	Per cent.
1898	340,400	498	684	1,000	340,400	...
1908	465,700	676	689	2,346	799,900	58·1
1914	832,000	1,031	807	3,797	1,293,000	64·4
1919	894,600	1,280	699	4,324	1,472,000	60·8

The cost of repairs per engine in 1919 was but little in excess of the fair cost for 1898, and this, notwithstanding the fact that only 1,280 engines were available to do work which, on the basis of the earlier year's business,

should have required 2,153 engines; in other words, it may be said that in 1919 each locomotive did 68 per cent. more work than the locomotive in 1898, yet cost only about 2·2 per cent. more for repairs.

Traffic Operation.

(Including operation cost of Telegraphs and Telephones.)

Year.	Cost after conversion to 1919 rates of pay and purchase price of materials.	Train Miles.	Per Train Mile.	Business Unit (1898 = 1,000).	Fair cost on 1898 business basis.	Percentage of fair cost (on business basis) actually absorbed in 1919.
	£		s. d.		£	Per cent.
1898	659,300	8,340,000	1 7·0	1,000	659,000	...
1908	1,096,300	14,251,100	1 6·5	2,346	1,547,000	70·9
1914	1,869,700	20,549,700	1 9·8	3,797	2,503,000	74·7
1919	1,927,600	19,935,200	1 11·2	4,324	2,851,000	67·6

The figures show that after allowing for the differences in the volume of business, the rates of wages, and the prices in the two years, traffic operations were conducted in 1919 at approximately one-third lower cost than in 1898, the saving in 1919 being equal to £923,000.

Details of the cost of carriage repairs for various years show somewhat similar results. A fair cost of the 1919 repairs on the 1898 business basis would be about £394,000, while the actual cost was £238,000, a saving of approximately £156,000, the expenditure being about 60 per cent. of what might have been expected.

A still more satisfactory result is shown in regard to wagon repairs. The fair cost on the 1898 business basis would have been about £550,000 in 1919, while the actual expenditure was only £325,000, a saving of approximately £225,000.

The comparison is the more satisfactory because in the cases of both carriages and wagons in 1919 the rolling stock was used to a much greater extent than in 1898.

NET EARNINGS AND INTEREST ON CAPITAL.

The net revenue from railways for the year ended 30th June, 1920, was £3,512,863, while the capital expended on lines open for traffic to that date was £79,318,917, including £659,930 paid from consolidated revenue. The amount thus available, to meet the interest charges on the capital expended, represents a return of 4·48 per cent. The following table shows the net earnings and the interest returned on the total capital expended on railways, including the cost of construction and equipment for the year 1890 and subsequent periods:—

Year ended 30th June.	Net Earnings.	Interest on Capital.	Year ended 30th June.	Net Earnings.	Interest on Capital.
	£	per cent.		£	per cent.
1890	967,251	3·17	1916	2,344,910	3·45
1895	1,235,615	3·31	1917	2,464,724	3·50
1900	1,319,052	3·43	1918	3,014,433	4·10
1905	1,467,574	3·40	1919	3,053,723	4·03
1910	2,209,306	4·58	1920	3,512,863	4·48
1915	2,305,349	3·60			

During 1919-1920 there was an increase in the rate of interest returned on account of additional revenue produced as a result of increases in goods and coaching rates imposed on 1st November, 1918, and further increased on 1st January, 1920.

The table below shows the rate of interest returned on the capital expenditure for each of the years since 1909, with the sum by which such return falls short of or exceeds the actual rate of interest payable on the cost of construction. The rate of return on capital represents the interest on the gross cost of the lines:—

Year ended 30th June.	Interest returned on Capital.	Actual rate of Interest payable on Cost of Construction.	Gain (+) or Loss (—).	Year ended 30th June.	Interest returned on Capital.	Actual rate of Interest payable on Cost of Construction.	Gain (+) or Loss (—).
	per cent.	per cent.	per cent.		per cent.	per cent.	per cent.
1909	4·45	3·65	+0·80	1915	3·60	3·67	-0·07
1910	4·58	3·53	+1·05	1916	3·45	3·78	-0·33
1911	4·67	3·59	+1·08	1917	3·50	4·09	-0·59
1912	4·41	3·60	+0·81	1918	4·10	4·17	-0·07
1913	3·76	3·49	+0·27	1919	4·03	4·30	-0·27
1914	3·87	3·67	+0·20	1920	4·48	4·63	-0·15

The railways being owned by the State, public opinion at once demands a reduction in freights and rates, when the net earnings are much in excess of the interest requirements; substantial reductions were made in 1911 and 1912, but passenger fares and goods rates have been increased considerably since June, 1913.

COACHING AND GOODS TRAFFIC.

For the first ten years after the opening of the first railway in New South Wales the larger part of the earnings was obtained from the passenger traffic, no doubt owing to the fact that the first lines were entirely suburban. It was not until the line crossed the mountains and opened up the interior that the proportions changed, and the goods traffic became the principal source of revenue.

The following table gives the proportion of earnings from the coaching and goods traffic at intervals since 1890. The percentages shown below include earnings from miscellaneous sources and rents, and therefore differ slightly from those stated on a previous page:—

Year ended 30th June.	Proportion of Total Earnings.		Year ended 30th June.	Proportion of Total Earnings.	
	Coaching, &c.	Goods and Live Stock.		Coaching, &c.	Goods and Live Stock.
	per cent.	per cent.		per cent.	per cent.
1890	40·2	59·8	1916	45·8	54·2
1895	35·5	64·5	1917	45·7	54·3
1900	38·8	61·2	1918	48·0	52·0
1905	39·9	60·1	1919	43·7	56·3
1910	39·9	60·1	1920	47·7	52·3
1915	44·7	55·3			

Coaching Traffic.

The following table shows the number of passenger journeys and the receipts from coaching traffic since 1890:—

Year ended 30th June.	Passenger Journeys.	Gross Earnings from Coaching Traffic.	Per head of population.	
			Passenger Journeys.	Gross Earnings from Coaching Traffic.
	No.	£	No.	s. d.
1890	17,071,945	1,041,607	15·8	19 3
1895	19,725,418	1,001,107	15·9	16 2
1900	26,486,873	1,195,496	19·7	17 6
1905	35,158,150	1,428,190	24·4	19 10
1910	53,644,271	2,124,292	33·6	26 7
1915	88,774,451	3,315,294	47·7	35 7
1916	92,850,838	3,574,063	49·9	38 5
1917	96,709,846	3,637,656	51·8	39 0
1918	94,304,516	3,932,936	49·9	41 7
1919	98,568,768	3,978,181	51·0	41 2
1920	114,654,660	5,714,131	57·4	57 2

Particulars regarding the passenger traffic on suburban and country lines during the year ended 30th June, 1920, are shown below; suburban lines include distances within 34 miles of Sydney and Newcastle:—

Description.	First Class.	Second Class.	Total.
SUBURBAN LINES.			
Ordinary Passengers	6,814,174	35,680,397	42,494,571
Season Ticket Holders' Journeys	10,347,120	22,822,291	33,169,414
Workmen's Journeys ... ..	.....	23,648,006	28,648,006
Total Passenger Journeys ...	17,161,294	87,150,697	104,311,991
Miles Travelled	125,334,076	631,992,718	757,326,794
Average Mileage per Passenger	7·30	7·25	7·26
Amount Received from Passengers	£ 372,618	1,318,003	1,690,621
Average Receipts per Passenger per Mile	d 0·71	0·50	0·54
COUNTRY LINES.			
Passengers	2,762,246	7,580,423	10,342,669
Miles Travelled	333,604,522	491,695,428	825,299,950
Average Mileage per Passenger	138·87	64·86	84·63
Amount Received from Passengers	£ 1,754,125	1,692,501	3,446,626
Average Receipt per Passenger per Mile	d 1·1	0·83	0·95

Goods Traffic.

The following figures show how greatly the goods traffic has expanded, especially in recent years:—

Year ended 30th June.	Goods and Live Stock Traffic.		Per head of Population.	
	Tonnage.	Gross Earnings.	Tonnage.	Gross Earnings.
		£		£ s. d.
1890	3,788,950	1,569,356	3·5	1 9 0
1895	4,075,093	1,855,187	3·3	1 9 11
1900	5,531,511	1,936,217	4·1	1 8 5
1905	6,724,215	2,213,105	4·7	1 10 9
1910	8,393,038	3,290,640	5·3	2 1 3
1915	11,920,881	4,206,234	6·4	2 5 2
1916	11,915,500	4,329,971	6·4	2 6 6
1917	11,732,864	4,542,619	6·3	2 8 8
1918	11,293,060	4,652,113	6·0	2 9 2
1919	12,714,612	5,583,982	6·6	2 17 9
1920	13,293,528	6,807,792	6·6	3 8 1

A statement showing the class of goods carried on the railways since 1900 is shown below:—

Year ended 30th June.	General Merchandise.		Wool.	Live Stock.	Minerals.		Total Goods.
	Grain, Flour, &c. (Up Journey).	Other.			Coal, Coke, and Shale.	Other.	
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1900	361,052	1,151,564	84,678	188,595	3,406,769	338,853	5,531,511
1905	522,755	1,398,443	90,572	174,424	4,169,076	368,945	6,724,215
1910	608,405	2,100,203	138,779	463,669	4,553,965	528,017	8,393,038
1915	482,876	2,849,908	132,895	849,604	6,649,704	955,894	11,920,881
1916	852,019	2,753,295	111,083	797,065	6,410,503	991,535	11,915,500
1917	1,327,067	2,713,102	117,762	577,798	6,052,489	944,646	11,732,864
1918	1,398,994	2,720,939	120,612	523,683	5,696,830	832,002	11,293,060
1919	1,634,776	3,255,947	126,037	645,858	6,003,564	994,830	12,714,012
1920	764,457	3,685,983	117,171	900,933	6,732,859	1,092,125	13,293,528

EXPANSION OF TRAFFIC.

The remarkable expansion which has taken place in the volume of traffic on the railways of New South Wales will be seen from the following comparison; the earnings during the quinquennium 1916-1920, show an increase of £13,741,648, or 40 per cent., as compared with the earnings during the previous five years. The number of passengers has increased by 29 per cent., and the tonnage of goods and live-stock, &c., by 5 per cent.:—

				Five years ended 30th June, 1915.	Five years ended 30th June, 1920.	Increase.	Percentage increase.
Earnings—							
Coaching Traffic	...	...	£	15,003,848	22,390,165	7,386,317	49
Goods and Live Stock	...	...	£	17,028,584	22,212,927	5,184,343	30
Coal, Coke and Shale	...	...	£	2,608,983	3,779,971	1,170,988	45
Total earnings	...	...	£	34,641,415	48,383,063	13,741,648	40
Passengers	...	...	No.	386,219,240	497,088,628	110,869,388	29
Goods and Live Stock	...	Tons		24,221,137	30,052,719	5,831,582	24
Coal, Coke and Shale	...	Tons		33,877,954	30,896,245	(-) 2,981,709	(-) 9
Total Tonnage	...	...		58,099,091	60,948,964	2,849,873	5

(-) Indicates decrease.

ROLLING-STOCK.

Information regarding the rolling-stock of New South Wales Railways on 30th June, 1919 and 1920, appears in the following table:—

Classification.	1919.	1920.	Classification.	1919.	1920.
Locomotives—			Merchandise—		
Engines	1,279	1,279	Goods, open	16,032	15,871
Tenders	1,039	1,040	Goods, covered	948	947
Coaching—			Meat trucks	428	428
Special & sleeping cars	121	96	Live-stock trucks	2,904	2,890
First-class	41	437	Brake-vans	586	599
Composite	215	215	Total	20,898	20,735
Second-class	902	917			
Brake-vans	136	136	Departmental Stock—		
Horse-boxes, carriages, trucks, &c.	289	288	Loco. coal, ballast, &c., waggons	1,753	1,803
Total	2,084	2,089			

MAINTENANCE OF PERMANENT WAY.

During the year ended 30th June, 1920, the length of line wholly or partially renewed by relaying, re-sleeping, and re-railing, was 197 miles 24 chains, and 292 miles 54 chains were re-ballasted, thus making a total of 489 miles 78 chains of line either partially or completely renewed. In this work 12,138 tons of rails, 397,585 sleepers, and 93,637 cubic yards of ballast were used.

SIGNALLING AND SAFETY APPLIANCES.

Great progress has been made in providing safety appliances at various places, and during recent years much new work has been installed in connection with the deviations, duplications, and new railway lines. At many of the principal stations the points and signals are interlocked, and at the Central Station, Sydney, an electro-pneumatic system of signalling is in operation. During 1913, track block and automatic signalling—the first in Australia—was installed between Redfern Tunnel Signal-box and Sydenham Junction; this system has been extended to 125 miles 73 chains of double track.

Particulars regarding the various systems employed for the safe working of the lines in 1919 and 1920 are shown below:—

	1919.		1920.	
	Mls.	Chs.	Mls.	Chs.
Single Line.				
By electric tablet	350	71	318	6
electric train staff	1,698	50	1,823	63
train staff and ticket with line clear reports ...	1,451	38	1,451	38
train staff and ticket without line clear reports.	689	79	685	42
train staff and one engine only	116	57	116	57
	4,307	55	4,395	46
Double Line.				
By automatic signalling with track block working	125	73	170	60
absolute manual block system	478	32	458	19
permissive manual block system	5	12	5	12
telephone	0	33	0	33
	609	70	634	44

An experimental installation of a locomotive cab signalling system laid down on the Richmond line in 1917 has been attended with success, and it has been decided to instal it on the line between Junee and Albury.

The Westinghouse brake is used on all the rolling stock of the Government railways.

RAILWAY ACCIDENTS.

The persons meeting with accidents on railway lines may be grouped under three heads—passengers, employees, and trespassers; and the accidents themselves may be classified into those arising from causes beyond the control of the persons injured, and those due to misconduct or want of caution.

The accidents may be further subdivided into those connected with the movement of railway vehicles and those apart from such movement.

Adopting such classifications, the accidents during the quinquennial period terminated on 30th June, 1919, are shown below. The return is compiled in a similar way to that adopted by the Board of Trade in England, and all accidents are reported which occur in the working of the railways, or on railway premises, to persons other than servants of the Department, however slight the injuries may be. In the case of employees of the Department all accidents must be reported which cause the employee to be absent for at least one whole day from his ordinary work:—

Classification.	Accidents connected with the Movement of Railway Vehicles.					Accidents not connected with the Movement of Railway Vehicles.				
	1915.	1916.	1917.	1918.	1919.	1915.	1916.	1917.	1918.	1919.
Passengers—										
Causes beyond their own control—										
Killed	1	...	...	...	...	...	...	...	...	...
Injured	77	14	34	25	27	...	12	11	4	6
Their own misconduct, or want of caution—										
Killed	5	16	14	12	4	...	...	...	...	...
Injured	174	208	141	142	137	40	41	53	59	91
Servants of the Department—										
Causes beyond their own control—										
Killed	2	...	...	1	...	...	...	...	2	...
Injured	30	37	30	24	42	64	103	92	96	127
Their own misconduct, or want of caution—										
Killed	31	31	16	20	17	5	3	5	3	2
Injured	281	344	283	221	387	2,704	2,690	2,408	2,505	3,020
Trespassers and others—										
Killed	39	40	33	26	23	6	7	7	4	8
Injured	83	107	84	84	97	107	110	157	102	105
Total {										
Killed	78	87	63	59	44	11	10	12	9	10
Injured	645	710	572	496	690	2,915	2,936	2,721	2,766	3,349

The rates per million passengers carried during the quinquennium were as follow:—

	Killed.	Injured.
Accidents connected with movement of railway vehicles—		
Causes beyond their own control	·00	·38
Their own misconduct or want of caution	·11	1·70
Accidents not connected with movement of railway vehicles—		
Causes beyond their own control ... ..	...	·13
Their own misconduct or want of caution ... ..	...	·60
Total	·11	2·81

Compensation Paid—Railways.

The amount of compensation paid during the twelve months ended 30th June, 1920, in connection with accidents on railways, was £27,210, of which £5,593 was personal, £21,617 being paid in respect of goods.

PRIVATE RAILWAY LINES.

In New South Wales the established policy has been to keep the railways under State management and control, and at the present time there are only 158 miles of private lines in operation, with the exception of short lines to connect coal and other mines with the main railways, on a few of which provision has been made for the carriage of passengers and goods.

In 1874 Parliament granted permission to a company to construct a line from Deniliquin, in the centre of the Riverina district, to Moama, on the River Murray, where it meets the railway system of Victoria. The line, which was opened in the year 1876, is of 5 ft. 3 in. gauge and 45 miles in length; a considerable proportion of the wool and other produce of the Riverina reaches the Melbourne market by this route. During the year 1888 a line of 3 ft. 6 in. gauge, and 35 miles 54 chains in length, was laid down from Silvertown and Broken Hill to the South Australian border. A short line connects the Government railway at Liverpool with the Warwick Farm Racecourse. The Seaham Coal Company's line connects the West Wallsend and Seaham Collieries with Cockle Creek; and the line of the Commonwealth Oil Corporation extends from Newnes Junction, on the Western line, to the Wolgan Valley. The following table shows the operations of all private railway lines open to the public for general traffic during the year 1918.

Name of Private Railway.	Line.		Total Capital Expended.	Reserve Fund.	Debentures Outstanding.	Passengers Carried.	Goods Carried.	Live Stock Carried.	Train Miles Run.
	Length.	Gauge.							
Deniliquin and Moama.	45	0 5 3	162,673	14,010	...	14,126	28,932	477,361	39,470
(a) Silvertown ...	35	54 3 6	477,994	107,460	...	43,764	*1,081,361	93,165	101,936
Warwick Farm ...	0	66 4 8½	5,700	...	...	30,838	...	699	66
Seaham Colliery ...	6	0 4 8½	16,000	...	...	21,384	8,302	20	7,790
East Greta ...	19	35 4 8½	492,182	...	...	857,166	tons. 94,527	...	392,539
Hexham—Minmi ...	20	0 4 8½	£1,000,000	...	...	...	980	...	1,872
Commonwealth Oil Corporation.	33	0 4 8½	194,500	...	475,000	1,843	17,633	...	17,390
†New Red Head...	12	0 4 8½	102,000	...	...	†	†	†	†

* Includes 482,149 tons local shunting. † Year 1915. ‡ Not available. § Approximate.
(a) Year ended 30th June, 1919.

The Deniliquin and Moama Company possesses 4 locomotives, 6 passenger carriages, and 60 goods carriages and vans. The Silverton Company has 20 locomotives, 665 goods vehicles, and 1 passenger carriage; and passenger carriages are hired also from the South Australian Government railways as required. On the Warwick Farm line Government rolling-stock is used. The Seaham Colliery has 2 locomotives, but otherwise Government rolling-stock is used, 4 passenger carriages, and 1,789 goods vehicles being hired during 1918. On the East Greta railway there are 19 locomotives, 27 passenger carriages, and 45 goods carriages. The Hexham-Minni Company has 1 locomotive, and 4 passenger carriages; and the Commonwealth Oil Corporation has 4 locomotives, 2 passenger carriages, 1 motor car, and 73 goods carriages and vans.

In addition to the private railway lines shown in the above table, there are several branches, connected principally with coal and other mines; a summary of them is given below:—

District.	Length. m. ch.	Gauge. ft. in.
Connected with Northern Line	95 54	4 8½
„ Western „	6 39	4 8½
„ South Coast „,	3 40	3 6
	29 76	4 8½

RAILWAYS OF NEW SOUTH WALES AND OTHER COUNTRIES.

The position of all railways of New South Wales in relation to other important countries of the world is shown in the following table; but it is necessary to remember that there are vital differences which really invalidate any effective comparison, as, for instance, differences in population, and in the competition or assistance which railways encounter from river or sea carriage:—

Country.	Length of Railways.	Per Mile of Line Open.		Country.	Length of Railways.	Per Mile of Line Open.	
		Popu- lation.	Area.			Popu- lation.	Area
	miles.	No.	sq. miles.		miles.	No.	sq. miles.
<i>New South Wales</i>	5,197	404	62.0	Germany	39,532	1,691	4.3
Victoria	4,223	347	20.8	France	31,958	1,239	6.5
Queensland	5,972	121	112.2	Switzerland	3,705	1,047	4.3
South Australia ...	3,400	134	111.8	Austria	14,747	2,099	8.6
Western Australia	4,975	65	196.2	Hungary	13,671	1,566	9.2
Tasmania	764	276	34.3	Canada	38,879	217	95.9
New Zealand	3,120	364	33.2	United States of America.	264,378	379	11.4
United Kingdom	23,709	1,940	5.1	Argentine Re- public.	21,858	392	52.8
Russia	48,955	3,654	169.4	Japan	7,147	7,956	20.7

RAILWAY GAUGES OF AUSTRALIA.

Excluding the Tasmanian lines the classification of the Government Railways according to gauge as at 30th June, 1919, may be seen below:—

Government Railways.	Mileage with Gauge.					Total Miles.
	2 ft.	2 ft. 6 in.	3 ft. 6 in.	4 ft. 8½ in.	5 ft. 3 in.	
New South Wales*	26	.....	40	4,975	.....	5,041†
Victoria ... ..	.....	122	.....	.....	4,075	4,197
Queensland	29	.....	5,583	.....	.....	5,612
South Australia ... ..	.....	.....	1,209	.....	1,081	2,290
Western Australia ... ..	.....	.....	3,539	.....	.....	3,539
Commonwealth ... ..	.....	.....	677	1,057	.....	1,734
Total	55	122	11,048	6,032	5,156	22,413

* For year ended 30th June, 1920.

† Includes Burrinjuck line.

In consequence of the diversity of gauge interstate railway communication is seriously hampered; in a journey from Queensland to Western Australia, breaks of gauge occur at Wallangarra, where the systems of Queensland and New South Wales meet, and at Albury, on the border of New South Wales and Victoria, at Terowie and Port Augusta in South Australia, and at Kalgoorlie, where the Commonwealth and the Western Australian lines connect.

The question of fixing the standard gauge has been the subject of many diverse professional opinions. The New South Wales gauge of 4 ft. 8½ in. has been recommended by the chief railway engineers of the Commonwealth and of the five States and by the Railway War Council, and has been adopted for the Port Augusta-Kalgoorlie railway.

Each year the problem of the unification of gauges becomes of more pressing importance because of its relation to questions of ordinary traffic as well as of defence; and the longer the delay the greater the cost becomes.

The necessity and urgency of a uniform gauge to connect the State capitals were affirmed in May, 1920, at a conference between the Prime Minister of the Commonwealth and the State Premiers, who also agreed upon the allocation of the cost and arranged that a committee of railway experts should report regarding costs, &c. Following upon the presentation of this report, at a further conference held in July, 1920, the question was again discussed, and it was finally decided that in the first place a thorough test should be made at Tocumwal of the third rail device; secondly, that the question of the gauge to be used, the scheme which would best meet requirements, and the estimated cost, should be investigated by a committee of two expert engineers from overseas and a chairman selected in Australia by the Prime Minister.

TRANSCONTINENTAL RAILWAYS.

It is the intention of the Federal Government to construct transcontinental railway lines to bring the States of the continent of Australia into direct communication. A line from Port Augusta in South Australia to Kalgoorlie in Western Australia was opened for traffic in November, 1917, the gauge of 4 feet 8½ inches having been adopted. The total length is 1,051 miles, making the distance by rail from Sydney to Fremantle (Western Australia) 2,761 miles, divided up as follows:—Sydney to Melbourne, 583 miles; Melbourne to Adelaide, 483; Adelaide to Port Augusta, 259; Port Augusta to Kalgoorlie, 1,051; Kalgoorlie to Fremantle, 385. This line is required to facilitate the transport of troops, &c., in time of

war, and accelerate the transit of European mails. Mail matter forwarded to Adelaide from Sydney by rail, and thence sent by steamer to Fremantle, takes six days, whereas the through railway journey occupies four days. When the heavy ballasting is completed it should be practicable to make the journey between Port Augusta and Kalgoorlie in about 24 hours; in the meantime, it takes about 35 hours.

TRAMWAYS.

With the exception of $2\frac{1}{4}$ miles privately owned, the tramways of New South Wales are the property of the State Government. The standard gauge of 4 ft. $8\frac{1}{2}$ in. has been adopted for all lines. The electric system was introduced into Sydney at the close of 1899, and the steam tramways in the metropolitan district have been converted. Of the $225\frac{1}{2}$ miles of line open at 30th June, 1920, there were $154\frac{1}{2}$ miles under the electric system and 71 miles worked by steam.

Line.	Length of Line.	Length of Single Track.
Electric—	mls. ch.	mls. ch.
City and Suburban	112 77	207 8
North Sydney	21 75	37 16
Ashfield to Mortlake and Cabarita	8 38	15 9
Rockdale to Brighton-le-Sands	1 20	1 20
Manly to The Spit and Manly to Narrabeen	10 58	15 38
	155 23	276 11
Steam—		
Arncliffe to Bexley	2 50	2 50
Kogarah to Sans Souci	5 45	6 79
Parramatta to Castle Hill	6 55	6 55
Sutherland to Cronulla	7 32	7 32
Newcastle City and Suburban	34 6	44 34
East to West Maitland	4 5	4 5
Broken Hill	10 4	11 35
	70 37	83 50
Total	225 65	359 61
Sidings, loops, and Cross-overs ... ..	.....	54 62

During the year ended 30th June, 1920, the length of tramway opened for traffic was 63 chains.

Rolling-stock.

The tramway rolling-stock, on 30th June, 1920, consisted of 26 steam motors, 79 steam cars, 1,389 motor cars and 5 trail cars for electric lines, and 113 service vehicles, making a total of 1,612.

Cost of Construction.

The capital cost of the State tramways to 30th June, 1920, amounted to £8,768,548, or £38,832 per mile open; the cost of construction was £4,508,008, or £19,964 per mile, and the expenditure on rolling-stock, workshops, machinery, &c., amounted to £4,260,540.

Working of Tramways.

The following statement shows the working of the various tramways in sections for the year ended 30th June, 1920. Three sections returned a profit during the period, and the total loss on all lines, after allowing for interest on capital, amounted to £8,449.

Line.	Cost of Construction and Equipment.	Passengers carried.	Gross Revenue.	Working Expenses.	Net Earnings.	Interest on Capital.	Profit + Loss —
Electric—	£	No.	£	£	£	£	£
City and Suburban	6,501,865	269,255,935	2,370,309	1,990,070	380,239	301,665	+ 78,574
North Sydney	786,430	25,165,376	211,923	175,431	36,492	36,333	+ 159
Ashfield to Mortlake & Cabarita	209,585	5,612,668	42,747	38,285	4,462	9,811	+ 5,349
Manly to The Spit and Manly to Narrabeen.	323,744	4,124,890	46,304	39,226	7,078	15,148	+ 8,070
Rockdale to Brighton-le-Sands	20,925	827,814	5,464	3,662	1,802	976	+ 826
Steam—							
Arncliffe to Bexley	22,193	604,118	4,796	7,283	— 2,487	1,040	— 3,527
Kogarah to Sans Souci	29,518	1,122,123	12,748	15,375	— 2,627	1,383	— 4,010
Parramatta to Castle Hill	39,306	1,065,777	11,377	12,733	— 1,356	1,842	— 3,198
Sutherland to Cronulla	52,427	946,768	15,300	13,607	1,693	2,442	+ 749
Newcastle City and Suburban	655,236	14,519,605	144,449	157,501	— 13,052	27,448	— 40,500
East to West Maitland	34,966	603,630	5,784	11,394	— 5,610	1,730	— 7,340
Broken Hill	92,353	1,035,947	10,596	21,554	— 10,958	4,307	— 15,265
Total, All Lines	8,768,548	324,884,651	2,881,797	2,486,121	395,676	404,125	— 8,449

Revenue and Expenditure.

In the following table are given details of revenue and expenditure, and capital invested for all State tramways, since 1880. The net earnings of the tramways for the year ended 30th June, 1920, amounted to 4.56 per cent. on cost of construction and equipment, as compared with 4.63 per cent., the actual interest on the public debt, taking into consideration the actual sum obtained by the State for its loans, many of which were floated below par:—

Year ended 30th June.	Total Length of Lines.	Capital Expended on Lines open for Traffic.	Gross Revenue.	Working Expenses.	Net Earnings.	Interest Returned on Capital.
	Miles.	£	£	£	£	per cent.
1880	4½	60,218	18,980	13,444	5,536	9.19
1890	39½	933,614	268,962	224,073	44,889	4.81
1900	71½	1,924,720	409,724	341,127	68,597	3.56
1910	165½	4,668,797	1,185,568	983,587	201,981	4.33
1915	219½	7,970,293	1,986,060	1,611,286	374,774	4.70
1916	220½	8,166,423	1,991,628	1,602,650	388,978	4.76
1917	224	8,309,629	2,008,539	1,691,367	317,172	3.82
1918	225½	8,470,091	1,922,641	1,608,260	339,381	4.60
1919	225½	8,568,133	2,237,701	1,850,724	386,977	4.54
1920	225½	8,768,548	2,881,797	2,486,121	395,676	4.56

During the year ended 30th June, 1920, the percentage of working expenses to the total receipts was 86·3, as compared with 82·7 in the previous year; the net earnings amounted to £395,676, which is equal to a net return per average mile open of £1,753, as compared with £1,716 per mile open in the previous year.

Comparison of Tramway Traffic.

The following statement contains a comparison of the passenger traffic and the tram mileage in the State tramways since 1900. With the extension of the tramway system the earnings per tram mile decreased from 2s. 3d. in 1900 to 1s. in 1905, but have since risen to 2s. 1½d.; the working cost per tram mile dropped from 1s. 10d. in 1900 to 10d. in 1905, but increased steadily to 1s. 10½d. in 1920.

Year ended 30th June.	Length of line open.	Passengers carried.	Tram mileage.	Earnings per tram mile.	Working cost per tram mile.
	miles.	No.	miles.	s. d.	s. d.
1900	71½	66,244,334	4,355,024	2 3	1 10
1905	125½	139,669,459	16,413,762	1 0	0 10
1910	165½	201,151,021	20,579,386	1 1½	0 11½
1915	219½	239,282,815	26,842,974	1 5½	1 2½
1916	220½	292,021,774	26,451,442	1 6	1 2½
1917	224	295,303,714	25,331,992	1 7	1 4
1918	225½	255,740,808	21,762,244	1 10	1 5½
1919	225½	268,797,814	24,674,306	1 9½	1 6
1920	225½	324,884,651	23,889,977	2 1½	1 10½

The extension of the City and North Sydney tramways since 1905 may be seen in the following statement, also the enormous increase in the passenger traffic. All lines which communicate directly with the city of Sydney are included in the category "City and Suburban"; the Ashfield, Kogarah, Arncliffe, and Rockdale lines, which act as feeders to the railways, and the Manly lines have not been included:—

Year ended 30th June.	City and Suburban.			North Sydney.		
	Length of line.	Passengers carried.	Tram mileage.	Length of line.	Passengers carried.	Tram mileage.
	miles.	No.	miles.	miles.	No.	miles.
1905	73½	120,973,934	14,413,273	11½	9,128,575	1,074,743
1910	94½	173,897,034	17,743,868	16½	13,677,491	1,651,153
1915	110½	240,545,317	22,242,010	19½	20,743,680	2,375,916
1916	111½	242,636,337	21,937,619	19½	20,813,557	2,279,494
1917	112½	244,712,191	20,884,254	20½	21,612,120	2,290,913
1918	112½	212,372,470	17,650,438	21	19,238,753	2,225,771
1919	113	222,111,451	20,094,167	21	20,086,649	2,394,534
1920	113	269,255,935	21,811,695	22	23,165,376	2,703,620

TRAMWAY ACCIDENTS.

The accidents which occurred on tramways during the quinquennial period ended 30th June, 1919, are classified in the following table, in a similar way to those relating to the railways:—

Classification.	Accidents connected with the movement of tramway vehicles.					Accidents not connected with the movement of tramway vehicles.				
	1915.	1916.	1917.	1918.	1919.	1915.	1916.	1917.	1918.	1919.
Passengers—										
Causes beyond their own control—										
Killed	1	...	...	...	...	...	...	...	...	...
Injured	75	77	43	57	47	2	1	2	...	...
Their own misconduct, or want of caution—										
Killed	7	7	12	4	5	...	1	...	...	...
Injured	312	346	297	270	226	19	8	13	13	3
Servants of the Department—										
Causes beyond their own control—										
Killed	1	1	...	...	...	...	...	...	...	...
Injured	37	47	74	64	87	19	29	31	36	41
Their own misconduct, or want of caution—										
Killed	3	1	1	3	1	...	...	...	...	1
Injured	161	152	241	207	231	411	306	322	379	438
Others—										
Killed	21	23	12	13	16	...	...	...	...	1
Injured	267	294	226	194	178	2	4	10	8	3
Total { Killed... ..	33	32	25	20	22	...	1	...	...	2
{ Injured	852	916	881	792	819	453	348	378	436	485

As the tramways usually traverse crowded streets, the number of accidents must be considered small.

The number of passengers carried on the tramways during the year ended 30th June, 1920, was 268,797,814, and the rate of fatal accidents to passengers was .02 per million. With one exception, the fatal accidents in the last five years were ascribed entirely to misconduct or want of caution on the part of passengers.

Compensation Paid—Tramways.

The amount of compensation paid during the twelve months ended 30th June, 1919, in respect of accidents on the tramways was £14,329, as compared with £12,823 for the preceding year.

PRIVATE TRAMWAYS.

There is one tramway under private control within the State—a steam tramway, which passes through the town of Parramatta, commencing at the Park and continuing as far as the Newington Wharf at Duck River, a distance of 2 miles 66 chains, where it connects with the Parramatta River steamers conveying passengers and goods to and from Sydney. The line has been constructed to the standard gauge of 4 feet 8½ inches, and was opened in 1883.

RAILWAYS AND TRAMWAYS—EMPLOYMENT AND WAGES.

The account of wages paid, together with the staff employed on the Government railways and tramways in June, 1920, is shown in the following statement, in comparison with the previous year:—

Particulars.	Year ended 30th June, 1919.			Year ended 30th June, 1920.		
	Railways.	Tramways.	Total.	Railways.	Tramways.	Total.
Persons employed—						
Salaried staff ...	4,937	794	5,731	4,913	759	5,672
Wages „ ...	29,776	8,234	38,010	29,807	8,211	38,018
Total number	34,713	9,028	43,741	34,720	8,970	43,690
Wages paid—	£	£	£	£	£	£
Maintenance Branch	1,465,285	196,472	1,661,757	1,811,324	279,984	2,091,308
Locomotive „	2,038,872	.....	2,038,872	2,894,533	.....	2,894,533
Electric „	.....	336,153	336,153	.....	444,964	444,964
Traffic „	1,038,637	727,615	1,766,252	1,408,132	981,803	2,389,935
Total	£ 4,542,794	1,260,240	5,803,034	6,113,989	1,706,751	7,820,740

The average number of men employed during the year ended 30th June, 1920, was 43,300, including an average of 1,562 employees serving with the Australian Imperial Force. The number of railway and tramway employees who had joined the Australian Imperial Force was 8,477. All permanent employees were paid the difference in their pay in railway and tramway service and in the defence forces; under certain conditions similar terms were allowed to members of the temporary staff.

A scheme to provide superannuation allowances for the officers of the railway and tramway service was introduced in 1910; particulars are shown in another chapter of this Year Book.

POSTS AND TELEGRAPHS.

The postal, telegraphic, and telephonic services of New South Wales passed over to the Commonwealth, on 1st March, 1901, and on 1st November, 1902, uniformity of the rates was established for the conveyance of newspapers and transmission of telegrams.

The postage rates on letters, letter-cards, printed papers, books, and magazines within each State were continued until 1st May, 1911, when, by the Postal Rates Act, 1910, complete uniformity of postage rates was established, and the postage for letters within the Commonwealth or to any part of the British Empire was reduced to 1d. per $\frac{1}{2}$ oz. In October, 1918, war postage was imposed, in addition to the ordinary charges, at the rate of $\frac{1}{2}$ d. on each postal article; in October, 1920, rates were again increased.

NUMBER OF POST OFFICES, &c.

The following table shows, in comparative form, the number of post offices, and the postal matter carried in the State of New South Wales.

Year.	Post Offices in New South Wales.	Receiving Offices.	Letters, Post-cards and Registered Articles.	Newspapers.	Packets.	Parcels.
1910	1,911	526	163,754,056	66,963,559	39,008,610	1,600,426
1911	1,948	542	189,656,401	71,619,194	36,283,500	1,748,822
1912	2,000	559	192,996,376	68,696,648	32,687,904	2,067,652
1913	2,025	571	212,639,659	64,874,811	38,583,889	2,318,453
1914	2,049	574	217,907,644	66,216,699	34,203,574	2,372,964
1915-16	2,074	566	219,525,661	72,067,335	33,343,149	2,537,970
1916-17	2,040	548	259,185,729	68,546,782	28,230,715	2,906,090
1917-18	2,031	548	255,177,316	62,320,777	24,844,315	2,923,254
1918-19	2,037	562	240,591,473	63,367,875	22,887,484	2,977,413

A large percentage of circulars classified previously as packets have been sent as letters since the reduction of letter rates.

Further particulars of the postal matter carried during the year ended 30th June, 1919, are shown below:—

Postal Matter.	Inland (Counted Once).	To and from other Australian States.	To and from Countries outside Australia.	Total.	Per Head of Population.
Letters and post-cards	174,251,033	36,576,704	27,434,964	238,262,701	123·4
Registered articles ...	1,622,724	362,777	343,271	2,328,772	1·2
Newspapers ...	45,940,669	11,660,297	5,766,909	63,367,875	32·8
Packets ...	17,386,256	3,245,591	2,255,637	22,887,484	11·8
Parcels ...	2,252,060	393,765	331,588	2,977,413	1·5

During 1918-19 the postal matter posted and received per head of population was—Letters, post-cards, and registered articles, 125; newspapers, 33; and packets and parcels, 13.

Value-payable Parcel Post.

Under a system of value-payable parcel post, the Department accepts for transmission within the Commonwealth parcels or letters sent in execution of orders, and collects from the addressees on behalf of the senders the charges due thereon. During the year ended 30th June, 1919, the number of parcels posted in New South Wales was 28,544, and the value collected was £54,876, the revenue, including postage, commission on value, registration, and money-order commission being £3,917.

DEAD LETTERS, &c.

The number of letters and other postal articles dealt with by the Dead Letter Office in New South Wales during the year ended 30th June, 1919, was as follows :—

How dealt with.	Letters and Post Cards.	Packets and Circulars.	Newspapers.
Returned direct to writers, or delivered	643,751	528,400	} 530,000
Destroyed in accordance with Act	101,532	105,150	
Returned as unclaimed to other States or Countries	125,743	19,719	
Total... ..	871,026	653,269	530,000

RATES OF POSTAGE.

On 1st May, 1911, the penny postage rates were introduced; the rate for letters throughout the Commonwealth and to any part of the British Empire, New Hebrides, Banks and Torres Islands, was fixed at 1d. per $\frac{1}{2}$ oz., and to all other places $2\frac{1}{2}$ d. per $\frac{1}{2}$ oz.

From 28th October, 1918, to 1st October, 1920, $\frac{1}{2}$ d. war postage, in addition to ordinary postage, was charged on all postal articles, other than parcels, posted in the Commonwealth; letters for members of the Australian Imperial Forces abroad, and those serving on ships of the Australian Navy, were exempted from war postage.

The principal postal charges in force within the Commonwealth and Papua are at the following rates, which came into operation on 2nd October, 1920.

Letters	2d. per $\frac{1}{2}$ oz.
Letter Cards	2d. each.
Post cards—Single	1 $\frac{1}{2}$ d. each.
Newspapers—Printed and published in Australia	1d. per 10 oz.
Printed and published outside Australia	1d. per 4 oz.
Magazines—Printed and published in Australia	1d. per 8 oz.
Printed and published outside Australia	1d. per 4 oz.
Books—Printed in Australia	1d. per 8 oz.
Printed outside Australia	1d. per 4 oz.
Printed papers	1d. per 2 oz.
Commercial papers, patterns, samples and merchandise	1 $\frac{1}{2}$ d. per 2 oz.
Parcels	6d. for 1 lb., and 3d. per lb. additional.

Licensed vendors of postage stamps may be allowed $2\frac{1}{2}$ per cent. commission, up to a maximum of 30s. per week. During the year ended 30th June, 1919, an amount of £5,358 was paid as commission to licensed vendors in New South Wales, the total so paid for all States of the Commonwealth being £19,809.

MAIL SERVICES.

The number of inland mail services in New South Wales during 1918–19 was 2,178; the cost of road services amounted to £223,973, and of railway services to £99,794.

The Postmaster-General establishes new mail services in the country districts of the State when the persons interested provide half the difference between cost and revenue.

OCEAN MAIL SERVICES.

A contract for the carriage of oversea mails fortnightly, between Australia and the United Kingdom, was arranged by the Commonwealth Government with the Orient Steam Navigation Company for a period of ten years, dating from 1st February, 1910.

The Peninsular and Oriental Company also conducted a fortnightly service, under contract with the Imperial Government, and thus regular weekly communication *via* Suez was maintained until the war period.

Mails to Europe *via* America are carried by the Union Steamship Company, which maintains a monthly service *via* Auckland, Fiji, Honolulu, and Vancouver, subsidised by New Zealand and Canada, and a monthly service *via* Wellington and San Francisco, subsidised by New Zealand. American vessels of the Oceanic Steamship Company despatched every three weeks also carry mails between Sydney and San Francisco.

Mails to China, Japan, and other eastern ports are carried by various British steamships, also by the Dutch and Japanese.

A British service between Sydney and Singapore is subsidised by the Government of New South Wales, and a mail service to Lord Howe Island and Norfolk Island, Papua, Solomon Islands, New Hebrides, and the Marshall and Gilbert Islands is subsidised by the Commonwealth Government.

AEROPLANE MAIL SERVICES.

The Postal Department has established a committee for the purpose of watching the development of the aeroplane and advising the Department upon its use for the conveyance of mails. Investigations to date indicate that aeroplane services in Australia are practicable, but that the establishment of such services independently by the Postal Department would be too costly. The development of aviation, however, is of vital importance for the defence of Australia, and it may be possible therefore to arrange with the Defence Department for experimental aeroplane services between selected points.

The Commonwealth Government proposes to introduce a bill at an early date dealing with aviation and the control of the navigation of the air.

TELEGRAPHS.

The electric telegraph was first used by the public of New South Wales on 26th January, 1858, when the line from Sydney to Liverpool, 22 miles in length was brought into operation. At 30th June, 1919, there were 2,252 telegraph stations. The following table gives a view of the telegraph business transacted in New South Wales since 1910 :—

Year.	Telegraph Stations.	Telegrams.			Revenue received.
		Transmitted, and delivered (Inland counted once).	In Transit.	Total.	
					£
1910	1,399	5,220,962	386,216	5,607,178	245,245
1911	1,406	5,505,935	357,625	5,863,560	253,398
1912	1,384	5,917,219	447,771	6,364,990	278,665
1913	1,602	6,116,945	456,722	6,573,667	297,965
1914	1,937	6,178,926	524,093	6,703,019	289,347
1915-16	2,107	6,402,092	624,992	7,027,084	331,924
1916-17	2,231	6,491,354	661,559	7,152,913	350,581
1917-18	2,237	6,870,263	728,154	7,598,417	386,919
1918-19	2,252	7,183,234	753,219	7,936,453	416,427

Although the telephone system has been developed extensively during recent years, there has been no decline in the number of telegraph messages.

The telegrams received and despatched during the year ended 30th June, 1919, were classified as follows:—

Inland (counted once)	4,261,229
Interstate	2,451,304
To and from other countries (cablegrams)	470,701
In transit	753,219
Total	7,936,453

Excluding the telegrams in transit, the messages represented 3·7 per head of population.

CABLE SERVICES.

The following statement shows the particulars of the cable lines giving communication from Sydney:—

- To Europe—
 - via Darwin and Banjoewangie, Java (duplicate).
 - via Perth, Cocos, and Durban.
 - via Roebuck Bay and Banjoewangie.
 - via Southport, Norfolk Island, Fiji, Fanning Island, and Canada.
- To New Zealand—
 - via La Perouse and Nelson (duplicate).
 - via Southport, Norfolk Island, and Auckland.
 - via Bondi and Muriwai Creek.
- To New Caledonia—
 - via Bundaberg and Gomen.
- To Tasmania—
 - via Flinders and Low Head (duplicate).

Cable Messages.

The following table gives a comparison of the cable business transacted in New South Wales during the last five years, excluding messages to and from Tasmania. Messages in transit are excluded also, but the receipts from such business are included in the amount of revenue shown.

Year.	Cable Messages.		Amount Collected.	
	Sent from New South Wales.	Received in New South Wales.	Total.	Portion due to Commonwealth Government.
			£	£
1914	162,114	153,395	366,086	29,833
1915-16	186,487	211,490	450,374	42,708
1916-17	186,143	260,284	503,587	48,107
1917-18	192,467	251,919	628,291	51,382
1918-19	196,521	274,180	899,833	67,058

LETTER TELEGRAMS.

Letter telegrams were introduced in February, 1914; messages may be telegraphed during the night to certain offices and thence forwarded as ordinary letters—that is, delivered by first letter delivery, or despatched to

address by mail. The messages must be written in plain language. Letter telegrams may be exchanged between any offices which are open for the receipt of ordinary business between 7 p.m. and midnight, or for ordinary or press business after 7 p.m.

DEFERRED TELEGRAMS.

A system of deferred telegrams came into operation on 1st January, 1912, by which telegrams, written in plain language, and subject to a delay not exceeding twenty-four hours, may be sent at half ordinary rates to those countries which have adopted the service, including the United Kingdom and all British Possessions to which the rate per word is not less than 10d., also to the Commonwealth wireless stations in the Pacific, and to Port Moresby and Flinders Island. Besides British territories the Commonwealth exchanges deferred telegrams with a number of foreign countries.

WIRELESS TELEGRAPHY.

The use of wireless telegraphy as an auxiliary to the present service or in lieu of constructing inland lines has been under consideration by the Postal Department for some time. During the war the use of wireless telegraph installations was restricted to the naval and military services. These restrictions have since been raised, but little has been done to extend the use of wireless telegraphy.

The New South Wales wireless station is at Pennant Hills, Sydney. The other stations in the Commonwealth are at Adelaide, Mount Gambier, Brisbane, Cooktown, Rockhampton, Thursday Island, Townsville, Perth, Broome, Esperance, Geraldton, Roebourne, Wyndham, Darwin, Hobart, Flinders' Island, King Island, and Melbourne.

TELEPHONES.

The telephone system was established in Sydney in 1880, and exchanges have since been provided in many other important centres, the number in 1919 being 853. A telephone trunk line between Sydney and Melbourne was brought into use in 1907.

The following table shows the growth of the telephone service since 1913:—

Year.	Exchanges.	Number of Lines Connected.	Public Telephones.	Telephone Instruments connected.
1913	451	43,845	916	53,978
1914	521	49,040	1,069	62,367
1915-16	705	51,905	1,317	66,532
1916-17	765	57,553	1,421	70,058
1917-18	825	62,123	1,521	78,886
1918-19	853	65,734	1,558	84,118

FINANCIAL RESULTS OF POSTAL SERVICES.

Viewing the postal services as important factors in the development of the country, any financial loss incurred in the working of the Post Office has been deemed to be counterbalanced by the national advantages gained.

The results for the whole Commonwealth during the last five years are compared in the following statement :—

Year ended 30th June.	Earnings.	Working Expenses.	Surplus. (+) Deficit. (-)	Interest on Capital.	Net Profit. (+) Net Loss. (-)
	£	£	£	£	£
1915	4,620,061	4,761,714	(-)141,653	488,069	(-)629,722
1916	5,049,569	4,841,667	(+)207,902	523,892	(-)315,990
1917	5,515,769	5,134,533	(+)381,236	558,382	(-)177,146
1918	5,773,954	4,809,571	(+)964,383	577,001	(+)387,382
1919	6,158,571	5,043,891	(+)1,114,680	590,035	(+)524,645

The accounts for the years 1916-19 are exclusive of the figures relating to the Wireless Telegraph Branch, which was transferred to the Department of the Navy from 1st July, 1915.

Particulars regarding the various branches in the State of New South Wales, during 1919, were as follows :—

Branch.	Earnings.	Working Expenses.	Surplus.	Interest on Capital.	Net Profit.
	£	£	£	£	£
Postal	1,230,180	1,148,496	81,684	40,399	41,285
Telegraph (except Wireless) ...	425,987	331,803	94,184	37,301	56,883
Telephone	777,859	578,304	199,555	142,564	56,991
Total, all branches	2,434,026	2,058,603	375,423	220,264	155,159

LAND LEGISLATION AND SETTLEMENT

AREA OF NEW SOUTH WALES.

THE area of New South Wales, including Lord Howe Island (5 square miles) and the Federal Capital Territory (about 928 square miles), as stated previously in this Year Book, is estimated at 310,372 square miles, or 198,638,080 acres, being a little over two and a half times the combined area of Great Britain and Ireland. Excluding the surface covered by rivers and lakes, the area within the boundaries of the State is 195,669,000 acres, or about 305,733 square miles, of which the greater portion has been alienated under various forms of tenure, classified as freehold or leasehold. The formal transfer on 1st January, 1911, of 576,000 acres at Yass-Canberra, and of 17,920 acres at Jervis Bay in 1915, to the Commonwealth Government as Federal Capital Territory, reduced the land surface of the State to 195,075,080 acres.

Territorial Divisions.

Under various Acts the State is divided into three territorial divisions, Eastern, Central, and Western, the boundary lines running approximately north and south.

The Eastern and Central Divisions are subdivided into Land Districts, in each of which is stationed a Crown Land Agent, whose duty is to receive applications and furnish information regarding land. Groups of these districts are arranged in larger areas, under the control of Land Boards, whose decisions are subject to review by the Land Appeal Court, which is composed of a President and two Commissioners, whose awards in matters of administration have the force of judgments of the Supreme Court. Whenever questions of law arise, a case may be submitted to the Supreme Court, either on the written request of the parties interested, or by the Land Appeal Court. The conditions of alienation and pastoral occupation of Crown lands differ in each of the three divisions of the State. Control of the lands within the Western Division is vested in the Western Land Board, consisting of three Commissioners.

The Eastern Division has an area of 60,669,606 acres (exclusive of an area of 593,920 acres of Commonwealth territory), and includes a broad belt of land between the sea-coast and a line nearly parallel to it, starting from a point midway between the small settlements at Bonshaw and Bengalla on the Dumaresq River, and terminating at Howlong, on the River Murray, thus embracing the coastal districts of the State, as well as the northern and southern tablelands. In this division is excellent agricultural land, and it includes all the original centres of settlement which are readily accessible to the markets of the State. For these reasons, the conditions governing the purchase and occupation of the Crown lands in the Eastern Division are more stringent than is the case in the Central and Western Divisions.

The Central Division embraces an area of 57,055,846 acres, extending from north to south between the western limit of the Eastern Division and a line starting from a point on the Macintyre River, where it is crossed by the 149th meridian of east longitude, and following this river and the Darling to the junction of Marra Creek; thence along that creek to the Bogan River, and across to the River Lachlan, between the townships of Euabalong and Condobolin, along the Lachlan to Balranald, and thence to the junction of the Edward River with the Murray. The area thus

defined contains the upper basin of the Darling River in the northern part of the State, and the basins of the Lachlan, the Murrumbidgee, and other affluents of the Murray in the southern portions. The land in this division is still devoted mainly to pastoral pursuits, but the cultivated area is increasing steadily.

The Western Division is situated between the western limit of the Central Division and the South Australian border. It contains an area of 80,318,708 acres, watered by the Darling River and its tributaries, and is devoted to pastoral pursuits. Water conservation and irrigation may ultimately make agriculture possible over this large area, but legislation in regard to the occupation of the lands of the district is based upon the assumption that for many years to come there will be little inducement for agricultural settlement.

METHODS OF ACQUISITION AND OCCUPATION.

Under the Acts now in force, land in the Eastern and Central divisions of the State may be acquired by the following methods:—

- (a) Under residential conditions—
- (1) Conditional and additional purchase ;
 - (2) Classified conditional purchase ;
 - (3) Homestead Selection ;
 - (4) Settlement purchase, under Closer Settlement Acts ;
 - (5) Homestead farms ;
 - (6) Suburban holdings ;
 - (7) Irrigation farms ;
 - (8) Returned Soldiers Special Holdings ;
 - (9) Conditional purchase lease ;
 - (10) Conditional lease ;
 - (11) Residential on gold and mineral fields lease ;
 - (12) Crown lease ;
 - (13) Settlement lease.
- (b) Under non-residential conditions,—
- (1) Conditional purchase, without residence ;
 - (2) Improvement purchases on gold-fields ;
 - (3) Auction sales ;
 - (4) After-auction sales ;
 - (5) Special sales, without competition ;
 - (6) Exchange ;
 - (7) Annual lease ;
 - (8) Inferior lands lease ;
 - (9) Occupation license ;
 - (10) Scrub lease ;
 - (11) Special lease ;
 - (12) Improvement lease ;
 - (13) Snow-lands lease ;
 - (14) Week-end lease ;
 - (15) Town lands lease ;
 - (16) Special conditional purchase lease.

The maximum area which may be purchased conditionally differs in the Eastern and Central Divisions according to the method of acquisition shown in the statement above. In the Western Division land may be alienated by auction or occupied under lease.

Certain of the above tenures may be converted, under specified conditions, into all or portion of certain other tenures.

Conditional Purchase.

Unreserved Crown lands in the Eastern and Central Divisions not held under pastoral or other lease, are available for conditional purchase, and lands held under annual lease or occupation license may also be acquired in this way, if not otherwise reserved. Land under conditional lease in any division may be purchased conditionally by the leaseholder only. Lands within suburban boundaries or within population areas may be proclaimed as special areas, and are open to conditional purchase under the special conditions prescribed. The value of any improvements on a conditional purchase may be paid by the applicant.

A residential conditional purchase may be taken up by males of or over age 16, or by females of or over age 18, provided that a woman must be married, or a widow, or judicially separated from her husband; for a non-residential conditional purchase the minimum age limit is 21 years.

The minimum and maximum areas allowed for each class of conditional purchase are as follow :—

Class.	Division.	Minimum Area.	Maximum Area.
		acres.	acres.
Residential	Eastern	40	1,280
	Central	40	2,560
Non-residential... ..	Eastern	4	320
	Central	4	320
Special area	Eastern ... ..	..	640
	Central ... ..	..	..

With regard to special areas, both the minimum and maximum areas are subject to proclamation in the *Government Gazette*, and are, therefore, liable to limitation. Any conditional purchaser may take up the maximum area at once, or by a series of purchases at convenient intervals. With the exception of non-residential purchases, the specified maximum areas may be exceeded by means of additional holdings, but the area must not exceed a home maintenance area. By this is meant an area which, used for the purpose for which it is reasonably fitted, would be sufficient for the maintenance in average seasons and circumstances of an average family. Additional holdings need not necessarily adjoin the original holdings, but must be situated within a reasonable working distance.

Areas may be set apart for original holdings, or for additional holdings, but no such area may be selected under both classes of holdings. Values and rentals are specified in the official notices under the Act. Lands may be classified and set apart, by notification, at specified prices.

Applications for conditional purchase, or for additional conditional purchase, must be lodged with the Crown Lands Agent of the district in which the land is situated, and a deposit and survey fee paid at the same time. The statutory price of ordinary Crown lands is fixed at £1 per acre for conditional purchase, but in special areas and on lands within classified areas the price per acre may be either above or below that amount. The deposit on all residential conditional purchases is at the rate of 5 per cent. of the capital value, but on non-residential conditional purchases the price of the land is doubled the deposit being at the rate of 2s. in the £ of such increased value; at least one-tenth of the survey fee must be lodged with the application unless such fee has been paid by a previous holder, through whom the applicant claims title, and stamp duty must be paid. Deposit and survey fee may be dispensed with in connection with an

application for a holding within a classified area if such be lodged during the first week the land becomes available, but must be paid subsequently as directed by the Land Board. Under ordinary conditions the balance of purchase money, with interest at $2\frac{1}{2}$ per cent. per annum, is cleared-off by twenty-seven annual payments of 1s. per acre, and a subsequent final lesser payment. The first instalment is due on the expiration of three years from the date of the contract.

A residential conditional purchaser in certain circumstances may reduce his annual instalment of 1s. to 9d. per £, in which case it will take the selector about forty-one years to pay. Under special circumstances a similar privilege may be extended to conditional purchasers not in residence. By the Crown Lands Act Amendment Act of 1903, the rate of interest on the balance of purchase money was reduced from 4 to $2\frac{1}{2}$ per cent. per annum, being retrospective only in special circumstances.

Upon receipt of an application for a conditional purchase the Land Board may cause the land to be surveyed and a report to be supplied by the surveyor, and may either confirm or disallow the application. In case of confirmation a certificate is issued to the applicant.

The original conditional purchase must be occupied continuously by the selector for a period of five years, and residence must be commenced within three months after the application has been confirmed by the Land Board. Residence may be suspended conditionally, or remitted by the Land Board, for sufficient cause, for stated periods, or in certain circumstances may be effected on the holding of a member of the same family, or on another of applicant's holdings, or in a village or town, or elsewhere within reasonable distance. In certain cases a wife may carry out residence on her husband's holding, or, conversely, a husband may carry out residence on his wife's holding. Each conditional purchase or conditional lease is subject to the condition of residence indicated, but the place of residence may be on any block of the series, and the term may be reduced in certain circumstances, by the applicant's previous residence on the series. The Minister may permit improvements in lieu of residence where the unimproved value of the area is not greater than 300.

The selector must enclose his land, within three years after confirmation, with such a fence as the Land Board may prescribe; or he may substitute improvements in lieu of fencing. In such a case, permanent improvements, of the value of 6s. per acre of purchase money but not exceeding £384, are required within three years, and these improvements must be brought up to the value of 10s. per acre of purchase money, but not exceeding an aggregate value of £640, within five years from the date of confirmation. In the case of non-residential purchases, the land must be fenced within one year after date of confirmation, and within five years other improvements to the value of £1 per acre must be effected. Fencing may be superseded by other improvements equivalent to 30s. per acre, within five years after confirmation.

Under the Crown Lands Amendment Act, 1908, an original non-residential conditional purchase, with any additional non-residential conditional purchase made in virtue of it, may be converted into an original residential conditional purchase, provided that the five years' residence commences from the date of application for such conversion. This term of residence is subject to reduction, and all moneys previously paid are credited towards payment of the converted conditional purchase.

A conditional purchase, residential or otherwise, may be converted into a homestead farm under certain conditions.

Transactions in respect of conditional purchase applications and deeds issued from 1862 to 30th June, 1919, were as follows:—

Year.	Conditional Purchase— Applications made.		Conditional Purchase— Applications confirmed.		Conditional Purchases for which Deeds have Issued.		Conditional Purchases in existence.	
	No.	Area.	No.	Area.	No.	Area.	No.	Area.
		acres.		acres.		acres.		acres.
1862-1800	280,648	39,751,391	65,337	11,806,991	99,161	12,848,166	96,961	14,475,553
1910	2,264	342,367	1,984	294,897	7,097	1,079,887	93,567	14,362,463
1911	1,602	221,537	1,613	227,520	4,457	632,738	93,403	15,614,036
1912	1,258	190,969	1,099	175,044	5,231	671,564	92,203	16,529,008
1913	783	103,844	839	105,167	3,265	406,019	92,183	17,307,305
1914	512	65,306	554	67,534	2,338	322,556	91,985	17,837,792
1915	362	46,175	287	35,249	2,354	304,012	90,904	18,035,210
1916	216	22,495	183	23,552	2,462	307,016	89,670	18,315,095
1917	168	25,761	108	13,025	2,891	357,828	88,493	18,693,429
1918	271	32,085	121	16,211	2,861	388,338	87,651	19,225,738
1919	511	75,370	201	24,911	3,698	559,779	86,203	19,435,807
Total (as at 30th June, 1919)	288,595	40,877,300	72,826	12,790,101	136,005	17,877,903	86,203	19,435,807

In 1908 the Conversion Act was passed, and since 1909 the number of selections has been reduced by forfeitures, cancellations, conversions into homestead selections, &c., and increased by conversions from various other tenures under the Crown Lands Act, so that the land wholly alienated, or in process of alienation, by conditional purchase, on 30th June, 1919, amounted to 37,313,710 acres, contained in 222,208 purchases. Included in the foregoing are 136,005 completed purchases, covering 17,877,903 acres, upon which deeds have now been issued. The balance represents the number of purchases still in force, but upon which the conditions, payments, &c., have not yet been fulfilled, viz., 86,203 with an area of 19,435,807 acres.

Applications for conversion to mineral conditional purchase may, under the 1910 Act, be annulled or withdrawn, and all moneys, less authorised deductions for cost, refunded with the application.

Improvement Purchases.

Holders of miners' rights or of business licenses on a gold-field, being in authorised occupation by residence on land containing improvements, may purchase such land without competition. Improvements must include a residence or place of business, and be of the value of £8 per acre on town land, and of £2 10s. per acre on any other land.

During 1918-19, 50 applications were granted for a total area of 32 acres 1 rood and 24 perches, the total purchase price being £1,061.

Auction Sales and After-auction Purchases.

Crown lands are submitted for auction sale under two systems. Under the ordinary system the balance of purchase money is payable, without interest, within three months of the day of sale, while, under the deferred payment system, the balance is payable by instalments, with 5 per cent. interest, distributed over a period not exceeding ten years; in either case, not less than 10 per cent. of the purchase money must be deposited at the time of sale.

Auction sales are limited by law to 200,000 acres in any one year. Town lands may be sold in blocks not exceeding half an acre, at an upset price of not less than £8 per acre; and suburban lands must not exceed 20 acres

in one block, the minimum upset price being £2 10s. per acre. Country lands may be submitted in areas not exceeding 640 acres, the upset price being not less than 15s. per acre. The value of improvements on the land may be added to the upset price.

Town or suburban land or portions of country land of less than 40 acres each, which have passed at auction may be bought, with the Minister's consent, at the upset price; a deposit of 25 per cent. of such upset price is payable at the time of application, the balance being payable on the terms fixed for the auction sale.

Special Non-competitive Sales.

Any unnecessary road which bounds or intersects freehold land may be closed and sold to the freeholder at a price determined by the Land Board, and any unnecessary road which passes through land held under conditional purchase may be closed and added to the area.

Reservations are maintained in many Crown grants of land having water frontage, being usually 100 feet from high-water mark; but the Crown may rescind the reservation, and convey the land to the holder of the adjoining land, at a price to be determined by the Land Board.

The owner in fee-simple of land having frontage to the sea, or to any tidal water or lake, who desires to reclaim and purchase any adjoining land lying below high-water mark, may apply to the Minister for Lands to do so, except in the case of Port Jackson, the control of which is vested in the Sydney Harbour Trust. Reclamations which might interrupt or interfere with navigation are not authorised.

Land encroached upon by buildings erected on granted land, or land situated between granted land and a street or road, which forms, or should form, the way of approach to the granted land, or land to which no way of access is attainable, or land which is insufficient in area for conditional purchase, may be purchased by the owner in fee-simple of the adjoining land, at a price determined by the Board.

Exchange of Land between the Crown and Private Owners.

Before the granting of fixity of tenure in connection with pastoral leases, the lessees had made it a practice to secure portions of their runs by conditional purchases and purchases in fee-simple. The practice was disadvantageous to the public estate, because Crown lands were left in detached blocks severed by lessees' freehold properties; and the lessees realised that it would be convenient to them to gather their freeholds together in one or more consolidated blocks by surrender of the private lands in exchange for Crown lands elsewhere.

Under the provisions of the Crown Lands Consolidation Act, 1913, the Governor, with the consent of the owner, may exchange any Crown lands for any other lands of which a grant in fee simple has been issued.

The Governor may accept in exchange for Crown lands, lands in respect of which a balance of purchase money remains unpaid, if upon payment of such balance the right to a grant in fee simple becomes absolute. In any such case a grant of Crown lands in exchange will not be issued until the balance of purchase money has been duly paid.

Applications received under this head during the year 1918-19 numbered 37, and 121 applications were outstanding on the 30th June, 1918. Thirty-two applications, embracing 55,385½ acres, were granted in 1918-19, and 27 were either refused or withdrawn, &c.

Homestead Selection and Homestead Grant.

The appropriation of areas for homestead selection was a prominent feature of the Act of 1895, the land chosen for subdivision being good agricultural land. Where suitable lands were situated within easy access of towns, small blocks were set apart, the lands being available after particulars relating to area, capital value, &c., had been published in the *Gazette*. The maximum area that might be selected was 1,280 acres, but the selector was limited to a block as granted.

Under the Crown Lands (Amendment) Acts, of the years 1908 and 1912, a homestead selection or grant may be converted into a homestead farm, or a conditional purchase lease, or a conditional purchase, or a conditional purchase and conditional lease, provided the area contained in such conditional lease does not exceed three times the area in the conditional purchase.

Lands are not now made available for homestead selections, such tenure having been replaced by that of homestead farm. Applications dealt with subsequent to 1912, are either in connection with areas previously set apart for homestead selection, or as additional areas, principally the latter. A large number of persons have, however, selected under this form of holding, as will be seen from the following statement which shows the applications and confirmations in regard to homestead selections and homestead grants issued up to 30th June, 1919.

Year.	Homestead Selections.				Homestead Grants issued.	
	Applications.		Confirmations.		No.	Acres.
	No.	Acres.	No.	Acres.		
1895 to 1910 ... (Year ended 30th June)	9,059	3,582,134	7,059	2,555,805	4,028	1,028,177
1911 ...	359	98,155	294	76,651	287	123,086
1912 ...	537	119,278	466	94,641	196	88,517
1913 ...	65	19,595	106	30,879	175	55,377
1914 ...	19	4,941	22	5,707	231	39,231
1915 ...	30	16,983	18	7,233	198	59,919
1916 ...	8	3,141	17	7,559	161	48,479
1917 ...	5	3,970	5	1,337	212	54,791
1918 ...	24	18,175	10	5,535	189	49,306
1919 ...	20	17,266	23	19,232	172	30,807
Total ...	10,126	3,883,638	8,020	2,804,579	5,849	2,177,690

After making allowance for conversions to and from other tenures, forfeitures, &c., the number of homestead selections and grants in existence on 30th June, 1919, was 3,091, of an area of 985,914 acres.

Homestead Farms.

The new tenures created by the Crown Lands Amendment Act of 1912 were homestead farms, suburban holdings, Crown leases, and irrigation farms. Crown lands are set apart for disposal as homestead farms, but the land may be made available before survey. Crown Lands available for conditional purchase (unless otherwise notified in the *Gazette*) are also available for homestead farm, and land may be set apart for additional homestead farms.

A person—including an alien—of a minimum age of 16 years, if a male, or 18 years, if a female, may apply for a homestead farm, provided that the applicant does not hold under any tenure—except lease which has less than five years to run, and does not confer right to purchase the freehold—an area of land which, added to the area of the homestead farm, would substantially exceed a home-maintenance area. In estimating what constitutes a

home-maintenance area, the joint area held by husband and wife (unless judicially separated) is taken into account as lands held by one person. An alien becoming the holder of a homestead farm, suburban holding, Crown lease, or irrigation farm, must become naturalised within three years. A married woman may apply if possessed of a separate estate. Persons who have selected previously are disqualified in certain circumstances.

The title of a homestead farm is a lease in perpetuity. The annual rent is charged at the rate of $2\frac{1}{2}$ per cent. of the capital value, but for the first five years the holder, in lieu of payment of rent, may expend an equal amount on improvements of a permanent character, the same (except boundary fencing) being in addition to those which are otherwise required as a condition of improvement or expenditure of the lease. The capital value is subject to reappraisal after the first twenty-five years and for each subsequent period of twenty years.

A condition of five years' residence is attached to every homestead farm, but in special cases residence in a town or village, or anywhere within reasonable working distance, may be allowed. Residence may be permitted on a holding of a member of the same family, or on another of the selector's holdings within reasonable working distance. Suspensions or remissions may be granted for such periods as determined by the Land Board. In certain cases a wife may carry out residence on her husband's holding, or, conversely, a husband may carry out residence on his wife's holding.

The Minister may permit improvements in lieu of residence where the unimproved value of the area is not greater than £300.

The perpetual lease grant will be issued after the expiration of five years from confirmation of the application, if the holder has complied with all required conditions. The holder of a conditional purchase, or conditional purchase and conditional lease, or homestead selection, or homestead grant, or conditional purchase lease, under certain conditions, may convert such holding into a homestead farm. A homestead farm may be protected against sale for debt in certain circumstances. Under certain conditions, a homestead farm may be converted into a conditional purchase lease or into a conditional purchase, with or without a conditional lease. A homestead farm, which is a conversion of a settlement purchase under provision now repealed, may be reconverted into a settlement purchase.

Applications received for Homestead Farms and those dealt with, during the last eight years are as follow:—

Year ended 30th June.	Applications.				Created by Conversion from other tenures.		Reversal of forfeiture and increased area.		Less—		Homestead Farms in existence at end of year.	
	Received.		Confirmed.						Forfeited, decrease in area, and conversions into other tenures.			
	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.
		acres.		acres.		acres.		acres.		acres.		acres.
1912	145	93,254	46	27,815	...	...	...	...	...	...	46	27,815
1913	400	217,186	356	203,365	19	10,041	...	...	...	...	421	241,221
1914	468	234,640	358	221,576	9	7,337	...	...	32	19,635	756	450,499
1915	605	467,873	437	327,098	11	4,550	1	210	50	33,439	1,155	748,918
1916	372	281,685	348	252,166	6	3,848	...	...	57	35,479	1,452	969,453
1917	271	181,722	167*	115,259	2	1,209	2	486	75	49,722	1,548	1,036,685
1918	245	186,853	158*	89,020	...	...	4	2,783	82	46,866	1,628	1,081,612
1919	498	572,713	339*	383,833	3	1,602	4	2,379	107	58,824	1,867	1,410,612

* Includes 82 original farms of 64,476 acres for Returned Soldiers in 1916-17; 51 of 36,208 acres in 1917-18, and 164 of 275,011 in 1918-19. Three applications for additional areas of 526 acres were also confirmed in 1917-18, and 7 applications for 3,413 acres in 1918-19.

Suburban Holdings.

The conditions of perpetual rent and five years' residence are attached to suburban holdings. The area of a suburban holding is determined by the Minister for Lands; the rent—minimum 5s. per annum—is calculated at the rate of $2\frac{1}{2}$ per cent. of the capital value, to be appraised for each period of twenty years. Males under 16 years, females under 18 years, are disqualified from applying. A married woman may, in certain cases, apply, provided her husband has not acquired a suburban holding. A suburban holding may be protected against sale for debt in certain circumstances, and may be purchased under certain conditions. After the expiration of five years from date of confirmation, and subject to fulfilment of all conditions, a perpetual lease grant will be issued.

Any suburban Crown lands, or Crown land within population boundaries, or within the Newcastle pasturage reserve, or any other Crown land, may be set apart for disposal by way of suburban holding.

The number of applications for, and confirmations of Suburban Holdings during the past eight years, were as under:—

Year ended 30th June.	Applications.		Confirmations.		Suburban Holdings in existence at the end of year.		Annual Rent.
	No.	Area.	No.	Area.	No.	Area.	
		acres.		acres.		acres.	£
1912	48	1,964	21	1,085	21	1,085	136
1913	548	12,704	373	8,730	388	9,731	1,146
1914	762	15,885	570	13,415	902	22,114	2,473
1915	563	10,499	477	9,299	1,311	30,717	3,495
1916	504	7,343	400	6,775	1,535	34,110	4,043
1917	299	4,300	230	2,937	1,662	36,631	4,246
1918	240*	4,576	186	3,318	1,815	38,643	4,381
1919	237*	4,792	183	3,226	1,945	41,227	4,670

*Includes 3 of 71 acres, as additional to holdings in 1917-18, and 23 for 252 acres in 1918-19.

In the total number of Suburban Holdings shown as existing at 30th June, 1919, are included 11 of 289 acres, applications to purchase which had been approved during the year 1917-18, and 136 applications for 2,057 acres in 1918-19.

Week-end Leases.

This tenure, created by the Crown Lands Amendment Act, 1916, is a lease in perpetuity, and is subject to payment of rent at the rate of $2\frac{1}{2}$ per cent. of the capital value; to the effecting of substantial improvements worth £1 per acre within five years from confirmation, and to the performance of such special conditions as may be notified. Residence is not necessary. The minimum rent is £1. Anyone (except a married woman not judicially separated) not under 21 years, may apply.

Persons who already hold land within areas defined in a notification setting apart the land for week-end leases, are disqualified in special circumstances.

Transfers may be made at any time with the Minister's consent, but must be to a qualified person, except in cases of devolution under a will or intestacy. The consideration for a transfer must not exceed the capital value of the improvements on the land. Week-end leases, on approval by the Minister, may be purchased.

During the year ended 30th June, 1919, 29 applications for 248 acres were received, and confirmation was made in the case of 21 for an area of 170 acres at an annual rental of £22. In 6 cases the applications were either

disallowed or withdrawn. Eight leases of 6 acres and rental value £8 were made freehold during this and previous years, and there was an adjustment of area on survey of 11 acres. At 30th June, 1919, these leases numbered 59, of an area of 240 acres, and annual rental £66.

Leases of Town Lands.

Crown lands within the boundaries of any town may be leased by public auction or by tender. The lease is perpetual, and the area included must not exceed half an acre. The amount bid at auction or offered by tender (not being less than the upset value) is the capital value on which the annual rent at the rate of $2\frac{1}{2}$ per cent. is based for the first period of twenty years. The capital value for each subsequent twenty years' period is determined by the Land Board.

The lease may contain such covenants and provisions as may be gazetted prior to sale or tender. Residence is not necessary.

No person is allowed to hold more than one lease, unless with the permission of the Minister on recommendation by the Land Board. The holder of a town lease may be allowed to purchase.

In the year 1918-19, after auction tenders were received and accepted for 2 lots of an area of 3 roods $12\frac{1}{2}$ perches and annual rental of £6 15s. On 30th June, 1919, there were 44 leases, containing $17\frac{1}{4}$ acres, the annual rental being £62 8s. 3d.

Settlement of Returned Soldiers.

Under the Returned Soldiers' Settlement Act, 1916, special provision is made for the settlement of discharged soldiers on Crown Lands, including the Murrumbidgee Irrigation Areas, and on lands acquired under the Closer Settlement Acts and otherwise.

Land is made available under one or other of the following tenures:—

1. Homestead Farm.—Lease in perpetuity.
2. Crown Lease.—Lease for 45 years.
3. Returned Soldiers' Special Holding.—Purchase or lease.
4. Suburban Holdings.—Lease in perpetuity.
5. Irrigation Farm.—Lease in perpetuity.
6. Group purchase.

In addition, discharged soldiers may purchase privately-owned land upon terms approved by the Minister for Lands, and the Government will provide the whole of the purchase money, the only restriction being that the transaction must provide additional settlement, as, for instance, in the way of subdivision, not merely by the replacement of one settler by another. The maximum value of land and improvements which may be so purchased is £3,000; in special cases, however, this may be increased to £3,500 or £4,000 for purely grazing areas.

An advance not exceeding £625 may be made available for each soldier settler, but it must be used only for the general improvement of the land, purchase of implements, stock, seed, and other necessaries, or in the erection of buildings.

Terms of repayment are usually as follows:—

House and other Permanent Improvements.—By payments over 25 years, interest only being charged during first five years.

Stock and Implements.—Six years, interest only being charged during first year.

Seeds, Plants, &c.—One year.

Interest is fixed under the Act as not exceeding $3\frac{1}{2}$ per cent. for the first year, and 4 per cent. for the second year and it increases progressively by not more than $\frac{1}{2}$ per cent. for each subsequent year, the maximum rate being $5\frac{1}{2}$ per cent.

If the circumstances so warrant, sustenance may be obtained for a period not exceeding six months, the rates being :—

For a Single Man.—£1 per week inclusive of pension.

Married Man.—£1 10s. per week, plus 2s. 6d. for each child under 16 years of age (inclusive of pension).

Certain colleges and farms are available for training of intending settlers. Sustenance will be provided by the Repatriation Department at the following rates :—

Soldiers without Dependents.—£2 2s. per week.

Soldier with Wife.—£2 17s. per week (inclusive of pension) with allowances for children.

The rates may possibly be altered from time to time.

Subject to such conditions as to security and terms of repayment as the Commission may think fit to impose, soldier settlers on the Murrumbidgee Irrigation Areas may obtain an advance, or have payment of rent and water rates suspended.

These advances will be made irrespective of the general advance of £625, which is made to all soldier settlers.

Details of the settlement of discharged soldiers on the land up to 30th June, 1920, under the special provisions noted, are shown below. It should be remembered, however, that many soldiers have taken up land upon areas not specially set apart for returned soldiers, and are not included herein :—

Returned Soldiers—Special Holdings.

	No.	acres.
Granted to 30th June, 1919	195	10,952
Year 1919-20	98	5,936
Total	293	16,888

Homestead Farms.

	Original Areas.		Additional Areas.
	No.	acres.	acres.
Confirmed year ended 30th June, 1917	82	64,476	.....
" " " 1918	51	36,208	526
" " " 1919	164	275,011	3,413
" " " 1920	273	315,520	13,078
Total	570	691,215	17,017

Crown Leases.

	Original Areas.		Additional Areas.
	No.	acres.	acres.
Confirmed to 30th June, 1917	40	99,885	.....
" year ended 30th June, 1918	21	66,197	.....
" " " 1919	36	83,943	10,311
" " " 1920	61	171,882	381
Total	158	421,907	10,692

Irrigation Farms.

	Murrumbidgee.		Wentworth.		Total.	
	No.	acres.	No.	acres.	No.	acres.
Granted to 30th June, 1919	6	347	7	72	13	419
Year 1919-20	315	17,381	...	...	315	17,381
Total	321	17,728	7	72	328	17,800

The number of estates purchased by the Government for soldiers' settlement up to 30th June, 1920, was as follows:—

	No. of Estates.	Area.	Value.
		acres.	£
By direct purchase	39	268,762	461,202
Under Crown Lands Act	23	28,350	160,648
Closer Settlement Fund	24	306,036	1,468,187
	86	602,948	2,090,037

The figures shown above under the head of Closer Settlement Fund relate only to estates subdivided as group settlements. Many more estates have been acquired for returned soldiers under the promotion sections of the Closer Settlement Act.

The number of returned soldiers who have been placed upon the land in New South Wales through the agency of the State's machinery in connection with the repatriation scheme was 4,210.

MURRUMBIDGEE IRRIGATION AREAS.

The disposal of lands within these irrigation areas is regulated by the Crown Lands Consolidation Act, 1913, and the Irrigation Act, 1912. These areas are administered by the Water Conservation and Irrigation Commission. A special land board, with the powers and duties of a local land board, has been appointed in connection with certain provisions of the Crown Land Acts relating to lands within an irrigation area; the lands are classified as town, irrigable, and dry or non-irrigable lands. A person (except a married woman not separated from her husband by judicial decree) 16 years or over, if a male, or 18 years or over, if a female, or two or more such persons, may apply for an irrigation farm or block. An alien is not barred, but he must become naturalised within three years under penalty of forfeiture. The title is perpetual lease, subject to perpetual payment of rent and performance of residence. The rent is at the rate of 2½ per cent. of the capital value—minimum for town land blocks, £1 per annum. At the expiration of five years after granting of the application a grant of the farm or block will be issued to the holder, provided that the required conditions have been observed. The holding may be protected against sale for debt in certain circumstances.

In respect of town land blocks, the conditions of residence are not imposed, and no person may hold more than three adjoining blocks for residence, or four adjoining blocks for business purposes.

On the 30th June, 1919, 804 farms were held, representing a total area of 36,807 acres. In addition 176 Town Lands Blocks were held.

Irrigation settlements have also been established at Hay and at Curlwaa, near Wentworth. These were in 1913 placed under the control of the Water Conservation and Irrigation Commission.

The Hay Irrigation Area consists of an area of 3,842 acres, and the Curlwaa Area 10,600 acres. Practically the whole of these areas are under occupation.

ALIENATION.

From the early days of settlement until the year 1861 the Crown disposed of land, under prescribed conditions, by grants and by sales, so alienating, by the end of 1861, an aggregate area of 7,146,579 acres, made up as follows:—

	acres.
1. By grants, and sales by private tender to close of 1831	3,906,327
2. „ „ in virtue of promises of early Governors made prior to 1831, from 1832-40 inclusive	171,071
3. „ sales at auction, at 5s., 7s. 6d., and 10s. per acre, from 1832-38 inclusive	1,450,508
4. „ „ „ „ 12s. and upwards per acre, at Governor's discretion, from 1839-41 inclusive	371,447
5. „ „ „ „ 20s. per acre, from 1842-46 inclusive	20,250
6. „ „ „ „ and in respect of pre-emptive rights, from 1847-61 inclusive	1,219,375
7. „ grants for public purposes, grants in virtue of promise of Governor made prior to the year 1831, and grants in exchange for lands resumed from 1841-61 inclusive	7,601
Total area alienated on 31st December, 1861	7,146,579

The figures relating to land alienation under the legislation of 1861, and to its subsequent amendments, show that up to 30th June, 1919, 14,933,717 acres had been sold by auction and other forms of sale.

The total area alienated by volunteer land orders to 30th June, 1919, amounted to 172,198 acres. Free grants ceased as from 31st January, 1912.

From 1862 to 30th June, 1919, the Crown dedicated 240,224 acres for public and religious purposes, the dedications during the last year covering 382 acres.

The area and the purposes for which land was dedicated during 1918-19, were as follows:—

	Area.				Area.		
	a.	r.	p.		a.	r.	p.
Athletic Sports Ground	0	2	2½	Public Roads	75	2	10½
Crematorium	12	2	12	Public Schools	65	0	27½
Fire Brigade Stations..	1	2	2½	Racecourse and Public Recre- tion	95	1	37
General Cemetery	4	1	25	Show Ground	2	1	0
Literary Institute	0	1	12½	Town Hall	0	2	36½
Mechanic's Institute	0	1	0	Workmen's Institute	0	2	25½
Public Hall	0	1	37½	Zoological Gardens	2	1	9½
Public Recreation	106	2	17½	Total	381	2	31
Public Recreation and Access Ground	0	1	0½				
Public Recreation and Show Ground	12	1	34				

The foregoing areas are inclusive of various tenures within the Federal Capital Territory aggregating approximately 173,451 acres and will be subject to modification when the territorial boundaries shall have been surveyed.

The operations of the various Orders, Regulations, and Acts of Council and of Parliament for the disposal of the public lands, since the foundation of New South Wales, have produced the following results:—

	acres.
Area granted and sold by private tender and public auction at prices ranging from 5s. to 20s. per acre, prior to the year 1862	7,146,579
Area sold by auction and other forms of sale, 1862 to 30th June, 1919, inclusive	14,933,717
Area sold under system of conditional purchase for which deeds issued, 1862 to 30th June, 1919, inclusive	17,877,903
Area granted under Volunteer Land Regulations of 1867	172,198
Area dedicated for public and religious purposes, less resumptions, 1862 to 30th June, 1919... ..	240,224
Homestead selections and grants existing on 30th June, 1919	985,914
Homestead farms	1,410,612
Suburban holdings	41,227
Returned Soldiers Special Holdings	10,952
Lands (acquired and Crown) alienated for Closer Settlement to 30th June, 1919	1,268,046
	44,087,372
<i>Less—</i>	acres.
Alienated and dedicated lands within Federal Capital Territory... ..	173,451
Area acquired for Closer Settlement, to 30th June, 1919	1,272,470
	1,445,921
Total area alienated, 30th June, 1919	42,641,451
Area in process of alienation under system of conditional purchase standing good on 30th June, 1919 (exclusive of Federal Capital Territory)	19,435,807
	62,077,258
Total area alienated, and in process of alienation on 30th June, 1919 (exclusive of Federal Capital Territory)	62,077,258

It is not possible to separate the area alienated by grant from that sold by private tender, as the records of early years are incomplete upon this point.

Under the provisions of the Crown Lands Amendment Act, 1912, the holder of a settlement purchase under the Closer Settlement Acts other than those acquired under the Closer Settlement Promotion Act, 1910, was permitted, under certain conditions, to convert such holding into a homestead farm. The Crown Lands Amendment Act, 1917, withdraws this right, and provides that those conversions already made may be re-converted into settlement purchase tenures. See pages 433 and 434.

The progress of alienation and of conditional settlement by purchase and lease at various periods from 1861 to 30th June, 1919, is shown in the following table:—

Year.	Area Alienated to end of year.	Area Conditionally Purchased, standing good at end of year.	Total area alienated and in course of alienation.	Area under Leases with right to convert. (See page 443.)	Total Area placed beyond State control.
	acres.	acres.	acres.	acres.	acres.
1861	7,146,579	...	7,146,579	...	7,146,579
1871	8,630,604	2,280,000	10,910,604	...	10,910,604
1881	22,406,746	12,886,879	35,293,625	...	35,293,625
1891	23,775,410	19,793,321	43,568,731	11,234,131	54,802,862
1901	27,934,627	20,044,703	47,979,330	13,980,942	61,960,272
1906	33,470,512	16,499,823	49,970,335	15,807,249	65,777,584
1911	38,501,167	15,614,036	54,115,203	25,352,311	79,467,514
1916	41,172,383	18,315,095	59,487,478	22,044,506	81,531,984
1917	41,549,337	18,693,429	60,242,766	21,124,423	81,367,189
1918	41,794,364	19,225,738	61,020,102	20,554,771	81,574,873
1919	42,641,451	19,435,807	62,077,258	20,115,919	82,193,177

CONVERSION OF TENURES.

In reference to the various methods of acquisition and occupation, details have been given of provisions of the Crown Lands Amendment Acts passed in 1908 and 1912, which confer on certain holders of Crown lands the right of conversion into more desirable tenures. The following statement shows the applications for conversion, and those confirmed, during the last three years:—

Class of Holding.	Applications.					
	1916-17.		1917-18.		1918-19.	
	No.	Area.	No.	Area.	No.	Area.
Conditional Leases	1,175	acres. 574,834	1,332	acres. 626,790	1,177	acres. 481,584
Conditional Purchase Leases ...	59	38,046	80	38,275	63	33,029
Conditional Purchases ... ..	...	...	...	...	1	676
Homestead Selections or Grants ...	130	63,346	443	27,718	193	82,598
Settlement Leases	73	244,724	48	158,611	60	165,320
Non-residential Conditional Purchases	3	400	3	347	9	1,131
Special Leases	328	39,872	392	48,391	459	54,795
Settlement Purchases	1	546	...	...	...	...
Church and School Lands Leases ...	8	1,081	...	...	...	...
Improvement Leases	4	2,089	2	1,280	1	2,322
Crown Leases ... ..	...	...	94	30,617	154	54,726
Homestead Farms ... ..	...	...	43	11,705	46	16,672
Total	1,781	964,938	2,437	1,188,734	2,163	892,853

Class of Holding.	Applications confirmed.					
	1916-17.		1917-18.		1918-19.	
	No.	Area.	No.	Area.	No.	Area.
Conditional Leases	1,105	acres. 538,629	1,277	acres. 612,702	1,186	acres. 506,287
Conditional Purchase Leases ...	64	46,458	69	36,005	68	25,996
Conditional Purchase ... ..	...	...	...	...	1	676
Homestead Selections or Grants ...	121	60,731	306	207,789	221	94,324
Settlement Leases	55	194,824	49	177,741	51	160,072
Non-residential Conditional Purchases	3	400	...	...	10	1,239
Special Leases	226	28,862	217	26,153	314	41,903
Settlement Purchases	2	1,209	...	...	...	...
Improvement Leases	3	1,613	2	1,280	...	6,100
Crown Leases ... ..	...	...	42	14,863	149	44,296
Church and School Lands Leases	7	14	1	1,066	...	...
Homestead Farms ... ..	...	...	22	6,255	52	15,368
Total	1,586	872,740	1,985	1,083,854	2,053	896,261

The new tenures created by the foregoing applications during the past three years were as follows :—

New Tenures.	1916-17.		1917-18.		1918-19.	
	No.	Area.	No.	Area.	No.	Area.
		acres.		acres.		acres.
Conditional Purchase	1,492	686,809	1,880	863,461	1,952	711,042
Conditional Purchase and Associated Conditional Lease*	43	162,842	87	213,849	64	157,021
Conditional Lease	20	15,672	9	2,874	30	19,033
Conditional Purchase Lease	5	159	3	1,398	2	1,180
Homestead Selections	12	2,641	6	2,272	1	6,100
Settlement Lease	12	3,408	...	...	1	253
Homestead Farm	2	1,209	...	...	3	1,602
Total	1,586	872,740	1,985	1,083,854	2,053	896,261

* Included in the above figures are 43 Conditional Leases of 129,457 acres in 1916-17, 87 embracing 162,205 acres in 1917-18, and 64 of 115,850 acres in 1918-19. Non-residential Conditional Purchases converted into Conditional Purchase are also included.

OCCUPATION OF PASTORAL LANDS—LIMITED TENURE.

The pastoral lands of New South Wales have been occupied under various systems of tenure. In the early days land was held for grazing by virtue of tickets of occupation, the issue of which was stopped in 1827, when holders of such lands were required to pay a quit-rent of 20s. per 100 acres per annum, and to vacate the land at six months' notice. The necessity for depasturing increasing stocks induced settlers to extend their occupation to Crown lands without any right except that of first discovery, until the Legislature, in 1833, passed an Act protecting Crown lands from intrusion and trespass, Commissioners being appointed to safeguard the interests of the State.

The discovery of new country soon attracted pioneer squatters beyond the limits of settlement as proclaimed on 14th October, 1829; and regulations, involving liability to severe penalties, were issued on 29th July, 1836, with the view of restraining unauthorised occupation. In 1839 the regulations were reinforced by the passing of an Act levying upon stock a yearly assessment at the following rates :— $\frac{1}{2}$ d. for every sheep, $1\frac{1}{4}$ d. per head of cattle, and 3d. for every horse.

Under an Act passed in 1847 a new system was introduced relating to pastoral lands of which previously the tenure had been annual, the fee being based on the area of land occupied by the squatter. Under the new plan, fixity of tenure of lease was substituted, the license fee being calculated upon the stock-carrying capacity of the run; but the term of the pastoral leases varied, being fixed, in the unsettled districts, at fourteen years; in the intermediate division, at eight years; while in the settled districts the yearly tenure was retained. The licensing fee under the altered conditions was charged at the rate of £10 for 4,000 sheep, or a proportional number of cattle—which was the minimum at which the stock-carrying capacity of a run could be assessed—and £2 10s. for every additional 1,000 sheep, or proportionate number of cattle. In settled districts lands were let for pastoral purposes only, in sections of not less than 1 square mile in area, the annual rental for each section being fixed at 10s.

The holders of alienated lands were permitted to depasture their stock upon Crown lands adjoining their holdings, free of charge; this permission, however, constituted only a commonage right.

The Occupation Act of 1861 created a new system, limiting the tenure of pastoral leases to five years in unsettled and intermediate or second-class settled districts, and leaving the whole of the pastoral leases open to the operations of the free selectors. The evils resulting from this system led Parliament to adopt, in 1884, 1889, 1895, and at intervals since 1903, the measures, the provisions of which are described hereafter.

CROWN LANDS ACT OF 1861.

The Crown Lands Act of 1861, introduced by Sir John Robertson, aimed at facilitating the settlement of an industrial agricultural population side by side with the pastoral tenants, by introducing a principle entirely new to the land legislation of the State, namely, that of free selection, in limited areas, *before survey*. The Act provided for the conditional purchase of areas from 40 to 320 acres in extent at £1 per acre—25 per cent. of the purchase money to be deposited with the application. At the expiration of three years the purchaser was required to pay the balance, and to furnish a certificate showing that he had resided on the land, and made the necessary improvements. Provision was made to defer payment of the balance of the purchase money on receipt of 5 per cent. interest.

The Amending Act of 1875, under which annual instalments were payable, gave to any conditional purchaser of land the option of availing himself of the change in the method of payment. The system of unconditional sales was, however, continued under the Act of 1861; and during the twenty-three years the Act was in operation 23,470,140 acres were sold conditionally, and 15,572,001 acres by auction, by improvement purchase, by virtue of pre-emptive right, or otherwise without conditions, the total area alienated being 39,042,141 acres. In many cases the land selected, or purchased, reverted to the State; so that the absolute area alienated or in process of sale when the Act of 1884 came into force amounted to only 32,819,023 acres, besides 7,146,579 acres alienated prior to 1861.

THE CROWN LANDS ACTS OF 1884 AND 1889.

After many amendments the Act of 1861 was superseded by that of 1884, with the supplementary enactment of 1889, which measures maintained the principle of free selection before survey, but with one essential difference. Under the original Act the whole area of the Crown lands was thrown open to free selection, including the lands held under pastoral lease. The Acts of 1884 and 1889 were devised to give fixity of tenure to the pastoral lessee and to obtain a larger rental from the public lands, at the same time restricting the area sold unconditionally.

Existing holders of pastoral leases under the earlier Act were required to surrender one-half of their leases, which were resumed by the Crown for subsequent alienation, leasehold, or reserve; the other half in each case was leased to the pastoralist under fixity of tenure for a term of years. On 31st December, 1884, when this division was made, there were 4,313 leased runs, yielding an annual rental of £268,500, and forming about 1,600 "stations," estimated to contain the bulk of the unalienated public estate, after allowing for reserves, &c. An increase in the revenue from pastoral occupation, one of the principal objects of the Act of 1884, has been realised, as evidenced by the total revenue received from the pastoral occupation of Crown lands, which increased from £329,356 in the year 1884 to £482,361 in the financial year 1918-19.

THE CROWN LANDS ACTS OF 1895 AND 1903 TO 1917.

The Act of 1861 failed conspicuously in encouraging *bond fide* settlement; and the legislation of 1884 and 1889 also was ineffective, since the accumulation of land in large estates continued, while settlement proceeded very slowly. Expert opinion pointed strongly to the necessity of introducing entirely new principles, and this was done in the Crown Lands Acts of 1895 and 1903, which, while placing land within easy reach of all, supplied the means of securing permanent settlers through the new system of tenure—homestead selections and settlement leases. These tenures have been superseded by those of homestead farms and Crown leases which were created by the Act of 1912.

In 1913 an Act, entitled the "Crown Lands Consolidation Act, 1913," was passed, which consolidated all existing original as well as amended and unrepealed portions of the various Acts dealing with the alienation, occupation, and management of Crown Lands. The Crown Lands (Amendment) Act, 1917, which came into force on 1st January, 1918, provided for conversion of certain tenures and modified the conditions relating to certain holdings particularly in regard to residence. It also amended the existing Acts in other respects.

OCCUPATION.

Annual Leases.

Unoccupied lands, not reserved from lease, may be obtained for pastoral purposes as annual leases, on application, or they may be offered by auction or tender. They may be obtained also by "after auction" tender, or "after tender" tender. No conditions of residence or improvement are attached to annual leases, which convey no security of tenure, the land being alienable by conditional purchase, auction sale, &c. The area in any one lease is restricted to 1,920 acres. In certain circumstances an annual lease may be converted into a lease under improvement conditions for a term not exceeding ten years.

The number of annual leases current at 30th June, 1919, was 5,932, embracing 2,552,665 acres, with an annual rent of £21,517.

Conditional Purchase Leases.

This form of tenure was created in 1905; but, as in the case of homestead selections and settlement leases, it is obsolete for the purposes of selection, as lands are not now made available under it. There are, however, considerable numbers of conditional purchase leases still standing.

The holder may convert the area into a conditional purchase by payment of a deposit of 5 per cent. on the capital value of the land, provided that the proper conditions have been observed, and subject to all the unperformed conditions of the lease, except payment of rent. The balance of purchase money is payable by equal annual instalments at the rate of 5 per cent. of the price, consisting of principal and interest at the rate of $2\frac{1}{2}$ per cent. on the unpaid balance, the first instalment becoming due twelve months after the date of application for conversion. In accordance with the provisions of the Crown Lands Amendment Act, of 1912, conditional purchase leases might be converted also into homestead farms.

A holder of a conditional purchase lease may acquire additional conditional purchase leases, but in no case may the total area of the lands held by him under any tenure, except under lease having less than five years to run without right of purchase, exceed a home-maintenance area.

Four applications for an area of 1,380 acres were received for additional conditional purchase leases during the year 1918-19, and 4 of 351 acres were confirmed. No special conditional purchase leases were confirmed, during the year. Two leases of 1,180 acres were converted from other tenures. The increase in area amounted to 17 acres. Reversals of forfeiture numbered 1 lease of 831 acres. The leases forfeited during the year were 2 of 851 acres, while 68 leases of 25,996 acres were converted into conditional purchase, and there was a decrease in area amounting to 2 acres. The leases holding good at 30th June, 1919, numbered 587 with an area of 408,768 acres, the rent amounting to £13,559.

Special Conditional Purchase Leases.

Under the Crown Lands Act, 1908, land might be set apart for disposal as special conditional purchase lease, provided that for six months the land had been available for some class of residential holding. The areas must be not less than 20, nor more than 320 acres. There were no conditions of residence, but substantial improvements of value of £1 per acre, or any lesser value not being less than 10s. per acre, must be completed within three years. Although no lands are now set apart for special conditional purchase lease, there are areas still available for application in certain districts.

Two applications for an area of 290 acres were received during 1918-19. No applications were confirmed.

Conditional Leases.

A conditional lease may be obtained by any holder of a conditional purchase (other than non-residential), or a conditional purchase within a special area in the Eastern Division. Lands available for conditional purchase are also available for conditional lease, with the exception of lands in the Western Division, or within a special area or a reserve.

Applications must be accompanied by a provisional rent of 2d. per acre and a survey fee, unless as otherwise provided. The area which an applicant may obtain as conditional purchases and conditional leases is restricted to 1,280 acres in the Eastern Division, and 2,560 acres in the Central Division; but the Land Board may specifically permit larger areas. The area that may be leased is limited to three times the area of the conditional purchase in virtue of which it is obtained. The lease is for a period of forty years, at a rent determined by the Land Board, payable yearly in advance. The conditions of fencing, or substitution of improvements in lieu of fencing, which attach to a residential conditional purchase, apply equally to a conditional lease, and residence is required as in the case of an additional conditional purchase.

After confirmation, a conditional lease may be converted, either wholly or in part not less than 40 acres, into a conditional purchase.

Applications for 368 leases, of an area of 112,452 acres, were lodged during 1918-19, and 151, including applications outstanding from the previous year, representing 44,947 acres, were confirmed.

Conditional leases, to the number of 1,186, embracing 506,287 acres, were converted into conditional purchase, and conditional leases containing an area of 134,883 acres, were created by conversion. Leases in existence at 30th June, 1919, numbered (gazetted) 25,510, embracing 14,468,840 acres, rent £190,214, and not gazetted (under provisional rent), 249 leases of 81,735 acres, and rent £681.

Leases of Scrub and Inferior Lands.

Scrub leases may be obtained by application, by auction, by tender, by after-auction tender, or by after-tender tender, but inferior-lands leases may be acquired only by auction or by tender, after-auction tender, or after-tender tender. There is no limitation as to area, and in the case of a scrub lease obtained by application the rent is appraised by the Local Land Board. The initial rent of an inferior-lands lease prevails throughout the whole term; but the terms of a scrub lease may be divided into periods, the rent for each period being determined by reappraisal. The term of each class of lease may not exceed twenty-eight years. The holder of a scrub lease must take such steps as the Land Board may direct for the purpose of destroying the scrub, and keep the land clear afterwards. During the last year of any of the leases application may be made for a homestead grant of an area not in excess of a home-maintenance area.

There were in existence at 30th June, 1919, 230 scrub leases with an area of 1,658,675 acres, and rental of £6,496, and 29 inferior land leases, embracing 71,710 acres, and rent, £271.

Occupation Licenses.

Occupation licenses may be (a) preferential occupation licenses, consisting of the area within the expired pastoral leases, and (b) ordinary occupation licenses, which relate to the parts of the holdings formerly known as resumed areas. They may be acquired by auction or tender, after-auction tender, or after-tender tender. Occupation licenses extend from January to December being renewable annually at a rent determined by the Land Board.

The area under occupation license (Crown Lands Act) was represented at 30th June, 1919, by ordinary 667 of 4,111,467 acres, rental £8,222, and preferential 318 leases, representing 966,613 acres, and rent, £4,240.

18th Section and Pastoral Leases.

Under the Crown Lands Amendment Act of 1903, the registered holder of any pastoral lease, preferential occupation license, or occupation license, could apply for a lease, for not more than twenty-eight years, of an area not exceeding one-third of the total area of the land comprised within the lease or license, subject to such rent, conditions of improvement, and withdrawal for settlement as may be determined. These are known as 18th Section Leases, having been granted under Section 18, Act of 1903, which has now been repealed.

At 30th June, 1919, these leases, also known as "Leases to Outgoing Pastoral Lessees," numbered 119 with an area of 677,221 acres, and rental of £6,097. There were no pastoral leases in existence on 30th June, 1919, in the Western Division, and not brought under the provisions of the Western Lands Act, 9 leases of 1,136,475 acres having expired during the year.

Special Leases.

Special leases are issued chiefly to meet cases where land is required for some industrial or business purpose, and may be obtained by application, auction, or otherwise, the term of the lease not to exceed twenty-eight years. The conditions attached are suitable to the circumstances of each case, being, like the rent, determined by the Minister. The Crown Lands Act, passed in 1908, provides for the conversion of special leases, for certain purposes, and of agricultural or pastoral Church and School lands leases, into original or additional conditional purchase leases; or original or additional conditional purchases; or original or additional homestead selections; or original or additional settlement leases; or conditional leases; or homestead farms.

The number of special leases granted during 1918-19 numbered 523 of 68,054 acres, and 314 leases representing 41,903 acres were converted into other tenures. After allowance has been made for leases which were terminated, were forfeited, surrendered, &c., and those which expired by effluxion of time, 6,759 leases (exclusive of leases within the Commonwealth territory) with an area of 663,919 acres and rental of £37,016, were current at 30th June, 1919.

Residential Leases.

The holder of a "miner's right" within a gold or mineral field may obtain a residential lease. A provisional rent of 1s. per acre is charged, the maximum area is 20 acres, and the longest term of the lease twenty-eight years; the annual rent is appraised by the Land Board. The principal conditions of the lease are residence during its currency, and the erection within twelve months of necessary buildings and fences. Tenant-right in improvements is conferred upon the lessee. The holder of any residential lease may apply after the first five years of his lease to purchase the land.

There were 946 leases embracing 13,511 acres and a rental of £1,663 current at 30th June, 1919.

Improvement Leases.

Improvement leases may consist of any scrub or inferior land not suitable for settlement in the Eastern or Central Divisions, and are obtained only by auction or tender, after-auction tender, or after-tender tender. The rent is payable annually, and the lease is for a period of twenty-eight years, with an area not exceeding 20,480 acres. Upon the expiration of the lease the last holder will have tenant-right in improvements. During the last year of the lease the lessee may apply for a homestead grant of an area not in excess of a home maintenance area, including the area on which his dwelling-house is erected. Should the Advisory Board, constituted under the Closer Settlement Act, 1907, report that land comprised in an improvement lease or scrub lease is suitable for closer settlement, the Minister may resume the lease, the lessee being compensated.

During 1918-19, 8 leases, comprising 19,590 acres, were let by tender at a total rental of £123, and 1 lease of 778 acres and rent £12 19s. 4d. was, under improvement conditions, granted. One improvement lease was converted into a homestead selection. After allowance has been made for leases, which were forfeited, voided, surrendered, expired and resumed, there remained current at 30th June, 1919, 849 leases with an area of 3,962,870 acres and rental £26,881.

Settlement Leases.

Under this tenure, which now has been superseded practically by that of Crown lease, farms gazetted as available for settlement lease were obtainable on application, accompanied by a deposit consisting of six months' rent and at least one-tenth of survey fee.

Under the Crown Lands Act of 1908, the holder of a settlement lease may convert such lease into a conditional purchase, or into a conditional purchase and conditional lease under certain provisions, but the area of the land to be converted into conditional purchase may not exceed a home maintenance area.

During 1918-19, five applications for additional leases relating to 7,732 acres were lodged. One settlement lease of 283 acres was created by conversion, and 51 leases for an area of 160,072 acres were converted into other tenures. After making allowance for leases forfeited, &c., and subdivision, there remained current at 30th June, 1919, 1,509 leases, comprising 4,479,135 acres, and rent, £52,908.

Snow Leases.

Vacant Crown lands which for a portion of each year are usually covered with snow, and are thereby unfit for continuous use or occupation, may be leased by auction or tender, by after-auction tender, or by after-tender tender as snow leases. Not more than one snow lease may be held by the same person. The maximum area is 10,240 acres. The term of the lease is seven years, but may be extended for three years.

At 30th June, 1919, there were twenty-one leases current, embracing 134,420 acres; and rent, £1,272.

Crown Leases.

Crown leases were constituted under the Crown Lands Amendment Act, 1912, and lands are specially set apart by notification in the *Gazette* as available for Crown lease. Crown lands available for conditional purchase (unless otherwise specified in the *Gazette*) are also available for Crown lease. Land may be set apart for Crown lease to be acquired only as additional holdings. The term of lease is forty-five years, and the annual rent $1\frac{1}{4}$ per cent. of the capital value, as determined every fifteen years. The rent payable for the first year may be remitted if, in addition to the improvements required as a condition of the lease, an equal sum be spent by the lessee in improving the land. The lessee is required to reside on the land for five years, and during the last five years of the lease, unless debarred by notification setting the land apart, may apply to convert into a homestead farm so much of the land as will not exceed a home-maintenance area. Under certain conditions, conversion may also be made into a conditional purchase, with or without a conditional lease. The lease may be protected against sale for debt in certain circumstances. Any person qualified to apply for a homestead farm may apply for a Crown lease.

Operations under this class of lease during the past eight years were as follow :—

Year ended 30th June.	Application.		Confirmed.		Leases current at 30th June.		
	No.	Area.	No.	Area.	No.	Area.	Rent.
		acres.		acres.		acres.	£
1912	116	311,360	54	168,392	54	168,392	1,588
1913	477	554,424	278	390,096	330	555,864	5,621
1914	836	697,425	493	356,727	805	880,785	9,259
1915	628	643,189	598	487,155	1,600	1,563,684	16,114
1916	571	864,158	501	780,373	1,760	1,896,765	21,561
1917	541	595,409	445*	441,313	2,033	2,134,446	24,845
1918	463	500,386	291*	285,248	2,337	2,449,587	28,292
1919	628	934,072	313*	341,324	2,565	2,694,879	31,303

* Includes 40 leases of an area of 99,885 acres, and annual rental of £1,448, for returned soldiers in 1917 of 66,197 acres, rental £948, in 1918; and 36 of 83,943 acres, and rental £1,190, in 1919.

Church and School Land Leases.

Certain grants were made under special enactments, and instructions from the Imperial authorities to Sir Thomas Brisbane, then Governor (1821-25), directed him to reserve one-seventh of the Crown lands in each county for Church and School purposes.

The aggregate area of such reserves up to the year 1832, shown by survey to be actually 454,050 acres, did not attain the proportional area specified in the instructions. These lands were administered by the Clergy and School Land Corporation until its abolition by Order of Council on the 4th February, 1833, when the lands reverted to the Crown, and an agent was appointed to determine the claims of purchasers, to whom deeds of grant were made and confirmed by a subsequent Act of Council, dated the 5th August, 1834.

Of the reserves mentioned above, 171,746 acres were alienated up to the year 1880, when, by the Church and School Lands Dedication Act of that year, the balance of 282,304 acres came under the control of the State Legislature to be administered for the purpose of Public Instruction. Subsequently the Church and School Lands Act, 1897, re-vested all these lands in the Crown, free from any trust or condition, but subject to the provisions of the Crown Lands Act of 1884 and its subsequent amending Acts, thus determining the land as Crown land. Until a notification classifying any area of Church and School lands has been published in accordance with the Crown Lands Act, such area may be dealt with only by reservation, dedication, license, or held under special or annual lease.

The total area of Church and School lands held under lease at 30th June, 1919, in the Eastern Division was 11 acres, at a rental of £330 per annum, the subdivisions being as follows:—

	No.	Area. acres.	Rent. £
Agricultural	1	1	1
Ninety-nine Year	37	10	326
Total	38	11	327

In addition to the above, there was one water-race, aggregating about 10 miles, with a rental of £3.

Other leases in existence at 30th June, 1919, were as follow:—

Homestead leases in the Western Division not brought under the provisions of the Western Lands Act were seven, containing an area of 51,074 acres, and rent £64. Fourteen leases expired during the year.

No artesian well leases held under the Crown Lands Acts in the Western Division, were in existence at 30th June, 1919, the 5 leases current in the previous year having expired.

There was also one block-holder's lease, 1 acre, and rent £6; and 101 prickly-pear leases, embracing an area of 41,148 acres, with a rental of £495. Permissive occupancies in existence at the same date were 3,492, for an area of 1,365,570 acres, and rental £10,873.

In addition to the foregoing leases, there were at 30th June, 1919, exclusive of leases to mine on private lands, 207,480 acres, approximately, held under mineral and auriferous leases. Permits to mine under roads and reserves covered an area of 2,173 acres.

WESTERN DIVISION.

The administration of the Western Division under the Western Lands Acts, 1901 and 1905, is vested in three Commissioners, constituting "The Western Lands Board of New South Wales," who, sitting in open Court, also exercise all the powers conferred upon Local Land Boards by the Crown Lands Acts.

Subject to existing rights and extension of tenure granted under certain conditions, all forms of alienation (other than by auction) and lease prescribed by the Crown Lands Acts, ceased to operate within the Western Lands Division from 1st January, 1902.

The registered holder of a homestead selection or grant, pastoral, homestead, settlement, residential, special, artesian well, improvement, scrub, or inferior lease or occupation license, of land in the Western Division, may apply to bring his lease or license under the provisions of the "Western Lands Acts of 1901 and 1905"; in cases where application has not been made, such lease or license is treated as if the Acts had not been passed.

Crown lands within this division are not available for lease until so notified in the *Gazette*, but leases for special purposes may be granted upon certain conditions, and holders of areas, which are considered too small to maintain a home or to make a livelihood, may obtain an additional area under certain conditions as a lease. Lands are gazetted open for lease at a stated rental under specified conditions with respect to residence, transfer, mortgage, and sub-letting.

All leases issued or brought under the provisions of the "Western Lands Acts of 1901 and 1905," except special leases, expire on 30th June, 1943. In cases where a withdrawal is made for the purpose of sale by auction or to provide small holdings, the lease of the remainder may, as compensation, be extended for a term not exceeding six years.

The rent on all leases brought under the provisions of the Act is determined by the Commissioners for the unexpired portion. The minimum rent or license fee is 2s. 6d. per square mile or part thereof, the maximum is 7d. per sheep on the carrying capacity determined by the Commissioners.

Holdings under the Western Lands Acts as at 30th June, 1919, were classified as follows:—

Class of Holding.	Leases issued.	Area.	Annual Rental.
	No.	acres.	£
Pastoral Leases	300	40,311,375	50,908
Homestead Leases	1,117	10,369,888	22,695
Improvement Leases	116	1,950,875	1,040
Scrub Leases	3	17,431	28
Inferior Lands Leases	4	209,950	50
Settlement Leases	8	40,050	130
Artesian Well Leases	32	327,351	419
New Special Leases	293	521,248	1,534
Special Leases (Conversion)	55	9,366	290
Occupation Licenses	102	6,923,913	2,033
Homestead Selections and Homestead Grants	35	24,788	140
Section 32, Western Lands Act Leases... ..	292	2,801,947	2,535
Part VII, " "	409	10,263,570	9,969
Preferential Occupation Licenses	4	11,908	10
Permissive Occupancies	62	969,249	759
Conditional Leases	81	109,922	538
Total	2,913	74,862,831	93,078

AREA LEASED AT 30TH JUNE, 1919.

The area leased to pastoral tenants and others at the end of June, 1919, amounted to 113,476,973 acres (including leases to miners under the Mining Act), and was subdivided as follows :—

Type of Lease.	Area. acres.	Type of Lease.	Area. acres.
To outgoing Pastoral Lessees	677,221	Snow Land	134,420
Occupation License	5,078,080	Special	663,919
Conditional	14,550,575	Inferior Land	71,710
Conditional Purchase... ..	408,768	Western Lands	74,862,831
Homestead	51,074	Permissive Occupancy	1,365,570
Annual	2,552,665	Prickly Pear	41,148
Settlement	4,479,135	Mining Act	209,653
Improvement	3,962,870	Other	13,780
Scrub	1,658,675		
Crown	2,694,879	Total	113,476,973

The total available area of the State, including that of Lord Howe Island, and exclusive of 593,920 acres ceded to the Commonwealth Government as Federal Capital Territory, is 198,044,160 acres. Deducting the area alienated, and in process of alienation, 62,077,258 acres, and the area leased, 113,476,973 acres, making a total of 175,554,231 acres, there remained a balance of 22,489,929 acres, representing the area of country neither alienated nor leased, and including roads, reserves for public purposes, travelling-stock routes and water.

The following statement shows the tenure under which the areas leased with right or provision to convert into freehold, under the Crown Lands (Amendment) Act of 1908, are held :—

	acres.
Conditional Leases	14,550,575
Conditional Purchase Leases	408,768
Settlement Leases	4,479,135
Special Leases	663,919
Residential Leases on Mineral Fields... ..	13,511
Church and School Land Leases	11
Total	20,115,919

The areas under long contracts of lease, in some cases with right of renewal, are given below :—

	acres.
Crown Leases	2,694,879
Leases to outgoing Pastoral Lessees	677,221
Homestead Leases	51,074
Scrub Leases and Inferior Land Leases	1,730,385
Snow-land Leases	134,420
Improvement Leases	3,962,870
Western Land Leases	66,957,761
Other Leases	251,059
Total	76,459,669

AREA AVAILABLE FOR SETTLEMENT.

As has been shown previously, the area which had been placed practically beyond State control at the end of June, 1919, was as follows :—

	acres.
Area alienated	42,641,451
Area conditionally purchased standing good	19,435,807
Area under Lease with right to convert... ..	20,115,919

Total area placed practically beyond State control 82,193,177

Adding together 82,193,177 acres practically beyond State control, and 76,459,669 acres of land leased on long contracts, a total of 158,652,846 acres shows the extent of territory which can now be more closely settled and intensely cultivated only by voluntary action of the holders, or by more systematic and probably costly resumptions. The balance is 39,391,314 acres; of this 2,969,080 acres represent the water area, and a considerable area, probably 3 or 4 million acres, must be deducted for roads and for useless land, leaving perhaps 32 million acres available for occupation under various tenures. There is, however, a difficulty attending any calculation of the area included in land under long leases, which might be made available for settlement. This is apparent when the conditions under which the leases are now held are taken into consideration. Except where right to renewal on expiration of the lease exists, certain areas are continually reverting to the Crown by effluxion of time, and again in respect of certain leases provisions have been made whereby the Minister may at his discretion withdraw a part, and in some cases the whole, of a leased area, or he may resume such leases for the purposes of settlement.

AREAS FOR SETTLEMENT, 1918-19.

With a view to classifying and bringing forward those areas which are suitable for settlement, systematic inspections of Crown lands are made in each district. To meet the demand for land, 1,443,787 acres, including 710,142 acres for Soldiers' Settlement, were made available during the year 1918-19, for the classes of holdings specified below:—

	For Ordinary Settlement. acres.	For Soldiers' Settlement. acres.	Total. acres.
For Crown Lease	295,511	175,254	470,765
Homestead Farms	134,132	378,792	512,924
Suburban Holdings	2,662	1	2,663
Additional Holdings (ordinary)	232,088	24,291	256,379
Irrigation Farms and Allotments	721	10,285	11,006
Conditional Purchase (original)	822	300	1,122
Conditional Purchase and Conditional Lease	5,207	345	5,552
Homestead Selection (original)	100	...	100
Week-end Leases	212	...	212
Returned Soldiers' Special Holdings ... ..	...	17,955	17,955
Soldiers' Group Purchases ... ..	...	53,530	53,530
Area acquired (Closer Settlement)	1,523	10,416	11,939
Closer Settlement Promotion Act.	35,227	25,673	60,900
	708,205	696,842	1,405,047
Area gazetted prior to 30th June, 1919, but not available until after that date	25,440	13,300	38,740
Total	733,645	710,142	1,443,787

The total areas available under the various tenures on 30th June, 1919, were as follow:—

	For Ordinary Settlement. acres.	For Returned Soldiers. acres	Total. acres.
For Crown Lease	2,140,411	17,850	2,158,261
Homestead Farms	126,317	70,087	196,404
Suburban Holdings	21,429	...	21,429
Conditional Purchase (Original)	4,972,182	...	4,972,182
Additional Holdings (Generally)	1,095,753	...	1,095,753
Week-end Leases	644	...	644
Town Lands Leases	194	...	194
Returned Soldiers' Special Holdings ... ..	...	10,162	10,162
Total	8,356,930	98,099	8,455,029

RESERVES.

The total area of reserved lands in the State as at 30th June, 1919, was 22,723,240 acres. A classification of reserves according to the purpose for which used is shown below:—

Class of Reserves.	Acres.
Travelling Stock	6,090,618
Water	922,035
Mining	1,307,530
Forest	3,739,427
Temporary Commons	481,960
Railway	273,860
Recreation and Parks	230,765
Pending Classification and Survey	4,929,697
For Conditional Purchase, within Gold-fields	743,413
Miscellaneous	4,003,935
Total	22,723,240

The extent of land set apart for timber conservation amounts to 3,739,427 acres; for routes and camping-places for travelling stock 6,090,618 acres have been reserved, 3,714,583 acres being in the Western Division; water reserves embraced 922,035 acres, of which 97,080 acres are in the Western Division.

Reserves are not necessarily unoccupied, and are in part held under Annual, Special, or Scrub Leases, occupation license, or permissive occupancy.

A revision of the reserved lands is being made in each Land District with the object of withdrawing from reserves any area the continued reservation of which is not required in the public interest.

LAND RESUMPTIONS.

Land required by the State may be obtained by resumption, purchase, exchange, surrender, or gift. Resumptions are those made under the Public Works and Lands for Public Purposes Acquisition Acts, and are treated by the Government Land Valuer, except those made for purposes of Public Instruction or of Railways. Resumptions under the Commonwealth Lands Acquisition Act, 1906-16, and Lands Acquisition (Defence) Act, 1918, are also included.

The following statement shows the area of such resumptions and purchases which were made during the past five years:—

Year.	Resumptions and Purchases.			Gifts.			Total.		
	a.	r.	p.	a.	r.	p.	a.	r.	p.
1915	19,107	3	8	17	0	10	19,124	3	18
1916	25,111	2	15	13	0	25	25,124	3	0
1917	12,789	0	9	7	0	0	12,796	0	9
1918	3,774	0	33	17	0	32	3,791	1	25
1919	3,411	2	10	26	3	8	3,438	1	18

Resumptions and purchases, and the purposes thereof, during 1918-19 were:—

	Area.				Area.		
	a.	r.	p.		a.	r.	p.
Aborigines' Home ...	25	2	0	River Improvements ...	305	3	8
Bridges ...	2	0	25·95	Road of access to Water Supply Catchment Area ...	49	0	8·50
Cold Storage Depot ...	0	1	0	Sewerage ...	53	2	37·50
Defence ...	43	1	21·25	State Forest ...	162	2	0
Fire Station ...	0	0	13·70	Storm Water Channels..			36·54
Harbour Improvements...	0	1	8	Water Supply ...	2,107	1	25·50
Hospitals ...	6	1	26·25	Water Trusts ...	45	3	5
Police Station ...	20	0	0	Total... ..	3,438	1	17·29
Postal ...	0	2	7·50				
Public School Purposes...	165	3	32·25				
Railways and Tramways.	446	1	21·75				
Repatriation Purposes ...	2	3	19·60				

REVENUE FROM PUBLIC LANDS, 1915-19.

The following statement shows the Revenue received from Public Lands during the years ended 30th June, 1915 to 1919, also the Revenue per capita:—

Head of Revenue.	1914-15.	1915-16.	1916-17.	1917-18.	1918-19.
ALIENATION—	£	£	£	£	£
Auction and Special Sales—					
Auction Sales	31,630	27,329	25,330	54,529	67,168
Improved Purchases	2,753	2,982	1,793	3,049	1,048
Newcastle Pasturage Reserve Sales	619	453	297	199	187
Miscellaneous Purchases	10,698	15,655	9,311	7,816	13,072
Total	£ 45,700	46,419	36,731	65,593	81,475
Conditional Purchases—					
Deposits and Improvements (Acts, 1884 and 1883)	25,782	37,083	37,601	51,455	40,481
Instalments and Interest (Acts of 1875, 1884, and 1889)	715,697	794,267	780,924	802,047	792,466
Interest (Act of 1861)	16,131	18,319	15,352	16,380	14,728
Balances (Acts, 1861, 1875, 1894, and 1889)	71,231	128,502	71,777	104,268	101,341
Homestead Selections (Improvements and Rent)	38,621	39,656	35,499	34,743	29,432
Total	£ 867,462	1,017,827	941,153	1,008,893	978,448
OCCUPATION—					
Leases—					
Pastoral	769	734	736	735	...
Conditional	201,526	206,530	198,481	201,738	194,862
Conditional Purchase	16,987	18,927	14,844	14,517	12,672
Occupation Licenses	21,242	20,621	20,120	19,436	16,469
Homestead and Farm	1,085	1,343	1,359	4,354	7,518
Annual and Snow Scrub and Inferior	35,639	31,902	31,038	31,218	34,028
Settlement	67,743	68,204	62,723	60,668	55,594
Improvement	37,693	37,167	34,644	33,948	28,323
Artesian Well	118	169	118	167	...
Church and School Land	399	391	365	354	307
Western Land Division	87,488	90,073	87,588	92,547	93,222
Leases under 18th Section, Land Act, 1903	9,160	8,199	7,550	7,207	6,594
Crown Leases	11,748	18,167	21,191	24,696	28,395
Suburban Holdings	2,693	4,192	4,125	4,409	4,367
Total	£ 494,290	506,619	484,882	495,994	482,361

REVENUE FROM PUBLIC LANDS, 1915-19—continued.

Head of Revenue.	1914-15.	1915-16.	1916-17.	1917-18.	1918-19.
OCCUPATION (continued)—	£	£	£	£	£
Mining—					
Mineral Leases	15,426	15,602	15,168	16,702	15,801
Leases of Auriferous Lands	1,688	1,315	1,226	1,174	957
Gold and Mineral Dredging Leases	793	651	591	711	752
Miners' Rights	2,484	2,399	2,201	2,414	2,415
Business Licenses	565	517	471	451	395
Residential Leases	1,816	1,830	1,894	1,844	1,864
Royalty on Minerals	99,345	111,194	104,129	102,164	117,052
Fees—Warden's Courts and Department of Mines	1,439	1,322	1,382	1,357	1,333
Other Receipts	3,842	3,344	2,956	3,614	4,093
Total	£ 127,378	138,174	130,018	130,431	144,662
Miscellaneous Land Receipts—					
Timber Licenses, &c.	88,908	66,922	68,218	69,318	54,519
Rents, Special Objects	52,800	57,087	53,650	56,433	56,274
Fees on Preparation and Enrolment of Title-deeds	3,742	4,058	3,358	4,041	5,608
Survey Fees	22,623	24,898	23,121	25,560	23,003
Fees on Transfer of Leases	2,653	2,769	.....	.....	.....
Quit Rents and Other Receipts	24,254	27,804	28,788	30,659	33,535
Total	£ 194,980	183,538	177,135	186,011	174,939
Gross Revenue	£ 1,729,810	1,892,577	1,769,919	1,886,922	1,861,885
Refunds	£ 31,729	27,264	22,910	25,462	33,478
Net Revenue	£ 1,698,081	1,865,313	1,747,009	1,861,460	1,828,407

REVENUE PER CAPITA.

	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Auction and Special Sales	0 0 6	0 0 6	0 0 5	0 0 8	0 0 10
Conditional Purchases	0 9 4	0 10 11	0 10 1	0 10 8	0 10 1
Pastoral Occupation	0 5 4	0 5 5	0 5 3	0 5 3	0 5 0
Mining Occupation	0 1 5	0 1 6	0 1 5	0 1 5	0 1 6
Miscellaneous Land Receipts	0 2 1	0 1 11	0 1 9	0 1 7	0 1 10
Gross Revenue	£ 0 18 8	1 0 3	0 18 11	0 19 7	0 19 3
Refunds	£ 0 0 5	0 0 3	0 0 3	0 0 3	0 0 4
Net Revenue	£ 0 18 3	1 0 0	0 18 8	0 19 4	0 18 11

CLOSER SETTLEMENT.

Under the Closer Settlement Act, 1901, provision was made for the acquisition of private lands, or of lands leased from the Crown, for purposes of closer settlement, but as power of compulsory resumption was not conferred, the Act was practically inoperative.

The Closer Settlement Act, 1904, repealed the 1901 enactment, and provided for compulsory resumption of private land for purposes of closer settlement when the value exceeds £20,000, exclusive of improvements, and owners could offer to surrender private lands at specified prices, such offer to be binding on the owner for a period of nine months. These provisions have been repealed by the Closer Settlement (Amendment) Act, 1914.

The Closer Settlement Amendment Act, 1907, constituted Advisory Boards to report upon lands suitable for closer settlement, the land being purchased by agreement with the owner, or acquired by resumption when the value, without improvements, exceeds £20,000. Within six months after the passing of an Act sanctioning the construction of a line of railway, the Governor may notify a list of estates within 15 miles of a railway line; within six months of this notification the Governor may notify his intention to consider the advisableness of acquiring for purposes of closer settlement land so notified the property of one owner and exceeding £10,000 in value.

Land comprised in an improvement or scrub lease, or section 18 lease, may also be resumed for closer settlement upon the recommendation of an Advisory Board constituted under the Act of 1907.

Before land acquired is available for settlement, the areas and values per acre of the proposed settlement purchases must be approved by the Minister. The area available may include not only land acquired under the Act but also any adjacent Crown lands set apart for the purpose. Settlement areas are notified for disposal in farms of three classes, viz., agricultural lands, grazing lands, and agricultural and grazing lands.

In the Closer Settlement Amendment Act, 1909, provision is made that at any time after a proclamation of intended acquisition of an estate, if an agreement be made that the land shall be subdivided for closer settlement by the owner, the power of resumption may be suspended for a term not exceeding two years. Any sale or lease made under such agreement must be submitted to the Minister, and if it be found that the owner has failed to fulfil the conditions, the suspension of the power of resumption shall cease.

Males over the age of 16 years, and females over 21 years, may apply for land under the Act, if they are not holders, except under annual tenure, of land which, with the area sought, will substantially exceed a home-maintenance area; but if any person divests himself of land in order to apply for a settlement purchase, his application will be disallowed, unless the Minister's consent in writing be obtained to the making of an application. Ministerial consent is not, however, necessary in the case of a discharged soldier or sailor, who has at any time previously obtained a title to and held any other land, if he no longer holds the same.

The person applying, if a woman, must be unmarried or widowed, or if married, be living apart from her husband under a decree for judicial separation; but with the Minister's consent a married woman not living apart from her husband may apply for a settlement purchase, in which case the lands held by her husband will be considered in estimating whether the area held, together with that sought, substantially exceeds a home-maintenance area; and in considering any application by a married man not so living apart, the total area held by husband and wife will be similarly considered.

Unless otherwise prescribed or notified under the present regulation, applications, on or after the 1st September, 1917, accompanied by a deposit of $6\frac{1}{2}$ per cent. of the notified capital value of the land, must be lodged with the Crown Land Agent of the district, or with any other officer duly appointed. The purchase money is payable in thirty-two annual instalments at the rate of $6\frac{1}{2}$ per cent. of the capital value of the land, including interest at $5\frac{1}{2}$ per cent. on the unpaid balance of purchase money. Where the settlement purchase is within a settlement purchase area notified prior to 1st January, 1913, the deposit and subsequent instalments are at the rate of 5 per cent. per annum, and the interest is at the rate of 4 per cent. per annum. Discharged soldiers or sailors are not, however, required to pay any deposit.

Residence for a period of five years is required, and commences at any time within twelve months after the decision of the Land Board allowing the purchase ; but the term may be extended to any date within five years of the allowance of purchase, and on such terms and conditions as to improvement, cultivation, or otherwise, as may be arranged between the applicant and the Land Board. Residence implies continuous and *bona fide* living upon any farm or township settlement allotment in the same settlement purchase area. Subject to the approval of the Land Board, the condition as to residence may be observed in any adjacent town or village ; or by permission may be suspended or remitted. Residence may be permitted on another holding (within reasonable working distance) subject to such conditions as may be imposed.

The purchaser is required to effect substantial and permanent improvements to the extent of 10 per cent. of the capital value within two years from the date of application, with an additional 15 per cent. within five years. Existing improvements on the land are held to fulfil this condition to the amount of their value. Every purchaser is subject to conditions as to mining, cultivation, destruction of vermin and noxious weeds, insurance of improvements against fire, &c.

The Minister may give consent to the temporary occupation, subject to certain conditions, of any lands within a settlement purchase area which remain unselected. The permit to occupy does not exempt the land from settlement purchase.

One Central Advisory Board now deals with closer settlement for the whole State.

The following table contains information regarding areas administered under the Closer Settlement Acts as at 30th June, 1919 :—

Name of Settlement Purchase Area.	Lands comprised in Settlement Areas.			Price paid for Acquired land.	
	Acquired land.	Adjoining Crown land.	Total.	Total.	Per Acre.
	acres.	acres.	acres.	£	£ s. d.
Myall Creek, Inverell	53,929	19,271	73,200	138,866	2 11' 6
Gobbagombalin, Wagga	61,866	4,631	66,497	207,560	3 7 1
Marrar, Wagga	26,608	781	27,389	68,777	2 11 8
Walla Walla, Albury	50,156	1,580	51,736	250,687	5 0 0
Sunny Ridge, Cowra	12,031	420	12,451	49,038	4 1 8
Boree Creek, Urana	17,002	242	17,244	61,385	3 12 3
Peel River, Tamworth	99,618	114	99,732	405,416	4 1 5
Mungery, Parkes	55,159	47,371	102,530	115,878	2 2 0
Coreen and Back Paddock, Corowa	37,862	1,492	39,354	140,000	3 14 1
Brookong, Urana	12,006	156	12,162	42,170	3 10 3
Piallaway and Walhallow, Tamworth	12,447	348	12,795	61,980	5 0 0
Everton, Dubbo	6,477	6,049	12,526	19,426	3 0 0

Closer Settlement Acts as at 30th June, 1919—*continued*.

Name of Settlement Purchase Area.	Lands comprised in Settlement Areas.			Price paid for Acquired land.	
	Acquired land.	Adjoining Crown land.	Total.	Total.	Per acre.
	acres.	acres.	acres.	£	£ s. d.
Pine Ridge, Dunedoo... ..	7,845	197	8,042	28,790	3 13 5
Richlands, Goulburn	8,719	302	9,021	34,885	4 0 1
Larras Lake, Molong... ..	11,536	42	11,580	53,830	4 13 4
Crowther, Young	10,563	325	10,888	52,201	4 18 10
North Logan, Cowra	11,441	243	11,684	54,461	4 15 3
Hardwicke, Yass	6,141	112	6,253	26,100	4 5 0
Tuppal, Corowa	49,178	1,073	50,251	221,224	4 10 0
Nangus, Gundagai	7,517	212	7,729	29,819	4 0 0
Gunningbland, Parkes	12,404	109	12,513	37,212	3 0 0
Tibbereenah, Narrabri	12,357	528	12,885	49,022	3 19 8
Wandary, Forbes	8,998	439	9,437	36,963	4 2 6
Cole Park, Malton, and Rossville, Goulburn	3,141	769	3,910	14,090	4 10 0
Bibbenluke, Bombala	16,174	410	16,584	60,339	3 15 0
Maharatta, Bombala	20,256	454	20,710	72,190	3 11 11
Warrah, Murrurundi	45,006	.....	45,006	192,747	4 5 8
Boorabil, Wyalong	8,717	1,731	10,498	17,433	2 0 0
Bygalore	19,264	324	19,588	48,867	2 11 0
Forest Vale	20,642	.....	20,642	56,765	2 15 0
Gorman's Hill West	3,980	4,339	8,319	8,457	2 2 6
Ungarie South	11,668	87	11,755	33,546	2 17 6
Baeremie	1,870	38	1,908	9,352	5 0 0
Manus	1,503	15	1,518	7,304	4 16 3
Estates purchased under Sec. II of Closer Settlement (Amendment) Act of 1914.	57,283*	.....	57,283	294,661	5 2 10
Total	801,366	94,254	895,620	3,001,441	3 15 5

* Represents lands for which applications were made under Sec. III of Closer Settlement Promotion Act of 1910; and paid for out of Closer Settlement Funds.

NOTE.—In addition to the above, twenty-three estates of an area of 302,192 acres, valued at £1,431,887 have been acquired for Soldiers' Settlements.

Of the total area of Closer Settlement lands, 26,641 acres have been reserved for roads and other purposes, and 868,979 acres have been divided into 1,832 farms, the average area per farm being 474 acres.

Particulars of the subdivisions are shown in the following statement:—

Name of Settlement Purchase Area.	Farms. No.	Capital value of Areas contained in Farms.			Farms allotted to 30th June, 1919.	Area allotted. acres.	Capital value of Farms allotted £
		Acquired Lands. £	Crown Lands. £	Total. £			
Myall Creek	131	138,716	27,231	165,947	131	67,820	165,947
Gobbagombalin	142	225,671	12,472	238,143	142	64,504	238,142
Marrar	46	75,133	2,040	77,173	46	27,048	77,173
Walla Walla	126	255,262	3,845	259,107	126	50,691	259,107
Sunny Ridge	21	50,292	1,236	51,528	21	12,237	51,528
Boree Creek	30	67,606	527	68,133	30	17,031	68,133
Peel River	289	438,578	126	438,704	289	97,412	438,704
Mungery	62	117,497	81,062	198,559	62	9,611	198,559
Coreen and Back Paddock	63	150,173	3,549	153,722	63	33,353	153,722
Brookong	20	43,155	341	43,496	20	12,006	43,496
Piallaway and Walhallow	38	63,485	1,371	64,856	38	12,631	64,856
Everton	18	49,886	14,571	64,457	18	12,306	64,457
Pine Ridge	16	29,556	625	30,181	16	7,946	30,181
Rjehlands	37	36,157	932	37,089	37	8,916	37,089
Larras Lake	30	57,109	3	57,112	30	11,477	57,112
North Logan	49	58,487	687	59,174	47	11,311	58,987
Hardwicke	21	26,957	276	27,233	21	6,172	27,233
Tuppall	117	232,110	2,362	234,472	117	49,573	234,472
Nangus	17	21,067	485	21,552	17	7,649	21,552
Gunningbland	19	38,792	118	38,910	19	12,330	38,910
Tibbereenah	76	51,721	868	52,589	76	12,733	52,589
Wandary	18	37,985	642	38,627	18	9,075	38,627
Crowther	22	53,687	694	54,381	22	10,677	54,381
Cole Park, Malton, & Rossiville	19	14,644	5,784	20,428	19	3,845	20,428
Bibbenluka	31	62,108	1,280	63,388	31	16,085	63,388
Maharatta	46	80,555	993	81,548	46	20,369	81,548
Warrar	83	209,904	..	209,904	83	4,318	209,904
Boorabil	6	18,175	2,690	20,865	4	6,315	14,132
Bygalore	19	56,035	403	56,438	2	2,801	9,824
Forest Vale*	25	68,870	..	68,870	..	..	..
Gorman's Hill West	6	7,010	9,050	16,060	1	1,053	2,507
Ungarie South	15	41,952	203	42,155	15	11,000	42,155
Paerami	4	10,702	254	10,956	4	1,908	10,956
Manus	5	10,168	102	10,270	5	1,518	10,270
Estates purchased under Section II of the Closer Settlement (Amendment) Act of 1914	159	294,661	..	294,661	159	57,283	294,661
Total	1,832	3,173,385	175,331	3,348,716	1,781	821,656	3,212,930

* Twenty-two farms on this Estate are being utilised in connection with Government scheme of share farming.

Up to 30th June, 1919, the total farms allotted were 1,781, containing 821,656 acres, of the capital value of £3,212,930, representing an average cost to the settler of £3 18s. 3d. per acre and of £1,804 per farm.

Of the above number, 45 farms, with 24,714 acres and valued at £107,716, have been converted into homestead farms, one farm of 229 acres, previously converted, have been restored as a Closer Settlement farm during the year, leaving 1,736 farms allotted under the Closer Settlement Act, in existence at 30th June, 1919, the area of which is 796,942 acres and the capital value £3,105,214.

On the 30th June, 1919, there were 51 farms containing 47,323 acres unallotted; 22 of these of 17,864 acres are being utilised in connection with the Government scheme of share-farming, leaving 29 farms of 29,459 acres available for settlement, and one farm which had been forfeited, was available for re-settlement.

The farms which have not yet been selected are let under permissive occupancy, and remain available for settlement purchase application.

Promotion Section of the Closer Settlement Acts.

The Promotion Section of the Closer Settlement Acts, which replaces the Closer Settlement Promotion Act, 1910 (repealed), enables three or more persons, or one or more discharged soldiers, each of whom is qualified to hold a settlement purchase, to negotiate with an owner of private lands, and under certain conditions to enter into agreements with him to purchase a specified area on a freehold basis, for a price to be set out in each agreement. Any one or more discharged soldiers or sailors may also enter into agreements to purchase on a present title basis from the holder—a conditional purchase; a conditional purchase lease; a conditional purchase and conditional lease, including an inconvertible conditional lease; a homestead selection; a homestead farm; a settlement lease; a Crown lease, or any part of one or more of such holdings; or an improvement or scrub lease, not substantially more than sufficient for the maintenance of a home.

Upon approval by the Minister, the vendor, in the case of private land, surrenders the area to the Crown, and the purchaser acquires it as a settlement purchase. In the case of land acquired on present title basis, the vendor transfers it to the purchaser. The vendor is paid by the Crown, either in cash or in Closer Settlement Debentures, and the freehold value of the land, inclusive of improvements thereon, purchased for any one person must not exceed £3,000, except in special cases where the improvements warrant it, when the freehold value may be up to £3,500; if the land is found suitable for grazing only, the freehold value may be up to £4,000.

Each farm is worked independently, the co-operation of the applicants ceasing with the allotment of an area. Each applicant has to pay a deposit of $6\frac{1}{2}$ per cent. of the Crown valuation of the farm granted to him, except discharged soldiers or sailors, who are not required to pay any deposit. Repayments of the balance of the purchase money to the Crown are subject to the regulations in force at the date of commencement of title. At present the regulations provide for repayment at the rate of $6\frac{1}{2}$ per cent. per annum of the capital value of the farm, where the purchase money is paid in cash; this includes interest at the rate of $5\frac{1}{2}$ per cent. on the outstanding balance, the whole indebtedness being discharged in thirty-two years, where the initial deposit is paid. If the land is paid for by debentures bearing interest at $4\frac{1}{2}$ per cent., the deposit and annual instalments to be paid by applicants will be 6 per cent., and interest 5 per cent.

Postponement of instalments and payment of interest only for a period may be sanctioned in special circumstances, and holders of farms may obtain advances from the Government Savings Bank Commissioners on account of improvements effected.

From the commencement of the Closer Settlement Promotion Act in September, 1910, till 30th June, 1919, 2,796 farms, of a total area of 1,156,573 acres, were applied for, the amount involved being £5,862,043. Of this number, 1,149 farms, embracing an area of 471,104 acres, at a cost of £2,439,229, were allotted and finally dealt with by the Government Saving Bank, at 30th June, 1919.

The transactions for each year were as follows:—

Year.	Estates.	Farms.	Area.	Amount Advanced.
			acres.	£
1910-11	4	26	10,785	54,131
1911-12	31	209	84,280	418,941
1912-13	36	274	107,791	599,145
1913-14	32	183	62,598	361,351
1914-15	16	95	35,963	201,163
1915-16	23	141	61,626	300,103
1916-17	13	57	28,877	123,331
1917-18	21	123	56,652	285,317
1918-19	11	41	22,532	95,747
Total ...	187	1,149	471,104	2,439,229

Of the estates shown to have been dealt with during the year 1915-16 there was one containing 3 farms with an area of 1,321 acres, which was settled by certificates and cash from the Closer Settlement Fund, to the extent of £6,464. This, together with 2 estates, 13 farms of an area of 5,273 acres and value £24,471, dealt with in like manner in 1914-15, have now been included in Closer Settlement Areas. In 1918-19, eighty-three properties of 38,367 acres, and value £212,364, were acquired by applications under Section III of the Closer Settlement Promotion Act of 1910, payment for which was made from the Closer Settlement Fund. These have also been included under the head of Closer Settlement (see page 450).

In addition to the land acquired by the State for closer settlement a number of estates have been subdivided for that purpose by private owners.

LABOUR SETTLEMENTS.

In the Labour Settlements Act, 1902, provision was made for land to be set apart for lease as a labour settlement, under the control of a Board, which was empowered to enrol approved persons; to make regulations concerning the work to be done; to apportion the work among the members; and to distribute equitably wages, profits, and emoluments, after providing for the cost of maintenance of members; to establish any trade or industry, and apportion the profits among the enrolled members. The land was under the control of a Board, in trust for the members of the settlement.

With a sufficient enrolment of members a Board might apply for monetary assistance on behalf of the members of the settlement, to a maximum amount of £25 for each enrolled member who was the head of a dependent family; £20 for each married person without a family; and £15 for each unmarried person. On the expiration of four years from the commencement of the lease, and at the end of each year following, 8 per cent. of the total sum paid to the Board became a charge on its revenue, until the total amount advanced, with interest at the rate of 4 per cent. per annum, had been repaid.

The Labour Settlement Act of 1902 was repealed by the Bega and Wilberforce Labour Settlement Act, 1917. That act dissolves the Boards of Control and provides for the exclusive right of the then existing settler or his representatives to acquire, within a specified period, the block set down opposite his name in the schedule under the Act, as a homestead farm under the Crown Lands Consolidation Act, 1913.

RURAL SETTLEMENT

The State may be classified for purposes of rural settlement and rural industries into five divisions, viz., Coast, Tableland, Western Slopes of the Great Dividing Range, Central Plains and Riverina, and the Western Plains. Each Division has its own special character, and its natural resources are characteristic of its climatic conditions. From Sydney as the centre, settlement extended first along the coast, then to the central and more accessible parts of the tableland, following the course of the great inland rivers towards the southern and western parts of the State when pressed by lack of pasturage for the growing flocks and herds, and debouching upon the great plains of the west.

Geographical features and climate have been the primary factors in determining the trend of settlement; and other considerations, such as the fertility of the soil, the distribution of the rainfall, the density of the timber-growth, and the consequent cost and difficulty of clearing, etc., naturally regulated the character of the rural settlement in a given locality and determined the purposes to which lands were applied.

Another matter of great importance was the question of communication between the sparsely-settled and the populous centres, with access to a market which would assure to the settler a reasonable prospect of the disposal of his products, and would permit an effort to regulate supply according to demand.

RURAL HOLDINGS AND TENURES.

Rural holdings may consist of alienated or Crown lands, or of both, and are classifiable in five distinct groups, according to the tenures under which they are held, viz.: (1) Freehold lands occupied by the owner, (2) rented freeholds, (3) combined freehold and rented lands, (4) alienated lands, rented or freehold, with attached Crown lands, and (5) Crown lands only.

The following statement shows the number of occupiers of holdings of 1 acre or over, as at 30th June, 1919, under the various tenures in the different defined divisions of New South Wales:—

Division.	Number of Occupiers of—					
	Alienated Land only.			Holdings of Alienated and Attached Crown Lands.	Separate Crown Lands Holdings.	Total.
	Freehold.	Private Rented.	Freehold and Private Rented.			
Coastal	34,600	8,422	2,448	3,024	933	49,427
Tableland	11,282	1,682	943	5,422	1,526	20,855
Western Slopes	11,977	1,162	594	3,347	1,589	18,669
Central Plains and Riverina ...	7,260	453	301	2,552	3,181	13,747
Western	683	49	8	475	921	2,136
New South Wales...	65,802	11,768	4,294	14,820	8,150	104,834

The majority of holders own the land they occupy; the total number of occupiers of alienated lands, with or without attached Crown lands, was 96,684, of whom 65,802, or 68·1 per cent., occupy their own freeholds; and of 14,820 holdings which are partly Crown leases, 13,446 are made up of freeholds owned by the occupiers, and worked in conjunction with the Crown leases.

The extent of alienated or freehold land occupied in holdings of one acre and over, as at 30th June, 1919, was 58,974,689 acres, of which 55,013,898 acres were occupied by the owners and 3,960,791 acres were rented. The Crown lands in occupation amounted to 115,666,478 acres, the area attached to alienated holdings was 90,338,125 acres, the balance, 25,328,353 acres, being in separate holdings.

The following table shows the area taken up in each Division of New South Wales, according to the class of tenure.

Division.	Area Alienated in Holdings.			Crown Lands.		Total Area in Holdings.
	Occupied by Owner.	Rented.	Total.	Attached to Alienated Holdings.	In Separate Holdings.	
	acres.	acres.	acres.	acres.	acres.	acres.
Coastal	7,838,304	1,433,742	9,273,046	3,814,358	466,075	13,558,479
Tableland	10,717,098	803,188	11,583,286	7,514,202	1,160,001	20,263,489
Western Slopes	13,630,012	719,434	14,399,446	4,938,572	1,826,598	21,164,616
Central Plains and Riverina	21,188,630	888,254	22,076,884	13,151,445	6,375,572	41,603,901
Western	1,539,834	47,173	1,637,027	60,919,548	15,494,107	78,050,682
New South Wales ...	55,013,898	3,960,791	58,974,689	90,338,125	25,328,353	174,641,167

Of the total area occupied, 33·8 per cent. was freehold, and 66·2 per cent. was leased from the Crown. Nearly two-thirds of the Crown lands so leased were in the Western Division, and utilised almost exclusively for depasturing stock.

Tenancy, as understood in older settled communities oversea, has made comparatively little progress, 93·3 per cent. of the alienated land being in the occupancy of the proprietors; but in some districts the system of working on shares has been instituted—the owner providing the land and the capital for the cultivation of the soil, and the farmer supplying the labour and the machinery, &c.

The proportions of the total area of the several Divisions occupied in holdings of various classes are shown in the following table:—

Division.	Proportion of Total Area Contained in—					
	Alienated Lands.			Crown Lands.		Total Holdings.
	Occupied by Owner.	Rented.	Total.	Attached.	Separate.	
	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.
Coastal	35·06	6·44	41·50	17·06	2·09	60·65
Tableland	41·49	3·36	44·85	29·09	4·51	78·45
Western Slopes	56·41	2·97	59·38	20·36	7·53	87·27
Central Plains and Riverina	46·23	1·94	48·17	28·70	13·91	90·78
Western	1·98	·06	2·04	75·80	19·28	97·12
New South Wales ...	27·70	1·99	29·69	45·48	12·75	87·92

The foregoing ratios show that slightly less than 88 per cent. of the total area contained within the boundaries of the State is occupied in holdings of one acre and upwards. The highest proportion of absolute alienation, 59 per cent. of the area of the Division, has taken place in the Western Slopes, and the lowest, 2 per cent., in the Western Division, but taking the total area of holdings, the Western Division shows the maximum proportion of its area—97·1 per cent.—under occupation; the proportions are high also in the Central Plains and Riverina, 90·8 per cent., and in the Western Slopes, 87·3 per cent.

NUMBER OF HOLDINGS AND AVERAGE AREAS.

Excluding from consideration land held simply under lease from the Crown, there were in the State of New South Wales on the 30th June, 1919, 96,684 holdings of one acre and upwards in extent, comprising land acquired from the Crown by grant or by purchase, with, in some cases, areas of Crown lands attached thereto.

The number of these holdings as returned by occupiers, and the alienated area at intervals since 1881, are shown herewith, together with the average area contained in the holdings.

Year.	Number of Alienated Holdings.	Alienated Area.		Year.	Number of Alienated Holdings.	Alienated Area.	
		Total.	Average per Holding.			Total.	Average per Holding.
1880-1	39,992	acres. 27,765,318	acres. 694	1905-6	77,136	acres. 48,728,542	acres. 632
1885-6	43,727	34,031,104	778	1910-1	87,503	52,164,454	596
1890-1	49,960	38,959,225	780	1915-6	94,177	56,288,979	598
1895-6	60,529	42,321,926	699	1917-8	96,085	57,787,075	601
1900-1	69,439	46,043,244	663	1918-9	96,684	58,974,689	610

The average area of alienated land per holding increased from 694 acres in 1881 to 787 acres in 1891, and then declined gradually to 593 acres in 1916; it has since advanced to 610 acres. In 1919 an average area of 934 acres of Crown lands was attached to each alienated holding, thus increasing the average area to 1,544 acres, and if holdings consisting of Crown lands only be taken into consideration the average area under all forms of tenure was 1,661 acres. Particulars for each Division of the State are shown below.

Division.	Average Size of Holding.		
	Alienated Area Only.	Alienated and attached Crown Lands.	All Tenures, including Holdings consisting of Crown Lands Only.
	acres.	acres.	acres.
Coastal	191	270	274
Tableland	599	988	972
Western Slopes	843	1,132	1,134
Central Plains and Riverina	2,089	3,334	3,026
Western	1,347	51,487	36,545
New South Wales	610	1,544	1,661

SIZE OF HOLDINGS.

Information regarding the size of the rural holdings has been tabulated in two distinct classifications, one in accordance with the size of the alienated area, and the other in accordance with the total area of alienated and Crown land contained in each holding. The alienated holdings numbering 96,684 as at 30th June, 1919, contained 58,974,689 acres of alienated land and 99,338,125 acres of Crown lands attached. There were also 8,150 holdings containing Crown lands only.

The following table shows the alienated area and the Crown lands attached classified according to the size of the privately owned land at the 30th June, 1919.

Size of Holding.	Number of Holdings.	Area Occupied.			Proportion in each area group.	
		Alienated.	Crown Lands Attached to Alienated.	Total.	Holdings.	Alienated Land.
acres		acres.	acres.	acres.	per cent.	per cent.
1— 15	30 628	144,168	271,155	415,323	31·68	·24
16— 50	11,138	365,153	1 497,849	1,863,002	11·52	·62
51— 100	8,311	652,995	970,085	1,623,080	8·60	1·11
101— 500	26,052	6,724,022	13,930,927	20,655,019	26·93	11·40
501— 1,000	10,015	7,031,335	16,320,379	23,351,714	10·36	11·92
1,001— 1,500	3,891	4,778,491	8,513,932	13,292,423	4·02	8·10
1,501— 2,000	1,640	2,849,102	5,593,131	8,442,233	1·70	4·83
2,001— 3,000	1,851	4,547,020	9,425,470	13,972,490	1·91	7·71
3,001— 4,000	882	3 071,185	7,275,333	10,346,518	·91	5·21
4,001— 5,000	505	2,256,687	4,549,493	6,806,180	·52	3·82
5,001— 7,500	709	4,291,898	6,242,930	10,534,828	·73	7·28
7,501— 10,000	314	2,705,541	2,318,825	5,024,366	·33	4·59
10,001— 15,000	310	3,738,163	4,293,939	8,032,102	·32	6·34
15,001— 20,000	149	2,566,582	2,823,098	5,389,680	·15	4·35
20,001— 30,000	154	3,736,006	2,795,917	6,531,923	·16	6·34
30,001— 40,000	55	1,903,970	549,044	2,453,014	·06	3·23
40,001— 50,000	28	1,247,082	1,287,131	2,534,213	·03	2·12
Over 50,000	72	6,365,219	1,679,487	8,044,706	·07	10·79
Total ...	96,684	58,974,689	90,338,125	149,312,814	100·00	100·00

The following table shows, for the year 1918-19, the number of holdings of various sizes composed of alienated and attached Crown lands:—

Size of Holding.	Freehold.	Private Rented.	Combined Freehold and Private Rented.	Combined Alienated and Crown Lands.	Total.
acres.	No.	No.	No.	No.	No.
1— 50	32,754	6,418	1,161	1,433	41,766
51— 100	5,293	1,544	398	1,076	8,311
101— 500	15,782	3,133	1,515	5,602	26,032
501— 1,000	6,235	420	569	2,791	10,015
1,001— 1,500	2,415	103	219	1,154	3,891
1,501— 3,000	1,935	100	230	1,226	3,491
3,001— 5,000	703	22	95	567	1,387
5,001— 10,000	462	24	72	465	1,023
10,001— 15,000	102	4	18	186	310
15,001— 20,000	51	...	5	93	149
20,001— 30,000	39	1	7	107	154
30,001— 40,000	13	...	3	39	55
40,001— 50,000	5	...	1	22	28
Over 50,000	12	...	1	59	72
Total ...	65,801	11,769	4,294	14,820	96,684

The total number of occupiers of freeholds only is 65,801, the proportion to the total number of occupiers being fairly constant in each size of holdings. Tenants of private lands, who number 11,769, are far more numerous in the smaller classes of holdings, and rapidly diminish both in number and in proportion as the estates become larger. The same is the case with regard to holders of freehold and private rented land, who number only 4,294. The persons who occupy alienated areas with Crown lands attached number 14,820, and over 41 per cent. of the holdings over 1,500 acres in extent are in this category.

In regard to the holdings under 50 acres, it is probable that the number is largely overstated, as many suburban properties not used for cultivation have been included. Investigation, not concluded at the time of going to press, is being made into the matter. In any case it was thought better to leave the statement as it is for the time, on account of comparison with previous years.

The largest absolute increases in the number of holdings occurred in the intervals from 1890 to 1895 (10,569) and from 1905 to 1910 (10,367), while the greatest absolute increase in the area alienated—over 6 million acres—occurred between 1880–5.

The increases per cent. in the quinquennial periods from 1880, were as follows:—

Period.	Rate of Increase per cent. in—		Period.	Rate of Increase per cent. in—	
	Number of Holdings.	Area Alienated.		Number of Holdings.	Area Alienated.
1880–1885	9·3	22·6	1905–1910	13·4	7·1
1885–1890	14·3	14·4	1910–1915	7·6	7·9
1890–1895	21·2	8·6	1917–18	2·0	2·7
1895–1900	14·7	8·8	1918–19	0·6	2·1
1900–1905	11·1	5·8			

Comparison of the relation of the various classes to the total number of holdings in 1913 and 1918–19 shows an increase in the proportion of freeholds, corresponding with a decrease in the proportion of all other classes of holdings.

Class.	1913. (31st December.)		1919. (30th June.)	
	Holdings.	Percentage of Total.	Holdings.	Percentage of Total.
Freehold	58,376	62·9	65,801	68·1
Private-rented	13,040	14·0	11,769	12·2
Combined freehold and private-rented ...	4,433	4·8	4,294	4·4
Combined alienated and Crown land ...	17,033	18·3	14,820	15·3
Total	92,882	100·0	96,684	100·0

From the table on page 458 it will be seen that while, on the one hand, the holders of estates exceeding 1,000 acres constitute but 10·91 per cent. of the total number of occupiers, the land held represents 74·71 per cent. of the total alienated area. It will further be noted that in the case of 72 estates of 50,001 acres and upwards, which represent only 0·07 per cent. of the total number of holdings, the area alienated in that group contains 10·79 per cent. of the total classified under this heading.

In addition to the alienated holdings—with or without Crown lands attached—there were at the 30th June, 1919, 8,150 holdings consisting of Crown lands only, the total area thus occupied being 25,328,353 acres. The total number of holdings of one acre and upwards was, therefore, 104,834, and the total area was 174,641,167 acres—consisting of 58,974,689 acres of alienated lands, and 115,666,478 acres of Crown lands.

In the next table, therefore, the results are inclusive of all holdings of one acre and upwards, the actual land being taken as the basis for each area group—whether the holdings are classed as alienated only, as alienated with Crown lands attached, or as Crown lands only.

Size of Holding.	Number of Holdings.		Total Area.		Percentage in each Series.			
	1912-13.	1918-19.	1912-13.	1918-19.	Holdings.		Area.	
					1912-13.	1918-19.	1912-13.	1918-19.
acres.			acres.	acres.				
1— 50...	39,677	43,555	501,199	532,527	40.38	41.55	0.29	0.30
51— 100...	8,084	8,052	629,909	625,231	8.23	7.68	0.36	0.36
101— 500...	24,299	24,491	6,277,671	6,374,285	24.73	23.36	3.60	3.65
501— 1,000...	9,549	10,886	6,776,643	7,750,789	9.72	10.38	3.88	4.44
1,001— 3,000...	10,069	10,833	17,317,947	18,544,551	10.25	10.33	9.92	10.62
3,001— 5,000...	2,480	2,711	9,578,039	10,488,603	2.52	2.59	5.49	6.01
5,001— 10,000...	1,942	2,122	13,155,684	14,414,308	1.98	2.02	7.54	8.25
10,001— 20,000...	964	1,023	13,097,932	13,841,667	0.98	0.98	7.50	7.93
20,001— 50,000...	703	712	21,180,029	21,342,975	0.71	0.68	12.13	12.22
50,001—100,000...	225	212	15,668,791	14,762,642	0.23	0.20	8.97	8.45
Over 100,000...	265	237	70,393,994	65,963,589	0.27	0.23	40.32	37.77
Total ...	98,257	104,834	174,577,838	174,641,167	100.00	100.00	100.00	100.00

The general tendency of areas in the holdings up to 20,000 acres is to increase, both absolutely and relatively. In the groups over 20,000 acres the actual reduction of area during the six years was 5,173,608 acres, but by far the greatest number of the large holdings are in the Western Division, and consist chiefly of Crown lands.

SETTLEMENT IN LAND DIVISIONS.

The following statements show for each Division of the State the holdings of alienated land, classified according to size, and the Crown lands attached to such holdings, as well as the area under cultivation; also the classification of all holdings, according to the total area of alienated and Crown lands.

THE COASTAL BELT.

From the metropolitan County of Cumberland settlement advanced westward, and after the alluvial lands of the Hawkesbury and the Nepean valleys had been occupied, the lower portion of the valley of the river Hunter, abounding with natural resources, agricultural as well as mineral, soon attracted settlers, so that more population is now concentrated in that district than in any other part of New South Wales outside the metropolitan area. Settlement extended gradually to the whole of the watershed of the Hunter and the Manning, particularly along the intermediate river courses, such as the Paterson, the Allyn, the Williams, the Kuruah, and the Myall.

The Division of the North Coast, occupied by an agricultural and dairy farming population, exhibits the most satisfactory results as regards settlement, which during recent years has extended very rapidly along the banks of the Hastings, the Macleay, the Bellinger, the Orara, the Clarence, the Richmond, and the Tweed.

Early in the nineteenth century settlement took a southerly direction from the metropolis, and extended along the lower river valleys of the South Coast where the best lands were alienated in grants of large areas to a few families. Later on, the nature of the country, and a more intelligent conception of the principles which should guide settlement, brought about the subdivision of some of these large estates into numerous small holdings. The development was, however, arrested about the period of the Federation of the States. Large numbers of the agricultural and dairy-farming population migrated to the North Coast, the Division losing over 2,000 of its inhabitants between the census years 1901 and 1911. The only county to retain its population was Camden, owing to the persistence of the coal-mining industry.

The figures in the following table show the settlement of the Coastal Division in holdings of one acre and upwards at the 30th June, 1919, and are exclusive of parks and reserves within the boundaries of Sydney and suburbs.

Size of Holding.	Number of Holdings.	Area Occupied.			Area under Crop.
		Alienated.	Crown Lands attached to Alienated Holdings.	Total.	
acres.		acres.	acres.	acres.	acres.
1— 30	22,877	164,886	40,028	204,914	25,619
31— 400	20,904	3,110,085	1,114,999	4,225,084	149,068
401— 1,000	3,278	2,007,895	596,075	2,603,970	35,954
1,001— 10,000	1,388	3,056,441	1,416,278	4,472,719	22,481
10,001— and upwards	47	938,739	646,978	1,585,717	1,996
The Coastal Division	48,494	9,278,046	3,814,358	13,092,404	235,118

The total area of this division is 22,355,401 acres, of which 9,278,046 acres of alienated land were occupied in holdings of one acre and upwards, and 3,814,358 acres of Crown lands were held in conjunction with the alienated, making a total of 13,092,404 acres. In addition, there were 933 holdings, consisting of 466,075 acres of Crown lands only.

Holdings under 31 acres represent 47·2 per cent. of the total number, and are generally market gardens and orchards in the vicinity of towns. The moderate-sized holdings consist mainly of dairy farms. The area under crop was 235,118 acres, including 272 acres of Crown lands attached to alienated holdings, but excluding 1,003 acres of cultivation on holdings consisting of Crown lands only.

Rural settlement in the valleys of the northern coastal rivers, and in the country extending from the sea to the foot-hills of the Great Dividing Range, has proceeded in a way very different from that of the Tableland, which extends from north to south, and divides the rich agricultural valleys of the coastal rivers and their broken mountainous watersheds from the immense plains of the Western Division.

THE TABLELAND.

After crossing the ranges which form the western boundary of the Coastal Belt, settlement proceeded in the Central Tableland, thence south and north, and later westwards, at first following the courses of the great rivers.

On the Northern Tableland the majority of the settlers are freeholders, tenants constituting a very small section of the occupiers of alienated land. The Central Tableland has not appreciably advanced for some time, and the Southern Tableland has experienced even a decline in its population.

The following statement shows the progress of rural settlement in the three Divisions of the Tableland at the 30th June, 1919.

Size of Holding.	Number of Holdings.	Area Occupied.			Area under Crop.
		Alienated.	Crown Lands attached to Alienated Holdings.	Total.	
acres.		acres.	acres.	acres.	acres.
1— 30	5,697	41,013	65,402	106,415	7,165
31— 400	8,404	1,419,048	1,950,215	3,369,263	150,764
401— 1,000	2,834	1,827,071	1,616,326	3,443,397	85,838
1,001—10,000	2,195	5,592,829	3,019,024	8,611,853	92,666
10,001 and upwards	149	2,703,325	863,235	3,566,560	16,721
Tableland Division	19,329	11,583,286	7,514,202	19,097,488	333,094

The holdings containing alienated land numbered 19,329, and contained 11,583,286 acres of alienated land and 7,514,202 acres of Crown land; there were also 1,526 holdings of Crown land only, the area being 1,126,001 acres. The area under cultivation was 333,094 acres, of which 403 acres were Crown lands attached to alienated holdings. In addition there were 3,270 acres under cultivation in holdings consisting of Crown lands only.

THE WESTERN SLOPES.

The districts situated on the Western Slopes of the Great Dividing Range mark the transition between the agricultural settlements of the Coastal Belt and the Tableland and the purely pastoral settlements of the Great Western Plains. There is a great extent of arable land in the Western Slopes, and although the proportion devoted to cultivation is greater than in any other Division, it is inconsiderable when compared with the total area. Distance from a market has been the principal obstacle to a rapid development of agriculture; but with the extension of the railway system during recent years, improvement in methods of wheat-growing, and a development in the practice of share-farming, a considerable impetus has been given to this branch of rural industry.

In the South-Western Slope, which is traversed by the principal permanent inland rivers of New South Wales, the land has been alienated to a large extent and immense areas of freehold estate are in the hands of a small number of holders. The progress of rural settlement in the Western Slopes at the 30th June, 1919, is shown in the following table:—

Size of Holding.	Number of Holdings.	Area Occupied.			Area under Crop.
		Alienated.	Crown Lands attached to Alienated Holdings.	Total.	
acres.		acres.	acres.	acres.	acres.
1— 30... ..	4,822	36,539	58,538	95,077	5,869
31— 100... ..	5,263	983,841	747,365	1,731,206	239,676
401— 1,000... ..	3,909	2,463,341	1,259,779	3,723,120	529,339
1,001—10,000... ..	2,914	7,451,537	2,258,726	9,710,263	655,237
10,001 and upwards	172	3,459,188	614,164	4,073,352	85,506
Western Slopes Division	17,080	14,399,446	4,938,572	19,338,018	1,515,627

In the Division of the Western Slopes there were 18,669 holdings with a total area of 21,204,616 acres, including 1,589 holdings of Crown lands only.

There were 1,480,547 acres of alienated land and 35,080 acres of Crown lands attached to alienated holdings under cultivation. Of holdings consisting of Crown lands only 47,527 acres were under cultivation.

THE CENTRAL PLAINS AND THE RIVERINA.

The portion of the Central Land Division of New South Wales which lies beyond the Western Slope of the Great Dividing Range constitutes the Division known as the Central Plains and the Riverina. The latter is the southern Division of the series and may be considered as the most important agricultural region of the State, not only on account of the total area alienated, but also from the fact that it contains a considerably greater section under cultivation than any other Division, except the Western Slopes; and the average size of the holdings also is comparatively large.

The following statement shows the progress of rural settlement in the Central Plains and the Riverina at the 30th June, 1919 :—

Size of Holding.	Number of Holdings.	Area Occupied.			Area under Crop.
		Alienated.	Crown Lands attached to Alienated Holdings.	Total.	
acres.		acres.	acres.	acres.	acres.
1— 30	1,755	12,601	51,053	63,654	2,328
31— 400	1,811	376,361	767,126	1,143,487	116,983
401— 1,000	3,520	2,320,079	2,338,109	4,658,188	628,281
1,001— 10,000	3,112	7,804,249	5,613,303	13,417,557	748,214
10,001 and upwards	363	11,563,594	4,381,849	15,945,443	107,482
Central Plains and Riverina Division... ..	10,566	22,076,884	13,151,445	35,228,329	1,603,288

In this Division there were 10,566 holdings containing alienated, and 3,181 holdings of Crown lands only, the total area in occupation being 41,603,901 acres; the area under crop consisted of 1,560,987 acres of alienated land, 42,301 acres of Crown lands attached to alienated holdings. There were also 144,517 acres of cultivation on holdings of Crown lands only.

THE WESTERN DIVISION.

In the Western Division of the State, settlement progresses slowly, and the population status is maintained by the mining communities of a few counties. The great mining centre of Broken Hill, situated close to the boundary of South Australia, has attracted a large population, and the copper-fields of Cobar and Wrightville in the region east of the Darling, with a few other places, support several thousand people, but excluding these closely-settled areas, the whole of this vast terrain, greatly exceeding in extent a third of New South Wales, is given up to the depasturing of stock.

The following statement shows the progress of rural settlement in the Western Division at the 30th June, 1919 :—

Size of Holding.	Number of Holdings.	Area Occupied.			Area under Crop.
		Alienated.	Crown Lands attached to Alienated Holdings.	Total.	
acres.		acres.	acres.	acres.	acres.
1— 30	513	2,306	260,849	263,155	110
31— 400	335	48,442	8,060,953	8,109,400	1,390
401— 1,000	152	99,235	14,063,573	14,162,808	960
1,001— 10,000	183	594,868	31,611,778	32,206,646	1,591
10,001 and upwards	32	892,176	6,922,390	7,814,566	556
Western Division	1,215	1,637,027	60,919,548	62,556,575	4,607

The proportion of land alienated is only 2 per cent. of the total area, being an aggregate of 1,637,027 acres out of 80,318,708 acres which the Division is estimated to contain. The land in the Western Division can be alienated only by auction, or it can be held under lease from the Crown. The area of Crown lands held is therefore very large, 60,919,548 acres being attached to 1,215 alienated holdings, and 15,494,107 acres in 921 holdings consisting of Crown lands only. The general character of the country militates against agricultural production and the successful rearing of cattle, and apart from the silver, gold, copper, and opal fields already mentioned, sheep-breeding is practically the only industry, except in the vicinity of townships, where market-gardens and fruit orchards are cultivated. The area under crop amounted to 4,607 acres, of which 3,543 acres were on alienated lands and 1,064 acres were Crown lands attached to alienated holdings. In addition 2,893 acres were under cultivation on holdings of Crown lands only.

ALL DIVISIONS.

The following table shows the number and area of alienated holdings in New South Wales, and is a summary of the particulars given in the foregoing tables for the five principal divisions of the State:—

Size of Holding. acres.	Number of Holdings.	Area occupied.			Area under Crop. acres.
		Alienated. acres.	Crown Lands attached to alienated Holdings. acres.	Total. acres.	
1— 30	35,664	257,345	475,870	733,215	41,091
31— 400	36,717	5,937,777	12,640,663	18,578,440	637,881
401— 1,000	13,743	8,722,621	19,873,862	28,596,483	1,280,372
1,001— 10,000	9,792	24,499,024	43,919,114	68,419,038	1,520,129
10,001 and upwards	768	19,557,022	13,428,616	32,985,638	212,261
Total, New South Wales..	96,684	58,974,689	90,338,125	149,312,814	3,691,734

Of the area under crop shown in the table above 3,612,614 acres were alienated land only, and 79,120 acres were Crown lands attached to alienated holdings. On holdings consisting of Crown lands only, not included in the foregoing tables, 199,110 acres were under cultivation.

PURPOSES FOR WHICH HOLDINGS ARE USED.

Analysis of the main purposes for which rural holdings of one acre and upwards are used, shows that of 104,834 holdings, inclusive of 8,150, which consist of Crown lands only, 42,495 or 40 per cent. are single-purpose holdings, being devoted to one or other of the three main branches of rural industry, viz., agriculture, dairying, or grazing; of the remainder, over 25 per cent. are devoted to agriculture in conjunction with dairying or grazing or to both.

The following statement shows, according to the Divisions of the State, the number of such rural holdings in the year 1918-19, and the purpose for which they were used:—

Purpose for which used.	Coastal.	Tableland.	Western Slopes.	Central Plains and Riverina.	Western Division.	Total.
Agriculture	4,872	1,408	1,217	1,625	118	8,735
Dairying	6,108	248	86	30	10	6,482
Grazing	8,467	7,945	5,125	4,546	1,215	27,278
Agriculture and Dairying	4,882	301	243	130	...	5,556
Agriculture and Grazing	2,325	4,532	7,374	5,170	66	19,467
Agriculture, Dairying, and Grazing	805	351	195	58	...	1,409
Dairying and Grazing	1,183	246	81	27	...	1,547
Poultry, Pig or Bee Farming	1,358	46	10	4	12	1,430
Residential, Mining, &c.	19,927	5,783	4,358	2,157	715	32,930
Total	49,427	20,855	18,669	13,747	2,136	104,834

THE EXTENT OF CULTIVATION.

The total area under crops during the season 1918-19, in all classes of holdings, was, 3,890,844 acres, made up as follows:—

Division.	Area under Crops.				Balance used for Pasturage, Grazing, etc.	Proportion of Cropped Area to Total Area of Holdings
	Alienated Lands.		Crown Lands.	Total.		
	Occupied by Owners.	Private Rented.				
	acres.	acres.	acres.	acres.	acres.	per cent.
Coastal	183,630	51,216	1,275	236,121	13,322,358	1·7
Tableland	296,879	35,812	3,673	336,364	19,927,125	1·7
Western Slopes	1,415,210	65,337	82,607	1,563,154	19,601,462	7·4
Central Plains and Riverina	1,499,939	61,048	186,718	1,747,705	39,856,196	4·2
Western	3,250	293	3,957	7,500	78,043,182	·0
New South Wales	3,398,908	213,706	278,230	3,890,844	170,750,323	2·2

The area under crops on alienated lands occupied by the owners represented 92·8 per cent. of the total area under crop, or 6·1 per cent. of the holdings of alienated lands; the area of private leasehold lands under crop as compared with the total private leasehold area was 7·4 per cent., but the area under crops on holdings of Crown lands is insignificant when compared with the total extent of rural holdings.

THE CLOSER SETTLEMENT MOVEMENT.

In discussing Land Legislation and Settlement an account was given of the progress of the movement for the extension of rural settlement on relatively small areas, which was inaugurated with the Closer Settlement Act of 1901, and adapted by subsequent Acts to prevailing conditions. In 1905 the scheme was in active operation.

The following comparative statement showing the number and area of holdings of alienated lands in area groups indicates to some extent the effect of the Closer Settlement policy upon the holdings of the State since 1905:—

Size of Holding.	Number of Holdings.		Alienated Area.		Percentage in Each Series.			
	1905.	1919.	1905.	1919.	Holdings.		Area.	
					1905.	1919.	1905.	1919.
acres.			acres.	acres.				
1— 50 ...	32,413	41,766	488,622	509,321	42·02	43·20	1·00	0·86
51— 100 ...	9,217	8,311	729,306	652,995	11·95	8·60	1·50	1·11
101— 500 ...	22,268	26,032	5,508,402	6,724,092	28·87	26·93	11·31	11·40
501— 1,000 ...	6,735	10,015	4,725,720	7,031,335	8·73	10·36	9·70	11·92
1,001— 1,500 ...	2,391	3,891	2,949,188	4,778,491	3·10	4·02	6·05	8·10
1,501— 3,000 ...	1,996	3,491	4,225,260	7,396,122	2·59	3·61	8·68	12·54
3,001— 5,000 ...	798	1,387	3,086,162	5,327,872	1·03	1·43	6·33	9·04
5,001— 10,000 ...	598	1,023	4,280,967	6,997,439	0·78	1·06	8·78	11·87
Over 10,000 ...	720	768	22,734,915	19,557,022	0·93	0·79	46·65	33·16
Total ...	77,136	96,684	48,728,542	58,974,689	100·00	100·00	100·00	100·00

During the period from 1906 to 1919 the number of holdings has increased from 77,136 to 96,684, or by 25·3 per cent., and the area from 48,728,542 acres to 58,974,689 acres, or by 21 per cent. There have been increases in the holdings of all the area series, except for the group 51-100 acres. Similarly there has been an increase in all areas except group 51-100 acres and 10,000 acres and upwards. The increase in the number of holdings in the latter area group is due to the fact that more areas are held with acreages from 10,000 to 40,000 acres. In the area group over 10,000 acres, the reduction of the very large holdings has been concurrent with a percentage increase in all but two of the smaller groups.

If account be taken of the Crown lands held by a number of occupiers in addition to the alienated areas the proportionate weighting of the various groups is considerably altered. A comparative statement is therefore given, showing the area in occupation, inclusive of the Crown Lands attached to estates in each area series as at 31st December, 1905, and 30th June, 1919. The estates have been classified, as in previous tables, according to the extent of private land only :—

Size of Holding.	Area occupied, including Crown Lands attached to alienated holdings.		Percentage area in each series.	
	1905.	1919.	1905.	1919.
acres.	acres.	acres.		
1— 50 ...	1,881,648	2,278,325	1·27	1·53
51— 100 ...	2,108,807	1,623,080	1·42	1·09
101— 500 ...	17,323,964	20,655,019	11·65	13·83
501— 1,000 ...	20,180,611	23,351,714	13·57	15·64
1,001— 1,500 ...	11,760,861	13,292,423	7·91	8·90
1,501— 3,000 ...	20,098,966	22,414,723	13·51	15·01
3,001— 5,000 ...	16,248,004	17,152,698	10·93	11·49
5,001— 10,000 ...	15,015,261	15,559,194	10·12	10·42
Over 10,000 ...	44,030,630	32,985,638	29·62	22·00
Total... ..	148,678,752	149,312,814	100·00	100·00

CROWN LAND HOLDINGS.

Crown lands are held, as has been explained, either in conjunction with alienated land or as separate holdings. The total area held in conjunction with alienated lands on 30th June, 1919, was 90,338,125 acres, attached to 14,820 holdings, and particulars as to the distribution, cultivation, &c., of this area are given in connection with the alienated lands. Holdings, consisting of Crown lands only, numbered 8,150, representing 25,328,353 acres, of which over 61 per cent. was in the Western Division. The following figures show the distribution of these holdings in the different divisions of the State :—

Division.	Number of Holdings.	Area held.	Area cultivated.
		acres.	acres.
Coastal	933	466,075	1,003
Tableland	1,526	1,126,001	3,270
Western Slopes	1,589	1,866,598	47,527
Central Plains and Riverina	3,181	6,375,572	144,417
Western	921	15,494,107	2,893
New South Wales	8,150	25,328,353	199,110

FOOD AND PRICES.

ALTHOUGH New South Wales is not entirely independent of external sources of food supply the articles which enter most largely into daily consumption—meat, bread, milk and butter—are all produced within the State in sufficient quantity to meet local demands, and, in the case of meat and butter, to leave a surplus for export.

FOOD CONSUMPTION.

With the cessation, on the 13th September, 1910, of the system of keeping records of interstate trade, it became difficult to determine accurately the quantity of commodities consumed within the State; consequently, tables which had been published previously were discontinued. In view, however, of the special interest attached to the question of food consumption, particularly in relation to the cost of living, efforts were made in 1916 to obtain this information again, and in spite of the absence of official records of interstate trade, the following estimates are published with a large degree of confidence as indicative of the consumption of the more important articles of diet during the year 1918-19 and during the three years 1907-09:—

Commodity.	Unit.	Consumption per head.		Commodity.	Unit.	Consumption per head.	
		1907-09.	1918-19.			1907-09.	1918-19.
Meat—Beef ...	lb.	141·8	81·3	Flour	lb.	228·4	230·1
Mutton ...	lb.	96·5	67·9	Bread	2-lb. loaves.	102·0	96·0
Pork ...	lb.	3·2	6·4	Rice	lb.	8·2	6·0
Bacon and Ham	lb.	7·9	8·4	Sago and Tapioca...	lb.	2·0	1·9
				Oatmeal	lb.	7·6	6·0
Total Meat	lb.	249·4	164·0	Sugar	lb.	103·8	105·9
Fish—Fresh and Smoked	lb.	6·4	9·8	Salt	lb.	38·5	33·5
Preserved ...	lb.	4·3	3·5	Jam	lb.	16·7	11·0
				Butter	lb.	26·1	29·1
Total Fish..	lb.	10·7	13·3	Cheese	lb.	3·5	3·7
Potatoes	lb.	181·0	114·1	Milk—Fresh ...	gal.	17·4	22·4
				Preserved ...	lb.	4·4	6·6
				Tea	lb.	7·3	7·7
				Coffee	oz.	11·0	13·9

From the above table it will be seen that there has been a marked decline in the consumption of some leading articles of diet; and as that decline has not been accompanied apparently by a corresponding increase in respect of other articles, it might be inferred that there has been either a lowering of the standard of living, or an elimination of waste and an adjustment of dietary. There is little doubt that the great cheapness of meat in the earlier years caused a wasteful consumption, and much of it taken for individual use was practically thrown away. It is remarkable, however, that the table shows also a decline in the consumption of bread; and as meat is rich in proteids (tissue formers), and moderately supplied with fat, while bread is largely the source of the supply of the necessary carbohydrates (work and heat producers) in a bread-and-meat diet, a correlative decline in the consumption of both bread and meat points to a more economic dietary, subject to certain modifications which will be considered later.

In comparison with the period 1907-09 there were decreases per head in the consumption of the following important articles of diet:—Meat 85·4lb., potatoes 66·9lb., bread 12lb., jam 5·7lb., rice 2·2lb. and oatmeal 1·6lb. There were increases in butter 3lb., fish 2·6lb., sugar 2·1lb., flour 1·7lb., fresh milk 5 gallons, and preserved milk 2·2lb. As approximately one-third of the meat sold for consumption is bone and waste the actual decrease in consumption would be about 57lb.

Meat.

The quantity of meat consumed is still large, though it has declined considerably during the last seven years.

The following statement shows the average annual consumption per head of the various kinds of meat in each year since 1910:—

Year.	Beef.	Veal.	Mutton and Lamb.	Pork.	Bacon and Ham.	Total.
	lb.	lb.	lb.	lb.	lb.	lb.
1910	142·2	3·1	100·0	5·9	9·1	260·3
1911	147·6	3·3	101·3	5·0	10·7	267·9
1912	161·0	4·4	90·9	6·2	11·1	273·6
1913	148·3	4·1	93·8	3·8	9·8	259·8
1914-15	118·3	3·3	78·8	3·0	9·4	212·8
1915-16	97·1	1·6	73·1	2·0	8·0	181·8
1916-17	93·0	2·0	69·8	3·6	9·6	178·0
1917-18	83·7	1·5	62·7	4·0	10·1	162·0
1918-19	79·0	2·3	67·9	6·4	8·4	164·0

During the interval between 1909 and 1919 the consumption per head declined by 85·4 lb., the decrease being general in all kinds of meat except pork and bacon. The consumption increased in each year from 1909 to 1912 when it reached 273·6 lb. per head, then it declined rapidly until in 1915-16 it was less than two-thirds of the consumption in 1912. The decrease continued, though at a slower rate, during the succeeding two years, and in 1917-18 the average consumption was only 162 lb. per head, or 111·6 lb. below the average in 1912; during 1918-19 there was an increase of 2 lb. as compared with the previous year.

The consumption per head of meat moved in the opposite direction to the retail price, declining as the price increased, as will be seen from the following statement which shows the variations in the average consumption and in the levels of the retail prices of meat (including bacon) since 1912, the figure for that year being taken as 100 in each case.

Year.	Average Annual Consumption.	Retail Prices.	Year.	Average Annual Consumption.	Retail Prices.
1912	100	100	1916-17	65	200
1913	95	104	1917-18	59	210
1914-15	78	132	1918-19	60	197
1915-16	66	197			

Between the years 1912 and 1918 there was a decrease of 41 per cent. in the average consumption and an increase of 110 per cent. in the retail prices; during 1918-19 the prices dropped by about 6 per cent., and the consumption increased slightly.

The decline in the consumption of meat has not apparently been counterbalanced by an increase in the consumption of fish, which as a food is inferior in every respect. The quantity of fish consumed represented 13·7lb. per head in 1918-19, viz., fresh and smoked 9·3 lb., and preserved 3·5 lb.

As regards the former there has been an increase of 3·4 lb. since 1909, while the latter shows a slight decrease which may be attributed to a rise in price.

It is, however, very probable that a growing consumption of rabbits has partially replaced the decline in the consumption of meat. The local consumption of this type of food, is difficult to ascertain, but is estimated at 60,000 to 80,000 pairs per week. This is probably equal to the total consumption during the three years 1907-09.

It is probable also that the diminution in the consumption of meat has been made good partially by an increased consumption of eggs. The number of eggs, however, used as food, either directly or as ingredients in cakes, pastry, puddings, etc., cannot be ascertained accurately.

Potatoes.

The consumption of potatoes decreased from 181 lb. per head to 114·1 lb. during the period under review. Local production has declined greatly, and is not equal to the demand, large supplies being imported from the neighbouring States. The average annual production during the last three years was 41,900 tons, as compared with 80,800 tons during the period 1907-09.

Bread and Flour.

The average consumption of bread in 1918-19 was 96 loaves (2 lb.) per head, on the assumption that there had been no variation since the previous year. The consumption of flour is stated at 230·1 lb. per head, but it is probable that this figure includes flour awaiting shipment abroad, also exports in the form of biscuits, and is somewhat in excess of the quantity actually consumed in New South Wales. The flour includes approximately 139,600 tons (144 lb. per head) used for bread, and 12,654 tons (13·1 lb. per head) used in biscuit factories, but the quantity used by pastrycooks is not available. Exclusive of the quantity used for bread, biscuits, etc., it is estimated that the average household consumption of flour by a family of five persons is about 4 lb. per week, or 42 lb. per head per annum.

The reduction in the consumption of bread from 102 loaves per head in 1907-09 to 96 in 1918-19, a reduction equivalent to 12 lb. of bread per annum, or 6 per cent., is a matter for attention. In this connection it is interesting to record the opinion of those in the trade, who considered that the introduction of day-baking in the middle of 1914 reduced the consumption of bread by about 10 per cent., as a result of a comparative staleness of the loaf baked the day preceding delivery. However, the practice now is that about 50 per cent. of the bread is delivered on the day on which it is baked, and it is possible that the consumption of bread has since increased.

Oatmeal, Rice, and Sago.

The consumption of oatmeal has declined from 7·6 lb. to 6 lb. per head, probably on account of an increased consumption of other breakfast foods. The consumption of sago and tapioca shows a slight alteration, and the quantity of rice has decreased from 8·2 lb. to 6 lb. per head. Supplies of rice are obtained by importation, and there was a shortage during 1919.

Sugar.

The quantity of sugar consumed—105·9 lb. per head—appears high; it has increased by 2·1 lb. since 1909, but in computing the average it is not possible to allow for the quantities used in the manufacture of products such as jam, of which the exportation has increased greatly, having risen from 300,000 lb. per annum during the period 1907-09 to 22,200,000 lb. in

1918-19. The records of the manufacturing industry in 1918-19 show that 9,543 tons of sugar (11 lb. per head) were used for jam and canned fruit; 2,968 tons (3·4 lb. per head) for biscuits; 1,930 tons (2·2 lb. per head) in condensed milk factories; 6,039 tons (7 lb. per head) in breweries; 3,103 tons (3·6 lb. per head) in aerated water factories; and 7,528 tons (8·7 lb. per head) in making confectionery.

The average household consumption of sugar is estimated at 6 lb. per week for a family of five persons, or 62 lb. per head per annum. Refined sugar is classed as a practically pure carbohydrate, and its food value is very high.

Salt.

Salt is an ingredient of almost all foods, large quantities being used in bacon-curing and meat-preserving, as well as in the preparation of bread, butter, cheese, &c. The average annual consumption amounts to 33·5 lb. per head. Ordinary domestic consumption in a family of five persons probably does not exceed 1 lb. per week. The estimates relating to the consumption of salt have been amended since the previous issue of this Year Book.

Butter, Cheese, and Milk.

Butter is an important item of food in New South Wales, and the consumption has increased from 26 lb. per head in 1909 to 29 lb. in 1919. During the last three years the production of butter in New South Wales exceeded, on the average, 75,000,000 lb. per annum, which was more than sufficient to supply the local demand, and a considerable quantity was exported.

The quantity of cheese consumed increased slightly, but the quantity of fresh milk increased from 17·4 gallons to 22·4 gallons per head, and of condensed milk from 4·4 lb. to 6·6 lb.

Tea and Coffee.

Tea enters largely into consumption amongst all classes, the average annual consumption being 7·7 lb. per head. Of coffee, on the other hand, the average was only 13·9 oz. per head.

CONSUMPTION OF INTOXICANTS.

As with other commodities, so with alcoholic beverages, the figures relating to local consumption in years later than 1909 were not published until the issue of the Year Book for 1916. To supply an approximate basis for later years, however, information was obtained from spirit merchants, and the consumption for the last ten years is estimated to have been as follows:—

Year.	Aggregate Consumption of Spirits.			Per Head of Population.		
	Australian.	Foreign.	Total.	Australian.	Foreign.	Total.
	gallons.	gallons.	gallons.	gallons.	gallons.	gallons.
1909	123,800	1,171,100	1,294,900	·08	·74	·82
1910	165,200	1,211,100	1,376,300	·10	·75	·85
1911	194,300	1,337,800	1,532,100	·12	·80	·92
1912	245,000	1,426,700	1,671,700	·14	·82	·96
1913	285,600	1,449,300	1,734,900	·16	·80	·96
1914-15	314,400	1,369,000	1,683,400	·17	·73	·90
1915-16	385,900	1,072,900	1,458,800	·21	·57	·78
1916-17	433,500	849,700	1,283,200	·23	·46	·69
1917-18	420,400	669,000	1,089,400	·22	·35	·57
1918-19	290,700	451,700	742,400	·15	·23	·38

The consumption of spirits, which had been increasing slowly for five or six years prior to the war, has decreased by 60 per cent. since 1913.

The departure of large numbers of men for military service abroad, the restriction of imports owing to difficulties of transport and high freights, the early closing of hotels and increased prices, have all contributed to the general decline. During 1918-19 the consumption decreased by one-third.

The consumption of beer per head increased by 32 per cent. between 1908 and 1913, but after the commencement of the war it decreased. Notwithstanding an increase during the last two years, the consumption in 1918-19 was 8 per cent. lower than in 1913. Practically all the beer consumed is brewed in Australia.

Year.	Quantity of Beer consumed.			Per Head of Population.		
	Australian.	Imported.	Total.	Australian.	Imported.	Total.
	gallons.	gallons.	gallons.	gallons.	gallons.	gallons.
1909	15,240,000	973,500	16,213,500	9·66	·62	10·28
1910	16,237,600	1,033,600	17,321,200	10·08	·64	10·72
1911	18,332,900	1,200,100	19,533,000	11·01	·72	11·73
1912	20,777,300	1,349,600	22,126,900	11·95	·78	12·73
1913	22,973,400	1,338,000	24,311,400	12·70	·74	13·44
1914-15	23,175,100	934,300	24,109,400	12·44	·50	12·94
1915-16	22,586,500	568,700	23,155,300	12·08	·31	12·39
1916-17	21,159,200	204,000	21,363,200	11·35	·11	11·46
1917-18	21,978,500	88,600	22,067,100	11·62	·05	11·67
1918-19	23,923,000	53,100	23,976,100	12·37	·03	12·40

The consumption of both Australian and foreign wines declined progressively from 1909 to 1917; during the last two years the consumption of Australian wine increased slightly, but the quantity of imported wines continued to decline.

Year.	Consumption of Wine.					
	Aggregate.			Per Inhabitant.		
	Australian.	Foreign.	Total.	Australian.	Foreign.	Total.
	gallons.	gallons.	gallons.	gallons.	gallons.	gallons.
1909	955,500	41,300	996,800	·60	·03	·63
1910	816,900	46,900	863,800	·50	·03	·53
1911	908,700	57,900	966,600	·55	·03	·58
1912	975,500	60,600	1,036,100	·56	·04	·60
1913	927,800	58,500	986,300	·51	·03	·54
1914-15	851,700	50,400	902,100	·46	·03	·49
1915-16	767,200	32,800	800,000	·41	·02	·43
1916-17	764,500	30,300	794,800	·41	·02	·43
1917-18	839,500	22,000	861,500	·44	·01	·45
1918-19	895,700	15,900	911,600	·46	·01	·47

The wine entering into consumption in New South Wales is chiefly the produce of Australian vineyards, but the quantity produced in the State is much less than might be expected in a country so eminently adapted for viticulture.

The decrease in the consumption of Australian wine reflected a steady decline in the production, the average annual production in New South Wales in the three years ended June, 1919, being only 574,000 gallons, as compared with 884,000 gallons in the period 1907-09, ten years ago.

The amount of money expended on intoxicating liquors in New South Wales in the year ended 30th June, 1919, was estimated at £7,275,000, or £3 15s. 4d. per head. There was a steady increase between 1909 and 1914-15, but during the succeeding two years, the drink bill decreased by £648,000, or 7s. per head of population. Owing to a rise in prices the total expenditure has since increased, notwithstanding the decrease in the quantity consumed. In 1918-19, the drink bill was £52,000 higher, but the amount per head was 1s. 1d. lower than in the previous year.

Year.	Drink Bill.		Year.	Drink Bill.	
	Total.	Per Head of Population.		Total.	Per Head of Population.
	£	£ s. d.		£	£ s. d.
1909	5,050,000	3 4 0	1914-15	7,315,000	3 18 6
1910	5,304,000	3 5 8	1915-16	7,246,000	3 17 6
1911	5,962,000	3 11 8	1916-17	6,667,000	3 11 6
1912	6,592,000	3 15 10	1917-18	7,223,000	3 16 5
1913	7,001,000	3 17 5	1918-19	7,275,000	3 15 4

CONSUMPTION OF TOBACCO.

The amount of tobacco consumed in New South Wales, as estimated, in each year since 1909, is shown in the following statement, special data having been obtained for estimates subsequent to 1909 :—

Year.	Total Consumption (009 omitted).				Per Head of Population.			
	Tobacco	Cigars.	Cigarettes.	Total.	Tobacco.	Cigars.	Cigarettes.	Total.
	lb.	lb.	lb.	lb.	lb.	lb.	lb.	lb.
1909	3,724	223	720	4,667	2·36	·14	·46	2·96
1910	3,707	239	873	4,819	2·29	·15	·54	2·98
1911	3,827	271	1,076	5,174	2·30	·16	·65	3·11
1912	3,796	293	1,353	5,442	2·18	·17	·78	3·13
1913	3,853	306	1,413	5,572	2·13	·17	·78	3·08
1914-15	3,921	296	1,391	5,608	2·10	·16	·75	3·01
1915-16	3,979	236	1,331	5,546	2·13	·13	·71	2·97
1916-17	4,098	263	1,283	5,644	2·20	·14	·69	3·03
1917-18	4,208	244	1,318	5,770	2·22	·13	·70	3·05
1918-19	3,918	252	1,484	5,654	2·03	·13	·77	2·93

The quantity of tobacco (including cigars and cigarettes) consumed in 1918-19 was 5,654,000 lb., which represents an average of 2·93 lb. per head of population. The average has remained fairly constant throughout the period reviewed, the lowest being 2·93 lb. in 1919, and the highest 3·13 lb. in 1912. During the last five years the retail price of tobacco (cut) of popular brands has advanced from 6s. 8d. to 12s. per lb.

As regards the description of tobacco used during the period under review the proportion of cigarettes advanced from 15 to 23 per cent., and the proportion of ordinary tobacco declined from 80 to 69 per cent.

Of the total tobacco consumed in 1918-19, about 94 per cent. was manufactured in Australia, the proportions of the different descriptions being of ordinary tobacco 96 per cent. made in Australia, cigarettes 92 per cent., and cigars 73 per cent. The proportion of tobacco and cigarettes made in Australia has not changed greatly since 1909, when the percentages were 87 and 94 respectively, but a marked increase—from 49 to 73 per cent.—has occurred in the proportion of cigars of Australian manufacture.

The following statement shows the quantity of Australian and of imported tobacco consumed in 1909 and in 1918-19:—

Description.	Total Consumption.			Per Head of Population.		
	Australian.	Imported.	Total.	Australian.	Imported.	Total.
	lb.	lb.	lb.	lb.	lb.	lb.
Tobacco ... { 1909	3,231,500	492,600	3,724,100	2·05	·31	2·36
{ 1918-19	3,781,000	136,400	3,917,400	1·96	·07	2·03
Cigars ... { 1909	109,200	114,100	223,300	·07	·07	·14
{ 1918-19	185,200	67,000	252,200	·10	·03	·13
Cigarettes ... { 1909	677,700	42,100	719,800	·43	·03	·46
{ 1918-19	1,360,000	124,000	1,484,000	·71	·06	·77
Total ... { 1909	4,018,400	648,800	4,667,200	2·55	·41	2·96
{ 1918-19	5,326,200	327,400	5,653,600	2·77	·16	2·93

Although the tobacco is called "Australian," the bulk of it is made from imported leaf, as only about 12 per cent. is made from leaf grown in Australia.

STANDARDISATION OF FOOD COMMODITIES.

The administration of the pure food law is entrusted primarily to the Board of Health, with an Advisory Committee, consisting of the President of the Board, and medical men, chemists, merchants, and others, on whose recommendations the Board makes regulations regarding the standardisation, composition, methods and conditions of manufacture, storage, sale, etc., in order to secure the wholesomeness, cleanliness, and purity of the food supply. Officers, appointed under the Act, may enter for the purpose of inspection any place used for the sale, storage, delivery, manufacture, or preparation of any article intended for use as a food or a drug. The first code of regulations, prescribing the standards for foods and drugs, was gazetted on 15th July, 1909. The Commonwealth Department of Trade and Customs has control as to the composition and labelling of foods and drugs imported into Australia.

STANDARD WEIGHTS AND MEASURES.

Weights and measures in New South Wales are regulated under the Weights and Measures Acts, 1915 and 1916. The standard weights and measures of the United Kingdom have been adopted; and all articles sold by weight must be sold by avoirdupois weight; except precious metals, sold by troy weight; precious stones, by metric carat; and drugs, retail, by apothecaries weight. Sales by retail must be according to net weight or

measure, and packages of goods must have the net weight or measure stamped thereon.

Weights, measures, and weighing and measuring instruments used for trade are required to be stamped with marks of verification, and, unless a measure made of glass, must be restamped at specified intervals. In the Metropolitan and Parramatta police districts and in other districts as proclaimed, coal and firewood are sold by weight, but in the case of quantities exceeding 5 cwt., if the written consent of the purchaser be obtained, it may be sold otherwise as agreed.

MUNICIPAL MARKETS.

The Sydney Corporation (Consolidating) Act of 1902 and its amendments empower the City Council to establish public markets within its boundaries for the sale of fruit, vegetables, fish, produce, or general merchandise; the Council may grant licenses for hawking and selling in the city, poultry, fish, vegetables, garden produce, and other articles, and may make by-laws for the regulation and control of all stands and stalls used, in any public way in the city, for the sale of refreshments or fruit.

Under the Local Government Act of 1919, the councils of municipalities and of shires are empowered to provide markets for the sale of animals or of any articles of human food; to supervise premises used for the storage of food; to control and regulate the hawking and peddling of food commodities; and, except in the Metropolitan and Newcastle districts, to establish abattoirs. The councils of municipalities exercise authority in respect of dairy supervision, and this power may be granted to the council of any shire.

Sydney Municipal Markets.

The Municipal Council of Sydney has erected markets for vegetables, farm produce, fruit, fish, and poultry.

The vegetable market has 288 stalls, which are occupied by the *bond fide* grower, who brings his own produce to market, and conducts the sale by private treaty; the charges are on the dues system at 1s. 6d. per cart load; the minimum amount payable weekly for each stall is 4s. 6d.

The produce market is occupied almost entirely by agents, who receive products from the country and oversea; these agents are allotted stands on the scale of 1s. 6d. per load, with an additional reserving fee of 1s. per week for the particular stand. Surrounding this market are stores, which are leased to the agents, who distribute to suburban and distant centres.

The fruit market was designed for the speedy and careful handling of this delicate food product. Fruit may be conveyed to the market directly by means of a special railway siding, which connects with the main railway system. Provision is made for sales by auction or by private treaty. Half of the market is reserved for the use of the growers, the charge for a stand being 2s. per day; the remainder is divided into stands which are let to agents at a rental of 11s. per week.

In the fish market supplies are consigned direct to the Council from the various districts, and are sold by the Council's officers at auction. Salt water, pumped from the harbour, is supplied to the markets for cleansing the fish, and a cooling chamber is provided.

In all these markets the officers of the Council are charged with the necessary authority for inspection and condemnation.

The poultry market provides accommodation for fifteen to twenty thousand head of poultry; there is also a special floor for eggs, bacon, butter, cheese, etc. The market is subdivided into stands, which are let to poultry auctioneers; the Council supervises the cleanliness of the market, but has no power in regard to inspection.

The area and cost of the several markets are as follows:—

Market.	Floor Space.	Cost of Market.	Market.	Floor Space.	Cost of Market.
	sq. ft.	£		sq. ft.	£
Vegetable ...	95,560	127,000	Fish ...	47,517	49,000
Produce ...	45,300	48,300	Poultry ...	12,200	27,500
Fruit ...	143,000	119,500			

Cold storage works have been constructed in the Market area immediately adjoining the Fruit Markets. They are equipped with chilling and freezing rooms for the storage of fruit, dairy and farm produce, mutton and rabbits, and their cost was £94,000.

The total storage capacity of the chambers, excluding passages and grading rooms, is 224,130 cubic feet. Provision is made to supply power for an ice-making plant, also for a further addition of cooling space as may become necessary.

FRUIT AND VEGETABLES.

The fruit supply is derived mainly from the local orchards and from Victoria, Tasmania, and Queensland. From November or December to February or March the supply is for the most part locally grown; from March to October the market for all fruits except citrus is supplied chiefly from the other States; and from May to December local supplies of citrus fruits are available. Prior to the war large shipments of bananas were imported from Fiji, but owing to the restriction of oversea shipping and to the outbreak of disease the importations diminished, and the Tweed River district became the chief source of supply.

In Sydney there are two fruit markets, viz., the Fruit Exchange, conducted by a private company, and the City Market, controlled by the City Council. Market sales are conducted generally by private treaty. The majority of the country and interstate distributors operate in the Fruit Exchange, which is exclusively a wholesale market. In the City Market a considerable amount of retail, as well as wholesale, trade is transacted.

The supply of vegetables, except potatoes and onions, is obtained from local sources and marketed at the City market. A large proportion of the potato supply is imported from Victoria and Tasmania, and the bulk of the onions from Victoria. Imported potatoes are sold by private treaty on the wharf shortly after arrival, and the prices are fixed by arrangement between the sellers; locally-grown potatoes are sold by auction in the railway yards.

On account of the numerous varieties and grades of fruit and vegetables, it is extremely difficult to ascertain satisfactory average retail prices, and on account of the large quantities of both grown in home gardens, it is, if anything, more difficult to estimate the local consumption.

The following statement shows in regard to a few varieties the average wholesale prices in Sydney during the last five years:—

Fruit and Vegetables.	1915.	1916.	1917	1918.	1919.
Apples, per bushel... ..	7s. to 10s.	6s. 6d. to 10s.	9s. to 13s.	8s. to 11s.	10s. to 15s.
„ cooking, per bushel	8s.	6s.	9s. 6d.	8s.	10s.
Oranges, per bushel ...	8s. to 13s.	7s. 6d. to 15s.	7s. to 13s.	7s. to 14s.	10s. to 17s.
Mandarins „	8s.	11s.	9s. 6d.	11s.	13s.
Pears „	11s.	11s.	9s. 6d.	12s.	13s.
Passion Fruit, per $\frac{1}{2}$ bushel	7s.	6s. 6d.	7s.	10s.	10s. 6d.
Bananas, per $1\frac{1}{2}$ bushel ...	20s.	15s. 6d.	16s. 6d.	18s.	23s.
Pineapples „	8s.	7s. 6d.	9s.	9s. 6d.	12s.
Cabbages, per doz.	6s. to 8s.	5s. to 7s.	6s. to 7s.	7s. 6d.	10s.
Cauliflowers „	6s. to 8s.	7s. to 8s.	8s.	8s. 6d.	11s. 6d.
Peas, per bushel	6s. 6d.	7s.	8s.	9s. 6d.	11s.
Beans „	5s. to 6s.	4s. to 5s.	5s. to 6s.	5s. 6d.	8s.

MEAT SUPPLY.

The estimated number of livestock (cattle, sheep, and pigs) required for food in New South Wales in each year since 1910 is shown in the following statement. These figures differ from those published elsewhere in this volume showing the animals killed in slaughtering establishments, as those include animals slaughtered for export and animals treated in boiling-down works. Moreover, the number of pigs shown in the table is larger than the number slaughtered in New South Wales in some years, when the production of bacon was not sufficient for local requirements.

Year.	Bullocks.	Cows.	Calves.	Sheep and Lambs.	Pigs.
1910	227,691	153,206	50,238	3,894,589	315,786
1911	233,141	179,122	54,493	4,068,349	335,403
1912	266,656	202,596	74,599	3,991,784	383,869
1913	232,796	230,041	70,919	3,896,880	309,976
1914-15	156,886	246,659	59,350	3,521,883	289,224
1915-16	167,870	163,278	30,296	3,358,469	234,633
1916-17	164,548	140,173	36,764	2,940,981	304,846
1917-18	187,986	89,583	28,504	2,436,394	335,428
1918-19	200,237	111,746	48,997	2,975,607	375,900

In the Metropolitan Abattoir Area (comprising the county of Cumberland), all operations in connection with the sale, slaughter, and inspection of stock, and with the sale of meat are under the control of the Metropolitan Meat Industry Board, which was created in 1916, in terms of the Meat Industry Act, 1915. The Board consists of three members, one representing the producers, one the consumers, and a chairman.

The cattle saleyards at Flemington cover an area of 66 acres, and the Act vests in the Board the land and buildings contained in the Public Abattoir at Glebe Island, the Stock Saleyards at Flemington, and the Public Abattoir at Homebush Bay, capable of accommodating on one day from 75,000 to 80,000 head of sheep and lambs, and 2,500 head of cattle. The following table shows the number of stock yarded annually during the last ten years:—

Year ended 30th June.	Sheep.	Cattle.	Year ended 30th June.	Sheep.	Cattle.
1910*	4,064,650	155,833	1915	3,381,937	255,876
1911*	3,407,835	193,953	1916	2,317,602	158,453
1912	3,648,138	211,705	1917	1,711,246	149,604
1913	2,721,356	265,126	1918	1,756,301	146,630
1914	2,805,207	276,440	1919	2,684,652	178,140

* Year ended 31st December.

The Pig and Calf Saleyards and Markets were opened at Homebush on 2nd July, 1916, and superseded the Municipal Small Stock Markets in the city.

The monthly yardings of stock at the saleyards during 1919 are shown hereunder:—

Months.	Sheep.	Cattle.	Calves.	Pigs.	Months.	Sheep.	Cattle.	Calves.	Pigs.
January ...	353,053	18,833	1,751	8,928	July ...	225,466	23,187	2,150	9,810
February ...	311,925	15,547	1,385	9,310	August ...	293,023	25,009	2,292	7,369
March ...	201,430	17,503	1,390	8,843	September ...	361,029	24,752	2,790	8,598
April ...	202,208	14,644	2,157	11,357	October ...	410,488	25,115	3,947	5,794
May ...	213,217	18,189	1,483	8,758	November ...	384,765	20,374	2,927	6,489
June ...	152,960	18,783	1,535	8,624	December ...	406,934	21,343	2,021	6,753
					Total ...	3,516,499	243,279	25,828	100,633

The Public Abattoirs at Homebush Bay is close to the saleyards; operations were commenced there in July, 1916, and the slaughtering of stock was transferred gradually from Glebe Island, until that establishment was closed in November, 1917. The Abattoir area consists of 1,400 acres, of which 1,200 acres are retained as resting paddocks for stock prior to slaughter, and 200 acres are used for buildings, roads, and railway. Extensive building operations are in progress to provide refrigerating works (capable of accommodating 250,000 carcasses), canning factories, a bacon factory, and oleo works.

The carcase butchers who operate at the Abattoir supply the labour and pay at fixed rates per head of stock treated. The charges, including fees for inspection, loading and unloading, and chilling for forty-eight hours, are as follows:—Cattle, 5s. 1½d. per head; sheep, 4¼d.; pigs, 1s. 5½d., and calves, 1s. 3d.

The following table shows the slaughtering at the Public Abattoirs at Glebe Island and at Homebush Bay during each of the last four years:—

Year.	Sheep.	Cattle.	Calves.	Pigs.
1916	1,245,655	87,639	37,190	66,737
1917	993,874	103,231	23,574	76,780
1918	1,620,619	114,096	33,882	120,638
1919	2,355,446	185,799	49,818	118,310

The meat is transported by rail from Homebush to the Central Meat Distributing Depot, thence it is delivered by the carcase butchers to the retail shops. The Central Depot is situated within the city area, on the Darling Harbour railway line, and depôts are in course of construction at St. Leonards and Rockdale to facilitate delivery in the suburban districts.

In the Newcastle district, *i.e.*, within a radius of 14 miles from the Newcastle Post Office, slaughtering and inspection are controlled by the Newcastle District Abattoir Board. Outside the Metropolitan and Newcastle districts slaughtering is done at private abattoirs, which are subject to inspection by officers appointed by the local authorities and by the Board of Health.

The wholesale prices per lb. of meat in Sydney in each year since 1911 are shown in the following table:—

Year.	Beef.		Mutton.	Lamb.	Pork.
	Fores.	Hinds.			
	d.	d.	d.	d.	d.
1911	1 $\frac{1}{4}$	2 $\frac{1}{4}$	2	2 $\frac{3}{4}$	5 $\frac{1}{4}$
1912	2 $\frac{1}{8}$	3 $\frac{1}{2}$	2 $\frac{7}{8}$	3 $\frac{3}{4}$	6 $\frac{3}{4}$
1913	2 $\frac{3}{8}$	3 $\frac{3}{8}$	3	3 $\frac{1}{2}$	7 $\frac{3}{8}$
1914	3	3 $\frac{7}{8}$	3 $\frac{1}{2}$	4 $\frac{3}{4}$	7 $\frac{1}{2}$
1915	5 $\frac{1}{8}$	6 $\frac{7}{8}$	5	5 $\frac{3}{4}$	9 $\frac{3}{8}$
1916	5 $\frac{3}{8}$	7 $\frac{5}{8}$	5 $\frac{5}{8}$	7	11
1917	5 $\frac{3}{4}$	7 $\frac{3}{8}$	6 $\frac{3}{8}$	7 $\frac{7}{8}$	10 $\frac{1}{2}$
1918	5 $\frac{3}{4}$	6 $\frac{1}{8}$	5 $\frac{3}{8}$	7	9 $\frac{3}{4}$
1919	5 $\frac{1}{2}$	8	5 $\frac{5}{8}$	6 $\frac{3}{8}$	10 $\frac{1}{2}$

The main cause of the marked increase in the prices of meat in 1915 was the depletion of the herds and flocks during the drought of 1914, and the consequent shortage of stock for slaughtering.

Meat Supply for Imperial Uses Act.

The Meat Supply for Imperial Uses Act was passed in February, 1915, in order to place at the disposal of the Imperial Government the whole of the supply of beef and mutton available for export during the continuance of the War. The purchase and shipment are arranged by the Metropolitan Meat Industry Board. Upon a written order of the Chief Secretary as the Minister charged with the administration of the Act, all stock and meat mentioned therein become the property of the Crown at prices fixed by the Board. The period of the Act has been extended by proclamations to 31st December, 1920, but it is probable that the contracts with the Imperial Government will be terminated at an earlier date, viz., in Queensland on 30th November, and in the other States on 31st October, 1920.

The prices for meat taken into cold storage were fixed as follows:—Mutton, first and second quality—wether, 5 $\frac{1}{2}$ d.; ewe, 5d.; teg, 5 $\frac{3}{4}$ d., and lamb 6 $\frac{1}{2}$ d.; third quality being $\frac{1}{8}$ d. less. Beef—ox, 4 $\frac{1}{2}$ d.; cow, 4 $\frac{3}{4}$ d. to 4 $\frac{7}{8}$ d.; boneless (in bags), 5 $\frac{1}{2}$ d.; in crates, 5 $\frac{1}{4}$ d. The prices are conditional upon delivery by the vendors of the meat free on board ship; no interest or charges may be claimed by the vendors for the meat until it has been twenty-eight days in cold storage, but thereafter they may be paid interest at the rate of 6 per cent. on the value of the meat, and the storage charge will be paid by the Government.

Up to the end of June, 1920, the quantity of beef and mutton requisitioned under the authority of the Act and shipped from Sydney was 171,615,684 lb., consisting of 3,391,312 carcasses and 1,640 pieces of mutton and lamb, and 186,466 pieces of beef. The Imperial Government purchased 378,820 crates of rabbits, valued at £347,273; also 1,482,314 lb. of cheese, the prices paid being 9 $\frac{1}{4}$ d. per lb. for first quality and 9d. per lb. for second quality. The total cost to the Imperial Government, including storage and interest, to the end of June, 1920, was £3,824,654 for beef and mutton, £404,576 for rabbits, and £57,108 for cheese.

FISH SUPPLY.

The seaboard waters of New South Wales contain immense quantities of edible fish, nevertheless fresh fish does not enter largely into the dietary of the people, the average annual consumption being only 10lb. per head. The local production in 1918-19 amounted to 20,102,459lb., exclusive of 5,065

dozens of crayfish and crabs, 356,832lb. of prawns, and about 23,000 sacks of oysters. The bulk of the supply is obtained from the river estuaries and the coastal lakes and inlets, and is marketed in Sydney by agents to whom the fishermen consign their catches.

There are two fish markets in Sydney, the Municipal Fish Market, and the Commonwealth Co-operative Fish Exchange, Redfern. The former is controlled by the City Council, which acts as selling agent, though private agents are allowed to conduct business in the Council's buildings. The Co-operative Fish Exchange is owned and controlled by a private company, but it is subject to inspection by a Government inspector acting under the Pure Food Act.

An effective system of distribution to private consumers has not been organised. In the city and nearer suburbs fish is retailed in State and private shops, and a few dealers maintain regular rounds for the purpose of house-to-house distribution, but the more distant suburbs are supplied only by hawkers, whose visits are intermittent.

The State Trawling Industry was initiated in 1915, with the object of developing the deep sea fisheries in order to provide a regular supply of cheap fish. In addition to the fish caught by the State trawlers the industry obtains supplies from the inshore fisheries by purchase from the local fishermen. The bulk of the fish is distributed by means of retail shops, of which thirteen have been opened in the Metropolitan area, two in Newcastle, and five in country towns. The average selling price, calculated on the net weight sold during 1918-19, was 6.2d. per lb., as compared with 5.9d. in the previous year; the prices charged in the State shops varied according to variety, viz., fresh fish, 3d. to 11d. per lb.; smoked, 7d. to 1s. per lb.; crayfish, 2s. to 2s. 6d. each; and prawns, 8d. to 1s. 6d. per lb.

BREAD SUPPLY.

The bread for the metropolitan population is produced under satisfactory conditions, and is of good quality; for the most part it is sold by the bakers directly to the consumers. A State bakery was acquired in 1914 to supply bread to Government institutions. Before the introduction of day baking in June, 1914, the bread was delivered at the consumer's house, but the deliveries have since diminished as many customers buy at the shops in order to obtain fresher bread.

Prior to the war the price was fixed ordinarily by the Master Bakers' Association with relation to the declared price of flour, which was fixed by an association of millers, but since August, 1914—except during the months March to August, 1919—the prices of bread and of flour have been determined by Government proclamation.

The variations in the price of bread in Sydney since 1900 are shown below in conjunction with the price of flour at the time when the price of bread was altered:—

Date.	Price of 2 lb. Loaf.	Cost of Flour per ton.	Date.	Price of 2 lb. Loaf.	Cost of Flour per ton.
	d.	£ s. d.		d.	£ s. d.
1900... ..	2½	6 15 0	1914—December ...	4	11 17 6
1902—April ...	2¾	8 15 0	1915—July ...	5	17 5 0
September ...	3	9 10 0	October ...	4	11 17 6
November ...	3½	10 10 0	1916—March ...	3½	11 5 0
1903—February ...	3½	12 0 0	1917—June ...	3¾	11 0 0
December ...	3½	10 10 0	1919—March ...	4	11 0 0
1904—September ...	3	9 0 0	October ...	4½	11 15 0
1907—June ...	3½	8 15 0	December ...	4½	11 17 6
1909—March ...	3½	10 0 0	1920—January ...	4¾	12 15 0
1910—June ...	3½	8 15 0	February 2nd	5½	16 7 6
1912—May ...	3½	9 15 0	„ 9th	6	19 2 6

MILK SUPPLY.

The law governing the conditions of milk production and distribution is contained mainly in the Dairies Supervision Act of 1901, the Pure Food Act of 1908, and the Dairy Industry Act of 1915. The duty of registering dairies, and supervising and inspecting dairy premises and cattle, is vested in local authorities, but in actual practice the administration is conducted by the Board of Health. At 31st December, 1919, there were 17,751 registered dairymen in the State, and the cattle in their dairy herds numbered 743,761; there were also 4,190 registered milk vendors. In the metropolitan district there are 338 registered dairymen, with 7,864 cattle, and 3,354 registered milk vendors.

The standard for milk is fixed by regulation under the Pure Food Act. It must contain not less than 8·5 per cent. of milk solids (not fat), and 3·2 per cent. of milk fat. During 1919 the Pure Food and Municipal Inspectors collected 8,032 samples of milk, and 869 were below standard; prosecutions were instituted in 302 cases, and penalties in fines and costs amounted to £1,397.

The milk supply of Sydney is derived partly from dairies in the metropolitan area, and partly from dairies in country districts, viz., the South Coast district between Wollongong and Nowra, the districts traversed by the Main Southern Railway between Liverpool and Moss Vale, the Penrith, Windsor, and Richmond Districts, and the districts around Bransxton, Singleton, and Gosford, on the Northern Railway line.

The proportion of the city supply derived from metropolitan dairies is decreasing steadily, and there is strong evidence of diminishing productiveness in many parts of the South Coast District, where the bulk of the country milk is obtained; but there has been an increase in the quantity obtained from the Maitland District.

The milk from the metropolitan dairies is distributed direct to the consumer, and the country milk is handled by three large distributing companies, being subjected to a pasteurising process before distribution.

The range of wholesale and retail prices of milk during each year since 1901 is shown below. The wholesale price represents that paid by the distributing companies to the farmer for milk delivered on trucks at country railway stations; the retail price for country milk is that charged by these companies, or by milk vendors, to the householder; and for fresh milk the retail price is that charged by the metropolitan dairymen.

The prices were fixed by the State or Federal authorities from July, 1915, to January, 1919; and from July, 1919, by the Necessary Commodities Control Commission.

Year.	Wholesale.	Retail.		Year.	Wholesale.	Retail.	
		Country.	Fresh.			Country.	Fresh.
	per gal.	per qt.	per qt.		per gal.	per qt.	per qt.
	d. d.	d.	d.		d. d.	d.	d.
1901	6 to 7	4	4-5	1915	8 to 11	5-5½	6
1906	6 „ 7	4	4	1916	8 „ 12	5-5½	6
1911	6 „ 9	4-5	5	1917	10 „ 12	5½	6
1912	6 „ 9	5	6	1918	10 „ 15½	5½	6
1913	6 „ 9	5	6	1919	15½ „ 21½	5½-7½	6-9
1914	8 „ 11	5	6				

REGULATION OF PRICES.

Shortly after the outbreak of the war, the Necessary Commodities Control Act of 1914 was passed to empower the State Government to review the prices of necessary commodities. The Commission appointed to administer

the Act operated until 20th July, 1916, when the Federal Government assumed control of the prices of foodstuffs, necessary commodities and services.

The Commonwealth Prices Adjustment Board was constituted under the War Precautions Act, and a Commissioner was appointed in each State to collect evidence on which the Board based its recommendations as to prices and rates.

During 1919 the various commodities were gradually released from Federal control until it was terminated about the middle of the year; thereupon, in July, the State Government restored the Necessary Commodities Commission. Lists of the commodities in respect to which price-fixing proclamations had been issued up to July, 1919, were shown in the 1918 issue of the Year Book. In that volume reference is made also to reports issued by the Inter-State Commission in relation to the causes of increase in the prices of commodities in general use, viz., bread, meat, butter, cheese, bacon, vegetables and fruit, milk, groceries, clothing and boots, also as to house rents.

Necessary Commodities Control Act.

The Act of 1914 was repealed in December, 1919, and the powers in relation to the regulation of prices were extended by the Necessary Commodities Control Act, 1919. A "necessary commodity" means any of the following:—

- (a) Coal, firewood, coke, kerosene, petrol, or other fuel.
- (b) Gas or electricity for lighting, cooking, heating, or industrial purposes.
- (c) Any article of food or drink for man or for any domesticated animal.
- (d) Any article of clothing or apparel for man, including hats, footwear, and haberdashery.
- (e) Fertilisers.
- (f) Any article which enters into, or is used in the composition or preparation of, any of the foregoing.
- (g) Agricultural implements.
- (h) Tools of trade.
- (i) Seeds for sowing.
- (j) Any article of furniture.
- (k) Any building material.
- (l) Carriage of necessary commodities by land or sea.
- (m) Drugs, proprietary medicines, medical instruments, chemicals, disinfectants, soaps, and toilet requisites.
- (n) Oils.
- (o) Any article which the Governor, upon the recommendation of the Commission, declares in the *Gazette* to be a necessary commodity.

The Commission may declare, in relation to wholesale and retail prices, the maximum at which any necessary commodity may be sold; and may fix different prices according to differences in quality, description, or quantity sold, also for different parts of the State; may vary or revoke any price previously fixed; and may fix prices conditionally, on a sliding scale, or on a percentage basis on landed or other costs; and may fix prices which vary with profits, dividends, or wages, or in accordance with a standard, time, or other circumstance.

Any person who sells, offers for sale, or has in his possession or under his control for sale, any necessary commodities at a price higher than the declared price, is liable to a penalty of £100 or imprisonment for six months; and a similar penalty may be imposed, under certain conditions, on any person who

refuses to sell at the fixed price a reasonable quantity of any necessary commodity in which he usually trades. The Commission may recommend the forfeiture of any necessary commodity which is withheld from sale.

Since the resumption of operations in July, 1919, the Necessary Commodities Control Commission has issued proclamations in respect to prices of the following commodities:—

Bacon and Ham	Coffee	Margarine	Rolled oats
Baking powder	Cornflour	Meats (canned)	Salmon (tinned)
Benzine	Flour	Milk (fresh)	Salt
Bran and Pollard	Footwear	Milk (condensed)	Sugar
Brandy	Gas	Motor spirit	Sulphate of Ammonia
Bread	Germea	Oatmeal	Treacle
Breakfast foods	Golden syrup	Oil (liquid fuel)	Vinegar
Bricks	Jam	Peas (split)	Yeast (compressed)
Building materials	Kerosene	Pepper	
Butter	Linseed meal	Potatoes	
Calf meal	Linseed oil	Poultry food	
Cheese	Maizena	Rice	

WHOLESALE PRICES.

In view of the rapid price variations that have characterised recent years, an investigation has been made into the movement of wholesale prices in Sydney from 1911 to 1919, and index numbers have been determined with the object of providing a measure of the extent of these variations, and of the changes in the purchasing power of money during the period under review. It is hoped to give the series an extended usefulness as opportunity offers, by investigating earlier years.

Wholesale prices probably do not fluctuate so frequently nor with such uncertainty as retail prices, and, when determined, they are generally of a wider incidence. Moreover, in the special case of New South Wales, wholesale prices in Sydney in most instances determine those throughout the State.

It is held by some notable economists and compilers of index numbers that a few commodities, well chosen with regard to their importance and their representative nature, will indicate the general trend of prices. The British Board of Trade uses 45 commodities, the London "Economist" originally used 22, but now employs 44 commodities, and the London "Statist," continuing Sauerbeck's indexes, treats of 45 articles. On the other hand, the United States Bureau of Labour investigates the prices of commodities varying in number between 234 and 346, while the Canadian Department of Labour has extended its list from 230 to 272 articles.

In the present investigation the number of commodities and kinds of commodities has been reduced to 100. These have been arranged in eight groups, corresponding to those of the Commonwealth Statistician in his wholesale price index numbers for Melbourne. The groups are numbered according to their importance in 1911, and the items in each group are arranged in similar order.

As the reliableness of index numbers obviously depends upon the accuracy of the price quotations, endeavour has everywhere been made to obtain information from the most representative and reliable sources as to the prices of the most typical grades of commodities. Trade journals and newspapers, giving prominence to market reports, constitute the principal sources of information, while, in some cases, inquiries have been made from manufacturers and merchants. Monthly averages have been obtained wherever possible, and an annual average by taking the arithmetic mean of the monthly averages. This process involves a degree of error which, however, is probably small. The effect has been to state a predominant price for the year, and, in view of the fact that a system of fixed weights

has been used, the results indicate simply and solely the extent of variations in the prices themselves, and pay no regard to changes of usage. The average annual prices will be published in the "New South Wales Statistical Register for 1919-20."

The list of commodities appearing below includes the majority of items of importance in the economic life of this State. But it will be seen that articles of clothing and furniture, and most of the highly manufactured products, have been excluded. Fashion, changes of grade and quality—due to the introduction of new processes, and to numerous other considerations—mitigate against the satisfactory determination of prices for such goods.

This deficiency, however, in a large measure, has been supplied by allowing to the raw materials, which are the bases of these goods, the full consumption-weight. Thus, raw cotton and wool are listed, instead of many items of cotton and woollen goods, four grades of leather instead of boots, shoes, harness, and other manufactures of leather, and six grades of timber instead of furniture, and other manufactures of wood.

The changes in prices of raw materials, are, perhaps, more violent and more rapid than those of manufactured articles, but on the whole, the index numbers based on these probably afford a fair indication of the general movement of prices over relatively long periods of time.

The statement which follows gives the grade of the article or commodity, and the source of information as to price, together with the weights applied to the various prices.

Commodity.	Description.	Unit of Measurement.	Weight (000 omitted).	Source of Information.
<i>Group I.—Agricultural Produce.</i>				
1. Chaff	Wheat	ton	600	Daily and Weekly Newspapers.
2. Flour	150-lb. bags	ton	200	
3. Hay	Oaten	ton	300	
4. Maize		bushel	6,800	
5. Potatoes		ton	130	
6. Wheat	Milling	bushel	3,150	
7. Oats	Best Feed	bushel	2,900	
8. Bran		bushel	6,300	
9. Pollard		bushel	4,750	
10. Barley—Malting	Chevalier	bushel	800	
Feed	Cape	bushel	87	
11. Peas	Blue Fodder	bushel	135	
12. Oatmeal	In 7-lb. bags	cwt.	6	
<i>Group II.—Groceries.</i>				
1. Sugar	1A	ton	92	C.S.R. Co. W. D. and H. O. Wills' Price Lists. Trade Lists.
2. Tobacco—Cigars	3 brands	100	232	
3. Cigarettes	Capstan and Three Castles	1,000	576	
4. Tobacco	Cut and Plug	lb.	3,820	
5. Tea	Good Quality (in packets)	lb.	13,000	
6. Soap	Household	40lb.	595	
7. Jam	Taylor's Assorted	1 doz. 27-oz. tins	1,525	
8. Kerosene		case 8½ gals.	750	
9. Dried Fruits—Currants	Mildura	lb.	3,650	
10. Raisins	Sultana Mildura	lb.	5,020	
11. Tinned Fish—Herrings	Leading Brands	lb.	2,200	
12. Salmon	Karluk Talls	lb.	3,250	
13. Sardines	Norwegian, ordinary ½'s	lb.	1,050	
14. Salt—Extra Fine		cwt.	605	
15. Rock	Liverpool Red	ton	9	
16. Rice	Locally dressed	cwt.	135	
17. Candles	Local	lb.	5,000	
18. Cocoa	Manufactured, ¼ lb. tins	lb.	870	
19. Coffee	Roast & ground, Chicory 25 per cent.	lb.	1,300	
20. Matches—Wax		gross	305	Trade Journals and Daily Newspapers.
21. Wooden	Local and Swedish	gross	295	
22. Starch	Silver Star	cwt.	25	
23. Sago		cwt.	30	
24. Blue	Reckitt's	lb. or doz. figs	650	
25. Mustard	Keen's	lb.	290	
26. Macaroni		lb.	830	

Commodity.	Description.	Unit of Measurement.	Weight (000 omitted).	Source of Information.
<i>Group III.—Textiles, Leather, and Jute.</i>				
1. Cotton (American)	Middling Upland, Liverpool Prices.	lb.	102,000	Statist, London.
2. Wool (Australian)	U.K. Import values	lb.	45,000	U.K. Trade Returns
3. Leather—Sole	Brown	lb.	1,000	
4. Harness	Waxed	lb.	3,000	Trade Journals and Newspapers.
5. Kip		lb.	2,000	
6. Bag		side	400	
7. Cornsacks	Standard	doz.	790	
8. Woolpacks	11½ lb.	each	920	
9. Bran bags		doz.	380	
<i>Group IV.—Metals and Coal.</i>				
1. Iron—Pig	Local	ton	38	Trade Journals and Newspapers.
2. Rod and Bar	Square and Round	ton	22	
3. Angle		ton	22	
4. Plate, Girder		ton	19	
5. Hoop, Galvanized		ewt.	35	
6. Hoop, Black		ewt.	35	
7. Corrugated, Galvanized.	Redcliffe, 26 g.	ton	35	
8. Sheet, Black		ton	20	Contracts.
9. Fencing Wire	No. 8	ton	32	
10. Barbed Wire	No. 12, Australian	ewt.	54	Trade Journals and Newspapers.
11. Coal	Newcastle, large, in Sydney	ton	3,900	
12. Copper	Sheet	lb.	13,330	
13. Tinned Plates	I.C. Coke, 14 x 20	ewt.	260	
14. Lead—Sheet		ton	6	Trade Journals and Newspapers.
15. Piping	Coils to 2 inch	ton	5	
16. Zinc—Sheet		ewt.	65	
<i>Group V.—Building Materials.</i>				
1. Timber—Flooring	Richmond River Pine, 4 x 1	100 ft. sup.	600	Trade Lists, Daily Newspapers, and Merchants.
2. Flooring	Rimu (N.Z.), 4 x 1	100 ft. sup.	200	
3. Weatherboards	Hardwood, 7-inch, rough splayed.	100 ft. lin.	1,000	
4. Hardwood	3 x 2	100 ft. lin.	1,500	
5. Oregon	Stock sizes up to 30-foot lengths.	100 ft. sup.	800	
6. Shelving	Kauri, 12 x 1	100 ft. sup.	250	
7. Bricks	Common	1,000	367	
8. Cement	Portland, ex-bags	cask, ¼ ton	750	
9. Glass—Sheet	16 oz.	sup. ft.	5,000	
10. Plate	¼ inch	sup. ft.	900	
11. Whitelead		ewt.	90	
12. Linseed Oil	Blundell and Spence—Raw	gal.	520	
13. Tiles, Roofing	Local	1,000	10	
14. Linie		ton	34	
15. Turpentine	Pratt's	gal.	220	
16. Slates, Roofing	Purple Baugor, 20 x 10	1,000	4	
17. Plaster of Paris		cask, 310 lb.	42	
<i>Group VI.—Meat.</i>				
1. Beef—Fores		lb.	148,600	"Australian Meat Trades Review" and Metropolitan Meat Board.
2. Hinds		lb.	124,000	
3. Mutton		lb.	150,000	
4. Lamb		lb.	16,000	
5. Pork		lb.	9,000	
<i>Group VII.—Dairy Produce.</i>				
1. Butter	Good Brands	lb.	47,000	Daily and Weekly Newspapers.
2. Eggs	New Laid	doz.	12,000	
3. Bacon	Sides	lb.	14,660	
4. Condensed Milk	Gold Medal	case, 42-lb.	236	
5. Cheese	Prime Loaf	lb.	6,125	
6. Ham		lb.	3,640	
7. Honey		lb.	7,230	
8. Lard	In Bulk	lb.	1,000	
<i>Group VIII.—Chemicals.</i>				
1. Superphosphate		ton	40	Trade Journals, Newspapers, and Merchants.
2. Cream of Tartar		lb.	1,920	
3. Sulphur	Common	ewt.	87	
4. Caustic Soda	70-72 per cent and 76-77 per cent.	ewt.	38	
5. Sheep Dip	Cooper's	case (100 lb)	7	
6. Carbonate of Soda		ewt.	33	

A scientific system of weights properly determined should, in perfection, give each item just that influence on the final result which is proportional to its importance for the purpose of the particular index. Thus, in ascertaining the general rise in the prices of goods over any period of time, account must be taken of the extent to which each type of goods has been used. It is, however, not necessary to obtain an exact measure of this usage for the purpose of weighting. So long as weights are proportionate, with substantial accuracy, to the importance of the several items, the results can be shown by experiment to vary little, even when widely diverging systems of weights are compared.

The weight given to the price of each commodity in the present index was the extent to which it entered into consumption in New South Wales on the average during the three years, 1911-1913.

The procedure has been to multiply the weight of each commodity by its price in each year, to add these products, and finally to obtain the index, with the year 1911 as base, by dividing the successive yearly aggregates by the 1911 aggregate.

The arrangement of commodities into groups places together those articles which are in close economic relationship, and for which prices in general might be expected to move in sympathy, or from causes common to all. Grouping thus throws into relief the manner in which prices have varied sectionally, as well as showing the aggregate variations.

Measured by aggregate value, the proportion of commodities included of Australian origin to those imported is approximately 2 to 1. In 1911. agricultural produce carried nearly 22 per cent. of the weight of all commodities, dairy produce and meat nearly 10 per cent. each, other Australian products about 22 per cent. The approximate percentages of the remaining groups were groceries 17, textiles, etc., 14, metals and coal 14, building materials 12, and chemicals 0.8. Of the 100 commodities included, 38 may be classed as raw materials and 62 as manufactured products. Their respective weights are in the approximate proportion of 2 to 1.

The following table furnishes the results of the investigation so far as they are at present available. It should be noted that the indexes are not comparable between groups except to illustrate the respective changes in price:—

Year.	I. Agricultural Produce.	II. Groceries	III. Textiles, etc.	IV. Metals and Coal.	V. Building Materials	VI. Meat.	VII. Dairy Produce.	VIII. Chemicals.	All Commodities.*
1911	1000	1000	1000	1000	1000	1000	1000	1000	1000
1912	1346	1036	968	1001	1079	1323	1133	980	1130
1913	1074	1033	1043	1039	1107	1379	1093	1003	1093
1914	1140	1016	1009	1079	1105	1669	1128	1220	1138
1915	1655	1099	976	1270	1137	2596	1349	1426	1402
1916	1169	1245	1367	1725	1241	2696	1380	1617	1491
1917	1131	1298	2093	2358	1421	3007	1440	1956	1728
1918	1383	1405	2614	2740	1685	2618	1487	2605	1935
1919	1939	1492	2501	2454	1879	2873	1718	2089	2092

* Weighted average.

Prices generally, since 1911, have increased almost constantly, as, with the exception of 1913, each year shows an advance on the preceding year, the greatest increases being in 1915, 1917, and 1918, in that order. These rises have not resulted from the same causes. Imported goods showed comparatively small advances, until 1915, when they were 15 per cent. above the

1911 level. Interesting comparisons may be made from the following table of index numbers:—

Description.	1911.	1912.	1913.	1914.	1915.	1916.	1917.	1918.	1919.
Commodities of Australian origin.	1000	1185	1113	1188	1532	1481	1580	1675	1993
Commodities imported...	1000	1023	1054	1041	1151	1509	2003	2438	2283

The prices of Australian products increased more during the years 1911 to 1915 than those of imported articles, and the sudden rise of the index number of 1915 was due principally to a bad season, which affected the prices of agricultural produce and meat. In a large measure, therefore, the high price index of 1915 was due to seasonal causes. From 1915 to 1919, the high level of the index number was due more to imported than to Australian commodities. But Australian produce, after a slight decline in 1916, rose in each of the following years to a higher level than in 1915. The increase between the years 1918 and 1919 amounted to 19 per cent., and, though partly due to world conditions, was largely the effect of an adverse season. The increase in the prices of agricultural and dairy produce and of meat were the principal factors. Imported goods, after a steep rise of 32 per cent. in 1916, took successive leaps of 33 per cent. and 21 per cent. in 1917 and 1918. After the end of the war prices fell for a time, and the 1919 index shows a decline of 6 per cent. in the prices of imported goods.

It is estimated that the commodities treated as of Australian origin and as imported, in the above table, enter 67 per cent. and 40 per cent., respectively, into the export and import trade of the State, and that their combined export and import values constitute 55 per cent. of the total value of the oversea trade of New South Wales.

Omitting the years 1912, 1915, and 1919, which were years of more or less severe drought, it does not appear that either agricultural or dairy produce obtained the increase in prices that other commodities enjoyed. The prices realised for agricultural produce varied considerably between seasons, but in 1918, when the general index number was nearly 94 per cent. above the level of 1911, the corresponding increase for agricultural produce was only 38 per cent., and even the high prices realised in consequence of the severe drought of 1919 did not bring the index for this group quite up to the general level.

In the case of dairy produce the index number, with the exception of a decline in 1913, increased throughout, and until 1914 was practically equal to the index of all commodities. Though an increase persisted from year to year, the index number fell further and further behind that of all commodities until the year 1919, when a rise of 15 per cent. occurred. This rise again was seasonal, and left the index considerably below the index of all commodities.

The following table shows the price-levels for the principal agricultural and dairy products included in this investigation for the years 1911 to 1919:—

Year.	Wheat (Milling).	Flour.	Wheaten Chaff.	Oaten Hay.	Potatoes.	Butter (Prime).	Eggs (New Laid).
1911	1000	1000	1000	1000	1000	1000	1000
1912	1167	1114	1407	1339	1551	1129	1098
1913	1029	1017	1101	1008	856	1023	1098
1914	1178	1109	1242	1030	849	1094	1045
1915	1601	1572	1770	1746	1337	1400	1189
1916	1381	1327	973	922	1420	1400	1183
1917	1356	1302	1005	1017	994	1541	1075
1918	1356	1307	1378	1316	1091	1576	1157
1919	1463	1329	2207	2110	2587	1812	1345

Seasonal variations do not appear to have affected the prices of meat, except to make them higher in years of drought, and only in the year 1918 was there a fall. The index has in nearly every year been higher than that of any other group and reached a point 200 per cent. above the 1911 level in 1917. The high index number is, however, in some measure due to the fact that low rates were ruling in 1911. The principal increases occurred in the years 1912 and 1915. A fall of 13 per cent. took place in 1918, during the latter part of which year prices were controlled by the Commonwealth Government. But this fall was of inconsiderable magnitude compared with the prices then ruling. The further advance that accompanied the 1919 drought conditions brought the general level of meat prices to 187 per cent. above the 1911 level. The same fluctuations have not characterised the price movements of beef and mutton, as will appear from the following comparison of price-levels:—

Commodity.	1911.	1912.	1913.	1914.	1915.	1916.	1917.	1918.	1919.
Beef	1000	1283	1321	1585	2762	3049	3027	2566	3033
Mutton	1000	1438	1500	1875	2500	2813	3187	2813	2813

The unfavourable seasons in this period were 1912, 1915, and 1919. It will be observed that beef prices increased by 74 per cent. between 1914 and 1915, and by a further 10 per cent. to a level in 1916 which, with the exception of a fall of 14 per cent. in 1918, was maintained until 1919. Mutton prices advanced by 44 per cent. in 1912, 24 per cent. in 1914, 33 per cent. in 1915, 12 per cent. in 1916, and 13 per cent. in 1917. In 1918 there was a decline to the 1916 level, which was maintained during 1919.

Cotton, wool, leather, and jute together fluctuated near the 1911 level until 1915, and thereafter advanced rapidly to 1919. The principal rise occurred in 1917, with considerable increases in 1916 and 1918. The individual price movements in these commodities are shown in the following table:—

Commodity.	1911.	1912.	1913.	1914.	1915.	1916.	1917.	1918.	1919.
Cotton	1000	916	996	911	834	1278	2356	3168	2791
Wool	1000	984	1035	1041	1020	1424	1932	2183	2184
Leather	1000	1006	1096	1142	1234	1344	1594	1586	2154
Jute	1000	1471	1357	1310	1401	1785	1801	2321	2491

Until the outbreak of war, raw cotton exhibited a tendency to decline, which became accentuated in July, 1914, and the lowest point was reached by the end of the year. A very slow recovery was effected during 1915, in which year low prices ruled. Thereafter rapid advances were made until September, 1918, when there commenced a series of fluctuations tending downwards, and continuing until the following September, when a further succession of rapid advances began. The greatest rise, 84 per cent., occurred between 1916 and 1917, while between 1915 and 1918 the prices almost quadrupled. As a consequence of the purchase by the Imperial Government of Australian wool from November, 1916, and the resultant market control, it has not been found practicable to determine a satisfactory average commercial price for these years. Recourse, therefore, has been made to the average import value into Great Britain of Australian wool. This value remained near the 1911 level until 1915. In 1916 an advance of 42 per cent. is shown, and, as a result of the rising market, the Imperial purchase scheme was formulated. By its adoption prices were controlled, but values continued to rise until 1919. A steady advance in leather was evident

until 1918, by which year prices had reached a point 59 per cent. above 1911 rates. A rise of 36 per cent. occurred in 1919. The prices of jute goods, as shown by cornsacks, bran bags and woolpacks, rose by 47 per cent. in 1912, and in the following years experienced a set back, until 1915, when a continuous advance began, the principal rises taking place in 1916 and 1918.

Most of the articles in the fourth group are manufactured metals, which are largely imported. The prices of these commodities showed small advances until 1914, when a period of rapid increases began. The greatest general rise occurred in 1917, and a slight decline followed the close of the war. Coal prices, recovering from downward fluctuations between 1911 and 1913, rose rapidly until 1919. The price-levels of the more important items of this group are shown in the following table:—

Commodity.	1911.	1912.	1913.	1914.	1915.	1916.	1917.	1918.	1919.
Pig-iron (local)	1000	1020	1033	1020	1250	2201	2296	1998	2074
Girder plate	1000	1028	1114	1149	1221	2177	4441	5998	3728
Corrugated Gal. Iron	1000	1070	1082	1117	1581	2135	2904	3462	3279
Copper (sheet)	1000	1031	1095	1127	1286	2095	2841	3048	2731
Coal	1000	982	970	1018	1066	1168	1383	1533	1670

The movement in the prices of building materials has been comparatively regular, but considerable advances took place in 1917, 1918, and 1919, viz., 14 per cent., 18 per cent., and 12 per cent. respectively. The greatest increases were in glass, linseed oil, whitelead, and imported timbers. The following table of price-levels furnishes a comparison of the principal items included in the group:—

Commodity.	1911.	1912.	1913.	1914.	1915.	1916.	1917.	1918.	1919.
Local Hardwood... ..	1000	1109	1151	1132	1119	1167	1312	1458	1776
Local Pine	1000	1075	1102	1079	1071	1201	1311	1653	1842
N.Z. Pine	1000	1094	1113	1119	1145	1214	1387	1694	1901
Oregon	1000	1103	1218	1160	1282	1526	1962	2545	2865
Bricks	1000	1066	1071	1071	1071	1071	1166	1191	1252

During the whole period under review groceries have shown the smallest increases of any group. The index advanced but little until 1915, and manifested signs of decline from 1911 to 1914. In 1916 it rose 11 per cent., and in 1918 a further 9 per cent., the total rise between 1911 and 1919 being 49 per cent. Increases were steadily maintained from 1914 onwards, and appear to have followed rather than accompanied the general advances. Comparing in each case with the year 1911, the increases in grocery prices occurred three years later than the general advance. Not until 1918 and 1919 did the grocery index reach the position occupied by the index of all commodities in 1915 and 1916, respectively. The yearly price-levels of the more important commodities of the group are shown below:—

Commodity.	1911.	1912.	1913.	1914.	1915.	1916.	1917.	1918.	1919.
Sugar	1000	1078	1044	985	1063	1337	1337	1337	1337
Tobacco	1000	1000	1000	1000	1076	1083	1168	1203	1349
Tea	1000	1000	1000	1000	1029	1029	1037	1102	1139
Soap	1000	1000	1000	1000	1000	1000	1132	1319	1513
Jam	1000	1098	1146	1146	1186	1401	1345	1432	1480
Kerosene	1000	1058	1114	1092	1138	1575	1851	2183	2299

The following statement shows the wholesale price index numbers for various parts of the British Empire and for the United States of America,

with 1911 as common base, and affords an instructive comparison of the manner in which wholesale prices varied under the influence of war conditions:—

Year.	Sydney, New South Wales. [Bureau of Statistics.]	Melbourne, Victoria. [Common- wealth Bureau of Census and Statistics.]	New Zealand. [Census and Statistics Office.]	Canada. [Department of Labour.]	United Kingdom. [Board of Trade.]	United States of America. [Bureau of Labour.]
Number of Commodities.	100	92	106	272	45	Variable. 234-346
1911	1000	1000	1000	1000	1000	1000
1912	1130	1170	1047	1055	1050	1062
1913	1093	1088	1057	1064	1065	1052
1914	1138	1149	1084	1068	1071	1042
1915	1402	1604	1276	1162	1315	1052
1916	1491	1504	1388	1429	1705	1302
1917	1728	1662	1564	1860	2220	1831
1918	1935	1934	1820	2184	2444	2050
1919	2092	2055	1847	2301	2701	2238

It will be observed that, of the total increase from 1911 to 1919, the greatest part occurred between the years 1916 and 1918; that the rise in price levels was less marked in the countries more remote from the centre of conflict; and that in no case has there been a general decline in prices since 1916. In Great Britain prices attained twice their 1911 level in 1917, in America and Canada in 1918, while in Australia this did not occur until 1919, and it had not then occurred in New Zealand. Until 1915 wholesale prices advanced more slowly outside Australia than within, and, with the exception of the United Kingdom, this was the case also in 1916. In 1917 and following years all countries except New Zealand, show a greater increase in prices than Australia.

The marked difference between the index numbers of Sydney and Melbourne in 1915 was largely due to seasonal causes. The price level of agricultural produce rose in that year to 2162 in Melbourne, while in Sydney it was 1655.

SYDNEY RETAIL PRICES.

The following table shows the average retail prices in Sydney of various commodities at intervals from 1890 to 1910. The quotations are based on the prices charged in the shops in the metropolitan district. The 1905-6 edition of the Year Book contains the average prices of commodities in each year from 1870 to 1900, and the 1913 edition the average prices in each year from 1900 to 1910:—

Commodity.	1890.	1895.	1900.	1905.	1910.
	s. d.	s. d.	s. d.	s. d.	s. d.
Bread ... 2 lb. loaf	0 3½	0 2¾	0 3	0 2¾	0 3½
Tea ... lb.	1 6	1 6	1 4	1 3	1 3
Coffee ... "	2 0	1 9	1 6	1 6	1 6
Sugar ... "	0 3½	0 2½	0 2½	0 2½	0 2½
Rice ... "	0 4	0 2½	0 2½	0 2½	0 2½
Oatmeal ... "	0 3	0 2	0 2½	0 2½	0 2½
Starch ... "	0 5	0 4	0 3½	0 5	0 5
Soap ... "	0 3½	0 2	0 3	0 3½	0 3½
Potatoes ... cwt.	6 0	4 3	6 9	10 6	7 6
Butter ... lb.	1 0	1 0	0 11	1 1	1 1
Cheese ... doz.	0 8	0 8	0 7½	0 8	0 9
Eggs ... quart	1 6	1 0	0 11	1 0	1 3
Milk ... lb.	0 4	0 4	0 4	0 4	0 4½
Bacon ... lb.	1 0½	0 7½	0 7½	0 9	0 10
Beef, fresh ... "	0 4	0 3	0 3½	0 5½	0 5½
Mutton ... "	0 3½	0 2½	0 3	0 2¾	0 2¾

Since the beginning of 1911 particulars are available regarding a larger number of articles, and returns of prices are now collected monthly. The mean of the monthly prices during 1911 and subsequent years is shown in the following statement:—

Commodity.	Average Retail Prices, Sydney.				
	1911.	1916.	1917.	1918.	1919.
Bread per 2 lb. loaf	s. d. 0 3·5	s. d. 0 4	s. d. 0 4	s. d. 0 4	s. d. 0 4·2
Flour 25-lb. bag	2 8	3 6·1	3 4·1	3 7·4	3 9·9
Tea lb.	1 3·5	1 6·1	1 6·2	1 6·7	1 8·1
Coffee and Chicory "	1 5	1 6	1 6	1 6·1	1 7·8
Cocoa ½ lb.	0 4·2	0 4·6	0 5·4	0 6·9	0 8
Sugar lb.	0 2·7	0 3·5	0 3·5	0 3·5	0 3·5
Rice "	0 2·7	0 3·2	0 3·3	0 3·4	0 5·4
Sago "	0 2·7	0 3·2	0 3·9	0 4·7	0 5·4
Jam (Australian) "	0 4·4	0 6	0 5·7	0 5·7	0 6
Oatmeal 5 lb.	1 0·5	1 2	1 1·4	1 5·6	1 10·6
Raisins lb.	0 6·2	0 7·7	0 7·7	0 8·2	0 8·7
Currants "	0 7	0 9·1	0 8·3	0 8·6	0 9
Starch "	0 5·5	0 6·4	0 7	0 6·9	0 7·6
Blue doz. squares	0 9	0 9·2	0 9·5	1 3·6	1 5
Candles lb.	0 7	0 8	0 9·3	0 10·4	0 11·4
Soap "	0 3	0 3·4	0 4	0 4·4	0 5·3
Potatoes 14 lb.	1 0·2	1 6·5	1 4	1 5·2	2 8·9
Onions lb.	0 1	0 1·1	0 1·9	0 2·8	0 2·7
Kerosene gal.	0 11·1	1 6·7	1 10·8	2 2·7	2 3·5
Milk qt.	0 4·3	0 5·5	0 6	0 6	0 7
Butter lb.	1 1·5	1 5·3	1 6·7	1 7	1 9·9
Cheese—New "	0 8·7	1 0·1	} 1 0·6	1 1·3	1 3·8
Matured "	0 10	1 0·2			
Eggs—New laid doz.	1 6·5	1 9·5	1 7·5	1 8·8	2 0·3
Fresh "	1 3·5	1 6·4	1 4·7	1 5·8	1 9·2
Bacon—					
Middle cut lb.	0 10·5	1 4·5	1 4·3	1 4·5	1 6·3
Shoulder "	0 7	1 0·4	0 11·5	0 11·5	1 2
Ham "	1 1	1 5·5	1 5·4	1 5·9	1 8·1
Beef (fresh)—					
Sirloin "	0 4·5	0 11·1	0 11·1	0 10·2	0 11·1
Rib "	0 3·8	0 9·5	0 9·5	0 9·2	0 9·4
Gravy beef "	0 3	0 7·6	0 8	0 7·2	0 6·3
Steak—Rump "	0 7	1 1·8	1 2·6	1 2·8	1 4
Shoulder "	0 3·5	0 8·5	0 9	0 8·8	0 9·1
Beef (corned)—Round "	0 4	0 9·6	0 9·5	0 9	0 9·6
Mutton—					
Leg "	0 3	0 7·8	0 8·2	0 7·8	0 7·8
Shoulder "	0 2·5	0 6·7	0 7·1	0 6·8	0 7·2
Loin "	0 3·8	0 7·9	0 9·1	0 8·4	0 8·6
Neck "	0 3	0 7	0 7·9	0 6·9	0 7
Chops—Loin "	0 4·2	0 9	0 10	0 10	0 10·4
Leg "	0 4	0 8·6	0 9·6	0 9·1	0 9·3
Neck "	0 3·5	0 7·3	0 7·9	0 6·8	0 7·4
Lamb—					
Fore-quarter "	1 9*	0 7·7	0 8·6	0 7·8	0 7·8
Hind-quarter "	2 9*	0 8·7	0 9·9	0 9·9	0 9·7
Pork (fresh)—					
Leg "	0 7·8	1 0·1	1 1·1	1 1·3	1 1·2
Chops "	0 8·5	1 0·1	1 3·5	1 2·6	1 2·1

* Each.

The prices of practically all the commodities increased considerably during 1919, and the monthly price levels shown on a later page indicate that the rise has been even greater since the end of 1919.

The above tables are useful for comparative purposes, in regard to the cost of living, but the figures do not disclose a most interesting feature in a history of prices, namely, the fluctuations during the year, which are pronounced, especially in the case of perishable produce. For such information readers are referred to the "N.S.W. Statistical Register," where the average monthly prices are shown.

HOUSE RENTS.

The average householder with a moderate income spends a considerable portion of his income on rent; any fluctuation in rents therefore affects largely the cost of living.

A review of the rents of houses in Sydney and suburbs since 1863 shows that for the first seven years of the period the rents did not vary greatly, though there was a tendency to increase in regard to the larger houses. In 1870 the average weekly rents, according to the size of the houses, were as follows:—Under 3 rooms and kitchen, 7s. 6d.; 3 rooms, 10s. 6d.; 4 rooms, 12s. 6d.; 5 rooms, 16s. 6d. Industrial conditions were unfavourable during the three years 1871–73 and the rents declined, but in 1875 they commenced to rise with the increase in immigration, and in 1883 the average rents for the classes of houses quoted above were 8s. 3d., 12s., 15s., and 18s. 9d. respectively. During the succeeding five years the rents of the smaller houses increased slightly, while the larger houses became cheaper; from 1889 to 1892 the conditions were reversed, and in the latter year the average rents were:—Under 3 rooms and kitchen, 7s. 6d.; 3 rooms, 10s. 6d.; 4 rooms, 15s.; and 5 rooms, 18s. 6d. In 1894 the effects of the industrial crisis caused the rents of the smallest houses to increase by about 1s. a week, and the houses of four rooms and over became 3s. cheaper than in 1892.

In 1899 the rents commenced to increase, and the upward movement continued until 1914; at first the increase affected only the smaller houses, and the rents of the five-roomed houses did not vary until 1905. In 1911 there was a marked increase in regard to all classes of dwellings, and the average rents were as follows:—Under 3 rooms, 11s. 3d.; three rooms, 14s. 3d.; 4 rooms, 17s.; and 5 rooms, 20s.

Particulars below show the average amounts paid by tenants of various types of houses in Sydney and suburbs during each of the past six years. The figures represent the average predominant rents paid for each class of house; the range of rents varies considerably according to locality, position, and class of building; proximity and means of speedy transport to the city are important factors in respect to rents in the suburbs:—

Class of House.	1914.		1915.		1916.		1917.		1918.		1919.	
	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.
Under 3 rooms and kitchen ..	12	6	12	3	12	3	12	3	12	6	12	9
3 rooms and kitchen	15	6	14	6	14	9	14	9	15	6	15	9
4 „ „ „	18	6	18	0	18	0	18	0	18	6	19	0
5 „ „ „	22	0	20	9	20	6	20	6	21	9	22	6
6 „ „ „	26	6	25	0	24	6	24	6	25	0	25	9
Average for all houses	20	0	19	0	19	0	19	0	19	6	20	0

During the ten years prior to the outbreak of war, rents in Sydney and suburbs increased by over 40 per cent., but the war had a steadying effect, and the next three years showed a slight decrease. Regulations were issued by the Commonwealth Government under the War Precautions Act, prohibiting any increase in the rent of a house occupied by a member of the Expeditionary Forces, or by a parent or female dependent of a member, except by leave of a competent Court. These regulations and the operations of the Fair Rents Court in Sydney tended to keep rents from rising above pre-war level.

In 1918, however, the rents increased, and the upward movement has since been continuous, owing to an increasing shortage of houses. It is estimated that at the end of 1919 there was a shortage in Sydney of 17,000 houses, the deficiency being attributed to the practical cessation of investment building on account of the high price of both materials and labour.

The following comparison shows that since 1914 there has been an increase of 78 per cent. in the cost of building in Sydney a plain brick cottage with 4 rooms, kitchen, bathroom, and verandah, assuming that the quantity of materials and of labour as in the month of July was equal in both years:—

Particulars.	1914.		1920.		Increase, 1914 to 1920.	
	Cost.	Proportion per cent.	Cost.	Proportion per cent.	Total.	Per cent.
	£		£		£	
Materials	264	66	488	69	224	85
Labour	134	34	221	31	87	65
Total	398	100	709	100	311	78

With the object of providing adequate housing, the Government of New South Wales has instituted a scheme for assisting people to build dwellings, and the Federal Government assists in providing houses for returned sailors and soldiers and their female dependents; particulars are given in the chapter relating to Social Condition.

Fair Rents Court.

The Fair Rents Act was passed on the 29th December, 1915, for the purpose of determining the fair rental of dwellings valued at less than £156 per annum. The Act provided for the establishment of Fair Rents Courts, consisting of a Stipendiary or Police Magistrate, and for the appointment of Registrars and other necessary officers.

The operations of the Fair Rents Act may be applied to any localities proclaimed by the Governor, but up to the present it has been proclaimed in the metropolitan area only.

In order to determine the fair rent, the Court must ascertain the capital value of the dwelling, which is the unimproved capital value of the land plus the estimated cost of erection as at the date of the application, less a fair sum for depreciation.

The fair rent is fixed on the capital value at a rate not less than that charged on overdrafts by the Commonwealth Bank of Australia, and not more than $2\frac{1}{2}$ per cent. above such amount, plus rates, taxes, repairs, maintenance, insurance, and depreciation. But, excepting where circumstances which render an increase equitable are proved, the fair rent may not exceed the rent which was charged for the dwelling on 1st January, 1915.

The amount fixed by the Court remains in force from six months to three years when specifically stated, but if no special period be mentioned the duration is three years. The Act does not apply to houses leased for a period exceeding three years.

The first sitting of the Fair Rents Court in Sydney was held on the 13th March, 1916.

Particulars of cases determined by the Court are shown in the following tables, but for several reasons they cannot be regarded as a satisfactory basis for conclusions as to the effect of the Fair Rents Act upon house rents. For instance, in cases where the tenant applies promptly upon receiving notice of the landlord's intention to increase the rent, the "fair rent" as determined by the Court may be recorded as an increase on the rent at date of application, while it is a reduction when compared with the proposed rental against which the action was directed.

The number of applications dealt with during the four years ended 31st March, 1920, are shown in the following statement:—

Particulars.	1916-17.	1917-18.	1918-19.	1919-20.	Total.
Cases withdrawn or struck out	141	53	100	225	519
Rent fixed as at date of application ...	137	49	36	47	269
„ Increased	7	19	132	254	412
„ Decreased	294	102	65	141	602
Total	579	223	333	667	1,802

The houses, in respect of which the 1,802 applications were made, were situated in the following districts:—City, 246. Suburbs—North western, including Balmain, Leichhardt, Annandale, and Glebe, 179; West Central, including Newtown, Erskineville, and St. Peters, 129; East Central, including Redfern, Waterloo, Alexandria, and Mascot, 145; Eastern, including Paddington, Randwick, Waverley, and Woollahra, 509; Western, including Ashfield, Burwood, Enfield, Drummoyne, Marrickville, and Petersham, 287; Southern, including Canterbury, Bexley, Hurstville, and Kogarah, 75; and Northern, including North Sydney, Mosman, Willoughby, Lane Cove, and Manly, 232.

The majority of dwellings affected by the decisions of the Court were small, and the rents did not exceed £1 5s. per week. The average of the rentals reviewed by the Court in the year ended March, 1920, was £1 ls. per week as compared with 19s. 2d. in 1916-17, 18s. 7d. in the following year, and 19s. 11d. in 1918-19. With few exceptions, the period of adjustment was twelve months. In the following statement the figures

are shown for the year 1919-20, and for the period of four years since the commencement of the Act.

Rent (at date of Application).	Year ended 31st March, 1920.				Total to 31st March, 1920.			
	Fixed as at date of Appl'n.	Increased.	Reduced.	Total.	Fixed as at date of Appl'n.	Increased.	Reduced.	Total.
10s. and under ...	3	2	...	5	10	2	13	25
10s. 6d. to 12s. 6d.	1	18	3	22	12	26	48	86
13s. to 15s. ...	6	38	20	64	44	54	162	260
15s. 6d. to 17s. 6d.	7	25	20	52	44	66	106	216
18s. to 20s. ...	17	43	32	92	64	88	103	255
20s. 6d. to 25s. ...	10	89	36	135	55	123	92	270
25s. 6d. to 30s. ...	1	34	17	52	22	46	33	101
30s. 6d. to 40s. ...	1	3	8	12	11	3	25	39
40s. 6d. to 50s. ...	1	2	4	7	7	4	12	23
50s. 6d. to 60s. ...	...	...	1	1	...	...	8	8
Total	47	254	141	442	269	412	602	1,283

During 1919-20 the Court granted increases in 57 per cent. of the decisions, and reductions in 32 per cent.; the total increases to 31st March, 1920, represented 32 per cent. and the total reductions 47 per cent.

The amount of reduction and of increase in the rents of dwellings during the year 1919-20 may be seen in the following statement:—

Amount of Reduction, or of Increase.	Rents Increased.	Rents Reduced.	Amount of Reduction, or of Increase.	Rents Increased.	Rents Reduced.
6d. and under.	36	23	3s. 6d. and under 4s.	14	16
1s. „ 1s. 6d.	56	35	4s. „ 5s.	33	11
1s. 6d. „ 2s.	31	6	5s. and over	20	12
2s. „ 2s. 6d.	42	6			
2s. 6d. „ 3s.	16	15			
3s. „ 3s. 6d.	6	17	Total ...	254	141

The reductions amounted to a sum of £17 4s. 8d. per week, which represents an average of 10·9 per cent., or 2s. 4d. per house per week. In 254 cases the rents were increased, the total increases amounting to £30 0s. 8d. per week, equal to 11·5 per cent. or 2s. 4d. per house.

The weekly rents reviewed by the Court during 1919-20 amounted to a sum of £464 5s., the net increase being £12 16s. or 2·8 per cent.

COST OF LIVING SINCE 1914.

Several investigations regarding the cost of living have been made by the industrial tribunals in connection with the regulation of wages. The first inquiry was conducted by the Commonwealth Court of Conciliation and Arbitration in 1907, in a case under the Excise Tariff Act, when the manufacturer of “Harvester” machines at Sunshine, Victoria, was required to show that the wages paid to his employees were “fair and reasonable.”

The standard adopted by the Court was based on the needs of a man, his wife and a family of three children, *i.e.*, one child more than in the State Court. In reference to this matter, the President of the Commonwealth Court, Mr. Justice Higgins, has stated “I had no evidence on the subject of

the actual average; and, as it would be absurd to make the minimum wage depend on the number of persons in each employee's family, as it would also handicap the man with many children in seeking employment, I thought that a family of 'about five' might fairly be taken as the kind of family to be brought into the calculations."

The evidence submitted in the *Harvester* case included a small number of household budgets of the workers' wives; the usual rent appeared to be 7s. per week, and the average expenditure for food, rent, and fuel, £1 12s. 5d. The Court decided that 42s. a week was the lowest wage which could be regarded as fair and reasonable for unskilled labourers.

It is the usual practice in the Commonwealth Court to use this rate as a basis of its awards as to wages, by varying it in accordance with the Commonwealth Statistician's index numbers of food and groceries and rent combined; but when different rates are fixed for various localities the basic wage for Sydney is generally 3s. per week above the Melbourne rate.

The first inquiry in New South Wales into the cost of living was conducted in 1913 by Mr. Justice Heydon, of the Court of Industrial Arbitration. The living wage was defined by him as the standard wage which will do neither more nor less than enable a worker of the class to which the lowest wage would be awarded, to maintain himself, his wife, and two children—the average dependent family—in a house of three rooms and a kitchen, with food, plain and inexpensive, but quite sufficient in quantity and quality to maintain health and efficiency, and with an allowance for the following other expenses:—fuel, clothes, boots, furniture, utensils, rates, life insurance, savings, accident or benefit societies, loss of employment, union contributions, books and newspapers, train and tram fares, sewing machine, mangle, school requisites, amusements and holiday, intoxicating liquors, tobacco, sickness and death, domestic help, unusual contingencies, religion or charity.

The evidence placed before the Court included statistical information supplied by the Government Statistician, budgets collected by employers and employees, municipal records, and returns supplied by house and estate agents. The decision of the Court, announced in February, 1914, was that the living wage in Sydney, calculated on the basis shown above, was not more than £2 8s. per week.

This standard wage was increased by the Court on the 17th December, 1915, to £2 12s. 6d. per week, and on the 20th August, 1916, to £2 15s. 6d. per week.

In 1918 the New South Wales Board of Trade was established, one of its functions being to make annual public investigations as to the increase or decrease in the average cost of living, in order to determine the living wage for adult workers.

At its first inquiry in connection with the determination of the living wage for men in the metropolitan area, the Board decided to adopt as a starting point the standard wage as declared by the Court of Industrial Arbitration in February, 1914, and to ascertain the increase or decrease in the average cost of living since that time. By increasing this amount to compensate for the decrease in the purchasing power of money calculated on the cost of food and groceries and rent, it was found that the living wage proper was £2 18s. 6d. per week in September, 1918, but in view of the abnormal conditions of the time the Board added another 3d. per day, and declared the standard wage to be £3 per week.

This method of calculating the increase in the cost of living was based on the assumption that the cost of other items of expenditure varied in the same ratio as the cost of food and rent. At its second annual inquiry in relation to the living wage for men in Sydney, the Board considered that this assumption was unwarranted and decided to examine separately each element of the cost of living, namely, food and groceries, rent, fuel and light, clothing and boots, miscellaneous items.

For food and groceries the Board, after perusal of the judgment of 1914, took 19s. 1d. as the cost at that date of the food regimen, and added 1s. 1d. as a further allowance for fruit and vegetables; to the total, £1 0s. 2d., the index number of food prices was applied and the allowance for food and groceries was assessed at £1 11s. 4d.

In regard to rent, the Board discarded the basis used in former judgments and adopted the average rental of four-roomed houses in Sydney and suburbs during the six months January to June, 1919, namely, 15s. 7d.

The method of determining the allowances for fuel and light and for clothing and boots was not disclosed in the declaration; it was stated that the Board "based its findings as to these items on the evidence at the inquiry, and upon inferences from relevant statistics, and assessed them as follows:—fuel and light 3s., clothing and boots, 14s."

In reference to miscellaneous items, the Board compared the results of various household budget inquiries in Australia and in America, and arrived at the conclusion that it seemed impossible to reject the suggestion that the miscellaneous expenditure of a civilised family represents at least 20 per cent. of the total expenditure. Nevertheless, the amount allocated to these items, 13s. 1d., represents 17 per cent. of the living wage.

In October, 1920, the Board of Trade declared the living wage to be £4 5s. per week, which represents an increase of 8s., or 11·4 per cent., over the living wage declared in the previous year; the methods used in arriving at this determination were not disclosed. In delivering judgment the President of the Board stated that prices had increased by about 18 per cent. and the purchasing power of money was at least 15 per cent. less than when the last declaration had been made.

The increase in the living wage, as fixed by the wage-regulating tribunals of New South Wales since 1914, is shown below:—

Date.	Living Wage for Adult Males in the Metropolitan Area.	Increase since 1914.	
		Amount.	Per cent.
1914—February	£ s. d. 2 8 0	£ s. d. ... ..	... ..
1915—December	2 12 6	4 6	9·4
1916—August	2 15 6	7 6	11·6
1918—September	3 0 0	12 0	25·0
1919—October	3 17 0	1 9 0	60·4
1920—October	4 5 0	1 17 0	77·1

It is interesting to compare the living wage for Sydney with that in the metropolitan areas of the other Australian States. In Queensland and South Australia the standard wage for unskilled workers is fixed by an industrial court; in Victoria and Tasmania there is no uniformity in regard to the determinations of the Wages Boards, the rates being fixed by collective bargaining between the employers and the employees in the industry concerned, and the wages for unskilled labour vary accordingly. Under the industrial legislation of Western Australia and of the Commonwealth the court adjudicates in cases of disputes only, and a rate is assessed for each case, having regard to any special conditions of the industry, *e.g.*, continuity or intermittency of employment, or the comparative laboriousness of the work.

The rates shown in the following statement for Melbourne and Perth are those awarded for unskilled labour in cases determined at or about the respective dates to which the table refers; the figures for Hobart represent the average of the rates for unskilled workers under the Wages Board determinations, which were in force in 1914 and in 1920. In the Commonwealth Court the basic rate, 51s., was adopted for an award for employees in the tanneries of New South Wales, Victoria, and Queensland in May, 1914, and again in September, 1914, for workers in felt hat factories in New South Wales, Victoria, and Queensland. In March, 1920, in the fruit-workers case, the President stated that the basic rate for Australia, as a whole, calculated in accordance with the methods adopted by the Court, was 71s. per week, the figure for the State of New South Wales being 75s.

Metropolitan Area.	Living Wage—Adult Males.		
	1914 (July).	1920.	
		Rate.	Date of Determination.
Sydney	£ s. d. 2 8 0	£ s. d. 4 5 0	October.
Melbourne	2 5 0	3 10 0	July.
Brisbane	2 2 0	3 17 0	March.
Adelaide	2 8 0	3 15 0	July.
Perth	2 14 0	3 12 0	January.
Hobart... ..	2 8 0	3 9 0	July.
Commonwealth	2 11 0	3 11 0	March.

In calculating the increase or decrease in the cost of living, considerable importance is attached to the proportion which each element of family expenditure bears to the total expenditure. Statistics relating to house rents and to the prices and consumption of the principal articles of diet are collected regularly, so that reliable estimates may be made in regard to the cost of food and rent, on which the wage-earner spends approximately 60 per cent. of his income. Data relating to clothing are not readily obtainable owing to the wide range of articles and frequent changes in quality and design, and a satisfactory method of recording variations in the cost of the numerous items of miscellaneous expenditure has not been devised.

The following statement shows the relative importance of each element of the living wage in Sydney, as declared in 1919, in comparison with official standards in other countries :—

Expenditure Group.	Sydney Living Wage (Board of Trade), Oct. 1919.	United States. Cost of Living Inquiry (National Conference Board), 1919.	Canada, 1918, (based on pre-war Budget).	United Kingdom, 1920. (based on pre-war standard).
	per cent.	per cent.	per cent.	per cent.
Food and Groceries	41	43	39	60
Rent	20	18	14	16
Fuel and Light	4	6	9	8
Clothing	18	13	19	12
Miscellaneous	17	20	19	4
Total	100	100	100	100

An analysis of the expenditure of a worker's family, representing the average obtained from pre-war budgets in several countries, was published in previous issues of this Year Book, the percentages being as follows :—Food and groceries 46, rent 25, fuel and light 5, clothing 13, and miscellaneous 11. In comparison with this standard, the Sydney living wage of 1919 shows much higher proportions of expenditure on clothing and miscellaneous items, viz., 18 and 17 per cent. The percentages in respect of the other groups were much lower, particularly rent, which declined from 25 per cent. to 20 per cent.

The analysis of expenditure in the United States relates to wage-earners in average American communities, and was determined from the results of government and other investigations for the purpose of a cost of living survey, conducted by the National Industrial Conference Board. It is comparable with the analysis of the Sydney living wage. The expenditure on food and rent represented 61 per cent. of the total in each case, but the proportions were lower in Sydney for fuel and for miscellaneous items, and higher for clothing. The proportions of expenditure in Canada were determined from studies made regarding family expenditure in Canada and the United States, a budget being planned on the basis of a family living on the average civil service salary (approximately 1,000 dollars) in Canada in 1909. On account of the cold climate a relatively high expenditure on fuel and clothing is necessary in order to maintain a fair standard of comfort.

The proportions of expenditure in the United Kingdom relate to a worker's family; they are based on a pre-war standard, and are used by the Department of Labour in calculating the increase in the cost of living in the United Kingdom. The analysis bears little resemblance to the other standards. Food expenditure absorbs the high proportion of 60 per cent. of the worker's income, but miscellaneous expenditure represents only 4 per cent.

Index Numbers—Retail Prices.

The following table shows the variations in retail prices, measured by index numbers, of food and groceries and of rent, in Sydney, in each month since July, 1914, the month before the outbreak of war. The index numbers were determined from the prices of 40 commodities in everyday use, the articles being as shown in the table on page 490, omitting cocoa and lamb. The prices in July, 1914, weighted on the consumption basis, were called 1000, and related to the prices, similarly weighted, in the subsequent months. The table affords also a measure of the variations in the purchasing power of money. Information regarding rent is

obtained quarterly and the monthly figures were interpolated after assuming that the average rent for the quarter was the rent for the middle month of the quarter:—

Month.	Food and Groceries.	Rent.	Food and Rent combined.	Month.	Food and Groceries.	Rent.	Food and Rent combined.
1914.				1917.			
July ...	1000	1000	1000	August ...	1381	942	1180
August ...	998	1000	999	September ...	1410	942	1196
September ...	985	1000	992	October ...	1405	946	1196
October ...	981	1000	990	November ...	1377	950	1182
November ...	967	988	977	December ...	1359	954	1174
December ...	1027	975	1003	1918.			
1915.				January ...	1372	959	1183
January ...	1049	959	1008	February ...	1376	963	1187
February ...	1040	954	1001	March ...	1362	967	1181
March ...	1057	950	1008	April ...	1352	975	1180
April ...	1082	946	1020	May ...	1362	975	1185
May ...	1119	946	1040	June ...	1351	975	1179
June ...	1175	946	1071	July ...	1343	971	1173
July ...	1269	946	1121	August ...	1311	971	1155
August ...	1391	946	1188	September ...	1328	971	1165
September ...	1332	946	1156	October ...	1368	975	1189
October ...	1338	946	1159	November ...	1397	979	1206
November ...	1273	942	1122	December ...	1426	983	1224
December ...	1300	938	1134	1919.			
1916.				January ...	1470	988	1250
January ...	1288	938	1128	February ...	1494	988	1263
February ...	1328	938	1148	March ...	1512	988	1273
March ...	1313	938	1142	April ...	1507	988	1270
April ...	1293	942	1133	May ...	1519	992	1278
May ...	1310	942	1142	June ...	1523	996	1282
June ...	1313	942	1144	July ...	1529	1000	1288
July ...	1336	942	1156	August ...	1534	1004	1292
August ...	1316	942	1145	September ...	1518	1008	1286
September ...	1316	942	1145	October ...	1585	1012	1324
October ...	1306	942	1140	November ...	1639	1021	1357
November ...	1316	942	1145	December ...	1634	1029	1358
December ...	1310	942	1142	1920.			
1917.				January ...	1651	1046	1374
January ...	1313	942	1144	February ...	1698	1062	1408
February ...	1338	942	1157	March ...	1708	1079	1421
March ...	1343	942	1160	April ...	1812	1087	1481
April ...	1348	942	1163	May ...	1831	1104	1499
May ...	1324	942	1150	June ...	1912	1120	1551
June ...	1316	942	1145	July ...	1961	1120	1577
July ...	1321	942	1148				

From the above table it will be seen that the effects of war were not felt by housekeepers until early in 1915. In that year the price-level of food rose from 1040 in February to 1391 in August, then declined gradually to 1300 in December, and it is remarkable that throughout 1916 the prices showed very little variation, so that in December they were at practically the same level as at the end of the previous year. In 1917 the price level remained fairly constant until it rose in August and in September to 1410, while a decline to 1359 occurred during the last two months of the year. During 1918 the prices did not vary greatly until the latter half of the year, when a decline in July and August brought them back to the level of December, 1916. Then a steady rise commenced and continued until in December, 1919, the prices

were 63 per cent. above the pre-war level. During 1920 the upward movement was accelerated, and in July, 1920, the increase amounted to 96 per cent.

Rents were not affected immediately by the outbreak of the war, but they began to decline slowly in November, 1914, reaching the lowest point at the end of 1915, when they were about 6 per cent. lower than in July, 1914. For two years there was only slight variation, then they commenced to rise, but did not regain the pre-war level until July, 1919. During the twelve months ended June, 1920, there was a rise of 12 per cent.

The index number for food and rent combined rose by 57·7 per cent. during the period under review, and it is curious to note that there was a greater increase in the twenty-one months after the signing of the armistice than during the fifty months of war.

The following statement shows the extent to which the war affected the retail prices of the principal articles of food in other countries; the particulars for the Australian States relate to the capital cities. The figures for the oversea countries have been taken from the "London Labour Gazette" and other official sources; those relating to France and to Sweden include fuel and lighting:—

Country.	Percentage Increases in Retail Food Prices since July, 1914.					
	July, 1915.	July, 1916.	July, 1917.*	July, 1918.	July, 1919.	July, 1920.
New South Wales	27	31	32	34	53	96
Victoria	40	34	29	33	44	108
Queensland	35	29	31	41	63	99
South Australia	31	24	12	25	36	52
Western Australia	16	20	13	11	42	63
Tasmania	24	25	24	34	40	84
Australia	31	30	26	31	47	94
India (Calcutta)	8	10	16	31*	51*	70
New Zealand	12	19	27	39	44	67
South Africa	7	16	28	34	39	97
Holland (Amsterdam)	—	—	42	76	110	117
United States	(-) 2	9	43	64	86	115
Canada	5	14	57	75	86	127
Switzerland†	19	41	78	122	150	137‡
United Kingdom	32	61	104	110	109	158
Denmark	28	46	66	87	112	154
Sweden	24	42	81	168	210	197
Norway	—	60	114*	179	189	219
Italy (Rome)	(-) 5	11	37	103	106	218
France (Paris)	22	32	83	106	161	273

* August. † June. ‡ March.

The comparison shows that prices have risen considerably in all the countries enumerated, the lowest increases being in India, New Zealand, South Africa, and Australia.

In order to demonstrate the effect of the increased prices in relation to the amount consumed, the weekly food bill of a family of five persons for the principal commodities in 1914 and in 1919 is shown below.

Fruit and vegetables, except potatoes, have been excluded on account of the impossibility of obtaining prices which would be properly comparable, principally owing to seasonal variations and to the difficulty of estimating the consumption.

It is assumed that each member of the family—a man, his wife and three children—consumed, on the average, equal quantities of food, though it is probable that the food consumption of an adult woman is about 80 per cent. of the quantity consumed by a man, and that the consumption by young children is still less. The statement is based upon the average rate of consumption as shown on a previous page, except in the case of flour and sugar, where allowance has been made for the quantities included in bread, jam, etc. :—

Article.	Unit of Quantity.	1914.			1919.		
		Weekly Consumption.	Average Price.	Weekly Cost.	Weekly Consumption.	Average Price.	Weekly Cost.
Beef	lb.	12·8	d. 5·3	s. d. 5 7·8	7·8	d. 10·0	s. d. 6 6
Mutton	lb.	8·1	4·8	3 2·9	6·5	8·2	4 6·3
Pork	lb.	·3	10·3	3·1	·6	13·6	8·2
Bacon and Ham	lb.	·9	11·0	9·9	·8	16·9	1 1·5
Fish—fresh, &c.	lb.	·8	9·5	7·6	1·0	14·0	1 2
„ preserved	lb.	·4	10·5	4·2	·3	18·3	5·5
Potatoes	lb.	14·4	·9	1 1	11·0	2·4	2 2·4
Flour	lb.	4·0	1·4	5·6	4·0	1·8	7·2
Bread	2lb. loaf	10·0	3·5	2 11	9·2	4·2	3 2·6
Rice	lb.	·8	3·0	2·4	·6	5·4	3·2
Sago and Tapioca	lb.	·2	2·7	·5	·2	5·4	1·1
Oatmeal	lb.	·5	2·6	1·3	·6	4·5	2·7
Sugar	lb.	6·0	2·7	1 4·2	6·0	3·5	1 9
Jam	lb.	1·6	5·9	8	1·1	6·0	6·6
Butter	lb.	2·9	14·2	3 5·2	2·8	21·9	5 1·3
Cheese	lb.	·3	10·6	3·2	·4	15·8	6·3
Milk—fresh	qt.	7·7	5·3	3 4·8	8·6	7·0	5 0·2
Tea	lb.	·7	15·8	11·1	·8	19·8	1 3·8
Coffee	oz.	1·3	1·1	1·4	1·3	1·2	1·6
Total ... ..	...	...	...	25 11·2	...	...	35 5·5

The weekly expenditure on the commodities enumerated rose from 25s. 11¼d. in 1914, to 35s. 5½d. in 1919—an increase of 36·7 per cent. In spite of the lower rate of consumption the meat bill increased from 9s. 11¼d. to 12s. 10d., while the expenditure on milk and butter rose from 6s. 10d. to 10s. 1¼d.

Taking rent into consideration—the average being 20s. in both years—the total weekly expenditure was 45s. 11¼d. as compared with 55s. 5½d., and the increase per week during the period amounted to 9s. 6¼d., which represents 20·7 per cent.

In the table on page 506 the price level of food in 1919 is 54·9 per cent. higher than in 1914, and of food and rent combined 29·7 per cent. higher; the differences from the increases quoted above, viz., 36·7 and 20·7 per cent. respectively, are due to the fact that in computing the price levels the regimen was assumed to be constant. In other words it may be said that the increases in the prices of food would have increased the average household expenditure on food and rent by 29·7 per cent. between 1914 and 1919, if that household had purchased the same quantities of commodities in each year, whereas, owing to decreased quantities being purchased in the later year the actual increase in expenditure was 20·7 per cent.

Cost of Clothing.

The information required to gauge accurately the movement of prices of clothing has not been collected, owing to the difficulty of fixing standards in view of the vast range of articles of clothing, the numer-

ous grades of quality, and the rapid changes in fashion and design. But an effort has been made to ascertain the approximate increase in the cost of clothing since the commencement of the war period, and it is estimated that for a family of five persons—a man, his wife and three children (a boy, girl, and baby)—with a moderate income, the common articles of clothing which could have been purchased for £31 in July, 1914, would have cost nearly £68 in July, 1920; this represents an increase of about 120 per cent. in cost, while it is probable that the standard of quality is much lower than in 1914.

Cost of Fuel and Miscellaneous Expenses.

Substantial increases have occurred in the cost of fuel and light. Kerosene, which is included in the list of food and groceries shown above, has doubled in price since 1914; gas for household purposes increased from 3s. 6d. per 1,000 cubic feet in July, 1914, to 5s. 1d. in July, 1920; coal was nearly 46 per cent. dearer, having risen from 24s. 6d. per ton to 35s. 9d.; and fire-wood had increased from 24s. per ton to 37s. 6d., or by about 56 per cent.

Almost all the items of miscellaneous expenditure have increased in price; for instance, fares by train, tram, and ferry, which are an important factor. General increases amounting to 66 per cent. have been made in railway fares, viz., 10 per cent. in August, 1917; 7½ per cent. in November, 1918; 15 to 20 per cent. in January, 1920; and 16⅓ per cent. in November, 1920. Tram fares, which were charged at 1d. per section, except for the second section of certain lines which were 1½d., have been raised to 2d. for one section, and 1d. for each additional section up to five. Increases have been made also in the fares charged on the majority of Sydney Harbour ferry routes; the season ticket fares were increased by 10 per cent. in 1917, and further increases were made in 1919.

The entertainments tax, imposed by the Commonwealth Government from 1st January, 1917, represents an increase of ½d. for every 6d. paid as the price of admission to amusements. The land and income taxation—State and Federal—increased from 22s. 6d. per head in 1914 to 81s. 1d. in 1919, and local government and water and sewerage rates from 28s. 11d. per head to 38s. 1d. An additional charge of ½d. was imposed on each postal article in October, 1918, and further increases were made in October, 1920, when letter rates were raised by ½d. per ½oz., and fees for telephone calls, except in small country exchanges, were increased by 25 per cent., and increases ranging up to 50 per cent. were made in the charges for telegrams. The cost of medical attendance and medicine also has increased since 1914.

COST OF LIVING, 1864-1920.

The following information covers the period of fifty years prior to the commencement of the European war, and before discussing the changes in the cost of living it will be of interest to review briefly the industrial conditions during that time.

At the commencement of the period, New South Wales was experiencing a succession of unfavourable seasons, and vast areas were affected alternately by drought and floods. In the year 1864 crops in the north were destroyed by continued rain, and in other parts by rust and drought; the following year was normal as regards the season, but in 1867-68 there were floods, followed by dry weather, and in 1869 a severe drought affected the State; in the two succeeding years considerable loss was occasioned by floods. The unfavourable seasons had a most baneful effect upon industry, by discouraging

the investment of capital in rural development; money was very dear, the public finances were in an unsatisfactory condition, and depression prevailed in commercial circles. The rates of wages declined, particularly those of mechanics, and there was a large degree of unemployment. The prices of commodities fell, also rents, as the cessation of immigration had reduced the demand for houses.

About the year 1872 a marked improvement was apparent, the production of gold increased, and copper and tin mines were developed. Extensive purchases of land indicated that greater attention was being paid to rural industries, the public funds were augmented by the revenue from land sales, and an expansive public works policy was initiated in order to provide roads and railways to open up the interior of the country. As a result, steady employment was readily obtainable, wages rose, and the Government maintained a vigorous immigration policy in order to meet the demand for labour.

An important factor affecting industrial conditions was the influx of large sums of private capital, which increased in volume from 1870 to 1885, and then declined. The wave of prosperity reached its height during the years from 1882 to 1885, and began to recede in 1886. The reduction of public and private expenditure and the completion of large public works caused large numbers to be thrown out of employment, and wages declined. Serious industrial disputes occurred in the coal-mining districts during 1886-88, the pastoral and maritime industries suffered through strikes in 1890, and the silver-mines at Broken Hill were idle for some months during 1892.

The year 1893 marks the beginning of a new industrial period. The financial crisis caused a stoppage of all forms of speculative activity, and wages fell during that year, and again in 1895. Conditions improved, however, as the result of important mining development and of the expansion of the agricultural industry. The area under crop increased from about a million acres in 1893 to nearly two and a quarter millions in 1899, and the oversea trade in wheat, which has grown to such important dimensions, was established in 1898.

The South African war, 1899-1902, did not greatly affect prices in New South Wales, as the rise in prices which has been continuous since 1897 was a world-wide movement which cannot be attributed to local causes. Since the federation of the Australian States, the Commonwealth Government has introduced a protective tariff and legislative measures to encourage local enterprise, with the result that there has been a remarkable expansion in the manufacturing industries. A disastrous drought in 1902-03 was followed by a period of prosperity which lasted until 1914, when the disturbing effects of the war were intensified by a drought affecting the rural industries.

The index numbers in the following tables indicate the variations in the cost of food and groceries and of rent, and of food and rent combined, in each year from 1864. The index numbers for food and groceries from 1864 to 1910 inclusive are based on the retail prices in Sydney of sixteen commodities in general use, viz., bread, beef, mutton, milk, butter, cheese, sugar, tea, coffee, potatoes, bacon, eggs, rice, oatmeal, soap, and starch. The expenditure on these sixteen commodities is nearly 90 per cent. of the total expenditure on the forty items of food and groceries, which are now considered in ascertaining the index numbers. The prices were weighted, according to the average consumption of each article, in the year 1865, and

according to the average annual consumption during the three years 1907-09, and by taking the mean of the two index numbers thus obtained for each year up to 1910 the index numbers shown below were formed.

From 1911 onwards 40 commodities have been included in the data on which the index numbers are based; information as to meat prices, previously limited to one quotation each of beef, mutton and bacon now include the prices of 18 different cuts of beef, mutton, pork, bacon, and ham; and onions, sago, jam, raisins, currants, blue, candles, and kerosene have been added to the list of groceries. The index numbers of years with the smaller number of commodities compare satisfactorily with those for the same years based on the larger numbers.

The basis of the table is the year 1911, the index numbers for which are called 1,000:—

Year.	Index Numbers (1911 = 1000).			Year.	Index Numbers (1911 = 1000).		
	Food and Groceries.	Rent.	Food and Rent Combined.		Food and Groceries.	Rent	Food and Rent Combined.
1864	1240	760	1036	1893	925	828	884
1865	1310	794	1091	1894	792	735	768
1866	1212	779	1028	1895	776	735	758
1867	1036	799	935	1896	811	725	775
1868	1080	799	961	1897	792	725	764
1869	970	779	889	1898	775	725	754
1870	1025	765	914	1899	853	740	805
1871	961	750	871	1900	829	765	801
1872	913	745	841	1901	919	789	864
1873	964	725	863	1902	1061	784	943
1874	1075	735	930	1903	973	784	892
1875	1007	776	908	1904	871	794	838
1876	1080	776	950	1905	970	814	904
1877	1096	776	960	1906	974	819	908
1878	1030	809	936	1907	956	838	906
1879	938	843	897	1908	1022	848	948
1880	911	858	888	1909	1021	877	960
1881	892	853	875	1910	999	907	960
1882	1111	843	997	1911	1000	1000	1000
1883	1071	892	995	1912	1137	1088	1115
1884	1037	868	965	1913	1080	1147	1110
1885	1089	863	993	1914	1134	1176	1153
1886	1136	843	1010	1915	1372	1117	1258
1887	1025	804	931	1916	1497	1117	1327
1888	1015	819	931	1917	1544	1117	1353
1889	996	848	933	1918	1555	1147	1372
1890	976	853	924	1919	1756	1176	1496
1891	964	853	916	1920*	2018	1279	1687
1892	970	873	928				

* First six months.

At the beginning of the period food was dear, the price level being 24 per cent. higher than in the basic year 1911, but rents were 24 per cent lower. In 1865 prices of food and rent increased; in the following year they were reduced and the decline was fairly steady down to the year 1872, when living was cheaper than in any other year from 1865 to 1893, the index number for food and rent being 23 per cent lower than in 1865. The prices of food were somewhat above normal from 1874 to 1888 except during the three years 1879 to 1881, and rents rose with increasing immigration. The index number for food and rent rose slowly up to the year 1877 and during the next four years it declined. During the prosperous years of the early

eighties the cost of living increased, and in the year 1886 it was slightly higher than in 1911. Thereafter the prices of food became gradually cheaper until in 1892 the index number of food and rent was 9 per cent. lower than 1886. During the two years 1893-4 the prices of food decreased by 18 per cent. and rents by 16 per cent. ; the decline continued until 1898, when the index number was the lowest during the whole period of fifty-six years. Since that year, as already stated, the rise in prices and in rent has been fairly continuous.

The index numbers in quinquennial periods are shown below :—

Period.	Index Numbers (1911=1000.)			Amount required in each period to purchase the same quantities of Food and Rent as would have cost, on the average, 20s in 1911
	Food & Groceries	Rent.	Food & Rent Combined.	
1864-1868	1175	786	1010	s. d 20 2
1869-1873	967	753	876	17 6
1874-1878	1058	774	937	18 9
1879-1883	984	858	931	18 7
1884-1888	1060	839	966	19 4
1889-1893	966	851	917	18 4
1894-1898	789	729	764	15 3
1899-1903	927	772	861	17 3
1904-1908	959	823	901	18 0
1909-1913	1047	1004	1029	20 7
1914-1918	1420	1135	1293	25 10
1919	1756	1176	1496	29 11
1920 (January-June)...	2018	1279	1687	33 9

A comparison such as the foregoing, extending over a long period, is necessarily defective in some respects, because as conditions and standards change, consumption varies. Articles highly prized at one period become less popular in another ; on the other hand, articles which are scarce at one period become common articles of diet at another. For example, there is the important and necessary article, milk, which probably did not figure as a genuinely marketable commodity until 1875 when Mr. T. S. Mort inaugurated the country milk supply to the metropolis. Prior to that year Sydney depended on local dairies, and for many years milk was regarded merely as a by-product of the butter and cheese industries, and it is only in comparatively recent years that its food value has been recognised fully.

It is important also to take into consideration the quality of the produce consumed, as considerable improvement has taken place. Thus the sugar consumed now is a good white article, whereas in earlier years an inferior quality of moist sugar was in general use. Flour, now roller-made, has improved greatly ; and the standard of butter has risen with the development of the co-operative factories and the introduction of refrigeration, the quality in general use at the present time being choice and fresh ; and so with many other articles of ordinary consumption.

WAGES.

A description has been given in the chapter "Employment and Industrial Arbitration" of the systems under which wages are regulated in New South Wales by the State and Federal industrial tribunals. The rates of wages in all industries have increased considerably since the war ; the increase in the general rate for unskilled labour may be seen in a previous table showing the living wage declarations of the State Industrial Court and of the Board of Trade. Where a living wage is declared, it becomes the minimum amount.

which may be awarded in respect to any industry under the State jurisdiction, though it does not apply to wages fixed under the Commonwealth legislation. The declarations of the Board of Trade relating to the women's living wage—viz., 30s. a week in December, 1918, and 39s. in December, 1919—came into operation under a regulation which applied to all adult female employees, except those provided with board and lodging, the value of which had not been assessed by the Court. But until 1920 the men's living wage did not become effective in respect to any current award until it was varied by the Court of Industrial Arbitration upon the application of the employees in the industry concerned. In granting such application, if a proviso in the award entitled the employees to have the whole award reopened, the Court increased all the rates by the same amount as the living wage; otherwise it varied only the rates below the living wage by increasing them to that amount. When the men's living wage was declared in October, 1920, it was applied by regulation to the lower rates.

When making renewal awards to replace those which have expired the Court goes back to the date of the original award and adds to the rates therein the total amount by which the living wage has been increased since that time. Thus the Court restores to the secondary wages any reductions which resulted during the war period from the operation of the "margin judgment," which is quoted in the chapter "Employment and Industrial Arbitration."

The following tables show the rates of wages in the principal industries at the end of each of the last five years as compared with the pre-war rates. Except where otherwise specified the figures indicate the minimum amount payable for a full week's work of 48 hours, on the basis of the weekly, daily, or hourly rates specified in the industrial awards or agreements. These tables relate to a limited number of occupations only, but the award rates are published annually in greater detail in the "Statistical Register of New South Wales." When labour is plentiful the award rates become general, but with a scarcity of labour competent employees command higher remuneration.

It will be noticed that some of the rates in the State awards at the end of 1919, as stated in the tables, are lower than the living wage, 77s. per week; this is due to the fact that a number of variations of current awards made by the Court subsequent to the living wage declaration of October, 1919, had not come into operation at the end of the year.

Building Trades.

Employees in the building trades are paid according to hourly rates, and the following amounts, which have been calculated by multiplying the award rates by forty-eight, except the rates for stonemasons, who work forty-four hours per week:—

Occupation.	Weekly Rates of Wages.						Increase, 1914 to 1919.	
	1914.	1915.	1916.	1917.	1918.	1919.	Amount.	Per cent.
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	
Bricklayers ...	72 0	78 0	78 0	84 0	84 0	84 0	12 0	17
Carpenters ...	66 0	72 0	80 0	80 0	80 0	80 0	14 0	21
Painters ...	64 0	68 0	75 0	75 0	79 6	79 6	15 6	24
Plasterers...	66 0	78 0	78 0	84 0	84 0	84 0	18 0	27
Plumbers ...	66 0	72 0	72 0	80 0	80 0	80 0	14 0	21
Stonemasons (44 hours)...	69 8	69 8	77 11	77 11	77 11	89 10	20 2	29
Hod-carrier ...	62 0	62 0	66 0	72 0	72 0	72 0	10 0	16
	54 0	54 0	60 0	68 0	68 0	68 0	14 0	26
Other Labourers...	to 62 0	to 62 0	to 62 0					

These rates of wages were increased between July, 1914, and December, 1919, by amounts varying from 6s. to 20s. 2d. per week, or from 10 to 29 per cent. Higher wages were awarded in January, 1920, when the rates for carpenters, plasterers, plumbers, and builders' labourers were raised by 22s. per week, bricklayers and stonemasons' rates by about 24s., and painters by 17s. 6d. This represents an increase of more than 50 per cent. since 1914 in the wages of the skilled workmen.

Engineering, Ironworks, &c.

The weekly wages in the engineering and metal trades were as follows:—

Occupation.	Weekly Wages.						Increase, 1914 to 1919.	
	1914.	1915.	1916.	1917.	1918.	1919.	Amount.	Per cent.
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	
Boilermakers	66 0	72 0	78 0	78 0	85 6	85 6	19 6	30
Electrical Fitters	74 0	74 0	82 0	82 0	82 0	90 0	16 0	22
„ Mechanics	66 0	66 0	74 0	74 0	74 0	82 0	16 0	24
Engineering—								
Blacksmiths	72 0	78 0	80 0	80 0	87 6	104 6	32 6	45
Brassfinishers	70 0	76 0	78 0	78 0	85 6	102 6	32 6	46
Coppersmiths	72 0	78 0	80 0	80 0	87 6	104 6	32 6	45
Fitters and Turners	70 0	76 0	78 0	78 0	85 6	102 6	32 6	46
Patternmakers	74 0	80 0	82 0	82 0	89 6	106 6	32 6	44
Ironmoulders	70 0	72 0	72 0	72 0	72 0	85 6	15 6	22
Tinsmiths... ..	60 0	66 0	66 0	66 0	73 0	91 6	31 6	52
General labourers	45 0	54 0	54 0	54 0	63 0	77 0	32 0	71

In the engineering workshops the wages of the skilled workmen were raised by 32s. 6d. per week, and the percentage increase during the period under review ranged from 44 to 46; an increase of 32s. per week in the rate for general labourers represents 71 per cent. Boilermakers received increases amounting to 19s. 6d., or 20 per cent., and ironmoulders 15s. 6d., or 22 per cent.; another rise of 17s. per week was awarded to the boiler-makers in January, 1920, and to the moulders some months later. In the electrical trades the rates for fitters were raised to 103s. 6d., and for mechanics to 95s. 6d. in August, 1920.

Bootmaking and Clothing Trades.

The local manufacture of boots and of ready-made clothing increased considerably during the war period owing to the demand for military sup-

plies and to the restriction of imports; increases in the wages of employees are shown below:—

Occupation.	Weekly Wages.						Increase, 1914 to 1919.	
	1914.	1915.	1916.	1917.	1918.	1919.	Amount.	Per cent.
Bootmaking—Men ...	s. d. 54 0	s. d. 60 0	s. d. 66 0	s. d. 66 0	s. d. 72 0	s. d. 72 0	s. d. 18 0	33
Women ...	28 0	28 0	31 0	31 0	34 0	34 0	6 0	21
Tailoring (order)—								
Tailors ...	60 0	60 0	64 0	65 0	65 0	75 0	15 0	25
Tailoresses—Coats ...	30 0	30 0	30 0	38 0	38 0	44 0	14 0	47
Trousers	25 0	25 0	25 0	29 0	29 6	40 0	15 0	60
Tailoring (ready-made)—								
Tailors ...	60 0	60 0	60 0	67 6	67 6	75 0	15 0	25
Tailoresses—Coats ...	25 0	25 0	25 0	29 6	29 6	40 0	15 0	60
Trousers	23 0	23 0	23 0	28 0	28 0	37 0	14 0	61
Woollen mill hands—								
Men ...	48 0	48 0	55 6	55 6	60 0	77 0	29 0	60
Women	21 0	21 0	31 0	31 0	31 0	33 3	12 3	58

The wages of journeymen in the boot trade rose by 33 per cent. between 1914 and 1919—and a further increase of 1½d. per hour, or 10s. a week, was awarded in March, 1920; the award rates of the women employees were raised by 6s. a week or 21 per cent., but the minimum rate at the 31st December under the living wage regulations was 39s. per week, which is 37 per cent. above the pre-war rate, 28s., in the boot factories.

In the clothing trade the employees work under an award of the Commonwealth Court made in May, 1919. Additions to the weekly wages represented an increase of 25 per cent. to the tailors and from 47 to 61 per cent. to the tailoresses. Many of these workers are paid piece-work rates, which are fixed by the award.

In the woollen mills the wages of the general hands were increased by about 60 per cent.

Food and Drink Factories.

The wages in the principal industries in connection with the food supply were as follow:—

Occupation.	Weekly Wages.						Increase, 1914 to 1919.	
	1914.	1915.	1916.	1917.	1918.	1919.	Amount.	Per cent.
Bread—Bakers ...	s. d. 50 0	s. d. 50 0	s. d. 70 0	s. d. 20 0	40			
	to	to	to	to	to	to		
Carters (54 hours)	65 0	65 0	75 0	75 0	75 0	75 0	10 0	15
Brewing—General Hands	52 6	60 0	60 0	60 0	60 0	77 0	24 6	47
Butter-makers ...	54 0	60 0	60 0	60 0	63 0	80 0	26 0	48
Flour-millers ...	68 0	68 0	68 0	73 0	73 0	77 0	9 0	13
	63 0	71 0	74 6	74 6	74 6	90 0	27 0	43
Jam-factory Hands ...	to	to	to	to	to	to		
	70 0	79 0	82 6	82 6	82 6	104 0	34 0	49
	48 0	54 0	54 0	54 0	61 0	77 6	29 6	61

A new award for bakers was gazetted in January, 1920, and the rates were raised by 24s. 6d. per week, the lower rate being 89 per cent. and the

higher 53 per cent. above the pre-war level. At the same time the weekly wage for bread-carters was fixed at 89s., an increase of 36s. 6d., or 70 per cent. since 1914. The wages of flour-millers and brewery hands were increased by over 40 per cent., and the rate for butter-makers was raised by 13 per cent. during the period covered by the table; but an award in May, 1920, brought the latter up to 94s., or 40 per cent. above the pre-war rate.

Other Factories and Shops.

The wages in the furniture and printing trades and in other classes of factories are shown below:—

Occupation.	Weekly Wages.						Increase, 1914 to 1919.	
	1914.	1915.	1916.	1917.	1918.	1919.	Amount.	Per cent.
Coopers	s. d. 66 0	s. d. 80 0	s. d. 80 0	s. d. 80 0	s. d. 81 0	s. d. 95 0	s. d. 29 0	44
Furniture and Cabinet-making	60 0	67 0	67 0	67 0	79 0	79 0	19 0	32
Sawyers— Band or Jig	68 0	68 0	68 0	74 0	74 0	74 0	6 0	9
Other	{ 54 0 to 66 0	{ 54 0 to 66 0	{ 57 0 to 66 0	{ 60 6 to 72 0	{ 60 6 to 72 0	{ 60 6 to 72 0	{ 6 6 to 6 0	{ 12 9
Bookbinders	65 0	65 0	70 0	70 0	70 0	70 0	5 0	8
Compositors, Jobbing	65 0	65 0	65 0	73 6	73 6	97 0	32 0	49
Tallowmaker	59 0	59 0	66 6	66 6	71 6	77 0	18 0	31
Tanning— Beamsmen	60 0	63 0	63 0	70 6	70 6	73 6	13 6	23
Curriers	65 0	68 0	68 0	75 6	75 6	75 6	10 6	16
Labourers	51 0	54 0	54 0	61 6	61 6	64 6	13 6	26
Brick Burners	{ 61 6 and 63 0	{ 61 6 and 63 0	{ 67 6 and 69 0	{ 67 6 and 69 0	{ 72 0 and 73 6	{ 89 0 and 90 6	{ 27 6 27 6	{ 45 44
„ Pitmen	62 0	62 0	68 0	68 0	72 6	89 6	27 6	44
Quarrymen (44hrs.)	67 10	73 4	73 4	73 4	84 4	84 4	16 6	24
Leatherworkers	54 0	60 0	66 0	66 0	66 0	77 0	23 0	43
Coachbuilders, Road	60 0	60 0	67 6	67 6	67 6	77 0	17 0	28
Jewellers	{ 65 0 to 70 0	{ 65 0 to 70 0	{ 65 0 to 70 0	{ 73 6 to 76 0	{ 73 6 to 76 0	{ 73 6 to 76 0	{ 8 6 6 0	{ 13 9
Watchmakers (46½hrs.)... ..	65 0	70 0	75 0	75 0	75 0	75 0	10 0	15
Shop-assistants, General	52 6	{ 48 0 to 62 0	{ 54 0 to 62 6	{ 57 0 to 66 6	{ 57 0 to 66 6	{ 77 0	{ 24 6	{ 47

Coopers, working under a Federal award, have gained increases equal to 29s. a week or 44 per cent. In the furniture trades the increases up to

December, 1919, amounted to 19s. a week or 32 per cent., and in January, 1920, an amount of 17s. was added, bringing the weekly wage up to 96s. or 60 per cent. above the pre-war level. The sawmilling award was not varied between 1917 and 1919, when it expired, but in January, 1920, sawyers in State timber yards were awarded rates which were 21s. 6d. over the amounts shown above for the year 1919. Other employees who received increases early in 1920 included bookbinders, 24s. a week; and tallowmakers, 11s. 6d. a week, or 29s. 6d. above the 1914 rate. In the tanning industry, beamsmen and labourers received 12s. 6d. and curriers 15s. 6d., so that the weekly rates are now 26s. above the pre-war level; and the rate for coachbuilders was raised by 15s., the increase since 1914 being 32s. or 53 per cent. Jewellers and watchmakers were awarded an increase of 20s. per week in March, 1920, and quarrymen 14s. 8d. in April; and in an award for shop-assistants, commencing in January, 1920, the rates for adults ranged from 77s. to 88s. per week.

Coal-mining.

The particulars in the following statement indicate the increases in the wages of employees in the coal-mining industry since 1914. The miners are paid piece-work rates, which vary according to the conditions of the seams or places where the coal is mined, and the table shows the hewing rates per ton and not the weekly wages as in the case of other occupations:—

Occupation.	Weekly Rates of Wages.						Increase, 1914 to 1919.	
	1914.	1915.	1916.	1917.	1918.	1919.	Amount	Per cent.
Miners (hewing rate per ton) ... {	s. d. 2 3½	s. d. 2 3½	s. d. 2 3½	s. d. 2 7½	s. d. 2 7½	s. d. 3 0¼	s. d. 0 8¼	32
	to 4 2	to 4 2	to 4 2	to 5 2½	to 5 2½	to 5 11½	to 1 9½	42
Whealers ... {	51 0	56 0	56 0	63 0	63 0	78 0	27 0	53
Engine-drivers—		to 60 0	to 60 0	to 75 6	to 75 6	to 91 0	to 40 0	78
	Loco. and winding {	66 0	66 0	66 0	76 0	76 0	96 0	30 0	45
	to 78 0	to 80 0	to 80 0	to 88 0	to 88 0	to 108 0	to 30 0	38
Other ... {	60 0	60 0	60 0	69 0	69 0	87 6	27 6	46
	to 75 0	to 75 0	to 75 0	to 80 0	to 80 0	to 102 0	to 27 0	36
Labourers ... {	48 0	54 6	54 6	65 5	65 5	81 0	33 0	69
	to 54 0	to 60 0	to 60 0	to 72 0	to 72 0	to 87 6	to 33 6	62

Increases amounting to 15 per cent. for miners and 20 per cent. for off-hand labour were awarded, as from 1st January, 1917, by a special tribunal appointed under the War Precautions Act, and the working hours were fixed as follows:—Eight hours bank to bank, including half-an-hour for meal time, on Monday to Friday, and six hours on Saturdays, Sundays, and holidays. The miners do not work on alternate (pay) Saturdays, and the number of shifts per fortnight is eleven. In May, 1919, the tonnage rates were further increased by 15 per cent., and 2s 7d. per day was added to the wages for off-hand labour. In September, 1920, a coal-miners' tribunal, appointed under the Commonwealth Industrial Peace Act of 1920, increased the rates for all contract work by 17½ per cent., and for off-hand labour by 3s. per day.

State Railway Services.

The wages of employees in the traffic branch of the Government Railways and of pick and shovel men engaged in railway construction are shown below :—

Occupation.	Weekly Rates of Wage.						Increase, 1914 to 1919	
	1914.	1915.	1916.	1917.	1918.	1919.	Amount.	Per cent.
Traffic--	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	
Engine-drivers...	72 0 to 96 0	72 0 to 96 0	72 0 to 96 0	72 0 to 96 0	74 6 to 96 0	84 0 to 108 0	12 0 12 0	17 13
Firemen ...	57 0 to 66 0	57 0 to 66 0	57 0 to 66 0	57 0 to 66 0	60 6 to 70 0	77 0 to 78 0	20 0 12 0	35 18
Guards ...	54 0 to 72 0	54 0 to 72 0	58 6 to 75 0	60 0 to 75 0	60 0 to 75 0	66 0 to 84 0	12 0 12 0	22 17
Porters ...	48 0 to 57 0	52 6 to 57 0	55 6 to 58 6	55 6 to 58 6	63 0 to 66 0	63 0 to 66 0	15 0 9 0	31 16
Signalmen ...	66 0 to 78 0	66 0 to 78 0	66 0 to 78 0	66 0 to 78 0	66 0 to 78 0	66 0 to 90 0	..... 12 0	..... 15
Construction— Pick and Shovel Men ..	56 0	56 0	56 0	60 0	64 0	85 6	29 6	53

The rates of wages in the railway services are determined by awards of the Court of Industrial Arbitration under State legislation. The highest increase since 1914, viz. 29s. 6d., is shown in the rate paid to navvies, which rose from 56s. to 85s. 6d. for a full week's work of 48 hours, with no lost time. The wages of guards and porters were raised by 17s. in January, 1920, and signalmen were awarded rates ranging from 86s. to 104s. per week.

Shipping.

The wages of seamen, cooks, and stewards on vessels engaged in Interstate trade are shown below, monthly rates being quoted; victualling and accommodation is provided in addition to wages :—

Occupation.	Wages—Per Month.						Increase, 1914 to 1919.	
	1914.	1915.	1916.	1917.	1918.	1919.	Amount.	Per cent.
A.B. Seamen ...	£ s. 8 0	£ s. 9 5	£ s. 9 5	£ s. 11 10	£ s. 12 5	£ s. 14 0	£ s. 6 0	75
Boatswains ...	9 0	10 5	10 5	12 0	13 5	15 0	6 0	67
Firemen ..	10 0	11 5	11 5	13 0	14 5	16 0	6 0	60
Cooks ...	7 10 to 14 10	7 10 to 14 10	8 10 to 15 10	8 10 to 15 10	9 10 to 16 10	10 10 to 18 5	3 0 3 15	40 26
Stewards ...	5 10 to 7 10	7 0 to 9 0	8 10 to 10 10	8 10 to 10 10	8 10 to 10 10	9 15 to 12 5	4 5 4 15	77 63

These rates are determined by award or agreement under Federal legislation. The wages of seamen were raised by £6 per month during the period under review, the percentage increases ranging from 60 to 75. The rates for the cooks are classified according to the tonnage of the vessels on which they

are employed ; those quoted above apply to vessels of less than 4,000 tons gross register, and show increases ranging from £3 to £3 15s. per month, or from 40 to 26 per cent.

The rate for wharf-labourers engaged by the week was increased from 5s. 6d. to 6s. 6d. in 1916, and this rate was still in operation at the end of 1919 ; for casual labour the rate since 1914 has been 1s. 9d. per hour, with 3d. extra for special cargoes such as wheat, explosives, or frozen meat.

Rural Industries.

The rates of wages in the rural industries are shown below ; rations and lodging are provided in addition to the amount stated :—

Occupation.	Weekly Rates of Wages.						Increase 1914 to 1919.	
	1914.	1915.	1916.	1917.	1918.	1919.	Amount.	Per cent.
Boundary Riders	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	
	20 0	20 0	20 0	20 0	20 0	20 0	20 0	100
Cooks (station) ...	to	to	to	to	to	to	to	
	25 0	25 0	25 0	25 0	40 0	40 0	15 0	60
Farmhands ...	50 0	50 0	60 0	72 0	72 0	72 0	22 0	44
	20 0	20 0	20 0	20 0	20 0	30 0	10 0	50
Harvesters ...	to	to	to	to	to	to	to	
	25 0	25 0	25 0	30 0	35 0	40 0	15 0	60
Milkers ...	30 0	30 0	30 0	40 0	40 0	40 0	10 0	33
	to	to	to	to	to	to	to	
...	40 0	40 0	40 0	50 0	50 0	60 0	20 0	50
	20 0	20 0	20 0	20 0	25 0	35 0	15 0	75
...	to	to	to	to	to	to	to	
	25 0	25 0	25 0	30 0	35 0	40 0	15 0	60

These rates show considerable increases since 1914 ; they are not subject to regulation by the industrial tribunals, except the rates for pastoral workers, which are fixed by an award of the Commonwealth Court. Shearers, who are not provided with rations, were paid in 1914 at the rate of 24s. per 100 sheep, and in 1917 the rate was increased to 30s.

All Industries.

The previous tables serve to illustrate the changes in the rates of wages in regard to individual occupations ; and in order to show the extent to which the increases affected the wages in all industries or in the various groups of industries, the average rates are shown in the following tables. They are the rates determined for New South Wales by the Commonwealth Statistician ; they are in close agreement with averages determined by the author, and have been adopted for the sake of uniformity.

For these computations particulars were obtained as to the wages in respect of 874 occupations ; the industrial awards and agreements were the main sources of information, and for occupations not subject to the industrial determinations, the ruling or pre-dominant rates were ascertained from employers and from secretaries of trade unions. The occupations were classified into fourteen industrial groups, and the tables were compiled on the basis of the weekly rates payable to adult male employees in the Metropolitan district, except in regard to the mining, shipping, and rural industries which are conducted for the most part outside the Metropolitan area.

In determining the average wage in each group an arithmetic mean was taken, that is, the sum of the rates was divided by the number of occupations,

no detailed system of weights being applied owing to the difficulty of obtaining satisfactory data as to the number of persons employed in each occupation. In computing the average for all the industries combined, the average for each industrial group was weighted in accordance with the relative number of all male workers engaged in that group.

The average weekly rates of wages payable to adult males in each group of industries, and the weighted average for all groups combined in each year since 1914, are shown below. In the shipping, pastoral, and domestic industries, where food and lodging are supplied, the value of such has been added to the monthly rates :—

Classification.	Average Weekly Wages.						Increase, 1913 to 1919.	
	1914.	1915.	1916.	1917.	1918.	1919.	Amount.	Per cent.
Wood, Furniture, Saw-mill, Timber Workers, &c. ...	58 1	61 9	65 1	67 6	69 6	76 6	18 5	32
Engineering, Shipbuilding, Smelting, Metal Works, &c. ...	57 11	61 10	64 0	65 11	68 11	82 5	24 6	42
Food, Drink, & Tobacco Manufacture and Distribution ...	56 0	59 7	62 3	64 1	66 1	79 3	23 3	42
Clothing, Hats, Boots, Textiles, Rope, Cordage, &c. ...	54 4	55 3	60 2	61 6	63 3	76 11	22 7	42
Books, Printing, Book-binding, &c. ...	66 1	66 4	67 9	72 2	75 2	86 0	19 11	30
Other Manufacturing ...	56 4	58 10	63 6	65 0	67 3	79 4	23 0	41
Building ...	68 1	68 8	71 4	75 6	76 0	78 10	10 9	16
Mining, Quarries, &c. ...	63 8	64 9	72 6	75 5	75 7	86 2	22 6	35
Railway and Tramway Services ...	61 5	63 0	65 2	65 11	67 8	81 11	20 6	33
Other Land Transport ...	51 10	53 5	59 4	59 7	62 1	78 3	26 5	51
Shipping, Wharf Labour, &c. ...	49 9	52 5	58 4	60 1	63 5	76 1	26 4	53
Pastoral, Agricultural, Rural, Horticultural, &c. ...	49 11	50 11	55 10	61 1	62 3	71 8	21 9	44
Domestic, Hotels, &c. ...	46 5	50 0	53 3	56 9	57 2	71 5	25 0	54
Miscellaneous ...	53 7	55 3	59 7	60 3	62 1	73 3	19 8	37
All Industries ...	56 2	57 7	61 11	64 5	65 11	76 9	20 7	37

In 1914 the highest average rates were in the building trades, 68s. 1d.; printing, etc., 66s. 1d.; mining, 63s. 8d.; railway and tramway services, 61s. 5d.; and the lowest rates were in the domestic group, 46s. 5d.; shipping, 49s. 9d.; and rural industries, 49s. 11d. In 1919 the highest rates were in the mining group, 86s. 2d.; printing, 86s.; engineering, etc., 82s. 5d.; railways and tramways, 81s. 11d. The domestic group, with an average of 71s. 5d., remained at the bottom of the list, notwithstanding the fact that this class showed the highest rate of increase, 54 per cent. The building trades, which had the highest average in 1914, showed the lowest increase during the period, viz., 10s. 9d., or 16 per cent., and in 1919 the average rate, 78s. 10d., was exceeded in six other groups; but, as stated previously, the award rates for these employees were increased considerably as from January, 1920.

The average rate for all the groups combined increased by 20s. 7d., or 36·6 per cent., between 1914 and 1919, viz., from 56s. 2d. to 76s. 9d. The increase in each year was as follows:—

Year.	Average Rate.	Increase in Each Year.		Increase since 1914.	
		Amount.	Per cent.	Amount,	Per cent.
	s. d.	s. d.	...	s. d.	...
1914	56 2	...	...	...	...
1915	57 7	1 5	2·5	1 5	2·5
1916	61 11	4 4	7·5	5 9	10·3
1917	64 5	2 6	4·0	8 3	14·7
1918	65 11	1 6	2·3	9 9	17·4
1919	76 9	10 10	16·4	20 7	36·6

During the first year of the war period the industrial tribunals refrained, except in special cases, from making alterations in the existing rates of wages, and the increase in the average up to December, 1915, was only 2·5 per cent. The restrictions were relaxed gradually after the middle of 1915, and the average wage rose in the following year by 7·5 per cent. The rate of increase was low in 1917 and 1918. After the armistice was signed the margin judgment was abrogated, and in October, 1919, the living wage was raised considerably by the Board of Trade, with the result that the average rate increased during 1919 by 10s. 10d., or 16·4 per cent.

Comparing the averages with the standard rates as determined by the industrial tribunals, the average rate in 1914 was 8s. 2d. higher than the living wage fixed by the New South Wales Court in February, 1914, and 5s. 2d. higher than the rate, 51s., used by the Commonwealth Court as the basic wage for various States; if allowance were made for the fact that the latter Court at that time usually adopted a basic rate for Sydney about 3s. higher than for other capitals, the average would be only 2s. 2d. higher.

In October, 1919, the Board of Trade declared the living wage in Sydney to be 77s., and the Commonwealth Court calculated it at 73s.; thus the average wage at the end of the year was 3d. below the former and 3s. 9d. above the latter.

The foregoing tables relate to the nominal rates of wages, that is the actual amounts of money payable in return for labour, but in order to show the effective value of these amounts it is necessary to consider them in relation to the purchasing power of money. For this purpose the average rates of wages have been reduced to index numbers, the year 1911 being taken as a basis, and have been divided by the index numbers of food and rent, which are the only elements of family expenditure of which satisfactory records as to cost are available; the results indicate the variations in the effective wages:—

Year.	Average Nominal Rates of Wages.		Index Number of Food and Rent Combined.	Index Number of Effective Wage.
	Amount.	Index Number.		
	s. d.			
1911	51 5	1000	1000	1000
1912	54 3	1055	1115	946
1913	55 9	1084	1110	977
1914	56 2	1092	1153	947
1915	57 7	1120	1258	890
1916	61 11	1204	1327	907
1917	64 5	1253	1352	926
1918	65 11	1282	1372	934
1919	76 9	1493	1496	998

The nominal wage increased in each year, but on account of the higher rate of increase in the cost of living its purchasing power declined. In 1912 the effective wage was reduced by 5·4 per cent.; in the following year the index number of food and rent dropped slightly, and the effective wage rose by 3·3 per cent.; it fell considerably during the years 1914 and 1915 and the index number was 11 per cent. lower than in 1911. During the years 1916 to 1918 the increase in wages was greater than the increase in the cost of food and rent, and the effective wage index number rose from 890 to 934, but it was not until 1919, when there was a marked increase in wages, that the nominal wage had practically the same purchasing power as in 1911.

VALUE OF PRODUCTION OF LOCAL INDUSTRIES.

The following statement shows the estimated value of production of the various local industries, at the place of production, at intervals since 1871. The figures are exclusive of the return from the building industry, which cannot be ascertained. After 1913 the values are quoted for the years ended 30th June, except those relating to the mining industry, which relate to the calendar years ended six months later. Since 1871 the aggregate value of production has increased by nearly 82¾ million pounds, and the value per head of population by £20 10s. 6d. From the primary industries alone the return in 1918-19 was £65,875,000, equal to £34 2s. 1d. per head, as compared with £12,565,000—or £24 14s. 6d. per head—in 1871.

The values quoted in this table are not exact, especially in the earlier years, but may be considered the best estimates to be made from the data available.

Year.	Estimated Value of Production of Specified Industries. (000 omitted.)							
	Pastoral.	Agricultural.	Dairying.	Poultry, Bees, Rabbits.*	Forestry and Fisheries.	Mining.	Manufacturing. (Value added to raw materials.)	Total, all Industries.
	£	£	£	£	£	£	£	£
1871	7,609	2,220	1,110	...	324	1,626	2,490	15,379
1881	10,866	3,829	2,285	...	492	2,138	5,570	25,180
1891	14,725	3,615	2,735	...	758	6,434	7,799	36,066
1896	11,774	5,374	2,546	...	715	4,465	7,302	32,176
1901	12,552	7,060	2,457	589	733	5,631	9,742	38,814
1906	19,743	7,518	3,425	1,693	1,174	7,913	11,906	53,372
1911	19,434	9,749	5,215	2,055	1,195	9,410	19,143	66,201
1912	19,440	11,817	5,758	2,089	1,303	11,229	22,464	74,100
1913	20,738	12,378	5,455	2,416	1,400	11,651	23,482	77,520
1914-15	18,848	10,031	6,231	2,301	1,307	9,603	24,011	72,332
1915-16	21,576	20,362	5,473	3,215	1,370	10,516	24,927	87,439
1916-17	26,842	11,488	7,478	3,395	1,282	12,564	26,748	89,797
1917-18	28,435	13,685	8,480	4,144	1,400	13,941	29,117	99,202
1918-19	29,865	12,280	8,552	4,092	1,641	9,445	32,226	98,101

* Poultry and Bee-farming included with Dairying prior to 1901.

With regard to the value of production of Forestry, shown in the above table, it is believed that the quotations for years prior to 1906 are understated.

The difference between the quotations for the manufacturing production in this table, and in the chapter "Manufacturing Industry," represents the value of production from factories dealing with milk products which is here included in the returns of the dairying industry.

During the year 1918-19 the total value of production, amounting to £98,101,000, was £1,101,000 lower than in the previous year. For many years the pastoral industry was the chief source of the wealth of the State, but during the last two years the value of production from the manufactur-

ing industry has been greater. In 1918-19 the value from this industry was £32,226,000, and from the pastoral £29,865,000. The production from the manufacturing industry has increased very rapidly since 1906.

The value of agricultural production during 1915-16 was the highest recorded, due mainly to a greatly increased wheat yield, but this high rate of production was not maintained in subsequent years.

The following table shows the equivalent values, per head of population, at intervals since 1871.

It will be observed that the value of production per head from the pastoral industry was considerably greater in 1871, 1881, and 1891 than in subsequent years and, if allowance were made for increased prices, the volume of production per head would appear to have contracted. In the early years, sheep-raising was the staple industry of the colony, as the export trade in wheat did not begin until 1898. Further, while the area of land available for pastoral pursuits has become actually less since 1871, owing to the development of agriculture, the population of the State has expanded into other activities, and it is natural that the development of the pastoral industry should have proceeded more slowly than formerly.

The development in the manufacturing industry in 1871, and particularly in 1881, as measured by the value of output per head of population, was not so great as the figures appear to indicate. Firstly, there is included the output from several classes of machines used in connection with the agricultural industry and not, strictly speaking, manufactories; secondly, most of the industries are subsidiary to agricultural and pastoral activities, and are manufactories of the simpler kinds, viz., boiling-down works, fellmongering, woolwashing, grain-mills, chaff-cutters, soap and candle works. There were no iron-works, and the output of cloth from woollen and tweed mills was a small portion of what it now is. Sugar mills, flour mills, tobacco factories, soap and candle works, distilleries and breweries alone were, considering the population, well advanced in 1891.

Year.	Pastoral.	Agricultural.	Dairying, including Poultry, &c.	Forestry and Fisheries.	Mining.	Manu- facturing.	Total, all Industries.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1871	14 19 5	4 7 5	2 3 8	0 12 9	3 4 0	4 18 0	30 5 3
1881	14 4 0	5 0 1	2 19 9	0 12 11	2 15 11	7 5 7	32 18 3
1891	12 17 10	3 3 4	2 7 11	0 13 3	5 12 8	6 16 7	31 11 7
1896	9 5 4	4 4 7	2 0 1	0 11 3	3 10 4	5 14 11	25 6 6
1901	9 3 8	5 3 4	2 4 7	0 10 9	4 3 1	7 2 6	28 7 11
1906	13 6 0	5 1 3	3 9 0	0 15 10	5 6 7	8 0 5	35 19 1
1911	11 13 6	5 17 2	4 7 4	0 14 4	5 13 1	11 10 0	39 15 5
1912	11 3 8	6 15 11	4 10 3	0 15 0	6 9 2	12 18 5	42 12 5
1913	11 9 3	6 16 10	4 6 11	0 15 6	6 8 9	12 19 7	42 16 10
1914-15	10 2 3	5 7 8	4 11 6	0 14 0	5 3 1	12 17 8	38 16 2
1915-16	11 10 10	10 17 10	4 13 0	0 14 8	5 12 6	12 6 8	46 15 6
1916-17	14 7 11	6 3 2	5 16 7	0 13 9	6 14 9	14 6 11	48 3 1
1917-18	15 0 8	7 4 8	6 13 6	0 14 10	7 7 5	15 6 10	52 7 11
1918-19	15 9 3	6 7 2	6 10 10	0 17 0	4 17 10	16 13 8	50 15 9

The exceptionally dry season during 1914-15 caused a relative decrease in all the industries except dairying, the aggregate value of production showing a decrease on the year 1913 equal to £4 0s. 8d. per head of population. But in 1915-16 all the industries showed an increased value per head, especially agriculture, which advanced to £10 17s. 10d., as compared with £5 7s. 8d. in the previous year. In 1916-17 the agricultural production dropped back to the normal level, being about £6 3s. 2d per head, but in the other industries substantial increases were recorded. In 1917-18 all the industries showed an increase as compared with the previous year. In 1919 there was a marked decline in the mineral production.

If the rural industries, viz., pastoral, agricultural, dairying, and poultry, bees and rabbits, be summarised in one total, the variations in the value of production per head in the rural, forestry and fisheries, mining, and manufacturing industries since 1911 will be seen in the following table, where the values per head are stated in the form of index numbers, the year 1911 being taken as a basis and called 100 :—

Year.	Production per head.				
	Rural.	Forestry and Fisheries.	Mining.	Manufacturing.	All Industries.
1911	100	100	100	100	100
1912	101	105	114	112	107
1913	103	108	114	113	108
1914-15	92	98	91	112	98
1915-16	124	102	100	116	118
1916-17	120	96	119	125	121
1917-18	132	104	130	133	132
1918-19	130	119	87	145	128

The per capita value of production from the rural industries was higher than in 1911 in each year except 1914, the increase during the period being 30 per cent. ; the mining production decreased in 1915 as a result of the war, but during the next three years it increased to a point 30 per cent. above 1911 ; in 1919, however, it was 13 per cent lower than in the basic year. The value of the manufacturing production has increased steadily, the rate of increase being greater since 1915-16.

Volume of Production.

Owing to the changes in prices, the foregoing tables, which relate to the actual value of production in each year, do not disclose a most interesting feature of statistics of production, viz., the increase or decrease in the volume or in the quantities produced. In order to illustrate the variations in the volume of production it is necessary to state the value as it would have been if the same prices had been obtained throughout the period.

The following statement shows the values as they would have been if the prices of 1911 had been obtained in each subsequent year. The figures as to rural, forestry and fisheries, and mining production have been obtained by multiplying the actual quantities produced by the prices of the year 1911 ; those relating to manufacturing production have been calculated by applying the Sydney wholesale price index numbers with 1911 as a basis to the value of the output and to the value of materials and fuel, while allowance has been made also for the time worked in each year :—

Year.	Value of Production if 1911 prices had been obtained, ('000 omitted).									
	Amount.					Per Head.				
	Rural.	Forestry and Fisheries.	Mining.	Manufacturing.	All Industries	Rural.	Forestry and Fisheries.	Mining.	Manufacturing.	All Industries
	£	£	£	£	£	£ s. d.	s. d.	£ s. d.	£ s. d.	£ s. d.
1911	36,453	1,195	9,410	19,143	66,201	21 18 0	14 4	5 13 11	11 10 0	39 15 5
1912	36,921	1,303	9,813	19,638	67,675	21 4 9	14 11	5 12 11	11 5 11	38 18 6
1913	38,837	1,381	10,384	21,196	73,793	21 9 4	15 3	5 14 9	11 14 3	39 13 7
1914-5	32,093	1,283	8,479	19,397	61,252	17 4 4	13 9	4 10 9	10 8 2	32 17 0
1915-6	40,221	1,262	7,559	16,291	65,333	21 10 5	13 6	4 1 0	8 14 4	34 19 3
1916-7	35,893	1,327	7,021	16,833	61,074	19 4 10	14 3	3 14 11	9 0 6	32 14 6
1917-8	36,173	1,335	7,918	15,218	60,644	19 2 5	14 1	4 2 11	8 0 1	32 0 4
1918-9	33,706	1,496	5,736	15,763	56,701	17 9 1	15 6	2 18 5	8 3 3	29 6 3

These figures indicate that the volume of production has not been maintained, and that the increase in the actual value received for the products of the various industries was due to increases in prices. From the per capita rates shown above, the following index numbers of the relative productive activity have been formed, the value per head in 1911 being taken as a basis, and called 100 :—

Year.	Relative Productive Activity (if 1911 prices had been obtained.)				
	Rural.	Forestry and Fisheries.	Mining.	Manufacturing.	All Industries.
1911	100	100	100	100	100
1912	97	104	100	98	98
1913	98	106	101	102	99
1914-15	79	96	80	90	83
1915-16	98	94	72	76	88
1916-17	88	99	66	78	82
1917-18	87	98	73	70	80
1918-19	80	108	52	71	74

During 1912 the relative productive activity in the rural industries declined by 3 per cent. The pastoral industry, which is the chief source of rural production, suffered a severe set-back owing to drought in the grazing areas during the first six months of the year, and the number of sheep was reduced by nearly 6 millions. The dairying industry also was affected by the dry weather, but the agricultural areas benefited by abundant rains during the latter part of the year.

In 1913 there was a slight improvement; cultivation was extended, though the average yield per acre of the principal crops was somewhat lower than in the previous year. The season was not, on the whole, favourable to the pastoralists and dairy farmers, but the volume of their production did not decrease.

In 1914-15 the index number of rural productive activity was the lowest during the period, being 21 per cent. lower than in 1911. A severe drought affected a large portion of the State, and many crops failed entirely; the pastoralists experienced serious losses, and the number of sheep in June, 1915, was 12 millions less than at the end of 1911. The drought was not so severe in the dairying districts, though there was a slight decline in the rate of production.

In 1915-16 the relative productive activity in rural industries showed an increase of 25 per cent. as compared with the previous year. The improvement was due to increased agricultural production, as large areas were brought under wheat cultivation to supply the demand for export; high prices were obtainable, and the ploughing season was favourable. This improvement was counterbalanced to some extent by a further decrease in pastoral production, which was affected by the shortage of stock resulting from the drought, and by a decline in the dairying production.

In 1916-17 the high rate of agricultural production was not maintained, owing to the unsettled state of the market, the difficulties as to disposal of the harvest, and the shortage of labour owing to war enlistments, added to which the ploughing season was unfavourable; on the other hand, the high prices obtainable for wool and meat caused many farmers to turn their attention to pastoral pursuits. Pastoral production was better than in the previous season, but it was low in comparison with 1911.

In 1917-18 the dairying and pastoral industries showed slightly increased production, but there was a further decline in agricultural production. The

index number of productive activity was somewhat lower than in the previous year, and in 1918-19 it declined by 9 per cent. The season was very dry, the area under crop declined by about 570,000 acres, and the dairy production showed a marked decline. The pastoral industry, though affected severely by drought, showed somewhat better results.

Briefly, the decline in pastoral production since 1911 may be attributed to the heavy losses of livestock through drought during 1912 and 1914-15. No season since 1911 has been generally favourable to the pastoralists, but this class of industry has received greater attention during recent years, owing to the high prices and the facilities for marketing the products. Apart from the effect of bad seasons, a decline in agricultural production has resulted from the disturbance of the oversea trade, the difficulty in disposing of the harvests, the scarcity of labour during the war period, and the prospect of better returns from sheep-farming. Fluctuations in dairying production were due mainly to seasons, though difficulty in obtaining shipping space affected the industry to some extent.

The production from poultry, bees, and rabbits has increased steadily since 1912. High prices for rabbit skins during the war period stimulated activity in this branch of industry. The returns from forestry and fisheries are relatively small, as these industries have not been developed, and employ only comparatively small numbers of men. The rate of production declined during the early years of the war period, but has since improved.

As to mining, satisfactory prices were obtained for the industrial metals during the first three years of the period under review. The productive activity in 1912 was equal to that of the previous year, and in 1913 it increased slightly; but in 1915 a serious decline occurred owing to the war; it became necessary to restrict the oversea export of coal, and the cessation of trade with the belligerent countries closed the main outlet for the metal products, and caused a curtailment of operations in metalliferous mines. As the war continued, the demand for industrial metals increased, and prices rose considerably, but the rate of production decreased in 1916 owing to industrial unrest at Broken Hill and Cobar; also in the coal-mining districts, where the mines were idle from October to December owing to a strike. In the following year industrial troubles caused a further decline, and the rate of productive activity was 34 per cent. below that of 1911.

In 1918 there was a marked improvement as the result of high prices and the absence of serious disputes; but in 1919 the relative production dropped to a point 48 per cent. below the basic year. The Broken Hill mines closed in May on account of a labour dispute, which had not been settled at the end of the year; the drought militated against the exploitation of the mineral deposits in many districts; and the seamen's strike affected the export trade in coal.

The rate of production in the manufacturing industry declined slightly in 1912, but rose above the former level in the following year. The trade dislocations following the outbreak of war caused a great decrease in the output of the factories, while many industries were affected also by drought, and the relative volume of production declined in 1914-15 and in 1915-16. A slight improvement took place in 1916-17, when many factories were continuously engaged in the production of war materials. In the following year, however, the rate of production reached the lowest level during the period, the index number being 30 per cent. below that of 1911. The output was reduced to some extent during this year by the strike which commenced in the railway workshops in August, 1917. A slight improvement took place in 1918-19, but the volume of production was 29 per cent. below that of 1911.

The foregoing tables show that there has been a marked decrease in the volume of production since 1911. As stated above, the main causes in regard to the rural industries were unfavourable seasons and shortage of labour, owing to war enlistments, and in the mining industry trade dislocations and industrial disputes. The manufacturing industry reflects to a considerable degree the diminished production of the primary industries. The shortage of labour and the scarcity and high cost of raw materials affected the output of many factories, while the absence of men on war service and the high prices caused a reduction in the demand for the products. These industries are more or less domestic concerns, making necessaries for local consumption; there is practically little or no export of manufactured articles, except foods.

It is not possible to quote the production per employee in the various industries, as, except in the manufacturing industry, the number of employees is not accurately recorded. In the chapter "Manufacturing Industry," particulars are given in regard to a few factories, but the records in many cases are deficient as to the "quantities" produced. The following statement shows, in regard to the principal products, the average annual production, absolute and per head, during the last three years, in comparison with the three pre-war years, 1911-13:—

Product.	Average Annual Production.		Per Head of Population.	
	1911 to 1913 (000 omitted).	1916-17 to 1918-19 (000 omitted).	1911 to 1913.	1916-17 to 1918-19.
Wool lb.	352,112	286,775	202·6	151·2
Tallow cwt.	698	442	·4	·2
Wheat bush.	31,865	30,878	18·3	16·3
Maize „	4,691	3,308	2·7	1·7
Potatoes cwt.	1,824	838	1·1	·4
Hay „	18,612	18,079	10·7	9·5
Butter lb.	79,198	75,281	45·6	39·7
Cheese „	5,845	7,204	3·4	3·8
Bacon and Ham „	15,940	17,048	9·2	9·0
Coal tons	9,664	8,662	5·6	4·6
Coke cwt.	9,217	14,220	5·3	7·5
Gold oz.	200	82	·1	·0
Silver „	2,117	1,674	1·2	·9
Silver-lead, Ore, &c. ... cwt.	7,167	4,053	4·1	2·1
Zinc „	10,290	1,819	5·9	1·0
Iron, Pig „	771	1,294	·4	·7
Portland Cement „	2,374	2,613	1·4	1·3
Beer and Stout gal.	21,665	22,879	12·5	12·1
Biscuits lb.	24,175	30,935	13·9	21·1
Boots and Shoes pairs	3,752	3,721	2·2	2·0
Bricks No.	366,985	235,114	211·2	124·0
Candles lb.	5,511	4,171	3·2	2·2
Gas 1,000 cub. ft.	4,878	7,409	2·8	3·9
Jam lb.	27,767	38,060	16·0	20·1
Leather „	13,373	16,970	7·7	9·0
Soap „	31,670	35,655	18·2	18·8
Sugar, Refined cwt.	1,834	2,331	1·1	1·2
Meat, Preserved lb.	25,501	17,307	14·7	9·1
Tweed and Cloth yd.	1,170	2,134	·7	1·1
Timber, Sawn sup.ft.	169,078	135,476	97·3	71·5
Fish, Fresh lb.	15,499	18,837	8·9	9·9

PASTORAL INDUSTRY.

LIVE STOCK.

The following table shows the number of stock in New South Wales at the end of each decennial period from 1861 to 1911, and in 1919 :—

Year.	Horses.	Cattle.	Sheep.	Pigs.
1861	233,220	2,271,923	5,615,054	146,091
1871	304,100	2,014,888	16,278,697	213,193
1881	398,577	2,597,348	36,591,946	213,916
1891	469,647	2,128,838	61,831,416	253,189
1901	486,716	2,047,454	41,867,099	265,730
1911	689,004	3,194,236	44,947,287	371,093
1919*	722,723	3,280,676	37,381,874	294,648

* At 30th June.

In addition to the live stock shown above at the 30th June, 1919, there were 36,334 goats (including 5,999 Angoras), 1,881 camels, 27 donkeys, 174 mules, and 508 ostriches. Since 1891 the sheep have diminished in number to the extent of nearly 24½ millions, but the other classes of stock show the following increases, namely :—Horses 253,000, cattle 1,152,000, and pigs 41,000.

In order to indicate the parts of the State in which the flocks and herds predominate, the following table has been prepared, showing the number of live stock in each Division at the end of various years since 1901 :—

Division.	1901.	1906.	1911.	*1916.	*1919.
SHEEP—					
Coastal Belt	1,097,471	1,316,580	1,433,037	1,110,511	927,094
Tableland	8,859,069	8,842,352	8,961,344	6,583,312	6,746,150
Western Slopes	11,671,524	11,675,425	11,198,621	8,655,530	9,506,637
Central Plains and Riverina...	14,706,082	15,998,996	16,048,376	12,047,361	14,755,051
Western Plains	5,522,953	6,299,068	7,305,909	4,204,015	5,446,942
Total	41,857,099	44,132,421	44,947,287	32,600,729	37,381,874
CATTLE DAIRYING—					
Coastal Belt	284,099	481,809	652,787	599,761	613,872
Tableland	70,224	100,398	106,956	99,996	73,600
Western Slopes	39,732	81,252	78,630	75,204	63,448
Central Plains and Riverina...	19,790	40,954	47,727	51,280	42,289
Western Plains	3,990	8,636	8,644	9,418	4,138
Total	417,835†	713,049	894,744	835,719	797,347
CATTLE, OTHER—					
Coastal Belt	667,282	703,434	915,602	786,534	1,050,056
Tableland	500,974	468,574	549,874	330,451	559,948
Western Slopes	305,789	365,980	422,273	231,754	413,653
Central Plains and Riverina...	114,327	204,901	302,103	159,310	346,975
Western Plains	41,247	87,956	109,640	62,002	112,697
Total	1,629,619	1,836,895	2,299,492	1,570,051	2,483,329
HORSES—					
Coastal Belt	160,704	171,485	207,074	221,538	213,367
Tableland	112,294	110,077	126,602	125,070	122,439
Western Slopes	110,845	130,947	179,728	187,306	187,543
Central Plains and Riverina...	77,650	97,009	140,140	154,744	167,448
Western Plains	25,223	28,244	35,460	30,884	31,935
Total	486,716	537,762	689,004	719,542	722,723

* At 50th June. † In milk only; dry cows and springing heifers are included in the total of Other Cattle.

The table shows that, roughly speaking, as regards sheep, two-fifths are in the Central Plains and Riverina, about one quarter is on the Tableland and another quarter on the Western Slopes. There are approximately five million sheep in the Western Division, and rather less than a million on the Coast. As regards dairy cattle, approximately three-fourths are in the Coastal Division, and small numbers are scattered in other parts of the State. Similarly as regards cattle other than dairying, two-fifths are on the Coast, about one-half is in the Central portions of the State, and the remainder in the Western Division. As regards horses, the numbers are fairly equally distributed in the Eastern and Central portions of the State, the number in the Western Division being less than 5 per cent.

Comparing the most recent with earlier years it would appear that the divisions which now predominate in regard to the various kinds of stock have always done so, and that there is a tendency for the predominance to become more marked.

SHEEP.

The following table, which shows the number of sheep at the close of each quinquennial period from 1861 to 1911 and then annually, illustrates the progress of sheep-breeding in New South Wales.

Year.	Sheep.	Year.	Sheep.	Year.	Sheep.
1861	5,615,054	1891	61,831,416	1913	39,850,223
1866	11,562,155	1896	48,318,790	1915*	33,009,038
1871	16,278,697	1901	41,857,099	1916	32,600,729
1876	25,269,755	1906	44,132,421	1917	36,196,383
1881	36,591,946	1911	44,947,287	1918	38,621,196
1886	39,169,304	1912	39,044,502	1919	37,381,874

* At 30th June since 1915.

The number of sheep in New South Wales reached the maximum of nearly 62,000,000 in 1891, but with that number the State apparently was overstocked, and in the unfavourable seasons which followed the pastoral industry suffered severely.

In 1901 the number of sheep was under 42 millions; during the succeeding decade there was an increase to 45,000,000, notwithstanding the disastrous year 1902, when the number declined to 26,600,000. From 1909 to 1916 the flocks decreased considerably, the principal causes being heavy losses in lambs and in grown sheep caused by drought, by the subdivision of large holdings, and by the development of the dairy industry. Since 1916 there has been an increase of 5,000,000 and the number of sheep in the State at 30th June, 1919, was 37,381,874.

After allowing for the causes which naturally impede the increase, such as the demands of the local meat supply, the requirements of the neighbouring States and of countries oversea, and the losses occurring from causes

other than drought, it is found that the rate of annual increase has been as high as 20 per cent., for instance, in 1904, and in several of the earlier periods. The effects in the past of drought on the number of sheep in the State and the periods of recovery will be seen from the following. After a drought in 1898-9, the number in 1899 when compared with the previous year showed a decrease of 5,000,000 or 12 per cent., but the loss was made up in two years. In the drought of 1902 the losses were more serious, amounting to 15,000,000, or 36 per cent.; and as the subsequent seasons were not altogether favourable five years elapsed before the losses were made good. In each of the five years following 1906 the number of sheep was about 45,000,000. From 1912 to 1919 the seasons were unfavourable for pastoral pursuits, and the number fluctuated between 39,000,000 in 1912 and 32,000,000 in 1916, which was the lowest number since 1913.

The decrease in the total number of sheep after 1891 was accompanied by great changes in the size of individual flocks, and these changes may be traced in the following table, which gives an approximate classification of the flocks for various years, from 1891 to 1919.

Size of Flocks.	Number of Flocks.				Number of Sheep.			
	1891.	1901.	1911.	1919.†	1891.	1901.	1911.	1919.†
1—1,000 ...	7,606	11,800	17,773	18,764	2,794,751	3,797,114	5,252,546	5,816,236
1,001—2,000 ...	1,954	2,351	3,510	3,560	2,979,168	3,590,849	5,149,618	5,027,172
2,001—5,000 ...	1,696	1,722	2,735	2,480	5,493,942	5,519,008	8,554,299	7,569,874
5,001—10,000 ...	686	729	847	803	4,943,221	5,210,117	5,977,233	5,572,070
10,001—20,000 ...	495	465	507	400	7,056,580	6,666,429	7,143,273	5,672,645
20,001—50,000 ...	491	344	296	195	15,553,774	10,552,373	8,737,927	5,523,927
50,001—100,000 ...	186	76	53	28	12,617,206	4,835,547	3,434,698	1,865,235
100,001 and over ...	73	12	6	3	10,392,774	1,588,103	697,893	334,715
Total ...	13,187	17,499	25,727	26,239	61,831,416	41,857,090*	44,947,237	37,381,874

* Includes 127,559 sheep in unclassified flocks.

† 30th June.

In 1891 there were only 13,187 holdings containing sheep, but at 30th June, 1919, they numbered 26,239, although the sheep had decreased by over 24 millions.

It is significant that while in 1891 there were 73 holdings which each carried over 100,000 sheep, the number of such in 1901 was 12, and in 1919 only 3. The sheep in flocks of over 20,000 comprised 62 per cent. of the total in 1891, but only 20·7 per cent. in 1919; while in 1891 the flocks under 2,000 comprised 9·3 per cent. of the total sheep compared with 29·0 per cent. in 1919. Of the 7,500,000 decrease in the number of sheep since 1911, 6,500,000 have occurred in the flocks of 10,000 and over. The greatest change has occurred since 1894, when a very large number of sheep perished, and pastoralists realised that the best method of meeting seasons of drought lay in the subdivision of their large flocks. Since 1904 the application to large estates of the closer settlement policy has caused a further subdivision of the flocks.

The following statement shows the flocks and the number of sheep at 30th June, 1919, classified according to the size of the holdings on which they were depastured, and for purposes of comparison similar information is shown for 1909.

Area Groups.				Number of Flocks.		Number of Sheep.		Proportion to total Flock.		Proportion to total Sheep.	
				1909.	1919.	1909.	1919.	1909.	1919.	1909.	1919.
	acres.							per cent.	per cent.	per cent.	per cent.
1 and under	51	...	1,085	662	27,103	20,548	4.5	2.5	1	1	
51 "	101	...	891	586	50,511	38,451	3.7	2.3	1	1	
101 "	501	...	5,905	5,844	1,138,079	1,038,598	24.5	22.5	2.5	2.8	
501 "	1,001	...	4,898	5,726	2,332,503	2,130,044	20.4	22.1	5.1	5.7	
1,001 "	5,001	...	8,166	9,594	11,051,542	10,500,112	33.9	37.0	24.1	28.1	
5,001 "	10,001	...	1,431	1,778	5,626,868	5,551,468	5.9	6.8	12.3	14.9	
10,001 "	20,001	...	690	835	5,298,223	4,639,525	2.9	3.2	11.5	12.4	
20,001 "	50,001	...	546	536	7,535,127	5,058,295	2.3	2.1	16.4	13.5	
50,001 "	100,001	...	206	178	4,886,760	3,062,812	9	7	10.6	8.2	
100,001 and upwards		...	244	201	7,941,397	5,285,640	1.0	8	17.3	14.2	
All-defined areas		...	439	299	314,465	56,381	...	...	...	...
Total		...	24,501	26,239	46,202,578	37,381,874	100	100	100	100	

The number of sheep depastured in the State in 1919 was over 8½ millions less than in 1909, but the number of flocks had increased by 1738, showing the tendency among sheep farmers to restrict the flocks to sizes where the risks of drought are not so great. In 1909, 44 per cent. of the sheep were depastured on holdings of 20,000 acres and upwards, while in 1919 only 36 per cent. were depastured. The holdings up to 20,000 acres carried 64 per cent. of the total number of sheep in 1919, having increased from 56 per cent. in 1909.

The principal breeds of sheep in New South Wales are the celebrated short-woolled Merino strain, Downs, and varieties of long-woolled English sheep, notably the Lincoln, the Leicester, the Border Leicester, and the Romney Marsh, together with crosses of the long-woolled breeds, mainly with the Merino. Suffolk sheep, which appear to be pre-eminently adapted for farming purposes, and for the production of weighty lambs for the export trade, were introduced into the New England district during 1904, but in the majority of the districts in which raising of early-maturing lambs is an important factor, the Dorset Horn breed has given exceptionally good results. At the close of 1919, the numbers of merino and cross-breeds were as shown below; the figures are based on returns collected for assessment purposes by the Chief Inspector of Stock, and are apparently below the actual number depastured.

Class of Sheep.	Rams.	Ewes.	Wethers.	Lambs.	Total.
Merino ...	379,250	12,638,464	6,511,288	3,641,098	23,170,100
Other Breeds— Coarse Wool ...	119,998	5,518,728	2,345,022	2,311,686	10,295,434
Total ...	499,248	18,157,192	8,856,310	5,952,784	33,465,534

Lincolns, and their crosses with Merinos, constitute the largest proportionate number of coarse-woolled varieties. The proportion of English and cross-bred sheep has increased considerably during more recent years. In 1893 the ratio of coarse-woolled and cross-breeds rose from about 2½ to 4.3 per cent., but with the development of the meat-export trade it has since advanced to 30.8 per cent.

On account of the mildness of the climate the necessity for housing stock during the winter months, except on the highlands, does not exist in New South Wales. The sheep are kept either in paddocks or under the care of shepherds, although on some stations both methods are followed concurrently. The paddocking system has many advantages, which are now fully recognized by stockowners.

The increased attention paid to cross-breeding in order to supply the demands of the frozen-mutton trade, and the increase in the number of settlers on small and moderate-sized holdings who combine grazing with agriculture, have together emphasised the necessity of conducting experimental breeding on a scientific basis, and of providing instruction for sheepfarmers. To meet this necessity a sheep and wool expert of the Department of Agriculture organises the class work conducted at State experiment farms, delivering lectures and giving demonstrations in country centres.

Cross-breeding experiments on a comprehensive scale were commenced in 1910 at the Wagga Wagga, Cowra, Bathurst, and Glen Innes Experiment Farms, the work being carried out specially in the interests of the farmer or small grazier, who has the facilities for breeding high-priced lambs. Both the long and the short woolled breeds were crossed with the Merino with the object of obtaining the most desirable characteristics of each group, so that all these qualities could be incorporated in a single strain. In the first step in the evolution of a dual-purpose sheep for wool and for mutton long-woolled rams were mated with Merino ewes. Then the early maturing and exceptional mutton qualities of the short-woolled varieties—Southdowns, Shropshires, and Dorset Horns—were utilised by mating rams of these breeds with the cross-bred ewes, for the production of a lamb suitable both for local consumption and for shipping. The final results of the investigations form the subject of a special "Farmers' Bulletin," issued by the Department of Agriculture in August, 1920, and the conclusion arrived at favoured the mating of merino ewes with sires of British breeds, in view of the adaptableness of the former to seasonal conditions.

The Border-Leicester crosses showed a material increase in body-weight over the other crosses at practically all ages. In wool production the Lincoln crosses maintained superiority, but as the Border Leicester wool commanded a higher price per lb. there was a tendency to even up the discrepancy.

In proportion of dressed-weight to live-weight, the Border Leicester was consistently above the Lincoln, and the Leicester once only surpassed it, and then by ½ per cent. only. In flesh value per lb. the Leicester showed to advantage, but taken into consideration with dressed weights, the results showed that at all ages the carcass value of the Border Leicester was greater than that of the other crosses.

Wool.

The prosperity of New South Wales depends very largely on the conditions of the wool market of the world, and the wool-clip is the most important factor of the year in the production of the State.

The following table shows the production in quinquennial periods since 1876, distinguishing the exports and the local consumption. The exports comprise both washed and greasy wool, but the actual weight of exports does not show the production clearly with regard to quantity. The proportion of washed and greasy wool varies each year, and the washed wool should be stated, therefore, as in grease; this course has been followed in the table, and the quantity of the staple used locally in woollen mills has been added to ascertain the total production, stated as in the grease.

The amount of wool used locally is known, so that the difference between this quantity and the total production represents the quantity exported, or available for export, either to oversea ports or to the other Australian States. It does not follow that the wool of any particular season is exported during that season, and this applies more particularly to the last five years, during which shipping facilities have been limited, and large quantities of wool have been held in store pending opportunities of shipment and sale.

The values given in the table represent the export values free on board, Sydney, and consequently differ from those on a later page, which show the values at the place of production :—

Period.	New South Wales Wool.—Quantity.			Value.		
	Exported, or available for Export.	Used Locally.	Total Production.	Exported, &c.	Used Locally.	Total Value (F.O.B., Sydney).
	lb.	lb.	lb.	£	£	£
1876-1880	713,518,500	4,878,500	718,397,000	31,076,350	222,250	31,298,600
1881-1885	939,605,700	4,208,300	943,814,000	40,381,380	181,720	40,563,100
1886-1890	1,290,919,900	3,861,100	1,294,781,000	44,641,580	130,920	44,772,500
1891-1895	1,808,007,600	5,622,400	1,813,630,000	48,893,010	131,590	49,024,600
1896-1900	1,401,170,000	7,070,000	1,408,240,000	42,782,450	201,250	42,983,700
1901-1905	1,297,118,300	5,466,700	1,302,585,000	46,528,630	190,470	46,719,100
1906-1910	1,811,746,400	5,415,600	1,817,162,000	73,437,200	172,800	73,610,000
1911	369,144,000	2,402,000	371,546,000	13,178,000	86,000	13,264,000
1912	324,384,000	2,420,000	326,804,000	12,727,000	96,000	12,823,000
1913	355,501,000	2,484,000	357,985,000	14,237,500	99,500	14,337,000
1914*	130,310,000	1,500,000	131,810,000	5,244,000	60,000	5,304,000
1915†	314,765,000	4,170,000	318,935,000	12,058,000	170,000	12,228,000
1916†	255,578,000	6,467,000	262,045,000	12,010,000	281,000	12,291,000
1917†	263,968,000	6,557,000	270,525,000	17,453,000	297,000	17,750,000
1918†	278,521,000	5,567,000	284,188,000	19,253,000	285,000	19,538,000
1919†	298,844,000	6,769,000	305,613,000	20,010,000	364,000	20,374,000

* Six months—January to June. † Year ended 30th June.

Prior to 1876 no distinction was made between washed and greasy wool, so that any attempt to estimate the production is surrounded with difficulty. From the information available, it would appear however, that the production in 1861 was 19,254,800 lb., and in 1871 the weight in grease was 74,401,300 lb.

Up to the time of the initiation of the Imperial Wool Purchase Scheme, described below, about 85 per cent. of the wool produced in New South Wales was sold in Sydney, where the wool sales in each year were attended by purchasers from Great Britain and from the foreign countries where woollen goods are manufactured on an extensive scale.

The average prices of wool, f.o.b. Sydney, in each year since 1901, are shown in the following table:—

Year.	Average Prices per lb.		Year.	Average Prices per lb.		Year.	Average Prices per lb.	
	Greasy.	Scoured.		Greasy.	Scoured.		Greasy.	Scoured.
	d.	d.		d.	d.		d.	d.
1901	7½	13¼	1908	9¾	16½	1914*	9½	14½
1902	8¼	16½	1909	9½	14½	1915†	9	15
1903	9½	18	1910	9¾	15½	1916†	10¾	16¾
1904	8½	18½	1911	9¼	14¾	1917†	15¾	21¾
1905	10¼	18¾	1912	9¼	14½	1918†	16¾	24½
1906	10¾	19½	1913	9¾	16	1919†	16	21¾
1907	11¼	20½						

* Six months, January–June.

† Year ended 30th June.

THE IMPERIAL WOOL PURCHASE SCHEME.

Details of the scheme under which the Imperial Government purchased Australian wool during 1916–17 were shown in the 1916 issue of this Year Book; similar arrangements were made for the acquisition of the wool of the season 1917–18. Subsequently the Imperial Government decided to extend the purchase of the Australian wool-clip for the period of the war and for one wool-year thereafter. The contract expired on 30th June, 1920.

The management of the scheme in Australia was placed under the control of a Central Wool Committee, consisting of a chairman, nominated by the Commonwealth Government, two representatives of the wool-growers, three representatives of the selling brokers, respectively of Sydney, Melbourne, and Adelaide, one representative each of the manufacturers, the scourers, and the buyers, and a secretary. Committees were formed in each State also on a similar basis.

The wool was purchased by appraisalment at a price which was decided at the initiation of the scheme by representatives of the various interests concerned, and was fixed at 15½d. per lb. in the grease, but it was understood that any wool not required for British military and naval purposes would be sold by the Imperial Government, and 50 per cent. of any surplus over 15½d. per lb. returned to the wool-growers.

With the object of returning to the wool-growers the fixed average rate, a Clean Cost Basis, divided into 381 different types of wool, was established; but at the commencement of the 1917–18 season it was superseded by a Table of Limits, consisting of 848 distinct types, which allowed more accurate classification of the various types, and at the same time provided for any unusual features in the clip.

Payment of the appraised value of the wool was made to the growers shortly after appraisalment, an amount equal to 10 per cent. being retained to meet any contingency that might arise from over-valuation of the wool. Sales of interest in the Wool Pool and speculation in wool equities were prohibited. Special arrangements were made to supply the requirements of local manufactures of woollens and wool-tops. The woollen manufacturers were allowed to purchase wool for their normal requirements to 30th June, 1920, at appraised value, plus a delivery charge of ¼d. per lb. and an appraisalment fee of ½ per cent. of the appraised value. Their purchases were confined practically to the medium and lower-grade wools, as they are engaged mainly in the manufacture of woollens, as distinct from worsteds, for which high-quality wools are necessary.

The manufacturers of wool-tops use high-grade wools, and their purchases were made under agreement with the Commonwealth Government. They were required to pay the flat rate value of the wool purchased and an additional sum, as decided by the Central Wool Committee or fixed by special agreement, in respect of the profits which would have been returned to the Wool Pool if the wool had been sold by the Imperial Government.

For the marketing of wool during the transition period from the termination of the contract with the Imperial Government until auction sales could be resumed under normal conditions, efforts were made to formulate a scheme to protect the interests of the owners. Proposals were submitted to the vote of the wool-growers, but the result of the ballot did not warrant any further action being taken and open auction sales were resumed in October, 1920.

The total quantities of greasy and scoured wool submitted for appraisal in Australia during the 1919-20 season and the appraised value are shown below :—

Wool.	Quantity of Wool Appraised.				Appraised Value.	
	Bales.	Fadges.	Sacks.	Total Weight.	Total.	Average per lb.
Greasy...	No. 1,710,873	No. 24,034	No. 251,319	lb. 579,709,381	£ 37,814,207	d. 15-66
Scoured	288,708	1,180	784	67,343,411	7,506,980	26-75
Total	1,999,581	25,214	252,103	647,052,792	45,321,187	15-23

Thus the average price of wool appraised in a greasy state was 15-66d. per lb. and of scoured wool 26-75d. per lb.; the average appraised price of all wool, calculated as in grease, was 15-23d. per lb. Assuming that, on the average, 2 lb. of greasy wool are required to produce 1 lb. of scoured, the wool appraised was equal to 714,396,203 lb. as in grease, and the total value at the flat rate of 15½d. per lb. would be £46,138,088; thus the appraised value was deficient by £816,901 or 1-77 per cent. It was decided to pay to the wool-growers, in addition to 10 per cent. retention money, a dividend of 2 per cent., the extra amount above the 1-77 per cent. difference between the flat rate and the appraised value being paid from the interest earned on the retention money.

The quantity of wool appraised in New South Wales in 1919-20 was 237,552,009 lb., and the appraised value was £16,390,647, or 14-87d. per lb.; particulars regarding the appraisements in each of the States in 1919-20 are as follow :—

State.	Weight.	Appraised Value.	
		Total.	Average per lb. as in grease.
	lb	£	d.
New South Wales	237,552,009	16,390,647	14-87
Victoria	184,221,076	13,031,817	15-29
Queensland	103,366,939	8,310,202	16-62
South Australia	70,176,631	4,164,840	13-86
Western Australia	40,474,144	2,569,744	14-75
Tasmania	11,261,993	853,937	18-16
Total	647,052,792	45,321,187	15-23

To meet the requirements of local manufacturers 27,315,929 lb. of greasy and 867,133 lb. of scoured wool were purchased. Woollen manufacturers were required to pay only the appraised value for their purchases, which amounted to 16,922,612 lb. of greasy wool and 754,706 lb. of scoured; the appraised value, at an average price of 15·36d. per lb. (greasy), amounted to £1,179,328 or £21,257 less than the flat-rate value.

Particulars regarding the distribution of the 1919-20 wool are shown in the following statement:—

Purchased by—	Quantity of Wool.			Appraised Value.	
	Greasy.	Scoured.	Total weight, as in grease.	Total.	Average per lb. (as in grease).
	lb	lb	lb	£	d.
Local Manufacturers of—					
Woolens	16,922,612	754,706	18,432,024	1,179,328	15·36
Wool Tops	10,393,317	112,427	10,618,171	1,030,057	23·29
Imperial Government ...	552,393,452	66,476,278	685,346,008	43,111,802	15·10
Total... ..	579,709,381	67,343,411	714,396,203	45,321,187	15·23

The manufacturers of wool-tops purchased 10,393,317 lb. of greasy and 112,427 lb. of scoured wool, the flat rate value being £1,048,624 or 23·7d. per lb. (greasy). This quantity is exclusive of skin-wool, the product of fellmongering operations, used in the manufacture of wool-tops.

The quantity of wool sold to the Imperial Government was 685,346,008 lb. as in grease, which at 15½d. per lb. amounted to £44,261,930, and an amount of £1,150,128 was deducted on account of the wool being of inferior quality to the general average of the whole clip. Charges to cover handling costs from warehouse to f.o.b., salaries of Government appraisers, remuneration of shipping houses, and other incidental expenses, amounted to £1,933,968.

The wool and other credits for the 1919-20 season were as follow:—

Imperial Government —	£
Wool Account	44,261,930
Handling Charges	1,933,968
Sheep-skins Accounts	2,271,349
Australian Manufacturers	2,227,952
Interest	231,099
	<hr/>
	£50,926,298
Less: Cost of Exchange	114,636
	<hr/>
Total	£50,811,662

In connection with a contract between the Commonwealth Government and the Imperial Government for the acquisition of all surplus sheep skins over and above Australian requirements, the appraisement of sheep-skins was undertaken by the Central Wool Committee during the seasons 1916-17 and 1917-18; subsequently it was decided to suspend this method and to purchase in the open market such skins as were required for naval and

military purposes by the Director of Raw Materials. Sheep-skins, weighing 48,085,227 lb., were purchased during 1919-20 at a total value of £2,149,788, the quantity purchased in New South Wales being 12,170,995 lb., valued at £547,315.

During the period of control from November, 1916 to, June, 1920, the total quantity of wool appraised was 2,274,164,123 lb.; the local manufacturers purchased 82,157,481 lb., and the balance, 2,192,006,642 lb., was sold to the Imperial authorities. The sheepskins purchased on behalf of the Imperial authorities amounted to 122,067,170 lb., and the value was £5,280,088; of these 26,939,792 lb., valued at £1,155,314, were acquired in New South Wales. Particulars are shown in the following statement:—

Season.	Wool.				Sheepskins.	
	Greasy.	Scoured.	Total Weight.	Value (Flat rate.)	Weight.	Value.
	lb	lb	lb	£	lb	£
1916-17	323,752,519	34,307,991	358,060,510	25,340,466	11,542,325	433,603
1917-18	569,612,721	47,340,301	616,953,022	42,902,277	24,241,856	1,031,414
1918-19	599,438,446	52,659,353	652,097,799	45,515,566	38,197,762	1,665,283
1919-20	779,709,381	67,343,411	647,052,792	46,138,088	48,085,227	2,149,788
Total	2,072,513,067	201,651,056	2,274,164,123	159,896,397	122,067,170	5,280,088

The total amount of money received from the Imperial Government and other sources to 30th June, 1920, was £173,896,059, including £6,486,992, which represents the 50 per cent. profits resulting from the re-sale of wool by the Imperial Government up to 31st March, 1919—the latest date for which the British balance-sheets are available.

The oversea shipments consisted of 5,662,750 bales, their destination being as follows:—

Country.	1916-17.	1917-18.	1918-19.	1919-20.	Total.
	bales.	bales.	bales.	bales.	bales.
United Kingdom	872,631	1,278,386	1,344,234	830,886	4,326,137
Belgium .....	...	...	115,307	129,739	245,046
France	20,133	47,300	61,063	37,901	166,397
Italy	69,331	109,737	92,440	15,514	287,022
Japan .....	...	24,597	2,424	41,648	68,669
United States	48,272	303,869	121,370	22,606	496,117
Other countries	40,963	27,241	4,908	250	73,362
Total	1,051,330	1,791,130	1,741,746	1,078,544	5,662,750

During the war period the shipments of wool consisted mainly of certain qualities of cross-bred wool, suitable for military and naval purposes, but when the armistice was signed the demand reverted to the merino and fine cross-bred wools for the manufacture of materials for civilian purposes. At 30th June, 1920, there remained in Australia 1,161,823 bales of wool which had been sold to the Imperial Government, viz., 498,246 bales of merino and 663,577 bales of cross-bred.

CATTLE.

The number of cattle returned shows that there was a great decline in the total from 1876 to 1886, that the number steadily increased from 1886 to 1896, when it stood at 2,226,163, and that subsequently, owing to

unfavourable seasons, the number decreased until in 1902, the total fell to 1,741,226. From 1902 the number increased to 3,194,236 in 1911, but declined to 2,405,770 in 1916. In the succeeding three years the number increased considerably, and in June, 1919, amounted to 3,280,676, which constitutes a record for the State.

The following table shows the number of cattle in the State at the close of each quinquennial period from 1861 :—

Year.	Cattle.	Year.	Cattle.	Year.	Cattle.
1861	2,271,923	1886	1,367,844	1911	3,194,236
1866	1,771,809	1891	2,128,838	1916*	2,405,770
1871	2,014,888	1896	2,226,163	1917*	2,765,943
1876	3,131,013	1901	2,047,454	1918*	3,161,717
1881	2,597,348	1906	2,549,944	1919*	3,280,676

* At 30th June.

The principal breeds of cattle now in the State are the Durham or Shorthorn, Hereford, Jersey, Ayrshire, and Devon, besides crosses from these breeds. At the close of the year 1919 the number of each breed, so far as could be ascertained, were :—

Breed of Cattle.	Pure and Stud.	Ordinary.	Total.
Shorthorn, Milking	39,717	206,889	246,606
" Beef	77,451	362,258	439,709
Hereford	34,074	127,456	161,530
Devon... ..	7,363	32,303	39,666
Black-polled	2,731	8,901	11,632
Red-polled	1,245	3,182	4,427
Ayrshire	9,115	52,838	61,953
Guernsey and Alderney	2,152	15,377	17,529
Holstein	799	4,135	4,934
Jersey..	18,359	81,109	99,468
Kerry... ..	24	40	64
Highland	40	120	160
Crosses (first) ... ..	...	1,764,368	1,764,368
	193,070	2,658,976	2,852,046
The crosses are estimated as follow :—			
Shorthorn—Hereford ... ..	...	...	306,173
Shorthorn—Devon ... ..	...	...	95,165
Shorthorn—Red-polled ... ..	...	...	10,345
Shorthorn—Guernsey... ..	...	...	11,270
Hereford—Devon ... ..	...	...	57,188
Hereford—Black-polled ... ..	...	...	11,064
Hereford—Jersey ... ..	...	...	327
Ayrshire—Shorthorn ... ..	...	...	175,429
Ayrshire—Jersey ... ..	...	...	42,266
Ayrshire—Hereford ... ..	...	...	395
Black-polled—Shorthorn ... ..	...	...	19,930
Jersey—Shorthorn ... ..	...	...	230,137
Holstein—Jersey ... ..	...	...	1,838
Holstein—Ayrshire ... ..	...	...	1,912
Dexter—Crossbreds ... ..	...	...	10
Unrecognisable... ..	...	...	800,919
Total ... ..	...	...	1,764,368

The foregoing table does not include the whole of the cattle, as large numbers, principally in the metropolitan centres and in the vicinity of towns, are not returned.

There has been an appreciable increase in the number of dairy cattle, many of the farmers in the coastal districts having turned their attention to the dairying industry with very satisfactory results. The number of milch cows at 30th June, 1919, was 445,354, and there were 273,154 dry dairy cows, 78,839 heifers within 3 months of calving, and 173,101 other heifers.

During 1918-19 the number of calvings recorded was 807,917, and 605,867 or 75 per cent. were surviving at the end of the year.

In order to encourage and assist dairy farmers in improving their breeds, the Government imported high-class stud-bulls from England, and these and their progeny are either sold or kept for service at the State farms.

The exports of New South Wales cattle to countries oversea during 1918-19 numbered 640. Of these 605, valued at £4,355, were ordinary cattle, and 35, valued at £1,151, were cattle for stud purposes.

HORSES.

Australian horses have acquired a high reputation. At an early period the stock of the country was enriched by the importation of some excellent thoroughbred Arabs, and it is constantly being improved by the importation of high class stock from Great Britain. The number of horses in the State steadily increased from 233,220 in the year 1861 to 518,181 in 1894; but owing to drought, the total had fallen in 1901 to 486,716; since that year there has been a substantial increase, and the number at the end of 1911 reached 689,004. There was a great advance in horse breeding between 1910 and 1914; owing to the increased demand which arose as a consequence of widening settlement, prosperous seasons, and, more recently, defence requirements; the number on 30th June, 1919, was 722,723.

The following table shows the number of horses in New South Wales at the end of quinquennial periods since 1861:—

Year.	Horses.	Year.	Horses.	Year.	Horses.
1861	233,220	1886	361,663	1906	537,762
1866	274,437	1891	469,647	1911	689,004
1871	304,100	1896	510,636	1916*	719,542
1876	366,703	1901	486,716	1919*	722,723
1881	398,577				

* At 30th June.

For purposes of classification the horses have been divided into draught and light, and the number of each particular kind, at the 31st December, 1919, so far as could be ascertained from returns collected by the Stock Department, was as follows:—

Class.	Thoroughbred.	Ordinary.	Total.
Draught	31,307	244,174	275,481
Light	32,937	268,765	301,702
Total	64,244	512,939	577,183

New South Wales is specially suited to the breeding of saddle and light-harness stock, and it is doubtful whether, in these particular classes, the Australian horse can be surpassed anywhere. Thoroughbred sires are kept on many of the large holdings and the progeny of these stallions combine speed with great powers of endurance. Although fed only on the ordinary herbage, these animals constantly perform long journeys across difficult country, and become hardy and sure-footed to a high degree. The possession of these qualities gives them great value as army remounts.

The approximate number of animals fit for market is as follows:—Draught 40,915; light, 42,180; total, 83,095. Of these it is estimated that about 19,025 are suitable for the Indian and other markets.

There is a considerable exportation annually to countries outside Australia, and the following table shows the number and the value of horses bred in New South Wales and sent to countries outside Australia in the years 1900, 1910, 1914–15, and 1918–19:—

Countries.	Number.				Value.			
	1900.	1910.	1915.	1919.	1900.	1910.	1915.	1919.
Fiji.....	48	190	215	75	£ 1,220	£ 4,566	£ 5,036	£ 1,796
India.....	1,688	925	411	3,298	18,521	20,522	10,955	66,650
New Zealand.....	189	106	62	11	3,276	4,660	9,750	4,600
South Africa.....	7,714	1	1	...	124,485	25	20	...
Straits Settlements ...	295	42	1	3	7,440	6,645	50	180
China.....	1,489	1	...	...	41,600	60	...	...
Japan.....	...	31	46	27	...	1,620	2,400	1,350
Java	36	98	34	354	720	2,747	1,085	9,173
Philippine Islands ...	35	397	...	...	1,060	9,985	...	...
Other Countries ...	78	135	82	34	4,963	4,486	5,003	1,127
Total	11,572	1,926	852	3,802	203,285	57,116	34,299	84,876

* Twelve months ended 30th June.

The horses sent to South Africa in 1900 were for the use of mounted troops in the war; since 1914, also, large numbers have been despatched oversea for military purposes, but they have not been included in the table, as particulars are not available. During 1904 agents from Japan purchased a large number of horses on behalf of the Japanese Government, but the trade in recent years has not been important. There is a regular export trade to India, where the horses are required as remounts for the Indian Army; this trade has shown a marked increase since 1914.

OTHER LIVE STOCK.

The number of goats in New South Wales in June, 1919, was 36,334, including 5,999 Angora goats, which are valued by pastoralists chiefly as effective scrub exterminators, although the dry climate of the western districts is eminently suited to the production of fine mohair.

Camels are used as carriers on the Western Plains, the number in June, 1919, being 1,881, compared with 1,792 at the close of the year 1913.

Donkeys and mules are not extensively used in New South Wales, the numbers in 1919 being 27 of the former and 174 of the latter. It is claimed that mules have many points of advantage over horses for farm work, especially in areas of limited rainfall—for instance, longer period of utility, smaller cost of maintenance, greater adaptability to untoward conditions of labour, and comparative freedom from disease.

A comparison for 1918-19 of the numbers of horses, cattle, sheep and swine, in New South Wales and in the other States of the Commonwealth is shown in the following table.

Country.	Horses.	Asses and Mules.	Cattle.	Sheep.	Goats.	Swine.
Australia—						
New South Wales	722,723	201	3,280,676	37,381,874	36,334	294,648
Victoria... ..	523,788	*33	1,596,544	15,773,902	*27,939	267,819
Queensland	731,705	1,037	5,940,433	17,379,332	132,947	99,593
South Australia	269,255	4,462	342,768	6,625,184	9,315	79,078
Northern Territory	31,436	250	570,039	58,620	7,514	1,200
Western Australia	180,086	6,413	943,793	7,161,402	35,421	85,822
Tasmania	41,221	...	218,234	1,841,924	2,566	44,328
Total	2,500,214	12,396	12,892,487	86,222,238	252,036	872,488

* Census, 1901.

The foregoing table shows that New South Wales contains the largest proportion in the Commonwealth of sheep, 43·3 per cent., and swine, 33·7 per cent.; whilst in Queensland there are 29·3 per cent. of the horses and 46·0 per cent. of the cattle.

The climate of certain portions of the State is considered specially suitable for ostrich farming, though it is not conducted on an extensive scale. The number of ostriches at the end of June, 1919, was 508, as compared with 662 at the close of the year 1913.

PRICES OF LIVE STOCK.

The governing factor in the price of meat is the price paid for live stock at the Metropolitan sale yards at Flemington, and that price is itself influenced by the world's market price for meat, hides, skin, &c., and by local climatic conditions.

The following statement shows the movement of the prices of fat stock during the years 1915 to 1919. Details of the monthly prices are published in the Statistical Register. Accurate quotations for lambs in 1916* are not available, as they were sold in most cases with the grown sheep, owing to the abnormal conditions and limited supply:—

Stock.	1915.	1916.	1917.	1918.	1919.
Cattle.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Bullocks and Steers—					
Mean of prime and good	17 15 0	18 9 3	16 13 0	17 9 6	18 8 0
Cows and Heifers—					
Prime	13 7 6	14 16 0	15 0 0	15 6 0	17 4 0
Calves, Vealers—					
Good... ..	3 2 0	3 17 3	4 7 6	4 10 0	4 11 3
Sheep.					
Cross-bred—					
Wethers—					
Mean of prime and good	1 3 3	1 13 3	1 14 3	1 13 3	1 10 9
Ewes—					
Mean of prime and good	1 1 6	1 8 6	1 15 9	1 15 6	1 9 0
Merino—					
Wethers—					
Mean of prime and good	1 1 6	1 11 0	1 11 3	1 11 0	1 9 3
Ewes—					
Mean of prime and good	0 18 3	1 6 6	1 5 9	1 4 0	1 3 0
Lambs, Woolly—					
Mean of prime and good	0 17 3	...	1 6 3	1 5 3	1 2 0
Pigs.					
Porkers—					
Good	2 7 0	2 9 0	2 17 6	2 10 6	3 7 3
Baconers—					
Good	4 2 0	4 15 6	4 6 3	4 3 3	4 17 6

A sharp rise in prices occurred as a result of heavy losses during the drought of 1914-5. In 1916, the prices were considerably above the level of the previous year, as supplies of stock for slaughtering were scarce, owing to the great demand for re-stocking which set in as a result of a favourable season, and of high values of wool. The high prices were maintained throughout 1917. In the following year the average prices were slightly lower.

In 1919 the price of pigs increased considerably, and prime cattle were somewhat dearer, but for all other stock the prices declined and did not rise again until the drought-stricken areas were relieved by the general rainfall during June, 1920.

The figures in the foregoing table show the mean prices of the grades which are most frequently marketed at the sale yards, and the variations in prices of the various classes were briefly as follows :—

The highest monthly average price in 1919 for extra heavy bullocks and steers prevailed in December, when £31 8s. was obtained. In November for the inferior grade £4 6s. only was realised.

The monthly averages of cows ranged from £21 7s. in December to £2 8s. in November. For merino wethers and hoggets £2 5s. in June was the maximum average, while 17s. 6d. in January was the minimum. Ewes reached the extreme averages in the same months, when prices of £1 18s. 6d. and 13s. respectively were realised.

Crossbred wethers and hoggets attained their maximum average in June at £2 5s. 6d., and their lowest in November at 19s. 6d.

Crossbred ewes ranged from £2 3s. for the month of June to 17s. 3d. for December. Lambs, suckers and woolly showed a monthly variation between £1 14s. in June and 11s. 9d. in November.

VALUE OF PASTORAL PRODUCTION.

The grazing industry long constituted the greatest source of wealth in New South Wales, and information relating to pastoral returns is therefore of interest.

It is difficult, from the nature of the industry, to estimate the return from pastoral pursuits as at the base of production; but taking the Sydney prices as a standard, and making due allowance for incidental charges, such as agistment, railway carriage or freight, and commission, the value during the season 1918-19 would appear as £29,865,000. The returns received from the different kinds of stock during the years 1891-1919 are shown in the following table.

Year.	Annual Value of Pastoral Production.					
	Sheep for Food.	Wool.	Cattle.	Horses.	Total.	Per Head of Population.
	£	£	£	£	£	£ s. d.
1891	2,367,000	9,996,000	1,535,000	827,000	14,725,000	12 17 10
1896	1,745,000	8,619,000	990,000	420,000	11,774,000	9 5 4
1901	2,071,000	8,425,000	1,374,000	682,000	12,552,000	9 3 8
1906	3,514,000	13,792,000	1,592,000	845,000	19,743,000	13 6 0
1911	2,811,000	12,933,000	1,689,000	2,001,000	19,434,000	11 13 6
1912	3,127,000	12,497,000	1,754,000	2,062,000	19,440,000	11 3 8
1913	2,885,000	13,620,000	2,041,000	2,192,000	20,738,000	11 9 3
1914-15	3,004,000	11,250,000	2,498,000	2,096,000	18,848,000	10 2 3
1915-16	4,295,000	11,380,000	3,729,000	2,172,000	21,576,000	11 10 10
1916-17	4,617,000	16,435,000	4,025,000	1,765,000	26,842,000	14 7 11
1917-18	3,978,000	18,091,000	4,702,000	1,664,000	28,435,000	15 0 8
1918-19	4,728,000	18,865,000	4,633,000	1,639,000	29,865,000	15 9 3

The value of the pastoral production depends mainly upon the price obtainable for wool in the world's markets, the volume of production being dependent upon the seasons experienced in the State. The prices of wool have risen considerably since 1914, so that, while the quantity produced in 1918-19 was 4 per cent. less than in 1914-15, the total value was 67 per cent. higher.

The prices of live stock generally decline in a dry season as graziers are forced to sell, owing to scarcity of pasturage, and with an improvement in climatic conditions the prices rise again, owing to the demand for re-stocking. The export prices of frozen meat have risen steadily since 1911, especially during the last five years.

In the following table are given for seven years the Sydney average f.o.b. prices of the principal pastoral products; leather is included as a pastoral product, although it might be regarded as a manufactured article:—

Pastoral Produce.	1913.	1914.	1915.	1916.	1917.	1918.	1919.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Beef ... lb.	0 0 3½	0 0 3½	0 0 5½	0 0 6½	0 0 6	0 0 6½	0 0 5½
Mutton ... "	0 0 3	0 0 3½	0 0 4½	0 0 5½	0 0 5½	0 0 6½	0 0 5½
Wool—							
Greasy ..	0 0 9½	0 0 9½	0 0 9½	0 1 1	0 1 3½	0 1 4½	0 1 4
Scoured ..	0 1 5	0 1 4	0 1 4½	0 1 8½	0 1 10½	0 1 10½	0 1 9½
Sheepskins							
with Woolbale	22 17 0	20 18 0	21 4 7	25 16 2	28 18 9	31 13 0	...
Hides ... each	1 9 4	1 8 0	1 12 0	1 9 3	2 13 0	2 9 3	2 5 0
Leather...bale	39 19 9	47 15 4	50 2 0	55 5 8	56 9 6*	...	...
Tallow ...cwt.	1 10 3	1 8 4	1 12 5	1 16 6	2 1 6	2 0 3	2 5 3

* January to June only; no later quotations.

In 1913 the prices of meat and leather were the highest throughout the period 1907-13. In 1914 the prices were affected by the War—the price of meat rose considerably, and that of leather was maintained at a high level; trade dislocations resulted in a decline in the prices of wool, skins, hides, and tallow, but towards the close of the year there was a marked improvement. During the next four years there was a steady increase in the prices of all the products shown in the table, though the averages for hides and tallow were slightly lower in 1918 than in the previous year. In 1919 a decline was apparent in the prices of all products with the exception of tallow.

PASTORAL IMPLEMENTS AND MACHINERY.

A list of the implements and machinery in use on pastoral holdings appeared in the 1912 edition of this Year Book. The aggregate value of the implements and machinery at the 30th June, 1919, was £2,609,529.

Shearing machines have been installed on all the large holdings devoted to wool-growing. In addition to shearing their own sheep, many owners of machines contract for the treatment of small flocks in the vicinity. The carts and waggon used on all rural holdings are included with farming machinery, as stated in the chapter on Agriculture, in which a comparative table of the value of farming, dairying, and pastoral machinery was shown.

MEAT SUPPLY.

The slaughter of live stock for food is permitted only in places licensed for the purpose. Of such establishments there are in the metropolis 48, and in the country districts 831, employing respectively 1,830 and 2,294 men, in all, 879 establishments and 4,124 men employed.

The following table shows the number of stock slaughtered during the year ended 30th June, 1919 :—

Stock.	Metropolis.	Country.	Total.
Sheep	2,342,940	1,607,751	3,950,691
Lambs	247,055	76,984	324,039
Bullocks	143,738	131,066	274,804
Cows	37,892	73,954	111,846
Calves	44,207	6,330	50,537
Swine	198,307	186,113	384,420

These figures represent the stock killed for all purposes. Of the sheep and lambs, 3,015,253, including 987,471 killed on stations and farms, represent the local consumption; 696,226 were required by meat-preserving establishments; 544,049 for freezing for export; 9,920 were boiled down for tallow; and 9,282 carcasses were exported to Victoria. All the cattle killed were required for local consumption, except the equivalent of 48,933 carcasses treated in the meat-preserving works, 22,709 (including 1,450 calves) exported frozen, 455 exported to Victoria, and 4,020 boiled down.

The following table shows the stock slaughtered in the various establishments at intervals since 1896. The figures relating to the establishments and employees are somewhat in excess of the actual number as they include a number of butchers' shops in country districts and the shop hands employed therein.

Year.	Establishments.	Employees.	Stock Slaughtered.					
			Sheep.	Lambs.	Bullocks. †	Cows.	Calves.	Swine.
1896	1,904	5,959	5,077,420	119,329	232,875	98,910	19,451	197,971
1901	1,642	4,675	4,372,016	147,117	202,795	113,374	19,654	248,311
1906	1,522	4,391	4,229,407	252,648	237,722	94,955	26,200	281,650
1911	1,287	4,343	6,146,739	400,186	306,773	182,178	59,969	316,331
1916*	1,071	3,722	3,815,477	361,831	187,882	165,134	31,986	219,806
1919	879	4,124	3,950,691	324,039	274,804	111,846	50,537	384,420

* Year ended 30th June. † Includes a small number of bulls.

The stock for the supply of meat for Sydney and suburbs is for the most part sold at the Flemington saleyards, near Sydney, and slaughtered in abattoirs at Homebush Bay. Animals sold at Flemington are inspected *ante mortem*, and the diseased are destroyed, while "doubtful" beasts are marked for further special attention at the abattoirs. The Inspecting Staff at the State abattoir consists of a Chief Inspector, sixteen assistants and three branders. Inspectors are stationed also at private slaughtering premises throughout the County of Cumberland. The operations of the inspectorial staff are supervised by the Veterinary officers of the Metropolitan Meat Industry Board, who pay regular visits to the different establishments.

The carcase meat for food is conveyed from the slaughtering premises in covered louvred vans for distribution to retail shops, which are regulated by the municipal authorities.

The particulars of operations at the State Abattoir, Homebush Bay, during the years ended 30th June, 1918, and 1919, are shown in the following statement:—

Animals.	Year ended 30th June, 1918.			Year ended 30th June, 1919.		
	Slaughtered.	Condemned.		Slaughtered.	Condemned.	
		Number.	Per cent.		Number.	Per cent.
Cattle	101,084	776	0-76	130,373	977	0-75
Calves	23,132	430	1-85	42,635	896	2-10
Sheep and lambs	1,061,471	411	0-04	1,838,243	1,514	0-08
Pigs	93,567	861	0-92	132,065	1,142	0-86

Further particulars relating to the operations of the Metropolitan Meat Industry Board have been shown in the chapter "Food and Prices," also a comparative review of the prices of meat.

The average wholesale prices of the best beef, during 1918, ranged from 50s. 6d. per cental in December to 65s. in September. During 1919 the prices quoted were, for good trade quality beef, and for the best, ranged from 57s. 2d. in February and July to 66s. 9d. in December.

MEAT EXPORT TRADE.

It has been proved that a great expanse of country is suited to the breeding of large-carcase sheep, and pastoralists have turned their attention in this direction with a view to securing a greater share in the meat trade of the oversea countries. In conjunction with this the account of experiments in cross-breeding, conducted by the Stock Department, should be read.

The quantity of frozen meat exported oversea in 1889 amounted to 37,868 cwt., valued at £33,426; two years later it had increased to 105,013 cwt., valued at £101,828; its subsequent development may be seen in the following table. The quantity of preserved meat exported was first recorded in 1887, when 9,701,812 lb., valued at £149,287 were exported; the trade in preserved meat is subject to considerable fluctuation..

Year.	Frozen or Chilled.				Preserved.	
	Beef.	Mutton and Lamb.	Total Weight.	Total Value.	Weight.	Value.
	cwt.	cwt.	cwt.	£	lb.	£
1891	*	*	105,013	101,828	6,509,928	85,629
1893	26,529	559,507	586,036	294,596	14,365,300	187,957
1901	115,050	351,516	466,566	541,525	10,086,940	209,697
1906	32,640	455,165	487,805	579,294	3,121,933	62,307
1911	65,097	535,259	600,356	758,155	20,783,779	401,384
1915-16	7,000	236,099	243,099	562,262	4,087,618	159,711
1917-18	36,464	77,864	114,328	302,846	21,522,696	1,230,083
1918-19	21,363	173,122	194,485	497,784	33,836,189	2,000,846

* Not available.

In the foregoing table, ships' stores, amounting annually to several millions of pounds in weight, are not included.

There was, prior to the War, an encouraging development in the meat export trade, and the prospects of its establishment on a stable foundation appeared highly favourable. European countries were gradually opening their ports to frozen meat, and the trade in the East was increasing. The war, however, closed many markets, and through inability to secure freight

space for commercial purposes, it seriously hampered exports. Early in 1915 arrangements were made in terms of the Meat Supply for Imperial Uses Act, for the purchase by the Imperial Government of all the beef and mutton available for export during the period of the war; details have been shown in the chapter relating to "Food and Prices." With the restoration of normal peace conditions the trade will doubtless experience a great revival, because the demand for foodstuffs will be considerable.

In order to establish a high reputation for this product it is necessary for exporters to exercise the greatest care in preparation and transport. Stringent regulations have been issued by the Department of Trade and Customs regarding inspection and shipment, which work was carried out by the Commonwealth authorities. All stock killed for export are examined in a manner similar to that for local consumption, and carcasses which have been in cold storage are re-examined immediately before shipment. In all the large modern steamers visiting the ports of New South Wales, accommodation has been provided for this class of trade.

The following statement, compiled from the British trade returns, shows the imports of frozen mutton into the United Kingdom during the last ten years, for which information is available, and the quantity imported from New South Wales.

Year.	Total Imports.	Imports into the United Kingdom from New South Wales.	Year.	Total Imports.	Imports into the United Kingdom from New South Wales.
	cwt.	cwt.		cwt.	cwt.
1908	4,385,771	315,998	1914	5,049,236	603,435
1909	4,761,838	448,011	1915	4,658,918	550,820
1910	5,405,923	776,084	1916	3,620,637	208,973
1911	5,330,070	612,620	1917	2,542,446	220,443
1912	5,021,529	342,422	1918	2,086,148	18,057
1913	5,204,257	695,955			

Since the outbreak of the War, the operations of the frozen-meat trade in the United Kingdom have been abnormal, as practically the whole trade was taken out of commercial hands and placed under official control. In this way the British Government was able to deal effectively with the shipping and other difficulties affecting the maintenance of supplies, a policy of continuous administration which would have been altogether impossible under the control of private traders. The annual importations into the United Kingdom, subsequent to 1913, were less than formerly, but large quantities of frozen meat were diverted to the continent of Europe and elsewhere for the use of the British forces engaged in the different theatres of the War.

The following statement shows the average wholesale prices obtained during the past ten years for Scottish and frozen mutton sold in London.

Year.	Best Scottish.	New Zealand.	Australian.	River Plate.	Year.	Best Scottish.	New Zealand.	Australian.	River Plate.
	d.	d.	d.	d.		d.	d.	d.	d.
1910	7½	4½	3½	3¾	1915	9¾	6½	5½	6½
1911	6¾	4¾	3½	3½	1916	12¾	8½	7½	9
1912	7¾	4¾	3½	3½	1917	14¾	8¾	8¾	10¾
1913	7¾	4¾	4	4½	1918	13¾	9	9	13½
1914	8½	5½	4½	4¾	1919	14½	12	12	12

The frozen beef imported into England from New South Wales, in 1916, amounted to 44,574 cwt., valued at £148,650; in 1917 it amounted to 163,009 cwt., valued at £559,613; and in 1918, 30,149 cwt., valued at £116,650. The value of rabbits imported was £861,462, as compared with £514,989 in 1917, while preserved meat, other than salted, was valued at £677,938 in 1918, as compared with £335,448 during the previous twelve months.

OTHER PASTORAL PRODUCTS AND BY-PRODUCTS.

The minor products accruing from pastoral occupations include skins and hides, tallow, lard and fat, furs, hoofs, horns, bones, bone-dust, glue pieces and hair. Some of these are discussed in the chapter relating to the Manufacturing Industry, and will be given only brief mention here.

The oversea trade in these products is considerable, and though there has been a marked decline in the volume of exports of many of the commodities owing to restrictions arising from war conditions, there has been an increase in the total value, as higher prices were obtainable.

The following table shows the oversea exports of various pastoral products at intervals since 1901:—

Products..	Oversea Exports.				
	1901.	1906.	1911.	1915-16.	1918-19.
Skins and hides—					
Cattle No.	91,084	72,743	263,306	431,731	166,682
Horse No.	473	722	1,392	706	540
Rabbit and hare ... lb.	*	7,380,455	5,795,839	4,352,640	10,110,540
Sheep No.	*	2 706 027	2,410,543	3,447,212	1,862,772
Other £	184,522	140,050	296,672	272,622	526,497
Bonedust cwt.	66,473	56,415	116,733	71,795	34,722
Bones cwt.	3,207	2,431	6,807	6,963	13,541
Furs (dressed and hatters, not on the skin). £	767	180	117	...	50,383
Glue pieces and sinews ... cwt.	12,862	11,003	20,580	13,276	2,974
Glycerine and lanoline ... lb.	*	336,586	138,347	218,673	819,484
Hair, other than human ... lb.	165,562	142,636	255,819	336,765	251,027
Hoofs cwt.	2,215	2,839	3,733	4,518	4,383
Horns £	12,532	11,979	13,475	3,455	9,044
Lard and refined animal fats. lb.	13,633	56,737	227,000	73,461	2,466,890
Sausage casings £	2,567	17,033	52,562	31,595	130,921
Tallow, unrefined ... cwt.	305,227	357,031	612,911	128,290	386,478

* Not available.

The classification adopted is that used by the Customs Authorities for the year 1918-19.

The total values of the above-named exports for the various years were as follows:—Year 1901, £849,197; year 1906, £1,369,436; year 1911, £2,151,496; year 1915-16, £1,625,812; and year 1918-19, £3,668,880.

NOXIOUS ANIMALS.

The only large carnivorous animals dangerous to stock in Australia are dingoes or so-called native dogs, and foxes; but graminivorous animals, such as kangaroos, wallabies, hares, and rabbits, particularly the last-named, are deemed by the settlers even more noxious.

The estimated losses in sheep by native or other dogs and foxes during the three years ended 30th June, 1920, were as follow :—

Destructive Agents.	Losses in Sheep.					
	Number.			Value.		
	1918.	1919.	1920.	1918.	1919.	1920.
Native Dogs	41,588	58,154	78,998	£ 50,646	£ 86,075	£ 106,236
Tame Dogs	12,808	11,584	17,043	15,181	13,338	21,760
Foxes	124,588	158,504	127,763	90,713	107,015	118,254
Total	178,984	228,242	223,804	156,540	206,428	246,250

Rabbits, which are the greatest pest to the pastoralists, found their way into this State from Victoria; their presence first attracted serious attention in 1881, and they multiplied so rapidly, that, in 1882, they were to be met on most of the holdings having frontages on the Murray River. Attempts to cope with them under the Pastures and Stock Protection Act proved ineffectual, and the Rabbit Nuisance Act was passed, which provided for the compulsory destruction of rabbits by the occupiers of the land, who were to receive a subsidy from a fund raised by an income tax upon stock-owners, but the fund soon proved inadequate, and from the 1st May, 1883, to the 30th June, 1890, when the Act was repealed, it was supplemented by £503,786 from the Consolidated Revenue. The tax upon stockowners yielded £831,457, and landowners and occupiers contributed £207,864, so that the total cost during the whole period exceeded £1,543,000.

The Rabbit Act of 1890 repealed the 1883 Act, and those provisions of the Pastures and Stock Protection Act relating to rabbits. It provided moreover, as occasion required, for the proclamation of land districts as "infested," and for the construction of rabbit-proof fences. From the 1st July, 1890, to the 30th April, 1902, the State expenditure under this Act was £41,620, nearly all of which was devoted to the erection of rabbit-proof netting. From May, 1902, to December, 1903, the expenditure amounted to £10,548.

Under the Pastures Protection Act of 1902 the State was divided into districts, the protection of the pastures being supervised by a board in each district elected by the stockowners. The pastures protection boards were empowered to levy a rate upon the stock, and to erect rabbit-proof fences on any land, to take measures to ensure the destruction of all noxious animals and to pay rewards for such destruction. The State expenditure on rabbit extermination since the establishment of the boards, consisted mainly of payments to the Railway Commissioners for the maintenance of rabbit-proof fences, and amounted to £13,414 to the end of June, 1918. Since that date no further payments have been made.

In order to prevent the spread of this pastoral pest the Government has erected rabbit-proof fences at numerous places. The longest of these traverses the western side of the railway line from Bourke, *via* Blayney and Murrumburrah, to Corowa, in the extreme south of the State, a distance of 612 miles; and the Railway Commissioners have undertaken the work of its maintenance. A fence extends from the Murray River northwards, 350 miles along the border between New South Wales and South Australia. On the Queensland border a fence has been erected between Barrington and

the river Darling, at Bourke, 84 miles; another, built at the joint expense of the Governments of Queensland and New South Wales, extends from Mungindi to the Namoi River, about 115 miles. The total approximate length of rabbit-proof fences erected by the State up to the 30th June, 1919, was 1,332 miles, at a cost of £69,888; by private persons, 106,318 miles, at a cost of £6,166,466; and by pasture boards, 683 miles, at a cost of £26,894.

Bonuses are offered by the pasture protection boards for the destruction of noxious animals, and during the year ended the 30th June, 1920, the total amount paid as bonus was £14,356.

Although the damage caused by rabbits is considerable it is compensated to some extent by their local use for food, and for manufacturing purposes, and their value for export as frozen meat, and skins.

Within the State these animals form a common article of diet, both in the metropolis and in the country, especially during the winter months, when large numbers of men are engaged in their capture and treatment, the consumption being estimated at 60,000 to 80,000 pairs per week. The fur of rabbits and hares is used largely in the manufacture of hats, of boots and of ladies' furs.

The following table shows the exports of frozen rabbits and hares, and of rabbit and hare skins, from New South Wales to countries outside Australia :—

Year.	Value of Exports.				
	Frozen Rabbits and Hares.		Rabbit and Hare Skins.		Total.
	Quantity.	Value	Quantity.	Value.	
1901	pairs. *	£ 6,158	lb. *	£ 9,379	£ 15,537
1906	5,938,518	246,803	7,380,455	293,260	540,063
1911	6,806,246	330,741	5,795,839	295,476	626,217
1915-16	9,487,687	607,711	4,352,640	210,935	818,646
1917-18	8,978,377	670,269	6,986,837	1,036,188	1,706,457
1918-19	3,956,877	221,632	10,110,540	1,103,575	1,325,207

* Not available.

The figures show the importance of the export trade in rabbits and hares. There was a considerable rise in the prices obtainable for skins, and the value in 1917-18 was three times greater than in 1906, though a smaller quantity was exported. The value in 1918-19, although lower than in the previous year, was high.

DAIRYING INDUSTRY.

DAIRY FARMING.

THE dairying industry is a very important factor in the wealth and prosperity of New South Wales. Although the first dairy farm for the manufacture of butter was established on the Nepean River, dairying as a profitable pursuit was in later years conducted mainly on the South Coast, in the Shoalhaven and Illawarra Districts, and subsequently the North Coast became the chief source of supply. It was not until the introduction of the creamery and factory system that any great development occurred, and with the manufacture of butter by machinery, and the perfection of the cold-storage system, the business of dairying was established on a firm basis.

The following figures show the dairy production in each Division of the State during the season ended the 30th June, 1919 :—

Division.	Average No. of Dairy Cows in Milk during year.	Total yield of Milk.	Butter made.	Cheese made.
Coastal—	No.	gallons.	lb.	lb.
North Coast	217,715	87,191,490	36,909,963	1,051,204
Hunter and Manning	108,529	42,683,603	13,654,140	1,025,822
County of Cumberland	21,780	10,571,901	605,652	7,914
South Coast	75,645	31,045,447	6,736,159	3,127,210
Total	423,669	171,492,441	57,905,914	5,212,150
Tableland—				
Northern	16,770	5,119,777	1,308,861	63,208
Central	15,983	5,140,419	1,134,347	102,932
Southern	11,738	3,658,206	816,614	180
Total	44,491	13,918,402	3,259,822	166,320
Western Slopes—				
North	11,902	3,893,443	1,025,897	82,396
Central	8,414	2,547,966	444,708	...
South	18,950	5,969,633	1,889,163	90,587
Total	39,266	12,411,042	3,359,768	172,983
Central Plains—				
North	1,716	527,394	26,911	...
Central	5,394	1,513,938	139,771	...
Total	7,110	2,041,332	166,682	...
Riverina	19,431	6,617,903	1,288,051	430,667
Western Division	2,233	613,880	28,721	...
Total, New South Wales...	536,200	207,095,000	66,008,958	5,982,120

Although dairying is confined mainly to the coastal regions, where grass is available throughout the year, it is also pursued actively in the more favoured inland parts to supply local wants, and in places remote from the metropolis well-equipped factories have been established. In these localities the industry is conducted in conjunction with wheat-farming and sheep-breeding, and sufficient fodder to carry the cattle through the winter months is a prime requirement upon tillage.

The system of share-farming has been applied to dairying, chiefly in the northern coastal districts. As a general rule, one party to the arrangement supplies the land, stock and the implements, and the other conducts the farm-work. The area farmed on shares by dairy farmers during the last four seasons is shown below :—

Season.	Holdings.	Share-farmers.	Area farmed on Shares.		
			Grazing.	Cultivation.	Total.
	No.	No.	acres.	acres.	acres.
1914-15	144	283	83,825	5,393	89,218
1915-16	174	319	83,668	7,661	91,329
1916-17	169	312	91,331	6,132	97,463
1917-18	147	253	80,647	3,099	83,746
1918-19	143	248	79,622	2,928	82,550

During the 1918-19 season dairy share-farming was conducted on 143 holdings, on which 248 share-farmers and their families were employed; the area of dairy farms under this system was 82,550 acres, of which 2,928 acres were devoted mainly to the production of fodder crops, and 79,622 acres were used for grazing. Of the total area 51,622 acres were in the Hunter and Manning Division, 12,801 acres in the North Coast Division, and 4,740 in the South Coast Division.

Most of the native grasses of the State are particularly suitable for dairy cattle, as they possess milk-producing as well as fattening qualities. In the winter the natural herbage is supplemented by fodder, such as maize, barley, oats, rye, lucerne, and the brown variety of sorghum, or the planter's friend. Ensilage also is made for food, but not so generally as it should be, and the quantity made in each year varies considerably. The area of land devoted to sown grasses has been extended largely during recent years, and in June, 1919, amounted to 1,438,465 acres. The produce of this land is used mainly as food for dairy cattle, and as the area is still below the present requirements, an extension of this form of cultivation may be anticipated.

The number of dairy cows in milk, and the area under sown grasses, together with the quantity of ensilage made in each district of the State during the season ended the 30th June, 1919, were as follow :—

Division.	Dairy Cows in Milk at 30th June, 1919.	Area of Land under Sown Grasses.	Ensilage made.
Coastal—	No.	acres.	tons.
North Coast	182,619	1,004,154	295
Hunter and Manning	86,915	211,742	105
County of Cumberland	19,143	3,976	410
South Coast	65,927	171,915	2,770
Total	354,604	1,391,787	3,580
Tableland—			
Northern	13,171	9,384	148
Central	12,589	5,347	105
Southern	9,084	1,491	3
Total	34,844	16,222	256
Western Slopes—			
North	9,256	4,396	200
Central	6,750	1,753	90
South	15,679	5,467	1,700
Total	31,685	11,616	1,990
Central Plains—			
North	1,425	4,066	...
Central	4,603	1,877	50
Total	6,028	5,943	50
Riverina	16,415	12,847	256
Western Division	1,778	50	160
Total, New South Wales ...	445,354	1,438,465	6,292

YIELD OF MILK.

The number of dairy cows shows a considerable increase since 1909, and there has been a corresponding expansion in the milk supply, as shown in the following table :—

Year.	Dairy Cows in Milk.	Total Yield of Milk. (000 omitted.)	Average Yield of Milk Per Cow.	Year.	Dairy Cows in Milk.	Total Yield of Milk. (000 omitted.)	Average Yield of Milk per Cow.
1909	No. 566,378	gallons. 201,183	gallons. 355	1915	No. 513,420	gallons. 237,930	gallons. 442
1910	632,736	235,578	372	1916	465,044	184,014	396
1911	638,525	237,623	372	1917	551,623	226,004	410
1912	620,730	225,446	363	1918	634,000	247,529	390
1913	600,420	231,592	386	1919	536,200	207,095	386

From 1909 to 1913 the cows in milk represented the number as at 31st December, and subsequently as at the 30th June. From 1915 to 1919 the number represents the average in milk during the year.

The dry dairy cows on the 30th June, 1919, numbered 273,154, as compared with 347,834 twelve months earlier, and 189,769 at the end of 1913. The number of cows milked during the year include probably 100,000 which cannot be classed as dairy cows in the commercial acceptance of the term; they are milked for home use, and their production is considerably below the yield of an average dairy cow. During the past five seasons dairying operations have been restricted considerably owing to the dryness of the seasons, especially during the first half of 1916; and large numbers of dry dairy cattle have been fattened and sold for beef. Under normal conditions an average yield of about 450 gallons is probably a fairly accurate estimate of the milking capabilities of local dairy cattle. The average yield during the season 1914-15 very nearly reached this figure, but as the seasonal conditions in the following years were less favourable, the average yields of milk per cow were lower, but nevertheless they compare favourably with the results obtained in earlier years.

Almost as important as the average yield of milk is the percentage of butter-fat, and it is satisfactory to note that this has been well maintained throughout the period reviewed in the following table, which shows the quantity of butter made per 100 gallons of milk treated on farms and in factories.

Year.	Quantity of Butter per 100 gallons of Milk treated.		
	On Farms.	In Factories.	On Farms and in Factories.
	lb.	lb.	lb.
1909	33·2	38·7	38·2
1910	32·5	39·8	39·2
1911	33·0	42·9	42·2
1912	33·1	42·4	41·8
1913	33·6	42·5	41·9
1915*	33·8	44·3	43·7
1916*	33·9	43·5	42·6
1917*	34·0	45·2	44·4
1918*	35·2	44·5	43·8
1919*	35·3	44·5	43·8

* Year ended 30th June.

The following statement shows the purposes for which the milk was treated in 1914, and during the year ended 30th June, 1919.

Purpose for which milk was treated.	1914-15.	1918-19.
	gallons.	gallons.
Used on farms for making butter	11,344,765	11,519,360
" " " cheese	2,637,610	1,358,520
Separated on farms, cream being sent to factories	180,328,513	139,192,581
Sent to butter factories or separating stations for butter	792,603	96,052
Sent to butter factories or separating stations for sweet cream	518,043	446,973
Sent to cheese factories	3,882,093	4,830,994
Sent to condensers	1,600,984	2,938,551
Pasteurised at factories for metropolitan market	10,287,280	13,120,982
Balance sold or otherwise used	26,538,109	33,590,987
Total	237,930,000	207,095,000

As already stated, it was the manufacture of butter by machinery which made the dairying industry more than locally important, and it is to the introduction of the factory system in convenient centres that it owes its present development. When the factory system was introduced the processes of cream separation and butter-making were carried on together. This arrangement was improved by the establishment of public "creameries" or separating stations, where the cream was separated and then sent to the factories. In recent years there has been another great change, and most of the farmers now treat the milk in their own dairies by means of hand separators.

The following table shows the development of this system since 1909.

Year.	Milk Separated for making Butter.			
	On Farms.		In Public Separating Stations.	Total.
	By hand.	By steam, etc.		
	gallons.	gallons.	gallons.	gallons.
1909	156,189,009	5,962,492	2,302,239	164,453,740
1910	181,281,265	11,589,744	2,715,550	195,586,559
1911	176,983,192	17,835,035	2,162,984	196,981,211
1912	165,341,882	16,811,648	1,175,404	183,323,934
1913	165,898,111	18,722,170	1,109,094	185,729,375
1915*	176,716,152	14,957,126	792,603	192,465,881
1916*	125,759,248	13,651,598	505,406	139,916,252
1917*	161,300,970	17,014,393	419,537	178,734,900
1918*	163,133,820	20,035,330	446,350	183,620,500
1919*	132,679,197	18,032,744	96,052	150,807,99

* Year ended 30th June.

PRODUCTION OF BUTTER.

The following statement shows the quantity of butter made, and the milk used for that purpose, at intervals since 1901. In distinguishing between the milk treated on farms and in factories, the quantity used in farm-factories, whether worked by a separate staff or by farm employees, has been included in the statistics relating to factories.

Year.	On Farms.		In Factories.		Total.	
	Milk used.	Butter made.	Milk used.	Butter made.	Milk used.	Butter made.
	gallons.	lb.	gallons	lb.	gallons.	lb.
1901	14,168,060	4,774,664	82,304,013	34,282,214	96,472,073	39,056,878
1906	14,288,379	4,636,642	141,760,969	54,304,495	156,049,348	58,941,137
1911	14,034,132	4,631,585	182,947,079	78,572,983	196,981,211	83,204,568
1916*	12,593,281	4,258,064	127,322,971	55,373,479	139,916,252	59,631,543
1919*	11,460,746	4,043,210	139,347,247	61,965,748	150,807,993	66,008,958

* Year ended 30th June.

The proportion of factory-made butter in the total production has increased from 72 per cent. in 1895 to 93 per cent. during 1918-19 a result of the decrease in the cost of production in factories as compared with farms. Nearly all the factories dealing with dairy produce are established on the co-operative system.

The combined effects of drought conditions and scarcity of shipping-space for export trade caused a marked decrease in the butter produced in 1916. In the following year a most successful season was experienced, and the output rose to 79,364,471 lb., or 33 per cent. higher than in 1916. The improvement was maintained in 1918 when the production amounted to 80,468,007 lb., or only 4 per cent. below the production in 1915, which was the highest on record. The reduced output in 1919 was largely due to the drought conditions prevailing in the Coastal districts during the year.

Further particulars regarding dairy factories are given in the chapter relating to Manufacturing Industry.

CHEESE-MAKING.

The advance in cheese-making has been by no means commensurate with the expansion of the butter trade, but during each of the years ended the 30th June, 1917 and 1918, the quantity made was nearly 8 million pounds. A large proportion of this was purchased by the Imperial Government for the use of troops, particulars of which are shown in the chapter relating to Food and Prices. Under normal conditions the demand for cheese is limited, and the local production has invariably failed to supply the requirements of the State; the manufacture of butter has been found more profitable. Moreover, the manufacture of cheese is retarded by its great disadvantages as an article of export. Cheese matures quickly, and unlike butter, cannot be frozen, and after a certain period it decreases in value. It represents, in addition, only half the money value of butter, while the cost of freight is practically the same: therefore it is not surprising that even where cheese can be produced in New South Wales under excellent conditions its manufacture prior to 1916-17 had not extended greatly.

From a previous table showing the cheese industry according to Divisions of the State, it will be seen more than half of the total production during the 1918-19 season was made in the South Coast Division.

The following table shows the production of cheese in factories and on farms at intervals since 1891:—

Year.	Production of Cheese.		
	In Factories.	On Farms.	Total.
	lb.	lb.	lb.
1891	3,592,717	1,203,850	4,796,567
1896	1,887,106	2,132,738	4,019,844
1901	2,428,599	1,410,236	3,838,835
1906	3,459,641	1,999,004	5,458,645
1911	4,617,387	843,265	5,460,652
1912	4,428,304	1,026,381	5,454,685
1913	4,872,165	1,748,483	6,620,648
*1915	5,314,494	1,042,133	6,356,627
*1916	4,969,374	1,010,262	5,979,636
*1917	6,946,956	883,283	7,830,239
*1918	7,120,770	678,906	7,799,676
*1919	5,500,298	481,822	5,982,120

* Year ended 30th June.

OTHER MILK PRODUCTS.

Condensed milk is produced in four factories in New South Wales, situated at Bomaderry, Singleton, Smithtown, and Windsor. A somewhat similar product, known as concentrated milk, is made also at three of the factories, and it is used principally on ocean-going steamers. The total quantity of milk treated by these factories during 1918-19 was 3,118,590 gallons, and the output totalled 11,267,358 lb., valued at about £280,135; the production during the last five years is shown below :—

Year.	Milk treated.	Condensed and concentrated milk produced.	
		Quantity.	Value.
	gal.	lb.	£
1914-15	1,600,984	6,002,593	99,634
1915-16	1,399,866	4,918,064	91,704
1916-17	1,693,340	5,829,990	125,120
1917-18	2,366,330	8,973,916	206,250
1918-19	3,118,590	11,267,358	280,125

SWINE.

The breeding of swine, which is usually conducted in conjunction with dairy-farming, has been much neglected in New South Wales, as the fluctuations in the following table show.

At 31st December.	Swine.	At 31st December.	Swine.	At 31st December.	Swine.
	No.		No.		No.
1861	146,091	1886	202,576	1911	371,093
1866	137,915	1891	253,189	1916*	281,158
1871	213,193	1896	214,581	1917*	359,763
1876	173,604	1901	265,730	1918*	306,107
1881	213,916	1906	243,370	1919*	294,648

* At 30th June.

Stock from the best imported strains can be purchased at the Government experiment farms and other institutions. The breeds are the improved Berkshire, Tamworth, Poland China, and Yorkshire strains.

The following statement shows the number of pigs in each division of the State at the end of June, 1919, and the production of bacon and ham during the year.

Division.	Swine.	Bacon and Ham cured.
Coastal—	No.	lb.
North Coast	91,463	6,153,123
Hunter and Manning	50,851	390,118
County of Cumberland	22,814	5,923,205
South Coast	20,907	481,114
Total	186,035	12,947,560
Tableland—		
Northern	9,402	440,177
Central	15,001	418,230
Southern	6,670	281,294
Total	31,073	1,139,701
Western Slopes—		
North	11,042	143,748
Central	10,234	270,239
South	20,779	528,191
Total	42,055	942,178
Central Plains—		
North	2,428	18,962
Central	5,813	130,104
Total	8,241	149,066
Riverina	24,367	1,608,191
Western Division	2,877	14,970
Total, New South Wales	294,648	16,801,666

BACON AND HAMS.

Until recently the production of bacon and hams was not sufficient for local requirements, and large quantities were imported. From a subsequent table, it will be seen that the industry has developed so far as to admit of a considerable export trade in these products.

The output of bacon and hams from factories and farms at intervals since 1891 is shown hereunder :—

Year.	Production of Bacon and Ham.		
	Factory.	Farm.	Total Production.
	lb.	lb.	lb.
1891	2,120,269	3,889,331	6,009,600
1896	2,902,987	2,400,776	5,303,763
1901	7,392,060	3,688,831	11,080,891
1906	7,337,910	4,505,685	11,843,595
1911	13,393,536	2,709,291	16,102,827
1916*	11,637,895	1,938,746	13,576,641
1918*	15,602,919	2,952,225	18,555,144
1919*	13,935,701	2,865,965	16,801,666

* Year ended 30th June.

The output of bacon and hams during 1918-19 showed a decrease on that of 1917-18 amounting to 1,753,478 lb., or 9.5 per cent. The production during the year 1918, 18,555,144 lb., constituted a record for the State, being two million pounds in excess of the year 1912, previously the best recorded. The curing of bacon and ham is confined chiefly to the coastal districts of the State. The industry of pig-breeding is conducted in conjunction with dairy farming, the skimmed milk from the hand separators being available for food. More than half the pigs reared in the State are in the coastal districts.

LARD.

Statistics showing the total production of lard are not available. During the year ended 30th June, 1919, the quantity extracted in bacon factories amounted to 633,739 lb., valued at £26,593; but as the manufacture of this product is conducted in many other establishments as well as on farms, this quantity represents only a portion of the total output.

During the twelve months ended 30th June, 1919, the oversea exports of lard and refined animal fats produced in Australia amounted to 2,466,890 lb., valued at £87,936, as compared with the direct imports from oversea countries to 9,400 lb., valued at £519.

THE DAIRY INDUSTRY ACT.

The Dairy Industry Act, which was passed in December, 1915, provides for a complete inspection by officers of the Dairy Branch of the Department of Agriculture, of factories devoted to the making of butter and cheese. The Act provides also for the compulsory uniform grading of butter, both for exportation and for local consumption. The grading of cream at butter factories is likewise compulsory, and those desirous of qualifying for this class of work must fulfil the conditions of a test examination before being permitted to grade cream under the provisions of the Act. It is required, moreover, that all butter be packed into boxes bearing registered brands, indicative of the quality of the product contained therein, the responsibility of truth to description resting in the first instance on the manager of any specified factory. The supervision of the details involved in this work is vested in an experienced dairy instructor, who is appointed to each of the dairying districts of the State. This officer acts also as an inspector, and he is constantly in communication with the factory managers and cream graders of his administrative area, and is consequently engaged in continual instruction in matters connected with the industry. The teaching of the dairy instructor is necessarily co-ordinated with the grading conducted in Sydney, where all butter intended for exportation oversea is examined by Commonwealth graders, and for interstate trade by State officials. Grade certificates recording the quality of the article are forwarded to the manufacturer, and copies are given also to the dairy instructor for the district, who is thereby informed of the Sydney grade-standard of the butter made under his supervision.

Since the Dairy Industry Act came into force the quality of factory butter has shown a marked improvement, and in the year ended 30th June, 1919, 96 per cent. of the total output was classed as choicest or first-grade, whereas, formerly, only 50 per cent. of the quantity exported reached this standard.

DAIRY INSTRUCTION.

Educational and experimental work relating to dairying is conducted by the Department of Agriculture at several of the State institutions, includ-

ing the Hawkesbury Agricultural College, the experiment farms at Wagga, Bathurst, and Grafton, the dairy farm at Wollongbar, on the North Coast, and the stud farm at Berry, on the South Coast.

The farms at Cowra and at Berry are devoted to the breeding and raising of Shorthorn milking stock; at Wollongbar are reared stud Guernseys; at Grafton and Glen Innes, Ayrshires; at Wagga Wagga, Bathurst and Yanco, Jerseys. Among other pure-bred stock raised at the Hawkesbury Agricultural College, Jerseys hold a prominent place and there are a number of Red Polls.

In order to enable factory managers and butter-makers to improve their scientific knowledge, dairy-science schools are held for short terms at different dairying centres, and certificates are given to those who pass successfully examinations in the grading of cream, and in the testing of milk and cream.

It is intended to give a regular course of scientific instruction, commencing at the factory and to be continued by means of bursaries at the Hawkesbury College; for those showing especial fitness an advanced course in dairy chemistry and bacteriology may be provided. During the year 1918-19 three dairy science schools were held and 77 students attended.

Instructors travel throughout the principal dairying districts during each year in order to give instruction and advice in cream-grading, butter and cheese making, and in all other matters connected with the industry.

HERD-TESTING.

For the purpose of assisting dairy-farmers to improve their herds by the introduction of pure-bred cattle from high-class stock, a valuable educational process is conducted in the form of herd-testing. This section consists of two branches, namely, the testing of pure-bred dairy cattle by the officers of the Department of Agriculture, and the testing of a large number of dairy cattle through local associations organised by the Department. During the year 720 pure-bred dairy stock were tested, while at the close of the year about 4,000 dairy cows were being tested, as compared with 1,500 in the previous year. When conditions become normal it is expected that testing units will be established in nearly all dairying centres.

EXPORTS OF DAIRY PRODUCTS.

Under the Customs Regulations dairy produce for export must be submitted to inspection and must be graded prior to acceptance for shipment, the exportation of inferior products being prohibited unless the goods are labelled as below standard.

The following table shows the oversea exports of butter, cheese, and bacon from New South Wales, inclusive of ships' stores, at intervals since 1891. The particulars for 1906 and earlier years relate to New South Wales produce, but for later years the produce of other Australian States is included, as it cannot be separated. The quantity included, however, is not large.

Year.	Oversea Exports.					
	Butter.		Cheese.		Bacon and Ham.	
	lb.	£	lb.	£	lb.	£
1891	10,510	478	17,624	411	9,099	380
1896	1,912,083	75,994	44,621	821	40,041	994
1901	8,699,817	379,342	173,892	4,359	95,666	3,007
1906	23,362,140	978,725	122,629	3,268	141,052	4,996
1911	33,044,324	1,518,993	127,380	3,723	618,056	17,561
1916*	4,305,927	259,834	191,200	9,767	223,761	11,279
1919*	8,530,479	667,624	508,255	34,214	4,078,471	262,554

* Year ended 30th June.

The decline in exports of dairy products in 1915-16 must be attributed to the incidence of the war, and the consequent great shortage of freight-space, but during the next two years large quantities were exported for war purposes and the figures show remarkable increases, especially in the case of cheese and bacon. During the year ended 30th June, 1919, the export of bacon and hams increased still further, but the positions of butter and cheese were not maintained.

The export trade in butter is almost entirely with the United Kingdom, where there is a ready market for all the products of the dairying industry. During 1917-18 and 1918-19 large shipments of bacon were sent to India, Egypt, and Java.

The imports of butter, the production of New South Wales, into the United Kingdom during the last ten years are shown hereunder.

Year.	Imports of Butter from New South Wales.	Proportion of Total Butter imported into United Kingdom.	Year.	Imports of Butter from New South Wales.	Proportion of Total Butter imported into United Kingdom.
	cwt.	per cent.		cwt.	per cent.
1909	132,708	3.27	1914	122,528	3.08
1910	217,780	5.03	1915	158,222	4.16
1911	281,588	6.54	1916	32,575	1.50
1912	186,695	4.61	1917	169,024	9.36
1913	153,936	3.77	1918	229,417	14.53

In earlier years there was difficulty in securing ocean freights during the export season, but the trade ultimately assumed such important dimensions that, prior to the beginning of hostilities in Europe in 1914, it became the subject of keen competition among shipping companies.

The increased percentage in 1918 was due to a large export from New South Wales and to a diminished total import into the United Kingdom.

The freight on butter forwarded from Sydney to London during the months January to October, 1919, was 5s. 3d. per box of 56 lb., plus 5 per cent. primage to 6s. 3d.; the rate has increased considerably since June, 1914, when it ranged from 2s. to 2s. 6d. per box.

The price of Australian butter in London was fixed by Government proclamation in September, 1917, at £10 6s. per cwt., in November of that year the price was raised to £11, and in the following month to £12 12s. per cwt. No variation from this rate had been recorded up to July, 1920.

DAIRYING INDUSTRY.—VALUE OF PRODUCTION.

The value of the production from the dairying industry during 1918-19 was £7,399,000, to which may be added £1,153,000 obtained from the sale of swine, making a total of £8,552,000, as under:—

Butter	£	4,537,000
Cheese		204,000
Milk (not used for butter or cheese)		1,949,000
Milch cows		709,000
Swine		1,153,000
Total		£8,552,000

The value of farm implements and machinery used in the dairying industry during 1918-19 was £711,964. A comparison of machinery used in the rural industries is shown in the chapter on Agriculture.

POULTRY-FARMING.

Poultry-farming was conducted formerly in conjunction with dairying; but the interests involved became so important commercially that a distinct industry dealing with poultry alone has been developed. Every effort is made to obtain the benefits of modern methods of poultry-farm management, and to secure the best egg-laying and table breeds. Statistics of production are not available, but a general estimate based on accessible returns shows the value during 1918-19 to be approximately £2,501,000.

The following statement contains particulars for five years regarding poultry of all descriptions on farms or holdings of one acre and upwards. The absence of information as to the poultry kept on areas of less than one acre detracts, however, considerably from the value of the statement.

Year ended 30th June.	Fowls, Chickens, &c.	Ducks, &c.	Geese, &c.	Turkeys, &c.	Guinea Fowls.	Eggs obtained during year. All kinds.
	No.	No.	No.	No.	No.	dozen.
1915	3,140,635	182,141	17,996	152,181	5,924	12,437,993
1916	3,203,474	159,516	17,191	146,732	5,415	13,628,385
1917	3,729,201	197,757	19,543	182,825	6,181	14,313,825
1918	3,731,730	213,509	20,160	147,982	5,299	15,122,317
1919	3,667,306	166,695	18,820	106,630	5,171	13,702,401

The number of poultry in the above table is given as at 30th June. On that date the number is at its lowest point, and on the 31st December would be probably twice as great.

Since 1901, egg-laying competitions organised by private subscription have been conducted at the Hawkesbury Agricultural College, with the object of stimulating the poultry industry. These competitions have attracted widespread interest, and birds for competition are sent from all parts of New South Wales, from the other Australian States, from New Zealand, and some from America.

By this means much valuable information has been gained from practical experiment and research; tests are arranged and records are kept of the cost of feeding, and of the results obtained from the various breeds of poultry, and by different methods of treatment. An annual report in bulletin form, giving particulars and tabulated results, is issued by the Department of Agriculture.

BEE-KEEPING.

The bee-keeping industry is at the present time of small importance, though there is ample inducement for further expansion.

The production of honey and of beeswax varies considerably from year to year, as shown in the following table, which relates to the last ten years.

Season.	Bee Hives.			Honey.	Average Yield of Honey per productive Hive.	Beeswax.
	Productive.	Un-productive.	Total.			
	No.	No.	No.	lb.	lb.	lb.
1909-10	47,807	17,992	65,799	2,066,330	43.2	53,006
1910-11	55,958	14,308	70,266	2,765,618	49.4	72,617
1911-12	62,254	11,801	74,055	3,433,253	55.1	67,358
1912-13	50,285	13,023	63,308	2,410,000	47.9	49,734
1913-14	43,990	11,029	55,019	1,866,835	42.4	39,244
1914-15	29,857	9,691	39,548	1,143,605	38.4	26,676
1915-16	31,974	5,803	37,777	1,590,384	49.7	29,919
1916-17	33,317	7,454	40,771	1,665,293	50.0	29,434
1917-18	50,668	10,314	60,982	3,875,511	76.4	53,342
1918-19	27,629	16,230	43,859	879,776	31.8	19,231

The low average yields in the early portion of the period under review were attributed to dry conditions and to the use of box-hives. The improvements in the years 1915-16 to 1917-18 synchronised with the extension of the provisions of the Apiaries Act, and the yield per productive hive during 1917-18, 76.4 lb., constituted a record and was 56 per cent. above the experience of the previous ten years. The year 1918-19 was disastrous for the bee-keeping industry, owing to prolonged dry weather and absence of flowers. There was a high mortality amongst the bees, and the total number of hives decreased by 28 per cent. The production is the lowest in the period under review, and the decrease in the number of productive hives, as compared with the previous year, represents 45 per cent.

Frame hives are now in general use, as the box-hive has been condemned. Special legislation which has been passed with reference to apiculture, is more fully detailed in the chapter relating to Agriculture.

The estimated value of the production in 1918-19 of honey was £18,300, and of beeswax £1,700, the production for each division being as follows:—

Division.	Honey.	Beeswax.
	lb.	lb.
Coastal	426,699	10,590
Tableland	178,027	4,584
Western Slopes	242,089	3,718
Central Plains and Riverina	25,704	271
Western Division	7,257	68
Total	879,776	19,231

WHOLESALE PRICES.

The average wholesale prices obtained during the last seven years in the Sydney markets for the principal kinds of dairy and poultry farm produce are shown in the following table. The average quoted for the year represents the mean of the prices ruling each month, and does not take into account the quantity sold during the month.

Dairy and Poultry Farm Produce.	1913.	1914.	1915.	1916.	1917.	1918.	1919.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Butter ... lb.	0 0 11	0 0 11½	0 1 2¾	0 1 3	0 1 4½	0 1 4¾	0 1 7¼
Cheese ... „	0 0 7	0 0 7½	0 0 9	0 0 9½	0 0 9¾	0 0 10	0 1 0¾
Bacon ... „	0 0 9¾	0 0 9¾	0 0 10½	0 0 11½	0 0 11½	0 1 0	0 1 1½
Eggs ... doz.	0 1 2¾	0 1 1	0 1 4¼	0 1 3	0 1 0	0 1 2	0 1 9½
Milk ... gal.	0 0 11¾	0 0 11¾	0 1 0	0 1 2	0 1 2¼	0 1 2¾	0 1 6¾
Poultry—							
Fowls							
(Roosters)pr.	0 4 10	0 5 5	0 5 6	0 5 9	0 5 9	0 5 9	0 7 0
Ducks							
(English) „	0 4 4	0 4 5	0 3 11	0 4 11	0 4 9	0 4 9	0 5 10
Geese ... „	0 7 0	0 6 8	0 6 4	0 8 0	0 9 9	0 9 9	0 10 5
Turkeys							
(Cocks) „	0 11 0	0 11 2	0 13 3	0 14 3	0 15 6	0 17 6	1 5 8
Bee produce—							
Honey lb.	0 0 3½	0 0 3¾	0 0 4¼	0 0 4¾	0 0 4½	0 0 4½	0 0 6¾
Wax „	0 1 2¾	1 0 2½	0 1 4	0 1 4½	0 1 6¼	0 1 10¼	0 2 0

Almost without exception prices increased each year, and were from 38 to 134 per cent. higher in 1919 than in 1913. Butter was 55 per cent. higher, bacon 38 per cent., eggs 45 per cent., and milk 59 per cent.

FORESTRY.

THE forest lands of the State containing timber of commercial value consist of about 11 million acres, of which about 8 million acres are Crown lands. Nearly 7 million acres of State lands have been either dedicated or reserved for the preservation and growth of timber.

The total forest area, although not large, contains a great variety of useful timbers, which in hardwoods number about twenty different kinds of good commercial value, including such renowned constructional woods as iron-bark, tallow-wood, and turpentine, whilst in other timbers there are about twenty-five varieties, including such valuable timbers as cedar, beech, pine, and teak. It is estimated that, approximately, five-sixths of the timber supply consists of mixed hardwoods and one-sixth of soft and brush woods.

Following the report of a Royal Commission appointed in 1907, a Forestry Department was established under the Forestry Act, 1909. This Act was repealed by the Forestry Act, 1916, which became law on the 1st November, 1916, and provided for the constitution of a Forestry Commission, consisting of three members, one being Chief Commissioner.

The Commission is charged with the administration of the Forestry Act, 1916, which provides for the control and management of the State forests and timber reserves, for the training of forest officers, for the conduct of research work, and for the collection of statistics in connection with forestry.

The Commission may dispose of timber and products of any State forest or timber reserve, and—

- (a) take and sell such timber and products;
- (b) convert any such timber into logs, sawn timber, or any other merchantable article, and sell the same;
- (c) convert any such products into merchantable articles, and sell the same;
- (d) construct roads, railways, and tram-lines and other works for the transport of timber; and purchase, rent, or charter and use vehicles and vessels, with the necessary motive power;
- (e) construct, purchase, or rent sawmills and other mills, with all the necessary machinery and plant for converting timber, and manufacturing articles from timber, and use such mills for those purposes.

One-half of the gross amount received from royalties, licenses, and permits, and from the sale of timber, other than the output of the mills as indicated in (e) above, is to be set apart for afforestation, reafforestation, survey and improvement of State forests and timber reserves, and for purposes incidental thereto, except that the expenditure of an amount exceeding £5,000 on any particular work is subject to the approval of the Minister.

The Government may purchase, resume, or appropriate land for the purpose of a State forest, and may dedicate Crown lands as State forests or timber reserves.

Timber-getters' and other licenses may be issued by the Commission, and exclusive rights to take timber products from specified areas of State forest or timber reserves may also be granted.

Every person conducting a sawmill for the treatment of timber must obtain a license, keep books and records, and make prescribed returns. Royalty must be paid on all timber felled and on all products taken from any State forest, timber reserve, Crown lands, or lands held under any

tenure from the Crown which require the payment of royalty; but such royalty is not payable on timber exempted by terms of the license or by the regulations, or on timber required for use on any holding not comprised within a timber or forest reserve; allowance may be made also for any timber which is not marketable. Trees on any State forest, timber reserve, or Crown lands, with the exception of lands held under conditional lease granted before the passing of the Act, must not be ringbarked except under permit.

The Act provides for regulations on the following matters:—Licenses, &c., and the fees and royalties payable; the periods and the conditions under which licenses, &c., may be granted; the protection and preservation of timber; the inspection, cutting, marking, and removal of timber; the kinds, sizes, and quantities which may be cut or removed; the conditions under which fires may be lighted in State forests; and the organisation of a system of education in scientific forestry.

The Act provides also for the classification of forest lands and for proclamation of State forests; and survey work is in progress for this purpose.

As an aid to forest management a Training School in Forestry was opened in March, 1920, under the instruction of a Bachelor of Science in Forestry, and seven students entered for the course. Efforts have also been made in the direction of the establishment of a Chair of Forestry at the Sydney University.

A large amount of regenerative work has been done in connection with the Murray River and the inland forests. Experimental works have been started in various parts of the coast and highlands to test the capacity of different classes of hardwood forest for reforestation, and to ascertain the best methods of treatment; and stations have been selected for the promotion of afforestation by the establishment of State nurseries, with the object of utilising some of the waste lands of the State, of which about 300,000 acres are suitable for the purpose.

On 30th June, 1920, the total area of Crown lands proclaimed as State Forests was 5,085,050 acres, and the area of timber reserves was 1,746,069 acres.

STATE FOREST NURSERIES AND PLANTATIONS.

A State Forest Nursery is maintained at Gosford for the propagation of economic plants. The planted area is about 42 acres; exchanges of seeds and plants are made with similar institutions in various parts of the world. Branch Nurseries of various dimensions have been established in practically every forestry district in the State, and the total area planted during the year 1919 was 396½ acres. Large areas have been cleared and prepared for planting, when a suitable opportunity presents itself.

To supplement the supply of softwood in the State, afforestation has been commenced in ten distinct areas, and with existing planting schemes an area of 60,000 acres is involved. Flying surveys in the southern highlands disclose an area of 150,000 acres suitable for the growth of softwoods and indigenous hardwood, and as this land is used only for summer grazing at present, there is a possibility of extension in afforestation.

FOREST INDUSTRIES.

During the year ended 30th June, 1919, there were 427 licensed sawmills. The employees numbered 4,892, and the value of plant and machinery was estimated at £709,787. The output of native timber amounted to 131,617,510 superficial feet, valued at the mills at £1,277,032.

The estimated value of production from Forestry in 1918-19 was £1,306,000, as at the place of production.

IMPORTS AND EXPORTS OF TIMBER.

In the following table particulars are shown regarding the import and export of timber to and from New South Wales at intervals since 1901 :—

Year.	Imports.				Exports—Australian Produce.			
	Undressed.		Other.	Total Value.	Undressed.		Other.	Total Value.
	Quantity.	Value.			Quantity.	Value.		
	sup. feet.	£	£	£	sup. feet.	£	£	£
1901	68,369,135	322,642	137,123	459,765	10,385,618	66,346	58,664	125,010
1906	84,771,918	444,563	81,850	526,413	29,321,865	325,805	9,361	335,166
1911	164,379,875	955,344	209,028	1,164,372	28,397,961	250,990	17,949	268,939
1915-16	119,232,376	814,102	74,305	888,407	15,098,981	144,486	10,965	155,451
1917-18	93,936,763	815,700	39,245	854,945	11,292,281	167,364	7,897	175,261
1918-19	85,975,377	1,442,082	55,892	1,497,974	9,964,984	168,828	14,142	182,970

Included in the value (£55,892) of other timber imported during the year 1918-19 are such items as laths, staves, shingles, which are not sold in superficial feet. The total value of these items amounted to £24,457.

FORESTRY LICENSES AND PERMITS.

Licenses and permits are granted at nominal sums for the purposes of obtaining timber and fuel, grazing, gaming, sawmilling, ringbarking, and for the occupation of land. Considerable revenue, however, is gained from royalties on timber, agistment and occupation fees, &c., which are chargeable in addition to the license and permit fees abovementioned.

TIMBER LICENSES.

The revenue collected by the State from Timber Licenses and from Royalty on timber during each year since 1910 is given in the following table :—

Year.	Timber Licenses, &c.	Royalty on Timber.	Total.	Year.	Timber Licenses, &c.	Royalty on Timber.	Total.
	£	£	£		£	£	£
1910	10,877	70,960	81,837	1916†	8,701	59,406	68,107
1911	11,153	79,165	90,318	1917†	9,136	58,137	67,273
1912	10,998	85,967	96,965	1918†	12,938	58,031	70,969
1913	12,251	85,362	97,613	1919†	26,705	70,887	97,592
1914*	6,593	39,531	46,124	1920†	52,000	95,040	147,040
1915†	11,365	76,021	87,386				

* Six months ended 30th June.

† Year ended 30th June.

The practice of forestry in Europe and America has shown that greater expenditure by the Government means vastly increased profits, and there is reason for expecting increased revenue as the result of forest improvement in New South Wales, where timber grows more rapidly and to larger size.

FISHERIES.

THE waters along the coast of New South Wales contain numerous varieties of fish, but the fishing industry has not been developed commercially. The vast mineral, pastoral, and agricultural resources of the State have presented more profitable avenues for the investment of capital, so that the development of fisheries has been left mainly to a few individuals with limited capital and primitive appliances.

The principal sources of the supply of marine fish are the coastal lakes and estuaries, the sea beaches and ocean waters, and Murray cod is obtained in the inland rivers.

The most extensive development may be expected in the ocean waters, where large shoals of deep-sea fish such as great Tunnies, Spanish Mackerel, Bonito, Mackerel, Kingfish, Tailer, Salmon, and many other pelagic fishes travel in large shoals. There are also immense quantities of Pilchards, Sprats, and other "Herring-kind," as well as sea Garfish and others.

Crayfishing and the oyster industry are also capable of great development, and mussels could be farmed successfully in a somewhat similar way to oysters, in many cases in places where the oyster will not flourish.

The expansion of the oyster industry depends upon a diffusion of the knowledge of successful oyster culture among oyster growers. With intense cultivation, one locality—Port Stephens—could produce in one year the whole of the present output of New South Wales.

Whaling operations have been conducted intermittently during recent years, but it is considered that two shore stations with two steam whaling gunboats each could be maintained profitably on the coast of the State. The season begins in June and ends in November, though whales may be taken before and after that period.

CONTROL OF THE FISHERIES.

Under the Fisheries Act, 1902, control of the fisheries of the State, previously administered by a Commission, was placed in the hands of a Board to supervise the industry, to carry out investigations likely to be of service, and to ensure observance of the regulations in regard to the dimensions of nets, closure of inland and tidal waters, net-fishing, and other such matters. Under an amending Act, in 1910, the Fisheries Board was dissolved and its powers vested in a Minister of the Crown, the Chief Secretary being charged with the administration of the Act.

The State Trawling Industry is carried on independently of the other fisheries of the State, as it is essentially a commercial project.

THE STATE TRAWLING INDUSTRY.

This undertaking was established in 1915 with the object of improving the conditions of the fishing industry by augmenting the supply and by affording facilities for speedy distribution to the consumers. Fishing operations are conducted with seven steel steam trawlers, using the full-sized commercial otter trawl net and one fish-carrier. Trawling has been confined principally to grounds off Botany Heads, a few miles south of Port Jackson, and in the vicinity of Eden and Green Cape, and some fishing has been done between

Sydney and Newcastle, and in the waters of the North Coast. The catches are landed at a central receiving depot at Woolloomooloo Bay, where there are cold storage facilities, and vessels trawling in the Northern waters may discharge at a distributing depot in Newcastle.

In addition to the trawled fish the industry obtains supplies from the inshore fisheries by purchase from the local fishermen at coastal receiving depots which have been established at Pindimar (Port Stephens), Maclean, Eden, and Wandandian. The bulk of the fish handled by the State Industry is distributed by means of retail shops, of which thirteen have been opened in the Metropolitan area, two in Newcastle, and five in country towns. The principal varieties of trawled fish are flathead, gurnard, leatherjacket, skate, barracouta, sawfish, snapper and John Dory. The fish acquired by purchase consists mainly of mullet, blackfish and garfish, as the fishermen market the better classes of fish through private agents.

Fishing Licenses.

Persons catching fish for sale in tidal or inland waters must be licensed, also boats used for this purpose: the annual fee being 5s., which is reduced to half that amount if the license is issued after 30th June and before 1st December.

The number of licenses granted to fishermen during the year 1919 was 3,164, and licenses were issued in respect to 1,703 fishing boats; the fees received amounted to £1,323.

The following table shows the number and value of the boats used in general fisheries and in oyster fisheries during 1919; the figures do not include the State Trawling vessels:—

Description.	General fisheries.		Oyster fisheries.	
	Number.	Value.	Number.	Value.
		£		£
Boats not more than 24 feet over all—				
With motor	216	22,824	69	6,669
Without motor	658	17,657	324	4,581
Boats more than 24 feet over-all—				
With motor	51	11,050	10	1,982
Without motor ... ..	...	...	15	910
Steamer	2	1,815	...	...
Total	977	53,346	418	14,142

Oyster Leases.

For the purposes of oyster-culture, tidal Crown lands below an approximate high-water mark may be leased at yearly rentals, determined by the Minister; the areas are classified as average, special, or inferior lands.

The leases of average lands are for fifteen years, but may be renewed for a like period; no area upon which an aggregate rental of less than £5 per annum is payable, may be leased to any person not already an oyster lessee.

Leases of special lands are granted for areas of special value after the land has been offered by auction or tender, and are subject to the same conditions as leases of average lands, but need not be confined to areas along the approximate high-water mark.

Leases of inferior lands are granted for a term not exceeding ten years, with the right of renewal for a further term of five years.

During the year 1919 applications for leases numbered 552, representing 146,800 yards of foreshore and 167½ acres of off-shore leases; at the end of the year the existing leases numbered 3,297; the length of foreshores held was 981,980 yards, and there were deep-water leases to the extent of 615½ acres. The deposits paid with the applications for leased areas were £789, while the rentals received during the year for leased areas were £7,498.

PRODUCTION.

The most important kinds of fish marketed are snapper, bream, black-fish, whiting, mullet, jewfish, flathead, garfish, and Murray cod—a fresh-water fish; salmon, tailer, trevally, leather-jacket, gurnard, and others, are gradually gaining favour in the local markets.

Fish.—Exclusive of fish marketed by the State Trawling Industry, the quantity consigned to Sydney and Newcastle markets during 1919 amounted to 176,194 baskets, of which 3,703 baskets were condemned. In addition 7,424 baskets of fish were consigned from the Tweed River to Brisbane, and 12,000 baskets are recorded as having been sold in various fishing centres in coastal areas, but these figures are incomplete. A basket of fish weighs approximately 84 lb.

As usual the bulk of the supplies came from the estuaries and lakes on the northern part of the coast-line. A small proportion, chiefly snapper, came from the ocean, this being principally the produce of the long-line fishing. The main sources of the fresh fish supply during 1919 are indicated below:—

Clarence River	40,902 baskets.	Camden Haven	8,555 baskets.
Port Stephens	15,687 "	Hawkesbury River	8,074 "
Wallis Lake	12,559 "	Botany Bay and George's	"
Lake Illawarra	11,575 "	River	7,079 "
Tuggerah Lakes	11,411 "	Manning River	6,724 "
Lake Macquarie	10,506 "	Macleay River	5,036 "

Notwithstanding the immense shipping development and consequent increase of traffic, and the large reclamation of foreshores of recent years, it is of special interest to note that the marketed production from Port Jackson was as much as 2,877 baskets. The actual production was very much greater, because a considerable quantity was sold in the suburbs of Sydney without passing through the markets.

The quantity of fish secured by the State Trawlers during 1919 was approximately 4,037,235 lb.; in addition 856,184 lb. of fish were produced from private fishermen at the coastal receiving depôts. The total production of fish, as far as recorded during 1919, was therefore about 21,000,000 lb.

Crayfish.—The number of marine crayfishes (*Palinurus*) marketed during 1919 was 56,784; the number captured was very much greater, but many were lost by death before marketing, and 912 were condemned. The principal source of supply was the northern crayfish grounds, from Newcastle to Port Macquarie. From Port Stephens alone over 26,000 were marketed.

Prawns.—A quantity of 6,718 baskets, or, approximately, 263,700 quarts, of marine prawns (*Penæus*) was marketed during 1919; about 113 baskets were condemned. These figures do not include prawns sold for bait.

Crabs.—About 77 baskets of crabs were marketed. These comprised several species of swimming-crabs, notably the Blue (*Lupa*) and the Mangrove (*Scylla*).

Oysters.—During the year 1919 the oyster production of the State amounted to 23,936 sacks of the Rock Oyster (*Ostrea cucullata*). This output was principally the result of artificial cultivation.

VALUE OF PRODUCTION.

The value of the production from fisheries of New South Wales, as recorded during the year 1919, was approximately £358,620, made up as follows:—

Fresh Fish—			£
State Trawling Industry.	4,893,419 lb.	...	91,750
Other	191,915 baskets	...	191,920
Crayfish	4,656 dozen	...	3,490
Prawns...	6,605 baskets	...	11,560
Crabs	77 baskets	...	60
Oysters	23,936 sacks	...	59,840
Total value			£358,620

This amount, £358,620, is exclusive of the value of fish condemned, or sold in fishing and other centres and not recorded, or used for fertiliser and oil, the value of molluscs other than oysters, and of the products of whale and dolphin fisheries.

The value of fish, fresh and preserved, imported into the State of New South Wales during 1919, was £231,239; as against this the value of exports was £94,305, comprising re-exports (tinned, potted, &c.), and fresh and smoked fish for ships' stores.

FISH PRESERVING.

The fishes especially suitable for treatment, by canning, smoking, or salting, include pilchard, sandy sprat, anchovy, tailor, samson fish, cow-nyung, kingfish, trevally, mackerel, bonito, little tunny, southern tunny, and Spanish mackerel. Canneries have been established at various times in New South Wales, but the irregularity of supplies under present conditions has militated against their success.

FISH CULTURE AND ACCLIMATISATION.

Experiments in the acclimatisation of non-indigenous fishes, such as carp and trout, have met with success in New South Wales, particularly in regard to Californian rainbow trout, which has been introduced in many mountain streams. Trout fishing now constitutes an important attraction for tourists and sportsmen in the districts watered by the Murrumbidgee and Snowy Rivers and their tributaries. A trout hatchery is maintained at Prospect, and considerable numbers of young fry are distributed annually.

AGRICULTURE.

In New South Wales the cultivation of plants indigenous to cold, temperate and even tropical regions is possible, on account of the wide range of climate and the diversity of fertile soils of varying characteristics in well-defined regions of coast, tableland, slopes, and plain.

Very few parts of the State are so barren or so little watered as to be unsuitable for cultivation, though the best agricultural country is in the Eastern and Central Land Divisions. The ample rainfall within this region favours the successful cultivation under ordinary conditions of about 50,000,000 acres. Wherever methods of irrigation are applicable, semi-arid districts have proved fertile. There is, of necessity, a limit to the possibilities of efficient irrigation, but New South Wales has entered only upon the experimental stage.

The rainfall of the Western Land Division is uncertain, and no reliance can be placed upon attaining payable results from agricultural pursuits; moreover, from the point of view of the grazier regarding outlay, results, and markets, the pastoral industry presents superior attractions in this part of the State.

The statistics shown in this chapter are inclusive of figures relating to the Federal Capital Territory. They have been compiled from returns collected, under authority of the Census Act, 1901, from the occupiers and owners of all holdings of 1 acre and upwards.

AREA UNDER CULTIVATION.

During the season 1918-19 an area of 5,329,309 acres, including grassed lands, was under cultivation, of which total the area under crops contained 3,890,844 acres, and that sown with grasses, 1,438,465.

The progress of cultivation since 1891 is shown in quinquennial periods in the following table :—

Seasons ended June.	Average Area under—		Acres per Inhabitant under—	
	Cultivation, including Grasses.	Crops.	Cultivation.	Crops.
	acres.	acres.		
1891-95	1,398,199	1,048,554	1·18	0·88
1896-1900	2,252,649	1,894,857	1·73	1·46
1901-05	2,942,506	2,436,765	2·10	1·74
1906-10	3,575,873	2,824,253	2·34	1·84
1911-15	5,187,850	4,025,165	2·87	2·23
1916	7,041,934	5,794,835	3·77	3·10
1917	6,520,187	5,163,030	3·51	2·77
1918	5,850,341	4,460,701	3·10	2·36
1919	5,329,309	3,890,844	2·76	2·02

Prior to 1891, exceedingly slow progress was made in agricultural development; the average cultivation per inhabitant in 1891-5, even including grass lands, was only a little over 1 acre, and the total area under crop did

not reach a million acres until the season 1892-3. During the next six seasons expansion was considerably accelerated, and the recorded area increased to 2,000,000 acres. Since 1899 the rate of growth has been slower; but in the season 1915-16 the area amounted to 7,041,934 acres, an advance of nearly two million acres over the area for the preceding five years. The wheat yield in that year was abnormally high, namely, 66,764,910 bushels, exceeding by nearly 28 $\frac{3}{4}$ million bushels that of 1914, the highest previous record. Unfavourable conditions in the following seasons caused a considerable diminution in the area sown for wheat, and the total area under cultivation was reduced by 521,747 acres in 1916-17. There was a further reduction of 669,846 acres in 1917-18, and of 521,032 acres in 1918-19.

The following statement gives particulars of the area under crops in the seasons 1905-06, 1915-16 (the season of maximum cultivation), and 1918-19, and shows the districts in which the greatest advances have been made.

Division.	Area under Crops.			Index Numbers. (1905-06=100)	
	1905-06.	1915-16.	1918-19.	1915-16.	1918-19.
Coastal—					
North Coast	acres. 109,704	acres. 95,024	acres. 75,571	87	69
Hunter and Manning	103,511	102,526	89,985	99	87
Cumberland	46,053	35,796	33,659	78	73
South Coast	51,009	45,257	36,906	89	72
Total	310,277	278,603	236,121	90	76
Tableland—					
Northern	68,362	80,597	60,174	118	88
Central	222,715	366,981	226,504	165	102
Southern	55,336	82,844	49,686	150	90
Total	346,413	530,422	336,364	153	97
Western Slopes—					
North	265,217	555,488	323,743	209	122
Central	412,578	890,105	575,241	216	139
South	442,855	1,126,381	664,170	254	150
Total	1,120,650	2,571,974	1,563,154	229	139
Central Plains—					
North	10,261	40,322	29,152	393	284
Central	287,437	593,714	443,263	207	154
Total	297,698	634,036	472,415	213	159
Riverina	745,183	1,769,478	1,275,290	238	171
Western	17,860	10,322	7,500	58	42
All Divisions	2,838,081	5,794,835	3,890,844	204	137

There has been a general increase in the area cultivated since 1906, except in the Coastal Division and in the northern and southern portions of the Tableland Division.

The largest increase as compared with 1905-06 took place in the Division of the Riverina, and amounted to 530,007 acres, which represented an advance of 71 per cent. The next largest increases were recorded for the South-western and the Central-western Slopes, and amounted to 221,315 acres and 162,663 acres respectively. Taken as a whole, the Western Slopes

showed an advance of 442,504 acres. The districts exhibiting the highest proportion of total cultivation in the year 1918-19 were the Riverina with 33 per cent., and the Western Slopes, with 40 per cent. The remaining 27 per cent. was distributed over the Coastal Belt, the Tableland, the Central Plains, and the Western Division, only 0.2 per cent. of the area under crop throughout the State being credited to the last-named Division.

The following table shows the total area under crops, together with the total area of each Division, and the area in occupation, during the season 1918-19.

Division.	Total Area of Division.	Area under—			Proportion of area under Crops to—	
		Occupation in Holdings of 1 acre and over.	Crops.	Sown Grasses.	Total Area.	Area under Occupation.
Coastal—	acres.	acres.	acres.	acres.	per cent.	per cent.
North Coast	5,409,370	4,180,802	75,571	1,004,154	1.4	1.8
Hunter and Manning	10,390,920	6,430,225	89,985	211,742	0.9	1.4
Cumberland	1,070,989	510,177	33,659	3,976	3.1	6.6
South Coast	5,484,122	2,437,275	36,906	171,915	0.7	1.5
Total	22,355,401	13,558,479	236,121	1,391,787	1.1	1.7
Tableland—						
Northern	8,928,487	7,513,343	60,174	9,384	0.7	0.8
Central	8,989,259	6,286,154	226,504	5,347	2.5	3.6
Southern	7,913,500	6,463,992	49,686	1,491	0.6	0.8
Total	25,831,246	20,263,489	336,364	16,222	1.3	1.7
Western Slopes—						
North	9,813,555	8,946,859	323,743	4,396	3.3	3.6
Central	6,252,567	5,226,043	575,241	1,753	9.2	11.0
South	8,185,759	6,991,714	664,170	5,467	8.1	9.6
Total	24,251,881	21,164,616	1,563,154	11,616	6.4	7.4
Central Plains—						
North	10,030,901	8,156,272	29,152	4,066	0.3	0.4
Central	16,029,880	15,016,217	443,263	1,877	2.8	3.0
Total	26,060,781	23,172,489	472,415	5,943	1.8	2.0
Riverina	19,767,073	18,431,412	1,275,290	12,847	6.5	6.9
Western	80,368,498	78,050,682	7,500	50	...	...
All Divisions	198,634,880	174,641,167	3,890,844	1,438,465	2.0	2.2

The figures shown above include particulars of the Federal Capital Territory, the area of which is 593,920 acres.

During the year 1918-19 about 2 per cent. of the total area of New South Wales was actually devoted to the growth of agricultural produce; and if the small extent of land upon which grasses had been sown for dairy-farming purposes be added to the area under crops, the proportion reaches only 2.7 per cent., and represents about 2¼ acres per head of population. The proportion of the cultivated area on alienated holdings was 6.1 per cent. of the total area of alienated rural lands in holdings of 1 acre and over; of the area in occupation, 58,974,689 acres were alienated and 115,666,478

acres were leased from the Crown. The area of Crown lands under crops amounted to 278,230 acres only.

Of the total area under crop, 3,398,908 acres, or 87·4 per cent., were cultivated by owners, and 491,936 acres, or 12·6 per cent., were cultivated by tenant occupiers, including Crown land lessees.

In addition to the area shown as cultivated and under sown grasses, 82,120,383 acres were ringbarked and partly cleared and under native grasses; and 3,046,809 acres were ready for cultivation on alienated holdings, including 2,760,479 acres which had been cropped previously, 105,233 acres of new land cleared and prepared for ploughing, and 181,097 acres in fallow.

The Riverina shows the largest area under cultivation, followed in order by the Southern and Central Divisions of the Western Slopes, the Central Plain, the North-western Slope, and the Central Tableland. There was an increasing but not relatively important area cropped in the Division of the North-central Plain, but in the Western Division there was practically no cultivation.

RELATIVE IMPORTANCE OF EACH CROP.

The largest proportion of the area under crops is devoted to the cultivation of wheat, which in 1918-19 represented 61·9 per cent. of the total; the area for hay was 20·9 per cent., for green food 8·5 per cent., maize 2·9 per cent., and oats 2·2 per cent.

The following statement shows the cultivated area under each of the principal crops, at intervals since 1905-06, and the relative importance of each crop.

Crop.	Area.			Proportion per cent.		
	1905-6.	1915-16.	1918-19.	1905-6.	1915-16.	1918-19.
	acres.	acres.	acres.			
Wheat	1,939,447	4,188,865	2,409,669	68·3	72·2	61·9
Maize	189,353	154,130	114,582	6·7	2·7	2·9
Barley	9,519	6,369	7,980	0·3	0·1	0·2
Oats	38,543	53,636	86,474	1·4	1·0	2·2
Hay	438,036	1,108,919	814,960	15·4	19·1	20·9
Green Food ...	95,058	162,945	331,129	3·3	2·8	8·5
Potatoes	26,374	19,589	20,879	0·9	0·3	0·6
Sugar-cane ...	21,805	11,258	10,490	0·8	0·2	0·3
Vines	8,754	7,883	8,740	0·3	0·1	0·2
Orchards	46,615	55,438	67,450	1·7	1·0	1·7
Market-gardens	9,119	10,967	10,043	0·3	0·2	0·3
Other Crops ...	17,612	15,748	11,206	0·6	0·3	0·3
Total	2,840,235	5,800,747	3,893,602	100·0	100·0	100·0

The above totals include areas double-cropped, viz., 2,154 acres, 5,912 acres, and 2,758 acres respectively.

The area devoted to wheat has always exceeded that given to other crops, and usually represents from two-thirds to three-fourths of the total area cropped, according to the climatic conditions prevailing during the year. The proportion under maize decreased from 6·7 per cent. in 1905-6 to 2·9 per cent. in 1918-19.

The number of holdings on which the principal crops were cultivated at intervals since 1900-01 is shown below.

Crop.	Number of Holdings.				
	1900-01.	1905-06.	1915-16.	1917-18.	1918-19.
Wheat	20,149	19,049	22,453	19,252	17,281
Maize	17,569	17,475	14,869	14,695	12,221
Barley	2,246	1,755	2,538	1,849	2,127
Oats	11,547	10,740	13,723	12,787	13,008
Potatoes	9,521	8,552	4,643	4,334	3,519
Tobacco	31	98	97	80	141
Sugar-cane	1,214	1,113	694	671	620
Grapes	1,832	1,530	1,292	1,304	1,275
Fruit—Citrus	1,905	2,385	5,787	6,221	6,165
Other	8,064	6,846	8,760	8,777	8,147
Market Garden Produce	2,266	2,842	3,301	2,931	2,729
Total Cultivated Holdings	45,828	46,349	50,632	47,275	44,509

Until 1913-14 the increase in wheat-holdings was pronounced, but during the following season there was a falling-off in their number, because ploughing operations were restricted considerably as a result of inadequate rainfall. During 1915-16 the number of wheat-holdings increased to 22,453, but declined in 1917-18 to 19,252, and to 17,281 in 1918-19. Relatively to the area cultivated, the number of maize-holdings is greatly in excess of those of wheat, owing to the fact that many dairy-farmers crop small areas for use on the farms; whereas much of the area under wheat—over one-fourth—is cultivated on the “ shares ” system, by which a number of growers cultivate one holding.

VALUE OF PRODUCTION.

The estimated value of the principal crops during the last five years, with the proportion of each to the total value, is shown in the following table, the values being based on prices realised on the farm.

Crop.	Value.					Proportion per cent.				
	1914-15.	1915-16.	1916-17.	1917-18.	1918-19.	1914-15.	1915-16.	1916-17.	1917-18.	1918-19.
	£	£	£	£	£					
Wheat	3,274,450	13,352,980	5,642,190	7,385,140	3,588,650	32.6	65.6	49.1	54.0	29.2
Maize	767,030	723,270	722,250	875,220	680,380	7.7	3.6	6.3	6.4	4.7
Barley	9,970	20,630	12,600	19,280	20,890	0.1	0.1	0.1	0.1	0.2
Oats	111,350	173,820	128,840	266,720	265,530	1.1	0.9	1.1	2.0	2.2
Hay and Straw	3,643,650	3,897,910	3,016,400	2,774,200	4,356,770	36.2	19.1	26.2	20.2	35.5
Green Food	513,000	367,820	281,170	296,460	477,400	5.1	1.8	2.4	2.2	3.9
Potatoes	277,270	294,390	196,919	222,900	295,010	2.8	1.4	1.7	1.6	2.4
Sugar-cane	190,130	205,070	208,160	264,500	167,060	1.9	1.0	1.9	1.9	1.4
Grapes	74,800	98,400	68,260	53,860	113,920	0.7	0.5	0.6	0.4	0.9
Wine and Brandy	45,120	47,840	54,850	50,690	85,700	0.5	0.2	0.5	0.4	0.7
Fruit—Citrus	257,870	252,170	254,120	384,660	745,070	2.6	1.2	2.2	2.8	6.0
Other	233,130	243,210	280,990	376,390	577,990	2.3	1.2	2.4	2.8	4.7
Market-gardens	405,280	400,860	395,700	409,380	441,060	4.0	2.0	3.5	3.0	3.6
Other Crops	228,710	283,990	222,390	305,500	564,760	2.3	1.4	2.0	2.2	4.6
Total..	10,031,760	20,362,360	11,487,830	13,634,900	12,280,190	100	100	100	100	100

The value of agricultural production in the season 1914-15 was not so high as in that of the two preceding seasons, owing to drought conditions, but the enhanced value arising from war conditions largely compensated growers for diminished production. The year 1915-16 showed the highest value recorded for agricultural production, the increase amounting to nearly

103 per cent. on the figures of the preceding year. The yield of wheat increased in value by nearly 308 per cent., of barley by nearly 107 per cent., and of oats by over 56 per cent. In 1916-17 the value of agricultural production dropped back. In 1917-18 the total value increased considerably, owing to a rise in the price of wheat; but this price did not advance in the 1918-19 season, and on account of adverse weather conditions the yield was 50 per cent. below that of the previous year. However, an increase in the production of hay, combined with a rise in price of approximately 50 per cent., and a large increase in the value of fruit and market garden produce prevented a decline in the total value commensurate with the falling-off in production of the staple crop.

The agricultural wealth of New South Wales at present depends mainly on the return from wheat and hay, the value of these crops in 1918-19 being £7,945,000, or nearly 65 per cent. of the total. Maize is next in importance, but the returns from other crops are comparatively of much smaller value.

The next table shows the area cultivated and the value of production from agriculture, together with the average value per acre over five-year periods since 1887.

Seasons ended June.	Average Annual Area Cultivated.	Average Annual Value of Production.	Value per Acre.
	acres.	£	£ s. d.
1887—1891	858,367	4,030,611	4 13 11
1892—1896	1,147,733	3,812,393	3 6 5
1897—1901	2,114,250	5,592,620	2 12 11
1902—1906	2,515,268	6,302,903	2 10 1
1907—1911	2,933,021	8,565,164	2 18 5
1912—1916	4,507,748	12,867,474	2 17 1
1917	5,163,030	11,487,830	2 4 6
1918	4,460,701	13,684,900	3 1 4
1919	3,890,844	12,280,190	3 3 1

The average value per acre of various crops during each of the last four seasons is shown below in comparison with the average for the last ten years:—

Crop.	Average Values per Acre.				Average Value for 10 Years 1910-19.
	1915-16.	1916-17.	1917-18.	1918-19.	
Grain—	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Wheat ...	3 3 9	1 9 8	2 4 4	1 9 9	2 0 9
Maize ...	4 13 10	4 13 0	6 0 1	5 1 3	4 15 0
Oats ...	2 19 3	1 18 5	3 4 7	3 1 4	2 11 0
Hay ...	3 9 9	3 9 5	4 8 10	5 6 6	3 17 10
Potatoes ...	15 0 7	8 15 5	9 17 5	14 2 7	11 6 5
Sugar-cane ...	34 0 2	39 17 1	47 6 8	36 11 9	31 4 5
Vineyards ...	23 10 5	19 18 8	16 3 6	30 5 4	19 5 1
Orchards ...	13 11 1	13 19 5	18 8 11	29 17 0	16 5 0
Market-gardens ...	36 11 0	37 4 6	40 7 6	43 18 4	37 7 10

SHARE-FARMING.

The system of agriculture known as share-farming has reached important dimensions. It is applied to dairy-farming also, especially in certain of the coastal districts, but in comparison with the area cultivated, that devoted to dairying is inconsiderable. During 1918-19 share-farming was conducted

on 1,539 holdings, of which 1,396 were devoted exclusively to agriculture, and 143 were used for dairy-farming. The cultivated area of the former was 656,730 acres, and of the latter 2,928 acres. In addition 6,606 acres were ploughed, but not sown. Of the 2,675 share-farmers 2,427 were engaged in agriculture, and 248 in dairying. In dairy farming 79,622 acres were utilised for purposes of depasturing stock.

The following table shows particulars regarding the area cultivated on shares during each of the last five years :—

Season.	Holdings.	Share Farmers.	Total Area farmed on shares.	Area under various Crops.				
				Grain.		Hay.	Green food.	Other Crops.
				Wheat.	Other.			
1914-15	No. 2,234	No. 4,496	acres. 1,073,580	acres. 778,808	acres. 8,553	acres. 95,563	acres. 189,217	acres. 1,439
1915-16	2,474	4,781	1,297,269	1,148,578	9,936	130,406	6,090	2,209
1916-17	2,395	4,358	1,130,676	1,028,697	9,525	81,914	9,671	869
1917-18	1,950	3,461	861,573	793,584	9,751	53,589	4,190	459
1918-19	1,539	2,675	659,658	546,776	12,911	87,226	12,145	600

Wheat is the principal crop grown under the share system. A marked decline since 1913-14, both in the number of farmers concerned and in the area cultivated on this plan is evident. In a measure, this is doubtless due to adverse seasons, but the regular falling-off in the past four years indicates a growing dislike for the system.

The owner leases his land, which is cleared, fenced, and ready for the plough, to the agriculturist for a period, and for the purpose of wheat-growing only, the farmer tenant possessing the right of running upon the estate the horses necessary for working the farm, and the owner retaining the right of depasturing his stock when the land is not in actual cultivation. Up to a specified yield the parties to the agreement take equal shares of the produce, any excess going to the farmer as a bonus; the system, however, is subject to local arrangements.

Of the wheat areas cultivated in 1918-19 on the share system, 313,560 acres were in the Western Slopes Division and 236,643 acres were in the Riverina.

AREA UNDER WHEAT.

The total area devoted to wheat far exceeds that used for any other cereal, and shows the greatest expansion. The area sown with wheat in the season 1918-19 amounted to 3,227,374 acres, or a decrease of 601,062 acres as compared with the preceding season; the area harvested for grain comprised 2,409,669, that reaped for hay 613,544, and that eaten-off by stock or used as green food, 204,161 acres.

The year 1897-8 may be said to mark the beginning of the present era of wheat-growing in New South Wales, for in that year the production for the first time exceeded the consumption, and left a surplus available for export.

The following statement shows the area under wheat in Divisions of the State during the seasons 1915-16 and 1918-19 in comparison with 1905-06.

Division.	Area under Wheat for Grain.			Proportion in each District.		
	1905-06.	1915-16.	1918-19.	1905-06.	1915-16.	1918-19.
	acres.	acres.	acres.	per cent.	per cent.	per cent.
Coastal	10,845	5,217	1,460	0·6	0·1	0·1
Tableland—						
Northern	14,546	7,642	3,676	0·8	0·2	0·2
Central	113,636	169,546	69,363	5·9	4·1	2·9
Southern	13,538	20,888	7,429	0·7	0·5	0·3
Total	141,720	198,076	80,468	7·3	4·7	3·3
Western Slopes—						
North	217,992	434,088	183,144	11·3	10·4	7·6
Central	343,928	693,099	374,538	17·7	16·6	15·5
South	350,780	901,799	460,909	18·1	21·5	19·1
Total	912,700	2,028,986	1,018,591	47·0	48·4	42·3
Central Plains	249,360	491,563	353,682	12·6	11·7	14·7
Riverina	620,616	1,463,728	954,317	32·0	34·9	39·6
Western	4,206	1,295	1,151	0·3	...	...
All Divisions	1,939,447	4,188,865	2,409,669	100·0	100·0	100·0

The proportions of land under wheat in each Division generally followed the same order as shown in a previous table for the total area under cultivation. Between 1906 and 1919 the proportions in each division have not shown any marked variations. A considerable decline, however, is evident in the Tableland division and in the North and North-western areas, but these are not important wheat-growing districts. Considered relatively and absolutely, the Riverina shows the greatest development, and improvements of less note are to be observed in the Central Plains and in Western Slopes Divisions. In 1918-19 these three divisions combined embraced 96·6 per cent. of the total area sown. The area in 1915-16 was the greatest ever cultivated for wheat in this State.

The great bulk of the wheat is grown on the Western Slopes and in the eastern part of the Riverina, these Divisions together contributing 82 per cent. of the whole. On the Coast, the Tableland, on the Western Plains, and in the Central Plain, with the exception of the eastern fringe, the wheat area and the yield are very small.

The next statement shows the yield in each of the Divisions in the years 1905-06, 1915-16, and 1918-19.

Division.	Yield of Grain.			Average Yield per Acre.		
	1905-06.	1915-16.	1918-19.	1905-06.	1915-16.	1918-19.
Coastal	bushels. 63,638	bushels. 33,881	bushels. 7,348	bushels 5·9	bushels 6·5	bushels 5·0
Tableland—						
Northern	213,706	79,172	7,956	14·7	10·4	2·2
Central	1,159,137	3,242,286	496,182	10·2	13·2	7·1
Southern	153,789	419,456	72,420	11·4	20·1	9·7
Total... ..	1,526,632	3,740,914	576,558	10·8	18·9	7·2
Western Slopes—						
North	2,221,094	5,616,454	538,971	10·2	12·9	2·9
Central	3,037,476	11,325,164	2,271,013	8·8	16·3	6·1
South	4,603,764	16,426,101	4,350,474	13·1	18·2	9·4
Total	9,862,334	33,367,719	7,160,458	10·8	16·4	7·0
Central Plains	2,018,194	4,601,866	1,645,731	8·1	9·4	4·6
Riverina	7,243,888	25,011,778	8,928,596	11·7	17·1	9·4
Western	22,514	8,752	6,309	5·4	6·8	5·5
All Divisions	20,737,200	66,764,910	18,325,000	10·7	15·9	7·6

In 1918-19 the average yield per acre was highest in the Southern Tableland, 9·7 bushels; in the Riverina and South-western Slopes the average was 9·4 bushels; while the average of New South Wales was 7·6 bushels. The Riverina and the Central and South-western Slopes, which yield the largest aggregate crops, control the general average of the State.

The following statement shows the area under wheat for grain and for hay since 1897-98, together with the total production and average yield per acre; information is not available to show the area fed off or used as green food for stock prior to 1906-07.

Season.	Area under Wheat.				Yield.		Average yield per acre.	
	For Grain.	For Hay.	Fed off.	Total.	Grain.	Hay.	Grain.	Hay.
1897-98	acres. 993,350	acres. 213,720	acres. *	acres. 1,207,070	bushels. 10,560,111	tons. 181,645	bushels. 10·6	tons. ·85
1898-99	1,319,503	312,451	*	1,631,954	9,276,216	177,002	7·0	·57
1899-1900	1,426,166	414,813	*	1,840,979	13,604,166	341,200	9·5	·32
1900-01	1,530,609	332,143	*	1,862,752	16,173,771	347,743	10·6	1·05
1901-02	1,392,070	312,358	*	1,704,428	14,808,705	286,798	10·6	·92
1902-03	1,279,760	320,588	*	1,600,348	1,585,097	75,892	1·2	·24
1903-04	1,561,111	286,702	*	1,847,813	27,334,141	452,484	17·5	1·58
1904-05	1,775,955	284,367	*	2,060,322	16,464,415	207,439	9·3	·73
1905-06	1,939,447	313,582	*	2,253,029	20,737,200	304,714	10·7	·97
1906-07	1,866,253	316,945	16,744	2,199,942	21,817,938	403,109	11·7	1·27
1907-08	1,390,171	365,925	129,813	1,885,909	9,155,884	198,230	6·6	·54
1908-09	1,394,056	490,828	104,202	1,989,086	15,483,276	426,916	11·1	·87
1909-10	1,990,180	380,784	5,825	2,376,789	28,532,029	565,549	14·3	1·49
1910-11	2,123,826	422,972	61,458	2,613,256	27,913,547	467,669	13·1	1·11
1911-12	2,380,710	440,243	80,731	2,901,684	25,088,102	423,262	10·5	·96
1912-13	2,231,514	704,221	31,557	2,967,292	32,487,336	779,500	14·6	1·11
1913-14	3,205,397	534,226	23,393	3,763,016	38,020,381	588,127	11·9	1·10
1914-15	2,758,024	569,431	815,561	4,143,016	12,830,530	354,531	4·7	·62
1915-16	4,188,865	879,678	53,702	5,122,245	66,764,910	1,211,677	15·9	1·38
1916-17	3,806,604	633,605	58,101	4,498,310	36,598,000	813,768	9·6	1·23
1917-18	3,329,371	435,180	63,855	3,828,436	37,712,000	484,708	11·3	1·11
1918-19	2,409,669	613,544	204,161	3,227,374	18,325,000	517,370	7·6	·84

* Information not available.

From this record of twenty-one years' experience it will be observed that a poor wheat yield was obtained at intervals of more or less regular recurrence, viz., in the years 1898-9, 1902-3, 1907-8, 1914-15, and 1918-19.

The area under wheat increased from $1\frac{1}{4}$ million acres in 1897-8 to $2\frac{1}{4}$ million in 1905-06. In the following seasons the area declined, but a marked improvement took place in 1909-10, and thereafter the area increased rapidly, especially in the period 1912-15, till the maximum of over 5 million acres was reached. The decreases in the last three seasons were due mainly to a shortage of labour, unfavourable ploughing seasons, and difficulties in regard to the disposal of the harvest; moreover, high prices obtainable for sheep and wool caused many farmers to substitute stockraising for wheat-farming.

The highest average yield of grain, 17.5 bushels, was recorded in 1903-4, and the lowest, 1.2 bushels, in 1902-3; the average yield during the last ten years was about 12 bushels per acre.

The area suitable for wheat-growing may be defined roughly as that part of the State which has sufficient rainfall (*a*) to admit of ploughing operations at the right time of the year, (*b*) to cover the growing period of the wheat-plant—April to October inclusive, and (*c*) to fill the grain during the months of September and October; or, in the case of districts where the rainfall in these months is light, to counteract the deficiency by the increased falls in the earlier or later months.

In some of the northern districts much of the land is unsuited to wheat-growing, because it consists of stony and hilly country, too rough for cultivation, and of black-soil plains which bake and crack, and which present mechanical difficulties to tillage. The rich soils of river-flats also must be omitted from good wheat-growing areas, because such land has a tendency to produce excessive straw-growth.

South of the Murrumbidgee, on the average, from 65 to 70 per cent. of the rain falls between the beginning of April and the end of October; in the central wheat areas (*i.e.*, the Central-western Slope and parts of the Central Plain) the percentage for this period drops to 50 or 60, and in the northern wheat country it ranges from 45 to 55.

The annual rainfall gradually diminishes towards the western limits of the State, the figures ranging from a mean of about 50 inches on the seaboard to 10 inches on the western boundary.

Formerly land with an average rainfall of less than 20 inches was excluded from the area considered safe for profitable wheat-growing; and it was estimated that with the exception of the coastal and certain unsuitable northern districts, the area with an average annual rainfall of not less than 20 inches, suitable for wheat-growing, covered from 20 to 25 million acres.

Since 1904 it is estimated that the wheat belt has been increased by about $13\frac{1}{2}$ million acres. Of this increase the greatest extension has taken place in the southern wheat areas, especially in the Riverina Division, where the spring rainfall is more suited than on the North-central Plain to filling and maturing the grain.

If wheat could be grown profitably in New South Wales in areas with an annual fall of 16 inches, another 9,000,000 acres would be added to the wheat belt. Improved methods of culture have enabled farmers to secure profitable returns even in districts of scanty rainfall; consequently the boundary of successful wheat production, as laid down in 1904, has been extended further westward.

On the map attached to this Year Book are shown the experience lines of profitable wheat cultivation, that is, the western boundaries of the area in which wheat has been successfully cultivated, as determined in 1904 and in 1912, the western boundary of the area over which the average rainfall is not less than 10 inches during the wheat-growing period being defined also.

In determining the present wheat experience line, due consideration was given to low yields attributable to bad farming, and other preventable causes. This is a very necessary precaution, as the average wheat yields for various districts do not always disclose accurately the possibilities of the region. Notwithstanding the improvement made during recent years in cultural methods generally, the majority of farmers do not obtain the maximum results possible under good treatment. The conservation of moisture by fallowing and by subsequent cultivation has not received sufficient attention, and the use of artificial manures should be more general.

COST OF GROWING WHEAT.

Various attempts have been made to secure data to form an accurate estimate of the cost of production; but as, either for grain or for hay, this depends largely upon the methods of culture, the area cultivated, the distance from the railway, and the soil conditions, the experiences of individual farmers have caused a wide diversity of opinion.

The factor which is probably the main cause of these differences is the efficiency of the producers. Wheat being the product of a large number of farmers working independently, it is natural that there should be greater variation in regard to efficiency than in other industries, where the producers are assembled under the supervision of experts and there are greater facilities for improving methods of production and for utilising labour and materials on the most economical basis.

The following estimates have been provided by the Department of Agriculture to indicate the average cost of producing wheat on unfallowed and on fallowed land. For the purposes of the estimates the area cropped annually is taken at 250 acres, viz., 230 acres for grain, and 20 acres for hay for horse feed; to crop this area in alternate seasons under the system of fallowing, the total area of the farm would be 500 acres. The value of the land is assumed to be £6 per acre and the value of the plant £680; as the farmer is engaged throughout the year in cultivating and other operations in connection with wheat-growing an amount of £200 per annum is added as a fair living allowance for him and his family. Experiments made by the Department of Agriculture indicate that an average yield of 20 bushels per acre may be obtained from fallowed land and the cost of production under the fallowing system is calculated on this basis; and the general average for the State—12 bushels per acre—is taken as the yield from unfallowed land; in each case one bushel per acre is deducted for seed wheat.

The costs of production were estimated as follows:—

	Unfallowed land.	Fallowed land.
	£	£
Interest on land at 6 per cent.	90	180
Plant—Interest and depreciation	90	90
Repairs	20	20
Living allowance for farmer	200	200
Wages—extra help... ..	40	40
Fertilisers	37	37
Bags	46	72
Cartage of wheat, at 9d. per bag... ..	32	55
Total cost	555	694
Cost, per acre (250 acres)	£2 4s. 5d.	£2 15s. 6d.
Cost, per bushel	4s. 5d.	3s. 2½d.

The total cost of producing a crop of wheat on 250 acres of unfallowed land is estimated at £555 or £2 4s. 5d. per acre; with an average yield of 12 bushels per acre from 230 acres the result, after deducting the seed wheat, would be 2,510 bushels at a cost per bushel of 4s. 5d. On the fallowed land the total cost is estimated at £694, or £2 15s. 6d. per acre, the cost per bushel for an average yield of 20 bushels per acre being 3s. 2½d. In the case of the fallowed land, moreover, the farmer may utilise the stubble for depasturing stock for a period of about six months from the time of harvesting in December until the land is ploughed for fallowing in June or July. It is difficult to estimate the value of this pasturage, but it may be fairly assumed as equivalent to the amount of interest payable for the period, i.e., £45 for 250 acres. Allowing for this return, the net cost of producing wheat on fallowed land would be reduced to £649, or £2 11s. 11d. per acre, or 2s. 11¾d. per bushel. When the land is not fallowed the stubble is usually burnt and the ploughing is commenced in February.

GRADING, HANDLING, AND MARKETING WHEAT.

The development of the wheat industry is dependent largely upon the facilities for cheap transportation to the world's markets; and at the present time, when combined efforts are being made by scientists and practical farmers to extend the cultivation and to improve the quality of the cereal, the co-operation of commercial and transport agencies by the introduction of improved methods of handling grain is necessary for the success of the industry.

Australian wheat for export is marketed on the basis of a single standard known as f.a.q., or fair average quality. In New South Wales the standard is fixed annually by a committee of members of the Sydney Chamber of Commerce and of two Government representatives. Samples obtained from each of the wheat districts are weighed on McQuirk's patent scale, and an average struck, which is used as a standard in all wheat export transactions.

The f.a.q. standard of New South Wales for the 1919-20 harvest was fixed at 61 lb. per bushel.

The following comparison shows the standard in New South Wales for each season since 1910-11, and the date on which it was fixed in each year.

Year.	Date Fixed.	Standard.	Year.	Date Fixed.	Standard.
1910-1911	13th Feb., 1911	62½ lb.	1915-1916	21st Feb., 1916	61 lb.
1911-1912	1st ,, 1912	61½	1916-1917	12th Mar., 1917	56¾
1912-1913	31st Jan., 1913	62¼	1917-1918	26th Feb., 1918	58½
1913-1914	19th ,, 1914	64	1918-1919	30th Jan., 1919	62½
1914-1915	15th Feb., 1915	60½	1919-1920	6th Feb., 1920	61

Under the present system the wheat is bagged on the farm and brought to the nearest railway station, whence that intended for export is carried in bags by rail to Sydney for shipment. At some of the stations the Railway Department has erected sheds, and a small charge is made for storage. At Darling Harbour, Sydney, where all the grain ships are loaded, sheds and bag elevators have been provided. As compared with bulk handling

and the employment of elevators, this system has many disadvantages, apart from the cost of bags and the great amount of labour required for handling bagged grain.

The dislocation of shipping arrangements consequent on war conditions and the unprecedented harvest of 1915-16 resulted in the accumulation of quantities of wheat far greater than those normally held in this State. Owing to the disadvantages of long storage in bags, wet weather and plagues of mice and weevil caused heavy losses in grain. A Royal Commission of Inquiry was appointed by the Federal Government, and its report was presented in July, 1917. The erection of permanent storage facilities was recommended and the recommendation was carried into effect. The Wheat Storage Act of 1917 gave the Federal Government power to finance the States in the construction of wheat elevators. New South Wales took prompt advantage of the act, and tenders were called for the necessary work before the close of the year.

The complete scheme provides for the erection of elevators at seventy country centres, with a total storage capacity of 15,400,000 bushels and a terminal elevator in Sydney with a total storage capacity of 6,509,600 bushels.

Sufficient headway has been made to enable the utilisation of some of the silos in handling the 1920-21 harvest.

Elevators at twenty-eight country centres will be put into operation during the coming season. They include 109 storage bins capable of holding 5,450,000 bushels of grain. The work of erecting the terminal elevator has so far advanced that the main storage space provided there will also be utilised. It will be possible to receive wheat in bulk from the country, store it in bulk, and ship it in bulk.

For conveyance from country stations to the terminal, the Railway Commissioners have converted a large number of 15-ton S trucks, and made them suitable for the carriage of grain in bulk. They are now engaged upon the design of a larger truck capable of carrying 40 tons of bulk wheat.

When the period of transition from bag handling to bulk handling is passed it will be possible to adopt a system of wheat grading similar to that of the United States of America and other great wheat-producing countries. Such a system will do much to encourage an improvement in production by giving to growers a return commensurate with the grade of wheat they produce.

GOVERNMENT WHEAT-MARKETING SCHEME.

The wheat-marketing scheme, adopted in consequence of abnormal conditions arising from the war, has been explained in former issues of this Year Book.

This scheme was carried out under the authority of the Commonwealth Government, and it operated in connection with the harvests of 1915-16 to 1919-20 seasons.

The harvest for 1920-21 will be subject to a compulsory pool, similarly organised, but under the authority of the Wheat Marketing Act, by which the Government of New South Wales will acquire all wheat grown in the State during the season.

The quantity of wheat handled by the Australian Wheat Board from its formation to 13th September, 1920, was 505,240,000 bushels, of which

138,681,000 bushels were pooled in New South Wales. Particulars regarding the disposal of New South Wales wheat are shown below :—

Season.	Wheat Shipped.	Wheat Sold Locally.	Shippers' Stocks.	Stock Adjustments.	Total.
	bushels.	bushels.	bushels.	bushels.	bushels.
1915—16	28,977,000	29,597,000	...	...	58,574,000
1916—17	7,893,000	21,631,000	...	2,526,000	32,050,000
1917—18	10,684,000	22,124,000	...	907,000	33,715,000
1918—19	549,000	13,343,000	...	...	13,892,000
1919—20	.....	450,000	...	...	450,000
Total as at 13-9-20	48,103,000	87,145,000	...	3,433,000	138,681,000

It would appear that shippers' and millers' stocks having been exhausted, the Wheat Pools of this State for the past five seasons were empty. It therefore became necessary in January, 1920, to import supplies from other States. This condition was due to two causes—the over-export of New South Wales stocks under direction of the Australian Wheat Board to meet the Imperial contracts, and the failure of the 1919—20 harvest, from which only 450,000 bushels entered the pool.

The total yield of wheat during the five seasons in which the pool operated was 163,696,540 bushels, of which 138,681,000 bushels were pooled, the remainder (25,015,540 bushels) being retained by growers for their own purposes.

The expenditure by the Australian Wheat Board to 13th September, 1920, was £127,799,000, advances to farmers amounting to £107,528,000, and expenses to £20,271,000; the amount expended in New South Wales was £32,435,000, as follows :—

Season.	Advances to Farmers.	Expenses.	Total Expenditure in N.S.W.
	£	£	£
1915-16	12,381,000	1,799,000	14,180,000
1916-17	5,002,000	1,878,000	6,880,000
1917-18	6,077,000	1,648,000	7,725,000
1918-19	2,933,000	571,000	3,504,000
1919-20	137,000	9,000	146,000
Total to 13-9-20	26,530,000	5,905,000	32,435,000

Information as to the receipts by the Board is not yet available for publication.

Final payment to farmers cannot be made until the whole of the wheat owned by the different States in the various pools has been sold. In the meantime wheat certificates have been issued, and farmers may dispose of their interests in the pooled wheat. The transfer of ownership is effected by means of the issue of negotiable scrip to the purchaser.

PRICES OF WHEAT.

The following table gives the average prices per bushel ruling in the Sydney market during the months of February and March of each year since 1865. The figures exhibit clearly the tendency towards a gradual reduction in the value of the cereal down to 1895, when the price was the lowest of the series. In 1896, however, owing to a decrease in the world's supplies, the price rose considerably, and led to an extension of cultivation

in Australasia. In the early years, with a deficiency in the local production, the price in Sydney was generally governed by the prices obtained in the neighbouring Australian markets where a surplus had been produced. It is now, however, determined by the price realised in London, which is usually equal to that ruling in Sydney, plus freight and charges.

The prices shown in the table are for an imperial bushel of 60 lb., and being for new wheat are slightly below the average for the year.

Year.	February.	March.	Year.	February.	March.	Year.	February.	March.
	per bushel.	per bushel.		per bushel.	per bushel.		per bushel.	per bushel.
	s. d.	s. d.		s. d.	s. d.		s. d.	s. d.
1865	9 6	9 7½	1884	4 3	4 3	1903	*5 11½	*5 9½
1866	8 4½	8 0	1885	3 10½	3 7½	1904	3 0½	3 0½
1867	4 3	4 4	1886	4 3½	4 5	1905	3 4½	3 3½
1868	5 9	5 9	1887	3 10	3 11	1906	3 1½	3 2½
1869	4 9	4 10	1888	3 6	3 6½	1907	3 0½	3 1½
1870	5 0	5 1½	1889	4 9	5 3	1908	4 4	4 5½
1871	5 7½	5 9	1890	3 6	3 6	1909	4 0½	4 6½
1872	5 0½	5 3	1891	3 7½	3 10	1910	4 1½	4 1
1873	5 1	5 8½	1892	4 9	4 9	1911	3 7½	3 5
1874	6 9	6 1½	1893	3 6½	3 6	1912	3 9½	3 8½
1875	4 7½	4 6	1894	2 11	2 8	1913	3 6½	3 7
1876	5 1½	5 6	1895	2 7	2 7	1914	3 8	3 9½
1877	6 1½	6 6	1896	4 4½	4 5	1915†	5 6	5 6
1878	6 1½	5 7½	1897	4 8	4 6½	1916†	5 1½	5 0½
1879	5 0	4 9½	1898	4 0	4 0	1917‡	4 9	4 9
1880	4 8	4 9	1899	2 7½	2 9	1918‡	4 9	4 9
1881	4 1	4 3	1900	2 9	2 8	1919‡	5 0	5 0
1882	5 5	5 6	1901	2 7	2 7	1920‡	8 5	8 10
1883	5 1½	5 2	1902	3 2	3 2½			

* Imported Californian wheat—quotations for South Australian wheat were about 5d. per bushel higher. † Officially fixed. ‡ Official price on trucks of wheat for flour for home consumption.

With regard to recent years, prices did not vary greatly prior to 1903, when, owing to the almost universal failure of the season's crop, there were no quotations, though imported wheat was sold at from 5s. 8d. to 6s. 3d. per bushel during the months of February and March. In 1908-9-10 the prices were higher than in any year since 1897. During the period 1911-14 the prices were considerably lower than those of the previous three years, but since 1915, owing to abnormal conditions due to drought and to the War, prices have been higher, and have been regulated by the Government, varying from 4s. 9d. to 8s. 10d. per bushel.

The Government of New South Wales guaranteed to the farmers a minimum price of 4s. per bushel of f.a.q. wheat of the seasons 1918-19 and 1919-20, delivered at country stations, and 7s. 6d. per bushel for the 1920-21 crop.

On 25th March, 1916, the official f.o.b. price per bushel of wheat for flour for home consumption was fixed at 4s. 10½d.; but city millers handling their own supplies obtained the wheat at 1½d. per bushel less than the f.o.b. price. On 1st February, 1919, the price was raised to 5s. per bushel, on 1st October to 5s. 6d., on 3rd January, 1920, to 6s. 6d., on 31st January to 7s. 8d., and on 12th February to 8s. 10d.

PRINCIPAL WHEAT-GROWING COUNTRIES.

The following table presents statistics of the latest recorded annual production, together with the average production during the five previous years.

Country.	Production.		Country.	Production.	
	Season, 1919-20. †	Average 5 previous seasons.		1919.	Average 5 previous years.
	bushels.	bushels.		bushels.	bushels.
New South Wales	4,296,630	34,445,880	United States ...	912,384,000	796,410,000
Victoria ...	14,858,380	35,320,590	British India ...	376,880,000	348,222,000
South Australia ...	14,947,413	27,007,300	Canada ...	193,260,400	248,084,000
Western Australia	12,270,560	11,022,580	Argentina ...	214,400,000	164,153,000
Queensland ...	256,925	1,120,490	France ...	177,929,000	207,406,000
Tasmania ...	141,000	433,060	Spain ...	129,215,000	136,809,000
			Italy ...	169,516,000	167,943,000
Total, Australia	46,800,908	109,349,900	United Kingdom	69,320,000	70,718,000
			Germany ...	79,824,000	113,788,000
New Zealand ...	4,004,000	6,435,817	Egypt ...	*32,558,000	†34,510,000
			Japan ...	29,809,000	28,594,000

* Year 1918.

† Period 1914 to 1917.

‡ Preliminary figures.

In regard to the above table the production of the past five years has in some cases been below normal in belligerent countries. In addition, the great fields of Russia are not yet producing sufficient grain to enable export on the pre-war scale.

A notable feature of the table is the general failure of Australian crops, except that of Western Australia, which was greater in 1919-20 than the average of the previous five harvests.

Certain foreign countries which appeared in the table in former years are not included in the preceding statement, notably Russia, Roumania, Austria-Hungary, Turkey (in Europe and in Asia), Algeria, and Belgium, as well as Persia and Chile.

It has been shown that the area under wheat for grain in New South Wales in 1918-1919 was 2,409,669 acres, while preliminary figures for 1919-20 show a total of 1,450,540 acres. In either case the average is abnormally low, on account of bad seasons and represents only a small portion of the total area available.

The average yield in the season 1918-19 was 7.6 bushels, and in 1919-20 approximately 3 bushels, while the average of the past five seasons was 10.7 bushels. Compared with the principal wheat-growing countries of the world, this yield is low, as will be seen from the following table, the averages shown being based on the latest available returns.

Country.	Period.	Average Yield per Acre.	Country.	Period.	Average Yield per Acre.
		bushels.			bushels.
Denmark ...	1915-18	40.8	Japan ...	1914-18	22.0
Netherlands ...	1914-18	36.8	France ...	1914-18	16.6
Switzerland ...	1914-18	33.3	United States ...	1914-18	14.7
United Kingdom	1914-18	31.6	Italy ...	1914-18	14.7
Belgium ...	1919	30.1	Russia ...	1914-16	11.4
Germany ...	1914, 5, 7, 8	27.1	India ...	1914-18	11.2
New Zealand ...	1915-19	25.4	Argentina ...	1914-18	9.9

A bare statement of average yield is, however, not entirely conclusive, as the relative cost of production also should be taken into consideration.

Moreover, in the older countries, the efforts of farmers are more concentrated, and more intensive cultivation is necessary.

MAIZE.

Maize ranks second in importance amongst the crops of New South Wales, but its cultivation is small in comparison with that of wheat, and sufficient is not grown for local consumption.

Maize is cultivated chiefly in the valleys of the coastal rivers, where both soil and climate are peculiarly adapted to its growth. On the Tableland also good results accrue.

The following statement shows the distribution of the area under maize for grain during the season 1918-19 with the production and average yield in each Division.

Division.	Area under Maize for Grain.		Yield.	
	Total.	Proportion to each Division.	Total.	Per Acre.
Coastal—	acres.	per cent.	bushels.	bushels.
North	40,704	35·5	993,375	24·4
Hunter and Manning	22,849	19·9	588,054	25·7
Cumberland	876	0·8	10,566	12·1
South	7,760	6·8	135,021	17·4
Total	72,189	63·0	1,727,016	23·9
Tableland—				
Northern	17,844	15·6	213,471	12·0
Central	2,381	2·1	30,780	12·9
Southern	230	0·2	1,749	7·6
Total	20,455	17·9	246,000	12·0
Western Slopes... ..	21,552	18·8	114,471	5·3
Central Plains, Riverina, and Western Divisions	386	0·3	4,434	11·5
All Divisions... ..	114,582	100·0	2,091,921	18·3

The North Coast, the most important maize-growing district in the State, in 1918-19 yielded 47 per cent. of the total production, the average yield being 24·4 bushels per acre. After the North Coast, the Hunter and Manning Division showed the largest area under crop. On the North Coast the best counties were Dudley and Raleigh, which gave 36·4 and 26·7 bushels per acre respectively. In 1918-19 the average yield on the tableland was 12·0 bushels per acre, compared with 19·8 for 1917-18. On the Western Slopes the yield was 5·3 bushels per acre, the corresponding figure for 1917-18 being 19·4 bushels.

The following statement exhibits a comparative review of the maize crop since the season 1900-1.

Season.	Area under Maize for Grain.	Production.		Season.	Area under Maize for Grain.	Production.	
		Total.	Average per Acre.			Total.	Average per Acre.
	acres.	bushels.	bushels.		acres.	bushels.	bushels
1900-1	206,051	6,292,745	30·5	1914-15	143,663	3,174,825	22·1
1905-6	189,353	5,539,750	29·3	1915-16	154,130	3,773,600	24·5
1910-11	213,217	7,594,130	35·6	1916-17	155,378	4,333,480	27·9
1912-13	176,471	5,111,990	29·0	1917-18	145,754	3,499,958	24·0
1913-14	156,820	4,453,309	28·4	1918-19	114,582	2,091,921	18·3

During the last twenty years there have been marked fluctuations in the area under cultivation. The largest area—226,834 acres—was cropped in 1903-4, but the largest yield was produced in 1910-11. The yield per acre is somewhat variable, ranging from 15.1 bushels in 1902-3 to 35.6 bushels in 1910-11, though the average has a tendency to decrease, owing to the reduction of the area cultivated in the coastal districts, where the average yield is highest, the most favourable localities yielding as much as 80 to 100 bushels per acre. The yields during the past five years have been below the average for the decennial period ended 1919.

OATS.

The production of oats in New South Wales is not sufficient to supply the local demand, although where cultivation has been undertaken the return has been satisfactory. The elevated districts of Monaro, Argyle, Bathurst, and New England contain large areas of land on which oats could be cultivated with excellent results, as it thrives best in regions which experience a winter of some severity.

The area under crop for grain in 1918-19 was 86,474 acres, which produced 1,273,752 bushels, being 14.7 bushels per acre, as compared with 82,591 acres, which yielded 1,455,111 bushels in the previous year.

The Northern Tableland gave the best average, with 17.7 bushels per acre. In the whole of the Tableland Division 10,788 acres were under crop, and yielded 143,133 bushels, or 13.3 bushels per acre; on the Western Slopes, 37,094 acres gave 516,984 bushels, or 13.9 bushels per acre, while in the Riverina the production was 580,410 bushels from 35,722 acres, or 16.3 bushels per acre. These three Divisions accounted for about 97 per cent. of the total productoin.

The following table gives statistics of the cultivation of oats for grain since 1900-1.

Season.	Acres under Oats for Grain.	Production.		Season.	Acres under Oats for Grain.	Production.	
		Bushels.	Bushels per Acre.			Bushels.	Bushels per Acre.
1900-1	29,383	593,548	20.2	1914-15	43,476	513,910	11.8
1905-6	38,543	883,081	22.9	1915-16	58,636	1,345,698	23.0
1910-11	77,991	1,702,706	21.8	1916-17	67,111	1,084,980	16.2
1912-13	85,175	1,674,075	19.7	1917-18	82,591	1,455,111	17.6
1913-14	103,416	1,835,406	17.7	1918-19	86,474	1,273,752	14.7

The area under oats for grain, with slight fluctuations, remained practically stationary for a number of years, but in 1913-14 it reached 103,416 acres, which is the greatest area ever sown with oats for grain in this State. In the following year, the area was less than in any year since 1906, but a rapid recovery has since been evident.

The average yield varied considerably, in a fair season exceeding 20 bushels per acre, and in a bad year falling below half that rate, but the average for the last ten years was nearly 19 bushels. The lowest average yield was 8.2 bushels per acre in 1903, when the crop almost failed, owing to the unfavourable season; and the highest was 24.9 bushels in 1907.

The market for oats is chiefly in the metropolitan district, and the demand depends mainly on the price of maize. Large quantities are imported from Victoria, Tasmania, and New Zealand.

BARLEY.

Barley is produced only on a moderate scale, although there are several districts where the necessary conditions as to soil and drainage present inducements for cultivation, particularly with regard to the malting varieties. Barley is grown mainly in the North-Western Slope and the Riverina Divisions. The areas under crop in other districts are small, and do not call for special notice. The following table shows the area under barley for grain, together with the production at intervals since 1897-8.

Season.	Area under Barley for Grain.	Production.		Season.	Area under Barley for Grain.	Production.	
		Total.	Average per Acre.			Total.	Average per Acre.
1900-01	acres. 9,435	bushels. 114,228	bushels. 12·1	1914-15	acres. 4,861	bushels. 46,500	bushels. 9·6
1905-06	9,519	111,266	11·7	1915-16	6,369	114,846	18·0
1910-11	7,082	82,005	11·6	1916-17	5,195	73,370	14·1
1912-13	16,916	289,682	17·1	1917-18	6,370	97,824	15·5
1913-14	20,610	303,447	14·7	1918-19	7,980	86,313	10·8

The table shows considerable fluctuation as to the area cultivated, while the grain yield has varied greatly, ranging from 4 bushels per acre in 1902-3, when the crop practically failed, to the excellent rate of 21·9 bushels in 1886-7. The average crop during the last ten years has been 14·8 bushels per acre.

BROOM MILLET.

Broom millet is a small but valuable crop, and during the last ten seasons the return from fibre alone gave an average of £24,452 per season. In 1918-19 though conditions were unfavourable and the average yield per acre was much below that of previous years, a considerable increase in the area is noticeable, while the total value of the product was greater than for any year since 1910-11. In 1918-19 3,019 acres were cultivated, 139 acres being cropped for grain, 1,099 acres for fibre, and 1,781 acres for both fibre and grain. The yield was 14,040 bushels of grain, or 7·3 bushels per acre, and 13,883 cwt. of fibre, or 4·6 cwt. per acre; the grain and fibre were valued at £3,650 and £41,370 respectively. The average yield of fibre during the last ten seasons was 6·6 cwt per acre. The greater part of the crop is grown in the valleys of the Hunter, the northern coastal rivers, and the North-western Slope. The experimental cultivation of broom millet on the irrigation areas has proved even more successful, as the plant grown there does not appear to be subject to certain fungoid troubles, which are occasionally encountered in the districts of the eastern littoral.

HAY.

A very considerable portion of the areas under wheat, oats, barley, and lucerne is utilised for the production of hay for farm stock and of cut chaff for the market. This proportion is increasing, but the extent of the increase depends on the climatic conditions of the season.

The following statement shows the area under each crop for hay, the total production, and the average return per acre during the last seven seasons.

Type of Hay.	1912-13.	1913-14.	1914-15.	1915-16.	1916-17.	1917-18.	1918-19.
AREA.							
	acres.	acres.	acres.	acres.	acres.	acres.	acres.
Wheaten	704,221	534,226	569,431	879,678	633,605	435,180	613,544
Oaten	182,955	211,606	161,320	176,183	161,723	118,917	152,842
Barley	1,708	1,395	1,179	1,348	866	844	1,238
Lucerne	56,420	52,479	52,582	50,544	61,584	64,708	46,359
Rye, etc.	1,762	1,424	1,432	1,166	754	995	977
Total	947,066	801,130	785,944	1,108,919	858,532	620,644	814,960
PRODUCTION.							
	tons.	tons.	tons.	tons.	tons.	tons.	tons.
Wheaten	779,500	588,127	354,531	1,211,677	813,768	484,708	517,370
Oaten	212,266	256,814	147,420	259,476	210,953	150,097	145,638
Barley	2,108	1,552	1,112	1,575	1,205	1,083	1,058
Lucerne	112,761	107,045	108,934	100,075	147,365	147,172	88,403
Rye, etc.	1,640	1,509	1,238	1,135	759	1,146	1,161
Total	1,108,275	955,047	613,235	1,573,938	1,174,050	784,206	753,630
AVERAGE PRODUCTION PER ACRE.							
	tons.	tons.	tons.	tons.	tons.	tons.	tons.
Wheaten	1.11	1.10	0.62	1.38	1.13	1.11	0.84
Oaten	1.16	1.21	0.91	1.47	1.30	1.26	0.95
Barley	1.23	1.11	0.94	1.17	1.39	1.28	0.85
Lucerne	2.00	2.85	2.07	1.98	2.39	2.27	1.91
Rye, etc.	0.93	1.06	0.86	0.96	1.01	1.15	1.19

In 1918-19 about 75 per cent. of the total area under cultivation for hay was taken up by the wheaten variety.

In general, oaten crops are grown in parts of the State which, on account of the climate, are unsuitable for maturing the grain, and preference is given to cultivation for hay; moreover, the prices obtainable for the hay are usually so profitable as to prejudice any material development of the grain harvest.

The area under barley for hay is inconsiderable. Lucerne is always in demand, and consequently realises remunerative prices. It gives the best return of all hay crops, the average yield during the last ten years having been 2.2 tons per acre for lucerne, and a little over a ton each for oaten, barley, and wheaten hay. In favoured districts, and with careful attention, lucerne grows so rapidly that, from a series of crops, even as many as eight cuttings may and have been procured, with an average result of 1 ton per acre for each.

GREEN FOOD AND SOWN GRASSES.

The great advance in dairy-farming has caused a corresponding increase during recent years in the cultivation of cereals, lucerne, and grasses, for green food. The cultural development of grasses has received great attention particularly in the northern and southern coastal districts, the great centres of dairy farming in the State. Considerable areas have been sown also in the Central Tableland, and smaller cultivations in the Northern and Southern Tablelands and in the Murray Valley.

The following statement shows the increase in the area cropped for green food and sown with artificial grasses in various seasons since 1897-8:—

Season.	Area Cropped for Green Food.	Area Sown with Grasses.	Season.	Area Cropped for Green Food.	Area Sown with Grasses.
	acres.	acres.		acres.	acres.
1897-8	62,145	376,402	1914-15	949,619	1,251,453
1900-01	78,144	422,741	1915-16	162,945	1,247,099
1905-06	95,058	627,530	1916-17	149,873	1,357,157
1910-11	179,382	1,055,303	1917-18	152,519	1,389,640
1913-14	146,239	1,234,455	1918-19	331,129	1,438,465

The largely-increased area under green food during 1914-15 was due entirely to drought, as the crops on numerous holdings failed to mature either for grain or for hay. No less than 815,561 acres sown with wheat were fed-off by stock, or otherwise used for green food; in 1917-18 the area so treated was 63,885 acres; but in 1918-19 it increased to 204,161 acres.

Lucerne is grown in considerable quantities on the Hunter River flats, and the cultivation of this fodder plant is extending throughout the country, principally along the banks of the rivers flowing from the western watershed of the Dividing Range. During 1918-19 there were 49,232 acres grown for green food, and if to these be added the area cropped for hay there were altogether 95,591 acres under lucerne.

WHOLESALE PRICES OF FARM PRODUCE.

The following quotations represent the average prices obtained for farm products in the metropolitan markets; for country districts due allowance must be made for cost of transportation, &c. The average for the year represents the mean of the prices ruling during each month, and does not take into account the quantity sold during the month. The figures are those quoted by the middleman and not those obtained by the producers:—

Farm.	1913.	1914.	1915.	1916.	1917.	1918.	1919.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Wheat bush.	0 3 7	0 4 1½	0 5 5	0 4 10	0 4 9	0 4 9	0 5 1½
Flour ton	8 12 9	9 8 5	13 7 0	11 5 4	11 1 0	11 0 0	11 5 9
Bran bush.	0 0 11	0 1 1	0 1 3½	0 0 10½	0 0 9½	0 0 9½	0 1 2½
Pollard "	0 0 11½	0 1 1	0 1 5½	0 1 0½	0 1 0½	0 1 1	0 1 3
Barley (cape) "	0 3 7	0 2 9	0 5 6½	0 3 1½	*	0 4 1	0 5 8
Oats "	0 3 0	0 3 0	0 4 7	0 2 10½	0 3 1	0 4 7	0 5 9½
Maize "	0 4 1½	0 3 11½	0 5 2½	0 4 6	0 3 9½	0 5 7	0 8 0
Potatoes (local) ton	4 15 5	4 14 8	7 9 1	8 14 0	5 10 10	6 1 8	14 8 8
Onions "	7 9 6	9 2 10	7 19 0	5 0 9	10 5 0	14 4 9	15 12 5
Hay—							
Oaten ton	4 15 2	4 17 2	8 4 8	4 7 0	4 16 0	6 4 2	9 19 2
Lucerne "	4 19 0	4 9 4	5 16 7	4 6 0	3 12 0	4 17 9	10 9 7
Chaff—							
Wheaten "	4 9 2	5 0 6	7 3 8	3 18 10	4 1 4	5 11 6	8 18 9

* No quotations.

The prices ruling in each month of the year are shown in the "Statistical Register."

ENSILAGE.

New South Wales is liable at intervals of fairly regular recurrence to long periods of dry weather and, consequently, lacks a permanent supply of natural fodder. Hence the necessity arises of conserving the abundant growth of herbage of good seasons, in the form of ensilage, for use when natural pastures are exhausted. The need is well illustrated by recent experiences. In the latter part of 1919 and the first half of 1920 a severe drought caused heavy losses of sheep and farm stock. Extensive Government aid had to be given to many distressed farmers, and large sums of money were expended in purchasing fodder from other States at high prices. The breaking of the drought was followed by a prolific growth of grass, of which but a small part can be consumed. If the remainder were scientifically conserved a vast store of inexpensive fodder would be available. In this work the Department of Agriculture offers liberal assistance by erecting in concrete, brick or timber, silos at actual cost, repayable by easy instalments without interest. Farmers may sink pits for the same purpose at small expense. In either case free advice on all matters of material and method are given by the Department.

The possession of stocks of ensilage is highly advantageous to the prosecution of dairy farming in the districts of the coast, where the climatic conditions are unfavourable to the growth of winter fodder.

The quantity of ensilage made at intervals since 1900-01 is shown in the following table.

Division.	Ensilage Prepared.					
	1900-01.	1905-6.	1910-11.	1915-16.	1917-18.	1918-19.
	tons.	tons.	tons.	tons.	tons.	tons.
Coastal	1,694	1,414	18,125	7,028	8,586	3,580
Tableland	3,753	1,430	2,328	800	259	256
Western Slopes	847	2,250	2,654	5,788	3,594	1,990
Central Plains and Riverina ...	460	4,227	6,409	4,595	2,190	306
Western	100	...	100	300	160	160
Total	6,854	9,321	29,616	18,511	14,789	6,292

The quantity of ensilage made each year during the last decade has varied considerably, especially during the first half of the period. The year of maximum production was 1909, when 34,847 tons were made on 364 farms. The production then decreased steadily until, in 1914-15, the quantity made was only 10,963 tons; this amount was made on 83 farms, and was valued at £18,000. In 1917-18 the production was 14,789 tons made on 116 farms and valued at £18,800; but in 1918-19 it fell to 6,292 tons, valued at £8,700, made on sixty farms.

POTATOES.

Potatoes are grown mostly on the Tableland, where in 1918-19 there were 17,875 acres under cultivation and the yield was 24,692 tons. In the coastal division there were 2,589 acres, yielding 4,936 tons.

The following statement shows the area under cultivation and the production at intervals since the season 1897-8 :-

Season	Area under Crop.	Production.		Season.	Area under Crop.	Production.	
		Total.	Average per Acre.			Total.	Average per Acre.
	acres.	tons.	tons.		acres.	tons.	tons.
1897-98	23,816	55,332	2.32	1914-15	30,418	40,709	1.34
1900-01	29,408	63,253	2.15	1915-16	19,589	44,445	2.27
1905-06	26,374	50,386	1.91	1916-17	22,449	45,331	2.02
1910-11	44,452	121,033	2.72	1917-18	22,580	49,984	2.21
1912-13	34,124	91,642	2.69	1918-19	20,879	30,356	1.45
1913-14	38,725	106,849	2.76				

The continuous fluctuation in the area from year to year since that time clearly shows that the possible advantages of this crop have been much neglected. The average yield during the last ten years has been 2.26 tons per acre, and the highest 2.8 tons per acre in 1909-10.

The average wholesale prices per ton of potatoes at Sydney during the season 1918-19 are shown below.

Month.	Local.	Victorian.	Tasmanian.	Month.	Local.	Victorian.	Tasmanian.
1918.	£ s. d.	£ s. d.	£ s. d.	1919.	£ s. d.	£ s. d.	£ s. d.
July ...	5 2 6	6 3 3	6 8 3	January ...	16 16 9	18 15 6	16 16 9
August ...	6 0 0	5 7 3	6 18 6	February ...	12 3 3	15 4 6	16 15 3
September ...	5 3 3	5 10 0	7 1 3	March ...	10 5 0	13 15 6	15 5 0
October ...	6 11 9	6 9 6	7 15 0	April ...	11 0 0	13 6 3	15 9 6
November ...	9 5 0	10 4 9	13 11 9	May ...	11 5 0	11 19 9	14 17 9
December ...	8 14 3	9 12 0	14 8 3	June ...	9 1 9	10 16 9	14 6 6

TOBACCO.

Tobacco culture is confined practically to the northern and southern portions of the Western Slopes and the Central Tableland.

The following statement shows the extent of the cultivation of tobacco, since 1897-8, during various seasons.

Season.	Area.	Production of Dried Leaf.		Season.	Area.	Production of Dried Leaf.	
		Total.	Average per Acre.			Total.	Average per Acre.
	acres.	cwt.	cwt.		acres.	cwt.	cwt.
1897-98	2,181	19,718	9.0	1914-15	1,563	10,065	6.4
1900-01	199	1,905	9.6	1915-16	1,277	9,563	7.5
1905-06	809	7,327	9.1	1916-17	952	921	1.0
1910-11	959	8,513	7.8	1917-18	791	2,609	3.3
1913-14	1,992	18,117	9.1	1918-19	1,680	20,952	12.5

For several years prior to 1889 the area under cultivation grew steadily, and in that year it reached the maximum of 4,833 acres. As, however, the local product did not compare favourably with the American leaf, it could

not be treated profitably, and a large proportion of the crop remained upon the farmers' hands; so that many growers abandoned tobacco in favour of other crops. The area had declined by 1907-8 to 533 acres; but subsequently it increased, owing to the greater attention paid to the processes of curing, and tobacco manufacturers endeavoured to stimulate the industry by paying adequate prices for good leaf, and by employing expert assistance to instruct growers. In 1917 and 1918 the seasons were unfavourable, owing to the continuous rains in the early spring, which caused an outbreak of blue mould in the seed beds. However, in 1919, conditions were most favourable and both the best and largest crop yet produced in the State resulted. The heavy yield per acre, coupled with the high quality of the leaf and the good prices realised, should offer encouragement to the further development of the industry.

SUGAR-CANE.

Sugar-cane was cultivated in New South Wales as early as 1824, but it was not until 1865 that systematic attention was given to this industry. Within a few years the richest portions of the lower valleys of the Clarence, the Richmond, the Tweed, and the Brunswick were occupied by planters. Mills were erected in the chief centres of the industry, and cane-growing and sugar-manufacturing became established industries in the north-eastern portion of the State, where the soil and the climate are in most respects well adapted to successful cultivation.

The yield of sugar from the cane crushed varies considerably, the variation approximating, between a maximum and a minimum year, to 1 ton of cane in the quantity required to produce 1 ton of sugar, measured by the saccharine density of the cane.

The following table shows the area and production since the season 1897-8. As sugar-cane is not productive within the season of planting, the area under cultivation has been divided, as far as practicable, into productive and non-productive, the former representing the number of acres upon which cane was cut during the season, and the latter the area either newly planted, or during which it was not sufficiently matured for milling, and was on that account allowed to stand for another year. On the average the area cut for cane represented about one-half of the total area planted.

Season.	Area.			Production of Cane.	
	Cut for Crushing.	Not cut.	Total.*	Total.	Average per Acre.
	acres.	acres.	acres.	tons.	tons.
1897-98	12,936	12,929	25,865	269,068	20·80
1900-01	10,472	11,642	22,114	199,118	19·01
1905-06	10,313	11,492	21,805	201,998	19·59
1910-11	5,596	8,167	13,763	160,311	28·65
1912-13	6,137	7,777	13,914	140,914	22·96
1913-14	6,198	7,034	13,232	185,970	30·00
1914-15	6,012	5,409	11,421	181,606	30·21
1915-16	6,030	5,228	11,258	157,748	26·16
1916-17	5,223	5,746	10,969	143,558	27·49
1917-18	5,588	5,008	10,596	174,881	31·30
1918-19	4,566	5,924	10,490	105,234	23·05

* Exclusive of areas cut for green food or plants.

This table bears convincing evidence of the decline in New South Wales of this important branch of agriculture. Though improved methods have resulted in a noticeable increase during the past eight years, in the average yield per acre, the total production of cane has fallen far below the level it reached twenty years ago. A consistent and marked decline, both in the total area cultivated and in the area cut for crushing is apparent throughout. The largest area on record, consisting of 32,927 acres, was planted in 1895-6, while the greatest production, 320,276 tons of cane, was obtained in 1896-7; but the average yield in that year was only 17.6 tons per acre. At about this time alterations were made in the Customs Tariff with regard to sugar and a great development in dairy farming on the Northern Rivers commenced. Both causes operated against the progress of sugar-growing. In recent years another industry, that of banana growing, has entered the field in competition with sugar-growing, and the higher returns in this new activity have added further serious cause to the decline in the area devoted to sugar. In 1918-19 the area was smaller than in any preceding year since 1880, and the total yield the lowest on record.

If became necessary in March, 1920, for the Commonwealth Government to grant a substantial advance in the price of sugar. This was done with a two-fold object, firstly, of stimulating local production and, secondly, of meeting the cost of imported supplies.

The county of Clarence contains the largest area devoted to the production of sugar, viz., 4,486 acres in 1918-19. The yield obtained from 1,784 acres of productive cane amounted to 32,865 tons, showing an average of 18.98 tons per acre. In the county of Rous cane was grown on 3,563 acres, and the yield was 52,653 tons, or an average of 28.32 tons per acre, cut on an area of 1,859 acres. In the county of Richmond the area under sugar-cane was 2,441 acres, of which 923 acres were cut, giving a total yield of 18,716 tons of cane, or an average of 20.28 tons to the acre.

Cane was grown during 1918-19 on 620 holdings; the majority of the farmers cultivate it in conjunction with dairy-farming, and only a few estates are devoted entirely to its production.

Sugar manufacturers invariably purchase the year's crop of cane as it stands, and cut it at their own cost. From plantations in full bearing the average weight of the cut cane varied from 25 to 32 tons, and the value received by the grower was, in 1918-19, about £1 8s. per ton of uncut cane. An additional 7s. per ton was paid for cutting, which, in most cases, was done by the growers.

GRAPE VINES.

The principal vineyards of the State are situated in the valleys of the Murray and the Hunter Rivers, where capital has been expended generously to introduce skilled labour, and to provide manufacturing appliances.

The great irrigated areas in the Murrumbidgee Valley are now rapidly growing in the favour of vignerons, and they may within a few years become the most important wine-producing districts of the State. Several hundred acres have already been planted with vines, and the results of the culture have proved highly satisfactory.

The vine-growing and wine-manufacturing industries are still, however, in their infancy, and at present the production is, speaking comparatively, insignificant.

The following table shows, at intervals since 1897-8, the total area under vines in this State, the area devoted to the wine-making industry only, the total production of wine in gallons, and the average number of gallons to the acre.

Season.	Total Area under Vines.	Area under Vines for Wine-making only.	Production of Wine.		Season.	Total Area under Vines.	Area under Vines for Wine-making only.	Production of Wine.	
			Total.	Average per Acre.				Total.	Average per Acre.
	acres.	acres.	galls.	galls.		acres.	acres.	galls.	galls.
1897-98	8,083	4,490	864,514	193	1914-15	7,985	4,113	549,140	134
1900-01	8,441	4,534	891,190	197	1915-16	7,883	3,501	571,000	163
1905-06	8,754	5,279	831,700	157	1916-17	8,666	3,442	628,950	183
1910-11	8,321	4,354	805,600	185	1917-18	8,594	3,839	538,210	140
1913-14	8,153	4,498	561,100	125	1918-19	8,740	3,961	555,770	140

The production of wine has declined during the last seven years. The total number of vineyards in 1919 was 1,275, in 224 of which wine-grapes were grown. The average area of each vineyard was about 7 acres, and the total planted with vines still in an unproductive stage was 2,145 acres. The average yield in 1918-9 was 140 gallons per acre, and during the last ten years 161 gallons. The wine produced in New South Wales during the year 1918-19 was valued at £83,370, and the brandy distilled by vignerons for fortifying purposes at £2,330.

The culture of grapes is not restricted to the production of fruit for wine manufacture, but a considerable area is devoted to their production for table use, particularly in various parts of Central Cumberland, and in the Orange, Yanco, and Mirrool Districts. The extent of land devoted to this branch of the industry in 1918-19 included 2,060 acres, with a production of 2,415 tons of grapes, or an average of 1.17 tons of fruit per acre.

Although there is a large local demand, and a possibility of an export trade for raisin fruits, no extensive areas have as yet been planted. In 1918-19 there were 574 acres cultivated for drying purposes, and the yield was 5,946 cwt., comprising 2,467 cwt. of sultanas, 1,029 cwt. of raisins, and 2,450 cwt. of currants. At the vineyards conducted in connection with the Wagga experiment farm and the Hawkesbury Agricultural College raisins and sultanas are dried every season and placed on the local market, where they are regarded as equal in every respect to the imported article.

ORCHARDS.

The cultivation of fruit does not receive sufficient attention, as both the soil and the climate of large areas throughout the State are well adapted to fruit-growing. A larger area of land is, however, being brought each year under fruit culture, and orchardists can ascertain from the Department of Agriculture the varieties which are recommended for planting in specified districts, and the prospects of ultimate success are thus greatly enhanced.

With large areas of suitable soil and with climatic conditions ranging from comparative cold on the highlands to semi-tropical heat on the North Coast, a large variety of fruits can be cultivated. In the vicinity of Sydney, oranges, peaches, plums and passion-fruit are most generally planted. On the Tableland, apples, pears, apricots, and all the fruits from cool and temperate climates thrive well; in the west and in the south-west, figs, almonds, and raisin-grapes can be cultivated; and in the north coastal districts, bananas, pine-apples, and other tropical fruits grow excellently.

Particulars of citrus orchards are shown in the following statement.

Season.	Area under Cultivation.			Production.	
	Productive.	Not bearing.	Total.	Total.	Average per Acre.
	acres.	acres.	acres.	bushels.	bushels.
1897-98	10,097	3,846	13,943	633,010	63
1900-01	11,013	3,952	14,965	648,628	59
1905-06	15,054	2,795	17,849	886,493	59
1910-11	17,465	2,643	20,108	1,478,306	85
1913-14	16,643	3,800	20,443	1,153,980	69
1914-15	16,675	5,237	21,912	1,445,624	87
1915-16	17,542	5,717	23,259	1,360,898	78
1916-17	17,542	6,306	23,848	1,559,835	89
1917-18	19,133	6,311	25,444	1,737,107	91
1918-19	20,529	7,068	27,597	1,619,346	79

The number of orchards in which citrus fruit was cultivated during the year 1918-19 was 6,165, and of these the average area was 4½ acres.

The citrus production of 1918-19 represented 990,901 bushels of oranges, the following being the different varieties—Seville, 109,180, Washington Navel 181,003, Valencia 198,397, and all other varieties 502,321; 222,612 bushels of lemons; 397,775 bushels of mandarins; and 8,058 bushels of other citrus fruits, namely, pomeloes (or grape fruit), shaddocks and limes. The trees of bearing age included 1,127,310 orange-trees, viz., Seville 94,114, Washington Navel 208,044, Valencia 231,267, and all other 593,885 respectively; 251,311 lemon-trees; 461,389 mandarin-trees, and 4,904 other citrus-trees; whilst the young trees which had not yet reached the age of bearing included 445,984 orange-trees, (Seville 31,054, Washington Navel 141,850, Valencia 182,148, and all other 90,932), 88,063 lemon-trees, 97,040 mandarin-trees, and 1,093 other citrus-trees.

The production of oranges has attained such proportions that the growers are obliged to seek oversea markets, the supply, both in New South Wales and in the adjacent States, exceeding in some seasons the local demand. During 1918-19 the export of citrus fruits from New South Wales amounted to 47,000 bushels, valued at £29,000, practically all of which went to New Zealand.

The principal crops of fruit other than citrus products, which are more intensively cultivated in the neighbourhood of Sydney, range from natives of comparatively cold to those of temperate and semi-tropical climates, but their successful culture is determined by altitude as well as by parallels of

latitude. Peaches showed the greatest measure of production, the output for the year 1918-19 reaching 566,107 bushels from 650,630 trees of bearing age. Apples came next, with an output of 519,327 bushels from 703,406 trees; followed by pears, with 157,262 bushels from 176,472 trees; plums and prunes, with 126,297 bushels, from 146,810 trees; apricots, with 78,409 bushels from 102,487 trees; passion-fruit, with 49,059 bushels from 108,053 vines; cherries, with 62,282 bushels from 135,579 trees; nectarines, with 28,137 bushels from 38,201 trees; and quinces, with 27,985 bushels from 26,939 trees, besides some smaller yields from minor fruit crops.

The following table shows the area under orchards and fruit-gardens exclusive of orangeries, together with the total value of each season's yield, at intervals since 1897-8.

Season.	Area of Productive Fruit-gardens and Orchards.	Area of Fruit-Gardens and Orchards not Bearing.	Total Area Cultivated for Fruit-gardens and Orchards.	Total Value of the Production of Fruit-gardens and Orchards.	Approximate Average Value per Acre.
	acres.	acres.	acres.	£	£ s. d.
1897-98	23,965	7,054	31,019	155,534	6 10 0
1900-01	25,766	5,503	31,269	270,081	10 10 0
1905-06	25,189	3,577	28,766	189,195	7 10 0
1910-11	20,498	6,748	27,246	271,930	13 5 4
1913-14	19,248	11,238	30,486	244,950	12 14 6
1914-15	18,500	12,567	31,067	233,130	12 12 0
1915-16	19,006	13,173	32,179	243,210	12 16 0
1916-17	20,761	13,359	34,120	280,990	13 11 0
1917-18	22,121	13,784	35,905	376,090	17 0 0
1918-19	23,795	12,970	36,765	742,730	31 4 0

Owing to the subdivision of orchards for residential and other purposes the area under fruit declined from 32,346 acres in 1901-2 to 25,859 acres in 1909-10; since that season it has increased, and in 1918-19 was the highest on record.

More than one-third of the area devoted to fruit culture is in the county of Cumberland, the actual acreage in 1918-19 being citrus, 11,450 acres; fruits other than citrus, 7,666 acres. At the Murrumbidgee irrigation settlement fruit-trees are being planted very extensively, especially peaches, apricots and oranges.

With the exception of oranges, the fruit-production of New South Wales is far below average demands. The State is, therefore, obliged to import large quantities, the greater portion of which could be grown within its own boundaries. As a matter of fact, vast quantities of fruit produced in New South Wales never reach the consumer. This is due to faults of marketing, and to lack of co-operation among growers. Good seasons are rewarded by a glut of fruit, for which, apparently, there is no system of efficient handling; and while consumers are anxious to secure supplies of sound fruit, much of the produce is allowed to be wasted.

The extent of cultivation of each kind of fruit is shown in the following table for the seasons 1917-18 and 1918-19.

Fruit.	1917-18.			1918-19.		
	Number of Trees not yet Bearing.	Trees of Bearing Age.		Number of Trees not yet Bearing.	Trees of Bearing Age.	
		Number.	Yield.		Number.	Yield.
Oranges—			bushels.			bushels.
Seville ...	} 406,318	1,058,663	1,037,416	31,054	94,114	109,180
Washington Navel ...				141,850	208,044	181,003
Valencia ...				182,148	231,267	198,897
All other ...				90,932	593,885	502,321
Lemons ...	93,553	242,546	250,600	88,063	251,311	222,612
Mandarins ...	80,567	442,264	445,264	97,040	461,389	397,775
Other Citrus ...	1,890	3,619	3,827	1,093	4,904	8,058
Apples ...	374,485	633,761	616,001	371,554	703,406	519,327
Pears—						
Williams ...	} 166,386	167,613	174,714	104,017	111,505	85,174
All other ...				40,894	64,967	52,088
Peaches—						
Early ...	} 285,626	643,262	598,440	140,797	480,209	386,771
Canning ...				92,333	170,421	179,336
Nectarines ...				10,271	38,201	28,137
Plums ...	151,286	131,066	140,978	101,388	123,023	105,352
Prunes ...				46,692	23,787	20,945
Cherries ...	119,782	142,387	68,536	100,987	135,579	62,282
Apricots ...	59,222	97,628	85,885	42,124	102,487	78,409
Quinces ...	14,250	31,290	36,438	13,271	26,939	27,985
Persimmons ...	3,037	9,397	10,262	3,769	11,000	11,310
Passion Fruit ...	*23,176	*110,528	52,670	*31,513	*108,053	49,059
All other ...	26,858	23,211	29,743	22,764	28,587	20,927

* Vines.

In 1918-19 the number of passion-fruit vines was stated as 139,566, of which 108,053 were bearing fruit, the vines being frequently planted among the trees of other fruits, especially in young citrus orchards. The passion-vine is easily grown and cheaply maintained, and on account of its early maturity forms a valuable means of profit to the grower until the fruit-bearing trees become productive.

Banana culture is becoming an important industry in the Tweed River district of the North Coast division. In 1917-18 an area of 2,691 acres was cultivated; 1,944 acres were productive and the crop was valued at £89,040. In 1918-19 the total area was 3,028 acres; 2,485 acres were productive and yielded 259,427 cases of bananas, valued at £155,660.

MARKET GARDENS.

In 1918-19 there were in the State 2,729 holdings, comprising 10,043 acres, cultivated as market gardens, the average size of each being 3.7 acres. The value of the production for the year was £441,070, equivalent to £43 18s. 4d. per acre. Nearly one-third of the total area laid down for market-gardens is in the County of Cumberland, and until recent years the industry was almost entirely in the hands of Chinese, but latterly it has received more attention from the farmers of the metropolitan districts.

One branch of gardening—tomato culture—is particularly remunerative, and the vegetable can be grown by persons unaccustomed to heavier labour

on farms. In 1918-19 there were 480 acres, exclusive of market-gardens, under cultivation for tomatoes, which yielded 110,587 half-cases, or 230 half-cases per acre. Settlers on irrigation areas cultivate tomatoes as a stock product whilst their orchards are maturing.

MACHINERY AND LABOUR.

For harvesting grain-crops the reaper and binder, the stripper, and the harvester are used, and there is considerable difference of opinion regarding the relative efficiency of these different implements. The reaper and binder is employed almost exclusively in moist districts, but over the greater portion of the wheat areas conditions are favourable to the use of the harvester. A modern type of harvester, particularly adapted to Australian conditions, produced and developed locally, has largely contributed to the expansion of wheat cultivation.

The estimated value of the agricultural machinery in use during the 1918-19 season was £5,696,916, or an average of £1 9s. 3d. per acre cultivated.

The following statement shows the area farmed, the value of the machinery used, and the value of the machinery used per acre, in Divisions of the State.

Division.	Area Farmed.	Value of Machinery.	Value of Machinery per Acre.
	acres.	£	£ s. d.
Coastal	236,121	679,665	2 17 7
Tableland	336,364	720,383	2 2 10
Western Slopes	1,563,154	2,192,245	1 8 0
Central Plains and Riverina	1,747,705	2,059,483	1 3 7
Western	7,500	45,140	6 0 4
Total	3,890,844	5,696,916	1 9 3

A comparison of the value of farming implements and machinery in use during various years since 1900-1901 in each of the rural industries is shown in the following table.

Season.	Farming.	Dairying	Pastoral.*	Total Value.
	£	£	£	£
1900-01	2,065,776	237,221	754,055	3,057,052
1905-06	2,557,262	365,436	1,120,991	4,043,689
1910-11	3,414,621	534,745	1,483,081	5,432,447
1915-16	5,362,027	570,955	2,015,048	7,948,030
1916-17	5,449,657	595,538	2,124,246	8,169,741
1917-18	5,615,995	659,059	2,316,518	8,591,552
1918-19	5,696,916	711,964	2,609,529	9,018,409

* Includes in many cases farming implements used on pastoral holdings.

FERTILISERS.

In New South Wales superphosphate is the only artificial fertiliser used in any considerable quantity, the soils in the wheat areas being generally deficient in phosphoric acid. Tests of manure conducted on the farmers' experiment plots indicate that the benefits derived from the application of superphosphates to wheat-lands, as a general rule, are most marked in the southern portion of the wheat-belt, viz., the South-western Slope and the Riverina. The beneficial results gradually diminish throughout the western

districts which form the central portion of the wheat-belt, and in the north-western districts no advantage is gained by the use of this fertiliser. The results may be affected, however, by the fact that fallowing is more common in the south than in the west, and much more than in the north.

The following table shows the area of land and the quantity of manure used during the year 1918-19.

Division.	Total Area Manured.	Quantities of Manure used.	
		Natural (Stable-yard, etc.).	Artificial (Superphosphate, Bone-dust, etc.).
	acres.	loads.	cwt.
Coastal	28,313	159,679	123,547
Tableland	56,257	10,601	43,406
Western Slopes	572,991	4,259	232,399
Central Plains	79,866	230	26,865
Riverina	1,042,333	4,123	428,711
Western	494	1,842	1,146
Total, New South Wales	1,780,254	180,734	856,074

The proportion of manured land in relation to the total cultivated in 1918-19 was only 45·7 per cent., although, as shown in the following table, a steady increase in the use of fertilisers has taken place since 1907, when the proportion was only 16·5 per cent. In 1918-19 the total number of cultivated holdings was recorded as 44,509, but the number on which manure was used was only 10,098, or 22 per cent.

The following table shows the total area cultivated, the total area manured, and the nature of the manures employed, for the various years between 1907-8 and 1918-19.

Season.	Total Area Cultivated.	Total Area Manured.	Manures Used--		Area Manured per cent. of Total Cultivated.
			Natural.	Artificial.	
	acres.	acres.	loads.	cwt.	
1907- 8	2,570,137	423,678	144,021	276,120	16·5
1910-11	3,381,921	1,030,536	186,204	500,342	30·5
1912-13	3,737,269	1,643,788	170,312	779,123	44·0
1913-14	4,568,841	2,226,742	166,753	1,010,596	48·7
1914-15	4,808,627	2,331,239	175,088	1,104,174	48·5
1915-16	5,794,835	2,753,431	177,788	1,132,446	47·5
1916-17	5,163,030	2,352,460	166,374	1,014,213	45·6
1917-18	4,460,701	1,974,691	181,052	897,738	44·3
1918-19	3,890,844	1,780,254	180,734	856,074	45·7

The sale of artificial manures is regulated by the Fertilisers Act of 1904, under the provisions of which measure the vendor is required to furnish to the purchaser a statement as to their nature and chemical composition.

THE DEPARTMENT OF AGRICULTURE.

The Department of Agriculture, created in 1890 to advance the interests of the farmers and fruit-growers of New South Wales, deals with all matters essential to agriculture; and its practical functions include the collection of information by scientific investigation and practical experiments relating to the causes of the failure of crops, improved methods of cultivation, means of combating pests, fertilisers, drainage and irrigation, new plants and new implements, and to the disposal of surplus products, and transport of produce. Such information is placed at the disposal of the agricultural producers of the State, and every other kind of assistance is rendered to them.

Bulletins are issued for the guidance of various classes of rural workers, and most of the publications of the Department are supplied free to persons engaged in rural industry. The officials answer all inquiries for advice or assistance, and visit various parts of the country throughout the year to give demonstrations to the farmers, to conduct experiments, and to advise generally regarding agricultural methods.

The *Agricultural Gazette*, the official organ of the Department, is issued monthly. It presents to the farmers of the State the results of scientific researches and of the investigations of official experts; it gives practical advice on the economic results dictated by these investigations, and supplies seasonable notes on matters of scientific, practical, and industrial interest.

Country newspapers are furnished weekly with notes describing the investigations and educational operations of the Department with respect to improved methods of agriculture, dairying, stock-raising, &c.; and efforts have been made to develop many phases of primary production, fallowing, rotation in cropping, and the cultivation of maize being specially treated.

The revenue and expenditure of the Department of Agriculture during the year ended 30th June, 1919, were as follow:—

<i>Revenue.</i>	£	<i>Expenditure.</i>	£
Agricultural College, Experiment Farms, etc.	63,716	Agricultural College, Experiment Farms, etc.	126,089
Repayments for Seed-wheat	57	Clearing Crown Lands, Tottenham, etc., Preparation of Share Farms, Forest Vale ...	2,166
Fees for fumigation, etc.	7,374	Bulk Handling of Wheat; Grain Elevators	494,305
Botanic Gardens, etc.	465	Fallowing land	11,479
Miscellaneous	1,086	Departmental	60,478
Stock Branch	5,884		694,517
	78,582	<i>Less Refunds</i>	12,661
<i>Less Refunds</i>	209		681,856
	£78,373	Stock and Brands, Pastures Protection	51,826
		Botanic Gardens, etc.	31,603
		Commercial Agents	3,649
Total	£78,373	Total	£768,934

AGRICULTURAL BUREAU.

An Agricultural Bureau has been established under the direction of the Department of Agriculture. Its objects are to collect and to disseminate information respecting plants, animals, or products likely to prove of value to cultivators; to discover the best methods of cultivating suitable economic crops, the breeding and feeding of domestic animals, and the preparation of products for market; to settle for each district the best times for fallowing, sowing, and harvesting; to prevent the introduction and dissemination of insect and fungus pests; to encourage social intercourse; and generally to advance the interest of persons engaged in rural industries. Government assistance is granted in the form of subsidies payable to each branch at the rate of 10s. for every £ membership fees; by lectures and demonstrations by the Departmental experts; and by the supply, free of charge, of the publications of the Department, including the *Agricultural Gazette* and *Farmers' Bulletins*. The Bureau was established in 1911, and at the 30th. June, 1919, there were 135 branches, as compared with 123 twelve months earlier.

AGRICULTURAL EDUCATION AND EXPERIMENTS.

In order to obtain a knowledge of local conditions and to afford an education in agriculture on scientific bases, the Government has established the Hawkesbury Agricultural College, thirteen experiment farms, three viticultural nurseries, an apiary, a stud-horse farm, and an agricultural training farm, besides farmers' experiment plots throughout the State. Agricultural training as conducted at the University and in the State schools, including the Hurlstone Agricultural High School, has been described in the chapter relating to Education.

Farm schools are in operation at Wagga and Bathurst experiment farms; the fee is £15 for the first year and £10 for the second year. Farm-apprentice schools have been established at the Wollongbar, Glen Innes, and Grafton farms. The course enables students to qualify as farm labourers and small farmers, and the fee is £5 for six months, while a second half-year's training may be given in return for labour.

Schools of instruction for dairy-factory workers are held periodically in dairying districts. During the year 1918-19 three schools for cream-graders and testers were held, and 77 students attended.

In order to secure the maximum advantage of experimental work and to co-ordinate the methods employed, a committee of experts was appointed to supervise all scientific farming investigations and field experiments.

The total area of experiment farms was 39,943 acres, of which 7,286 acres were under crop and 1,029 acres were under artificially-sown grasses during the season 1918-19, the proportion for various crops being as follows:—

	acres.
Cereals and hay	5,398
Fruit-trees and vines	400
Green fodder	1,389
Root and other crops	99

Much of the remaining area allotted to these farms was partially cleared, a portion was under fallow, and another portion was ready for ploughing.

The winter schools at the Hawkesbury Agricultural College include a special course in poultry-farming, and in other subjects useful to those engaged in this industry, to which students of both sexes are admitted. During the year 1918-19 the attendance at the ordinary winter school was 61, and at the poultry farmers' school 21.

The Department of Agriculture has made special provision for the instruction of women in suitable branches of rural work. In addition to the facilities afforded by the summer and winter schools at the Agricultural College, instruction in all branches of agriculture is provided for women at the Cowra Experiment Farm. A fee of £5, which covers board, lodging, and instruction, is charged for the first six months, and a similar period of training may be given free.

Arrangements have been made for the specialised training of returned soldiers desirous of settling in rural life. Courses of instruction in various branches for a period of six months are provided at the Hawkesbury Agricultural College, Wagga, Bathurst, Yanco, Trangie, Wollongbar, Grafton, and Glen Innes Experiment Farms. At these institutions instruction and board and lodging are free, and sustenance is paid by the Repatriation Department.

HAWKESBURY AGRICULTURAL COLLEGE.

The Hawkesbury Agricultural College provides accommodation for resident students, and imparts theoretical and practical instruction in a three-years' course, which embraces every department of agriculture. Instruction is given also in dairying, pig-raising, horse, sheep, and poultry breeding, and experimental research work is conducted in connection with cereal and other crops, in cultivation with fertilisers, and in soil culture. All subsidiary branches of farm labour are taught, including blacksmithing, carpentry, sheep-killing, bee-keeping, and other occupations incidental to the pursuit of agriculture. An area of 116 acres has been leased on the banks of the Hawkesbury River, on which a complete system of irrigation is being installed. The education and maintenance fee is £28 per annum, payable half-yearly in advance, and it includes the tuition, board and lodging of the student, medical, dispensing, and sports fees, but not the purchase of text-books and apparatus, or the cost of laundry work. Special courses of instruction are also provided, notably at the winter school for farmers and poultry-keepers of both sexes. In June, 1919, there were 171 regular students in residence, and 908 acres out of the total of 3,430 acres attached to the College were under crop, and 300 acres were under sown grasses.

Jersey dairy cattle and Romney Marsh sheep are bred, also stud pigs of various breeds, which are distributed to farmers throughout the Commonwealth and New Zealand. In the poultry section the egg-laying competitions attract a large number of competitors.

EXPERIMENT FARMS.

Work of a general educational and research nature is carried on also at twenty experiment farms, which have been established in various parts of the State with varying curricula, adjusted to meet local needs and climatic conditions. The aim is to disseminate better knowledge of the practice of agriculture in established industries, to encourage by example new activities suited to the locality, to demonstrate in a practical manner the agricultural possibilities of the State, and, in some cases, to afford instruction for students.

Particulars as to each farm are given in the following table.

Farm.	Particulars (as at 30th June, 1919.)					Remarks.
	Area.	Students in Residence.	Fees Payable.	Receipts.	Expenditure.	
Wagga Wagga	Acres, 3,220	No, 15	1st year £15. 2nd " £10.	£ 4,746	£ 9,821	Specialises in seed wheat.
Bathurst	752	32	do.	3,244	6,362	Orchard and soil culture.
Wollongbar and Duck Ck.	734	17	1st 6 mos. £5.	2,895	3,870	Stud farm—Dairy cattle and pigs.
Berry	403	..	..	3,239	2,995	Stud farm—Dairy cattle.
Viticultural Stn., Howlong	224	..	..	181	2,252	Phylloxera-resisting vines.
Grafton	1,075	3	1st 6 mos. £5.	2,853	6,828	Mixed farming suited to sub-tropical districts.
Glen Innes	1,073	1	do.	2,033	6,283	Mixed farming and fruit culture.
Womens' Training Farm, Cowra	1,011	14	do.	2,898	5,809	Specialises in seed wheat and cross-breeding with sheep.
Pera	1,183	..	..	1,265	1,595	Artesian-bore water applied to orchard culture.
Narara	100	..	..	782	3,318	Phylloxera-resisting vines.
Yanco	2,045	7	Nil.	5,092	10,918	Irrigation, ostrich farming and mule-breeding.
Nyngan	5,049	..	..	1,545	3,119	Dry-farming. Merino sheep suitable for dry areas.
Coonamble	1,945	..	..	1,013	3,446	Dry-farming. Wheat cultivation and sheep-farming.
Temora	1,666	..	..	1,991	3,982	Specialises in seed wheat.
Condobolin	1,348	..	..	1,722	2,289	Dry-farming. Suitable varieties of wheat.
Trangie	9,736	..	..	9,958	6,230	Stud-merino farm, also specialises in wheat culture.
Bangaroo	5,037	..	..	5,018	9,111	Stud farm—Horses.
Glenfield	112	..	..	..	963	Veterinary farm.
Griffith	59	..	..	649	1,623	Mother-stock vineyard. Irrigated area.
Wauchope Apiary	36	..	..	18	1,470	Study of diseases among bees.
Totals	36,748	89	..	51,142	92,243	

FARRER SCHOLARSHIPS.

The Farrer memorial fund was established by public subscription in honour of the late William J. Farrer, whose work in the production of new wheats has afforded great benefit alike to the industry and to the community. The money subscribed has been invested in trustees, and the interest is used for the Farrer research scholarship, the specific object of which is the improvement of wheat cultivation. The scholarship is granted to a candidate selected by the trustees from applicants possessing one of the following qualifications :—

- (a) A graduate in science, to pursue studies with original research in the Cambridge University Laboratory, or elsewhere outside the State.
- (b) Graduate or undergraduate, to pursue the study of plant-breeding in University laboratories under the supervision of the Science Faculty.
- (c) Student who has taken a diploma from the Hawkesbury Agricultural College, or similar institution, to pursue the study of plant-breeding in the field, or in any other approved way.
- (d) A young farmer, or other person, possessing necessary qualifications and aptitude for investigating this subject in the field under supervision of the trustees.

The selected scholar presents his results at the close of the year in the form of a paper to be published by the trustees. At the end of the year the holder of the scholarship may be re-appointed, or a new selection made.

The Government Farrer scholarship is offered for competition amongst students wishing to enter the Hawkesbury Agricultural College with a special view to study wheat cultivation. The value of the scholarship is £100; it is awarded after competitive examination, and provides for the full education of the recipient during the three years' course, for the purchase of books and apparatus, and for the payment of medical, sport, and other fees. The trustees of the Farrer memorial fund are authorised specially to give priority in the matter of the Farrer research scholarship to a Government Farrer scholar at the close of his college course if he shows special aptitude for research work in connection with wheat cultivation.

The *Daily Telegraph* Farrer scholarship consists of a grant of books, apparatus, etc., to the value of £10, given each year by the *Daily Telegraph* Newspaper Co., Ltd., to the best first-year wheat student at the Bathurst or Wagga experiment farm.

STATE ADVANCES TO SETTLERS.

To meet the demand for capital, and impelled by the necessity for affording assistance to settlers whose prospects had been affected by prevalent drought conditions, the Government inaugurated a system in 1899, by which advances are made to settlers on the basis of the French *Crédit Foncier*, at rates of interest and of repayment which are intended to be available for the benefit of every settler offering adequate security. The original Act of 1899 has received several amendments, and in 1906 the powers of the Advances to Settlers Board were transferred to the Commissioners of the Government Savings Bank of New South Wales, the maximum and minimum advances being fixed at £2,000 and £50 respectively.

On the 30th June, 1919, the advances which had been made to settlers numbered 16,031 and amounted to £4,774,412, equivalent to £297 per loan, of which 9,860, representing £2,174,661, had been repaid, leaving 6,171 advances current at that date, the average balance of the principal being £421 per loan.

The operations of the bank relating to advances to settlers, since 1911, have been as follow:—

Year.	ADVANCES MADE.			REPAYMENTS.		BALANCES REPAYABLE.		
	Number.	Total Amount.	Average.	Number.	Total Amount.	Number.	Total Amount.	Average
		£	£		£		£	£
1911	838	331,693	395	743	185,420	3,754	1,074,359	286
1912	940	475,070	505	572	153,093	4,122	1,396,336	339
1913	1,386	771,272	556	414	116,476	5,094	2,051,132	403
1914*	602	336,035	558	260	89,186	5,436	2,297,981	423
1915†	860	387,715	451	436	171,617	5,860	2,514,078	429
1916†	686	200,865	293	501	201,611	6,045	2,513,332	446
1917†	501	161,855	323	384	152,513	6,162	2,522,674	409
1918†	515	232,460	451	575	211,079	6,102	2,544,055	417
1919†	589	260,255	442	520	204,558	6,171	2,599,751	421

* Half-year ended 30th June. † Year ended 30th June.

The Commissioners are empowered to make advances upon mortgages of land in fee-simple, and of land held under conditional purchase, or lease,

settlement purchase or lease, and homestead grant or selection. The advances are made to repay existing encumbrances, to purchase land, to effect improvements, to utilise resources, or to build homes.

The conditions under which loans are repayable vary according to the circumstances of the individual case; the maximum loan to any one person is £2,000, the rate of interest ranges between $4\frac{1}{2}$ and 5 per cent., and the maximum period of repayment is thirty-one years.

The system affords material assistance to prospective settlers, as well as to those already engaged in the pursuit of agriculture.

In terms of the Savings Banks Amalgamation Act, 1914, the Commissioners of the Government Savings Bank may make advances upon mortgage of irrigation farm leases, up to a maximum amount of three-fourths of the value of the interest of the holder in permanent or prospective improvements; the repayment of these loans is guaranteed by the Government.

The advances made to 30th June, 1919, numbered 122, the total amount being £20,805, of which 29 advances, representing £5,491, had been repaid. No advances were made by the Bank in the year 1918-19, as the settlers on the irrigation areas may now obtain advances directly from the Water Conservation and Irrigation Commission.

RURAL INDUSTRIES BOARD.

In 1915 various schemes were inaugurated by the Departments of Agriculture and Lands to render financial aid in the form of loans, repayable by instalments, to farmers desirous of clearing areas of land for wheat-planting, and to assist necessitous farmers. The operations of these schemes were of comparatively small scope until 1919, when, owing to the long continuance and severity of the drought, some 5,000 applications for assistance were received. The Government promptly voted £75,000 to meet the situation and relief was distributed in the form of orders for fodder, household supplies, and fertiliser, while seed wheat was supplied under a separate scheme. An amount of £60,000 was advanced to about 1,000 applicants on the security of second and third mortgages and of crop liens. Dairy-farmers as well as wheat-growers benefited under the scheme.

The drought continuing, a serious situation developed and £1,000,000 was raised locally by loan for relief purposes. On the 1st December, 1919, the Rural Industries Board was created to carry on the work and it was assisted by eighty-five country boards. The purposes for which the board was constituted were (a) to take over, consolidate, and collect all advances under previous schemes since the year 1915; (b) to extend the scope of relief given to necessitous farmers to enable them to sow crops during 1920. Relief measures were confined to cases where ordinary commercial assistance was not forthcoming and a tentative limit of £500 per individual was fixed. It was found that many settlers had been suffering from the effects of drought for several years and were already heavily indebted. Usually promissory notes were now accepted as the only security.

In 1920 a further loan of £1,000,000 was raised to help small graziers, as the long drought threatened serious depletion to the flocks of the State. Fortunately, however, beneficial rains fell in June, 1920.

Altogether advances amounting to approximately £1,470,000 were made to nearly 10,000 farmers, and 17,885 applications for relief were dealt with between 1st December, 1919, and 31st October, 1920.

The operations of the Rural Industries Board during this period involved a total expenditure of £2,072,410, as follows :—

Head of Expenditure.	£
Seed Wheat	538,454
Fodder	1,165,698
Household Supplies	42,459
Cornsacks	124,660
Cash Advances	177,929
Fallowing Advances	2,638
Miscellaneous... ..	20,572
Total	2,072,410

while the advances and repayments as at 31st October, 1920, under all schemes since 1915 were :—

Nature of Advance.		Advances.	Repayments.
		£	£
1915	{ Seed Wheat and Fodder	377,407	337,396
	{ For Clearing Land	18,986	15,207
	{ Loans	14,791	8,051
1916	Cornsacks	1,660	1,387
1917	Seed Wheat	450	236
1918-19	For Fallowing	14,513	1,384
1919	{ Seed Wheat	60,875	5,447
	{ For Holdings of Hay	683	248
	{ To Necessitous Farmers	57,983	...
1920	Advances by Rural Industries Board	1,470,000*	2,000*
Total		2,017,348*	371,356*

*Approximately.

WATER CONSERVATION AND IRRIGATION.

THE provision of an adequate water supply for irrigation purposes is essential in a country liable to dry seasons which affect extensive areas, and a recognition of this fact has induced the Government to undertake various schemes, which will constitute portion of an irrigation system to serve the whole State.

The following table shows in conjunction with the total area, the area under crop, the number of sheep and cattle, and the average annual rainfall in the various divisions calculated over a period of years; the rainfall figures indicate the range of the averages of the representative stations in each division :—

Division.	Average Annual Rainfall.	Total Area.	Area Under Cultivation 1918-19		Sheep 1919.	Cattle 1919.
			Wheat For Grain.	Other Crops.		
Coastal—	Inches.	Acres.	Acres.	Acres.	No.	No.
North Coast ...	38 to 63	5,410,000	...	75,000	9,000	732,000
Hunter & Manning	24—60	10,391,000	1,000	89,000	736,000	646,000
Cumberland ...	31—48	1,070,000	...	34,000	27,000	55,000
South Coast ...	27—56	5,484,000	...	37,000	155,000	231,000
Total ...	...	22,355,000	1,000	235,000	927,000	1,664,000
Tableland—						
Northern ...	30—32	8,928,000	4,000	56,000	2,030,000	394,000
Central ...	24—37	8,989,000	69,000	157,000	2,212,000	115,000
Southern ...	19—32	7,914,000	8,000	42,000	2,504,000	125,000
Total ...	...	25,831,000	81,000	255,000	6,746,000	634,000
Western Slopes—						
North ...	24—31	9,813,000	183,000	141,000	3,664,000	245,000
Central ...	20—29	6,253,000	375,000	200,000	2,211,000	72,000
South ...	20—28	8,186,000	461,000	203,000	3,632,000	160,000
Total ...	...	24,252,000	1,019,000	544,000	9,507,000	477,000
Central Plains & Riverina—						
North ...	19—23	10,031,000	19,000	10,000	3,071,000	112,000
Central ...	17	16,030,000	335,000	108,000	4,577,000	98,000
Riverina ...	14—17	19,767,000	954,000	322,000	7,107,000	179,000
Total ...	...	45,828,000	1,308,000	440,000	14,755,000	389,000
Western ...	9—16	80,368,000	1,000	7,000	5,447,000	117,000
Total N.S.W. ...	..	198,634,000	2,410,000	1,481,000	37,382,000	3,281,000

The table shows the great extent of the country with a low average rainfall. In these areas the majority of the sheep are depastured and a large proportion of the crops is cultivated; therefore, there is urgent necessity for the conservation of all the available water to carry the stock over periods of drought and to increase the cultivation of fodder and other crops which can be grown under irrigation. Even in the coastal districts, where the average rainfall is highest, the dairying industry suffers from periods of drought, of which the effects could be mitigated if sufficient attention were paid to conservation.

The Control of Water Conservation and Irrigation Works.

The system and the works necessary for its maintenance and development are under the control of the Water Conservation and Irrigation Commission, which consists of the Minister for Agriculture, as Chairman, and two other Commissioners. The works controlled by the Commission include the great Murrumbidgee irrigation scheme, the small irrigation settlements at Hay and Wentworth, natural works of water conservation, shallow boring for settlers, and water trusts and artesian bore trusts operating under the Water Act. The Commission has control also of storages and diversions of water by private persons for purposes of conservation and irrigation.

The Murrumbidgee Irrigation Scheme.

Under this scheme a storage dam across the Murrumbidgee River has been constructed, to retain the flood water, which will be released for use lower down the river during dry periods. Provision has been made for a movable diversion weir about 240 miles below the dam, to turn the required amount of water from the river into the main canal; a main canal, leaving the river near the weir; four main branch canals and a series of subsidiary canals and distributing channels through the area to be irrigated; bridges, checks, regulators, and other structures throughout the entire system; and meters for measuring the volume allowed to each farm. Towns and villages, roadways to serve each farm, and a general surface drainage system are included in this scheme.

The site of the storage dam is at Burrinjuck, 3 miles below the confluence of the Murrumbidgee and the Goodradigbee Rivers. The dam-wall, when complete, will have a maximum height of 240 feet, and will impound the waters in a lake covering 12,740 acres. The reservoir will have a capacity of nearly 33,612 million cubic feet or 771,641 acre-feet, the catchment area being about 5,000 square miles, drained by three principal streams—the Murrumbidgee, the Goodradigbee, and the Yass Rivers—up which the water will be backed, when the dam is full, to distances of 41 miles, 15 miles, and 22 miles respectively above the dam. Direct communication between Burrinjuck and the Main Southern Railway has been provided by the construction of a 2-foot gauge line from Goondah, a distance of 26 miles.

The irrigation areas are situated on the northern side of the Murrumbidgee River, and when fully developed it is estimated that there will be over 200,000 acres under irrigation in blocks devoted to fruit and vegetable growing, dairying and stock raising, &c. With the aid of irrigation the soil and climate are suitable for the production of apricots, peaches, nectarines, prunes, pears, plums, almonds, melons, cantaloupes, and citrus fruits, also wine and table grapes, raisins, sultanas, figs, olives, and most varieties of vegetables and fodder crops. Dairying and pig-raising are already being conducted successfully by settlers in the areas.

The first area made available for settlement was in the vicinity of Yanco siding, on the Hay Railway line. The second, which is situated on the northern side of Mirrool Creek, is served by an extension of the railway from Barellan to Griffith. Further areas are being thrown open for settlement as the construction works are completed.

Farms varying in size from 2 acres to 200 acres have been made available. The average agricultural farm is from 15 to 25 acres, but to suit the requirements of dairymen and other stock farmers blocks of larger areas have been made available. These include non-irrigable or "dry" areas in addition to the irrigable portion. The "water right" or number of "acre-feet" of water allotted to each holding is specified when the holding is notified as available for application, as is also the charge for such fixed water rights which may be altered at any time by notification in the *Government Gazette*. An "acre-foot" of water means such a quantity as would cover one acre with water 12 inches deep.

The conditions for the disposal of irrigation blocks are contained in the Crown Lands Consolidation Act of 1913 and its amending Acts. Any person over the age of 16 years if male, or 18 years if female (other than a married woman not living apart from her husband under decree of judicial separation), or by two or more such persons jointly, may apply for a farm or block. A married woman not judicially separated from her husband, or subject to any other statutory disqualification, may (a) acquire by way of transfer, with the consent of the Minister, out of her own moneys, a lease within an irrigation area; (b) continue to hold a lease which she held before her marriage; and (c) hold a lease which may devolve on her by will or intestacy of a deceased person. The tenure is perpetual leasehold.

The improvement conditions attached to the farm holdings include fencing, planting of trees for wind-breaks, construction of dwellings, and the destruction of noxious plants.

Subject to such conditions as to security and terms of repayment as the Commission may require, settlers may obtain an advance, or have suspended the payment of amounts owing. Such advances are limited to the total amount of funds made available by Parliament for this purpose. The Government Savings Bank Commissioners also have statutory powers to make loans upon mortgage of irrigation farm leases.

Large areas of land have been reserved for discharged soldiers; and camps have been established for the accommodation of selected applicants, who are granted farms after three months' satisfactory service. While in camp the men are employed upon developmental work in connection with their blocks, and are paid wages at award rates.

Upon taking up residence on their farms these settlers may obtain advances up to £625 for the development of their blocks, and subsequently such additional amounts as may be necessary to bring their land to the stage of productiveness. Payments for rent, &c., and repayments of advances will be suspended for five years in the case of fruit farms, and for two years in the case of dairy farms. The total indebtedness, including interest, will then be payable by instalments extending over a period of twenty years.

Towns and villages have been established at the centres of the Yanco and Mirrool irrigation areas, and the Commission is empowered to construct streets and to provide water-supply, sanitary, and other services.

Factories for butter, cheese, bacon, and for fruit and vegetable canning have been established on the areas to treat the produce of the settlers, also abattoirs to supply meat for local consumption, and an electric power station from which light and power are supplied to the various factories and to residents.

The State nurseries at Lecton and Griffith supply fruit and other trees to the settlers, and an experiment farm is maintained at Yanco under the control of the Department of Agriculture: also a viticultural nursery at Griffith (in the Mirrool irrigation area) for the propagation of vines on phylloxera-resistant stocks.

During the year 1918-19 a total area of 30,246 acres was irrigated and 18,845 acres were under crop. Details of production will be found in a statement on page 605.

Hay Irrigation Area.

The irrigation area at Hay, on the Murrumbidgee River, consists of about 4,160 acres; prior to 1913 it was controlled by a trust appointed in 1897. On 31st December, 1919, the area held and used for irrigation purposes was 1,014 acres in 105 blocks, ranging from 3 acres to 34 acres in size; generally the term of lease is thirty-years, and the annual rental from 5s. to 10s. per acre. In addition, 2,013 acres of non-irrigated land had been taken up in 43 blocks, as permissive occupancies. The water-rate is fixed from time to time, during 1918-19 it was 25s. per acre per annum. The pumping machinery is similar to that at Curlwaa, the capacity of the pumps being 4,000 gallons per minute. Dairying and pig-raising are the principal industries, the cultivation of fruit being very limited.

Curlwaa Irrigation Area.

The Curlwaa irrigation area, situated at Wentworth, consists of 10,600 acres, of which 1,405 acres have been subdivided in 97 irrigable blocks. On 31st December, 1919, 94 blocks, containing 1,402 acres, had been taken up in areas varying from $1\frac{1}{2}$ acres to 37 acres. There are also 94 non-irrigated blocks, ranging in size from $\frac{3}{4}$ of an acre to 336 acres, and containing 7,155 acres; and at the end of 1919, 91 blocks, representing an area of 7,103 acres, were in occupation. An area of 1,290 acres has been reserved as a common. During the year 1918-19 an area of 1,067 acres was under cultivation, the area under fruit being 652 acres, of which 470 acres were bearing. Oranges, peaches, apricots, nectarines, pears, grapes, sultanas, and currants are grown, and it has been proved that the Curlwaa soil is eminently suited to fruit culture, some of the finest oranges grown in New South Wales being the product of this locality.

The pumping machinery consists of a suction-gas plant, supplying two engines of about 55-brake horse-power each, working two centrifugal pumps, with an average combined capacity of about 4,600 gallons per minute. The main channels measure about 9 miles and 10 chains in length.

The land may be leased for periods not exceeding thirty years, the annual rent at the present time varying from 1s. to 24s. per acre. The rate for water is fixed from time to time by the Commission, and is at the present 20s. per acre per annum, except in a few special cases. Each lessee is entitled to receive a quantity of water equivalent to a depth of 30 inches per annum, **limited** to 4 inches in any one month.

PROGRESS OF IRRIGATION SETTLEMENTS.

Comparative statistics of the irrigation settlements in New South Wales are shown in the following statement; the particulars for 1910-11 relate to the Hay and Curlwaa settlements only, as farming on the Murrumbidgee area was not in operation until the season 1912-13:—

	1910-11.	1915-16.	1918-19.			
			Murrumbidgee.	Hay.	Curlwaa.	Total.
Cultivated Holdings No.	86	771	715	29	58	802
Area irrigated Ac.	1,127	33,434	30,246	1,014	1,402	32,662
Area under crop „	862	22,488	13,845	126	1,067	20,038
Grain „	2	4,287	3,177	...	...	3,177
Hay and Green food „	399	13,631	8,396	80	413	8,889
Grape vines—Bearing „	186	353	498	5	198	701
Not yet bearing „	74	486	683	...	56	739
Orchards—Bearing „	58	440	1,998	35	272	2,305
Not yet bearing „	139	2,896	3,842	2	126	3,970
Livestock—Horses No.	239	3,300	4,072	198	172	4,442
Cattle—Dairy „	484	2,461	3,735	440	34	4,209
Other „	530	1,488	2,822	478	41	3,341
Sheep „	703	32,440	43,664	1,977	521	46,162
Swine „	134	2,799	4,852	294	76	5,222
Production—Wine gal.	...	650	39,315	...	...	39,315
Sultanas... .. cwt.	} 1,009	2,778	153	20	1,299	1,472
Raisins „		1,499	179	...	415	594
Currants „		1,848	298	...	1,290	1,588
Oranges.—						
Seville bush	} 273	4,988	40	550	250	840
Washington navel „			12,069	24	6,312	18,405
Valencia... .. „			3,820	...	454	4,274
All other „			785	...	55	840
Peaches.—						
Early „	} 2,467	25,861	9,985	1,972	16,235	28,192
Canning „			65,217	...	...	65,217
Nectarines „			1,915	...	429	2,344
Apricots... .. „	2,905	10,690	20,550	929	5,976	27,455
Milk gal.	171,619	504,181	1,050,843	200,933	3,421	1,255,197
Butter lb.	5,100	12,923	18,054	260	...	18,314
Bacon and Ham „	820	8,865	11,701	420	...	12,121

The area devoted to fruit growing has increased considerably since 1915-16, but the orchards planted on three-fourths of the area have not yet reached the stage of production. Oranges, peaches, nectarines, and apricots are the principal kinds of fruit produced, but the yield is small in comparison with that which may be expected in a few years as the young trees become increasingly productive.

The following statement shows the number of fruit trees of the principal varieties, distinguishing the productive from those not yet bearing :—

Fruit Trees.	1910-11.		1915-16.		1918-19.	
	Pro-ductive.	Not yet Bearing.	Pro-ductive.	Not yet Bearing.	Pro-ductive.	Not yet Bearing.
Orange—						
Seville	} 202	3,606	6,509	67,020	955	1,666
Washington navel					30,246	79,995
Valencia					9,163	31,433
All Other					2,277	3,225
Peach—						
Early	} 1,752	4,503	16,812	101,113	23,250	20,512
Canning					88,257	69,011
Nectarine					2,401	1,672
Apricot	2,033	2,969	5,927	42,066	36,704	31,397
Prune				10,290	3,922	40,989
Plum	98	282	682	5,897	3,999	12,246
Pear—						
Williams	} 165	1,096	2,278	14,336	5,779	16,998
Other					1,046	5,154
Apple	400	718	1,256	3,065	1,906	6,916
Fig	201	38	303	3,395	1,506	5,358
Almond		140	582	5,446	5,087	8,074

WATER RIGHTS.

The Water Act, 1912, consolidates the Acts relating to water rights, water and drainage, drainage promotion, and artesian wells. Part II of the Act vests in the Crown the right to the use, flow, and control of the water in all rivers and lakes which flow through or past or are situate within the land of two or more occupiers. Private rights were abolished, and a system of licenses was established for the protection of private works of water conservation, irrigation, and drainage, and the prevention of inundation of land. During the year ended 30th June, 1919, 170 applications were received for new licenses, and 137 for the renewal of existing licenses; at the date mentioned, 1,255 licenses were in force.

Water Trusts and Bore Trusts.

Part III of the Water Act, 1912, provides for the supply of water for irrigation, stock, or domestic purposes, and for drainage, the liabilities on which are repaid to the Crown with interest spread over a period of years; the works are administered by trustees appointed from among the beneficiaries under the Act, except in the case of trusts in the Western Division, when the Western Land Board is appointed as trustee.

For the supply of water, trusts have been constituted in connection with (a) seventy-three artesian wells; (b) eight schemes for the improvement of natural off-takes of effluent channels, for the purpose of diverting supplies from the main rivers; (c) in three instances for the construction of weirs across stream channels; and (d) two pumping schemes—one from a natural watercourse, and one from a well.

The total area included within these trusts amounts to 6,602,062 acres.

Artesian Bores.

That portion of the great Australian artesian basin which extends into New South Wales covers approximately 70,000 square miles, and is situated in the north-western portion of the State.

The first artesian bore was sunk in 1879 on the Kallara pastoral holding, between Bourke and Wilcannia, and the first Government bore was completed in 1884 at Goonery on the Bourke-Wanaaring road.

The following statement shows the extent of the work which has been successfully effected by the Government, and by private owners, up to the 30th June, 1919:—

Bores.	Flowing.	Pumping.	Total.	Total Depth.
				feet.
For Public Watering-places, Artesian Wells, etc.	120	35	155	321,229
For Country Towns Water Supply	2	1	3	4,354
For Improvement Leases	37	4	41	65,027
Total, Government Bores	159	40	199	390,610
Private Bores... ..	218	81	299	434,737

The average depth of Government bores is 2,060 feet, and of private bores 1,470 feet, and they range from 89 to 4,338 feet.

The deepest wells in New South Wales are in the county of Stapylton, one at Boronga having a depth of 4,338 feet and an outflow at present of 941,887 gallons; another at Dolgelly has a depth of 4,086 feet, and a discharge of 548,803 gallons per day. The largest outflow at the present time is at the Wirrah bore, in the county of Benarba, which yields 1,168,710 gallons a day, and has a depth of 3,578 feet.

Of the 547 bores which have been sunk, 377 are flowing, and give an aggregate discharge of 90,078,275 gallons per day; 121 bores give a pumping supply, the balance of 49 being failures.

The flow from 73 bores is utilised for supplying water for stock on holdings served in connection with bore water trusts or artesian districts under the Water Act of 1912. The total flow from these bores amounts to 35,728,424 gallons per day, watering an area of 4,360,167 acres by means of 2,666 miles of distributing channels. The average rating by the bore trusts to repay the capital cost, with 4 per cent. interest, in twenty eight years, is 1.5d. per acre, including the cost of maintenance and administration.

In the majority of cases the remaining bores are used by pastoralists for stock-watering purposes only, but in a few instances the supply is utilised in connection with country towns.

The watering of the north-western country by means of bore water has largely increased the carrying capacity of the land; but, what is perhaps of greater importance, it has made comparatively small pastoral settlement practicable in country previously confined almost entirely to the operations of companies holding immense areas.

It has been determined that the multiplicity of bores is the chief factor governing the annual decrease in bore flows, also that the limitation of the discharge of water from a bore will prolong its existence as an efficient flow; action has been taken, therefore, to prevent any waste by the control of the bore flow, and by its adjustment to actual needs. It is anticipated that this action will materially reduce the rate of decrease in the future.

Shallow Boring.

Arrangements were made in 1912 to assist settlers by sinking shallow bores, and the scheme, which was described fully in the 1916 issue of this Year Book, has met with considerable success.

Operations were commenced with one plant only, and the number has been increased gradually until 21 are at work. A large number of applications

from settlers wishing to take advantage of the liberal conditions offered under the regulations has been received, and further applications are coming to hand, consequently the plants now in use will be probably be insufficient to cope with the demand.

Up to the 30th June, 1919, 372 bores had been undertaken, but 47 proved failures.

In addition to the work conducted under the shallow boring regulations, 19 bores have been sunk in the Pilliga Scrub and on Crown lands for the Lands Department and Forestry Commission. The fact that 42 of the bores put down in the Pilliga Scrub are giving a flowing supply is of special interest, as it indicates the possibility of tapping a small and hitherto unknown artesian basin.

Private Artesian Bores.

Much has been done in the way of artesian boring by private enterprise. So far as can be ascertained, 324 private bores have been undertaken in New South Wales, of which 25 were failures. The yield of the flowing bores is estimated at 39 million gallons per day. No data are available regarding the pumping bores.

THE MURRAY RIVER IRRIGATION SCHEME.

The River Murray Waters Act was brought into operation on the 31st January, 1917. Its principal objective is the storage of 1,000,000 acre-feet of water in a dam to be constructed on the Upper Murray, 10 miles above the town of Albury, conjointly by the Governments of New South Wales and Victoria.

On 28th November, 1919, His Excellency the Governor-General performed the ceremony of turning the first sod, thus inaugurating the work of construction. At the same time the name "Hume Reservoir" was given to the principal storage dam. By June, 1920, the preliminary surveys, plans and designs and the preparatory constructional works were well advanced.

The effect of creating the River Murray storage system will be to ensure at all times sufficient flow below Albury for diversions for irrigation, and or stock and domestic supplies, besides making good the losses in the water due to seepage, evaporation, and lockages. It has been decided to construct 24 locks and weirs on the Murray between Albury, New South Wales, and Blanchtown, South Australia, with nine more on the Murrumbidgee River. A depth of at least 5 feet of water will be maintained as far as Echuca, the present head of navigation on the Murray. The Act provides that, subject to certain conditions, New South Wales and Victoria shall share the regulated flow of the river at Albury, and shall each have the full use of all the tributaries of the parent stream within its territory below Albury, with the right to divert, store, and use the flows thereof.

It is estimated that the New South Wales regulated river-flow, after the construction of the Upper Murray storage-dam, will amount at least to 120,000 acre-feet per month at Albury during the irrigating season. An investigation to ascertain the methods by which the New South Wales proportion of the Murray waters can be most profitably applied is in progress. It is probable that considerable new areas will be irrigated for fruit growing.

At a Premiers' Conference, 1920, it was recommended for the consideration of the Governments concerned that the powers of the River Murray Commission be extended in order to permit of the whole of the works in the three States being constructed under the direct control of one authority.

SOCIAL CONDITION.

PUBLIC HEALTH.

MATTERS pertaining to public health (other than quarantine), to the maintenance of high standards in regard to food, to the supervision of sources of supply and distribution, and to the enforcement of sanitary and hygienic conditions are functions of the State Government, while immigration, trade, commerce, quarantine, and the provision of old-age and invalidity pensions are functions of the Commonwealth.

Practical measures to promote the well-being of the people, through the prevention or relief of sickness and destitution, are directed by the State towards the protection of infant life, the removal of children from unsuitable environment, the housing and care of mental defectives and of the aged and infirm, and the enactment of laws to safeguard the public from preventable disease. State establishments are maintained for the alleviation of sickness and destitution, and many institutions controlled by private organisations are assisted with Government subsidy.

DEPARTMENT OF PUBLIC HEALTH.

In New South Wales the Department of Public Health directs the general medical work of the Government, safeguards public health, and advises Local Government bodies. Acts relating to public health, hospitals, pure food, supervision of dairies and dairy cattle, noxious trades, sanitation, cattle slaughtering and diseased animals and meat, to prevent the spread of tuberculosis and other diseases, and to regulate sanitary conditions in local government areas, in factories and shops, and in premises licensed under the Liquor Act, are administered by the Department, and the various State hospitals and asylums are under its control.

The Board of Health consists of ten members, nominated by the Government, including the President, who is Director-General of Public Health and Chief Medical Officer to the Government. Several other Boards have been established in connection with the Public Health Department, such as the Tuberculosis Advisory Board, to furnish expert advice for the treatment and prevention of tuberculosis; the Hospital Advisory Board, to furnish recommendations in matters affecting hospitals; the Pre-Maternity, Baby Clinics, and Home Nursing Board, to organise measures with the object of lessening the infantile death-rate, and safeguarding the health of women and children generally.

The State institutions under immediate control of the Director-General of Public Health include the Coast Hospital, for the treatment of general and infectious cases; the Leper Lazaret; David Berry Hospital, in the Shoalhaven district; Lady Edeline Hospital for Babies; Sanatorium for Consumptives at Waterfall; two Convalescent Hospitals, "Montrose" Maternity Home, Burwood, and "Fernleigh," Rest Home at Ashfield; and five Asylums for the Infirm, which, since the inauguration of the old-age and invalidity pension system in 1901, have been utilised to a great extent for the treatment of the sick.

STATE EXPENDITURE ON HOSPITALS AND CHARITABLE RELIEF.

The State expenditure on hospitals and charities for the year ended June, 1919, amounted to £1,360,246.

The expenditure on hospitals and charities includes the cost of maintenance of State institutions and departments administering relief, and subsidies to other institutions, granted on condition that an equal amount be raised by private annual contributions, and that the Government through approved officers have the right of recommending the admission of patients. The following is a statement showing the growth of expenditure in the five years ended 30th June, 1919:—

Payments from—	1915.	1916.	1917.	1918.	1919.
	£	£	£	£	£
Consolidated Revenue	782,500	872,501	946,418	983,483	1,283,114
Public Works Account	44,780	69,334	78,830	49,683	77,132
Total	£ 827,280	941,835	1,025,248	1,033,166	1,360,246

Sums paid from the Consolidated Revenue to augment the National War Relief Funds have been excluded from the table, viz., £44,049 in 1915, £52,062 in 1916, £127,087 in 1917, £281,558 in 1918, and £508,342 in 1919.

Grouping the items of expenditure from the Consolidated Revenue Fund under various headings, a comparison of the respective items for the last two years is shown below:—

	1918.	1919.
	£	£
General Hospitals and Charitable Institutions	254,915	309,204
Mental Hospitals and Institutions	342,956	369,591
Children's Relief	190,045	196,436
Government Asylums for the Infirm	108,107	112,520
Destitute and Deserted, Sick and other	53,710	42,307
Aborigines Protection	16,706	17,073
Charitable Societies	3,474	3,763
Miscellaneous	13,570	*232,220
Total	983,483	1,283,114

The last item includes £218,892 expended in 1919 in connection with the outbreak of influenza, and to the figures are to be added the cost shown subsequently of State subventions to Friendly Societies, the maintenance of the Department of Public Health, and similar agencies for the public benefit.

CHILD HYGIENE.

The law of New South Wales relating to the protection of children, and to the condition of child-life, is contained for the most part in the following statutes:—State Children Relief Act, 1901, which consolidated the Acts of 1881 and 1896; Deserted Wives and Children Act, 1901 (consolidating Acts passed in 1851 and 1859), and Amendment, 1913; Children's Protection Act, 1902; Infant Protection Act, 1904; and Neglected Children and Juvenile Offenders Act, 1905.

Under the State Children Relief Act, the Controlling Board has power to board-out children who are inmates of an asylum or charitable institution, wholly or partly supported by grants from the public revenue, also children whose admission to such institutions has been authorised. The Board may issue licenses for the reception of these children as boarders, may apprentice them to suitable persons, or arrange for their adoption or restoration to parents or natural guardians. Children may be boarded out with their own mothers, and the period of boarding-out usually terminates at 14 years of age; but in special cases it may be extended. At the end of the boarding term the children may be apprenticed for a maximum term of five years.

The Children's Protection Act regulates the adoption of young children. The reception of a child under 3 years of age, to be maintained for payment apart from his parents or guardians, is allowed only on the written authority of a Justice of the Peace, and persons who receive two or more children under 3 years of age must apply annually for registration; the children, and the premises of persons having custody of them, are subject to inspection by the officers of the State Children Relief Board. Persons in charge of maternity homes must furnish records of all births occurring in the homes. The employment of young children in dangerous or unsuitable occupations is prohibited, and provision is made for the protection from neglect or ill-treatment of any boy under 14 years of age, or of any girl under 16 years.

The Infant Protection Act regulates the protection and maintenance of infants, and the supervision of institutions used for the reception of children up to 7 years of age. The Act provides for the payment by the father of expenses, up to a maximum amount of £20, incidental to the birth of an illegitimate infant, and for the maintenance of the child up to the age of 14 years, if a boy, and to 16 years, if a girl. The mother also may be required to contribute towards the maintenance of an illegitimate infant. Cases in respect of the provisions of the Act are heard at the Children's Courts, and disobedience of an order of the Court may be punished by imprisonment. Institutions used for the reception and care of children under 7 years of age must be licensed, and are subject to inspection by officers of the State Children Relief Board.

The Venereal Diseases Act, 1918, prescribes that no child may be boarded-out by the State Children Relief Board unless certified by a medical practitioner as being free from venereal diseases; and the Children's Courts may order the medical examination of any child reasonably believed to be suffering from such diseases.

The Deserted Wives and Children Act, which relates to the maintenance of wives and legitimate children, provides that a man who has left his wife or children without means of support may be ordered to contribute towards their maintenance, and to enter into recognisances for his obedience to the order. Any person committed to prison for failing to find security, or for non-compliance with an order under the Deserted Wives and Children Act, or under the Infant Protection Act, may be required to perform work, the earnings, after deducting his cost of living, being applied to the satisfaction of the order. In cases of wife desertion the court may place any child of the marriage under the legal custody of the wife, or other approved person, and may order the husband to contribute towards the child's maintenance; similar procedure is authorised in cases of child desertion.

The Neglected Children and Juvenile Offenders Act authorises the establishment of shelters for the temporary detention of children, and provides for industrial schools and reformatories. Special courts were established to deal with cases in respect of children over 5 years and under 16 years of age, and of offences by and against children, and with affiliation cases under the Infant Protection Act; in 1913 their jurisdiction was extended to complaints under the Deserted Wives and Children Act. Where practicable the Children's Courts must be held in proximity to a shelter, and not in the ordinary Courts; persons not directly interested may be excluded from the court-room. In the disposal of children the Courts, presided over by a Special Magistrate, may release on probation to an asylum or person willing to undertake care, may commit to an institution, or may sentence according to law, in which case the child may be detained in a reformatory for a term ranging from one to five years. No children, under the Neglected

Children and Juvenile Offenders Act, can be boarded out to their own mothers without a specific Court direction to that effect.

The Neglected Children and Juvenile Offenders Act regulates also the issue of licenses to children engaged in street-trading, this part of the Act being administered by the State Children Relief Board.

The Juvenile Smoking Suppression Act of 1903 restricts the use of tobacco by juveniles. Any person who supplies a child under 16 years of age with tobacco, cigars, or cigarettes is liable to a fine of £5.

Under the provisions of the Liquor Act, children must not be supplied with intoxicating liquor, nor be allowed in the bar of licensed premises, nor sent to licensed premises to obtain liquor.

The laws relating to factories and shops, and to apprenticeship, &c., regulate the conditions of child labour. Particulars are shown in the chapters of this volume relating to the Manufacturing Industry and to Employment.

The Testators' Family Maintenance and Guardianship of Infants Act, 1916, assures to the widow or widower and children of a testator an adequate maintenance from the estate, and amends the law regarding the guardianship of infants. An important provision provides that after the death of the father of an infant the mother shall be guardian notwithstanding any appointment made by the father.

The Public Instruction Act was amended in 1916 to cause regular attendance at a school of all children between the ages of 7 and 14 years, and to render the laws relating to truancy more effective.

THE STATE CHILDREN RELIEF BOARD.

The State Children Relief Board is charged with the administration of the State Children Relief Act. The Department administers also the Children's Protection Act, and supervises institutions licensed under the Infant Protection Act, and children placed under its jurisdiction by the Children's Courts as boarded-out wards, children on probation, or inmates of institutions. The Board's officers undertake the licensing of children engaged in street-trading, and the supervision of school attendance in country districts.

The total number of children under its supervision in terms of the various Acts at 5th April, 1920, was 19,915, as compared with 17,154 in the previous year:—

	1915.	1916.	1917.	1918.	1919.	1920.
Boarded-out apart from their mothers.	4,880	5,081	4,653	4,656	4,581	4,979
Boarded-out with their mothers ...	6,612	7,310	7,323	7,764	8,257	10,797
Registered under Children's Protection Act.	925	693	590	499	431	355
In institutions licensed under Infant Protection Act.	535	500	382	395	429	465
Engaged in street-trading ...	680	695	663	782	902	1,216
Employed in theatres ...	265	180	121	240	276	320
Released on probation ...	1,184	1,566	1,903	1,882	2,278	1,733
Total ..	15,081	16,025	15,635	16,218	17,154	19,915

The supervision is undertaken by salaried inspectors, whose efforts are supplemented by honorary officers. Women inspectors visit and inspect infants placed out apart from their mothers; and all such infants in the metropolitan area must be submitted to medical examination every fortnight during the first twelve months of life.

As a result of his investigation into the working of the Department, a Royal Commissioner recently made recommendations that the present

system of administration be changed, and that the Department be administered by a permanent head; that special provisions be made for the separation, both before and after appearance at the Court, of juvenile offenders, mental deficient, and children suffering from contagious diseases, and generally that the administration should be more sympathetic and the allowances for destitute mothers more liberal.

Expenditure of State Children Relief Department.

The gross amount expended by the Government during the year ended April, 1920, on account of the services of the State Children Relief Department, was £257,366; of this amount, £85,554 represented the cost of maintenance of children boarded-out apart from their parents, while allowances to widows and deserted wives towards the support of their own children amounted to £133,390. Contributions by parents and relatives and repayments of maintenance allowance amounted to £6,674. The Department realises the need of remedial legislation to ensure the recovery of contributions for maintenance from any near relative of a destitute person.

The following statement shows the expenditure of the State Children Relief Department during the five years ended April, 1920:—

Year ended April.	Boarding-out.	Widows, &c.	Cottage Homes.	Children's Protection and Neglected Children Acts and Supervision of School Attendance.	Total Expenditure.	Contributions by Parents and other Revenue.	Net Expenditure by Government.
	£	£	£	£	£	£	£
1916	57,996	76,989	11,599	10,047	156,631	6,357	150,274
1917	64,378	79,405	17,892	12,828	174,503	5,880	168,623
1918	63,534	89,364	14,428	16,030	183,356	6,580	176,776
1919	73,680	108,228	12,729	16,870	211,507	7,670	203,837
1920	85,554	133,390	20,628	17,794	257,366	6,674	250,692

THE PRESERVATION OF INFANT LIFE.

Reference to the chapter of this volume relating to vital statistics will show that much of the infantile mortality is due to preventable causes. With the object of reducing this wastage, preventive measures were commenced by the Sydney Municipal Council in 1904, and trained female inspectors were appointed to visit mothers and to instruct them. This work was extended subsequently to the more populous suburbs.

A Baby Clinic Committee under the auspices of the Government has established organisations in the Metropolis and in large country centres, for supplying advice and instruction in the care and nurture of infants.

At the end of 1919, seventeen clinics were open in the most thickly-populated suburbs of Sydney, in Newcastle, and in Broken Hill.

An honorary medical officer and two nurses are attached to each clinic; the nurses instruct the mothers, and make arrangements for medical treatment when necessary. Owing to the influenza epidemic, no new clinics were established during 1919, and the total attendance at clinics was 2,206 less than in the previous year. Particulars relating to the work of the clinics during 1919 are shown below:—

Total attendance at Clinics ...	92,539	New-born babies visited ...	7,872
Average monthly attendance ...	7,711	Total number of visits paid by the nurses ...	24,838
Babies weighed ...	56,160		

Notification of Births.

The Notification of Births Act, which has been proclaimed operative in Sydney and Newcastle and their suburbs, provides that a written notification of every birth must be delivered or posted within thirty-six hours after birth to the Under Secretary of the Department of Public Health, or to any other authorised person. The notification under the Act is in addition to the notice required by any Act relating to the registration of births.

Maternity Allowances.

The payment of maternity allowances to mothers of children born in Australia is made under the Maternity Allowance Act, passed by the Commonwealth Parliament in 1912. A sum of £5 is payable in respect of each birth, one allowance only being payable in cases of plural births.

The following statement shows the number of maternity allowances passed for payment in New South Wales during the years ended 31st December, 1913-19:—

Year.	Maternity Allowances.	Year.	Maternity Allowances.
1913	51,564	1917	52,600
1914	53,690	1918	50,320
1915	52,028	1919	48,660
1916	51,992		

Infants' Homes.

Homes licensed under the Infant Protection Act are classified in two groups—those for the reception of five or less children, being generally private homes, and those for six children or more, mainly institutions of a charitable nature for the care of infants.

The number of licensed homes during the years 1915-19 is shown below:—

Year.	Private Dwellings Registered.	Institutions.	
		Number.	Inmates under 7 years of Age.
1915	81	20	389
1916	44	20	382
1917	166	21	400
1918	84	21	429
1919	71	23	465

With the exception of the Infants' Home, Ashfield, subsidised by the Government, the institutions are supported entirely by voluntary contributions.

The Sydney Benevolent Asylum, for the reception of children, operates under a special Act, and is exempted from the provisions of the Infant Protection Act.

The twenty-three institutions licensed during 1919 provided accommodation for 646 children, but the provisions of the Act apply only to those under age 7; the number in each age group is shown below:—

Age group.	Number.	Age group.	Number.
Under 1 year	14	5-6 years	133
1-2 years	24	6-7 years	66
2-3 years	47		
3-4 years	82	Total	465
4-5 years	97		

Three Homes for Mothers and Infants are maintained in the metropolitan area under the direction of the State Children Relief Department. They were established on the principle that the accommodation of a small number of inmates in a cottage home is more efficacious for the preservation of infant-life than the aggregation in large institutions. During the year ended 5th April, 1920, 281 woman and 424 infants were admitted, and 210 women and 348 infants were discharged.

The Lady Edeline Hospital for Sick Babies, under the direction of the Public Health Department, provides accommodation for children up to 2 years of age suffering from gastro-enteritis and other diseases peculiar to infancy. The children under treatment during 1918 numbered 209; there were 48 deaths.

Registrations under Children's Protection Act.

The number of children registered under the Children's Protection Act during 1919 was 762, and at 31st December there were 355 under supervision; 320 theatre licenses for children were issued, as compared with 276 during the previous year. Theatre licenses may be issued to children over 10 years of age in the metropolitan area, but those under 14 years are not permitted to travel with touring companies. Strict supervision is necessary to protect the interests of children engaged in this class of work.

The transactions under the Children's Protection Act during the years 1915-19 may be seen in the following statement:—

Particulars.	1915.	1916.	1917.	1918.	1919.
Registrations from Lying-in Homes ...	8,064	8,250	10,039	11,165	11,335
Foster Homes registered	126	113	126	110	40
Children registered	1,268	1,094	1,112	927	762
„ died	52	33	34	8	29
„ discharged from supervision ...	523	471	579	488	378
„ under supervision at 31st Dec....	693	590	499	431	355
Theatre Licenses for Children	180	121	240	276	320

DEPENDENT, NEGLECTED, AND DELINQUENT CHILDREN.

Since 1881, 29,668 children have been placed under the control of the State Children Relief Board to be boarded-out apart from their parents. Of this total 24,689 children had been removed from the control of the Board, so that there were 4,979 remaining under its charge on 5th April, 1920, of whom 2,869 were boys and 2,110 were girls. In addition the Board was paying allowances towards the support of 10,797 children living with their mothers, who are widows or deserted wives; thus the total number of children under the supervision of the Board, in terms of the State Children Relief Act, was 15,776.

Children maintained apart from parents.

The State wards are boarded out to persons deemed to be eligible after strict inquiry by the Board, the maximum number of children under the care of one guardian being three, except in cases of families comprising a greater number, brothers and sisters being placed usually in the same home. Strict supervision is exercised by the officers of the Board to prevent ill-treatment or neglect, and visiting ladies voluntarily assist in the various districts,

keeping a constant watch upon the children, and the conditions under which they live. The distribution of the children provided for apart from their parents at 5th April, 1920, was as follows:—

Classification.	Boys.	Girls.	Total.
Boarders	1,695	1,231	2,926
Without subsidy	107	149	256
Apprentices	498	382	880
Adopted	75	146	221
In Hospitals	38	27	65
Cottage Homes	325	96	421
Depôt	13	45	58
Absconded	116	27	143
Unofficial	2	7	9
Total	2,869	2,110	4,979

The number of children who were wards of the State Children Relief Board is shown in the following table, at five-year intervals since 1881:—

Year ending April.	Boys.	Girls.	Total.	Year ending April.	Boys.	Girls.	Total.
1881	24	35	59	1911	2,551	1,947	4,498
1886	779	587	1,366	1916	3,029	2,052	5,081
1891	1,417	952	2,369	1917	2,733	1,920	4,653
1896	1,954	1,502	3,456	1918	2,703	1,953	4,656
1901	2,205	1,705	3,910	1919	2,622	1,959	4,581
1906	2,114	1,776	3,890	1920	2,869	2,110	4,979

The following table shows, for a period of five years, the ages of children when received by the Board for boarding out apart from their mothers:—

Age.	Year ending April—				
	1916.	1917.	1918.	1919.	1920.
Under 1 year	116	139	148	169	216
1 year	118	43	57	86	115
2 years	62	43	50	74	74
3 „	60	30	49	54	60
4 „	65	51	70	80	80
5 „	71	43	66	67	76
6 „	62	44	51	63	96
7 „	74	45	76	70	91
8 „	73	56	77	83	77
9 „	99	63	81	94	94
10 „	130	79	102	97	108
11 „	129	86	82	98	94
12 „ and over	296	222	289	293	289
Unknown	104	37	20	18	23
Total	1,459	981	1,218	1,346	1,493

The number of children received during 1919 showed an increase of over that of the previous year.

Of the 1,493 children received by the Board during 1919-20, 415 came from the Children's Courts, 23 were transferred from the Sydney Benevolent Asylum, and 1,055 were boarded-out direct from the State Children's Depôt.

In April, 1920, 3,810 widows and deserted wives were receiving allowances

towards the support of 10,797 of their own children living with them, and under 14 years of age. The new applications during 1919 numbered 2,053; allowances were granted in 1,684 cases. The mothers receiving allowances in April, 1920, were 2,245 widows, 885 deserted wives, and 281 wives deprived of their husbands' support through insanity; imprisonment 140; detention in hospital, 333, or in asylum for infirm, 86; and allowances were granted by Ministerial approval in 40 cases, where the husband was an invalid at home. There is no law in operation in New South Wales to compel relatives, other than parents, to contribute towards cost of maintenance.

The rate of weekly payment for children boarded out, apart from their parents, is 10s. per week, irrespective of age.

Cottage Homes for Children.

Cottage homes have been established by the State Children Relief Board for State children requiring special treatment. There are eleven homes at Mittagong, and four in the Pennant Hills district, all situated amid rural surroundings. At Mittagong six of the homes comprise the Farm Home for boys, three are for the use of invalids and delicate State children, and two for the care and instruction of feeble-minded boys; and at Parramatta the cottages are reserved for delicate children, one being for feeble-minded girls.

The Farm Home at Mittagong provides suitable industrial occupation and training for boys committed from the Children's Court. The boys are taught regular and industrious habits, and the products of the farm are available for the children in the Cottage Homes. There were 325 boys under supervision in the Farm Home at 5th April, 1920.

The admissions to the Cottage Homes during the year ended April, 1920, were 567 and the discharges 524. On 5th April, 1920, 421 children remained in the various homes, 325 boys and 96 girls.

There is also a home at Raymond Terrace for feeble-minded boys; 14 boys were admitted during the year, and 13 discharged, 35 being under supervision at 5th April, 1920.

Permanent Adoption of Children.

The State Children Relief Act provides that orphan children, or those who have been surrendered for adoption, may be adopted permanently and the permanent adoption of 221 State wards—75 boys and 146 girls—has been arranged by the State Children Relief Board; while 107 boys and 149 girls are boarded without subsidy. The law, however, does not forbid private arrangement of adoptions, and many are arranged without the cognisance of the Board.

Apprenticeship of State Children.

The following statement shows the number of apprentices placed by the Board during the five years ended 5th April, 1920:—

	1916.	1917.	1918.	1919.	1920.
Boys ...	155	123	154	165	47
Girls ...	90	84	96	129	42
Total ...	245	207	250	294	89

The number of children apprenticed during 1919 was 205 less than in the previous year, due to the fact that a number have been placed at Hillside Home for Girls for training and at Trade Schools for Boys at Mittagong, where instruction in bootmaking, tailoring, carpentering, etc., is given, instead of being placed with employers as formerly.

At the end of April, 1920, there were 880 apprentices (498 boys and 382 girls) under indentures. The terms of indenture prescribe a wage payment and pocket-money on a specified scale, the wages being banked half-yearly to the credit of the apprentice; one-third of the accumulated amount is paid over on completion of the apprenticeship, the balance remaining at interest till age 21 is attained, unless exceptional circumstances arise, when the Board may allow the money to be paid earlier.

The majority of the girls are apprenticed in domestic service, and the boys to farmers, orchardists, and artisans in country districts.

From 1887 to April, 1920, the total collections of the Apprentices Fund were £105,957, of which £87,143 had been paid over on completion of the indentures, and £18,814 remained to the credit of the fund, the collections for the year having been £5,462.

Reformatories and Industrial Schools.

The number of children sent to reformatories has diminished considerably since the development of the probationary system; such institutions are needed, however, for a number of delinquents who show positively criminal tendencies. In addition to the Farm Home at Mittagong, where truants and minor delinquents are detained for short periods, there are two State institutions, viz., the Farm Home for Boys at Gosford, and the Girls' Industrial School at Parramatta, to which a training home is attached.

The Gosford Home is used for the reception and treatment of the older juvenile offenders. The labour of the boys was utilised largely in clearing the site and in constructing the necessary buildings, &c. The plan of the institution allows the inmates to be classified and segregated; it is therefore suitable for the reception of youths from 16 to 20 years of age, who, under existing legislation, are received in prisons.

During the year 1919, 122 boys were admitted, and 102 discharged; of the latter 5 were apprenticed, 77 were released on probation, and 5 were transferred to the Mittagong Farm Home, 5 to the Metropolitan Shelter, and 1 to Mental Hospital; 1 died and 8, whose time had expired, were discharged.

At the Girls' Industrial School a training home was established in 1912, to enable a more effective classification of the inmates. On 31st December, 1919 there were 130 girls in the institution—101 in the Industrial School, and 29 in the Training Home; 63 girls were admitted during the year, and 77 were discharged.

There are a number of institutions conducted by religious bodies and other organisations, in which destitute children are placed by their natural guardians in preference to boarding-out. These institutions receive a small number of children from the Children's Courts, and at the end of the year 1918, supported 2,415 children, as is shown in the following statement:—

Institutions.	Boys.	Girls.	Total.
General Public	181	152	333
Church of England	40	177	217
Roman Catholic	574	832	1,406
Methodist	17	31	48
Presbyterian	125	79	204
Salvation Army	127	80	207
Total	1,064	1,351	2,415

Children's Courts.

The majority of cases in respect of neglected children and juvenile offenders are conducted at the Metropolitan Children's Court, the transactions in the Country Children's Courts being comparatively few. Two shelters have been established in Sydney in connection with these Courts; they are used for the detention of children apprehended by the police, or awaiting decisions of the Courts, or due for transfer to institutions to which they have been committed; they serve also for the detention of those sentenced to imprisonment in default of payment of fine, or on remand for discipline, medical examination, or other inquiry.

As the number of girls passing through the shelter is small, the work is conducted at the Central Dépôt for State Children, where also boys under 7 years of age are received. The shelter for boys over 7 years is attached to the Metropolitan Children's Court.

A medical officer from the Department of Education examines juvenile offenders, prescribes treatment, and advises the magistrate where delinquency is the outcome of physical or mental disability. During the year ended 5th April, 1920, 129 boys were examined at the shelter, 45 were found to be suffering with physical defects, and recommended for hospital treatment; tested by the Binet-Simon method, the mental capacity of 23 boys was below normal.

During the year ended 5th April, 1920, the number of children brought before the Metropolitan Children's Court was 2,517, of whom 2,271 were boys and 246 were girls; 283 were uncontrollable children; 195 were neglected or under improper guardianship; 29 were charged with breaking terms of probation.

It is the policy of the Court in regard to minor offences to have proved cases formally withdrawn, usually on payment of costs, in order to avoid the recording of a conviction; in 1919-20, 581 cases were withdrawn, 32 were dismissed, and the convictions numbered 1,936.

The disposal of these children is shown in the following statement:—

Disposal.	Boys.	Girls.	Total.
Released on Probation to Parents	1,054	68	1,122
Do do do Other persons	105	48	153
Committed to care of State Children's Relief Board	7	5	12
Do do Ormond House, Paddington	32	39	71
Do do Farm Home, Mittagong	125	...	125
Do do Farm Home, Gosford	51	...	51
Do do Girls' Training Home, Parramatta ... ..	...	23	23
Do do do Industrial School, Parramatta ... ..	...	5	5
Do do Truant School*	53	...	53
Fined	491	58	549
Withdrawn	32	...	32
Dismissed or Discharged	321	...	321
Total	2,271	246	2,517

Further particulars regarding offenders charged at the Children's Courts are given in the chapter of this volume relating to Law Courts.

Release on Probation.

The probationary system by which truants and other juvenile offenders are released under supervision has proved a more effective measure for the reform of juvenile delinquents than the former method of committing them to institutions.

The number of children released under probation from the Children's Courts during the year ended 5th April, 1920, was 1,587, viz., 1,458 boys and 129 girls; 111 had been brought before the Court as neglected, 227 as uncontrollable, 801 had been convicted for stealing, and 448 for other offences. The metropolitan and suburban courts released 1,303 children, and the country courts 284.

The terms of probation were:—One year and under, 1,466; one to two years, 59; over two years, 62. Cases in which the terms of probation exceeds one year usually relate to children committed to the care of relatives or to private establishments, the length of term implying legal authority to retain custody of the children apart from their parents.

During the year ended April, 1920, 196 children were released on probation by the State Children Relief Board.

Street-trading by Children.

Street-trading is defined by law as hawking newspapers, matches, flowers, or other articles, singing, or performing for profit, or any like occupation carried on in a public place. Girls are not allowed to engage in street-trading. Licenses are issued by the State Children Relief Department to boys under 16 years; the trading hours prescribed for boys between ages 12 and 14 are from 7 a.m. to 7 p.m., and for boys over 14 years of age, from 6 a.m. to 10 p.m. The minimum age at which a license is granted is 12 years, and in case of certain occupations, 14 years. Licenses are renewable half-yearly, and licensees are required to wear a metal arm-badge whilst trading.

Precautions are taken by supervisors to ensure the regular school attendance of licensees under 14 years of age.

During the year ended 31st March, 1920, 1,216 boys were licensed, their ages and the purposes for which licenses were granted were as follows:—

Street-trading.	12 years and under 14.	14 and under 16.	Total.
Hawking newspapers	812	329	1,141
„ flowers, &c.	35	20	55
„ other articles	11	9	20
Total	858	358	1,216

Particulars regarding the licenses granted and refused during the last five years are shown below:—

Period ended 31st March.	Boys Licensed.			Applications refused.	Licenses withdrawn during year.
	12 years and under 14.	14 years and under 16.	Total.		
1916	482	213	695	122	38
1917	393	270	663	122	42
1918	401	381	782	55	32
1919	524	378	902	88	18
1920	858	358	1,216	40	206

MEDICAL INSPECTION OF SCHOOL CHILDREN.

A Medical Branch of the Department of Education has been created, with a staff of medical officers and nurses. The work of the medical branch includes the medical inspection of school children, the inspection of school buildings, the delivery of lectures on health and allied subjects to teachers, senior students, and parents, and the investigation of outbreaks of infectious disease. Dental inspections are conducted in conjunction with the medical.

A medical examination is made every three years of all children present at each school, except in the metropolis, and, as the term of compulsory attendance is seven years, the children will be examined at least twice during their school life. The last examination was in 1917, and the 1920 examination is now in progress.

Recent developments of the school medical system have been in the direction of providing facilities for treatment of defective children. A travelling hospital, a travelling ophthalmic clinic, a metropolitan dental clinic, and 6 travelling dental clinics have been established.

Where there are no resident doctors or dentists the travelling hospital visits parts of the State with a staff of one medical officer, a nurse, and a dentist; the doctor gives general treatment and performs minor operations, and treats eye defects. The travelling ophthalmic clinic treats eye defects at country schools. The number of school children treated by the hospital and clinics during 1919 was 16,374; or 4,724 less than the previous year, about one-fourth of the school year being lost owing to closure during the influenza epidemic.

PROTECTION OF THE ABORIGINES.

The protection and training of the aboriginal natives of New South Wales are controlled by a Board consisting of the Inspector-General of Police and a maximum of ten other members appointed by the Governor.

At the end of December an area of about 21,735 acres in various reserves had been set apart for aborigines. Dwellings have been erected, the residents are encouraged to work, and assistance in the form of food and clothing is supplied when necessary.

Aboriginal children are required to attend school until the age of 14 years, and a number of schools have been established for their exclusive use; the attendance in 1919 numbered 649. The Board may assume control of the children, and apprentice them, or place them in training homes.

At the census taken on 12th May, 1920, there were in New South Wales 7,228 aborigines, viz., 1,238 full-bloods and 4,532 half-castes, 1,123 quadroons and 335 octoroons. The Aborigines Protection (Amendment) Act of 1918 reduces the definition of aborigine to full-bloods and half-castes, and the number of quadroons and octoroons shown below includes those who are intermarried with a higher caste or are the progeny of the two former classes. The following statement shows the classification as recorded at that date:—

Castes.	Living on Reserves.	Not living on Reserves.	Receiving Aid.	Not Receiving Aid.
Full-bloods	590	648	706	532
Half-castes	1,870	2,662	1,585	2,947
Quadroons	272	851	234	889
Octoroons	76	259	57	278
Total	2,808	4,420	2,582	4,646

The expenditure by the Aborigines Protection Board during the eighteen months ended 30th June, 1920, amounted to £51,780, including £29,877 for general maintenance, £4,711 for the purchase of stores, £7,821 as disbursements from the Board's produce and sale store account, £8,406 for educational purposes, £775 for medical attention, and £190 for other services. An amount of £8,190 was received as revenue from sales, so that the net expenditure was £43,590.

PUBLIC HOSPITALS.

Public hospitals embrace all institutions for the care of the sick, except those owned and maintained entirely by private persons; hospitals conducted by charitable and religious organisations, some of which are not subsidised by the Government, and the Thomas Walker Convalescent Hospital, maintained by private endowment, are included. The Public Hospitals Act of 1898, and its amendment, define the procedure in the election of officers, and in matters relating to the property of the public hospitals to which the provisions of these Acts have been extended. With few exceptions the hospitals receive financial assistance from the public funds.

There were in New South Wales, at the end of 1918, 157 general hospitals for the treatment of the sick; 26 were in the metropolitan area, and 131 in country districts. The accommodation provided was 7,167 beds, including 637 in the open air, viz., in the metropolitan hospitals, 3,316, or an average of 127 per hospital; and in country districts, 3,851, or an average of 29 per hospital. The cubic capacity of metropolitan hospitals was 3,521,710 cubic feet, or an average of 1,152 cubic feet per bed; in the country hospitals the average was 1,217 cubic feet, the average for New South Wales being 1,189 cubic feet per bed. The average daily number of patients was 3,655 in all the metropolitan hospitals, and 2,129 in the country.

The following statement shows the extent to which the general hospital services have increased since 1901:—

Particulars.	1901.		1911.		1918.	
	Metro-politan.	Country.	Metro-politan.	Country.	Metro-politan.	Country.
Hospitals	15	103	21	120	26	131
Beds, including those in open air	1,453	1,938	2,113	2,976	3,316	3,815
Indoor patients	16,919	16,093	29,610	26,954	43,062	34,191
Outdoor patients	72,645	7,614	104,466	11,880	214,350	30,256
Average daily number of patients	2,045		3,302		4,784	
Indoor patients per 1,000 of mean population	24.1		34.0		40.4	
Average annual cost per occupied bed	£72 12s. 11d.		£85 18s. 9d.		£115 3s. 2d.	

The number of indoor patients is exclusive of those treated in Government asylum hospitals, and the outdoor patients are exclusive of 4,843 and 5,323 patients treated at the Dental Hospital during the years 1911 and 1918 respectively.

PRIVATE HOSPITALS.

In addition to the public hospitals, there are numerous private hospitals which, prior to 1909, were entirely free of State supervision; but since the passing of the Private Hospitals Act, 1908, a private hospital (which includes any place in which medical, surgical, or lying-in cases are received) has not been allowed to carry on business unless it is licensed by the Department of Public Health, and complies with the regulations as to structure and management. The hospitals thus licensed in 1918 numbered 538, viz., 189 in Sydney, and 349 in the country.

The following statement shows the classification and accommodation of private hospitals:—

District.	Classification.				Accommodation.			
	Medical, Surgical, and Lying-in.	Medical and Surgical.	Lying-in.	Total.	1 to 3 Beds.	4 to 10 Beds.	11-20 Beds.	Over 20 Beds.
Sydney	51	10	128	189	67	76	21	25
Country	124	9	216	349	148	166	32	3
Total	175	19	344	538	215	242	53	28

HOSPITAL FINANCE.

The following statement shows the revenue and expenditure of the public hospitals for the year 1918:—

Items.	Metropolitan.	Country.	New South Wales.
Receipts—	£	£	£
State aid	180,242	138,049	318,291
Subscriptions and donations	127,413	116,479	243,892
Contributions by patients	47,950	49,531	97,481
Miscellaneous	39,286	13,242	52,528
Total Receipts	£ 394,891	317,301	712,192
Expenditure—			
Buildings and repairs	54,532	43,398	97,930
Salaries and Wages	131,425	111,243	242,668
Provisions, Stores, &c.	156,891	134,848	291,739
Miscellaneous	31,434	22,890	54,324
Total Expenditure	£ 374,282	312,379	686,661

The expenditure in connection with the institutions controlled entirely by the Government has been included in the figures stated above.

According to the hospital accounts the total amount of State aid received by the hospitals in the metropolitan area in 1918 was £180,242, and by the country hospitals £138,049. The total for the State was £318,291, comprising special grants amounting to £62,599 to metropolitan and £31,550 to country hospitals; and subsidies, £117,643 to metropolitan and £106,499 to country institutions. These amounts do not include payments for attendance on aborigines, expenses in connection with special outbreaks of disease, which are met from the general Medical Vote, nor cost of maintenance of a large number of chronic and incurable cases in hospitals and asylums for the infirm.

The revenue and expenditure of public hospitals at intervals since 1900 are shown below:—

Year.	Revenue.					Expenditure.			
	State aid.	Subscriptions and Donations	Contributions by Patients.	Other.	Total.	Buildings and Repairs.	Salaries and Wages, Provisions, Stores, &c.	Other.	Total.
	£	£	£	£	£	£	£	£	£
1900	88,463	65,624	20,458	16,474	191,029	17,362	131,932	14,339	163,633
1905	100,976	72,430	27,635	14,824	215,865	34,541	167,815	22,808	225,164
1910	146,638	102,690	45,417	19,603	314,348	33,652	241,607	29,054	304,313
1915	265,580	133,780	73,615	25,048	498,023	82,747	389,105	36,139	507,991
1916	285,385	163,018	85,551	24,981	558,935	80,182	433,339	37,546	551,067
1917	296,861	174,805	91,336	27,933	590,935	85,997	473,148	43,496	602,641
1918	318,291	243,892	97,481	52,528	712,192	97,930	534,407	54,324	686,661

The balances of the funds of the hospitals as at the beginning and end of the year 1918 are shown in the following statement:—

Hospitals.	Current Account.		Invested Funds.	
	At 1st Jan., 1918.	At 31st Dec., 1918.	At 1st Jan., 1918.	At 31st Dec., 1918.
	£	£	£	£
Metropolis ...	(-)110,685	(-)105,374	140,969	156,167
Country ...	23,750	20,118	96,266	104,820
Total ...	(-)86,935	(-)85,256	237,135	260,987

(-) Indicates debit balance.

The average annual cost of maintenance per patient in the hospitals during 1918 was £115 3s.; the average is calculated on the average daily number of patients, and is exclusive of cost of buildings, repairs, outdoor treatment, and district nursing:—

Average Daily Number Resident.	Number of Hospitals.	Average Annual Cost per Occupied Bed.			
		Wages.	Provisions, Stores, &c.	Miscellaneous.	Total.
		£	£	£	£
Under 1	7	368·97	195·94	73·03	637·94
1 to 3	13	161·40	121·39	32·52	315·40
3 ,, 5	12	146·01	88·62	25·89	260·52
5 ,, 10	29	75·62	71·68	15·60	162·90
10 ,, 15	18	59·40	66·41	10·13	135·94
15 ,, 20	16	47·43	65·48	9·09	122·00
20 ,, 25	10	40·83	54·31	5·39	100·53
25 ,, 30	7	30·97	48·66	5·76	85·39
30 ,, 35	5	25·91	56·71	5·98	88·60
35 ,, 40	4	30·03	42·13	6·57	78·73
40 ,, 100	19	32·58	45·98	8·89	87·45
Over 100	10	52·31	57·97	11·51	121·79
Total ...	150	48·17	56·57	10·42	115·16

The following statement shows the medical and nursing staffs attached to public hospitals during 1918:—

Hospitals.	Medical Staff.		Nursing Staff.			Total.
	Honorary.	Salaried.	Qualified Nurses.	Nurses Training.	Wardsmen & Wardmaids.	
Metropolitan ...	385	90	421	728	99	1,248
Country ...	210	111	517	365	70	952
Total ...	595	201	938	1,093	169	2,200

During the year 77,253 persons were under treatment as indoor patients, 43,062 in metropolitan, and 34,191 in country hospitals, and the number remaining in hospitals at the close of the year was 4,220 (2,312 males and 1,908 females).

The following statement shows the number of indoor patients treated, and the discharges and deaths during the past five years:—

Year.	Patients under Treatment.	Discharges.	Deaths.	Patients at the end of Year.
1914	70,154	61,759	4,310	4,085
1915	73,183	64,088	4,788	4,307
1916	75,856	66,642	5,027	4,187
1917	76,660	67,890	4,627	4,143
1918	77,253	68,215	4,818	4,220

The increase in the number of patients treated has been steady, and has been more rapid than the growth of population, the proportion of the population treated in hospitals having risen gradually from 28 per 1,000 in 1906 to 40 per 1,000 in 1918.

During 1918, 249,929 persons were treated as outdoor patients of the general hospitals, viz., 219,673 at metropolitan hospitals, including 5,323 at the Dental Hospital, and 30,256 at country hospitals.

Sickness in Public Hospitals.

The principal diseases of patients under treatment in the public hospitals during 1918 are shown in the following table; patients treated at the hospitals attached to the Government asylums are not included, but are shown separately on a subsequent page. The cases under treatment during 1918 numbered 77,253—males 39,291, and females 37,962. The number who died, or were discharged numbered 73,033, leaving 4,220 under treatment at the end of the year. These figures include transfers, and represent the aggre-

gate of the number of cases treated at each hospital; cases admitted more than once during the year are counted each time admitted:—

Disease.	Total under Treatment.		No. of those discharged during the year—recovered, relieved, or unrelieved.		Died.	
	Males.	Females.	Males.	Females.	Males.	Females.
Typhoid	463	299	366	225	56	36
Smallpox	2	2	2	2	...	...
Scarlet fever	255	393	238	369	5	6
Diphtheria and Croup	1,854	2,436	1,692	2,253	80	95
Influenza	1,124	665	1,063	646	33	11
Purulent infection, Septicæmia... ..	492	217	462	200	15	11
Tuberculosis of lungs	1,156	621	564	329	240	124
Tuberculosis, other organs	329	309	241	236	42	33
Veneral diseases	789	459	731	401	16	16
Cancer	1,016	703	720	519	239	145
Rheumatism, Gout	977	635	903	565	19	14
Diseases of the eye	827	598	782	559	1	1
Heart diseases	667	366	461	267	173	80
Diseases of the Veins	568	456	538	427	...	...
Bronchitis	910	594	862	561	29	19
Pneumonia—Broncho-Pneumonia	1,924	1,147	1,532	950	345	169
Pleurisy	439	291	392	265	19	10
Diseases of the Pharynx	709	931	694	920	...	2
Diseases of the stomach	1,063	863	987	813	27	19
Diarrhœa and Enteritis	1,189	948	939	775	181	119
Appendicitis, Typhlitis	1,749	2,429	1,544	2,278	70	45
Intestinal obstruction	1,329	504	1,214	438	73	53
Nephritis, Bright's disease	512	320	305	233	178	62
Diseases, female genital organs..	...	4,184	...	3,994	...	32
Puerperal condition ... ..	...	6,600	...	6,214	...	117
Diseases of skin, &c.	1,341	862	1,253	803	16	16
Accidents	6,481	1,792	5,898	1,602	246	78
All Diseases	39,291	37,962	33,966	34,249	3,013	1,805

STATE ASYLUMS FOR THE INFIRM.

Five asylums for the infirm are maintained by the Government—four for men and one for women. These institutions were established as asylums for aged and destitute persons, but the character of the work of the institutions has changed considerably and the majority of inmates now require medical care.

The average number resident during the year 1918 was 2,895, as compared with 2,942 during the previous year. The weekly cost per inmate for each of the last three years 1916-18 is shown below:—

Head of Expenditure.	1916.	1917.	1918.
	s. d.	s. d.	s. d.
Salaries and money allowances	3 9	3 10	4 4
Provisions, extras, medical comforts, and forage	8 7	8 2	9 10
All other expenses	1 2	0 7	0 11
Gross weekly cost for maintenance	13 6	12 7	15 1
Average weekly contribution towards Revenue	2 2	2 5	2 9
Net weekly cost	11 4	10 2	12 4

In the hospitals attached to these institutions 5,119 cases of illness were treated during 1918—males, 3,940; and females, 1,179; at the end of the year, 1,160 cases remained under treatment.

CONVALESCENT HOSPITALS.

Two State Convalescent Hospitals have been established—Denistone House, at Eastwood, for men; and the Strickland Convalescent Home, for women, Carrara, Rose Bay. These institutions receive persons who are convalescing from serious illness, and thereby accommodation is made available for urgent cases at the metropolitan public hospitals. During 1918 the number of persons treated was 279 men and 563 women; 15 men and 22 women remained in the institutions at the end of the year.

At the Carrington Centennial Convalescent Hospital, Camden, patients from the Metropolitan district are accommodated for rest and change in the bracing climate of the southern highlands; the hospital is subsidised by the Government. The Thomas Walker Convalescent Hospital, Parramatta River, is privately endowed.

TREATMENT OF COMMUNICABLE DISEASES.

Measures for the treatment and prevention of infectious diseases are taken under the authority of the Public Health Act. Cases of such diseases as leprosy, bubonic plague, smallpox, scarlet fever, typhoid fever, diphtheria, infantile paralysis, acute malarial fever, cerebro-spinal meningitis, must be notified to the Board of Health; no case of typhus, yellow fever, or cholera has occurred in New South Wales, and bubonic plague is practically non-existent. In the Metropolitan and Hunter River districts, in the Katoomba Municipality, and in the Blue Mountains shire, cases of pulmonary tuberculosis must be notified.

Where necessary, special provision is made for the isolation of infectious cases. In the metropolis the majority are treated at the Quarantine Station, or at the Coast Hospital; country cases are accommodated in special wards of the local hospitals.

The cases of infectious disease notified during 1918 were as follow:—

Disease.	Sanitary District.		Other Districts.	Total.
	Metropolitan.	Hunter River.		
Typhoid Fever	328	71	411	810
Scarlet Fever... ..	759	29	520	1,308
Diphtheria	2,327	310	2,514	5,151
Infantile Paralysis	12	6	32	50
Acute Malarial Fever	10	...	1	11
Cerebro-Spinal Meningitis	47	19	54	120
Tuberculosis	1,091	51	166	1,308

There was also 1 case of leprosy from the Metropolitan district.

In comparison with the previous year there was a decrease in 1918 in the notifications of all these diseases except infantile paralysis, which showed an increase of 34 cases.

Leprosy.

The Leper Lazaret for the segregation of persons suffering from leprosy was opened for the admission of patients in 1883, though statutory provision for the compulsory notification of the disease and detention of lepers was not made until 1890. The number of cases in the lazaret on 1st January, 1918, was 24; during the year 1 was admitted, and 1 was discharged,

leaving 24—19 males and 5 females—in the lazaret at 31st December, 1918. The birthplaces of the inmates of European descent were New South Wales, 9; Victoria, 1; England, 3; Germany, 1; and Greece, 1. There were 9 coloured inmates; 2 were born in China, 5 in the Pacific Islands, 1 each in Syria and Java.

The cost of management was £3,184, or an average of £131 4s. 7d. per inmate.

Tuberculosis.

A remarkable reduction in the mortality from tuberculosis has been effected since the enactment of the Dairies Supervision Act of 1886, the Pure Food Act of 1908, and other legislation for the protection of the food supply from insanitary conditions, but the fact, as shown in the chapter dealing with Vital Statistics, that nearly 7 per cent. of the deaths in New South Wales during 1918 were caused by tuberculosis, demonstrates the necessity for further drastic measures to prevent the spread of the disease.

In July, 1912, an Advisory Board was appointed to assist the Government in matters relating to the treatment of tuberculous diseases. This Board is composed of medical practitioners representing the University, the hospitals, the Government Medical Service, the general practitioners, and the various branches of medical science, medicine, surgery, pathology, State medicine, and diseases of women and children, also a veterinary scientist.

In August, 1915, pulmonary tuberculosis was proclaimed under the provisions of the Public Health Amendment Act of 1915 as notifiable in the Metropolitan and Hunter River sanitary districts, and in October, 1916, in the Katoomba municipality and the Blue Mountains shire. The Metropolitan combined sanitary district includes Sydney and suburbs, the municipalities of Granville, Parramatta, Liverpool, Bankstown, the shires of Ku-ring-gai, Hornsby, and Warringah. The Hunter River district embraces Newcastle and the surrounding municipalities as far west as Singleton.

Persons suffering from pulmonary tuberculosis may receive treatment of a temporary character at the general hospitals, and there are special institutions for their care and treatment, such as the State Hospital at Waterfall, the Queen Victoria Homes for Consumptives at Wentworth Falls and Thirlmere, and the R. T. Hall Sanatorium at Hazelbrook, as well as various private hospitals; tuberculous cases are received also at the Sacred Heart Hospice for the Dying, Sydney. At the hospitals attached to the State asylums at Lidcombe and Newington, accommodation is reserved for a limited number of tuberculous patients; and arrangements have been made with the Government of South Australia to provide sanatorium treatment in that State for patients from Broken Hill.

The Waterfall Hospital was established in 1909, and persons suffering from pulmonary tuberculosis in early as well as advanced stages of the disease are treated there. There are 388 beds, of which 72 are in the open air; 567 males and 234 females were accorded hospital treatment during 1918. The expenditure during the year was £19,477; the average cost of treatment, excluding buildings, repairs, &c., was £59 11s. per occupied bed.

Five homes for the treatment of returned soldiers affected with the disease have been established in the State; two by the Defence and Repatriation Department, the "Lady Davidson" Home at Turramurra and "Woodville" at Randwick; two by the Red Cross Society, "Bodington" at Wentworth Falls, and "Glenferrie" at Leura, while "Shuna" at Leura, provided by Miss Eadith Walker, is also used for the purpose. The homes are under the control of the Red Cross Society.

The National Association for the Prevention and Cure of Consumption opened the first Anti-tuberculosis Dispensary in Sydney. Medical advice is given at the dispensary to persons suffering from tuberculous diseases, and a nurse is employed to visit their homes and instruct the inmates in precautionary measures to prevent the spread of tuberculosis.

The dispensary system is being extended with the co-operation and financial assistance of the Government; throat and chest dispensaries have been established in connection with metropolitan hospitals, and at Newcastle.

Malarial Fever.

Acute malarial fever was proclaimed as a notifiable disease on 17th March, 1915; this precautionary measure was taken to prevent its spread amongst the residents of the State by soldiers returning from service in the tropics. To the end of the year 105 cases had been reported; with 14 exceptions, the patients were men from the warships or members of the Expeditionary Force who had been employed in New Guinea and other malarial regions in the Pacific. In 1916, 58 cases; in 1917, 17 cases; and in 1918, 11 cases were notified.

Venereal Diseases.

The treatment of venereal diseases is regulated under the Venereal Diseases Act, 1918, which prescribes that all persons suffering from such diseases must place themselves under treatment by a qualified medical practitioner.

Clinics for the treatment of venereal diseases have been established at two of the metropolitan public hospitals, and special wards for these cases have been provided at the Newington and Liverpool State Asylum Hospitals. Prisoners suffering from venereal diseases are detained for treatment in Lock Hospitals under the Prisoners Detention Act. Particulars are given in the chapter relating to Police and Prison services.

Other Notifiable Diseases.

Infant paralysis—acute anterior poliomyelitis—was made notifiable in New South Wales from 1st January, 1912; there were 50 notifications in 1918, as compared with 16 in the previous year.

Cerebro-spinal meningitis was proclaimed a notifiable disease on 11th October, 1915, when an outbreak occurred in a military encampment and spread to some extent amongst the civil population. The notifications in 1918 numbered 120, or 77 less than in the previous year. During 1917 a number of cases of a disease somewhat resembling cerebro-spinal meningitis occurred in various country towns in the north-western and western districts. The mortality rate was high, and after special investigations by the public health authorities it was concluded that the disease was polio-encephalo-myelitis, known for the purpose of convenience as "X disease." In 1917 seventy cases were recorded, and 39 deaths; in 1918 there were 58 cases and 46 deaths, up to the month of April when the epidemic practically ceased.

CHARITABLE INSTITUTIONS AND SOCIETIES.

In addition to hospitals for the treatment of sickness or disease, the State asylums for the infirm, and the cottage homes for State children, there exist, both in the metropolis and in the country, other institutions, such as homes for women, and for the blind, deaf, and dumb; for granting casual aid to indigent persons; and for the help of discharged prisoners.

A number of charitable institutions are maintained partly by State aid and partly by private contributions, and others are wholly dependent on private aid.

During 1918 the recorded admissions to the various charitable institutions numbered 14,838, and at the end of the year there were 6,885 persons in the institutions, viz., 2,538 men, 1,465 women, and 2,882 children. The estimated value of outdoor relief afforded at institutions and by societies during 1918 was £30,716. State aid amounted to £342,597, and the total revenue and expenditure were respectively £552,244 and £554,352.

The following is a comparative statement of the revenue and expenditure of the charitable institutions and societies:—

Particulars.	1910.	1915.	1917.	1918.
Number of Institutions and Societies ...	179	199	195	198
Revenue—	£	£	£	£
State Aid... ..	189,584	275,513	289,697	342,597
Subscriptions, &c.	66,815	107,773	111,219	133,460
Other	67,806	77,937	80,314	76,187
Total	324,205	461,223	481,230	552,244
Expenditure—				
Buildings and Repairs	13,912	18,862	15,330	37,222
Maintenance, Salaries and Wages	278,590	401,273	443,284	473,965
Other	26,103	45,232	19,777	43,165
Total	318,605	465,367	478,391	554,352

In the matter of nursing, the District Nursing Association, the Bush Nursing Association, and the Sydney Day Nursing Association are active. The District Nursing Association restricts its operations to Sydney and its suburbs, and during 1918 seven nurses connected with the Association made 18,850 visits to 1,668 patients. The Association is maintained by public subscriptions.

The object of the N.S.W. Bush Nursing Association are to provide, gratuitously if needed, Trained Nurses for sick and injured persons and for midwifery cases in country towns and districts, also to give assistance in minor cases of sickness or injury. Each district provides for the support of its own nurse, the Central Council furnishing the cost of her initial equipment and travelling expenses, and providing a nurse to take the place of nurses on annual leave; it also furnishes financial assistance to District Committees requiring such. Bush nurses are also engaged in the work of "following up" the medical inspection of the Public School children, attending to cases where children have not received treatment as notified by the medical officer. In 1918 eighteen nurses were at work in various parts of the State.

GOVERNMENT RELIEF.

To the various hospitals and asylums the Government issues orders authorising the holders to secure relief from the institutions. During 1918 9,819 orders were granted, of which 5,744 were to the Government asylums, 2,594 were to the Coast Hospital, and 513 were for out-door treatment at hospitals; the balance were distributed among other institutions. The total applications numbered 9,885 in 1918 as compared with 10,772 in 1917, 66 were refused, but it frequently happens that applicants who have been refused Government orders receive recommendations to institutions not under State management.

The expenditure from Consolidated Revenue by the State and Commonwealth Governments on eleemosynary objects in New South Wales now amounts to nearly £3,000,000. Details of the expenditure for the years 1908-9 and 1918-19 are as follow:—

Head of Expenditure.	1908-9.	1918-19.
	£	£
Hospitals—State	22,239	81,960
General	77,337	144,847
Mental	185,909	322,429
Charitable Institutions... ..	56,044	183,927
State Children Relief	82,284	196,436
Government Asylums for Infirm	73,973	123,746
Relief of Destitute Sick	21,957	29,638
Burials	355	581
Blankets, &c., (Stores Department)	806	1,084
Railway claims	2,531	} 10,904
Deserted Children and Destitute Persons	3,614	
Grants to Charitable Societies	25,877	27,945
Subvention to Friendly Societies ... ..	...	32,530
Baby Clinics, Bush Nursing ... ..	...	} 11,025
Throat and Chest Dispensaries ... ..	...
Anti-Tuberculosis Board, &c.... ..	...
Industrial Schools and Reformatories	18,214	9,977
Labour Farm ... ..	...	1,000
Kindergarten Classes	1,000	1,000
	572,140	1,179,029
Old-Age Pensions	*526,835	†1,112,098
Invalid and Accident Pensions	*75,373	† 419,692
Maternity Bonuses ... ..	...	† 248,885
Total	1,174,348	2,959,704
Per head of Population	15s. 1d.	£1 10s. 8d.

* Paid by State. † Paid by Commonwealth Government to persons in New South Wales.

It will be seen that the aggregate expenditure has increased by £1,785,356, or by 152 per cent. since 1908-9, while the cost per head of population is now 15s. 7d., or 103 per cent. greater than it was 10 years ago. The cost to the State in 1918-19 was £4,682 greater than in 1908-9, notwithstanding that it had been relieved of the charges on account of Old Age and Invalidity Pensions, which in 1918-19 amounted to £1,531,790.

PUBLIC CHARITABLE COLLECTIONS.

Numerous public collections have been made for the relief of distress occasioned by war, mining disasters, floods, drought, &c. A fund thus established is usually administered by a committee formed at a public meeting of citizens summoned for the purpose of inaugurating the fund.

With the object of increasing the revenue of the hospitals and charitable agencies, public collections are made in the Metropolitan and several country districts.

National Relief Fund of New South Wales.

The National Relief Fund of New South Wales was formed in 1914 by the amalgamation of certain funds which had been established by public subscription. A Board consisting of the Colonial Secretary, the Lord Mayor of Sydney, the Public Trustee, and six other members appointed by the Governor was constituted to administer the fund; the moneys, etc., are

vested in the Public Trustee, and will be used for the relief of persons injured, or of the dependents of those killed or injured in war or public disasters.

The relief distributed during the year 1918 was valued at £1,561, while £7,500 was transferred to the Australia Day Amelioration Committee, and the administrative expenses amounted to £81; the balance at the credit of the fund on 31st December, 1918, was £26,333.

War Relief Funds.

On the outbreak of the war numerous relief funds were initiated in New South Wales; those subsidised or assisted by grants or expenditure from the Consolidated Revenue of the State are audited by the Auditor-General in terms of the Trustees Audit Act.

The total amount of contributions to the War Relief Funds from the commencement of the war to 30th June, 1920, was £5,025,605, the amount contributed to the principal funds being as follows:—

Fund.	Amount.	Fund.	Amount.
	£		£
Australia Day	1,102*	Italian Red Cross	67,577
Australia Day Amelioration Committee	415,612	Servian and Montenegrin	54,222
Red Cross (N.S.W. Division)...	1,383,810	Air Squadron	82,645
Red Cross (Australia Day) ...	18,115†	Tanned Sheepskin Clothing ...	41,516
Lord Mayor's Patriotic	341,006	Pastoralists' Union	28,490
Citizens' War Chest	552,995‡	A.I.F. Memorial	56,170
Chamber of Commerce... ..	110,659	Anzac Day	12,326
Y.M.C.A. Field Service	305,221	Edith Cavell Memorial	23,876
Jack's Day	162,441	Voluntary Workers' Associa- tion and Homes Day	66,241
Belgian Relief	690,933	Miscellaneous	174,484
French Relief	329,011		
Polish Relief	107,153	Total	£5,025,605

*Exclusive of £618,861 transferred to Red Cross Fund, and £220,000 to Amelioration Committee.

†Exclusive of £309,208 transferred to Red Cross Fund and £103,070 to Australia Day Amelioration Committee.

‡Exclusive of £38,000 transferred to other funds.

In addition to the amount shown above, goods in kind were supplied to a very large extent.

Of the total cash contributions, viz., £5,025,605, an amount of £4,721,700 had been disbursed at 30th June, 1920.

Hospital Saturday Fund.

The Hospital Saturday Fund of New South Wales, inaugurated in 1893, is registered under the Companies Act, and is managed by a Board of thirty members and eight honorary officers, all of whom are elected annually. Indoor collections at places of business, household collections by means of boxes, and an annual out-door collection are made; the money is distributed among certain hospitals and auxiliary medical charities in the metropolitan area.

During the year ended 31st May, 1919, £17,390 was collected and £16,042 was distributed; the expenses amounted to £1,053.

The United Charities Fund is administered by a general committee, composed of delegates of the Associated Charities within Sydney and suburbs, except the medical charities aided by the Hospital Saturday Fund; usually an annual collection is made throughout the metropolis.

During the year ended 1st February, 1919, the collections amounted to £4,077. The amount distributed was £3,500, the expenses being £218.

INSANITY.

Under the Lunacy Act, 1898, the Judge in Equity is constituted a court to deal with matters relating to persons of unsound mind or incapable of managing their own affairs, and the Master in Lunacy has power to manage the estates of such persons, and controls trust funds which at December, 1918, amounted to £309,544. The Act authorises the appointment of an Inspector-General of Insane, who is empowered to visit every hospital, reception-house, ward, cell, or licensed house, and to inquire generally as to the care, treatment, and health, mental and physical, of the patients. Persons deemed to be insane may be examined and detained on the order of a Justice; and in public hospitals, and in gaol establishments, wards are reserved for the reception and observation of mental patients, but special hospitals are maintained by the Government for their treatment and care.

MENTAL HOSPITALS.

For the treatment of mental patients there were during 1918 nine Government hospitals, in addition to a hospital for criminal insane at Parramatta, three licensed houses at Tempe, Ryde, and Mt. Colah, and reserved accommodation in a South Australian hospital for patients from the Barrier District of New South Wales.

Each institution admitting new cases is provided with a department specially designed and fully equipped for the treatment of curable patients.

The medical staff of the hospitals and licensed houses numbered 21, the nursing staff and attendants numbered 612 men and 499 women, and the average daily number of patients resident, excluding patients on leave, was 7,060, comprising 4,153 males and 2,877 females.

At the end of the year 1918 there were in the New South Wales hospitals 7,117 patients—4,207 males and 2,910 females; in the South Australian hospitals the patients from New South Wales numbered 22 men and 25 women; in addition there were 187 men and 277 women on leave from various institutions, making a total number of 7,628 under official cognisance—4,416 males and 3,212 females.

In the following table is stated the number of mental patients under official notice at the close of each year, with their proportion per 1,000 of the population at intervals since 1881:—

Year.	Number of Mental Patients.			Proportion per 1,000 of Population.		
	Males.	Females.	Total.	Males.	Females.	Total.
1881	1,354	726	2,080	3·16	2·06	2·66
1891	1,912	1,222	3,134	3·04	2·29	2·70
1901	2,684	1,804	4,488	3·72	2·75	3·26
1911	3,810	2,573	6,383	4·30	3·19	3·77
1912	3,866	2,640	6,506	4·13	3·13	3·66
1913	3,935	2,739	6,674	4·09	3·15	3·64
1914	4,092	2,846	6,938	4·23	3·17	3·73
1915	4,169	2,930	7,099	4·38	3·19	3·80
1916	4,264	3,020	7,284	4·62	3·23	3·92
1917	4,339	3,048	7,387	4·64	3·26	3·91
1918	4,416	3,212	7,628	4·62	3·30	3·96

From these figures it appears that generally the proportion of patients treated in the mental hospitals is increasing. To ascertain the general insanity rate it would be necessary to consider the extent to which patients are treated in private houses, and the proportion of persons whose mental condition, while not calling for certification, might be relieved by treatment if provision were made for the admission of voluntary patients.

The influx of insane persons is restricted by legislation which renders the owner, charterer, agent, or master of a vessel liable for the maintenance of any insane person landed in the State. In 1918, 17 insane patients were received from places beyond the State, 9 being discharged after a few days' treatment at the Reception House, and 8 admitted to mental hospitals.

The numbers of admissions and re-admissions to mental hospitals during the last five years are shown below:—

Year.	Admissions.			Re-admissions.		
	Males.	Females.	Total.	Males.	Females.	Total.
1914	760	462	1,222	118	81	199
1915	685	435	1,120	124	102	226
1916	747	477	1,224	109	93	202
1917	710	393	1,103	109	98	207
1918	670	493	1,163	150	145	295

Of the admissions in 1918 natives of New South Wales numbered 822, England 226, Ireland 92, Scotland 58, other British countries, 176, foreign countries 84.

The next table shows the number of patients who died or who were discharged from the mental hospitals, on account of recovery, permanent or temporary:—

Year.	Discharged.						Deaths.		
	Recovered.			Relieved.			Males.	Females.	Total.
	Males.	Females.	Total.	Males.	Females.	Total.			
1914	341	222	563	69	48	117	301	168	469
1915	338	230	568	84	44	128	310	179	489
1916	313	233	546	56	37	93	396	214	610
1917	326	258	584	54	35	89	363	171	534
1918	296	241	537	74	51	125	369	182	551

PER CENT. OF AVERAGE NUMBER RESIDENT.

1914	8·7	8·5	8·7	1·8	1·8	1·8	7·7	6·4	7·2
1915	8·5	8·7	8·6	2·1	1·7	1·9	7·8	6·8	7·4
1916	7·7	8·5	8·0	1·3	1·4	1·4	9·7	7·8	8·9
1917	7·9	9·3	8·5	1·3	1·3	1·3	8·8	6·1	7·7
1918	7·1	8·4	7·6	1·8	1·8	1·8	8·8	6·3	7·8

The records of persons admitted during 1918 show that among the exciting causes of insanity intemperance in drink is most prominent, particularly among men; among predisposing causes the most important are congenital defects, hereditary influence, and old age.

The weekly cost of maintaining mental patients in Government hospitals during the year 1918 was 18s. 4½d. per patient, of which the State paid 15s. 6d., the balance being derived from private contributions. The sub-joined table shows the average weekly cost per patient from 1914 to 1918:—

Year.	Annual Cost of maintenance of Patients.	Cost of maintenance of Patient per week.		
		To State.	Private Contributions.	Total.
	£	s. d.	s. d.	s. d.
1914	249,832	12 2½	2 8½	14 11½
1915	268,795	13 0½	2 9	15 9½
1916	306,569	14 7½	2 9½	17 5½
1917	311,757	14 9½	2 10	17 7½
1918	335,559	15 6	2 10½	18 4½

The increase in the cost of maintenance is due mainly to benefits conferred on the staff, such as increased remuneration, Workmen's Compensation Act insurance, and to the higher cost of commodities. In 1918, the cost of 57 voluntary patients is also included.

Reception houses have been established at Sydney, Newcastle, and at the local gaols in some country towns, where affected persons are placed under observation. At Darlinghurst (Sydney) and Newcastle treatment is provided for attacks of short duration, and for alcoholic cases which have developed mental symptoms. The number of patients under care during 1918 was 1,545; 988 were transferred to mental hospitals, and 537 were discharged as recovered or relieved.

Persons who become mentally deranged in gaol are placed in the observation ward at the State Penitentiary at Long Bay; 71 persons were under observation during 1918.

A small hospital was established in 1908 by the Lunacy Department on a site adjoining the Reception House at Sydney, for the treatment of patients in the earlier and curable stages of mental diseases, wherein restraint or the special conditions of a hospital are not required. Accommodation is provided for 20 male patients; and during 1918 the number of cases treated was 123; 110 were discharged, and 13 remained at the end of the year.

CARE OF THE FEEBLE-MINDED.

At present the only provision made by the State for the feeble-minded is at four cottage homes established by the State Children Relief Department, where State children who are feeble-minded are accommodated, and at the Newcastle Hospital for the Insane, which is used for children who are certified as imbeciles or idiots.

DEAF MUTISM.

The number of persons who were deaf and dumb, as ascertained at the census of 1911, was 640, equivalent to one person in every 2,573 of the population.

The rate at ages 10 to 20 is the highest; whereas, since deaf-mutism is an affliction of childhood, it is reasonable to expect that the rates below those ages would be the highest. This probably arises from the unwillingness of parents to make known this infirmity in their children.

Excluding children under 10, the rate declines more or less regularly as the age advances. At all ages over 30 the female rate is higher than the male.

BLINDNESS.

The number of persons afflicted with blindness at the census of 1911 was 1,011; this is equivalent to one person in every 1,629. The higher proportion which exists among males is probably due to the greater risk of accident to which they are exposed.

Among both sexes the rate increases from the lowest to the highest ages, and rapidly after age 60. Practically at all ages the male rate is higher than the female. The majority of young persons afflicted with blindness were probably so at birth or soon after.

The care and education of the blind and the deaf and dumb are undertaken at several institutions in New South Wales. The New South Wales Institution for the Deaf and Dumb and the Blind is maintained partly by Government subsidy and partly by public subscriptions; special educational courses are provided, the fees being remitted in cases of financial inability. Denominational institutions for the instruction of deaf mutes are conducted at Waratah and Westmead, and one for blind girls at Liverpool.

Under the Commonwealth invalid pension system provision is made for the payment of pensions to permanently blind persons above the age of 16 years.

FRIENDLY SOCIETIES.

The first Friendly Society in New South Wales was founded in 1834, when the Australian Union Benefit Society was established. This society is still existent.

All legislation affecting Friendly Societies was consolidated in the Act of 1912, but two amendments were made in 1913 and 1916.

The Act provides for the compulsory registration of societies or branches established for the purpose of providing, by subscription of the members, benefits of various kinds including sick pay, funeral donations, and medical attendance and medicine.

In order that the contributions chargeable shall be sufficient to meet obligations, the Act provides that the tables of contribution payable for benefits susceptible of calculation by way of average shall be duly verified by an actuary.

Provision is made also for safeguarding the funds of the societies. All moneys received or paid on account of any particular fund or benefit must be kept distinct from the moneys paid or received on account of any other fund or benefit, but after valuation the Registrar may authorise surplus moneys belonging to any fund or benefit to be used in any manner for the purpose of any other fund or benefit. If the benefit funds are administered by one central body for the whole society, they may be treated as one fund.

The secretary must furnish to the Registrar a yearly return giving full details relating to the finances and membership of the society.

The Registrar is empowered to appoint inspectors to examine into and report to him on the affairs of any society or branch, and the inspector may demand the production of all books and documents of the society or branch, and may examine on oath its officers, members, agents, and servants in relation to its business.

The benefits assured are fairly uniform in all societies, and consist usually of medical attendance and medicine for a member and his family, with sick pay for the member, and funeral allowances for the member and his wife. The average sickness benefit is 21s. per week during the first six months,

10s. 6d. for the next six months' illness, and 5s. per week for rest of illness, this last provision being rendered possible by the system of State Subventions, of which more detailed mention is made later. The funeral benefits usually range from £20 to £40 at death of the member, and a contingent benefit of £10 or £15 is payable on death of the wife. A separate benefit for widows of members, usually £10, may be assured in most of the societies for a stated contribution.

A valuation of the assets and liabilities of the societies is made in the office of the Registrar every five years. The last valuation was made as at 31st December, 1914.

The liabilities of all societies for Sick and Funeral benefits were £5,411,716, whilst the total assets were £5,563,960, showing a surplus of £152,244; so that the assets were equal to £1 0s. 7d. for every £1 of liabilities. The results showed uniformly strong positions in the Funeral Funds, but there was a tendency to weakness in the Sickness Funds, necessitating an adjustment of the contributions in some cases. The valuation as at 31st December, 1919, is now being made, but the final results are not available.

The societies may be divided into two classes, viz., Friendly Societies proper, and Miscellaneous Societies, whose objects bring them within the scope of Friendly Societies' legislation, but whose benefits differ somewhat from those of ordinary Friendly Societies.

At 31st December, 1919, there were 61 Societies, including 22 Miscellaneous; 18 possessed branches, and 43, including 2 with juvenile branches, were classed as Single Societies. No new Societies were registered during 1919.

The following summary shows the branches, membership, and funds as at 31st December, 1919:—

Classification.	Societies and Branches.	Members.	Funds.
Friendly Societies Proper—	No.	No.	£
Affiliated	1,882	180,502	2,159,002
Single	21	3,672	58,794
	1,903	184,174	2,217,796
Miscellaneous Societies	22	1,280	18,846
Total... ..	1,925	185,454	2,236,642

The societies classified as "Friendly Societies proper" offer such a wide range and appeal so strongly to individual sympathies that the field of operations for new societies is limited, and only one new Society has been established since 1913.

The following table shows the number of members during the ten years ended 31st December, 1919:—

Year.	Aggregate Membership.		Year.	Aggregate Membership.	
	Members.	Percentage of Population.		Members.	Percentage of Population.
1910	149,579	9.1	1915	178,705	9.6
1911	164,910	9.7	1916	178,877	9.6
1912	179,932	10.1	1917	177,602	9.4
1913	188,590	10.3	1918	180,896	9.4
1914	182,325	9.5	1919	184,174	9.2

The membership of 184,174 at 31st December, 1919, represented 9·2 per cent. of the total population of the State. The number of members entitled to benefits was 169,482, the remainder being ineligible on account of brief membership or arrears of contributions. The benefits of medical attendance and medicine accrue also to the member's family, but such persons are not included in the membership.

The membership in 1919 comprised 161,876 men, 10,265 women, and 12,033 juveniles. As compared with the previous year there were increases of 2,646 men, 340 women, and 292 juveniles, the total net increase being 3,278 members. During each of the four years prior to 1918 there were decreases in the male membership, which may be attributed directly to the war.

Information regarding receipts and expenditure of Friendly Societies, and the accumulated assets, may be found upon reference to Part Private Finance of this Year Book.

MISCELLANEOUS FRIENDLY SOCIETIES.

In addition to the Friendly Societies proper there were at the end of 1919 twenty-two miscellaneous societies registered under the Friendly Societies Act. Eighteen were medical institutes or dispensaries which have no members in the ordinary sense of the term, but are supported by subscriptions from branches of Friendly Societies within their immediate districts, at a fixed rate per head of membership. The dispensaries supply medicine to all members whose names have been placed on their lists by contributing branches, and in some cases arrange also for medical attendance.

The receipts of the dispensaries in 1919 were £38,777, and the expenditure was £37,351, so that there was an excess of receipts amounting to £1,426. These bodies have received liberal grants from the Government, and with this assistance have been able to purchase land and to erect buildings, the shares of the subscribing branches being covered by the issue of interest-bearing debentures; but in addition to making the necessary interest payments, most of the dispensaries have been enabled to make substantial reductions in the principal. The four remaining societies were Accident Societies.

The following particulars relate to the year 1919:—

Classification.	Dispensaries.	Other Miscellaneous Societies.	Total.
Societies No.	18	4	22
Membership No.	...	1,280	1,280
Receipts £	38,777	3,060	41,837
Expenditure £	37,351	3,527	40,878
Funds £	16,003	2,843	18,846

STATE SUBVENTION OF FRIENDLY SOCIETIES.

To enlarge the sphere of usefulness of the Friendly Societies the Subvention to Friendly Societies Act, 1908, now consolidated with the Friendly

Societies Acts, assured to the societies which might elect to be bound by its provisions, the following monetary benefits payable from the Consolidated Revenue of the State:—

1. Sick pay—

- (a) One half of the cost in each year in respect of continuous sickness after twelve months from the commencement of such sickness, for male members less than 65, and for females less than 60 years of age—provided that the maximum cost to the State shall not exceed 5s. per week for each case.
- (b) The whole cost of sick pay in respect of male members aged 65 years and over, and of female members aged 60 years and over—subject to the same proviso as above.

2. Amount equal to contributions payable—

- (a) On account of all male members 65 years and over, and of female members 60 years and over, for medicine and medical attendance, provided that such contributions shall not be more than those payable by members of the same society under the ages stated.
- (b) Under the rules of a society in respect of the aged members above mentioned, to assure payment of funeral allowance at their death.

With one exception all affiliated societies have become applicants under the Act.

The refunds to the societies on account of sick pay in 1919 to 3,489 members amounted to £21,361, and the payments on account of contributions to £13,722; of the latter amount £9,865 provided medical attendance and medicine to 6,813 aged members and widows, and £3,857 paid the contributions to the Funeral Fund of 7,462 aged members and widows.

The following is a summary of the claims for the eleven years during which the system has been in operation:—

Year.	Applicant Societies.	Sick Pay.				Contributions.				Total Amount of Claims.
		Continuous Sickness.		Sickness of Aged Members.		Medical.		Funeral.		
		Claimant Members.	Amount.	Claimant Members.	Amount.	Claimants.	Amount.	Claimants.	Amount.	
1909	18	285	£ 925	701	£ 2,763	2,569	£ 1,348	2,486	£ 822	£ 5,858
1910	28	457	2,442	1,188	7,072	3,608	3,402	3,481	1,871	14,787
1911	30	576	2,837	1,417	8,428	3,194	4,028	3,400	2,055	17,348
1912	29	617	3,296	1,519	9,742	3,940	4,549	4,170	2,222	19,809
1913	29	681	3,480	1,615	10,146	4,300	4,874	4,561	2,320	20,820
1914	29	776	4,030	1,662	10,770	4,717	5,955	5,066	2,536	23,291
1915	28	904	4,764	1,871	11,659	4,909	6,423	5,251	2,737	25,583
1916	29	928	5,012	1,852	12,547	5,418	7,219	5,487	2,965	27,743
1917	29	1,018	5,292	2,042	13,623	5,805	8,025	6,218	3,276	30,216
1918	29	1,105	5,564	2,165	14,238	6,318	8,835	6,986	3,553	32,190
1919	28	1,155	6,223	2,334	15,138	6,813	9,865	7,462	3,857	35,083

During the eleven years the total claims for subvention have amounted to £252,728, and the annual claim now amounts to about £34,000.

The system has been of benefit to all the societies, but more particularly to those in which the proportion of aged members is large.

THE FRIENDLY SOCIETIES' EXPERIENCE OF SICKNESS.

The returns of the Friendly Societies of New South Wales furnish valuable information relating to the sickness and mortality of the members, and a standard of purely local experience is provided as a basis of the quinquennial valuations of the societies, by their experience recorded for the nine years 1900-08. During this period the sickness of the male members aggregated 859,412 weeks, the annual rate per member being 1·30 weeks.

The following table shows the average annual weeks of sickness per member in New South Wales at every fifth year of age during the years 1900-08 in comparison with the experience of the Manchester Unity Friendly Society of England, 1893-7, the South Australian Friendly Societies, 1895-1904, and the Victorian Friendly Societies, 1903-7:—

Central Age.	New South Wales Friendly Societies, 1900-1908.	Manchester Unity, England, 1893-1897.	South Australian Friendly Societies, 1895-1904.	Victorian Friendly Societies, 1903-1907.
Years.				
18	·84	·95	·74	·91
23	·76	·90	·77	·86
28	·74	·97	·75	·85
33	·75	1·10	·79	·89
38	·84	1·33	·89	·99
43	1·02	1·65	1·04	1·20
48	1·32	2·11	1·32	1·46
53	1·85	2·98	1·80	2·10
58	2·94	4·41	2·84	3·82
63	4·63	7·15	4·44	6·56

The New South Wales experience approximates closely to that of South Australia, but is considerably below the experience of England and of Victoria.

The male rates decrease down to age 29, and then increase regularly to the end of the observed period of life. The phenomenon of high rates at the early ages is not explained on the ground of paucity of data, as the same result was exhibited in the experience of individual societies whether their membership was large or small. The sickness rates of the Friendly Societies of other States of the Commonwealth disclose a similar feature, and it must be concluded that such high rates are peculiar to this class of experience, and probably induced by the liberal benefits available.

PENSIONS.

New South Wales Government Pensions.

No general pension system, other than the old-age and invalid pensions noted subsequently, is in operation in New South Wales, but pension funds have been established in connection with sections of the Public Service, and are maintained partly by deductions from officers' salaries and partly by public revenue, viz., the Public Service Superannuation Fund, the Police Superannuation and Reward Fund, and the Government Railways Superannuation Fund.

The Public Service Superannuation Fund was established by the Civil Service Act, 1884, contributions by officers of the service being at the rate of 4 per cent. of salary. Since the Public Service Act of 1895 no new contributors have been admitted, and in 1895 the existing contributors were given the option of withdrawing from the fund. The officers who elected to discontinue their contributions are entitled under prescribed conditions to receive refunds and gratuities on retirement; officers who have continued to contribute are entitled to an annual pension equal to one-sixtieth of the average annual salary for the last three years' service, multiplied by the years of service, the pensions being payable on retirement through incapacity or at age 60, or on abolition of office. An Amending Act in 1903 provided that on the Superannuation Account becoming exhausted all amounts payable to or out of that account should be paid to or out of the Consolidated Revenue. During the year 1918-19 the expenditure was £170,443, consisting of pensions, £160,738, and refunds and contributions, £9,705; contributions by public servants amounted to £9,967; the balance, £160,476, representing the net charge to Consolidated Revenue. In addition to these amounts, a sum of £3,500 is appropriated annually in terms of the Constitution Act for the payment of pensions to certain Government officers; the pensions paid during 1918-19 amounted to £2,252, the balance unallotted being £1,248.

A pension fund for the police force was established in 1899, amending legislation being passed in 1906. Annual contributions by members of the service are at the rate of 4 per cent. of salary; other sources of revenue are penalties imposed on members of the police force, and penalties and damages awarded to the police as prosecutors, also the proceeds of the sale of unclaimed goods in possession of the police. The amount of pension payable to members who entered the police service prior to 1906 is graduated in accordance with length of service, and ranges from half the salary, less 3 per cent. on retirement after fifteen years' service, to the whole of the salary, less 3 per cent., after thirty years' service. For the members who entered the service after 1906 the pension is one-fortieth of the salary on retirement for each year of service, less 3 per cent., up to a maximum of three-fourths of the salary on retirement; the retiring age is 60 years, except in cases of incapacitation, but under prescribed conditions the services of any member of the force may be retained until he reaches the age of 65 years. During the year ended 30th June, 1919, the receipts of the Police Superannuation and Reward Fund amounted to £109,045, including deductions from salaries, £37,045, and special appropriation from Consolidated Revenue, £72,000; the disbursements, £110,264, included pensions, £107,239; gratuities, £2,735; and miscellaneous, £290.

The Railway Service Superannuation Fund was established in October, 1910; the contributions from employees of the Railway and Tramway services are at the rate of 1½ per cent. of salary, and the State provides all that is necessary beyond such contributions. The amount of pension payable is one-sixtieth of the average annual salary during term of service, multiplied by the number of years of service, the maximum pension being two-thirds of the average salary. At 30th June, 1919, there were 35,826 contributors; the number of pensions in force was 1,763, amounting in the aggregate to £126,249 per annum. The average rate of pension was £73 8s. per annum. Since the inception of the fund 2,243 pensions have been granted, and 444 pensioners have died; 34 officers under 60 have been re-employed, and 2 pensions have been written off the books. During the year 1918-19 the receipts of the fund amounted to £136,605, including a subsidy of £41,000 from the Government; the disbursements, representing pensions, gratuities, refunds, &c., amounted to £133,265.

The main provisions of the Superannuation Acts, 1916 and 1918, which came into operation on 1st July, 1919, provide pensions and other benefits for employees of the New South Wales Government and other public bodies, except those subject to the Railway Service and Police Superannuation Acts. Half the cost is borne by the employees, except where otherwise provided, and the balance by the employers. The retirement age is 60 years, but women may elect to contribute for retirement at age 55; upon the death of a contributor or pensioner his widow receives half the amount of pension for which he has contributed, and £13 per annum for each child under 16 years. Contributions of employees vary in accordance with age and salary; the rates in the following table indicate cost payable every fortnight:—

Age next Birthday.	Men.		Women.	
	First £52 to man, £26 to widow, £13 to each child under 16.	Subsequent increment £52 to man, £26 to widow.	Each £52 on retirement at age.	
			55 Years..	60 Years.
Years.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
16	0 2 4	0 2 1	0 1 9	0 1 1
20	0 3 0	0 2 8	0 2 5	0 1 5
25	0 4 1	0 3 7	0 3 9	0 2 2
30	0 5 4	0 4 9	0 5 6	0 3 2
35	0 6 11	0 6 3	0 8 1	0 4 5
40	0 9 2	0 8 6	0 12 4	0 6 5
45	0 12 10	0 12 2	1 0 10	0 9 8
50	1 0 5	0 19 8	2 6 8	0 16 5
55	2 2 5	2 1 5	12 13 4	1 16 2
60	10 6 9	10 3 1	...	9 8 8

Employees over 30 years of age may contribute at the rates prescribed for age 30 for pensions up to a maximum of £104; if under 55 years they may contribute for an additional pension not exceeding £52 at the rates for actual age, so that the maximum pension payable will be £156 per annum. The amount of pensions will vary in accordance with salary, as shown hereunder:—

Annual Rate of Salary.		Pension.	Annual Rate of Salary.		Pension.
£	£	£	£	£	£
1	to 130	52	365	to 416	182
131	„ 156	65	417	„ 468	208
157	„ 208	78	469	„ 520	234
209	„ 260	104	521	„ 572	260
261	„ 312	130	573	„ 624	286
313	„ 364	156	625	and over.	312

Clauses of the Act, which came into operation when it received Royal assent, authorised the payment of pensions up to £104 per annum, without contribution, to employees who attained the age of 60 years after 1st January, 1914, and before the commencement of the Act, and were retired after ten

years' service. The Superannuation Act does not apply to employees having rights to pension or gratuity under the Civil Service Acts, but they may elect to come under it.

The following statements show the total amount paid in pensions and gratuities to public officers of the State from the sources enumerated during the year ended 30th June, 1919:—

Particulars.	Public Revenue.	Contributions.	Total.
Pensions—	£	£	£
Judges	3,937	...	3,937
Stipends to Clergy	100	...	100
Public Service—			
Superannuation Act (1903) ...	160,738	..	160,738
Superannuation Act (1916) ...	54,955	...	54,955
Constitution Act	2,252	...	2,252
Police Superannuation and Reward Fund.	72,000	35,239	107,239
Government Railways Superannuation.	41,000	78,723	119,723
Other	1,434	...	1,434
Total Pensions	336,416	113,962	450,378
Gratuities—			
Imperial and State Contingents, South Africa and China.	587	...	587
Railway and Tramway	9,686*	...	9,686
Government Railways Superannuation Fund.	...	1,573	1,573
Police Superannuation and Reward Fund.	...	2,735	2,735
Other	28,573	...	28,573
Total Gratuities	38,846*	4,313	43,159
Total Pensions and Gratuities	375,262	118,275	493,537

* Includes £414 from Loans.

The next statement shows the amount expended on Pensions and Gratuities to servants of the Crown during the five years ended 30th June, 1919.

Year ended 30th June.	Pensions.			Gratuities.		
	Public Revenue.	Contributions.	Total.	Public Revenue.	Contributions.	Total.
1915	179,846	112,384	292,230	27,048	4,095	31,143
1916	193,881	119,224	313,105	32,922	6,334	39,256
1917	212,060	125,490	337,550	36,689	4,440	41,129
1918	289,931	103,919	393,850	45,234	4,180	49,414
1919	336,416	113,962	450,378	38,846	4,313	43,159

WAR PENSIONS.

The Australian Soldiers' Repatriation Act, 1920, passed by the Commonwealth Parliament, provides for the grant of pensions upon the death or incapacity, as the result of warlike operations, of members of the Commonwealth Naval or Military Forces. The general administration of the Act is entrusted to Commissioners, of whom there are three appointed by the Governor-General, but in each State there is also a Board consisting of three members, which determines the pensions.

The rates of pension payable on total incapacity range from £4 4s. to £6 6s. per fortnight, according to rank; in cases of partial incapacity lower rates are assessed by the Commissioners. The wife of a totally incapacitated member receives a pension ranging from £1 16s. per fortnight to £3 per fortnight; widows receive from £2 7s. to £6 per fortnight; widowed mothers receive pensions ranging from £2 to £6 per fortnight, and a pension is also payable on account of each child under 16 years of age.

The loss of two or more limbs, of both legs, feet, arms, hands, or eyes, or of arm and leg, hand and foot, or one eye together with leg, foot, hand, or arm, or the loss of all fingers and thumbs; or lunacy; or wounds, injuries, or disease involving total permanent disabling effects, and very severe facial disfigurements are regarded as constituting total incapacitation. The amputation of a leg at the hip, or an arm at the shoulder joint, is held to constitute an incapacity of 80 per cent., while the loss of leg, foot, hand, or arm otherwise constitutes 75 per cent. disablement. Blinded soldiers receive a special pension at the rate of £8 per fortnight. Where the pension payable is not more than 30 per cent. of the rate for total incapacity, payment of a lump sum may be substituted.

The number of pensioners under the War Pensions Act as at 30th June, 1919, was as follows:—

Pensioners.	New South Wales.		Commonwealth.	
	Number of Pensioners.	Average Fortnightly Rate.	Number of Pensioners	Average Fortnightly Rate.
Incapacitated Soldiers	23,218	£ s. d. 1 11 4	71,512	£ s. d. 1 10 1
Dependents of deceased Soldiers	13,165	} 0 19 8	50,436	} 0 19 0
Dependents of incapacitated Soldiers	17,453		59,581	
Total	53,836	1 4 9	181,529	1 3 4

War Pensions current in New South Wales on 30th June, 1920, numbered 69,631, as against 53,836 at the same date in the previous year, showing an increase of 15,795 during the twelve months. The liability for fortnightly payments during, approximately, one year amounted to £1,977,716, while the actual expenditure during the year 1919-20 was £1,826,111.

Particulars as to total cost to the Commonwealth Government on account of War Pensions during the year 1919-20 are as follows:—

	£
Total expenditure on War Pensions	*5,872,770.
Cost of administration	118,619.
	£5,991,389.

* Exclusive of £159,500 advanced to Money Order Office during the year.

INVALID AND OLD-AGE PENSIONS.

Invalid pensions were first paid in New South Wales under the Invalidity and Accidents Pensions Act, passed by the State Parliament in 1901, which allowed pensions up to £26 a year to persons over 16 years of age permanently incapacitated for any work.

The State system was maintained until the payment of invalidity pensions was undertaken by the Commonwealth on 15th December, 1910. The pensions paid during the currency of the State Act amounted to £235,012.

The conditions attaching to invalid pensions payable by the Commonwealth are similar to those prescribed by the State Act, the maximum pension being the same as in the case of old-age pensions. The applicant must have resided for at least five years and have become incapacitated or blind in Australia, but persons permanently incapacitated or blind by reason of congenital defect are regarded as having become so in Australia, if brought to Australia before the age of 3 years. Invalid pensions are not payable to persons whose income or property exceeds the limits prescribed in the case of applicants for old-age pensions, or whose relations adequately maintain them. Aliens, Asiatics (except those born in Australia), and aboriginal natives of Australia, Africa, Pacific Islands, and New Zealand are not qualified to receive invalid pensions.

Prior to the commencement of the Commonwealth invalid pension system, New South Wales was the only State in which such a pension scheme was operative; in Victoria pensions were payable to persons permanently disabled whilst engaged in certain hazardous occupations, but only 111 claims were taken over by the Commonwealth. The pensions taken over from New South Wales at 15th December, 1910, numbered 3,498. Particulars of transactions in New South Wales during the last five years are shown below:—

Year ended 30th June.	New Claims.	Lapses.			Invalid Pensions current in New South Wales at 30th June.		
		Deaths.	Cancellations and Transfers.	Total.	Males.	Females.	Total.
1915	2,204	388	150	538	4,158	3,980	8,138
1916	2,031	445	99	544	4,819	4,537	9,356
1917	2,335	362	111	473	5,106	5,697	10,803
1918	2,582	463	162	631	5,669	6,500	12,169
1919	2,659	698	279	977	6,086	7,012	13,098

The invalid pensions current in New South Wales on 30th June, 1919, represented 6.8 per thousand of population compared with 6.4 for the Commonwealth.

The old-age pension scheme sanctioned by the Old-age Pensions Act, 1900, passed by the Parliament of New South Wales, commenced to operate on 1st August, 1901, and virtually expired on 1st July, 1909, when that portion of the Commonwealth Invalid and Old-age Pensions Act, 1908-1909, which relates to the payment of old-age pensions to men, came into operation. The portion of that Act authorising payment of pensions to women on attaining age 60 commenced to operate on 15th December, 1910.

The total amount paid for old-age pensions for the period of nine years during which the State system was in operation was £4,009,127, and the cost of administration £165,560 approximately. On the introduction of the Commonwealth administration, 21,292 State pensions were converted.

The conditions governing the payment of old-age pensions under the Commonwealth have varied but slightly from the conditions prevailing under the State Act; the age qualification is 60 years for women and 65 years

for men, with a reduction to 60 years in case of men permanently incapacitated; the length of residence qualification is twenty years in Australia, but absences amounting in the aggregate to one-tenth of the total period of residence are permitted. Naturalised persons are eligible for pensions, but aliens and aboriginal natives are disqualified.

Up to the 2nd October, 1916, the maximum pension payable was £26 per annum; this amount was raised to £32 10s. as from 12th October, 1916, and a further increase to £39 per annum was made as from 15th January, 1920, with proportionate reduction in respect of any income or property of the claimant, so that the pensioner's income with the pension shall not exceed £65 per annum in the case of men pensioners and £60 in the case of females; in computing income any benefits accruing from friendly societies are not to be reckoned as income, nor any gifts and allowances from children or grandchildren; in assessing the value of property, the home in which the pensioner permanently resides is not included. Money payable to a pensioner while he is an inmate of a benevolent asylum or hospital may be paid to the asylum or hospital for his benefit.

Prior to the introduction of the Commonwealth system, old-age pensions had been payable in three States—New South Wales, Victoria, and Queensland.

The following statement shows the applications received in New South Wales, and the number of old-age pensions current on 30th June, 1914-19:—

Year ended 30th June.	New Claims.	Lapses.			Old-age Pensions current in New South Wales at 30th June.		
		Deaths.	Cancellations and Transfers.	Total.	Male.	Female.	Total.
1914	4,819	2,755	768	3,523	14,217	17,948	32,165
1915	4,732	2,845	834	3,679	14,569	18,335	32,904
1916	4,375	2,884	936	3,820	14,630	18,619	33,249
1917	4,553	2,727	737	3,464	14,591	19,350	33,941
1918	4,689	2,451	702	3,153	14,795	20,283	35,078
1919	4,634	2,795	744	3,539	14,979	20,543	35,522

The old-age pensioners in New South Wales represent 18.4 per thousand of population; in the Commonwealth as a whole the rate is 19.1.

The total expenditure by the Commonwealth on invalid and old-age pensions during the year ended 30th June, 1919, was as follows:—

	£
Paid as pensions	3,880,865
Paid to benevolent asylums for maintenance of pensioners ...	55,759
Cost of administration	63,280
Total	£3,999,895

HOUSING.

The number of occupied dwellings in New South Wales at the Census of 1911 was 332,841. Private dwellings, including tenements, numbered 319,766, or 96.07 per cent. of occupied dwellings; boarding and lodging houses, 5,966, or 1.8 per cent.; hotels, 2,795, or .8 per cent.

The inmates of private dwellings numbered 1,494,504, or 91·2 per cent. of the total population of the State. Nearly 25 per cent. of the inmates of private dwellings reside in houses containing 5 rooms, while 84 per cent. reside in houses containing from 4 to 9 rooms.

The principal materials used for building are wood and bricks, 49·7 per cent. of the occupied dwellings being built of the former and 36·4 per cent. of the latter; 3 per cent. are built of stone and 2·7 per cent. of iron.

In regard to population it has been shown that the density of settlement in Sydney and the suburban areas varies considerably. The extent of building operations, as shown by the records of past years, indicates an increase of dwelling-houses in New South Wales, but the major portion of that increase has been in suburban dwellings.

In Sydney improvements and resumptions have been continuous; 147 new buildings were erected during 1919, and 446 were altered or enlarged. In the suburbs the cottage plan of dwelling-house is favoured, and, as in the city, brick buildings predominate. During the past five years new buildings have been erected in the city and suburbs at a rate averaging 5,600 per annum.

Year.	New Buildings.			Net Increase of Population, Sydney and Suburbs.
	Sydney.	Suburbs.	Total.	
1915	123	5,943	6,066	10,500
1916	90	4,961	5,051	1,600
1917	88	4,723	4,811	12,700
1918	76	4,878	4,954	15,400
1919	147	6,969	7,116	36,000

Since 1911 the number of new buildings in the suburban areas has largely increased, but there was a considerable decline in building operations during the period of the war.

The following table shows the number of cases in which permission was granted to erect new buildings in municipalities outside the Metropolis during the six months ended 30th June, 1920:—

Municipality.	New Buildings (to erect which permission was granted).	Estimated Population, 31st December, 1919.
Auburn	82	11,910
Bankstown	169	7,000
Dundas	53	2,330
Goulburn	50	11,000
Granville	80	12,030
Lidcombe	73	8,770
Newcastle and Suburbs	447	62,900
Prospect and Sherwood...	50	6,090
Wagga Wagga	64	7,650
Other Municipalities (135)	831	355,380
	1,899	485,060

Only those municipalities where permission was granted for the erection of fifty buildings or more have been shown; the other municipalities have been grouped.

As the result of the partial cessation of building operations during the war there arose a shortage of houses, which was accentuated in 1919 by the return of soldiers from oversea. Efforts are being made both by the State and Commonwealth Governments to relieve the situation, the State Government by an extension of its housing schemes, and the Commonwealth Government by its War Service Homes scheme.

STATE HOUSING SCHEMES.

The Housing Board, consisting of three members, constituted under the Housing Act of 1912, is empowered to purchase land, and after subdivision to erect thereon buildings for residential and other purposes. A purchase or resumption of land exceeding £20,000 in value cannot be made without parliamentary approval.

The Board may lease any such land with buildings thereon for residential purposes for any term not exceeding twenty years, at a rate sufficient to provide for interest and other charges, and may sell such land and buildings subject to certain conditions.

Any male person aged 18 years or over, and any female person 21 years or over, unmarried or widowed, or living apart from her husband, are qualified to obtain land, provided they do not own any land with a building thereon in New South Wales.

Under the Housing Extension Act of 1919, the scope of the original scheme was considerably extended. Any person may apply for an advance (a) to erect or make additions to a house on land owned by him, as a home for himself or his family, (b) to purchase a dwelling-house, provided that he is 21 years of age and his yearly income does not exceed £400, that the house is for the use of himself and his family only, and that he is not the owner of any other land or dwelling-house in the State. The maximum amount that may be granted is £1,000.

Repayment may extend over thirty years in the case of brick buildings and twenty years for wooden buildings.

Any person who has received an advance for home building purposes cannot sell or mortgage the property before the expiration of seven years.

Buildings societies whose objects include the provision of houses for their members, may be assisted by grants or loans for this purpose. Councils of Municipalities and Shires may also be assisted by grant or loan, subject to the provisions of the Local Government Act, 1919, to erect houses.

From the inception of operations in 1912 to 30th June, 1920, the Housing Board built 763 houses, and on the latter date 501 were in course of erection. Particulars are as follow:—

Where Built.	Houses completed.	In course of erection.	Total.
On Crown Lands or Lands acquired by Crown...	453	378	831
On applicant's land... ..	310	123	433
Total	763	501	1,264

The total expenditure to 30th June, 1920, amounted to £477,127. Of the houses erected on Crown lands 314 were built for tenants under the original scheme at Dacey Garden Suburb, and thirty-five at Stockton. The remainder were built for sale on terms to successful balloters under the scheme initiated in May, 1919.

The Dacey Garden Suburb is about 5 miles from the centre of the City of Sydney, and adjoins the suburb of Kensington. An area of Crown lands, covering 336 acres, and valued at £21,872, was appropriated, and a sum of £75,000 was made available for the purposes of the suburb; in April, 1914, the expenditure of an additional amount of £150,000 was authorised. Reservations have been made for roads, parks, gardens, and other public places, also for public buildings, schools, and for religious purposes, the area allotted for various purposes being as follows:—Roads, 70 acres; parks and open spaces, 21½ acres; houses and shops, 169½ acres; public buildings and churches, 7 acres; public school, 5 acres; leaving an area of 63 acres yet to be dealt with. The total number of houses on the 273 acres will be 1,673, averaging 6.65 to the acre, including roads, but excluding parks and open spaces. The main roadway is 100 feet wide, with secondary roads 66 feet wide.

Building operations were commenced on 6th June, 1912, and 314 cottages, six shops, a clinic, and a picture theatre had been completed at 30th June, 1920. The cottages are built of brick or concrete blocks, on stone or rubble foundations, with tile and slate roofs. The accommodation of the smallest dwellings is three rooms, and of the largest four rooms, kitchen, &c. The cottages are lighted throughout with electricity, and gas is laid on for cooking purposes. The rentals ranged from 12s. 9d. to 18s. 9d., and the average cost from £276 to £640, which includes building, kerbing and guttering, asphaltting footpaths, turfing, sewerage connection, &c.

The capital employed at 30th June, 1919, amounted to £182,549, of which £135,169 was absorbed on cottages, £8,944 on shops and picture theatre, and the balance, £38,436, was expended in the construction of the storm-water channel, road formation, &c. During the financial year 1918-19 the rentals contracted for amounted to £12,300, and the rents received to £12,149; at the end of the year the arrears of rent outstanding amounted to £253.

At Stockton thirty-five houses have been erected at a cost of £24,000, and twenty-four homes were in course of erection at 30th June, 1920; eight houses have been built at Orange, the cost being £6,043.

Observatory Hill Resumed Area.

The Observatory Hill Resumed Area is situated on the foreshores of Port Jackson, adjoining the wharves, and contains a number of business premises and residences, including dwellings, erected on the flat system, for waterside workers. The area comprises about 30 acres, and was acquired by the Government in 1900 in connection with the Darling Harbour wharves resumption. Being the oldest settled portion of Sydney, practically the whole of the area required improvement. The capital employed amounted to £1,327,271 as at 30th June, 1919; the total revenue during the year 1918-19 was £68,314; and the expenditure £22,248, exclusive of interest on loan capital.

STATE SAVINGS BANK—ADVANCES FOR HOMES.

Under the provisions of an Act passed in 1913 the Commissioners of the Government Savings Bank were authorised to make advances to enable persons to erect or enlarge their homes or to purchase dwellings already constructed.

The Bank advances up to three-fourths of the value of the property to a maximum of £750, and the repayments in the case of new stone, concrete, or brick buildings are to be made within thirty years, and in the case of wooden structures within twenty years. No advance will be made to any person who at the time of the application is the owner of another dwelling in the State.

The system came into operation on 1st July, 1914, and up to 30th June, 1919, the amount of £1,637,450 had been advanced to 4,400 borrowers. The transactions during each year were as follow:—

Year ended 30th June.	Applications received.		Advances approved.		Advances made.	
	No.	Amount.	No.	Amount.	No.	Amount.
		£		£		£
1915	840	337,894	728	283,870	575	221,900
1916	928	333,490	927	346,175	794	298,375
1917	992	347,810	946	329,100	783	274,785
1918	1,567	573,870	1,251	460,245	875	311,710
1919	2,073	810,415	2,022	793,155	1,373	530,680
Total ...	6,400	2,403,479	5,874	2,212,545	4,400	1,637,450

Sydney Municipal Housing Area.

An Act was passed in 1912 to enable the Municipal Council of the City of Sydney to erect and let dwelling-houses, and for that purpose to acquire land.

A block of buildings named "Strickland Dwellings," erected by the Council on land acquired in Chippendale in connection with street improvements, was opened in April, 1914. The buildings are three storeys high, and cover a ground space of 279 feet by 78 feet; the total cost, including land, was £49,814. At each end there are four shops, and the remainder of the building is divided into 71 suites of self-contained flats of two, four, or six rooms; the rents range from 12s. 6d. to 27s. 6d. per week. The City Council has by resumptions acquired other lands and buildings, and after street-widening retained many dwellings which by repairs and improvements of sanitary conditions have been converted into satisfactory residential areas.

WAR SERVICE HOMES.

The Commonwealth War Service Homes Act, 1918, which came into force in 1919, provides for homes for Australian sailors and soldiers and their female dependents. The Commissioner charged with the administration of the Act is authorised to acquire land and dwellings, and to erect dwellings, &c.; he may make advances on mortgage to eligible persons to enable them to acquire homes, or may sell homes to them on the rent-purchase system. The amount of advance on the total cost of land and a dwelling may not exceed £800, and the maximum rate of interest for repayments is 5 per cent. The number of applications dealt with in New South Wales up to September, 1920, was as follows:—

	No.
Houses completed	398
Houses in course of construction	1,040
Contracts let, but work not started	94
Tenders under consideration	13
	<hr/>
	1,545

PARKS AND RECREATION RESERVES.

The city of Sydney contains within its boundaries a large extent of parks, squares, and public gardens. The most important are—Moore Park, where about 368 acres are available for public recreation, including the Sydney Cricket Ground and the Royal Agricultural Society's Ground;

the Botanic Gardens and Garden Palace Grounds, 65 acres, with the adjoining Domain, 86 acres, ideally situated on the shores of the Harbour; and Hyde Park, 39 acres, in the centre of the city. The total area covered is 654 acres, or 20 per cent. of the whole of the city proper. This does not include the Centennial Park, 552 acres in extent, situated on the outskirts of the city, formerly reserved for the water supply, but now used for recreation by the inhabitants of Sydney. This magnificent recreation ground has been cleared, planted, and laid out with walks and drives, and is a favourite resort of the citizens.

The Zoological Gardens were situated in Moore Park until a new site was opened in 1916 at Taronga Park, on the northern side of the Harbour. In the preparation of the new gardens the natural formation has been retained as far as practicable, with the object of displaying the animals in natural surroundings.

The suburban municipalities are also well served, as they contain, including the Centennial Park, about 4,060 acres of public parks and reserves, or about 44 per cent. of their aggregate area, dedicated to, and in some cases purchased for, the people by the Government.

In addition to these parks and reserves, the National Park, situated about 16 miles south of Sydney, and accessible by railway, was dedicated to the people in December, 1879. This park, with the additions subsequently made in 1880 and 1883, contains a total area of 33,747 acres, surrounding the picturesque bay of Port Hacking, and extending in a southerly direction towards the mountainous district of Illawarra. It is covered with magnificent virgin forests; the scenery is charming, and its beauties attract thousands of visitors.

Another large tract of land, designated Kuring-gai Chase, was dedicated in December, 1894, for public use. The area of the Chase is 35,322 acres, and contains portions of the parishes of Broken Bay, Cowan, Gordon, and South Colah. This park lies about 15 miles north of Sydney, and is accessible by railway at various points, or by water *via* the Hawkesbury River, several of whose creeks, notably Cowan Creek, intersect it.

In 1905 an area of 248 acres was proclaimed as a recreation ground at Kurnell, on the southern headland of Botany Bay, a spot famous as the landing-place of Captain Cook; and the Parramatta Park (252 acres) although outside the metropolis, may be mentioned on account of its historic interest.

In country districts, reserves have been proclaimed as temporary commons, and considerable areas have been dedicated from time to time as permanent commons attached to inland townships, which are otherwise well provided with parks and reserves within their boundaries.

A State Nursery is maintained at Campbelltown, from which plants, trees, and shrubs are distributed to the various parks and reserves.

Under the Public Parks Act the Governor may appoint trustees of any lands proclaimed for the purposes of public recreation, convenience, health, or enjoyment. The trustees are empowered to frame by-laws for the protection of shrubs, trees, &c., upon the land vested in them, and to regulate the use and enjoyment of such land by the public.

RACE-COURSES.

No race meeting may be held on any race-course in New South Wales unless such race-course is licensed under the Gaming and Betting Act, 1912. When used for horse-racing or pony-racing the running ground of such race-course must not be less than 6 furlongs in circumference. A limitation is made in certain cases regarding the number of days in any one year on which meetings for horse-racing, pony-racing, and trotting races or contests may be held on a race-course.

During the year ended 31st December, 1919, there were 362 separate licenses issued for horse-racing, pony-racing, and trotting contests, the license fees received amounting to £1,064. Owing to the restrictions on racing by the Commonwealth authorities under the War Precautions Act having been removed, the number of licenses increased during the year.

Under the provisions of the Totalisator Act, 1916, racing clubs must establish totalisators on race-courses when so directed.

THEATRES AND PUBLIC HALLS.

Plans of buildings intended to be used for theatres and public halls must be approved by the Government. A license may be refused if the provisions of the Theatres and Public Halls Act, 1908, have not been complied with; or that alterations or additions to the building are necessary in order to provide for public safety, health, or convenience; or if it is considered that the building is not suitable for holding public entertainments or public meetings therein, or the site of such building is unsuitable. At 31st December, 1919, there were 1,850 theatres and public halls in New South Wales, to which buildings the provisions of the Theatres and Public Halls Act, 1908, applied, and seating accommodation was provided for approximately 830,000 persons.

LICENSING COURTS.

In the metropolitan district of the State, the Court for granting licenses to sell intoxicants consists of three Stipendiary Magistrates. In country districts the local Police Magistrate and two Justices of the Peace, specially appointed, constitute the Court; if there is no Police Magistrate resident within 10 miles of the courthouse a licensing magistrate may be appointed. In 1882 the number of licensed houses was 3,063; in 1908, it was 2,980; and in 1918, 2,578, the decrease being 402, or 13·5 per cent. since 1908.

The Liquor Act, 1912, and its amendments, regulate the sale of intoxicating liquor, and facilitate the exercise of the principle of local option. In addition to stringent regulations regarding the licensing and management of hotels, the registration of clubs in which liquor is sold is compulsory. Registration is granted only to properly-conducted associations, established for a lawful purpose, on suitable premises.

On 17th February, 1916, the Minister for Defence, in the exercise of powers conferred under the provisions of the War Precautions Act, ordered that all licensed premises in the county of Cumberland, and in places within five miles of any military training camp in the State, should be closed at 6 p.m. On 24th February the order was varied, making the closing hour 8 o'clock.

Subsequently an Act was passed in the State Parliament authorising a referendum, when the electors were enabled to vote for the hour of their choice, ranging from 6 p.m. to 11 p.m., both inclusive. At the referendum taken on 10th June, 1916, an absolute majority of votes was recorded for six o'clock, and since 21st July, 1916, all the licensed premises have been closed at that hour. Particulars of the voting on 10th June, 1916, are shown below:—

Districts	Votes Recorded for—						Informal Votes.	Total.
	6 o'clock.	7 o'clock.	8 o'clock.	9 o'clock.	10 o'clock.	11 o'clock.		
City ...	10,686	216	1,388	14,952	87	94	1,107	28,530
Suburban ...	172,067	2,294	8,994	65,505	347	460	7,198	256,865
Country ...	164,741	2,320	10,752	98,385	971	2,639	13,903	293,711
Total ...	347,494	4,830	21,134	178,842	1,405	3,193	22,208	579,106

LOCAL OPTION.

The following propositions were submitted to the electors at the general elections, held in 1907, 1910, and 1913:—

- (a) That the number of existing licenses be continued.
- (b) That the number of existing licenses be reduced.
- (c) That no licenses be granted in the electorate; or where resolution (c) has been previously carried.
- (d) That licenses be restored in the electorate.

To carry resolution (c) or (d) the votes in favour were required to be three-fifths of the total votes polled, and 30 per cent. of the electors on the roll. Where resolution (c) was not carried the votes were added to those given for resolution (b).

In electorates where a majority of electors voted for reduction, licenses could be reduced by one-fourth. If the "no license" resolution had been carried in any electorate, licenses in that electorate would have ceased to operate within three years.

Particulars of the local option vote are shown in the following statement:—

Year.	Electorates in which Electors carried—		Votes recorded for—			Percentage of Total Votes.		
	Con- tinuance.	Re- duction.	Con- tinuance.	Re- duction.	No- license.	Con- tinuance.	Re- duction.	No- license.
1907	25	65	209,384	75,706	178,580	45	16	39
1910	76	14	324,973	38,856	212,889	56	7	37
1913	75	15	380,707	44,453	245,202	57	7	36

The proposition that no licenses be granted was not carried in any electorate, consequently no vote has yet been taken on the question of "Restoration."

When the first local option vote was taken in September, 1907, there were 3,023 hotels in existence; of this number it was ordered that 293 be closed at dates varying from 10th September, 1908, to 31st December, 1913. At the second local option vote on 14th October, 1910, there were 2,869 hotels, and as a result of the vote the closing of 28 was ordered. On the day of the election, 6th December, 1913, there were in existence 2,719 hotels, of which 23 were ordered to close at a fixed date. The licenses in force during 1919 numbered 2,557.

The number of Wine licenses in operation at the time of the vote of 1907 was 633, of which 46 have been abolished. In 1910, of the 565 licenses in existence, orders were made in 5 cases; while in 1913, in respect of the 514 existing, 7 closing orders were made.

REDUCTION OF LIQUOR LICENSES.

The Liquor Act of 1912 provides that a local option vote must be taken at each general election of the State Parliament, unless the election be held within eighteen months of the previous polling day. This provision was suspended by the Liquor Amendment Acts of 1916 and 1919, and the local option vote was not taken at the general elections held in 1917 and 1920.

The Liquor Amendment Act, 1919, provides that no new publicans' or wine licenses may be issued after 1st January, 1920, except on the grounds of increase of population, and then only on the application of a majority of the adult residents living within a radius of 1 mile of the premises for which a license is sought.

This Act also provides that a referendum must be taken on the question of prohibition within eighteen months of the date on which the Act became operative. The following are the propositions to be submitted to the electors:—

- (a) Whether prohibition with compensation shall come into force throughout New South Wales, and
- (b) At what hour licensed premises and registered clubs shall be closed.

In the first case, if an absolute majority for "No" is recorded the trade in alcoholic liquor will continue to be regulated under the Liquor Act of 1912 and subsequent amending Acts. If, however, an absolute majority is recorded for "Yes," then prohibition with compensation will come into force within six months of the date on which the vote was taken.

In the second case the hour for which an absolute majority is recorded will be the hour at which all licensed premises and clubs must be closed. If, however, prohibition with compensation is carried, then the determination with regard to the closing hour will take effect only until prohibition becomes operative.

Two Boards have been appointed under the Act, namely, the Licenses Reduction Board, empowered to reduce the number of publicans' licenses in accordance with the Act, to fix the compensation fees payable by licensees, and to assess the compensation which shall be paid in the cases of premises deprived of licenses, and the Compensation Assessment Board, whose duties are to assess the cost to the State for compensation if prohibition be carried.

Compensation is made from the Compensation Fund into which compensation fees collected from licensees are paid. The fee payable by each licensee in any year is an amount equal to 3 per cent. of the sum expended by him in the purchase of liquor during the preceding year.

The statutory number of licenses, that is, the number of licenses below which reduction may not be effected, must not exceed—

- (a) In the case of an electorate for which five members are returned to the Legislative Assembly, one for each 250 of the first thousand electors on the electoral roll, and a further three for each subsequent two thousand, and
- (b) In an electorate for which three members are returned, one for each 250 of the first thousand electors, and a further one for each subsequent 500.

The licenses in any electorate may not be reduced by more than one-fourth of the existing number.

The following table gives particulars respecting the number of hotels in the State, and the average population to each:—

Year.	Licenses issued.	Average Population to each Hotel.	Year.	Licenses issued.	Average Population to each Hotel.
1890	3,428	321	1915	2,640	708
1895	3,238	356	1916	2,617	713
1900	3,163	428	1917	2,589	724
1905	3,063	475	1918	2,578	741
1910	2,865	564	1919	2,557	767

The annual fee for a Publican's license is regulated by the annual assessed value of the hotel. During the year 1919 an amount of £86,072 was collected on account of such licenses.

The Liquor Act which regulates the issue of hotel licenses provides also for the issue of "Additional Bar" licenses where liquor is sold in more than one room in the licensed premises, and of booth or stand licenses for places of public amusement for a period not exceeding seven days.

Licenses are allowed for the sale of liquor in club premises, and packet licenses to Masters of steamers engaged in the coastal trade of the State.

Colonial Wine, Cider, and Perry licenses are held chiefly by grocers and keepers of restaurants, oyster saloons, and wine and fruit shops; the liquor sold must be the produce of fruit grown in Australasia, and the quantity sold at one time must not exceed 2 gallons.

Spirit Merchants' and Brewers' licenses do not come under the operation of the Local Option Vote. Holders of Spirit Merchants' licenses are not permitted to sell a quantity less than 2 gallons of liquor of the same kind at one time.

Railway Refreshment Room licenses are issued under Executive authority and not by Magistrates.

The following statement shows the number of licenses for the sale of intoxicating liquor issued during 1919:—

License.	Annual Fee.	Number of Licenses.	Fees Collected.
	£		£
Publicans'	Regulated by assessed value.	2,557	86,072
Additional Bar	20	143	2,794
Club	£5 and upwards.	78	980
Packet	3-15	15	150
Booth or Stand	2*	1,542	3,084
Colonial Wine, Cider, and Perry ...	3	467	1,401
Brewers'	20-30	16	} 5,080
Spirit Merchants'	20-30	199	
Railway Refreshment Room ...	30	29	870

* For period of issue not exceeding seven days.

The other licenses issued by Magistrates are Billiard and Bagatelle, Auctioneers', Pawnbrokers', Hawkers' and Pedlers', Collectors', Second-Hand Dealers', and Sunday Trading. The fee for Billiard and Bagatelle licenses is £10 per annum, and during 1919 there were 763 in force, the total fees collected being £7,340.

Auctioneers' licenses are divided into two classes, viz., General and District. The annual fee for a general license is £15, and for a district £2, and provision is made for a *pro rata* payment for licenses issued after the commencement of the year. There were 344 of the former and 1,995 of the latter current in 1919, the fees received being £8,466. General licenses are available for all parts of the State; district licenses only cover the Police district for which they are issued, but they are not issued for the Metropolitan District. Sales by auction are illegal after sunset or before sunrise, except in the Municipality of Albury, where, under the Auctioneers' Licensing (Amendment) Act, 1915, wool may be put up to sale or sold after sunset.

In 1919 there were 102 Pawnbrokers' licenses current in New South Wales, for each of which an annual fee of £10 is payable. The hours for receiving pledges by pawnbrokers are limited, with certain exceptions, to between 8 a.m. and 6 p.m., but no restriction is placed on the rate of interest charged.

The annual license fee for a hawkers trading on foot is £1, and if with pack animals or vehicles the charge is £2; the total amount of fees received during 1919 was £1,664.

The fee for a Collectors' license is 1s., Second-hand Dealer £1, and Sunday Trading 5s.

The following table shows the principal licenses issued in 1905, and in the last five years:—

License.	1905.	1915.	1916.	1917.	1918.	1919.
Publicans'	3,063	2,640	2,617	2,589	2,578	2,557
Additional Bar ... ..	...	141	132	136	134	143
Club ... ..	...	73	76	73	77	78
Railway Refreshment	24	27	27	27	28	29
Booth or Stand	1,915	1,955	1,816	1,574	1,273	1,542
Packet	24	19	21	17	18	15
Colonial Wine, Cider, and Perry	682	497	487	403	458	467
Spirit Merchants'	205	192	193	179	194	199
Brewers'	40	26	24	23	19	16
Auctioneers'—General	222	289	303	287	344	344
District	1,064	1,540	1,683	1,745	1,909	1,995
Billiard and Bagatelle	698	831	838	733	785	763
Tobacco	*	13,014	13,179	13,089	13,308	14,141
Pawnbrokers'	66	96	99	102	100	102
Hawkers' and Pedlars'	*	1,354	1,178	1,149	1,224	1,479
Collectors' ... ..	...	1,731	1,852	2,092	2,354	2,207
Second-hand Dealers' ... ..	...	798	946	993	1,216	1,247
Stage Carriage	*	224	222	193	153	212
Sunday Trading ... ..	...	...	4,604	4,826	5,825	6,014

* Not available.

RELIGIONS.

Churches in New South Wales.

New South Wales being originally a Crown colony, the church establishment as existing in England was introduced. Subsequently, there was accorded to the clergy of each of the principal denominations support from the Crown in the form of subventions, which were continued under a statute passed in New South Wales in 1836, as an annual payment of £30,000 divisible between the Church of England, Roman Catholic, Presbyterian, and Wesleyan denominations. In 1862 these subventions were restricted to the clergy then actually in receipt of State aid, and in the succeeding year (1863) the subventions paid by the State amounted to £32,372, distributed as follows:—Church of England, £17,967; Roman Catholic, £8,748; Presbyterian, £2,873; Wesleyan Methodist, £2,784.

Only one clergyman was in receipt of subvention in December, 1919, the allowance made during 1918-19 amounting to £100.

Church Constitution and Government.

Property belonging to the Church of England may be vested in corporate bodies of Trustees, and trusts for various dioceses were formed under an Act of Parliament passed in the year 1881. This Act was repealed in 1917, and the corporate bodies now hold property under the provisions of the

“Church of England Trust Property Act, 1917.” They are entitled to hold, on behalf of the Church, all real and personal property which may be assigned to them by grant, will, or otherwise. There are seven dioceses in the province of New South Wales, under a Metropolitan, viz., Sydney, Newcastle, Goulburn, Bathurst, Armidale, Riverina, and Grafton. In each diocese a Synod, consisting of clerical and lay representatives meets annually to make ordinances for the government of the Church. Each diocesan synod elects from its members representatives to sit at the Provincial Synod of New South Wales, which meets every three years, and to the General Synod of Australia and Tasmania, which meets every five years.

The Roman Catholic Church is under the direction of the Archbishop of Sydney, under whom are the Suffragan Bishops of Maitland, Goulburn, Bathurst, Armidale, Wilcannia-Forbes, Lismore, and Wagga Wagga, the State of New South Wales forming an ecclesiastical province. An Apostolic Delegation for Australasia was constituted in 1914, with headquarters at Sydney; in 1920 jurisdiction was extended to Oceanica.

The various branches of the Presbyterian Church in the State are classified into seventeen Presbyteries, consisting of a number of separate charges, to each of which a Minister is appointed. The management of the affairs of the Presbyterian Church is controlled by a General Assembly, which sits annually. It is presided over by a Moderator, who is elected by the Presbyteries. By Act of Parliament, the Assembly has power to grant permission to trustees to mortgage Church property, and trustees are authorised to hold property for the Church generally. In July, 1901, a scheme of federal union was adopted by representatives from the various States, and the United Church is called the Presbyterian Church of Australia, the General Assembly of which meets alternately in the capital city of the various States every second year.

On 1st January, 1902, the Wesleyan Methodist Church, the Primitive Methodist Church, and the United Methodist Free Church in New South Wales entered into organic union, with a common name, common funds, common laws, and equal rights. The United Church is known as “The Methodist Church of Australasia.” The South Sea Mission Districts are under the control of the New South Wales Conference, with the exception of the Solomon Islands’ district, which was transferred to the New Zealand Conference in 1920.

The Congregational Union of New South Wales was incorporated in 1882 by an Act which gives it legal status, and empowers it to hold property. The Union allows every separate church to maintain independence in the administration of its local affairs. Assemblies for the transaction of denominational business, &c., are held every six months.

The question of amalgamation between the Presbyterian, Methodist, and Congregational Churches in Australia was submitted by each church to a ballot of its members in September, 1920. The complete results are not available, but a majority of the adherents of each church—large in the case of the Methodists and Congregationalists, but smaller among Presbyterians—was in favour of union.

The churches of the Baptist Denomination, which are independent of each other, are united together in a voluntary association called the Baptist Union of New South Wales, which holds annual and half-yearly meetings. The denomination has a fund controlled by trustees, from which churches are assisted on terms, with easy repayments. At the annual or assembly meetings, officers are chosen by nomination and ballot, and ministers or laymen are eligible for the highest positions. The churches prosecute Home Mission work in this State, and maintain a Foreign Mission Establishment in India.

The Salvation Army was established in Australia in 1881. Melbourne was made the chief centre for Australia under the command of a Commissioner. Sydney, Newcastle, Bathurst, and Armidale, are now district headquarters for New South Wales, each district being under direction of a divisional commander, all officers and members bearing military titles and designations; there are also treasurers and secretaries to corps. Persons who are in sympathy with the Salvation Army and attend its meetings, but who have not subscribed to the "articles of war"—which combine a confession of faith and a pledge against the use of intoxicating liquors and baneful drugs—are regarded as adherents.

The various Jewish congregational movements in Sydney were amalgamated when the Great Synagogue was opened in 1878. A local ecclesiastical court was opened in 1905, when an ordained Rabbi arrived from England to become chief minister of the community, and president of its court. There have been other Jewish congregations at West Maitland and Newcastle, and there is one at Broken Hill.

Census Records of Religion, 1911.

An interesting comparison of the number of persons belonging to the principal religions at the date of each Census from 1891-1911 is afforded in the following table. In this table "Catholic" (undefined) has been included with "Roman Catholic":—

Religious Denominations.	Number of Persons.			Proportion per cent.		
	1891.	1901.	1911.	1891.	1901.	1911.
Protestant—						
Church of England	503,054	623,131	734,667	45·32	46·58	45·46
Methodist	112,448	137,638	151,392	10·13	10·29	9·37
Presbyterian	109,390	132,617	183,099	9·86	9·91	11·33
Congregational	24,090	24,834	22,656	2·17	1·86	1·40
Baptist	13,029	15,441	20,679	1·18	1·15	1·28
Lutheran	7,950	7,387	7,087	·72	·55	·44
Unitarian	1,329	770	844	·12	·06	·05
Salvation Army	10,315	9,585	7,413	·93	·72	·46
Other Protestants	9,741	14,251	54,395	·87	1·06	3·37
Total, Protestants	791,346	965,654	1,182,232	71·30	72·18	73·16
Roman Catholic	286,911	347,286	412,680	25·85	25·96	25·54
Greek Church... ..	253	561	1,083	·02	·04	·07
Others—						
Jew, Hebrew	5,484	6,447	7,660	·49	·48	·47
Buddhist, Confucian, Moham- medan, &c.	11,508	8,035	5,114	1·04	·60	·32
Freethinkers, Agnostics, &c. ...	6,358	3,564	3,929	·57	·27	·23
No Denomination, No Religion ...	8,062	6,265	3,239	·73	·47	·21
	1,109,922	1,337,812	1,615,937	100	100	100
Object to state	11,237	13,068	22,008	...	...	...
Unspecified	2,795	3,966	10,503	...	...	...
Total, New South Wales, } including Federal territory }	1,123,954	1,354,846	1,648,448	...	...	...

NOTE.—The figures for 1911, for purposes of comparison with the previous Census returns, include persons within the Federal capital territory.

INDEX.

- Abattoirs, Homebush, 477, 537
 Aborigines, 51, 621
 Absentee Taxpayers, 132
 Accidents, Deaths from, 88
 Factories, 221
 Mining, 248
 Railway, 404
 Tramways, 411
 Accountants, Public, 117
 Advances, Bank, 156
 for Homes, 649
 to Settlers, 598
 Agricultural College, Hawkesbury, 596
 Education, 105
 Agriculture, 563-608
 Department of, 594
 Holdings, 464
 Alienation of Lands, 431, 442
 Aliens, 50
 Appeals, Law, 266
 Apprenticeship, 220, 617
 Arbitration, Industrial, 257
 Commonwealth, 202
 Other Countries, 203
 State, 195
 Area of New South Wales, 9, 419
 Area under Cultivation, 465, 563-569
 Arrests, 252
 Artesian Bores, 606
 Art Gallery, National, 120
 Assurance, Life, 163
 Asylums, State, 626
 Australia (*see* Commonwealth).
 Australian Imperial Forces, 38
 Aviation School, 103
 Awards—Industrial, 197, 200
 Baby Clinics, 64, 613
 Bacon, 550
 Banking, 152-158
 Bank Notes, 150
 Bankruptcy, 178, 261
 Barley, 566, 581
 Barristers, 116, 268
 Beef (*see* Meat).
 Bee-keeping, 554
 Beer, Consumption of, 471
 Benevolence (*see* Hospitals, Charities).
 Benevolent Asylum, Sydney, 614
 Betting Tax, 131
 Bills of Exchange, 151
 of Sale, 181
 Treasury, 143
 Births, 56-61
 Notification of, 614
 Biscuit Factories, 379
 Blindness, 636
 Boarding-out of Children, 615-617
 *13139
 Board of Trade, 201, 495
 Boot and Shoe Factories, 383
 Bores, Artesian, 606
 Boring, Shallow, 607
 Botanic Gardens, 594
 Boundaries of New South Wales, 9.
 Counties, 239, 372
 Bread, Consumption of, 469, 479
 Breadwinners, 185
 Breweries, 381
 Brickworks, 375
 Bridges, 296, 319
 Building, Cost of, 442
 Societies, 161
 Buildings, New, 647
 Bulk Handling, Wheat, 575, 594
 Burrinjuck Dam, 602
 Bursaries, 109, 110, 115.
 Butchering, 477
 Butter, Consumption of, 471
 Production of, 543, 546
 Factories, 377
 Cabinet, 23
 Cable Services, 416
 Cabs, 270
 Cadets, Military, 37, 107
 Canberra, 13, 35
 Cancer, 76, 626
 Candle Factories, 374
 Capital, Manufactories, 359, 362
 Banks, 153
 City (*see also* Sydney), 13, 35
 Punishment, 273
 Railways, 395
 Tramways, 409
 Casualties, A.I.F., 39
 Cattle (*see also* Meat, Dairying, Prices),
 521, 530-533, 535, 601
 Causes of Death, 69
 Census, 41
 Chambers of Commerce, 335
 Charities (*see* Hospitals), 615, 629-631
 Cheese, Consumption of, 471
 Production of, 543, 548
 Chemical Factories, 388
 Childbirth, Deaths in, 83
 Child Labour in Factories, 366
 Children, Mortality, 63-68
 of School Age, 92
 Protection of, 611, 615
 State, 615
 Chinese, 51
 Chronological Table, 1
 Churches (*see also* Religion, Marriages).
 656
 Cigars and Cigarettes, 472, 381, 585
 Cities of New South Wales, 282
 Citizen Forces, 38

- City Railway, 393
 Clearances, Shipping, 336
 Climate, 14, 16
 Clinics, Baby, 613
 Closer Settlement, 124, 447-453
 Clothing, Cost of, 502
 Factories, 382
 Coal, 241-245
 Coast, 9, 16
 Cobar, Mines, 237
 Coffee, Consumption of, 471
 Coinage, 149
 Coke, 244
 Collections, Charitable, 631
 Commerce, 325
 Chambers of, 335
 Commercial Education, 105
 Commissioners, Commercial, 335
 Fire, 310, 30
 Railway, 389, 30
 Companies, Incorporated, 159
 Insurance, 163
 Commonwealth, Bank, 157
 Railways, 393
 Repayments to States, 148
 Compensation, Miners', 247
 Paid, Railways, 405
 Tramways, 411
 Seamen's, 223
 Workmen's, 222
 Compulsory Training, 35
 Conciliation, Commonwealth, 202
 Other Countries, 203
 State, 200
 Conjugal Condition, 53-56
 Conservatorium of Music, 120
 Consolidated Revenue Account, 121
 Constitution, State, 22
 Federal, 23
 Consumption (*see* Tuberculosis)
 of Coal, 242
 of Food, 467-473
 Co-operative Societies, 160
 Copper, 236
 Copyright, 268
 Corn (*see* Maize).
 Coroners' Courts, 256
 Cost of Living, 494, 502
 Court, Fair Rents, 492
 Courts, Children's, 619
 Law, 251-266
 Licensing, 652
 Cows (*see* Cattle, Dairying, Slaughtering).
 Credit Foncier, 598
 Crimes Act (*see* Law).
 Criminals, 275
 Crops, 563-592
 Cross-breeding of Sheep, 525
 Crown Land, Holdings, 466
 Crown Lands Acts, 435, 441
 Cultivation, Extent of, 465, 563-569
 Curlwaa Irrigation Area, 604
 Currency, 149
 Customs (*see* Commerce).
 Acts, 325
 Revenue, 334
 Dacey Garden Suburb, 649
 Dairy Cattle, 532, 543, 545
 Dairying, Holdings, 464
 Industry, 543, 555
 Dead Letters, 414
 Deaf Mutism, 635
 Deaths, 61, 69, 83, 626
 Debt, Public, 141
 Debts Courts, Small, 255
 Defence, 35-40
 Diamonds, 245
 Discount, Bank, 156
 Diseased Animals Slaughtered, 538
 Discases, 626
 Deaths from various, 69-86
 Industrial, 222
 Seasonal Prevalence, 86
 Distances of Ports from Sydney, 348
 Divorce, 262
 Docks and Slips, 343
 Doctors, 625
 Dogs, 127, 541
 Domestic Training, 105
 Dredging for Minerals, 233
 Drink Bill, 472
 Drought Relief, 599
 Drunkenness, 276
 Dwellings (*see* Housing, Rents).
 Early Closing, Hotels, 652
 Shops, 219
 Education, 89
 Agricultural, 594
 State Expenditure, 90, 94
 Educational Societies, 117
 Eggs, Consumption, 469
 Production, 554
 Eight Hours Act, 218
 Elections, 25, 33
 Electorates, 27
 Electric Light and Power Works, 384
 Lighting, 291, 293, 309
 Elevators, Grain, 575, 594
 Emigration, 46
 Employees, Manufacturing Industry,
 357, 365, 367, 371
 Mining, 228, 243
 Policemen, 269
 Seamen, 345
 Teachers, 91, 99, 101
 Employment, 185, 187.
 Enlistments, A.I.F., 39
 Ensilage, 545, 584
 Entertainment Tax, 133
 Epidemics, 70-74, 626
 Estate Duties, 132
 Estates of Deceased Persons, 182, 260
 Examinations, School, 108
 Exchange Rates, Bank, 156
 Settlement, Bank, 156
 Excise Revenue, 334
 Expeditionary Forces, Australian, 38
 Expenditure, Public, 121, 133
 Agriculture, 594
 Business Undertakings, 134
 Education, 90, 94
 Hospitals and Charities, 609, 623, 631
 Immigration, 147

Expenditure—*continued*.

- Justice, 280
- Local Government, 294–296
- Land, 123
- Loan, 139
- Mining, 227
- Police and Prison Services, 269–280
- Postal Services, 413–418
- Railways, 395, 396
- Roads and Bridges, 32, 139
- State Children Relief, 613
- Sydney Harbour Trust, 122, 134, 139
- Tramways, 409
- Water Supply and Sewerage, 122, 134, 139
- Experiment Farms, 595, 598
- Exports, 326–332
 - Dairy Products, 552
 - Meat, 538
 - Pastoral Produce, 540
- Extradition, 279
- Factories (*see also* Manufacturing and Manufactories), 354
- Factories, Inspection, 220
 - Outdoor Workers, 220
- Fair Rents Court, 492
- F.A.Q. Standard Wheat, 574
- Farmers, Share, 544, 568
- Farms, Number of, 464
- Federal (*see also* Commonwealth).
 - Territory, 9, 13, 35
- Feeble-minded Persons, 635
- Fellmongering, 373
- Ferries, 321
- Fertilisers, 592
- Finance, Loans, 137
 - Local Government, 288
 - Private, 149
 - Public, 121
 - Public Debt, 141
 - Revenue and Expenditure, 121, 133
 - Surplus Revenue, 148
 - Taxation, 127
 - Trust Funds, 136
 - War Expenditure, 148
- Fire Brigades, 175
 - Commissioners, Board of, 310
 - Insurance, 163, 174
- Fires, 176
- Firms, Registration of, 159
- First Offenders, 251, 274
- Fisheries, 559, 562
- Fish Supply, 478
- Flour, Consumption of, 469
 - Mills, 379
- Food and Prices, 467, 499, 504
 - Bill, Weekly, 501
 - Consumption, 467
- Foods, Standardisation of, 473
- Forestry, 556
- Friendly Societies, 162, 636
- Fruit, 475
- Fruit-growing, 588
- Fuel, cost of, 502
- Funds, Charitable, 631
- Gaols, 271
- Gardens, Market, 566, 591
- Gasworks, 307, 384
- Geography, 9, 10
- Geology (*see also* Mining), 11
- Gold, 232
 - Reserves, 155
- Government, 22, 24, 29, 34
 - Business Undertakings, 134, 352, 375
 - Housing Schemes, 648
 - Local, 281
 - Workshops, 352
- Governors, 24
- Grape Vines, 587
- Grasses, Sown, 545, 563, 582
- Grazing, Area used for (*see also* Pastoral Industry), 465
- Grazing, Holdings, 464
- Groceries, Prices (*see also* Food), 490
- Halls, Public, 652
- Harbour Trust, Sydney (*see also* Ports), 348
- Hat and Cap Factories, 383
- Hawkesbury Agricultural College, 596
- Hay, 566, 571, 582
 - Irrigation Area, 604
- Health of Miners, 247
 - Public, 609
- Herds (*see* Dairying),
- High Court of Australia, 265
- Historical Events, 1
- Holdings, Land, 429, 433, 442, 457, 464, 537
 - How used, 464
 - Sheep, 523
 - Suburban, 427
- Homes, Advances for, 649
- Homes for Children, 617
- Honey, 554
- Horses, 521, 532, 535
- Hospital Saturday Fund, 632
- Hospitals, 610, 622
- Hotels, Licensing of, 652
- Hours of Work, 218
- House, Cost of Building, 492
- House of Representatives, 32
- House-rents, 491, 499, 504
- Housing, 646
- Hunter District Water and Sewerage, 314
- Hygiene, Child, 610
- Illegitimacy, 59
- Illegitimate Children, Deaths of, 85
- Immigration, 46, 50, 147, 189
- Imperial Wool Purchase Scheme, 527
- Imports, 326–329
- Imprisonment, 272
- Income Tax, 129, 132
- Index, Historical, 1
 - Mortality, 68
- Indexes, Prices, 482, 489, 499, 504
- Industrial Accidents, 221
- Industrial Arbitration, 257
 - State, 195
 - Commonwealth, 202
 - Other Countries, 203
- Conciliation, 195
 - State, 200
 - Commonwealth, 202
 - Other Countries, 203

- Industrial, Diseases, 222
 - Dislocations, 210
 - Undertakings, Government, 134, 352, 375
 - Unions, 192, 196
- Inebriates, 276
- Infantile Mortality, 63, 84
- Infants, 611, 613
- Infirm, Asylums for the, 626
- Inquests, 256
- Insanity, 79, 633
- Instruction (*see* Education), 163, 174, 176
- Insurance, 163, 174, 176
 - Unemployment, 189
 - Workmen's, 222
- Interest, Bank, 156
 - on Capital—
 - Post Offices, 418
 - Railways, 400
 - Tramways, 409
- Intoxicants, Consumption of, 471
- Invalid Pensions, 644
- Iron, 238, 240
- Irrigation, 430, 601
- Justice, Cost of Administration, 280
- Juvenile Offenders, 611
- Juveniles in Factories, 366
- Kerosene Shale, 241
- Kindergarten Schools, 104
- Labour (*see also* Employment, Unions, Wages)
 - Agencies, 188
 - Agricultural, 592
 - Depot, State, 188
 - Exchanges, 188
 - Settlements, 453
- Land, Acquisition, 420, 442
 - Acts, Crown, 435, 441
 - Alienation, 431, 442
 - Appeal Court, 265
 - Available for Settlement, 443
 - Boards and Courts, 419, 441
 - Closer Settlement, 447
 - Cultivation, 465
 - Divisions, 460
 - Exchange of, 424
 - Leases, 428, 436
 - Occupation of, 434, 436, 455
 - Reserves, 445
 - Resumptions, 445
 - Revenue, 446
 - Revenue and Taxation, 129, 131, 133
 - Sales, 421, 424, 442
 - Selection, 425
 - Unalienated, 443
 - Valuations, 284, 286, 301
 - Western Division, 441
- Lard, Production of, 551
- Law Courts, 251
- Lead, 233
- Leases, Land, 428, 431, 436
- Leather (*see* Tanneries).
- Legal Aid, 265
 - Tender, 149
- Legislative Assembly, 25
 - Council, 22, 24
- Legitimation Act, 59
- Letters, 413
- Letter Telegrams, 416
- Libraries, 118
- Lighthouses, 342
- Liquor, Consumption, 470
 - Drink Bill, 472
 - Licenses, 652
 - Traffic, 653
- Live Stock, 521
- Living, Cost of, 484, 502
 - Wage, 213, 217, 498
- Loans, Local Government, 289, 293, 299, 304
 - Public, 137, 145
- Local Government, 281
- Lord Howe Island, 9, 47
- Lunacy, 633
- Machinery, Agricultural, 592
 - Coal Cutting, 243
 - Mining, 231
 - Pastoral, 536
- Magistrates (*see* Law Courts).
- Mail Services, 414
- Maize, 566, 579
- Malarial Fever, 629
- Manufactories, Bounties, 372
 - Child Labour, 366
 - Classification of, 352
 - Costs of Production, 361
 - Employees, 357, 365, 367, 371
 - General Summary, 351, 357
 - Individual Industries, 372
 - New Industries, 388
 - Output per employee, 364, 385
 - Value of Production, 361
 - Wages, 357, 360, 363
 - Women and Juveniles, 369
- Manufacturing Industries, 351
 - Employment, 185
- Manure, 593
- Markets, Municipal, 293, 474
- Mark Signatures, 55
- Marriages, 53
- Masculinity, 43, 58
- Maternity Allowances, 614
- Matrimonial Causes, 262
- Meat, Consumption of, 468
 - Exports, 538
 - Industry Board, 476, 538
 - Prices, 489
 - Supply, 476, 536
 - Supply Imperial Uses Act, 478
 - Works, 378
- Medical Inspection of School Children, 107, 621
- Medical Practitioners, 116
- Mental Hospitals, 633
- Metals, 230
- Metal Works, 376
- Meteorology, 14
- Metropolis (*see also* Capital, Sydney),
 - Population of, 48
- Migration, 46
- Military Forces (*see also* Defence), 36, 38
- Milk, 543, 545, 549
 - Consumption, 471
 - Supply, 480
- Millet, Broom, 581

- Minerals, 230
 Miners, 228, 243
 Miners' Rights, 225
 Mining Industry, 225
 Ministries, 29, 34
 Minting, 149
 Mitchell Library, 119
 Money (*see also* Coinage and Currency).
 Lenders, Registration, 182
 Orders, 151
 Mortality, Causes, 69
 Friendly Society Experience, 640
 Index of, 68
 Infantile, 63
 Mortgages, 180
 Motor Tax, 130
 Motor Vehicles, 270
 Municipalities, 231, 285
 Municipal Markets, 474
 Murray River Irrigation Scheme, 608
 Murrumbidgee Irrigation Area, 430, 602
 Museums, 118
 Music, Conservatorium of, 120
 Nationality, Shipping, 337
 Natural Increase of Population, 45, 60
 Naturalisation, 52
 Naval Defence, 38
 Navigation of Rivers (*see also* Shipping),
 340
 Necessary Commodities Control, 481
 New South Wales, Area, 419, 460
 Notes, Bank, 150, 153
 Postal, 151
 Noxious Animals, 541
 Nurseries, Forest, 557
 Nurses, 625
 Nursing Associations, 630
 Oatmeal, Consumption of, 469
 Oats, 566, 580
 Observatory, 14
 Occupations, 185
 Factory Workers, 371
 Oil, Kerosene, 241, 245
 Old Age Pensions, 644
 Opal, 246
 Orchards, 566, 588
 Orphanages, 618
 Output, Manufacturing (*see also* Pro-
 duction), 385
 Parcels Post, 413
 Parks, 323, 650
 Parliament, 23, 28, 31
 Pastoral Industry, 521
 Land Leases, 434
 Produce exported, 540
 Pasturage, Area used for, 465
 Pastures Protection, 541
 Patents, 268
 Patients, Hospital, 625
 Mental, 633
 Pensions, 640
 Pigs, 521, 549
 Pilotage, 341
 Police Force, 269
 Pensions, 641
 Population, 41
 Port Jackson, 347
 Ports, Shipping at, 340
 Postal Notes, 151
 Postal Service, 413
 Post Offices, &c., number, 413
 Potatoes, 566, 584
 Consumption of, 469
 Poultry-farming, 464, 554
 Preference to Unionists, 197, 203, 219
 Preferential Voting, 32
 Price Control, 480
 Price Levels, Retail, 499, 504
 Wholesale, 486
 Prices, Coal, 244
 Live Stock, 534
 Meat, 489, 539
 Minerals, 232
 Pastoral Produce, 536
 Potatoes, 585
 Retail, 489, 499, 503
 Wheat, 576
 Wholesale, 483
 Dairy Produce, 555
 Farm Produce, 583
 Index Numbers, 482-489
 Wool, 527
 Primary Producers, 185
 Prisons, 271
 Probate, 260
 Production, 515-520
 Agricultural, 567, 579-583
 Bee-keeping, 554
 Coal, 242
 Dairying, 543
 Factory, 372, 515
 Fruit, 589
 Irrigation Areas, 605
 Manufacturing, 373-388
 Cost of, 361, 364
 Value of, 361
 Mining, 230
 Pastoral, 535
 Poultry Farming, 554
 Tobacco, 585
 Value of, 515
 Volume of, 517
 Wheat, 578
 Wine, 588
 Productive Activity, 518
 Property, Valuation of, 285, 301
 Proportional Representation, 25
 Prospecting, 227
 Public Accounts, 121-126
 Debt, 141, 144, 146
 Finance, 121
 Health, 609
 Instruction Act, 89
 Library, 118
 School System, 89
 Services, 297, 302
 Service Superannuation, 641
 Trust Office, 260
 Works, 30, 294, 297, 302
 Works Account, 124
 Quarantine, 345
 Quarries, 231
 Rabbits, 541
 Racecourse Taxes, 651

- Railways, Government, 389
 Other Countries, 406
 Private, 405
 Service Superannuation, 641
 Working Costs, 1898-1919, 397
 Rainfall, 15, 17, 601
 Rates (*see also* Taxes), 282, 287, 297, 301, 303
 Real Estate Transactions, 179
 Recreation Reserves, 650
 Re-exports, 333
 Referenda, Federal, 34
 Reformatories, 618
 Registers, Shipping, 343
 Registration, Births, Deaths, Marriages, 53
 Relief Funds, 631
 Religions of the People, 656
 Of School Children, 93
 Rents, House, 491, 499, 504
 Index Numbers, 499
 Repatriation, 39, 428
 Representative Government, 22
 Reservoirs, 311
 Returned Soldiers' Settlement, 428
 Revenue, Public, 121, 129, 133
 Agricultural, 594
 Customs and Excise, 334
 Lands, 446
 Local Government, 297
 Railways and Tramways, 399-409
 River Traffic, 340
 Roads, 296, 319
 Rocket Stations, 341
 Routes, Sea, 348
 Rural Industries (*see* Production, Agriculture, Dairying, &c.).
 Industries Board, 599
 Employment, 185
 Settlement, 455
 Training, 105
 Salaries (*see* Wages).
 Saleyards, Homebush, 477
 Salt, Consumption of, 471
 Saturday Half-holiday Act, 219
 Savings Banks—Government, 157
 School, 106
 Sawmills, 375
 Scaffolding and Lifts Act, 221
 Scholarships, 109, 115, 597
 Schools, State (*see also* Education), 89
 Ages of Scholars, 93
 Enrolment and Attendance, 92
 Industrial, 618
 Medical Inspection of, 107
 Private, 102
 Ragged, 107
 Religions of Scholars, 93
 Scientific Societies, 117
 Seamen, 345
 Seamen's Compensation, 223
 Sea Routes, 348
 Seasons, 15
 Seed Wheat, 600
 Senate, 32
 Sentences to Imprisonment, 272
 Settlement, Irrigation, 430, 601
 Land, 420-465
 Land available for, 443
 Sewerage, 298, 306, 311, 316
 Sex Distribution, 43, 58
 Share-farming, 544, 568
 Shearers' Accommodation, 220
 Sheep, 521, 535, 601
 Ship Building, 343
 Shipping, 336
 Shipping Offices, Government, 345
 Vessels imported, 344
 Ships, Sales of, 344
 Ships' Stores exported, 333
 Shipwrecks, 341
 Shires, 281, 286, 300
 Sick Benefit, 637
 Sickness, 69, 622, 625
 Silos, Wheat, 575, 594
 Silver, 233
 Sinking Funds, State Debt, 146
 Slaughtering, 477, 537
 Smelting Works, 376
 Soap Factories, 374
 Social Condition, 609
 Societies, Building, 162
 Educational, 117
 Friendly, 162, 636
 Soldiers (*see* Defence, Repatriation, and Settlement)
 Solicitors, 117, 268
 Spirits, Consumption of, 471
 Drink Bill, 472
 Starr-Bowkett Societies, 162
 State (*see also* Government), 611
 Children, 615
 Steel, 239
 Stock, Public—Quotations, 146
 Street-Trading (Children), 620
 Strikes (*see also* Employment), 210
 Sugar Cane. 566
 Consumption of 470
 Mills, 380
 Refinery, 381
 Suicide, 87
 Superannuation Funds, 641
 Sydney, 283, 289, 293
 Distances from, 348
 Harbour Trust, 348
 Port of, 347
 Shipping entered, 348
 Tanneries, 372
 Tariff, Customs, 325
 Taxation (*see also* Rates), 127, 304
 Tea, Consumption of, 471
 Teachers, 91, 99, 101
 Technical Education, 103
 Telegraphs, 655
 Telephones, 417
 Temperature, 16
 Tenures, Conversion of, 433
 Territorial Divisions, N.S.W., 419, 460
 Theatres, 652
 Tides, 21
 Timber (*see also* Forestry), 658
 Tin, 237

- Tobacco, Consumption, 472
 Factories, 381
 Production, 585
 Totalizator Tax, 131
 Tourist Bureau, 13
 Districts, 13
 Trade (*see also* Commerce)
 Board of, 201, 495
 Marks, 268
 Overseas, 326
 of N.S.W., Ports, 335
 Unions, 192, 194, 196, 202
 Traffic, Railway, 400
 Regulations, 270
 Tramways, Government, 408
 Private, 411
 Transcontinental, Railways, 407
 Trawling Industry, State, 419, 559
 Treasury Bills, 143
 Trustee, Public, 260
 Tuberculosis, 74, 626, 628
 Unemployment, 187
 Unions, Trade, 192, 194, 196, 202
 Employers', 193
 Industrial, 192, 196
 Unionists, Preference to, 197, 203, 219
 University of Sydney, 112
 Valuations, 284, 286, 301
 Vegetables, 475
 Vehicles, Motor, 270
 Venereal Diseases, 629
 Vineyards, 566, 587
 Violence, Deaths from, 87
 Vital Statistics, 53
 Voters, 21, 33
 Wages, 213, 229, 498, 505
 Effective, 514
 Manufacturing Industry, 357
 Seamen, 346
 Wages and Salaries, Police, 269
 Railways, 412
 Teachers, 100
 War Contingents, 38
 European, 38
 Expenditure, 148
 Funds, 632
 Pensions, 643
 Service Homes, 650
 War-time Profits Tax, 133
 Water, Artesian Bores, 606
 Conservation and Irrigation, 601
 Supply, 298, 305, 311
 Weather, 14
 Weights and Measures, 473
 Western Division Lands, 441
 Wharfage, Sydney, 349
 Wheat, 566, 601
 Board, Australian, 576
 Bulk Handling, 575, 594
 Marketing, 574, 576
 Wholesale Prices (*see* Prices).
 Winds, 15
 Wine, Consumption of, 471
 Production, 588
 Wireless Telegraphy, 417
 Wives, Deserted, 611
 Women, Employed in Factories, 369
 Legal Status of, 267
 Wages of, 217
 Wool, 525, 535
 Woollen and Tweed Mills, 382
 Woollscouring, 373
 Work (*see* Employment).
 Workmen's Compensation, 222
 Insurance, 222
 Wrecks, Ships, 341
 Zinc, 233
 Zoological Gardens, 651