THE MANUFACTURING INDUSTRY.

THE progress of the manufacturing industry in Australasia has been somewhat irregular, even in the most advanced states; and although the tabular statement given below shows an increase since 1885 of 94,752 hands in the Commonwealth and 26,623 in New Zealand, a growth proportionately much greater than that of the population, by far the greater part of this extension has taken place during the last seven years. The population of the continent at the present time is not sufficient to maintain industries on an extensive scale, and in past years the field was still further limited by intercolonial tariffs. Now that these barriers have been swept away, and the Australian market secured to a certain extent to the local manufacturer, more rapid progress may reasonably be expected in the manufacturing industry.

The majority of the manufactories of Australasia may be classified as domestic industries—that is to say, industries naturally arising from the circumstances of the population, or connected with the treatment of perishable products; but there are nevertheless a fair number of firmly established industries of a more complex character. A statement of the number of establishments and of the hands employed in Australasia is given below for various years since 1885. The information is obtained annually in the states of the Commonwealth, but only once in every five years in New Zealand:—

Year.	Establishments.		Hands employed.	
	Commonwealth.	New Zealand.	Commonwealth.	New Zealand.
	No.	No.	No.	No.
1885	8,632	1,946	105,265	22,095
1890	8,903	2,254	133,147	25,633
1895	8,247	2,459	133,631	27,389
1900	10,040	3,668	184,160	48,718
1902	11,696	3,668	200,017	48,718

It is interesting to note the extent to which the employment of female labour has increased during late years. In 1897, the females

engaged in the manufactories of the states which comprise the Commonwealth numbered only 26,837 and represented 17·7 per cent. of the total hands employed; in 1902 their number had increased to 45,242 and the proportion to 22·6 per cent. In New Zealand the experience has been similar, from 4,391 in 1895 the number of females increased to 10,624 in 1900, and their proportion to the total hands employed rose from 16·1 per cent. to 21·8 per cent. The increase may have been slightly prejudiced by the fact that the returns for the states were not all compiled on the same basis; still there is sufficient evidence that the employment of female labour is extending, a result borne out also by the information obtained at the Census of 1901 and published in part "Employment and Production" of this volume. The proportion of females employed is largest in Victoria, where there were 23,405 out of a total of 73,063 persons, equal to 32 per cent.; South Australia followed with 19·20 per cent., and Western Australia had the lowest proportion with 11·11 per cent. The following table shows the number of males and females employed in the Commonwealth in each year since 1897 :—

Year.	Hands Employed.	
	Males.	Females.
1897	124,938	26,837
1898	130,389	28,221
1899	139,755	31,707
1900	147,652	36,508
1901	154,000	39,664
1902	154,775	45,242

Manufactories of Victoria.

Victoria was the state which first displayed activity in the manufacturing industries. In 1885 there were employed in factories, properly so called, 49,297 hands, and in 1889 there were 57,432 hands; but the number fell away to 41,729 in 1893. Since that year there has been an increase to the extent of 31,334 hands. Of the 73,063 workers employed in 1902, 3,711 may be said to have found occupation in connection with domestic industries for the treatment of perishable produce for immediate use; 32,617 in other industries dependent

upon the natural resources of the country, and 36,735 in industries the production from which comes into competition with imported goods :—

Year.	Establishments.	Males.	Females.	Total Hands employed.
1885	2,813	41,542	7,755	49,297
1886	2,770	39,453	6,320	45,773
1887	2,854	42,019	7,065	49,084
1888	2,975	47,335	7,153	54,488
1889	3,137	49,105	8,327	57,432
1890	3,104	47,596	8,773	56,369
1891	3,123	43,627	10,786	54,413
1892	2,934	35,726	9,689	45,415
1893	2,659	32,209	9,520	41,729
1894	2,614	32,638	10,681	43,319
1895	2,724	35,406	12,240	47,646
1896	2,809	37,728	12,669	50,397
1897	2,759	38,620	14,030	52,650
1898	2,869	40,631	14,147	54,778
1899	3,027	44,041	16,029	60,070
1900	3,097	45,794	18,413	64,207
1901	3,249	47,059	19,470	66,529
1902	4,003	49,658	23,405	73,063

The number of factories and industrial establishments of various sizes, with the number of hands employed in each class, during 1902, will be found below :—

Number of Hands employed by each Establishment.	Number of Establishments.	Total number of Hands.
Under 4 hands	525	*1,647
4 hands	398	1,592
5 to 10 hands	1,629	11,303
11 to 20 ,, ...	726	10,562
21 to 50 ,, ...	467	14,361
51 to 100 ,, ...	148	10,238
101 hands and upwards	110	23,360
Total.....	4,003	73,063

* Includes 389 hands employed in creameries.

Manufactories of New South Wales.

The manufacturing industries of New South Wales do not cover so wide a field as those of Victoria, nor do they afford employment for as many persons. For the year 1902 the two states compare as follows :—

State.	Establishments.	Hands employed.		Total.
		Males.	Females.	
Victoria	4,003	49,658	23,405	73,063
New South Wales ..	3,396	54,326	11,943	66,269

In Victoria, therefore, there were employed 11,462 females more than in New South Wales, and 4,668 fewer males. In order to trace the progress of the manufacturing industry in New South Wales during the last eleven years, it is necessary to adjust the figures for the five years 1891–95, because in 1896 a change was made in the scope of the returns by the inclusion of dressmakers and milliners who were not previously counted as factory hands. Certain other small changes were made, the object of which was to secure uniformity with Victoria. Making the necessary adjustments, the figures since 1891 are as follows :—

Year.	Establishments.	Males.	Females.	Total Hands employed.
1891	3,056	43,203	7,676	50,879
1892	2,657	42,909	5,007	47,916
1893	2,428	37,832	4,225	42,057
1894	3,070	41,070	5,432	46,502
1895	2,723	41,546	6,484	48,030
1896	2,928	42,908	6,932	49,840
1897	2,826	44,333	7,106	51,439
1898	2,839	44,673	7,845	52,518
1899	2,912	47,063	8,583	55,646
1900	3,077	50,516	10,263	60,779
1901	3,367	54,556	11,674	66,230
1902	3,396	54,326	11,943	66,269

Up to the year 1891 there had been a fairly regular increase in the employment afforded by the factories of the state; in the following year, owing to causes already discussed in another part of this volume, there was a decrease in the number of persons employed, and, from 50,879 in 1891, the number had fallen to 42,057 in 1893—the year of the bank failures. In the following years there was a rapid recovery, so that the employment in 1897 was greater than in 1891, and the year 1902 showed an improvement of 15,390 during the eleven years since 1891, and an increase of 24,212 over the figures of 1893.

Of the 66,269 workers employed in 1902, 31,693 found employment in connection with industries the products from which come into competition with imported goods, 3,855 were engaged in domestic industries for the treatment of perishable produce required for immediate use, and 30,721 in other industries called into existence by the natural resources of the state.

The number of factories and industrial establishments of various sizes, with the number of hands employed in each class during 1902, were as follows:—

Number of Hands employed by each Establishment.	Number of Establishments.	Total number of Hands.
Under 4 hands	574	1,429
4 hands	335	1,340
5 to 10 hands	1,228	8,465
11 to 20 ,,	593	8,794
21 to 50 ,,	438	13,948
51 to 100 ,,	123	8,859
101 hands and upwards	105	23,434
Total	3,396	66,269

Manufactories of Queensland.

In Queensland systematic statistics relating to manufactories have been taken only since 1892. Until the year 1900, no details were available with reference to the employment of males and females, and the numbers for previous years have therefore been estimated. The figures for the last ten years are as follows:—

Year.	Establishments.	Persons employed.		
		Males.	Females.	Total.
1893	1,391	12,434	2,000	14,434
1894	1,323	13,124	2,100	15,224
1895	1,397	16,128	2,600	18,728
1896	1,332	17,013	2,720	19,733
1897	1,682	19,100	3,060	22,160
1898	1,864	20,830	3,340	24,170
1899	2,172	23,440	3,760	27,200
1900	2,019	23,138	3,766	26,904
1901	2,062	23,431	3,692	27,123
1902	1,977	17,595	3,363	20,958

The value of materials used in Queensland industries in 1902 was £4,180,000, the wages paid £1,598,400, and the value of production £7,417,000; the value added to materials in the process of manufacture

was therefore £3,237,000. Owing to the adversity of the season and from other causes the year 1902 was by no means a favourable one, and taking this fact into consideration in conjunction with the smallness of the population and the large inflow of imported goods, the output of the factories must appear large. Queensland possesses important sugar-refining and meat-preserving industries, the combined output of which amounts to slightly over £3,093,000, or more than 40 per cent. of the total production of all the manufacturing industries of the state. The figures relating to these two industries are worthy of special attention, and are dealt with at some length in another place.

Manufactories of South Australia.

In South Australia returns were obtained from manufactories in 1892, but in the following three years no information was obtained; since 1895, however, the returns have been collected annually. The following are the available figures :—

Year.	Establishments.	Males.	Females.	Total Hands employed.
1892	815	9,642	1,847	11,489
1896	767	10,974	1,811	12,785
1897	768	10,930	2,027	12,957
1898	766	12,296	2,085	14,381
1899	841	12,941	2,214	15,155
1900	1,036	14,800	2,859	17,659
1901	1,129	14,881	3,442	18,323
1902	1,325	16,595	3,943	20,538

Manufactories of Western Australia.

In Western Australia, the manufacturing industry has advanced very rapidly in importance, and the number of hands employed now exceeds eleven thousand. The following are the figures for the last six years :—

Year.	Establishments.	Males.	Females.	Total Hands employed.
1897	413	8,683	408	9,091
1898	485	8,521	613	9,134
1899	476	8,641	766	9,407
1900	507	9,440	880	10,320
1901	537	10,238	1,062	11,300
1902	575	10,420	1,303	11,723

Manufactories of Tasmania.

Tasmania has several long-established industries, but until 1902 little information was available concerning them. In that year, however, a systematic attempt to gather complete statistics was made, and this accounts for the apparently large increase in the number of hands shown to be employed as compared with those for previous years given in former issues of this volume :—

Establishments	420
Hands—Males	6,181
Females	1,285
Total	7,466

Manufactories of New Zealand.

In New Zealand, information regarding the manufacturing industry is obtained only at the quinquennial census. The following statement shows the progress made since 1886 :—

Year.	Establishments.	Hands employed.		
		Males.	Females.	Total.
1886	1,946	19,601	2,494	22,095
1891	2,254	22,664	2,969	25,633
1896	2,440	22,945	4,391	27,336
1901	3,668	38,094	10,624	48,718

The foregoing figures show very marked progress during the last five years, and from an analysis of the returns it appears that this progress has been general amongst all classes of industries.

Value Added by Processes of Manufacture or Treatment.

Statistics of a more or less exhaustive character are taken annually in all the states in order to show the condition and progress of the manufacturing industry ; but it is only at certain periods, usually on the occasion of a general census, that details of the output of factories are obtained. In New South Wales for the year 1901, and in New Zealand for the previous year, elaborate returns were obtained of the

output of all branches of manufacturing industries, the value of materials operated on, wages paid, and other particulars. From the information gathered some interesting deductions may be made. As regards New Zealand, it may be remarked that the totals do not agree in all cases with those shown in the New Zealand Year Book, additional information having been supplied by the Statistician of that colony to complete the values of raw materials, wages and output. The following are some of the salient features of the returns :—

	New South Wales.	New Zealand.
	£	£
Raw materials and other materials worked up	12,597,982	9,166,787
Fuel	482,428	243,000
Wages	4,867,917	3,511,590
Value of goods manufactured and work done (including custom work and repairing)	22,820,839	16,339,450

These figures do not take into consideration the returns from butter and cheese factories, the production from which is included elsewhere. From the figures just given the following values are obtained :—

	New South Wales.	New Zealand.
	£	£
Value added to materials and fuel during the process of production	9,740,429	6,929,663
Percentage added to value of materials and fuel	74·5	73·6
Value added to materials, fuel, and wages	4,872,512	3,418,073
Percentage added to materials, fuel, and wages	27·1	26·5

A close examination of the returns of the two countries would probably disclose some discrepancies in details, but these are unavoidable in a general statistical review of the manufacturing operations of separate countries compiled by different persons. Taken as a whole, however, the returns of New South Wales and New Zealand are in very close agreement. The margin above the cost of materials, fuel, and wages includes the interest on land and buildings where these are the property of the manufacturer; repairs and renewals to buildings and fixtures; rent, where the buildings, etc., are not the property of the manufacturer; interest on capital represented by machinery; renewals and depreciation in machinery and conveyance plant; advertising; and insurance, rates, and taxes not in the nature of excise duty or income tax. These, from a close analysis of the returns for New South Wales were found to be represented during the year 1901 by a total sum of £1,492,000. Assuming that approximately the same proportion

of expenses obtains in New Zealand, and taking the two countries together, the following results are arrived at:—

	£
Value of Materials Used	21,764,769
Fuel	725,428
Wages	8,379,507
Miscellaneous Expenses	2,472,367
	33,342,071

As the total output was valued at £39,160,289 there remained, when the foregoing charges were met, the sum of £5,818,218, which provides for the interest on capital embarked in the business, and trade losses and profits. This latter figure represents 17·5 per cent. of all the items included in cost of production, or 14·9 per cent. of the value of the production itself. In other words, for every hundred pounds worth of goods produced in the factories of the two countries, the following were the proportions of the various elements included in the price of the goods as they left the manufactories:—

Materials and Fuel	57·4
Wages	21·4
Miscellaneous Expenses	6·3
Interest, Provision for Trade Losses, Profits, &c.	14·9
	100·0

The voluminous returns of the industrial census of the United States for 1900 give some very interesting figures relating to the manufacturing industries of that country:—

	Million Dollars.
Value of Materials used, including Fuel	7,345·4
Wages	2,726·0
Miscellaneous Expenses	1,027·7
Interest, Provision for Trade Losses, Profits, &c.	1,905·3
Total Output	13,004·4

The proportion of total output borne by each of the above items is given below:—

Value of Materials used, including Fuel	56·5
Wages	21·0
Miscellaneous Expenses	7·9
Interest, Provision for Trade Losses, Profits, &c.	14·6
	100·0

It will be seen that the Australian figures are in close agreement with those of America, nor is this agreement a matter of mere coincidence, for it is characteristic of the great majority of the industries making up the total, and shows that the business of manufacturing tends everywhere to fall into the same lines.

Interesting statistics were obtained in 1891, and again in 1901, of the value of materials used, and of the output by the manufactories of Victoria. The following are the official figures for the two periods, excluding the returns from butter and cheese factories :—

1890–1.

	£
Value of output	22,227,909
Value of materials used or operated on	11,902,089
Value added in process of treatment or of manufacture	£10,325,820

1900.

	£
Value of output	16,948,951
Value of materials used or operated on	10,104,131
Value added in process of treatment or of manufacture	£6,844,820

It will be seen that there has been an apparent decline in the value of production of not less than £3,481,000. There are, however, omissions to be allowed for. Taking these into consideration, there is still a difference in favour of 1890 to the extent of about £3,000,000.

In order to make a comparison of the returns for the two years on the same basis, the figures relating to those industries not common to each have been excluded from the statement given in the following pages. From the figures thus obtained it is found that as regards industries of a precisely similar character there was a net increase for the ten years in the number of persons employed of 853—there being an increase of 3,211 in the female workers and a decrease of 2,358 in the males. The horse-power employed in the factories of the state increased from 26,307 to 26,921 during the same period. These increases, taken in conjunction with the fact that there has not been any great decline in the value of materials used or operated on, would seem to point to the necessity of considerable caution in dealing with the Victorian official figures. For the year 1890, it is impossible to review the returns except in regard to a few omissions from the value of materials operated on, but these can be supplied with a fair approximation to the truth. Another important omission is that of the value

of fuel. Fuel is of course a considerable item in the value of materials consumed in production, and in the following figures an estimate of the value of fuel used has been made. The figures for 1900 also require attention. On analysing them, and comparing the results with the extremely comprehensive statistics of New Zealand and New South Wales, as will be hereafter explained, the author came to the conclusion that the output of certain large classes of industries was greatly understated. In justice to the Victorian office it must be stated that the correctness of the published figures is strongly maintained, and, since no appeal can be made to the original documents, as these have been destroyed, the question can be argued only on the probabilities of the case. Allowing reasonable rates for wages and fuel in 1890 and 1900, the following totals and percentages are obtained :—

	1890-1.	1900.
Materials used	£10,760,110	£9,749,549
Fuel	289,000	262,000
Wages	3,980,000	3,884,362
Value of output	20,218,070	16,315,171
Do added to materials and fuel during the process of production	9,168,960	6,303,622
Percentage added to value of materials and fuel	82·98	62·96
Value added to materials, fuel and wages	5,188,960	2,419,260
Percentage added to value of materials, fuel, and wages	34 53	17·41

If these percentages be compared with those obtained for the United States, New South Wales and New Zealand, the figures will stand as follows :—

	Victoria.		United States.	New South Wales.	New Zealand.
	1890-1	1900			
Percentage added to value of materials and fuel	82·98	62·96	77·04	74·5	73·6
Percentage added to value of materials, fuel, and wages	34·53	17·41	29·12	27·1	26·5

The miscellaneous expenses of production in New Zealand and New South Wales average about 8 per cent. of the cost of materials, fuel, and wages, and in America they amount to 10 per cent.; if the lower of these figures be allowed in the case of Victorian factories, the

following would represent the margin for interest, provision for trade losses, profits, etc. :—

	per cent.
Victoria, 1890–1	24·6
Do 1900	8·7
New South Wales	17·4
New Zealand	17·5
United States	17·2

It does not appear at all probable that in comparison with the other states the margin for profit, etc., in Victoria for the year 1900 was so small as the foregoing figures would make it appear, and the author has therefore ventured to substitute his own figures for the Victorian official compilation. The new figures will bear comparison with those obtained in the state ten years previously, and will show that the additional labour employed and the vast improvement in machinery effected in the ten years have not been without satisfactory results.

It has been considered necessary to raise the gross output shown in the official figures from £16,948,951 to £19,210,100, and the net output —that is to say, the excess of gross output over the value of materials, fuel, and labour—from £6,844,820 to £8,169,809, or by £1,324,989. The figures for the two years, which include all industries except butter and cheese factories, and not merely those shown on the preceding page, would then be as follows:—

	1890–1.	1900.
	No.	No.
Number of establishments	3,104	3,097
Horse-power	29,174	33,410
Persons employed—Males	47,596	45,794
Females	8,773	18,413
Total	56,369	64,207
	£	£
Value of materials treated, including fuel	13,077,089	11,040,291
Amount of wages paid	*4,240,000	*4,233,000
Total value of output	22,227,909	19,210,100
Value added to materials during process of manufacture	9,150,820	8,169,809

* Approximate.

As the author has not had the advantage of being able to use the original returns, the figures just given are advanced with considerable diffidence, and it is open to anyone who prefers the authority of the Victorian office to use its figures in place of the approximate estimates herein given. The estimated value added in the process of manufacture and treatment for each state will be found on page 956.

Classes of Industry.

The information in regard to industrial establishments is not given by the various statistical departments in precisely the same form, but the following classification which was agreed upon at a conference of statisticians held in 1901, is observed in the majority of the states. The table shows the number of hands, male and female, employed in 1902 :—

Class of Industry.	Commonwealth.		New Zealand.		Australasia.	
	Males.	Females.	Males.	Females.	Males.	Females.
Treating Raw Materials, the Product of Pastoral Pursuits, &c.	7,661	54	2,357	7	10,018	61
Oils and Fats, Animal, Vegetable, &c.	1,681	72	239	8	1,920	80
Processes in Stone, Clay, Glass, &c.	8,039	88	1,146	1	9,185	89
Working in Wood	16,278	32	7,104	10	23,382	42
Metal Works, Machinery, &c.	38,323	91	6,404	13	44,727	104
Connected with Food and Drink, etc.	28,772	4,932	6,760	679	35,532	5,611
Clothing and Textile Fabrics and Materials	16,876	34,714	5,874	8,546	22,750	43,260
Books, Paper, Printing, and Engraving	14,076	3,403	2,960	662	17,036	4,065
Musical Instruments	199	13	11	.....	210	13
Arms and Explosives	145	151	21	84	166	235
Vehicles and Fittings, Saddlery, and Harness, etc.	7,660	67	2,197	40	9,857	107
Ship and Boat Building, etc.	2,014	12	393	81	2,407	93
Furniture, Bedding, and Upholstery	5,031	399	1,382	73	6,413	472
Drugs, Chemicals, and By-products	1,711	484	174	33	1,885	517
Surgical and other Scientific Instruments	105	21	.....	.....	105	21
Jewellery, Timepieces, and Plated Ware	1,082	39	19	.....	1,101	39
Heat, Light, and Power	3,440	86	657	150	4,097	236
Leatherware, not elsewhere included	353	70	19	3	372	73
Minor Wares, not elsewhere included	1,329	514	377	234	1,706	748
Total	154,775	45,242	38,094	10,624	192,869	55,866

Distributing the above total for the Commonwealth amongst the various states, the results shown in the following table are obtained. A comparison of the information now published in regard to Tasmania with that of former years would convey the idea that a large increase of employment had occurred, but the apparent increase is due to the fact that in 1902, for the first time, exhaustive information was obtained as to the development of the manufacturing industries.

Class of Industry.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.
Treating Raw Materials, the Product of Pastoral Pursuits, &c.	3,187	2,837	438	876	68	309
Oils and Fats, Animal, Vegetable, &c.	533	613	148	317	75	67
Processes in Stone, Clay, Glass, &c.	3,293	2,934	466	526	595	313
Working in Wood	5,175	3,714	2,354	417	3,631	1,019
Metal Works, Machinery, &c.	13,724	9,872	3,589	7,334	2,175	1,720
Connected with Food and Drink, &c.	11,244	11,325	5,917	2,642	1,283	1,293
Clothing and Textile Fabrics and Materials	14,357	25,589	3,840	4,568	1,647	1,589
Books, Paper, Printing, and Engraving	5,936	6,551	2,001	1,600	908	483
Musical Instruments	202	.. .	1	9	....	....
Arms and Explosives	12	284	....	....	....	.. ..
Vehicles and Fittings, Saddlery, and Harness, &c.	2,135	3,001	877	858	537	229
Ship and Boat Building, &c.	1,474	174	163	114	76	25
Furniture, Bedding, and Upholstery	2,019	1,871	542	528	283	187
Drugs, Chemicals, and By-products	636	1,256	55	142	67	39
Surgical and other Scientific Instruments	65	44	17	....	....	....
Jewellery, Timepieces, and Plated Ware	243	616	34	139	47	42
Heat, Light, and Power	1,545	1,067	354	187	298	75
Leatherware, not elsewhere included	97	276	38	....	12	....
Minor wares, not elsewhere included	392	949	124	281	21	76
Total	66,269	73,063	20,958	20,538	11,723	7,466

Industries treating Raw Materials the Product of Pastoral Pursuits.

A consideration of the details relating to the various classes of industry discloses some very interesting features. The hands employed in the industries treating raw material, the product of pastoral pursuits, arranged according to the principal groups, were as follow :—

Class of Industry.	Commonwealth.		New Zealand.		Australasia.	
	Males.	Females.	Males.	Females.	Males.	Females.
Boiling-down and Tallow Refining	341	7	75	....	416	7
Tanneries	5,282	17	1,957	6	7,239	23
Wool-scouring and Fellmongering						
Chaff-cutting	1,978	30	265	1	2,243	31
Grass-seed Dressing	....	....	60	....	60	....
Compressed Forage.....	60	....	....	....	60	....
Total	7,661	54	2,357	7	10,018	61

The horse-power of the machinery in use in the Commonwealth was 6,933, and in New Zealand 2,099, the value of the machinery and plant being £532,803 and £128,988 respectively.

It is difficult to say if the figures for all the states are compiled upon the same basis. In New South Wales and Victoria wool-scouring works on sheep stations are not included, as the hands are employed in such works only during the shearing season, and frequently for not more than a few weeks. In Queensland there are no establishments classed as tallow-refineries, tallow being incidentally extracted in the process of meat-preserving, and the persons engaged therein are included in the latter industry.

The number of hands employed in treating raw material, the product of the pastoral industries, varies greatly from year to year, and, owing to the decrease in the number of live stock depastured, is much less than in former years. The following is a distribution of the total persons employed in the various states of the Commonwealth :—

Class of Industry.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.
Boiling-down and Tallow Refining	207	99	4	38	....	....
Tanneries	1,115	1,635	218	298	43	101
Wool-scouring and Fellmongering	1,610		200	79	....	....
Chaff-cutting	255	1,103	16	401	25	208
Compressed Forage	....	....	....	60	....	....
Total	3,187	2,837	438	876	68	309

Tanning, fellmongering, and wool-scouring afford the largest amount of employment amongst industries of this class, and the details show the goods treated or manufactured in tanneries during the latest year available.

State.	Number Tanned.			
	Hides.	Skins.		
		Calf.	Sheep.	Other.
New South Wales	433,299	41,565	3,282,600	32,040
Victoria	422,224	177,480	247,333	65,833
Queensland	167,000	.....	132,221	.....
Western Australia	10,730	.....	6,100	.....
Tasmania	*108,720	.....	.....	.....
New Zealand	178,075	.....	272,775	.....

* Includes skins.

The foregoing information is somewhat imperfect, but will serve to convey an idea of the development of the industry in each state.

The quantity of wool washed in ordinary wool-scouring establishments cannot be stated with exactitude, but the following figures will give some idea of the extent of the industry. The figures represent the weight of clean wool exported from each state or locally consumed, in accordance with the latest annual returns; the amount of wool washed in Victoria appears small, but it is given on the authority of the Customs returns of that state.

	lb.
New South Wales	30,014,656
Victoria	2,620,877
Queensland	12,219,040
South Australia	2,626,327
Western Australia	447,916
New Zealand	23,366,416

Oils and Fats, &c.

There were 2,000 persons employed in factories dealing with oils and fats, the numbers in each industry being as follows:—

Class of Industry.	Commonwealth.		New Zealand.		Australasia.	
	Males.	Females.	Males.	Females.	Males.	Females.
Oil and grease	233	10	10	.....	243	10
Soap and candles	1,424	62	224	8	1,648	70
Glue	24	.....	5	.....	29	.....
Total	1,681	72	239	8	1,920	80

The horse-power of the machinery used in the Commonwealth was 1,812, and in New Zealand 428, and the value of the machinery and plant was £467,904 and £44,203 respectively.

Of the 1,753 hands employed in the Commonwealth, 1,486 were engaged in soap and candle factories. The employment afforded by other industries was but small, as will be seen from the next table.

Class of Industry.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.
Oil and grease	108	127	8	.....	.....	.....
Soap and candles	425	486	140	293	75	67
Glue	.....	.....	.....	24	.....	.....
Total	533	613	148	317	75	67

In view of the important dimensions attained by the soap and candle-making industry in the several states, the following information regarding the output during the year 1902 may be interesting; no information is available as to the production of candles in Queensland :—

State.	Soap manufactured.	Candles manufactured.
	cwt.	lb.
New South Wales	175,822	2,965,766
Victoria	150,698	5,533,472
Queensland	63,522	.....
Western Australia	22,782	1,866,725
Tasmania	15,020	1,081,920
New Zealand	92,321	2,989,280

Stone, Clay, Glass, &c.

The industries which are comprised in this class deal with the various processes in stone, clay, and glass, and are each year assuming larger proportions. Brick and tile-making is far the most important, sixty-one out of every hundred employed being engaged therein.

Class of Industry.	Commonwealth.		New Zealand.		Australasia.	
	Males.	Females.	Males.	Females.	Males.	Females.
Asphalt	48	.....	.....	.....	48	.....
Bricks and Tiles	4,740	75	838	.....	5,578	75
Glass (including Bottles)	948	5	9	.....	957	5
Glass (Ornamental)	309	1	7	.....	316	1
Lime, Plaster, and Cement	890	1	184	.....	1,074	1
Marble and Slate	217	1	.....	.....	217	1
Modelling, &c.	116	.....	.....	.....	116	.....
Pottery and Earthenware	189	.....	.....	.....	189	.....
Stone-dressing	549	5	81	.....	630	5
Other Industries	33	.....	27	1	60	1
Total	8,039	88	1,146	1	9,185	89

The horse-power of machinery employed in the Commonwealth was 5,784, and in New Zealand 1,166, the value of the machinery and plant being £674,678 and £68,952 respectively.

The hands employed in each industry for the different states are shown below. Those engaged in the manufacture of pottery and earthenware can be given only for New South Wales and South Australia; in the other states they are included with brick and tile makers.

Class of Industry.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania
Asphalt	48	.....	.....	.....	.....	.....
Bricks and Tiles	1,973	1,451	329	208	485	279
Glass (including Bottles)	280	610	.....	63	.....	.....
Glass (Ornamental)	145	165	.....	.....	.....	.....
Lime, Plaster, and Cement	396	265	37	67	00	26
Marble and Slate	148	.....	70	.....	.....	.....
Modelling, &c.	45	61	.....	.....	10	.....
Pottery and Earthenware	155	.....	.....	34	.....	.....
Other Industries	.....	.....	30	.....	.....	3
Stone Dressing	103	382	.....	64	.....	5
Total	3,293	2,934	466	526	595	313

The term "asphalt" is popularly applied to tarred stone and screenings, but the asphalt workers referred to in the foregoing table are engaged in processes connected with the preparation for market of Trinidad and other asphalts.

The manufacture of pottery is generally associated with brick-making, and in the following table the products of brickyards and potteries for the year 1902 are shown together.

State.	Number of bricks and fire-bricks made.	Value of—	
		Pipes and tiles made.	Pottery, &c., made.
		£	£
New South Wales	180,727,000	77,626	*
Victoria	90,545,280	71,074	27,289
Queensland	15,241,165	13,471	*
Western Australia	37,721,897	.....	.....
Tasmania	6,873,936	4,212	*
New Zealand	41,290,316	27,335	7,475

* Included with Pipes and Tiles.

Working in Wood.

The persons employed in these industries numbered 23,424, the largest employment being afforded by saw-mills. Owing to the lack of uniformity in the statistics of the various states it is impossible to state the strength of the hands in the various industries, but this has been done as far as practicable.

Class of Industry.	Commonwealth.		New Zealand.		Australasia.	
	Males.	Females.	Males.	Females.	Males.	Females.
Boxes and Cases	183	.....	.....	.....	183	.....
Cooperage	15,664	30	137	1	22,611	38
Joinery			5	.....		
Saw-mills			6,805	7		
Wood Turning and Cork Cutting.	266	2	157	2	423	4
Other Industries	165	.....	.....	.....	165	.....
Total	16,278	32	7,104	10	23,382	42

Machinery is largely used in these industries, although not of a very valuable character. The horse-power of that employed in the Commonwealth was 18,717 and in New Zealand 9,097, the values being £1,524,662 and £425,695 respectively.

The succeeding table shows the distribution of employment in the various states of the Commonwealth. The figures relating to saw-mills and joinery appear slightly misleading; this is due to the fact that the returns for the different states are not compiled on the same basis. In Western Australia the joiners are included with workers in saw-mills, and in New South Wales a number of them are also included with the saw-mill employees. In South Australia no information is given concerning them, although there must be a considerable number. Apparently New South Wales is the only state where establishments are engaged exclusively in the manufacture of boxes and packing-cases, in the remaining states this industry is combined with some other branch of wood-working.

Class of Industry.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.
Boxes and Cases	183	.....	.....	.....	.....	.....
Cooperage	210	90	53	56	3,631	3
Joinery	777	1,949	416	.....		58
Saw-mills	3,930	1,467	1,855	270		929
Wood Turning and Cork Cutting.	75	173	.....	20	.....	.....
Other Industries	.....	35	30	71	.....	29
Total	5,175	3,714	2,354	417	3,631	1,019

There is no uniformity in the details published by the various states regarding saw-mills; but the information as to the quantity of timber roughly sawn for the latest year available is given below.

	Square feet, 1 inch thick.
New South Wales	90,308,834
Victoria	40,494,660
Queensland	72,478,971
Western Australia	124,005,005
New Zealand	261,583,518

The figures for New South Wales show a great falling off compared with those for 1900, when the quantity operated on was returned as 168,440,000 feet.

Metal Works, Machinery, &c.

Works connected with the treatment of metals, manufacture of machinery, agricultural implements, and railway rolling stock form a large and growing class of industry. The grouping given below is not by any means satisfactory. Persons engaged in the various processes connected with the extraction of gold from gold-bearing stone are in a sense just as much entitled to be classified in the following tables as those concerned in the reduction of silver, lead, or copper ores. The determination of what constitutes an establishment classifiable as a work or factory is by no means clear. As regards works for the extraction of metals from their ores, the determining factor seems to be the degree of intricacy involved in the process of reduction; and whereas a quartz battery would not be called a factory or work, an establishment using a cyanide plant might be so classified. The distinction is not very logical, but as it has long obtained in these states it is retained here.

Class of Industry.	Commonwealth.		New Zealand.		Australasia.	
	Males.	Females.	Males.	Females.	Males.	Females.
Agricultural Implements	1,522	9	584	2	2,106	11
Brass and Copper	676	2	.....	.....	676	2
Cutlery	76	1	2	.....	78	1
Galvanized Iron	1,276	9	261	.....	1,537	9
Engineering, Ironworks and Foundries	17,915	30	3,392	10	21,307	40
Lead Mills	69	1	.....	.....	69	1
Railway Carriages	365	1	.....	.....	365	1
Railway and Tramway Workshops	7,614	21	1,626	.....	9,240	21
Smelting	6,656	.....	.....	.....	6,656	.....
Stoves, Ovens, and Ranges	267	1	193	.....	460	1
Tinsmithing	1,014	2	336	1	1,350	3
Wireworking	439	7	.....	.....	439	7
Other Metal Works	434	7	10	.....	444	7
Total	38,323	91	6,404	13	44,727	104

In these industries machinery is very extensively used. The horse-power of the machinery in use in the Commonwealth was 21,192 and in New Zealand 2,780, the values being £3,394,973 and £317,072 respectively.

In considering this and the subsequent tables, several difficulties in making comparisons will be met with. In Queensland, for example, all metal works, except smelting, are grouped in the one line, which is also the case in Western Australia. In Queensland and Tasmania no hands are shown as being employed in the manufacture and repairs of rolling stock; this, of course, is incorrect, for though little manufacturing may be carried on, all the states make their own repairs. In Victoria 1,351 hands are shown as employed in railway carriage and rolling-stock manufacture and repairs as compared with 4,050 in New South Wales. The employment afforded in railway workshops is chiefly in the nature of repairs, but locomotives, passenger carriages, and goods waggons are built in each state, and it is evident that the repairs in the former state are not on such an extensive scale as in the latter. The number of hands set down as employed in the manufacture of agricultural implements in New South Wales is only 82, few establishments devoting themselves entirely to this business, the manufacture of implements being usually associated with ironworking generally. Included in the 610 workers in tinsmithing in South Australia are a number of plumbers and persons engaged in the manufacture of stoves and ovens. New South Wales and South Australia possess smelting works on a large scale, affording employment to 2,558 hands in the first-named state, and to 1,768 in the latter. The chief smelting works of New South Wales are situated at Cockle Creek, near Newcastle, and at Dapto, in close proximity to the coal-fields. The chief ores treated are copper, tin, silver, and lead, partly the production of the state itself, and partly of Tasmania, South Australia, Western Australia, Queensland, and New Caledonia. The smelting works of South Australia are situated at Port Pirie, and deal with silver and lead ore from Broken Hill. The number of hands employed in each state is shown in the following table:—

Class of Industry.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.
Agricultural Implements	82	789	.....	559	40	61
Brass and Copper	162	516	.....	.....	.....	.....
Cutlery	17	60	.....	.....	.....	.....
Galvanized Iron	379	823	.....	83	.....	.....
Engineering, Ironworks and Foundries	5,547	4,975	3,254	2,809	1,040	320
Lead-mills	14	56	.....	.....	.....	.....
Railway Carriages	366	.....	.....	.....	.....	.....
Railway and Tramway Workshops	3,684	1,351	.....	1,505	1,095	.....
Smelting	2,558	732	335	1,768	.....	1,263
Stoves and Ovens	148	120	.....	.....	.....	.....
Tinsmithing	333	.....	.....	610	.....	73
Wireworking	258	188	.....	.....	.....	.....
Other Metal Works	176	262	.....	.....	.....	3
Total	13,724	9,872	3,589	7,334	2,175	1,720

Industries connected with Food and Drink.

The industries connected with food and drink afford employment for a large number of hands, the distribution into detailed groups being as shown in the following table. The figures for the most part afford their own explanation. Included under the head of cornflour, oatmeal, and arrowroot are, in the case of Victoria, a small number of hands making macaroni, and some starch makers; these last are few in number, and it was not found possible to exclude them from the persons employed in making farinaceous foods, otherwise they could have been classed elsewhere. Owing to an arrangement between the statistical offices of New South Wales and Victoria, factories dealing with milk products have been included in the list of manufactories, although they cannot rightly be considered as such.

Class of Industry.	Commonwealth.		New Zealand.		Australasia.	
	Males.	Females.	Males.	Females.	Males.	Females
Bacon Curing	675	7	185	11	860	18
Butter Factories	2,782	96	1,165	23	3,947	119
Cheese Factories						
Condensed Milk	31	6	17	16	48	22
Meat Preserving	2,937	131	2,369	51	5,306	182
Biscuits	3,073	1,387	454	213	3,685	1,747
Confectionery			158	147		
Cornflour, Oatmeal, &c.	546	296	19	10	565	306
Flour Mills	2,404	25	513	2	2,917	27
Jam and Fruit Canning	2,375	1,153	88	84	2,553	1,293
Pickles, Sauces, and Vinegar			90	61		
Sugar Mills	2,296	....	....	....	2,296	....
Sugar Refineries	955	5	256	....	1,211	5
Aerated Waters, Cordials, &c.	3,478	160	437	15	3,915	175
Breweries	3,512	9	677	5	4,189	14
Condiments, Coffee, Spices &c.	563	260	63	15	626	275
Distilleries	207	....	....	....	207	....
Ice and Refrigerating	890	13	5	....	895	13
Malting	208	....	145	....	353	....
Tobacco, Cigars, &c.	1,514	1,380	12	26	1,526	1,406
Salt	263	....	....	....	263	....
Other Industries	63	4	107	....	170	4
Total	28,772	4,932	6,760	679	35,532	5,611

In the preparation of foods and drinks machinery enters largely into use; the capital invested in machinery in the Commonwealth was £7,617,338, and in New Zealand £1,035,939 the average horse-power used being 52,021 and 14,792 respectively

Distributing the persons shown above as employed in the Commonwealth amongst the various states, the most noticeable point is the strong position of Queensland, due entirely to the development of the sugar and meat-preserving industries.

Class of Industry.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.
Bacon Curing	123	285	26	226	....	22
Butter Factories	824	1,407	333	....	3	82
Cheese Factories	62			167	....	....
Condensed Milk	37	....	....	....	....	....
Meat-preserving	919	598	1,544	....	....	7
Biscuits	894	957	237	....	148	111
Confectionery	803	808	284	218	....	....
Cornflour, Oatmeal, &c.	378	442	22	....	....	....
Flour Mills	812	664	194	527	94	138
Jam, and Fruit Canning	679	1,638	243	155	54	681
Pickles, Sauces and Vinegar	58		....	11		9
Sugar Mills	633	....	1,663	....	....	....
Sugar Refineries	531	324	....	105	....	....
Aerated Waters, Cordials, &c.	1,343	1,053	632	199	346	65
Breweries	1,033	1,112	419	342	445	170
Condiments, Coffee, Spices, &c.	363	259	65	196	22	8
Distilleries	10	73	53	71	....	....
Ice and Refrigerating	593	139	73	32	66	....
Malting	45	163	....	....	....	....
Tobacco, Cigars, &c.	1,104	1,293	129	263	105	....
Salt	....	59	....	204	....	....
Other Industries	....	51	....	16	....	....
Total	11,244	11,325	5,917	2,642	1,283	1,293

There are many important industries in this class the details of which would prove interesting, but only for a limited number is the necessary information available. The most important of these is perhaps the meat-preserving and refrigerating industry, and the following table will give some idea of its development in the various states.

The figures show the latest annual output, those for New South Wales are exclusive of 1,264,743 lb. of tongues preserved during the year.

State.	Sheep and lambs, frozen.	Beef, frozen and chilled.	Rabbits frozen.	Meat Preserved.		
				Beef.	Mutton.	Rabbits.
	carcases.	lb.	No.	lb.	lb.	lb.
New South Wales	963,614	8,138,144	*	5,703,701	7,678,960	.....
Victoria	375,178	702,450	6,218,422	862,960	1,670,256	1,852,144
Queensland	117,729	85,743,229	.....	23,023,137	5,374,696	.....
New Zealand.....	3,348,123	34,285,328	6,040,047	7,867,440		.....

*Value £6,233.

The sugar industry has attained considerable dimensions in New South Wales and Queensland. Some details of the industry for the

year 1902 are given below, but more extended information is given on this subject in the chapter dealing with "Agriculture."

State.	Sugar cane crushed.	Sugar manufactured.	Molasses manufactured.
	tons.	tons.	gallons.
New South Wales	222,276	21,544	1,073,640
Queensland	641,927	76,626	2,217,738

Detailed information regarding flour-mills is available for each state excepting South Australia, and the following items have been selected as being of most value in showing the progress made. The quantity of flour made compared with the wheat ground seems a little inconsistent in some of the states, but the figures are given as they appear in the official records.

State.	Wheat ground.	Other grain ground.	Flour made.
	bushels.	bushels.	tons.
New South Wales	8,853,048	.....	185,147
Victoria	8,491,224	126,765	170,696
Queensland	1,338,346	84,833	26,579
Western Australia	576,781	.....	11,840
Tasmania	903,298	97,259	18,620
New Zealand	4,004,789	762,340	83,017

Breweries afford a large amount of employment, and those of Victoria have attained the most importance and have the largest annual output, as the following figures show :—

State.	Beer and Porter made.	Materials used—		
		Sugar.	Malt.	Hops.
	gallons.	cwt.	bushels.	lb.
New South Wales	15,074,794	89,332	606,160	756,770
Victoria	17,160,408	115,240	625,441	677,262
Queensland	5,073,164	.....	.....	.....
Western Australia	4,780,058	28,680	181,955	300,350
Tasmania	1,814,077	.....	.....	.....
New Zealand	7,379,581	21,647	455,035	562,245

Clothing and Textile Fabrics.

Industries connected with the manufacture of clothing and textile fabrics afford more employment than any other class. The females employed largely outnumber the males, and the excess would be still greater if all persons working in their own homes, or in dwelling-houses not classed as factories, had been included. The following table shows the number of males and females employed in this class of industry:—

Class of Industry.	Commonwealth.		New Zealand.		Australasia.	
	Males.	Females.	Males.	Females.	Males.	Females.
Woollen Mills	995	884	769	924	1,764	1,808
Boots and Shoes	8,612	3,582	1,906	790	10,518	4,372
Slop Clothing and Tailoring	4,763	11,878	1,153	2,980	5,916	14,858
Dressmaking and Millinery	517	12,021	24	2,889	541	14,910
Underclothing	177	3,362	.....	.....	177	3,362
Dyeworks and Cleaning	87	101	28	23	115	124
Furriers	47	67	.....	.....	47	67
Hats and Caps	745	1,079	37	80	782	1,159
Waterproof and Oilskin	147	556	22	92	169	648
Shirts, Ties, and Scarfs	49	604	28	503	77	1,107
Rope and Cordage	563	177	192	.....	755	177
Tents and Tarpaulins	139	99	.....	.....	139	99
Flax Mills	.....	.....	1,698	.....	1,698	.....
Hosiery	35	304	17	265	52	569
Total	16,876	34,714	5,874	8,546	22,750	43,260

The use of machinery is not extensive in this class, as compared with the number of hands engaged. The value in the Commonwealth was only £800,197, and in New Zealand £340,933, the average horse-power used being 4,932 and 3,644 respectively.

Victoria shows the greatest development in these industries, and employs more hands than any other state in almost every branch of them. The only exceptions are waterproof clothing, where New South Wales employs more hands, and textiles, in which it is surpassed by New Zealand. The colony last named has 1,693 hands employed in woollen mills compared with 1,122 in Victoria and 276 in New South Wales. New Zealand has also 1,698 hands in flax mills; in no other state has this industry been established. The classification of the minor industries is a matter of some difficulty as in many cases two or more

branches are combined; this will account for the variations in such industries as shirt-making, underclothing, &c. The following table shows the distribution of employment in the various states of the Commonwealth :—

Class of Industry.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.
Woollen Mills	276	1,122	129	142	.....	210
Boots and Shoes	4,098	5,101	1,045	1,368	284	298
Slop Clothing and Tailoring	5,439	7,040	1,527	1,744	891	.....
Dressmaking and Millinery	2,593	6,550	*950	962	458	1,025
Underclothing	†.....	3,325	.....	190	.....	24
Dyeworks and Cleaning	58	116	.....	14	.....	.....
Furriers	41	67	.....	.....	.....	6
Hats and Caps	474	1,170	125	55	.....	.....
Waterproof and Oilskin	454	249	.....	.....	.....	.....
Shirts, Ties, and Scarfs	653	†.....	.....	.....	.....	.....
Rope and Cordage, Mats, &c.	141	477	64	58	.....	.....
Tents and Tarpaulins	130	59	.....	35	14	.....
Hosiery	†.....	313	.....	.....	.....	26
Total	14,357	25,589	3,840	4,568	1,647	1,589

* Estimated. † Included elsewhere.

There are important boot and shoe factories in each of the states, and the output is attaining considerable proportions, as will be seen from the figures given below. No output of uppers is recorded from New South Wales or Victoria, although there are some establishments solely devoted to upper making; but the great bulk of the uppers is made in the ordinary boot factories.

State.	Articles manufactured.			Value of Output.
	Boots and Shoes.	Slippers.	Uppers.	
	pairs.	pairs.	pairs.	£
New South Wales	3,052,914	451,588	.....	.....
Victoria	3,613,487	216,483	.....	.....
Queensland	687,667	.....	17,721	179,687
Western Australia	212,768	.....	.....	.....
Tasmania	187,584	.....	.....	59,610
New Zealand	1,161,873	104,583	166,027	529,254

The manufacture of textile fabrics is becoming an important industry, especially in New Zealand, where the hands employed in woollen mills

are nearly equal in number to those in the whole of the Commonwealth. Of the Commonwealth states Victoria is the most important, as may be judged by its consumption of wool, which is five times that of New South Wales. The following information shows the output from woollen mills in the various states :—

State.	Wool used.	Articles manufactured.				Value of Output.
		Tweed and Cloth.	Flannel.	Blankets.	Shawls and Rugs.	
	lb.	yds.	yds.	pairs.	No.	£
New South Wales ...	693,328	566,296	14,500	6,340	800	...
Victoria	3,473,835	708,749	2,612,343	67,609	5,718	...
Tasmania	913,828	.....	.....	.....	.....	...
New Zealand.....	3,257,319	1,445,867	1,191,234	49,523	26,806	359,382

Books, Paper, Printing, &c.

The different industries connected with printing, bookbinding, paper-making, &c., afford work to 21,101 persons. The great bulk of these is employed in the various processes of printing, actual manufacturers being comparatively few in number. Australia and New Zealand produce many excellent paper-making materials; nevertheless, only 300 persons are employed in paper-making, and a large proportion of the output of the mills consists of ordinary brown or wrapping papers.

Class of Industry.	Commonwealth.		New Zealand.		Australasia.	
	Males.	Females.	Males.	Females.	Males.	Females.
Electrotyping and stereotyping ..	77	5	.....	.....	77	5
Paper, Paper bags, boxes, &c.....	632	705	103	76	735	781
Photo-engraving	62	23	.....	.....	62	23
Printing and bookbinding	13,140	2,669	2,852	586	15,992	3,255
Printing materials	58	1	5	.....	63	1
Engraving	107	.....	.....	.....	107	.....
Total	14,076	3,403	2,960	662	17,036	4,065

The machinery employed in the above had a value of £1,765,582 in the Commonwealth, and £381,958 in New Zealand. The average horse-power used was 4,811 and 1,762 respectively.

There are several difficulties in the way of making comparisons regarding these industries. Under the headings of electrotyping and stereotyping and photo-engraving there are no returns for any state but New South Wales. It must be presumed, therefore, that persons employed in these pursuits in the other states are included with printing, bookbinding, &c. Under the head of printing are included the composing and mechanical staff of the newspaper offices—persons whom it takes a

very wide definition to bring in under the term "manufacturers." The following table shows the employment afforded in the various states :—

Class of Industry.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.
Electrotyping and stereotyping ..	82	.....	.....	.....	.....	.....
Paper, Paper bags, boxes, &c.....	522	531	85	171	28	.....
Photo-engraving	57	.....	.....	.....	28	.....
Printing and bookbinding	5,275	5,864	1,906	1,429	852	483
Printing materials	.....	49	10	.....	.....	.....
Engraving	.....	107	.....	.....	.....	.....
Total	5,936	6,551	2,001	1,600	908	483

Musical Instruments.

The manufacture of musical instruments is not yet firmly established in Australasia, and until recently the employment afforded was mainly in the direction of fitting and repairs.

Class of Industry.	Commonwealth.		New Zealand.		Australasia.	
	Males.	Females.	Males.	Females.	Males.	Females.
Musical Instruments	199	13	11	..	210	13

In New Zealand no machinery was employed, and in the Commonwealth the average horse-power used was only 33, and the value £3,325.

New South Wales is the only state which shows much development, 202 persons out of a total for the Commonwealth of 212 being engaged in that state. The greater part of this employment is afforded by one establishment.

Arms and Explosives.

The manufacture of small arms and explosives is of great importance in connection with the defence of these shores, but so far little attention has been devoted to the industry, only 401 hands being employed, these being occupied exclusively in the manufacture of explosives.

Class of Industry.	Commonwealth.		New Zealand.		Australasia.	
	Males.	Females.	Males.	Females.	Males.	Females.
Explosives	145	151	21	84	166	235

The horse-power of the machinery used in the Commonwealth was 92, and in New Zealand 39, the value of the plant being £47,458 and £10,650 respectively.

Of the Commonwealth states Victoria alone shows much development in this industry, and 284 hands are engaged in the manufacture of explosives, the remaining 12 hands being employed in New South Wales.

Vehicles, Saddlery, and Harness.

In connection with the manufacture and repair of vehicles, saddlery, harness, &c., there are 9,964 hands employed. The great bulk of the work done in connection with coaches and waggons consists of repairing; but there are establishments in all the states where vehicles of all classes are manufactured.

Class of Industry.	Commonwealth.		New Zealand.		Australasia.	
	Males.	Females.	Males.	Females.	Males.	Females.
Coach and Waggon Building	5,245	13	1,185	.....	6,430	13
Cycles	613	6	378	17	991	23
Perambulators	62	6	.....	.....	62	6
Saddlery and Harness	1,650	42	629	23	2,309	65
Spokes, &c.	33	.....	.....	.....	33	.....
Whips	27	.....	5	.....	32	.....
Total	7,660	67	2,197	40	9,857	107

The employment of machinery in this class is mainly in tyre-setting. The horse-power of the machinery used in the Commonwealth was 758, and in New Zealand 226, the values being £178,726 and £38,868 respectively.

Victoria shows by far the greatest progress in this class, no less than 3,091 hands being employed in that state.

Class of Industry.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.
Coach and Waggon Building ...	1,566	2,302	476	395	372	147
Cycles	77	301	.....	153	41	47
Perambulators	27	41	.....	.....	.....	.....
Saddlery and Harness	421	431	401	310	124	35
Spokes, &c.	33	.....	.....	.....	.....	.....
Whips	11	16	.....	.....	.....	.....
Total	2,135	3,091	877	858	537	229

Ship and Boat-building and Repairing.

The industries depending upon shipping have not attained large dimensions in any of the states, and as regards ship-building itself, the use of iron instead of wood for the frames and hulls of vessels has injuriously affected a promising industry, as the woods of Australia are eminently fitted for ship-building purposes. The following is a statement of the persons employed :—

Class of Industry.	Commonwealth.		New Zealand.		Australasia.	
	Males.	Females.	Males.	Females.	Males.	Females.
Docks and Slips	....	.....	32	.....	2,407	93
Sails, Tents, and Tarpaulins	2,014	12	150	81		
Ship and boat-building and repairs	....	.....	211	.....		
Total	2,014	12	393	81	2,407	93

The use of machinery of a powerful character is necessary for the purpose of quickly emptying docks, although it is not in constant requisition. The value in the Commonwealth was £385,201, and in New Zealand £209,878, the average horse-power in use being 1,505 and 484 respectively.

In industries connected with ship-building and repairing, New South Wales has a far larger number of hands employed than any other state, mainly due to the fact that Sydney is the terminal port of most of the great lines of steamers trading with Australia. The chief portion of the business is in connection with the docking and repairing of ships, although there are several establishments engaged exclusively in ship and boat building.

Class of Industry.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania
Docks and Slips	1,042	174	163	114	76	.....
Sails, Tents, and Tarpaulins	40					15
Ship and boat-building and repairs	392					10
Total	1,474	174	163	114	76	25

Furniture, Bedding, &c.

Although Australia and New Zealand produce various kinds of wood admirably adapted to the requirements of the furniture trades, it can hardly be said that the industry has attained a development equal to its opportunities. As showing the possibilities of the industry, it may be mentioned that the value of furniture, bedding, flock, and upholstery imported into the Commonwealth during 1902 was £262,400, and into

New Zealand £62,840. The employment afforded by the industry was :—

Class of Industry.	Commonwealth.		New Zealand.		Australasia.	
	Males.	Females.	Males.	Females.	Males.	Females.
Bedding, Flock, and Upholstery..	820	268	64	1	884	269
Billiard Tables	29	.....	7	.....	36	.....
Chair-making	45	.....	.....	.....	45	.....
Furniture and Cabinet-making ..	3,830	46	1,243	67	5,073	113
Picture Frames	219	84	19	3	238	87
Window Blinds.....	88	1	49	2	137	3
Total	5,031	399	1,382	73	6,413	472

The value of the machinery employed in the Commonwealth was £91,672, and in New Zealand £28,249, the average horse-power used being 960 and 464 respectively.

The manufacture of furniture, bedding, &c., in the Commonwealth affords employment to 5,430 persons, of whom 2,019 are in New South Wales and 1,871 in Victoria. The distribution in the various states is as follows :—

Class of Industry.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.
Bedding, Flock, and Upholstery..	492	436	126	12	.....	22
Billiard Tables	29	.....	.....	.....	.....	.....
Chair-making	45	.....	.....	.....	.....	.....
Furniture and Cabinet-making ..	1,303	1,276	416	441	283	157
Picture Frames	113	107	.....	75	.....	8
Window Blinds.....	37	52	.....	.....	.....	.....
Total	2,019	1,871	542	528	283	187

The manufacture of billiard tables is an established industry in Victoria, but the number of hands employed cannot be given separately, as they are included amongst those shown in furniture and cabinet-making.

Drugs and Chemicals and By-Products.

In all the states there are establishments engaged in making chemicals or medicines of some description, while the manufacture of fertilisers is also an established industry in every state.

Class of Industry.	Commonwealth.		New Zealand.		Australasia.	
	Males.	Females.	Males.	Females.	Males.	Females.
Chemicals, Drugs, and Medicine..	1,205	423	96	33	1,301	456
Fertilisers	308	5	47	.....	355	5
Paints and Varnishes.....	198	56	31	.....	229	56
Total	1,711	484	174	33	1,885	517

The horse-power of the machinery used in the Commonwealth was 2,132, and in New Zealand 319, the values of the plant being £257,876 and £32,963 respectively.

The classification for individual states will be found below :—

Class of Industry.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.
Chemicals, Drugs, and Medicines..	437	1,072	33	32	31	23
Fertilisers	37	136	22	95	7	16
Paints and Varnishes	162	48	.....	15	29	.....
Total	636	1,256	55	142	67	39

The information regarding Victoria is misleading; included in the workers engaged in chemicals, &c., are a number of persons engaged in the manufacture of rubber goods, the two returns having been combined so that the particulars regarding an individual establishment might not be disclosed.

Surgical and Scientific Appliances.

The employment afforded in these industries is not great, and the major portion of the work is in connection with the manufacture of spectacles, etc.

Class of Industry.	Commonwealth.		New Zealand.		Australasia.	
	Males.	Females.	Males.	Females.	Males.	Females.
Surgical, Optical, and other Scientific Instruments	105	21	.....	.....	05	1

The machinery employed was valued at £4,975, and the average horse-power used was 25.

In only three of the Commonwealth states are these industries established, and in none of them have they attained any important dimensions.

Class of Industry.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasman a.
Surgical, Optical, and other Scientific Instruments	65	44	17	.....	. ....	.....

Timepieces, Jewellery, and Plated Ware.

There are 1,140 hands engaged in this class, mostly employed in connection with jewellery.

Class of Industry.	Commonwealth.		New Zealand.		Tasmania.	
	Males.	Females.	Males.	Females.	Males.	Females.
Electro-plating	97	3	11	.....	108	3
Manufacturing Jewellery	985	36	8	.....	993	36
Total	1,082	39	19	.....	1,101	39

The horse-power of the machinery employed in the Commonwealth was 91, and in New Zealand 14, the values of the plant being £24,348 and £3,822 respectively.

In each of the states certain persons are returned as being engaged in the manufacture of jewellery, but it is extremely doubtful if as many as are set down are employed solely in this industry. It is more than probable that the numbers include some hands principally engaged in the repair of watches and clocks.

Class of Industry.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.
Electro-plating	75	.....	34	25	.....	.....
Manufacturing Jewellery	168	616		114	47	42
Total	243	616	34	139	47	42

Industries connected with the Production of Light.

Industries connected with the production of fuel, heat, and light do not afford employment to many hands. The following table shows 4,333 hands, of whom 2,545 are employed in gas-works, 1,034 in electric-lighting works, 283 in coke-making, and 183 in manufacturing matches. Gas-supply gives employment to far more persons than the table shows—possibly to twice as many—but the additional hands are not employed in gas making, but in laying down pipes and other work connected with gas supply.

Industry.	Commonwealth.		New Zealand.		Australasia.	
	Males.	Females.	Males.	Females.	Males.	Females.
Coke-works	283	.....	.....	.....	283	.....
Electric Apparatus	119	1	.....	.....	119	1
Electric Light and Power	979	3	52	.....	1,031	3
Gas-works and Kerosene	1,973	.....	568	4	2,541	4
Lamps and Fittings, &c.	37	35	.....	.....	37	35
Hydraulic Power	49	47	.....	.....	49	47
Matches	.....	.....	37	146	37	146
Total	3,440	86	657	150	4,097	236

Machinery of a very powerful and valuable character is required in these industries, as will be seen from the fact that the value of the plant in the Commonwealth was £2,733,872, and in New Zealand £871,653, the average horse-power used being 30,457 and 2,419 respectively.

Only in New South Wales is the number of hands employed in each industry specified. The coke-workers in Victoria are included with hands employed in gas-works, while the hands employed in establishments other than gas-works are grouped together in Queensland. The number of hands employed in manufacturing candles is not included in the following table. The soap and candle industries are usually worked together, so that it is not possible to separate the hands employed which are accordingly classified under the heading of soap and candle workers, in the second group of the series. The manufacture of matches is carried on in Victoria, but the number of hands employed is not disclosed in the official statistics.

Industry.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.
Coke-works	283	.....	.....	.....	.....	.....
Electric Apparatus	44	76	106	91	216	.....
Electric Light and Power	413	147				9
Gas-works and Kerosene	723	758	248	96	82	66
Lamps and Fittings, &c.	72	.....	.....	.....	.....	.....
Hydraulic Power, &c.	10	86	.....	.....	.....	.....
Total	1,545	1,067	354	187	298	75

In view of the magnitude attained by gas-works in the various states, the following particulars as to the quantity of coal used and gas made during 1902, may prove interesting :—

State.	Coal used.	Cubic feet of gas produced.
	tons.	
New South Wales	196,460	2,304,814,000
Victoria	169,356	1,642,652,799
Queensland	36,709	339,023,600
Western Australia	.....	52,423,870
Tasmania	.....	69,686,979
New Zealand	.....	756,531,150

LEATHERWARE.

In view of the fact that the tanning industry has assumed such important dimensions, it is unsatisfactory to find that only 445 hands are employed in connection with the manufacture of leatherware.

Class of Industry.	Commonwealth.		New Zealand.		Australasia.	
	Males.	Females.	Males.	Females.	Males.	Females.
Leather Belting, Fancy Leather, Portmanteaux, and Bags.	353	70	19	3	372	73

The machinery employed in the Commonwealth was valued at £10,941, and the average horse-power in use was 70.

The largest development of the industry is in Victoria, where 276 hands are employed, the majority of them, 123 males and 47 females, being engaged in the manufacture of fancy leather.

Class of Industry.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.
Leather Belting, Fancy Leather, Portmanteaux, and Bags.	97	276	38	.....	12	.....

Minor Wares.

All industries which could not properly be brought under the foregoing classification are included here. The more important of the industries are shown separately, but owing to their varied nature it is impossible to show them all, so that a number of separate industries have been brought together under the comprehensive title of "Other Industries."

Class of Industry.	Commonwealth.		New Zealand.		Australasia.	
	Males.	Females.	Males.	Females.	Males.	Females.
Baskets and Wickerware, Mats, &c.	96	7	116	19	212	26
Brooms and Brushware	585	217	86	42	671	259
Rubber Goods	62	2	3	.....	65	2
Toys	11	.....	.....	.....	11	.....
Umbrellas	72	157	.....	.....	72	157
Other Industries	503	131	172	173	675	304
Total	1,329	514	377	234	1,706	748

The horse-power of the machinery employed in the Commonwealth was 417, and in New Zealand 206, the values of the plant being £54,995 and £22,028 respectively.

The returns of the various states are each compiled on a different basis, so that it is impossible to give accurate information regarding the several industries. The manufacture of brooms and brushware is, however, the most important, while umbrella-making also employs a considerable number of hands. In Victoria the hands employed in the

manufacture of rubber goods are included with those engaged in the preparation of chemicals, &c.

Class of Industry.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.
Baskets and Wickerware Mats, &c.	25	57	124	199	21	.....
Brooms and Brushware	233	294			.....	76
Rubber Goods	49	.....		15	.....	.....
Toys	11	.....		.....	.....	.....
Umbrellas	43	172		14	.....	.....
Other Industries	31	426		53	.....	.....
Total	392	949	124	281	21	76

The relative development of the industries of the states may be measured by the information shown in the following table, in which the industries are arranged in three classes, viz. :—First, those connected with the treatment of perishable products for domestic consumption ; second, those dependent upon the natural resources of the country ; and, third, those the production from which comes into competition with imported goods :—

State.	Employed in domestic industries for the treatment of perishable products for immediate use.		Employed in industries dependent upon the natural resources of the country.		Employed in industries the production from which comes into competition with imported goods.	
	Males.	Females.	Males.	Females.	Males.	Females.
New South Wales	3,790	65	25,786	4,935	24,750	6,943
Victoria	3,652	59	19,504	13,113	26,502	10,233
Queensland	1,363	94	8,290	1,841	7,942	1,428
South Australia	726	14	6,710	2,784	9,159	1,145
Western Australia	854	6	6,461	1,067	3,105	230
Tasmania	277	40	4,133	728	1,771	517
Commonwealth	10,662	278	70,884	24,468	73,229	20,496
New Zealand	2,446	59	20,155	4,496	15,493	6,069
Australasia	13,108	337	91,039	28,964	88,722	26,565

Plant Employed in Manufactories.

The character of the industry chiefly determines the horse-power required and the value of the plant. Thus, in the clothing and allied industries, the average number of persons per 100 horse-power is 770 ; in industries connected with the preparation of food and drink, the average is only 62. The value of the plant, compared with the horse-power, also varies greatly as between the different industries. In industries working in wood, the value of plant is only about £70 per horse-power ; in furniture trades, £85 ; while in gas-making it is about £1,200. The following is a statement of the amount of horse-power

and value of plant employed in the various groups of industries, according to the classification used in the foregoing pages :—

Class of Industry.	Commonwealth.		New Zealand.	
	Horse-power.	Value of plant.	Horse-power.	Value of plant.
	No.	£	No.	£
Treating raw materials, &c.	6,933	532,803	2,099	128,988
Oils and fats, &c.	1,812	467,904	428	44,203
Processes in stone, clay, glass, &c.	5,784	674,678	1,166	63,952
Working in wood	18,717	1,524,662	9,097	425,695
Metal works, machinery, &c.	21,192	3,394,973	2,780	317,072
Connected with food and drink, &c.	52,021	7,617,338	14,792	1,035,939
Clothing and textile fabrics, &c.	4,932	800,197	3,644	340,933
Books, paper, printing, &c.	4,811	1,765,582	1,762	381,958
Musical instruments	33	3,325	.....	.....
Arms and explosives	92	47,458	39	10,650
Vehicles, saddlery, and harness	758	178,726	226	38,868
Ship and boat building, &c.	1,505	385,201	484	209,878
Furniture, bedding, and upholstery	960	91,672	464	28,249
Drugs, chemicals, and by-products	2,132	257,876	319	32,963
Surgical and other scientific instruments	25	4,975	.....	.....
Jewellery, platedware, &c.	91	24,348	14	3,822
Heat, light, and power	30,457	2,733,872	2,419	871,653
Leatherware not elsewhere included	70	10,941	.....	670
Minor wares not elsewhere included	417	54,095	206	22,028
Total	152,742	20,571,526	39,939	3,962,521

There is a slight inaccuracy in the returns that it is well should be pointed out. The horse-power quoted represents the average power actually used, while the value of machinery and plant represents that of all the usable machinery that the establishments contain.

Similar information for each state of the Commonwealth is given below :

HORSE POWER.

Class of Industry.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.
	No	No.	No.	No.	No.	No.
Treating raw materials, &c.	2,535	2,634	591	842	43	288
Oils and fats, &c.	525	376	95	683	82	51
Processes in stone, clay, glass, &c.	2,961	1,822	256	287	292	166
Working in wood	5,699	3,923	3,990	483	3,317	1,305
Metal works, machinery, &c.	8,020	4,784	2,520	2,392	742	2,734
Connected with food and drink, &c.	13,711	12,996	18,502	4,063	1,374	1,375
Clothing and textile fabrics, &c.	829	3,430	225	263	39	146
Books, paper, printing, &c.	1,456	2,061	420	475	305	94
Musical instruments	33	.....	.....	.....	.....	.....
Arms and explosives	2	90	.....	.....	.....	.....
Vehicles, saddlery, and harness	147	298	62	170	61	20
Ship and boat building, &c.	973	253	135	116	22	6
Furniture, bedding, & upholstery	269	529	85	2	29	46
Drugs, chemicals, and by-products	280	1,427	153	169	57	46
Surgical and other scientific instruments	10	6	5	.....	4	.....
Jewellery, platedware, &c.	13	74	.....	4	.....	.....
Heat, light, and power	15,248	8,908	682	1,186	2,799	1,634
Leatherware not elsewhere included	24	42	.....	.....	4	.....
Minor wares not elsewhere included	78	168	46	120	.....	5
Total	52,813	43,821	27,767	11,255	9,170	7,916

VALUE OF PLANT.

Class of Industry.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.
	£	£	£	£	£	£
Treating raw material, &c.	197,136	166,824	76,752	64,420	5,571	22,100
Oils and fats, &c.	137,287	99,055	31,342	183,560	8,260	8,400
Processes in stone, clay, glass, &c.	379,016	153,415	60,226	33,750	33,363	14,908
Working in wood	340,160	189,716	269,267	28,360	613,864	83,295
Metal works, machinery, &c.	1,140,127	851,972	338,965	363,870	218,985	481,054
Connected with food and drink, &c.	2,280,679	1,413,407	2,988,037	600,550	204,859	129,806
Clothing and textile fabrics, &c.	197,310	433,116	72,015	41,490	14,751	36,515
Books, paper, printing, &c.	594 939	637,720	197,162	172,510	122,514	40,737
Musical instruments	3,325	.....	.....	.....	.....	.....
Arms and explosives	286	47,172	.....	.....	.....	.....
Vehicles, saddlery, and harness, &c.	39,310	61,194	18,496	39,900	16,993	2,833
Ship and boat building, &c.	270,430	52,935	27,691	29,920	3,975	250
Furniture, bedding, and upholstery	31,655	42,557	11,117	190	3,912	2,211
Drugs, chemicals, and by-products	67,526	148,697	14,391	20,950	4,112	2,200
Surgical and other scientific instruments	1,900	770	663	.....	1,642	.....
Jewellery, plated ware, &c.	6,675	13,618	1,500	1,000	905	650
Heat, light, and power	1,094,962	735,230	410,927	107,010	149,094	236,649
Leatherware not elsewhere included	3,390	5,459	450	.....	1,642	.....
Minor wares not elsewhere included	9,730	24,136	2,709	15,030	.....	3,390
Total	6,795,843	5,082,023	4,521,710	1,702,510	1,404,442	1,064,998

The average value of plant per horse-power of machinery employed ranges from £99 in the case of New Zealand to £163 for Queensland, the average for Australasia being £127. The average for each state was as follows:—New South Wales £129, Victoria £116, Queensland £163, South Australia £151, Western Australia £153, and Tasmania £135. A mere statement of values, however, has no special meaning, since the difference in the figures is compatible with two opposite conditions—either the same plant is put to greatest use in the case of New Zealand, or it is of superior character in the case of Queensland.

VALUE OF PRODUCTION OF MANUFACTORIES.

The value of the articles produced in the manufactories has been carefully estimated for each of the states and is given below. For New South Wales and Queensland the information is now obtained annually; but although this is not the case in the other states, there is no difficulty in arriving at a satisfactory estimate, owing to the ample data at command. The production from butter, cheese, and bacon factories and creameries has not been taken into consideration, as it has already been included under the pastoral and dairying industries. The figures refer to the year 1902, except in the case of New Zealand, where the census returns of 1901 are the latest figures available, and

have accordingly been used. The total value of the output of all factories was £92,032,000, of which £52,984,000 represents the value of materials and fuel used, and £39,048,000 the value added in the processes of treatment. Of the latter sum, £18,611,000 was paid in wages, leaving a balance of £20,437,000, which accrued to the proprietors, and out of which rent, insurance, depreciation, &c., had to be paid, the remainder representing profits on the business. The difference between the value of materials and fuel used and the total output is the real value of production from manufactories; this sum has been stated above as £39,048,000, and the amount in each state was as follows :—

State.	Value of Production.	Value per Inhabitant.
	£	£ s. d.
New South Wales	11,452,000	8 4 4
Victoria	10,734,000	8 17 10
Queensland	3,237,000	6 6 3
South Australia	2,883,000	7 17 10
Western Australia	2,423,000	11 16 5
Tasmania	1,389,000	7 18 2
Commonwealth	32,118,000	8 6 5
New Zealand	6,930,000	9 1 6
Australasia	39,048,000	8 7 8

The above table would seem to indicate that, in proportion to population, Western Australia holds the premier position; but the position occupied by that state is due to the higher prices obtained for the products rather than from any great development of the manufacturing industries. New Zealand stands second, and its position is ample evidence of the great expansion that has occurred in the manufacturing industries of the colony during the last few years. The added value for Victoria has been set down at £10,734,000, which is £4,330,000 higher than that shown by the latest official returns. On the basis of these returns the production per inhabitant would be £5 5s. 3d., or £2 18s. 10d. below the average of the other Commonwealth states, a condition of things far removed from the bounds of probability.

Wages paid in Manufactories.

A comparison of the wages paid in the manufactories of the various states would be decidedly interesting, but unfortunately the figures are available only for New South Wales, Victoria, and New Zealand, and even in these states they are not compiled on the same basis. What information is available has, however, been prepared and is presented in the

form of a table showing the average weekly wages paid in the various industries where a sufficient number of hands is employed to enable a fair average rate to be stated. The figures refer to the year 1901; those for New South Wales were compiled from the returns furnished under the Factories and Shops' Act; those for Victoria were obtained from the report of the Chief Inspector of Factories and Shops; while the New Zealand figures were obtained from the census returns published by the Government Statistician.

Industry.	Average Weekly Wages.					
	Males.			Females.		
	New South Wales.	Victoria.	New Zealand.	New South Wales.	Victoria.	New Zealand.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Boiling-down and tallow refineries	2 6 10	.....	.....	.....	.....	.....
Tanneries	1 16 6	1 15 2	1 11 3	.....	.....	.....
Wool scouring and fellmongery	1 19 2	1 17 2		.....	.....	.....
Chaff cutting	1 14 7	1 12 3	.....	.....	.....	.....
Oil and grease	2 0 9	.....	.....	.....	.....	.....
Soap and candles	1 13 6	1 8 6	1 12 8	0 10 1	.....	.....
Bricks and tiles	2 3 5	2 4 9	1 9 0	.....	.....	.....
Glass (including bottles)	1 8 9	1 10 10	.....	.....	.....	.....
Glass (ornamental)	1 18 2	1 15 10	.....	.....	.....	.....
Lime, plaster, and cement	1 19 11	1 16 3	1 14 9	.....	.....	.....
Marble and slate	1 13 9	.....	.....	.....	.....	.....
Pottery and earthenware	1 14 2	1 15 6	.....	.....	.....	.....
Boxes and cases	1 12 7	.....	.....	.....	.....	.....
Cooperage	1 13 0	2 4 7	1 10 7	.....	.....	.....
Joinery	2 6 0	.....	.....	.....	.....	.....
Saw-mills	1 14 2	2 3 2	1 9 0	.....	.....	.....
Wood-turning	.....	1 16 11	1 9 5	.....	.....	.....
Agricultural implements	.....	.....	1 15 6	.....	.....	.....
Brass and copper	1 7 2	1 9 6	1 12 0	.....	.....	.....
Galvanised iron	1 12 4	.....		.....	.....	.....
Ironworks and foundries	1 12 4	1 16 5		.....	.....	.....
Engineering	1 16 6	.....	1 13 0	.....	.....	.....
Railway carriage works	1 16 8	.....	.....	.....	.....	.....
Smelting	2 9 7	1 19 9	.....	.....	.....	.....
Stoves and ovens	1 12 7	1 11 6	1 13 9	.....	.....	.....
Tinsmithing, sheet ironworks	1 8 7	1 4 0	1 6 5	.....	.....	.....
Other metal works	1 19 7	1 10 8	1 10 4	.....	.....	.....
Wire working	1 12 1	1 5 1	.....	.....	.....	.....
Bacon curing	1 19 3	1 18 9	1 8 11	.....	.....	.....
Butter factories	1 2 6	1 7 9	1 11 6	.....	0 10 10	0 16 3
Meat preserving	1 14 1	2 0 8	1 15 1	0 11 0	.....	0 11 2
Biscuits	1 2 8	1 2 8	1 9 0	0 11 5	0 13 4	0 8 2
Confectionery	1 4 0	1 9 6	1 7 1	0 8 6	0 12 8	0 9 5
Cornflour, oatmeal, &c.	1 14 5	.....	.....	0 11 9	.....	.....
Flour-mills	1 17 11	1 19 3	1 17 0	.....	.....	.....
Jam and fruit canning	1 2 2	1 5 10	1 8 7	0 11 2	0 14 5	0 8 3
Pickles, sauces, and vinegar	1 9 2		1 3 1	0 9 0		0 13 3
Sugar refineries	2 2 10	1 18 0	.....	.....	.....	.....
Aerated waters, cordials, &c.	1 8 9	1 8 8	1 8 0	0 12 5	.....	.....
Breweries	1 12 7	1 15 5	2 7 5	.....	.....	.....
Condiments, coffee, and spices	1 6 6	1 6 8	.....	0 9 6	0 11 2	.....
Distilleries	.....	2 2 5	.....	.....	.....	.....
Ice and refrigerating	2 10 5	.....	.....	.....	.....	.....
Malting	.....	.....	1 19 9	.....	.....	.....
Tobacco, cigars, &c.	1 10 7	1 15 5	.....	0 17 3	0 17 7	.....
Fish-curing and preserving	.....	.....	1 1 2	.....	.....	.....
Woollen mills	1 2 6	1 3 10	1 15 9	0 15 3	0 16 5	0 16 11
Boots and shoes	1 10 7	1 14 6	1 13 4	0 13 1	0 15 3	0 13 3
Slop clothing	1 16 3	.....	.....	0 13 2	.....	.....

Industry.	Average Weekly Wages.					
	Males.			Females.		
	New South Wales.	Victoria.	New Zealand.	New South Wales.	Victoria.	New Zealand.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Clothing (tailoring)	2 2 0	2 0 5	1 15 0	0 18 4	0 18 3	0 15 11
Dressmaking and millinery	1 15 2	2 0 6	1 17 5	0 10 9	0 11 5	0 10 3
Hats and caps	1 11 2	1 19 7	1 7 5	0 13 10	0 17 0	0 13 3
Waterproof and oilskin	1 18 0	1 12 6	1 6 9	0 12 11	0 15 6	0 9 6
Shirts, ties, and scarfs	1 14 1	1 12 9	1 6 3	0 11 1	0 14 3	0 10 5
Rope and cordage	1 4 7	1 5 0	1 6 4	.....	0 11 9	.....
Tents and tarpaulins	1 7 2	.....	.....	0 13 6	.....	.....
Paper bags, boxes, &c.	1 0 4	1 9 0	.....	0 10 5	0 10 3	.....
Printing and bookbinding	1 19 7	1 15 4	1 19 3	0 11 7	0 11 11	0 12 7
Musical instruments	1 18 2	2 0 4	.....	.....	.....	.....
Explosives	.....	1 13 4	.....	.....	0 12 3	.....
Coach and wagon building	1 12 5	1 11 1	1 7 1	.....	.....	.....
Cycles	.....	1 7 0	1 1 3	.....	0 19 6	.....
Docks and slips	2 4 7	.....	.....	.....	.....	.....
Ship and boat building	2 4 10	.....	1 4 7	.....	.....	.....
Bedding, flock and upholstery	1 12 5	1 18 11	.....	0 16 0	0 16 8	.....
Iron bedsteads	.....	1 12 4	.....	.....	.....	.....
Furniture and cabinetmaking	1 13 6	2 0 2	1 7 6	0 15 0	.....	0 13 0
Picture frames	1 10 5	1 0 11	.....	0 15 2	0 16 4	.....
Chemicals, drugs, and medicines	1 8 4	1 9 0	.....	0 11 3	0 15 11	.....
Manufacturing jewellery	1 19 1	2 0 11	.....	.....	0 16 1	.....
Electric light and power	1 15 1	2 3 6	.....	.....	.....	.....
Gas works	2 3 9	.....	2 7 8	.....	.....	.....
Leather belting	1 12 5	1 6 8	.....	.....	.....	.....
Fancy leather, portmanteaux, and bags	1 7 0	1 3 9	.....	0 12 10	0 12 5	.....
Brooms and brushware	1 7 3	1 9 5	1 6 8	.....	0 13 1	0 10 11
Saddlery and harness	1 12 5	1 14 5	1 4 11	1 3 0	0 17 2	0 17 2
Basket and perambulator factories	.....	.....	1 3 5	.....	.....	.....
Flax mills	.....	.....	1 3 0	.....	.....	.....

These figures must be accepted with a certain degree of caution. In each state a considerable number of juvenile workers is employed, but only in Victoria is their actual strength ascertained, and as the average weekly wage paid in any establishment would depend to a large extent on the proportion of juvenile labour employed, a fair comparison is impossible while that information is lacking.