

SECTION XIII.

MANUFACTURING INDUSTRIES.

§ 1. General.

1. **Industrial Progress.**—The statistics of manufactures in the Commonwealth during recent years shew that many industries have now been permanently established on a secure basis, and also indicate a fairly rapid, though in some cases a somewhat irregular, progress both in regard to the extension of existing industries and the establishment of new ones. The scale on which many manufactories are established in Australia, however, appears small in comparison with those established in older countries of the world; but it should be remembered that owing to the sparseness of its population Australia cannot at present maintain industries on a very extensive scale, and also that until the inauguration of the Commonwealth in 1901 the field was still further limited by intercolonial tariffs.

(i.) *The Gold Discoveries, 1851.* During the period anterior to the gold discoveries (1851) little was done in regard to manufacturing industries in Australia. Such industries as had then been established were chiefly connected with the preparation of food-stuffs, and were to a large extent called into being by the isolated position of the country. It was found that, owing to the comparatively high prices which could be obtained for the products of the pastoral industry, those engaged in such pursuits in Australia could compete successfully in the world's markets. Owing to the sparseness of its population and to the distance of Australia from the world's centres of distribution, there was but little incentive towards any decided progress in agriculture, which was accordingly for many years almost entirely subsidiary to sheep and cattle raising. With the adoption of improved methods of agriculture, however, there were signs of an early extension in the cultivation of wheat, when the discovery of gold in 1851 completely changed the economic aspect in Australia and effected a revolution in all industrial relations. The large towns were practically depleted of their male able-bodied population, and the first effect of the gold rush upon manufacturing industries was disastrous. The supply of labour in many occupations was exhausted, and most branches of industry came to a standstill. There was, however, a rapid change. A decline in the activity of the gold-fields threw many immigrants, whose early lives had been passed in English cities, out of employment. The surplus of labour thus engendered accumulated in Melbourne and a few other large towns, establishing incipient artisan communities. This no doubt intensified the early impulses towards industrial employment. In the State of Victoria, in particular, it was sought to encourage the investment of capital in manufacturing enterprises by the establishment of protective Customs duties. Manufacturing industries were revived on a larger scale than formerly, and the population attracted by the discovery of gold remained in Australia and furnished the labour necessary to operate the factories thus established.

(ii.) *Later Progress.* Soon after the discovery of gold the construction of the first railways (1854) and the re-establishment of regular steamship communication with

Europe (1856) helped to encourage the industrial activity, which commenced to appear. The States of New South Wales and Victoria, which had recently (1855) received the benefits of responsible government, soon turned their attention to the settlement of an agricultural population on the land. The Acts which were passed (see Section VI., § 2) had a beneficial effect on the working classes, giving them opportunities for employment not previously open to them, and fostering the manufacturing industries by increasing the measure of primary production. During the following years the various manufacturing industries prospered. The statistics of the States are not sufficiently complete or uniform to enable a statement of the progress of these industries to be given. The following table, however, shewing, so far as returns are available, the number of factories and the number of employees in each State at decennial periods since 1861 and in 1907, will serve to indicate generally the progress which has been made:—

NUMBER OF FACTORIES AND EMPLOYEES IN EACH STATE, 1861 to 1907.

Year.	N.S.W.	Victoria.	Queensland.	S. Aust.	W. Aust.	Tasmania.	C'wealth.
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NUMBER OF FACTORIES.

1861	601	531
1871	1,813	1,740
1881	2,961	2,488	571†	823†
1891	3,056	3,141	1,328†	996†	175
1901	3,367	4,003	2,110†	1,335†	662	420*	11,897
1907	4,432	4,530	1,359	1,086	643	505	12,555

NUMBER OF EMPLOYEES.

1861	...	4,395	...	...	...	...	...
1871	13,583	19,569	...	5,629	...	...	...
1881	31,191	43,209	...	10,995	...	...	...
1891	50,879	53,525	...	14,099	...	...	...
1901	66,135	73,063	26,172	19,283	12,198	7,466*	204,317
1907	86,467	90,903	27,954	22,701	12,607	8,209	248,841

* For 1902. † Not on same basis as other States.

Since the inauguration of the Commonwealth, the throwing open of the whole of the Australian markets to the industrial products of each State has facilitated the internal distribution of the products of Australian industry.

2. Defects in Industrial Statistics.—A complete statistical account of the growth of the manufacturing industries in Australia unfortunately cannot be given for any lengthy period, owing to the fact that the necessary statistics have not been collected in past years by the several States upon a definite and identical basis. Even in respect of either the definition of a "factory" or (so far as they might be included in related returns) the statistics of persons employed therein, there was formerly no common agreement. The relatively minor place that manufacturing industry held in relation to the total activity of Australia was, perhaps, responsible for the fact that the necessity for uniform method was not earlier recognised.

In 1896 it was agreed, as between Victoria and New South Wales, to adopt a common definition of the term "factory," viz., "any factory, workshop, or mill where four or more persons are employed or power is used." This agreement was adopted for the States generally at the Conference of State Statisticians in 1902, when it was decided,

however, that the term "factory" should include also "all establishments, whether making for the trade, wholesale or retail, or for export." It was further agreed that industries should be arranged, as far as possible, under a uniform classification. As a result of the conference of 1902 a higher degree of uniformity in the collection and presentation of industrial statistics was attained in the several States, so that returns upon which anything like a proper comparative study of the development and progress of various manufacturing industries in the Commonwealth may be based date back only as far as the year 1903, when the resolutions of the conference first came to be put into force. All the States did not, however, fall completely into line, and, as may be seen in the succeeding parts of this section, the comparisons afforded by the returns for the years 1903 to 1906, inclusive, are in some cases subject to various limitations. At the conference of statisticians held in Melbourne in 1906 special consideration was given to the methods to be adopted for the collection of statistical information regarding primary and secondary production and industry. A definite classification of industries was adopted, and a set of forms for the collection and compilation of industrial statistics on a definite and uniform basis in each State was agreed upon. The States have not, even yet, fallen entirely into line in collecting and classifying the returns. The particulars for the year 1907 are, however, in more complete co-ordination than those for previous years, and it is hoped that it will be possible to give particulars for future years for the several States in greater detail and on a perfectly uniform basis throughout.

3. **Classification of Manufacturing Industries.**—Under the classification adopted at the Conference of Statisticians held in 1906, factories were placed under nineteen different categories, according to the nature of the industry carried on therein; many of the categories were also subdivided. Where two or more industries are carried on by one proprietor in one building, each industry is, when possible, treated as a separate establishment. The statement given below shews the classification which has been adopted; it must be understood, however, that this classification does not pretend to be exhaustive, but merely serves as a guide for the collection and presentation of statistics in the several States on a definite and uniform basis:—

CLASSIFICATION OF MANUFACTURING INDUSTRIES.

<p>CLASS I.—TREATING RAW MATERIALS, ETC.</p> <p>Boiling-down, Tallow Refining, etc.</p> <p>Tanneries</p> <p>Woolscouring & Fellmong'ring</p> <p>Chaff-cutting, etc.</p> <p>CLASS II.—OILS AND FAT, ETC.</p> <p>Oil and Grease</p> <p>Soap and Candles</p> <p>CLASS III.—STONE, CLAY, GLASS, ETC.</p> <p>Bricks and Tiles</p> <p>Glass (including Bottles)</p> <p>Glass (Ornamental)</p> <p>Lime, Plaster, Cement and Asphalt</p> <p>Marble, Slate, etc.</p> <p>Modelling, etc.</p> <p>Pottery and Earthenware</p> <p>CLASS IV.—WORKING IN WOOD.</p> <p>Boxes and Cases</p> <p>Cooperage</p> <p>Joinery</p> <p>Saw Mills</p> <p>Wood-turning, etc.</p> <p>CLASS V.—METAL WORKS, MACHINERY, ETC.</p> <p>Agricultural Implements</p> <p>Brass and Copper</p>	<p>Cutlery</p> <p>Engineering</p> <p>Galvanised Iron-working</p> <p>Ironworks and Foundries</p> <p>Lead Mills</p> <p>Railway Carriages</p> <p>Railway and Tramway Work-shops</p> <p>Smelting</p> <p>Stoves and Ovens</p> <p>Tinsmithing</p> <p>Wireworking</p> <p>Other Metal Works</p> <p>CLASS VI.—FOOD AND DRINK, ETC.</p> <p>Bacon Curing</p> <p>Butter Factories</p> <p>Jam and Fruit Canning</p> <p>Pickles, Sauces, and Vinegar</p> <p>Sugar Mills</p> <p>Sugar Refining</p> <p>Aerated Waters, Cordials, etc.</p> <p>Breweries</p> <p>Condiments, Coffee, Spices, etc.</p> <p>Distilleries</p> <p>Ice and Refrigerating</p> <p>Malting</p> <p>Tobacco, Cigars, etc.</p>	<p>CLASS VII.—CLOTHING AND TEXTILE FABRICS.</p> <p>Woolen and Tweed Mills</p> <p>Boots and Shoes</p> <p>Slop Clothing</p> <p>Clothing (Tailoring)</p> <p>Dressmaking and Millinery—</p> <p>Makers' material</p> <p>Customers' material</p> <p>Dyeworks and Cleaning</p> <p>Furriers</p> <p>Hats and Caps</p> <p>Waterproof and Oilskin</p> <p>Shirts, Ties, and Scarfs</p> <p>Rope and Cordage</p> <p>Tents and Tarpaulins</p> <p>CLASS VIII.—BOOKS, PAPER, PRINTING, ETC.</p> <p>Electrotyping & Stereotyping</p> <p>Paper-making, Paper Boxes, Bags, etc.</p> <p>Photo-engraving</p> <p>Printing and Binding</p> <p>CLASS IX.—MUSICAL INSTRUMENTS, ETC.</p> <p>Musical Instruments and Sewing Machines</p> <p>CLASS X.—ARMS & EXPLOSIVES</p> <p>Explosives</p>
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CLASSIFICATION OF MANUFACTURING INDUSTRIES.—Continued.

<p>CLASS XI.—VEHICLES, SADDLERY, HARNESS, ETC. Coach and Wagon Building Cycles Perambulators Saddlery, Harness, etc. Spokes, etc.</p> <p>CLASS XII.—SHIP AND BOAT BUILDING AND REPAIRING. Docks and Slips Sailmaking Ship and Boat Building and Repairing</p> <p>CLASS XIII.—FURNITURE, BEDDING, ETC. Bedding, Flock, & Upholstery Billiard Tables Furniture and Cabinet Making Picture Frames Window Blinds</p>	<p>CLASS XIV.—DRUGS AND CHEMICALS, ETC. Chemicals, Drugs, and Medicines Fertilisers Paints, Varnishes, and By-products</p> <p>CLASS XV.—SURGICAL AND OTHER SCIENTIFIC INSTRUMENTS. Surgical, Optical, and other Scientific Instruments</p> <p>CLASS XVI.—TIMEPIECES, JEWELLERY, & PLATED WARE. Electro-plating Manufacturing Jewellery, etc.</p>	<p>CLASS XVII.—HEAT, LIGHT, AND POWER. Coke Works Electric Apparatus Electric Light and Power Gas Works and Kerosene Lamps and Fittings, etc. Hydraulic Power</p> <p>CLASS XVIII.—LEATHERWARE (N.E.I.) Leather Belting, Fancy Leather, Portmanteaux & Bags</p> <p>CLASS XIX.—MINOR WARES. Basket and Wickerware, Matting, etc. Brooms and Brushware Rubber Goods Toys Umbrellas Other Industries</p>
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§ 2. Number of Manufactories.

1. **General.**—In stating the number of factories in the States of the Commonwealth it is to be remembered that in the collection of statistics, for years prior to 1907, the same basis has not been adopted in each State. In 1906 in Queensland, for example, 689 factories would have been added under the system previously adopted in that State. This would bring the total up to 1993 on the former basis. The factories excluded, however, are those employing only two hands and no power, and the difference in other respects is not material.

In the following table shewing the total number of manufactories in the Commonwealth between the years 1903 and 1907, it should be noted that not only are the results affected by differences of classification, but also that the number of factories from year to year does not unequivocally indicate a change in the position of the industry, since amalgamations may account for part of the reduction of the numbers. Thus in Melbourne a number of breweries have been combined under a single company, and, of the number thus amalgamated, it is intended to keep only three breweries active.

MANUFACTORIES OF THE COMMONWEALTH, 1903 to 1907.

Year.	N.S.W.	Victoria.	Queensland.	South Aust.	West. Aust.	Tasmania.	C'wealth.
1903 ...	3,476	4,151	2,001*	906*†	586	431	11,551
1904 ...	3,632	4,208	1,909*	906*	672	444	11,771
1905 ...	3,700	4,264	1,911*	985	649	436	11,945
1906 ...	3,861	4,360	1,304	1,012	665	373	11,575
1907 ...	4,432	4,530	1,359	1,086	643	505	12,555

* Not on same basis as other States. † 1904 results repeated.

(i.) *Classification of Factories in Commonwealth, 1903 to 1907.* The following table shews the total number of factories in the Commonwealth at the end of each year from 1903 to 1907, classified on the basis indicated in § 1, 3, hereof :—

CLASSIFICATION OF FACTORIES IN THE COMMONWEALTH, 1903 to 1907.

Class of Industry.	1903.*	1904.	1905.	1906.	1907.
I. Treating raw material, product of agricultural and pastoral pursuits, etc. ...	756	751	751	742	807
II. Treating oils and fats, animal, vegetable, etc. ...	119	121	112	99	92
III. Processes in stone, clay, glass, etc. ...	617	615	625	610	626
IV. Working in wood ...	1,110	1,122	1,126	1,119	1,215
V. Metal works, machinery, etc. ...	1,414	1,484	1,528	1,394	1,504
VI. Connected with food and drink, etc. ...	2,196	2,222	2,253	2,177	2,250
VII. Clothing and textile fabrics, etc. ...	2,176	2,236	2,315	2,335	2,661
VIII. Books, paper, printing and engraving ...	867	910	907	919	964
IX. Musical instruments, etc. ...	9	9	10	10	16
X. Arms and explosives ...	10	10	8	8	8
XI. Vehicles and fittings, saddlery and harness, etc. ...	1,036	1,060	1,087	941	1,071
XII. Ship and boat building and repairing ...	87	90	95	83	70
XIII. Furniture, bedding, and upholstery ...	453	454	441	418	470
XIV. Drugs, chemicals, and by-products ...	154	163	150	156	144
XV. Surgical and other scientific instruments ...	20	23	23	26	26
XVI. Jewellery, timepieces, and platedware ...	100	114	110	121	142
XVII. Heat, light, and power ...	297	251	263	272	309
XVIII. Leatherware, n.e.i. ...	36	36	33	41	45
XIX. Minor wares, n.e.i. ...	94	100	108	104	135
Total ...	11,551	11,771	11,945	11,575	12,555

* South Australian figures for 1904.

For the purpose of the returns in the above table the definition of a factory adopted at the Conference of Statisticians in 1902 (see § 1, 2,) is used, viz., "Any factory, workshop or mill where four or more persons are employed or power is used." The total increase in the number of factories according to this table from 1903 to 1907 was 1004, or an average of 251 a year. The state of the manufacturing industries throughout Australia cannot, however, be gauged from a mere enumeration of the number of factories. Some of the factories concerned were practically in their infancy, employing but few hands, while others were developed on a large scale. Also amalgamations may account for a reduction in the numbers.

(ii.) *Classification of Factories in each State, 1907.* The following table shows the number of factories in each State of the Commonwealth at the end of the year 1907, classified according to the nature of the industry. (See classification given in § 1, 3, hereof):—

CLASSIFICATION OF FACTORIES IN EACH STATE, 1907.

Class of Industry.	N.S.W.	Vic.	Qld.	S. Aus.	W. Aus.	Tas.	Cwth.
I. Treating raw material, product of agricul. and pastoral pursuits, etc. ...	295	323	44	111	18	16	807
II. Treating oils and fats, animal, vegetable, etc. ...	40	21	15	11	3	2	92
III. Processes in stone, clay, glass, etc. ...	258	203	36	57	42	30	626
IV. Working in wood ...	522	290	212	56	59	76	1,215
V. Metal works, machinery, etc. ...	428	619	199	142	68	48	1,504
VI. Connected with food and drink, etc. ...	756	656	357	249	149	83	2,250
VII. Clothing and textile fabrics, etc. ...	890	1,220	109	192	121	131	2,661
VIII. Books, paper, printing & engraving ...	365	341	122	62	58	16	964
IX. Musical instruments, etc. ...	12	3	...	1	...	...	16
X. Arms and explosives ...	3	5	...	...	...	...	8
XI. Vehicles and fittings, saddlery and harness, etc. ...	345	377	133	111	50	55	1,071
XII. Ship and boat building & repairing ...	31	12	17	6	4	6	70
XIII. Furniture, bedding, and upholstery ...	144	194	59	33	26	14	470
XIV. Drugs, chemicals, and by-products ...	58	64	5	9	7	1	144
XV. Surgical and other scientific instruments ...	8	11	5	1	1	...	26
XVI. Jewellery, timepieces, & platedware ...	46	57	12	12	3	12	142
XVII. Heat, light, and power ...	166	70	25	14	25	9	309
XVIII. Leatherware, n.e.i. ...	14	24	2	3	2	...	45
XIX. Minor wares, n.e.i. ...	51	40	7	16	7	6	135
Total ...	4,432	4,530	1,350	1,086	643	505	12,555

2. **Use of Mechanical Power.**—The principal motive power is steam, but the chief towns possess electric power stations owned either by the Government, or by public bodies or private companies. From these many manufactories find it convenient to derive their motive power. The distinction between factories employing steam, gas, oil, or electric machinery, and those employing either other power or none at all, affords an opportunity of ascertaining how many factories there are in the ordinary sense of the word, that is, establishments which are not merely workshops. For instance, in the Victorian clothing trade, out of 337 factories only 53 employ mechanical power, the balance may consequently be regarded merely as workshops.

The following table shews the number of factories in which machinery is worked by steam, gas, oil, or electricity, and the horse-power of engines or motors used, in each State and in the Commonwealth during the year 1907 :—

UTILISATION OF MECHANICAL POWER IN FACTORIES IN EACH STATE, 1907.

State.	Number of Establishments.			Actual Horse-power of Engines Used.				
	Using Machinery worked by Steam, Gas, Oil, or Electricity	Others.	Total.	Steam.	Gas.	Oil.	Electricity.	Total.
	No.	No.	No.	H.P.	H.P.	H.P.	H.P.	H.P.
New South Wales	2,761	1,671	4,432	75,862	4,901	429	10,072	91,264
Victoria ...	2,717	1,812	4,530	42,945	4,516	1,060	4,182	52,703
Queensland ...	953	406	1,359	26,628	1,127	317	2,357	30,329
South Australia ...	728	358	1,086	11,121	1,917	1,287	1,240	15,565
Western Australia	432	211	643	17,558	197	716	2,705	21,178
Tasmania	252	253	505	6,168	145	304	2,987	9,604
Commonwealth	7,843	4,712	12,555	180,182	12,803	4,113	23,543	220,641

The percentage for the Commonwealth of the number of establishments using machinery worked by steam, gas, oil, or electricity on the total number of establishments is 62.42. The total average horse-power in use was 221,641, of which engines in which the motive power was steam formed 81.29 per cent. ; gas, 5.77 per cent. ; oil, 1.97 per cent. ; and electricity, 10.97 per cent.

§ 3. Number Employed in Australian Factories.

1. **Total Number Employed.**—Each person employed in and about a factory, in whatever capacity, is now included as a factory employé, consequently every proprietor who works in his business is counted as an employé, and all “outworkers” (see paragraph 6 hereinafter) are also included. The individuals embraced may be classed under the following heads, viz. :—(i.) Working proprietors; (ii.) managers and overseers; (iii.) accountants and clerks; (iv.) engine-drivers and firemen; (v.) skilled and unskilled workers in the factories, mills, or workshops; (vi.) carters and messengers; and (vii.) others.

(i.) *Average Numbers Employed, 1903 to 1907.* The following table shews, for each year from 1903 to 1907, inclusive, (a) the average numbers of persons (including both sexes and all ages) employed in manufacturing industries in each State; (b) the percentage of the numbers employed in each State on the total numbers employed in the Commonwealth; and (c) the numbers employed per ten thousand of the mean population in each State and the Commonwealth :—

**NUMBER OF PERSONS EMPLOYED IN MANUFACTURING INDUSTRIES,
1903 TO 1907.**

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	C'wealth.
AVERAGE NUMBERS EMPLOYED.							
1903 ...	65,633	73,229	19,286	18,049†	11,828	7,785	195,810
1904 ...	68,036	76,287	20,058	18,049	12,685	8,224	203,339
1905 ...	72,175	80,235	21,705	19,273	12,733	8,468	214,589
1906 ...	77,822	85,229	23,961	20,153	12,897	8,498	228,560
1907 ...	86,467	90,903	27,954	22,701	12,607	8,209	248,841

PERCENTAGE OF AVERAGE NUMBERS ON TOTAL EMPLOYED.

	%	%	%	%	%	%	%
1903 ...	33.50	37.37	9.84	9.28†	6.04	3.97	100.00
1904 ...	33.44	37.49	9.86	8.94	6.23	4.04	100.00
1905 ...	33.62	37.37	10.11	9.03	5.93	3.94	100.00
1906 ...	34.03	37.26	10.47	8.88	5.64	3.72	100.00
1907 ...	34.75	36.53	11.23	9.12	5.07	3.30	100.00

AVERAGE NUMBERS EMPLOYED PER 10,000 OF MEAN POPULATION.

1903 ...	463	606	376*	...	534	439	502
1904 ...	472	632	386*	492	536	460	515
1905 ...	489	662	413*	518	509	472	534
1906 ...	515	696	450	534	496	475	560
1907 ...	558	734	519	589	481	458	599

* Inclusive of factories with two persons. † Figures for 1904.

(ii.) *Rates of Increase, 1903 to 1907.* From the preceding table it may be seen that there has been a general and steady increase in the average number of persons employed in manufacturing industries in each State during the period referred to. The following table shews the percentage of increase during each year on the average number for the preceding year:—

PERCENTAGES OF INCREASE IN AVERAGE NUMBER EMPLOYED, 1903 to 1907.

Years.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	C'wealth.
1903-4 ...	3.66	4.18	4.15	...	7.24	5.64	3.84
1904-5 ...	6.08	5.18	8.21	6.67	0.38	3.61	5.52
1905-6 ...	7.82	6.22	10.38	4.70	1.29	0.45	6.52
1906-7 ...	11.11	6.66	16.67	11.80	— 2.25	— 3.49	8.80

2. Classification of Numbers Employed in Factories in the Commonwealth, 1903 to 1907.—The following table gives a classification of the average numbers of persons employed in factories of different descriptions in the Commonwealth during the years 1903 to 1907, inclusive:—

AVERAGE NUMBER OF PERSONS EMPLOYED IN VARIOUS FACTORIES IN COMMONWEALTH, 1903 to 1907.

Class of Industry.	1903.*	1904.	1905.	1906.†	1907.
I. Treating raw material, product of agricultural and pastoral pursuits, etc.	7,547	7,182	7,460	7,809	8,956
II. Treating oils and fats, animal, vegetable, etc.	1,649	1,601	1,717	1,760	1,727
III. Processes in stone, clay, glass, etc.	7,900	7,907	8,285	8,779	8,909
IV. Working in wood	16,498	16,285	16,938	18,347	19,457
V. Metal works, machinery, etc.	35,586	37,164	40,061	43,431	47,060
VI. Connected with food and drink, etc.	31,761	33,033	35,026	36,720	40,228
VII. Clothing and textile fabrics, etc.	53,041	56,269	59,025	62,594	68,373
VIII. Books, paper, printing and engraving	17,187	18,167	18,441	19,565	20,733
IX. Musical instruments, etc.	254	282	384	386	430
X. Arms and explosives	361	302	280	347	323
XI. Vehicles and fittings, saddlery and harness, etc.	7,753	8,161	8,780	9,027	10,288
XII. Ship and boat building and repairing	1,978	1,853	1,964	2,124	2,049
XIII. Furniture, bedding and upholstery	5,297	5,214	5,422	5,890	6,819
XIV. Drugs, chemicals and by-products	2,048	2,153	2,373	2,600	2,895
XV. Surgical and other scientific instruments	125	142	146	178	170
XVI. Jewellery, timepieces, and platedware	1,064	1,239	1,237	1,397	1,700
XVII. Heat, light, and power	3,636	3,992	4,443	4,834	5,372
XVIII. Leatherware, n.e.i.	463	557	592	731	788
XIX. Minor wares, n.e.i.	1,642	1,836	1,945	2,041	2,564
Total	195,810	203,339	214,589	228,560	248,841

* South Australian figures for 1904. † Excluding Queensland Government Railways. For preceding years the Queensland statistics include all establishments where two or more hands were employed except Government Railway workshops.

The total increase in the average number of hands employed from 1903 to 1907 was 53,031, or an annual average of 13,258. The increase was general throughout all the various classes of industry except Class X., in which there was the small decrease of thirty-eight hands. The greatest development took place in Classes VII. and V., the increases being 15,332 and 11,474 respectively.

3. Classification of Numbers Employed in each State, according to Class of Industry, 1907.—The following table shows a similar classification of employes in manufacturing industries in each State for the year 1907:—

AVERAGE NUMBER OF PERSONS EMPLOYED IN VARIOUS FACTORIES IN EACH STATE, 1907.

Class of Industry.	N.S.W.	Vic.	Qld.	S. Aus.	W. Aus.	Tas.	C'wth.
I. Treating raw material, product of agricul. and pastoral pursuits, etc.	3,727	3,101	646	1,096	167	129	8,956
II. Treating oils and fats, animal, vegetable, etc.	639	563	142	291	57	35	1,727
III. Processes in stone, clay, glass, etc.	3,675	3,383	451	655	515	230	8,909
IV. Working in wood	5,896	4,647	3,077	1,071	3,345	1,421	19,457
V. Metal works, machinery, etc.	18,093	13,469	4,111	6,826	2,489	2,072	47,060
VI. Connected with food and drink, etc.	12,064	12,894	9,897	3,159	1,411	1,303	40,228
VII. Clothing and textile fabrics, etc.	21,922	33,118	5,130	4,791	2,202	1,507	68,373
VIII. Books, paper, printing & engraving	7,593	7,701	2,182	1,652	1,074	531	20,733
IX. Musical instruments, etc.	380	34	...	16	...	...	430
X. Arms and explosives	16	307	...	...	...	...	323
XI. Vehicles and fittings, saddlery, and harness, etc.	3,464	3,633	1,154	1,234	512	291	10,288
XII. Ship and boat building & repairing	1,680	144	71	97	19	38	2,049
XIII. Furniture, bedding, and upholstery	2,481	2,370	796	642	275	255	6,819
XIV. Drugs, chemicals, and by-products	1,106	1,323	61	348	45	12	2,895
XV. Surgical and other scientific instruments	84	50	21	5	10	...	170
XVI. Jewellery, timepieces, & platedware	626	737	117	146	28	56	1,700
XVII. Heat, light, and power	2,040	1,864	421	421	350	276	5,372
XVIII. Leatherware, n.e.i.	272	422	52	24	18	...	788
XIX. Minor wares, n.e.i.	709	1,063	125	227	90	53	2,564
Total	86,467	90,903	27,954	22,701	12,607	8,209	248,841

The largest number employed in any particular class in the Commonwealth was in Class VII., in which there were 68,373 employés, or 27.48 per cent. on the whole number. The class affording employment to the smallest number of hands was Class XV., in which there were 170 hands, or 0.07 per cent. on the total number of employés. Classes VI., VII., and VIII. comprise those industries in which female labour is largely employed. (See § 4 hereof.)

4. Classification of Numbers Employed in each State according to Nature of Employment, 1907.—In the following table the average numbers of persons employed in each State during the year 1907 are classified according to the nature of their employment:—

**AVERAGE NUMBER OF PERSONS EMPLOYED IN EACH STATE, CLASSIFIED
ACCORDING TO NATURE OF EMPLOYMENT, 1907.**

State.	Average Number of Persons Employed.						Total.
	Working Proprietors.	Managers and Overseers	Accountants and Clerks.	Engine-drivers and Firemen.	Workers, Skilled & Unskilled in Factory Mill or Workshop.	Carters, Messengers and Others.	
New South Wales ...	3,983	2,792	2,857	2,308	71,979	2,548	86,467
Victoria ...	4,604	2,713	2,746	1,544	75,148	4,148	90,903
Queensland ...	1,270	994	1,116	1,103	21,228	2,243	27,954
South Australia ...	1,021	666	795	499	18,865	855	22,701
Western Australia ...	525	426	515	346	9,799	996	12,607
Tasmania ...	...*	772	310	314	6,545	268	8,209
Commonwealth ...	11,403	8,363	8,339	6,114	203,564	11,058	248,841

* Included in Managers and Overseers.

5. Classification of Factories according to Number of Hands Employed, 1907.—The number of factories in each State classified according to the numbers of hands employed, and the total numbers of hands employed in each class of factory, are shewn in the following table:—

**CLASSIFICATION OF FACTORIES ACCORDING TO NUMBER OF HANDS EMPLOYED,
1907.**

No. of Persons Employed in each Factory.	N.S.W.	Victoria.	Q'sland.	S. Aust.	W. Aust.	Tas.	C'wealth.
NUMBER OF FACTORIES.							
Under 4 ...	647	617	182	120	87	165	1,818
4 ...	508	597	169	126	63	48	1,511
5 to 10 ...	1,636	1,624	463	407	229	137	4,496
11 to 20 ...	803	811	232	210	147	67	2,270
21 to 50 ...	505	550	180	143	71	60	1,509
51 to 100 ...	190	179	82	51	30	13	545
Over 100 ...	143	152	51	29	16	15	406
Total ...	4,432	4,530	1,359	1,086	643	505	12,555

No. of Persons Employed in each Factory.	N.S.W.	Victoria.	Q'sland.	S. Aust.	W. Aust.	Tas.	C'wealth.
TOTAL AVERAGE NUMBER OF HANDS EMPLOYED.							
Under 4 ...	1,507	1,503	414	282	204	345	4,255
4 ...	2,032	2,388	676	504	252	192	6,044
5 to 10 ...	11,357	11,483	3,202	2,902	1,556	974	31,474
11 to 20 ...	11,673	11,801	3,415	3,044	2,123	972	33,028
21 to 50 ...	15,728	17,049	5,721	4,506	2,256	1,879	47,139
51 to 100 ...	13,346	12,332	5,927	3,570	1,929	871	37,975
Over 100 ...	30,824	34,347	8,599	7,893	4,287	2,976	88,926
Total ...	86,467	90,903	27,954	22,701	12,607	8,209	248,841

6. Outworkers.—The term "outworker" or "homeworker" has acquired a special meaning in connection with manufacturing industries, and technically embraces only those to whom work is given out by factory owners to be wrought upon in their own homes. Individuals working for themselves are not included. The following table gives particulars, so far as available, of the average number of outworkers connected with factories in each State during each year from 1903 to 1907, inclusive :—

NUMBER OF OUTWORKERS CONNECTED WITH FACTORIES, 1903 to 1907.

Year.	N.S.W.	Victoria.	Q'sland.	Sth. Aus.	West Aus.	Tas.	C'wealth.
1903 ...	308	955	*	*	*	71	*
1904 ...	439	991	*	*	*	42	*
1905 ...	374	1,186	*	*	*	86	*
1906 ...	501	1,431	*	*	*	57	*
1907 ...	592	1,429	264	66	18	60	2,429

* Not available.

Although the figures from 1903 to 1907, for the States of New South Wales and Victoria, show generally a fairly steady and rapid increase in the number of outworkers, they are considerably smaller than the figures for early years. For example, in 1897 there were 2382 outworkers registered in Victoria in the clothing trades, while the number of employés in factories for those trades was 14,293. The corresponding figures for the same year in New South Wales were 546 outworkers and 8602 factory employés. Thus it will be seen that the number of employés in factories has largely increased, while the increase in the number of outworkers has been relatively small.

The Factories Acts in each State contain provisions regulating the employment of outworkers. Generally records of out-work must be kept by factory proprietors, specifying the names and remuneration of workers, and stating the places where the work is done. Further particulars are given in a later part of this book. (See Section XXVII. *Industrial Unionism and Industrial Legislation.*)

§ 4. Sex Distribution in Factories.

1. Employment of Females in Factories.—In all the States the employment of female labour in factories is now regulated by Act of Parliament. In Victoria the first Act dealing with the subject was passed in the year 1873, and provided that no female should be employed for more than eight hours a day without the permission of the Chief Secretary. The number of working hours for women is now limited to forty-eight per week in all the States except Tasmania, where the maximum number of working hours is ten per day. The maximum periods of continuous labour, and the intervals of cessation

therefrom, are also prescribed by the several Acts. Further reference is made to the restrictions regarding the employment of females in a later part of this book. (See Section XXVII. *Industrial Unionism and Industrial Legislation.*)

2. **Distribution of Employes according to Sex, 1903 to 1907.**—In Victoria the ratio of the average number of females to the average number of males employed in factories during the year 1886 was about one to five. Five years later (1891) it was somewhat less, but in 1896 had increased to about one woman to three men, and at present is about one to two. The employment of women is, however, largely confined to a few trades.

In New South Wales the male workers were about seven times the number of females in 1886; in 1891 the proportion had become six to one; in 1903 about four to one; and is now rather higher than three to one. The great prosperity in clothing and textile industries is one of the main causes of increase in female employment. Large numbers are occupied in tailoring and dress making, in wholesale manufactories, in tobacco factories, and preserving works. Certain trades are specifically known as women's trades, such for example as clothing and textile trades, preparation of food, book-binding, and lighter work connected with the drug trade, such for example as wrapping. In common with commercial establishments, a considerable number of women are also employed as clerks and typewriters in factories.

(i.) *Average Numbers of Males and Females Employed, 1903 to 1907.* The following table shews the average numbers of male and female employes, so far as available, in factories in each State from 1903 to 1907:—

AVERAGE NUMBER OF MALES AND FEMALES EMPLOYED IN MANUFACTURING INDUSTRIES, 1903 to 1907.

State.	1903.	1904.	1905.	1906.	1907.
MALES.					
New South Wales	52,453	53,457	56,111	59,979	65,953
Victoria	49,434	50,554	52,925	56,339	59,691
Queensland	*16,086	*16,758	*18,105	*19,961	23,191
South Anstralia	†14,408	14,408	15,832	16,451	18,423
Western Australia	10,420	11,078	11,091	11,015	10,667
Tasmania	6,445	6,880	7,105	7,220	6,972
Commonwealth	149,246	153,135	161,169	170,965	184,897
FEMALES.					
New South Wales	13,180	14,579	16,064	17,843	20,514
Victoria	23,795	25,733	27,310	28,890	31,212
Queensland	*3,200	*3,300	*3,600	*4,000	4,763
South Australia	†3,641	3,641	3,441	3,702	4,278
Western Australia	1,408	1,607	1,642	1,882	1,940
Tasmania	1,340	1,344	1,363	1,278	1,237
Commonwealth	46,564	50,204	53,420	57,595	63,944

* Estimated. † 1904 figures.

It may be seen that during the years specified there has been for the whole Commonwealth a total increase in the number of male employes of 35,641, or an annual average of 8910, and in the number of female employes a total increase of 17,380, or an annual average of 4345.

(ii.) *Average Numbers of Males and Females Employed per 10,000 of Mean Population, 1903 to 1907.* The following table shews the average numbers of male and female employes per 10,000 of the mean male and female population respectively in each State from 1903 to 1907 :—

**AVERAGE NUMBERS OF MALE AND FEMALE EMPLOYES PER 10,000 OF MEAN
MALE AND FEMALE POPULATION RESPECTIVELY, 1903 to 1907**

State.	1903.	1904.	1905.	1906.	1907.
MALES.					
New South Wales ...	704	701	717	746	796
Victoria ...	814	835	871	919	963
Queensland ...	*563	*532	*624	*682	789
South Australia ...	†762	762	815	821	902
Western Australia ...	772	789	752	724	696
Tasmania ...	696	739	762	775	753
Commonwealth ...	725	732	755	787	844
FEMALES.					
New South Wales ...	197	214	232	253	284
Victoria ...	394	426	450	471	503
Queensland ...	*138	*141	*151	*165	194
South Australia ...	†207	207	210	213	235
Western Australia ...	171	161	162	177	178
Tasmania ...	156	155	158	146	143
Commonwealth ...	249	265	278	296	325

* Estimated. † 1904 figures.

3. **Rate of Increase for each Sex.**—The percentages of annual increase in the average numbers of males and females employed in manufacturing industries, based upon the figures for the preceding year, are shewn below for the whole Commonwealth, for the years 1903 to 1907 :—

**PERCENTAGES OF ANNUAL INCREASE IN AVERAGE NUMBERS OF MALE AND
FEMALE EMPLOYES, 1903 to 1907.**

Particulars.	1903-4.	1904-5.	1905-6	1906-7.
Males ... %	2.60	5.25	6.08	8.15
Females ... %	7.82	6.40	7.81	11.02

The above table shews that there has been relatively a larger increase in the number of female than in the number of male employes. This matter is referred to further in the following paragraph hereof. The subjoined statement shews the percentages of annual increase in each State during the last year (1906-7) :—

PERCENTAGES OF INCREASE IN AVERAGE NUMBERS OF MALE AND FEMALE EMPLOYEES, 1906-7.*

Particulars.		N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	C'wealth.
Males ...	%	9.96	5.95	16.18	11.98	-3.16	-3.43	8.15
Females ...	%	14.97	7.69	19.07	15.55	3.08	-3.21	11.02

* The negative sign indicates a decrease.

4. Increasing Ratio of Female Employment in Factories.—The increasing extent to which females are employed in the factories of the Commonwealth may perhaps be best shown by giving the number of females to every 100 male employes for each year and for each State:—

NUMBER OF FEMALES PER 100 MALES IN AUSTRALIAN FACTORIES, 1903 to 1907.

Year.	N.S.W.	Victoria.	Queensland.	S. Aust.	W. Aust.	Tas.	C'wealth.
1903	25.13	48.14	*19.89	+26.07	13.51	20.79	31.20
1904	27.27	50.90	*19.89	26.07	14.51	19.53	32.78
1905	28.63	51.60	*19.89	22.35	14.80	19.46	33.15
1906	29.75	51.28	*20.04	23.31	17.09	17.68	33.69
1907	31.10	52.29	20.53	23.22	18.19	17.74	34.58

* Estimated. † 1904 figures.

Although this table shows that from 1903 to 1907 there has been an increase in the percentage specified from 31.20 to 34.58, the tables given in the next succeeding paragraph show that this increase has not been due so much to the incursion of female labour into what may be termed men's trades, as to the activity in those trades in which women are ordinarily engaged, more especially in dressmaking, millinery, etc.

5. Employment of Females in Particular Industries, 1907.—The employment of women in manufacturing industries in Australia is largely confined to a few trades, of which the more important are comprised in Classes VI., VII., and VIII. (see § 1, 3. above), viz., in connection with food, drink, etc., clothing and textile fabrics, and books, paper, printing, etc. The following table shows the average number of females employed in each of these classes during the year 1907 in each State, and also shows the percentages of the average numbers so employed on the total average numbers of females employed in all classes of factories:—

AVERAGE NUMBERS OF FEMALES EMPLOYED IN PARTICULAR INDUSTRIES AND PERCENTAGES ON AVERAGE TOTAL EMPLOYED, 1907.

Class.	N.S.W.	Vict.	Qld.	S. Aust.	W.Aust.	Tas.	Cw'lh.
AVERAGE NUMBERS.							
VI. Food, drink, etc. ...	2,546	3,203	589	892	113	195	7,038
VII. Clothing and textile fabrics ...	14,955	24,397	3,847	3,507	1,631	920	48,857
VIII. Books, paper, printing, etc. ...	1,692	1,079	344	454	142	59	4,670
Total ...	19,193	29,579	4,580	4,153	1,886	1,174	60,565
PERCENTAGES ON TOTAL AVERAGE FEMALE EMPLOYEES.							
VI. Food, drink, etc. ...	12.41	10.26	12.36	9.16	5.82	15.76	11.00
VII. Clothing and textile fabrics ...	72.90	78.16	76.57	77.30	84.07	74.37	76.41
VIII. Books, paper, printing, etc. ...	8.25	6.34	7.22	10.62	7.32	4.77	7.30
Total ...	93.56	94.76	96.15	97.08	97.21	94.90	94.71

It will be seen that by far the greater part of the total number of females employed in factories work in one or other of the three classes of industry indicated. Class VII. being the most important.

The classification of the employment of women in Class VII. in the two States of largest population is of interest. The following table shews, also, for the sake of comparison, the number of males employed:—

EMPLOYMENT IN CLASS VII., 1907.

Class VII.	New South Wales.		Victoria.	
	Males.	Females.	Males.	Females.
Woolen and tweed mills	179	216	742	847
Boots and shoes	3,163	1,623	4,185	2,118
Slop clothing	2,722	6,273	1,912	6,271
Clothing (tailoring)				
Dressmaking and millinery	56	4,421	170	8,595
Dyeworks and cleaning	38	29	42	81
Furriers	19	16	29	55
Hats and caps	335	759	576	828
Waterproof and oilskin	28	131	47	143
Shirts, ties, and scarves	113	1,341	249	5,047
Rope and cordage	183	4	404	277
Tents and tarpaulins	136	142	61	23
Other ... ..	...	...	7	112
Total	6,967	14,955	8,424	24,397

§ 5. Child Labour in Factories.

1. **Conditions of Child Labour.**—The employment of young persons in factories in each State of the Commonwealth is regulated by Acts of Parliament in a similar manner to the employment of female labour. Excepting under special circumstances, children under a certain age may not be employed at all in factories. The minimum age in New South Wales, Queensland, and Western Australia is fourteen, and in the other States is thirteen years. Other restrictions on the employment of young persons in factories are more particularly referred to in a later part of this book. (See Section XXVII. *Industrial Unionism and Industrial Legislation.*) The general object of the restrictions imposed is to assure that a proper period shall be devoted to primary education, and that the early years of toil shall not exhaust the worker before the attainment of full growth.

2. **Average Number of Children Employed in Factories, 1903 to 1907.**—In the statistical compilations of the various States the term "child" may be taken to denote any person under sixteen years of age, excepting in New South Wales, where it denoted, for years prior to 1907, any person under fifteen. The following table shews the average number of children of each sex employed in manufacturing industries in each State during the year 1907. It will be seen that the Commonwealth figures for years prior to 1907 are incomplete. There have been increases in the average number employed in all the States for which returns are available, except South Australia, where there has been a small decrease. The largest increase was in New South Wales, where the numbers rose from 1194 in 1903 to 4286 in 1907, a total increase of 3092, or an annual average of 773. These figures are, however, subject to the disability mentioned on the next page.

AVERAGE NUMBER OF CHILDREN EMPLOYED IN FACTORIES, 1903 to 1907.

State.	1903.	1904.	1905.	1906.	1907.
MALES.					
New South Wales ...	774	748	668	881	2,406
Victoria ...	2,696	3,058	3,261	3,213	3,253
Queensland ...	*	*	*	*	1,119
South Australia ...	*	1,245	1,362	1,166	1,127
Western Australia ...	179	217	197	203	216
Tasmania ...	125	168	284	251	214
Commonwealth ...	†3,774	†5,436	†5,772	†5,714	8,335
FEMALES.					
New South Wales ...	420	452	473	579	1,880
Victoria ...	2,332	2,952	3,034	2,997	3,095
Queensland ...	*	*	*	*	576
South Australia ...	*	395	324	400	480
Western Australia ...	47	94	81	126	159
Tasmania ...	47	75	128	99	97
Commonwealth ...	†2,846	†3,968	†4,040	†4,201	6,287
TOTAL.					
New South Wales ...	1,194	1,200	1,141	1,460	4,286
Victoria ...	5,028	6,010	6,295	6,210	6,348
Queensland ...	*	*	*	*	1,695
South Australia ...	*	1,640	1,686	1,566	1,607
Western Australia ...	226	311	278	329	375
Tasmania ...	172	243	412	350	311
Commonwealth ...	†6,620	†9,404	†9,812	†9,915	14,622

* Not available. † Incomplete.

The relatively large increase in the figures for the Commonwealth for the last year is accounted for largely by the fact that in New South Wales, during years prior to 1907, the term "child" denoted any person under the age of fifteen years of age, which, in 1907, was raised to sixteen years in order to come into line with the other States of the Commonwealth. It should be noted also that the Commonwealth figures for the years 1903 to 1906 are exclusive of returns for Queensland, and for the year 1903 are also exclusive of South Australia.

3. Industries Employing Child Labour, 1907.—The employment of children is largely confined to a limited number of industries, the most important of which are specified in the table below, which shews the average number of children of each sex, employed in the several industries indicated, in each State during the year 1907:—

NUMBER OF CHILDREN ENGAGED IN VARIOUS INDUSTRIES, 1907.

Class.	Industry.	N.S.W.		Victoria.		Q'ld.		S. Aust.		W. Aust.		Tas.		Cwlth.	
		M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
V.	Engin'ring, ironworks, foundries, etc. ...	151	...	268	...	87	...	106	...	31	...	19	...	662	...
VI.	Biscuits, cakes, etc. ...	123	107	59	25	12	15	3	1	...	...	9	...	206	148
..	Jams, pickles, sauces, etc. ...	63	33	67	37	21	1	40	49	2	...	80	36	273	156
..	Aerated waters, cordials, etc. ...	64	4	73	...	47	3	18	...	11	...	...	...	213	7
..	Tobacco, cigars, etc. ...	10	40	60	98	3	...	3	18	...	...	...	...	76	156
VII.	Boots and shoes ...	242	250	358	401	61	50	89	70	9	4	11	4	770	779
..	Clothing ...	115	431	78	442	30	199	31	116	18	68	2	7	274	1,263
..	Dressmaking and millinery ...	...	124	5	833	2	81	...	63	...	42	...	43	7	1,186
..	Hats and caps... ..	20	92	51	71	1	8	4	4	...	...	...	...	76	175
..	Shirts, ties, scarfs, etc.	6	138	14	520	10	95	3	34	...	23	...	...	33	810

4. **Apprenticeship.**—The apprenticeship systems of the several States may be summarised as follows :—

In New South Wales, no child may be apprenticed until the attainment of the age of fourteen years, in Victoria and Queensland, twelve years. There is no limitation in the case of the other States, nor any regulating Acts except as applying to charity apprentices. The statutes limiting the age at which children may begin to work may be regarded as applicable by way of preventing too early apprenticeship, so also may those directing that education be continued up to a certain age or standard.

Indentures must be entered into specifying the conditions of the employment. Apprenticeships may not exceed seven years in duration, and become inoperative at twenty-one years of age, or in the case of women, on marriage.

The Arbitration Courts and Wages Boards have power to limit the number of apprentices which may be taken into a factory. No general statistics of the number of apprentices in Australia have been collected up to the present time. Other enactments relating to child labour are referred to elsewhere.

§ 6. Amount of Wages Paid and Value of Production.

1. **Introduction.**—The importance of the manufacturing industries of the Commonwealth is indicated by the fact that the total value of the output for 1907 exclusive of the States of Western Australia and Tasmania, for which particulars are not available, was £86,972,413, of which amount the sum of £52,542,012 represents the value of the raw materials used. The difference between these two amounts, viz., £34,430,401, represents the amount by which the value of the raw materials was enhanced in the process of manufacture. The total amount of salaries and wages paid in factories in all the States during 1907 was £18,323,977; the corresponding amount, exclusive of the States of Western Australia and Tasmania, being £16,291,425.

2. **Amounts of Salaries and Wages Paid, 1907.**—The total amounts of salaries and wages paid during the year 1907 in various classes of factories in the Commonwealth (excluding all sums drawn by working proprietors) are shewn in the following table.

It has been found that it is not practicable to shew satisfactorily in this book the rates of wages paid to employes in various classes of manufacturing industries in Australia, owing to the fact that the rates in many industries vary very considerably in different parts of the country.

**AMOUNTS OF SALARIES AND WAGES PAID IN FACTORIES IN COMMONWEALTH,
1907.***

Class of Industry.	N.S.W.	Vict.	Q'land.	S. Aust.	W. Aust.	Tas.	Cwltth.
	£	£	£	£	£	£	£
I. Treating raw material, product of agricultural and pastoral pursuits, etc.	242,761	206,642	51,109	72,717	15,723	10,681	599,638
II. Treating oils and fats, animal, vegetable, etc.	45,658	47,193	11,614	18,824	5,053	3,400	131,742
III. Processes in stone, clay, glass, etc.	306,927	270,016	29,850	52,943	47,843	15,533	732,112
IV. Working in wood	466,832	358,522	243,476	94,278	384,965	106,202	1,654,275
V. Metal works, machinery, etc.	1,884,144	1,226,616	363,530	642,100	301,795	228,975	4,647,160
VI. Connected with food and drink, etc.	898,637	905,224	590,293	246,070	173,884	74,750	2,888,858
VII. Clothing and textile fabrics, etc.	1,051,153	1,397,053	223,710	226,572	145,672	79,183	3,128,343
VIII. Books, paper, printing and engraving	637,883	645,205	203,707	133,127	146,362	54,291	1,820,575
IX. Musical instruments, etc.	35,298	2,299	...	1,306	...	...	38,903
X. Arms and explosives	1,220	18,337	...	...	...	...	19,557
XI. Vehicles and fittings, saddlery and harness, etc.	243,910	232,408	77,443	84,696	50,939	20,996	710,392
XII. Ship and boat building and repairing	214,018	9,547	7,367	13,558	1,939	3,788	250,217
XIII. Furniture, bedding and upholstery	190,091	172,941	51,131	54,596	30,924	15,860	515,543
XIV. Drugs, chemicals, and by-products	76,382	94,395	3,737	22,587	5,531	640	203,272
XV. Surgical and other scientific instruments	6,348	3,036	1,689	691	1,084	...	12,848
XVI. Jewellery, timepieces, and platedware	48,548	62,142	7,773	12,464	3,087	4,517	138,531
XVII. Heat, light, and power	243,231	215,508	43,904	45,984	58,888	31,992	639,557
XVIII. Leatherware, n.e.i.	16,805	25,151	2,122	1,342	1,306	...	46,726
XIX. Minor wares, n.e.i.	40,810	81,442	6,184	10,539	5,708	1,036	145,728
Total	6,650,715	5,982,677	1,923,639	1,734,394	1,380,708	651,844	18,323,977

* Excluding all amounts drawn by working proprietors.

The maximum amount of salaries and wages paid in any particular class was in Class V., the amount being £4,647,160, or 25.36 per cent. on the total amount; the minimum amount was in Class XV., £12,848, or 0.07 per cent. on the total amount. The State in which the largest amount was paid was New South Wales, where the amount paid was over ten times as much as was paid in Tasmania. The following statement shews the average amount paid per employé in each State respectively; the figures are exclusive of working proprietors:—

AVERAGE AMOUNT OF SALARIES AND WAGES PAID PER EMPLOYE, 1907.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	C'wealth.
Amount paid ... £	80.63	69.33	71.82	80.00	114.23	79.40	77.17

In comparing the figures in the above table regard should be paid to the nature of certain industries which are carried on to a greater extent in some States than in others (see § 2 hereof). In Victoria, for instance, where the average is lowest there are a large number of factories and hands employed in Class VII., and in that class wages are low, a great many women and children being employed. The position occupied by Western Australia is no doubt partly due to the increased cost of living in that State.

3. Value of Raw Materials used in Factories, 1907.—The total value of raw materials worked up (i.e., exclusive of fuel, lubricants, etc.) in factories in the Common-

wealth, exclusive of the States of Western Australia and Tasmania, for which particulars are not available, during 1907, was £52,542,012, which represents 61.46 per cent. of the total value of the finished products. (See next paragraph hereof.) The following table shows the value of the raw materials worked up in various factories in each State except Western Australia and Tasmania, during the year 1907:—

**VALUE OF RAW MATERIALS WORKED UP IN FACTORIES IN COMMONWEALTH,
1907.**

Class of Industry.	N.S.W.	Vic.	Qld.	S.A.	W.A.*	Tas.†	Cwth.‡
	£	£	£	£	£	£	£
I. Treating raw material, product of agricultural and pastoral pursuits, etc. ...	3,925,883	1,896,987	1,058,399	479,646	...	...	7,860,865
II. Treating oils and fats, animal, vegetable, etc. ...	487,451	299,713	53,674	107,112	...	...	947,950
III. Processes in stone, clay, glass, etc. ...	187,982	141,939	8,842	17,902	...	...	336,066
IV. Working in wood ...	1,271,115	565,784	374,411	230,335	...	...	2,491,645
V. Metal wks., machinery, etc. ...	5,219,699	1,870,542	531,062	1,867,506	...	...	9,488,809
VI. Connected with food and drink, etc. ...	7,422,925	7,781,422	3,772,353	1,656,039	...	...	20,632,739
VII. Clothing and textile fabrics, etc. ...	2,079,141	2,838,249	470,985	443,009	...	...	5,831,384
VIII. Books, paper, printing, and engraving ...	536,055	649,470	36,412	126,973	...	...	1,348,910
IX. Musical instruments, etc. ...	52,910	1,066	...	1,251	...	...	55,227
X. Arms and explosives ...	3,634	73,438	...	...	...	...	77,072
XI. Vehicles and fittings, saddlery and harness, etc. ...	290,931	281,114	76,891	123,129	...	...	772,065
XII. Ship and boat building and repairing ...	105,877	6,906	3,070	6,551	...	...	121,904
XIII. Furniture, bedding, and upholstery ...	264,832	326,570	49,690	53,260	...	...	724,352
XIV. Drugs, chemicals, and by-products ...	320,817	443,436	8,168	144,761	...	...	917,232
XV. Surgical and other scientific instruments ...	5,689	2,147	1,378	3,000	...	...	12,214
XVI. Jewellery, timepieces, and plated ware ...	65,652	119,858	15,847	15,650	...	...	217,002
XVII. Heat, light, and power ...	299,995	193,153	20,050	33,484	...	...	546,682
XVIII. Leatherware, n.e.i. ...	75,214	114,691	3,039	3,689	...	...	196,633
XIX. Minor wares, n.e.i. ...	120,910	319,598	5,765	16,939	...	...	463,212
Total ...	22,746,162	17,926,128	6,490,086	5,879,636	...	...	52,542,012

* Details too incomplete for publication. † Figures not available. ‡ Exclusive of Western Australia and Tasmania.

The class in which the maximum value of raw materials was used was Class VI., "Connected with Food and Drink, etc.," the value being £20,632,739, or more than twice the value in any other class. The next important class in order of value was Class V., "Metal Works, Machinery, etc.," in which raw materials to the value of £9,488,809 were used. The class in which the minimum value appears is Class XV., "Surgical and other Scientific Instruments," the value being £12,214.

4. **Total Value of Output of Manufacturing Industries, 1907.**—The value of the output of new goods manufactured and repairs effected in factories of various classes in each State, except Western Australia and Tasmania, during the year 1907 is shown in the following table. The figures given represent not only the increased value due to the process of manufacture, but also include the value of the raw materials used. The difference between the value of the materials used and the total output (see paragraph 5 hereof) is the real value of production from manufactories.

TOTAL VALUE OF OUTPUT OF FACTORIES IN COMMONWEALTH, 1907.

Class of Industry.	N.S.W.	Victoria.	Q'land.	S.A.	W.A.*	Tas.*	Cwth.†
	£	£	£	£	£	£	£
I. Treating raw material, product of agricultural & pastoral pursuits, etc.	4,507,210	2,336,399	1,241,370	602,325	...	...	8,637,304
II. Treating oils and fats, animal, vegetable, etc.	686,894	433,603	96,279	155,559	...	...	1,377,335
III. Processes in stone, clay, glass, etc.	827,680	684,519	60,633	115,091	...	...	1,687,978
IV. Working in wood	2,082,130	1,171,610	783,541	443,068	...	...	4,460,349
V. Metal works, machinery, etc.	9,160,693	3,815,558	1,330,247	3,301,965	...	...	17,608,468
VI. Connected with food and drink, etc.	10,283,497	10,517,884	5,757,093	2,372,849	...	...	28,931,328
VII. Clothing and textile fabrics, etc.	3,817,637	4,935,774	858,796	790,505	...	...	10,402,762
VIII. Books, paper, printing, and engraving...	1,627,440	1,910,979	468,935	225,092	...	...	4,232,495
IX. Musical instruments, etc.	118,951	5,653	...	3,465	...	...	128,069
X. Arms and explosives	5,264	115,481	...	...	...	...	120,745
XI. Vehicles and fittings, saddlery and harness, etc.	690,084	656,545	215,269	251,450	...	...	1,813,348
XII. Ship and boat building and repairing...	387,314	24,368	15,099	24,530	...	...	451,811
XIII. Furniture, bedding, and upholstery	598,412	598,875	125,564	140,325	...	...	1,463,176
XIV. Drugs, chemicals, and by-products	595,073	760,008	17,933	192,931	...	...	1,565,950
XV. Surgical and other scientific instruments	19,675	8,518	5,838	4,200	...	...	33,231
XVI. Jewellery, timepieces, and platedware	146,043	240,327	26,425	37,225	...	...	450,020
XVII. Heat, light, and power	1,373,709	830,088	202,352	137,812	...	...	2,543,961
XVIII. Leatherware, n.e.i.	107,947	162,153	9,306	6,343	...	...	285,748
XIX. Minor wares, n.e.i.	194,750	480,292	14,776	33,617	...	...	723,335
Total	37,231,012	29,693,634	11,209,515	8,838,252	...	...	86,972,418

* Not available. † Exclusive of Western Australia and Tasmania.

It may be seen that the State of New South Wales far outstrips the other States in the total value of the output of her factories, the value being £37,231,012, or 42.88 per cent. on the total value for the four States. The next State in order of value is Victoria, which produces 34.14 per cent.; the value of the output of Queensland is 12.88 per cent. and of South Australia 10.10 per cent. on the total value for the four States. The two most important classes in order of value of output (Classes VI. and V.) are the same as in order of value of raw materials used; the next class is, however, Class VII., as regards output, but is Class I. as regards raw materials used. The following statement shews the value of output per head of mean population during 1907. The population of the Commonwealth is taken exclusive of the two States for which particulars are not available:—

VALUE OF OUTPUT OF FACTORIES PER HEAD OF MEAN POPULATION, 1907.

Particulars.	N.S.W.	Victoria.	Q'land.	S.A.	W.A.*	Tas.*	Cwth.†
Amount per head ... £	24.06	23.95	20.82	22.70	...	...	23.41

* Not available. † Exclusive of Western Australia and Tasmania.

5. Value of Production of Manufacturing Industries, 1907.—The difference between the figures given in paragraph 4 and the corresponding figures in paragraph 3 hereof represents the amount added to the value of the raw materials by the process of manufacture. This is the real measure of the value of production from manufacturing industries. The following table shews the value added in this manner in each State, for which figures are available, during the year 1907 for various classes of factories:—

VALUE OF PRODUCTION FROM MANUFACTURING INDUSTRIES IN COMMON-WEALTH, 1907.

Class of Industry.	N S.W.	Victoria.	Q'land.	S.A.	W.A.*	Tas.*	Cwlth.†
	£	£	£	£	£	£	£
I. Treating raw material, product of agricultural and pastoral pursuits, etc. ...	581,377	439,412	182,971	122,670	...	...	1,325,439
II. Treating oils and fats, animal, vegetable, etc. ...	199,443	138,890	42,605	48,447	...	...	429,385
III. Processes in stone, clay, glass, etc. ...	659,698	542,580	51,846	97,789	...	...	1,351,913
IV. Working in wood... ..	811,015	605,826	389,130	162,733	...	...	1,968,704
V. Metal works, machinery, etc. ...	3,940,999	1,945,016	799,185	1,434,459	...	...	8,119,659
VI. Connected with food and drink, etc. ...	2,860,572	2,736,462	1,984,745	716,810	...	...	8,298,589
VII. Clothing and textile fabrics, etc. ...	1,738,546	2,097,525	387,811	347,496	...	...	4,571,378
VIII. Books, paper, printing, and engraving ...	1,091,434	1,261,509	432,523	98,119	...	...	2,883,585
IX. Musical instruments, etc. ...	66,041	4,587	...	2,214	...	...	72,842
X. Arms and explosives ...	1,630	42,043	...	...	...	...	43,673
XI. Vehicles and fittings, saddlery and harness, etc. ...	399,153	375,431	158,378	128,321	...	...	1,041,283
XII. Ship and boat building and repairing ...	222,437	17,462	12,029	17,979	...	...	329,907
XIII. Furniture, bedding, and upholstery ...	303,580	272,905	75,874	87,065	...	...	738,824
XIV. Drugs, chemicals, and bi-products ...	274,281	316,522	9,765	48,170	...	...	648,718
XV. Surgical and other scientific instruments ...	13,988	6,371	4,460	1,200	...	...	26,017
XVI. Jewellery, timepieces, and plated ware ...	80,391	120,474	10,578	21,575	...	...	233,016
XVII. Heat, light, and power ...	1,073,714	636,935	182,302	104,328	...	...	1,997,279
XVIII. Leatherware, n.e.i. ...	32,733	47,482	6,216	2,654	...	...	89,065
XIX. Minor wares, n.e.i. ...	73,840	160,694	9,011	16,578	...	...	260,123
Total	14,484,850	11,767,506	4,719,429	3,458,616	...	...	34,430,401

* Not available. † Exclusive of Western Australia and Tasmania.

It may be seen that as regards the amount of the value added the classes are approximately in the same order as in the case of value of production. The value added to raw material by process of manufacture per head of mean population is shewn in the following statement :—

VALUE OF PRODUCTION OF MANUFACTURING INDUSTRIES PER HEAD OF MEAN POPULATION, 1907.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.°	Tas.*	Cwlth.†
Value	£ 9.36	9.49	8.76	8.88	...	...	9.27

* Not available. † Exclusive of Western Australia and Tasmania.

Thus it may be seen that the position of the two leading States, New South Wales and Victoria, in regard to total value of output of factories per head of mean population is reversed in regard to value added per head, though the difference in either case is very small. The other two States for which particulars are available retain their relative positions in both cases.

As the total value of the output for the four States for which particulars are available was estimated at £86,972,413, there remained, after payment of £52,542,012, the value of the raw materials used, of £16,291,425 for salaries and wages, and of £1,832,447 for fuel, the sum of £16,306,529 to provide for all other expenditure and profits. The

following table gives corresponding particulars for each State for which particulars are available, expressed absolutely and as percentages of the total value of the output:—

VALUE OF OUTPUT AND COST OF PRODUCTION, 1907.

State.	Raw Materials Used.	Fuel.	Salaries and Wages.	All other Expenditure and Profits.	Total Value of Output.
VALUE AND COST, ETC.					
	£	£	£	£	£
New South Wales ...	22,746,162	843,686	6,650,715	6,990,449	37,231,012
Victoria ...	17,926,128	498,454	5,982,677	5,286,375	29,693,634
Queensland ...	6,490,086	208,775	1,923,639	2,587,015	11,209,515
South Australia ...	5,379,636	281,532	1,734,394	1,442,690	8,838,252
Western Australia* ...	...	...	...	...	...
Tasmania* ...	...	...	...	...	...
Commonwealth† ...	52,542,012	1,832,447	16,291,425	16,306,529	86,972,413

PERCENTAGE OF COST, ETC., ON TOTAL VALUE.

	%	%	%	%	%
New South Wales ...	61.10	2.26	17.86	18.78	100
Victoria ...	60.37	1.68	20.15	17.80	100
Queensland ...	57.90	1.86	17.16	23.08	100
South Australia ...	60.87	3.19	19.62	16.32	100
Western Australia* ...	...	...	...	...	...
Tasmania* ...	...	...	...	...	...
Commonwealth† ...	60.42	2.10	18.73	18.75	100

* Not available. † Exclusive of Western Australia and Tasmania.

For every hundred pounds worth of goods manufactured in each State and in the Commonwealth the percentages given in the above table represent the proportions of the various elements included in the price of the goods as they left the factories.

§ 7. Investment of Capital in Manufacturing Industries.

1. **General.**—The amount of capital invested in manufacturing industries may be estimated approximately by taking the sum of the value of land and buildings occupied as manufactories and the value of the plant and machinery used in connection therewith. As an indication of the permanent character and stability of the industries which have been established in the Commonwealth, it may be noted that the values of both land and buildings and of machinery and plant used in the factories are rapidly increasing. Thus, for the whole Commonwealth the total value of land and buildings and plant and machinery has increased from 1903 to 1907, by £5,735,961, from £43,596,921 to £49,332,882, that is, at the rate of £1,433,990 per annum.

The following statement shews for the year 1907 the values of land and buildings and of machinery and plant used in connection with manufacturing industries in each State:—

CAPITAL INVESTED IN MANUFACTURING INDUSTRIES, 1907.

Value of—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Cwltth.
	£	£	£	£	£	£	£
Land and buildings ...	9,508,259	8,376,642	2,261,539	2,487,606	1,637,307	834,611	25,105,864
Machinery and plant ...	9,043,772	6,771,458	3,989,679	1,553,654	1,893,351	975,104	24,227,018
Total ...	18,552,031	15,148,100	6,251,218	4,041,260	3,530,558	1,809,715	49,332,882

It may be seen from the above table that the total capital invested in the manufacturing industry in the Commonwealth during the year 1907 was approximately £49,332,882, or £11.87 per head of mean population; of that sum £25,105,864 was invested in land and buildings occupied as manufactories, the remaining £24,227,018 being the value of the plant and machinery used in connection therewith.

2. Value of Land and Buildings.—The value of the land and buildings occupied in connection with manufacturing industries may be conveniently classified according to the nature of the industry conducted therein.

(i.) *Total Value in Commonwealth, 1903 to 1907.* The following table shews for the whole Commonwealth the approximate values of land and buildings occupied in connection with manufacturing industries of various classes during each year from 1903 to 1907, inclusive:—

VALUE OF LAND AND BUILDINGS OCCUPIED AS FACTORIES IN COMMONWEALTH, 1903 TO 1907.

Class of Industry.	1903.	1904.	1905.	1906.	1907.
	£	£	£	£	£
I. Treating raw material, product of agricultural and pastoral pursuits, etc. ...	814,684	788,816	791,535	777,371	781,733
II. Treating oils & fats, animal, vegetable, etc. ...	380,038	374,000	375,097	363,622	343,424
III. Processes in stone, clay, glass, etc. ...	739,904	734,873	741,110	728,995	820,332
IV. Working in wood ...	1,181,236	1,172,010	1,132,615	1,219,155	1,090,551
V. Metal works, machinery, etc. ...	2,975,650	3,341,310	3,231,594	3,313,200	3,709,314
VI. Connected with food and drink, etc. ...	6,750,689	6,787,809	6,956,539	6,638,474	6,708,611
VII. Clothing and textile fabrics, etc. ...	2,892,181	2,875,560	2,931,080	2,919,301	3,396,599
VIII. Books, paper, printing, and engraving ...	2,156,872	2,174,697	2,155,476	2,134,021	2,357,799
XI. Musical instruments, etc. ...	26,041	26,141	26,041	27,741	27,405
X. Arms and explosives ...	35,461	28,832	29,233	30,314	31,152
XI. Vehicles & fittings, saddlery & harness, etc. ...	1,012,603	1,011,668	980,989	951,288	1,079,859
XII. Ship and boat building and repairing ...	1,079,068	1,105,053	1,102,918	1,111,752	991,907
XIII. Furniture, bedding, and upholstery ...	657,729	629,304	652,976	618,422	633,237
XIV. Drugs, chemicals, and by-products ...	319,858	291,506	307,593	335,393	444,060
XV. Surgical and other scientific instruments ...	39,029	53,217	32,736	37,197	31,779
XVI. Jewellery, timepieces, and platedware ...	143,450	161,604	140,535	159,356	204,734
XVII. Heat, light, and power ...	1,994,379	1,831,126	1,858,594	1,857,610	2,202,528
XVIII. Leatherware, n.e.i. ...	64,010	63,897	61,472	60,365	57,043
XIX. Minor wares, n.e.i. ...	140,587	138,029	139,666	143,204	193,797
Total ...	23,403,489	23,589,452	23,647,799	23,427,281	25,105,864

The figures in the above table for the years 1903 to 1906, inclusive, are subject to the limitations that the actual returns for these years for the States of New South Wales and South Australia are not available. In order to present an approximate total for the Commonwealth, however, 1901 figures for New South Wales, and 1907 figures for South Australia are included for the years specified. It may be seen that the total net increase was £1,702,375, or an annual average of £425,594. In eight classes, viz., Classes I., II., IV., VI., X., XII., XIII., and XVIII., there were comparatively small decreases. The largest decreases were in Classes IV. and XII., amounting to £90,685 and £87,181 respectively. The largest increases were in Classes V. and VII., and amounted to £735,664 and £504,418 respectively.

(ii.) *Value in each State, 1907.* The following table gives similar information for each State up to the 31st December, 1907:—

VALUES OF LAND AND BUILDINGS OCCUPIED AS FACTORIES IN EACH STATE, 1907.

Class of Industry.	N.S.W.	Victoria.	Q'land.	S.A.	W.A.	Tas.	Cwltth.
	£	£	£	£	£	£	£
I. Treating raw material, product of agricultural and pastoral pursuits, etc.	294,209	325,629	49,620	70,934	25,315	16,026	781,733
II. Treating oils and fats, animal, vegetable, etc.	152,077	107,290	22,201	51,533	6,323	4,000	343,424
III. Processes in stone, clay, glass, etc.	394,886	288,579	35,170	48,076	41,829	11,792	820,332
IV. Working in wood ...	390,705	237,958	139,155	86,397	184,255	52,081	1,090,551
V. Metal works, machinery, etc.	1,651,096	957,781	230,623	391,234	421,165	57,415	3,709,314
VI. Connected with food and drink, etc.	2,030,840	2,288,112	886,199	611,015	397,583	494,862	6,708,611
VII. Clothing and textile fabrics, etc.	1,367,641	1,303,321	187,581	314,771	144,430	78,855	3,396,599
VIII. Books, paper, printing and engraving ...	813,389	781,501	361,347	204,667	173,220	23,675	2,357,799
IX. Musical instruments, etc.	20,440	5,240	1,725	...	...	...	27,405
X. Arms and explosives ...	2,954	28,198	...	...	...	...	31,152
XI. Vehicles and fittings, saddlery and harness, etc....	377,164	336,408	122,346	151,416	65,155	27,370	1,079,859
XII. Ship and boat building and repairing ...	560,938	401,585	10,821	12,123	1,640	4,800	991,907
XIII. Furniture, bedding and upholstery ...	229,158	233,067	64,239	48,781	37,790	20,202	633,237
XIV. Drugs, chemicals, and by-products ...	142,497	225,428	6,560	53,715	15,810	50	444,060
XV. Surgical and other scientific instruments ...	13,088	8,151	5,850	1,050	3,640	...	31,779
XVI. Jewellery, timepieces, and platedware ...	67,944	92,030	12,300	20,180	3,120	9,160	204,734
XVII. Heat, light, and power ...	911,519	647,927	119,317	387,214	106,528	30,023	2,202,528
XVIII. Leatherware, n.e.i.	17,900	27,463	3,600	5,740	2,340	...	57,043
XIX. Minor wares, n.e.i.	69,314	80,974	4,610	27,035	7,064	4,300	193,797
Total ...	9,508,259	8,376,642	2,261,539	2,487,606	1,637,207	834,611	25,105,864

The maximum value for the Commonwealth of land and buildings in any particular class was in Class VI., amounting to £6,708,611, or 26.72 per cent. on the total value. The next classes in importance were Classes V., VII., VIII., and XVII., in which the values were £3,709,314, £3,396,599, £2,357,799, and £2,202,528 respectively. The sum of the values for the five classes mentioned amounted to £18,374,851, or 73.19 per cent. on the total value for all classes.

(iii.) *Total Values in each State, 1903 to 1907.* The following table shows the total values, so far as returns are available, of land and buildings occupied as manufactories in each State at the end of each year from 1903 to 1907, inclusive:—

TOTAL VALUES OF LANDS AND BUILDINGS OCCUPIED AS FACTORIES IN EACH STATE, 1903 to 1907.

Year.	N.S.W.	Victoria.	Queensland.	S. Aust.†	W. Aust.	Tasmania.	C'wealth.
	£	£	£	£	£	£	£
1903	*8,029,890	7,967,945	2,631,039	2,487,606	1,291,115	995,894	23,403,489
1904	*8,029,890	7,641,051	2,699,191	2,487,606	1,731,233	1,000,481	23,589,452
1905	*8,029,890	7,771,238	2,709,951	2,487,606	1,685,597	963,517	23,647,799
1906	*8,029,890	8,062,110	2,405,559	2,487,606	1,775,279	666,837	23,427,281
1907	9,508,259	8,376,642	2,261,539	2,487,606	1,637,207	834,611	25,105,864

* According to Census 1901. † 1907 figures throughout, those for previous years not being available.

It may be seen that, so far as returns are available, there has been a general though irregular increase in the States of Victoria and Western Australia, as well as for the

whole Commonwealth. There have been irregular decreases in Queensland and Tasmania. The irregularities, however, are probably due partly to the returns having been made on different bases for the succeeding years in carrying into effect the resolutions passed at the Conferences of Statisticians (see § 1, 2, hereof).

3. *Value of Plant and Machinery.*—The following table shows for the whole Commonwealth the approximate value of plant and machinery used in connection with factories at the end of each year from 1903 to 1907, inclusive. The figures, however, are subject to certain limitations, inasmuch as returns for South Australia for the years 1903 to 1906, inclusive, are not available; South Australia figures for 1907 have therefore been taken throughout:—

**VALUE OF PLANT AND MACHINERY USED IN FACTORIES IN COMMONWEALTH,
1903 to 1907.**

Class of Industry.	1903.	1904.	1905.	1906.	1907.
	£	£	£	£	£
I. Treating raw material, product of agricultural and pastoral pursuits, etc. ...	534,784	568,476	578,382	618,891	644,597
II. Treating oils & fats, animal, vegetable, etc. ...	306,945	312,539	327,182	328,484	331,595
III. Processes in stone, clay, glass, etc. ...	670,644	691,881	734,285	745,504	752,084
IV. Working in wood... ..	1,583,895	1,491,195	1,490,402	1,422,545	1,506,933
V. Metal works, machinery, etc. ...	3,410,662	3,580,494	3,657,936	3,749,781	4,237,810
VI. Connected with food and drink, etc. ...	6,786,451	7,267,717	7,177,535	7,436,991	7,340,941
VII. Clothing and textile fabrics, etc. ...	863,075	903,216	962,164	1,177,456	1,133,083
VIII. Books, paper, printing, and engraving ...	1,748,719	1,795,758	1,824,315	1,889,705	1,993,135
IX. Musical instruments, etc. ...	5,070	6,090	6,730	6,327	7,829
X. Arms and explosives	52,766	45,017	44,037	44,476	45,613
XI. Vehicles & fittings, saddlery & harness, etc. ...	160,741	157,743	161,479	194,136	195,271
XII. Ship and boat building, and repairing ...	268,697	243,770	256,340	241,371	240,486
XIII. Furniture, bedding, and upholstery ...	101,223	92,631	94,768	97,392	106,613
XIV. Drugs, chemicals, and by-products ...	252,850	278,244	282,293	306,285	332,349
XV. Surgical and other scientific instruments ...	4,543	4,885	5,013	7,329	6,340
XVI. Jewellery, timepieces, and platedware ...	29,920	31,831	32,972	38,796	45,927
XVII. Heat, light, and power	3,336,066	4,299,529	4,524,472	4,895,419	5,208,454
XVIII. Leatherware, n.e.i.	12,188	12,230	11,867	15,489	16,523
XIX. Minor wares, n.e.i.	64,173	65,816	65,407	68,831	82,435
Total	20,193,432	21,848,442	22,237,599	23,285,208	24,227,018

It may be seen that during the period in question there has been a steady and substantial net increase amounting in all to £4,033,586, or an annual average of £1,008,397. The increase has occurred in all classes of industry except in Classes IV., X., and XII., in all of which there have been comparatively small decreases amounting to £76,962, £7153, and £28,211 respectively. The largest increase was in Class XVII., "Heat, Light, and Power," and amounted to £1,872,368; the next largest was in Class V., "Metal Works, Machinery, etc." and amounted to £827,148.

(i.) *Total Value in each State 1903 to 1907.* The classified figures in the preceding table for the whole Commonwealth are shown below for each State. It will be seen that the increase in value referred to is general throughout the States, with the exception of Queensland, where there is apparently a small decrease. This apparent decrease may, however, be really due to the reclassification of factories, so as to come into line with the other States:—

VALUE OF PLANT AND MACHINERY IN FACTORIES, 1903 to 1907.

Year.	N.S.W.	Victoria.	Queensland.	S. Aust.*	W. Aust.	Tasmania.	C'wealth.
	£	£	£	£	£	£	£
1903	7,009,806	5,010,896	4,052,584	1,553,654	1,644,331	922,161	20,193,432
1904	7,536,903	6,027,134	4,200,303	1,553,654	1,776,481	753,967	21,848,442
1905	7,919,948	6,187,919	3,988,056	1,553,654	1,834,098	753,924	22,237,599
1906	8,295,337	6,450,355	4,282,502	1,553,654	1,861,477	841,883	23,285,208
1907	9,043,772	6,771,458	3,989,679	1,553,654	1,893,351	975,104	24,227,018

* Figures for 1907 throughout, previous years not available.

(ii.) *Classified Value in each State, 1907.* The following table shows the value of plant and machinery used in factories in each State during the year 1907, classified according to the nature of the industry in which used:—

VALUE OF PLANT AND MACHINERY USED IN FACTORIES IN EACH STATE, 1907.

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	C'wealth.
I. Treating raw material, product of agricultural and pastoral pursuits, etc. ...	£ 261,074	£ 225,496	£ 87,583	£ 48,764	£ 10,480	£ 11,300	£ 644,597
II. Treating oils and fats, animal, vegetable, etc. ...	158,923	112,176	35,562	14,396	6,938	3,600	331,595
III. Processes in stone, clay, glass, etc. ...	426,840	202,403	44,163	26,898	44,412	7,368	752,084
IV. Working in wood ...	436,816	228,263	290,121	37,686	417,087	96,960	1,506,933
V. Metal wks., machinery, etc. ...	1,850,946	947,315	418,993	395,774	369,097	255,685	4,237,810
VI. Connected with food and drink, etc. ...	2,553,063	1,542,293	2,343,705	507,686	286,040	108,154	7,340,941
VII. Clothing and textile fabrics, etc. ...	313,624	595,712	80,696	67,320	21,072	54,179	1,132,063
VIII. Books, paper, printing, and engraving ...	767,271	711,205	187,860	143,449	131,127	53,223	1,993,135
IX. Musical instruments, etc. ...	6,292	1,337	...	200	...	...	7,829
X. Arms and explosives ...	200	45,413	...	...	...	...	45,613
XI. Vehicles and fittings, saddlery, and harness, etc. ...	61,922	63,007	22,651	26,317	15,943	5,431	195,271
XII. Ship and boat building and repairing ...	163,098	54,875	14,403	5,250	1,155	2,515	240,486
XIII. Furniture, bedding, and upholstery ...	33,696	39,364	13,294	10,944	5,780	3,535	106,613
XIV. Drugs, chemicals, and by-products ...	124,208	126,623	6,070	65,088	9,850	500	332,349
XV. Surgical and other scientific instruments ...	2,760	1,500	1,180	500	400	...	6,340
XVI. Jewellery, timepieces, and platedware ...	20,193	17,396	3,506	3,217	1,100	515	45,927
XVII. Heat, light, and power ...	1,835,803	1,792,948	438,488	197,221	571,335	372,659	5,208,454
XVIII. Leatherware, n.e.i. ...	5,999	9,745	384	145	250	...	16,523
XIX. Minor wares, n.e.i. ...	21,044	54,387	1,020	2,789	1,285	580	82,435
Total ...	9,043,772	6,771,458	3,989,679	1,553,654	1,893,351	975,104	24,237,018

The greatest value for any particular class of industry is for Class VI. "Connected with Food and Drink, etc.," and amounts to £7,340,941, or 30.30 per cent. on the total value for all classes. The next greatest value is for Class XVII. "Heat, Light, and Power," and amounts to £5,208,454, or 21.50 per cent. on the total. The next greatest is for Class V., "Metal Works, Machinery, etc.," amounting to £4,237,810, or 17.49 per cent. on the total value. The total for the three classes just specified amounts to £16,787,205, or 69.29 per cent. on the total value for all classes.

§ 8. Particular Industries.

1. **General.**—The preceding remarks and tables, together with the summary of manufacturing industries given at the end of this section, furnish a general view of the recent development of particular classes of industries in Australia treated under the nineteen categories referred to in § 1.3 hereof. In order to make the information complete, it must necessarily be supplemented by details exhibiting the development of individual industries. This alone will furnish adequate information as to the channels into which the main efforts of Australian manufacture flow. It is therefore proposed to deal herein with such particular industries as are of special importance in the Commonwealth by reason either of the number of persons employed, the number of factories, the amount of capital invested therein, the value of the production, or other features of special interest. In cases where there are only either one or two establishments of a particular class in any State, returns are not published, in order to avoid disclosing information as to the operations of individual factories.

2. **Tanning, Fellmongery, and Wool-scouring Industries.**—In Class I. (see § 1. 3 hereof) the most important industry is tanning, the returns for which, however, are grouped with the fellmongering and wool-scouring industries. Until recent years tanning in Australia was confined to the production of the coarser class of leathers, but lately the tanning of the finer leathers has been undertaken with satisfactory results. The position of these industries in the several States in 1907 was as follows:—

TANNING, FELLMONGERY AND WOOL-SCOURING, 1907.

Item.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	Cwth.
Number of factories ...	152	90	37	12	3	6	300
.. employés ...	2,507	1,893	615	294	64	67	5,440
.. male employés ...	2,500	1,888	614	294	63	67	5,426
.. female ...	7	5	1	...	1	...	14
Actual horse-power of engines employed ...	2,051	1,223	706	201	60	46	4,287
Average time in operation during year mths	10.2	10.3	...	11.2	12	12.0	...
Approx. value of lands and buildings	£ 177,790	174,318	44,370	24,704	10,950	11,196	443,258
Approx. value of plant and machinery	£ 159,850	124,064	81,225	9,197	5,500	6,550	386,386
Total amount of wages paid during year	£ 168,373	140,436	49,648	27,393	6,983	6,573	399,406

* Not available.

(i.) *Progress of Tanning, etc., Industries, 1904 to 1907.* The development of tanning, fellmongering, and wool-scouring industries during the period 1904 to 1907 is shewn in the following table, from which it will be seen that the decrease in the number of factories, due to the closing of a number of small establishments, was not accompanied by a corresponding decrease in the number of employés:—

DEVELOPMENT OF TANNING, ETC., INDUSTRIES, 1904 to 1907.

State.	Number of Factories.				Number of Employés.				Approximate Value of Plant and Machinery.			
	1904.	1905.	1906.	1907.	1904.	1905.	1906.	1907.	1904.	1905.	1906.	1907.
									£	£	£	£
New South Wales	160	166	154	152	2,187	2,228	2,427	2,507	152,673	156,830	172,553	159,850
Victoria ...	86	88	84	90	1,439	1,614	1,657	1,893	109,095	114,863	114,951	124,064
Queensland ...	50	48	40	37	459	477	513	615	70,738	70,246	84,750	61,225
South Australia ...	14	14	14	12	355	335	344	294	...	...	...	9,197
Western Australia ...	3	2	2	3	65	55	61	64	4,000	4,500	5,500	5,500
Tasmania ...	8	3	3	6	96	56	56	67	8,715	4,550	6,600	6,550
Commonwealth ...	321	321	297	300	4,601	4,765	5,058	5,440	345,221*	350,989*	384,354†	386,386

* No information available. † Exclusive of South Australia.

(ii.) *Production of Tanneries, 1907.* The quantity of raw materials used and the quantity and value of leather produced in tanneries in each State during the year 1907 are shewn in the following table:—

RAW MATERIALS USED AND LEATHER PRODUCED IN TANNERIES, 1907.

Particulars.	N.S.W.	Vic.	Qld.	S. Aust.	W. Aust.	Tas.	C'wealth.
RAW MATERIALS USED.							
Hides ...	No. 445,271	490,318	93,955	90,643	22,830	20,300	1,163,317
Pelts treated ...	No. 3,297,331	322,982	278,946	*	*	*	13,899,259
Bark ...	Tons 10,451	10,049	2,131	1,843	629	573	25,676
LEATHER PRODUCED.							
Quantity ...	lbs. 13,752,311	18,000,000	3,050,000	2,714,188	850,159	719,000	39,076,658
Value ...	£ 703,003	900,000	152,872	159,181	41,470	33,000	1,994,526

* Not available. † Incomplete

3. **Soap and Candle Factories.**—In Class II. (See § 1. 3 hereof) the manufactures of soap and candles are the most important industries. These two manufactures are frequently carried on in the same establishments, so that separate returns cannot be obtained; it may, however, be said generally that the manufacture of soap is the more important of the two. The following table gives particulars of soap and candle factories in each State during the year 1907:—

SOAP AND CANDLE FACTORIES, 1907.

Item.	N.S.W.	Vic.	Q'ld.	S.A.	W.A.	Tas.*	Cwltb.†
Number of factories	34	15	15	7	3	...	74
" employés	553	510	142	166	57	...	1,428
" male employés	445	497	141	165	55	...	1,303
" female "	108	13	1	1	2	...	125
Actual horse-power of engines employed	334	225	140	88	39	...	826
Average No. of months in operation during year	11.7	11.9	†	12	12	...	...
Approximate value of land and buildings	£ 108,770	96,160	22,201	41,680	6,323	...	275,134
" plant and machinery	£ 127,311	106,326	35,562	11,896	6,938	...	288,033
Total amount of wages paid during year	£ 36,857	43,429	11,614	16,736	5,053	...	113,689

* As there are only two soap and candle factories in this State, returns are not disclosed.
† Exclusive of Tasmania. ‡ Not available.

(i.) *Development of Soap and Candle Factories, 1904 to 1907.* The following table gives particulars for the last four years regarding the numbers of factories and employés and the value of plant and machinery in these industries in each State:—

DEVELOPMENT OF SOAP AND CANDLE FACTORIES, 1904 to 1907.

State.	Number of Factories.				Average Number of Employés.				Approximate Value of Plant and Machinery.			
	1904.	1905.	1906.	1907.	1904.	1905.	1906.	1907.	1904.	1905.	1906.	1907.
									£	£	£	£
New South Wales	46	40	41	34	508	574	602	553	114,755	119,717	121,313	127,311
Victoria	19	20	15	15	492	500	523	510	101,486	105,529	104,244	106,326
Queensland	25	21	14	15	151	142	142	142	34,929	34,303	33,599	35,562
South Australia...	7	9	8	7	180	222	207	166	*	*	*	11,896
Western Australia	4	4	3	3	74	68	61	57	10,021	9,771	8,216	6,938
Tasmania	4	3	2	†	47	39	35	†	8,200	5,600	4,300	†
Commonwealth	105	97	83	74	1,452	1,545	1,570	1,428	269,391	274,920	271,672	288,033

* Information not available. Totals exclusive. † See note * to preceding table.

(ii.) *Production of Soap and Candles, 1904 to 1907.* The subjoined statement shews that there has been a considerable increase in the production of both these industries. As regards the production of soap, exclusive of South Australia, there was an increase of 11,868 cwt., or an annual average of 3,956 cwt. The returns as to the production of candles are incomplete; it may be seen, however, that there have been considerable increases in both New South Wales and Victoria.

PRODUCTION OF SOAP AND CANDLES, 1904 to 1907.

State.	Soap.				Candles.			
	1904.	1905.	1906.	1907.	1904.	1905.	1906.	1907.
	cwt.	cwt.	cwt.	cwt.	lbs.	lbs.	lbs.	lbs.
New South Wales	206,677	212,658	221,834	225,217	3,984,035	4,226,062	4,799,898	5,656,354
Victoria	162,126	150,261	154,570	153,478	4,650,352	4,709,488	4,826,528	5,341,056
Queensland	58,033	55,167	64,130	59,900	*	*	*	*
South Australia...	...	...	...	56,745	...	...	...	1,975,075
Western Australia	27,584	28,005	26,960	31,774	1,989,610	1,626,000	1,567,768	†
Tasmania	11,760	8,360	7,360	†	620,480	479,360	703,360	†
Commonwealth	468,180	454,451	474,854	527,114	11,244,477	11,040,930	11,897,554	12,972,485

* Not available. Totals exclusive of these States. † See note * to second table above. ‡ Not available for publication.

(iii.) *Raw Material Used, 1907.* The following statement shews the quantity of raw materials used in soap and candle factories in each State during the year 1907 :—

RAW MATERIAL USED IN SOAP AND CANDLE FACTORIES, 1907.

Particulars.	N.S.W.	Vic.	Qld.	S. Aust.	W. Aust.	Tas.*	Cwth.†
Tallow ... cwt.	111,756	139,536	42,251	41,890	11,042	...	346,475
Copra ... cwt.	55	†	†	848	†	...	903
Alkali ... lbs.	5,255,843	†	1,601,713	767,200	564,780	...	8,189,536

* As there are only two soap and candle factories in this State, particulars are not disclosed. † Not available. ‡ Incomplete.

4. **Saw Mills.**—The most important industry in Class IV. is the saw-milling industry, of which particulars are given below. To compare this class of industry in the several States all saw mills, including both forest and other mills are combined; joinery, moulding, and box works, etc., are excluded :—

SAW MILLS, FOREST AND OTHER, 1907.

Items.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	Cwth.
Number of factories ...	377	119	155	24	30	60	765
" employes ...	3,983	1,681	2,507	679	586	1,171	10,607
" male employes ...	3,867	1,681	2,491	678	584	1,159	10,560
" female ...	16	...	16	1	2	12	47
Actual horse-power of engines employed...	6,610	1,732	4,036	560	625	1,746	15,309
Average No. of mths. in operation during yr.	10.3	8.0	...	9.2	11.7	9.0	...
Approx. value of land and buildings	£ 210,052	12,620	84,605	64,849	80,855	41,821	494,802
" plant and machinery	£ 332,239	99,723	243,292	25,773	51,614	94,760	847,401
Total amount of wages paid during year	£ 308,845	118,258	202,206	63,540	82,998	87,208	863,055

* Not available.

5. **Agricultural Implement Factories.**—The manufacture of agricultural implements is an important industry in Australia, and is of particular interest owing to the fact that it is one of the first industries to which what has been called the "New Protection" system is sought to be applied (see Section XXVII. hereof). The nature of the machines manufactured may be gathered from the machines scheduled in the Customs tariff, 1906-7, which includes stripper harvesters, strippers, stump-jump ploughs, disc cultivators, winnowers, corn-shellers and baggers, drills, and other implements usually employed in agriculture. The stripper-harvester, which combines the stripper with a mechanism for winnowing and bagging grain, is an Australian invention, and is exported to many countries.

No information is available concerning the actual production or the number and value of the machines and implements of local production used in Australia.

The following table gives particulars of the agricultural implement works of Australia :—

AGRICULTURAL IMPLEMENT WORKS, 1907.

Items.	N.S.W.	Victoria	Q'land.	S.Aust.	W.A.*	Tas.	Cwth.†
Number of factories ...	21	55	4	49	...	13	142
" employes ...	499	1,618	142	827	...	45	3,131
" male employes ...	496	1,612	141	825	...	45	3,119
" female ...	3	6	1	2	...	...	12
Actual horse-power of engines employed	140	581	64	499	...	...	1,284
Average number of months in operation during year ...	11.6	11.5	...	11.5	...	12	...
Approx. value of land and buildings	£ 45,104	75,038	4,379	28,460	...	2,150	155,131
" plant and machinery	£ 16,426	66,492	9,444	34,034	...	796	127,192
Total amount of wages paid during year	£ 39,431	147,675	8,224	61,238	...	1,950	258,518

* As there are only two factories of this class in Western Australia particulars are not disclosed. † Exclusive of Western Australia. ‡ Not available.

(i.) *Development of Agricultural Implement Works.* The following table shews the progress of this industry during the years 1904 to 1907 :—

AGRICULTURAL IMPLEMENT WORKS, 1904 to 1907.

State.	Number of Factories.				Number of Employés.				Approximate Value of Plant and Machinery.			
	1904.	1905.	1906.	1907.	1904.	1905.	1906.	1907.	1904.	1905.	1906.	1907.
									£	£	£	£
New South Wales	11	17	17	21	114	386	440	499	4,670	11,524	12,850	16,426
Victoria ...	50	53	53	55	1,496	1,624	1,747	1,618	62,163	65,203	62,808	66,492
Queensland ...	...	...	8	4	...	...	117	142	...	...	11,470	9,444
South Australia ...	30	45	49	49	504	750	874	827	...	...	...	34,034
Western Australia	4	4	6	*	39	37	56	*	2,150	2,710	2,470	*
Tasmania ...	...	...	...	13	...	...	...	45	...	...	...	796
Commonwealth	95	119	133	142	2,153	2,797	3,234	3,131	68,983	79,437	89,598	127,192

* See note ^o to preceding table.

6. **Engineering, Ironfoundry Works and Metal Trades.**—The classification in these industries is not very satisfactory. Generally, engineering shops, ironworks, and foundries are included, as also are factories for making nails, safes, patterns, meters, and springs. Railway workshops, agricultural implement factories, smelting and metallurgical works, and ordinary blacksmiths' shops are not included. The combination of industries is rendered necessary by the limited classification still adopted by some of the States:—

ENGINEERING, IRONFOUNDRY WORKS AND METAL TRADES, 1907.

Items.	N.S.W.	Vic.	Q'ld.	S.A.	W.A.	Tas.	Cwlth.
Number of factories ...	179	290	92	43	57	18	679*
" employés ...	6,001	6,284	1,818	1,798	1,132	355	17,388
" male employés ...	5,983	6,256	1,812	1,796	1,124	353	17,324
" female ...	18	28	6	2	8	2	64
Actual horse-power of engines employed	3,989	3,355	707	966	581	250	9,848
Average number of months in operation during year ...	11.8	11.4	*	11.7	11.9	12	...
Approx. value of land and buildings	£ 420,977	390,225	194,815	83,520	85,303	18,465	1,139,305
" plant and machinery	£ 617,643	536,262	170,716	131,758	88,621	40,859	1,485,070
Total amount of wages paid during year	£ 634,907	563,857	159,129	155,493	122,978	35,984	1,571,758

* Information not available.

In addition to engineering works which supply local domestic requirements, there are now a number of large and important establishments which engage in the manufacture of special classes of machinery and implements. The manufacture of mining and smelting machinery and apparatus forms an important section of this industry, and many Australian mines have been locally equipped.

7. **Railway Carriages and Rolling Stock, Railway and Tramway Workshops.**—The railway workshops of Australia form an important item in the metal and machinery class, and are chiefly State Institutions. The following table gives the details concerning them, but includes also private establishments manufacturing rolling stock:—

RAILWAY CARRIAGES AND ROLLING STOCK, RAILWAY AND TRAMWAY WORKSHOPS, 1907.

Items.	N.S.W.	Victoria	Q'ld.	S. Aust.	W. Aust.	Tas.	Cwlth.
Number of factories ...	25	15	7	8	6	6	67
" employés ...	4,640	2,462	110	1,241	1,183	487	10,123
" male employés ...	4,626	2,457	110	1,241	1,181	486	10,101
" female ...	14	5	...	...	2	1	22
Actual h.p. of engines employed	1,713	436	65	306	1,752	109	4,381
Average number of months in operation during year ...	12	12	*	12	12	12	...
Approx. value of land and buildings	£ 678,145	264,765	800	198,605	330,032	25,000	1,497,347
Approx. value of plant and mach'ny	£ 408,436	177,198	4,140	140,423	226,426	56,634	1,013,257
Total amt. of wages paid during year	£ 558,163	298,854	10,873	138,819	165,480	60,090	1,232,279*

* Information not available.

8. **Smelting Works.**—The subjoined table gives particulars of metal smelting works. There are only two works of this description in each of the States of Victoria and South Australia, and there is only one in Western Australia. Particulars for these States are, therefore, not given separately, but are included in the total for the Commonwealth :—

SMELTING WORKS, 1907.

Items.	N. S. W.	*Vic.	Qld.	*S.A.	*W.A.	Tas.	Cwth.
Number of factories	50		14			5	74
.. employés	4,216		1,120			1,079	8,631
.. male employés	4,215		1,119			1,079	8,629
.. female	1	...	1	...	...	...	2
Actual horse-power of engines employed	7,942		1,925			2,339	15,018
Average No. of months in operation during year	11.3		...			12	...
Approximate value of land and buildings	£ 214,340		24,800			7,000	270,058
.. plant and machinery	£ 778,694		200,337			156,430	1,246,399
Total amount of wages paid during year	£ 547,839		132,659			123,492	1,039,026

* As there are only two smelting works in each of the States of Victoria and South Australia, and only one in Western Australia, particulars are not disclosed, but are included in the total for the Commonwealth.

Blast furnaces for the smelting of iron ores have been established in Australia. (See Section XII. hereof, p 512). The blast-furnace plant at the works of William Sandford Limited, Lithgow, in New South Wales, was brought into commission on the 8th May, 1907. The ore which has been used was obtained from the deposit at Coombing Park, near Carcoar. The quantity raised amounted to 34,731 tons. The following materials were received at the blast furnace:—Iron-ore, 34,500 tons; slag, 2831 tons; coke, 20,873 tons; and limestone, 13,433 tons. The output of this furnace was 18,631 tons, valued at £60,550. The number of hands employed at the works and the mine averaged 871, and the wages paid amounted to £79,944.

9. **Bacon-curing Factories.**—The following table gives particulars of factories engaged in bacon curing in each State during the year 1907 :—

BACON-CURING FACTORIES, 1907.

Items.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	Cwth.
Number of factories	16	27	4	10	3	6	66
.. persons employed	130	348	170	50	19	24	741
.. males	130	336	168	50	19	23	726
.. females ... ..	...	12	2	...	...	1	15
Actual horse-power of engines employed	82	213	97	33	36	40	501
Average No. of mths. in operation during yr.	10.9	11.6	†	10.2	9.1	12	...
Approximate value of land and buildings	£ 32,600	31,820	8,966	6,450	11,310	2,000	93,146
.. plant and machinery	£ 9,946	25,530	45,847	3,294	3,650	1,625	89,892
Total amount of salaries and wages paid	£ 14,822	27,472	16,604	2,862	2,548	1,843	66,151

† Information not available.

Further information regarding the bacon-curing industry may be found in Section IX., *Farmyard and Dairy Production*.

(i.) *Quantity and Value of Production, 1907.* The following table shews the number of pigs killed and the quantity and value of the production of bacon-curing factories in each State during the year 1907 :—

PRODUCTION OF BACON-CURING FACTORIES, 1907.

Particulars.	N.S.W.	Victoria.	Qld.	S. Aust.	W. Aust.*	Tasmania.	C'wealth.†
QUANTITY.							
Bacon ... lbs.	7,012,404	13,609,144	8,888,662	966,939	...	279,504	31,243,616
Ham ... lbs.	228,281	*	425,635	258,684	...	*	719,418
Lard ... lbs.	237,098	*	425,635	56,685	...	*	719,418
VALUE.							
Bacon ... £	230,671	428,000	296,942	29,065	...	8,000	1,011,232
Ham ... £	8,966	*	8,692	9,588	...	*	14,702
Lard ... £	4,580	*	12,110	1,430	...	*	27,140
Other products £	6,137	*	12,110	8,893	...	*	27,140
PIGS KILLED.							
Number ...	90,450	145,513	89,751	16,972	...	3,525	346,211

* Not available. † Exclusive of Western Australia.

10. **Butter and Cheese Factories.**—The subjoined table gives particulars of butter and cheese factories in each State during the year 1907. The returns include factories for making condensed or concentrated milk, but are exclusive of creameries :—

BUTTER AND CHEESE FACTORIES, 1907.

Items.	N. S. W.	Vic.	Qld.	S. A.	W. A.	Tas.	Cw'wth. †
Number of factories ...	190	224	83	57	...	23	577
" employés ...	1,047	1,248	1,351	213	...	78	3,932
" males ...	1,032	1,212	1,156	198	...	67	3,665
" females ...	15	36	195	15	...	6	267
Actual horse-power of engines employed ...	2,082	2,047	1,341	291	...	135	5,896
Average No. of months in operation during year ...	11.6	11.8	†	11.1	...	9	...
Approximate value of land and buildings ...	£ 177,168	250,444	97,200	14,873	...	12,111	551,794
" " plant and machinery ...	£ 244,438	311,241	133,861	25,224	...	8,199	722,963
Total amount of wages paid ...	£ 92,296	120,534	72,074	12,539	...	4,307	301,750

* As there are only two factories in this State particulars are not disclosed. † Exclusive of Western Australia. ‡ Not available.

(i.) *Development of Factories, 1904 to 1907.* The following table shews the progress of the factories in this industry from 1904 to 1907, and illustrates the recovery of the principal States from the effects of the drought.

DEVELOPMENT OF BUTTER, etc., FACTORIES, 1904 to 1907.

State.	Number of Factories.				Number of Persons Employed.				Approximate Value of Plant and Machinery.			
	1904.	1905.	1906.	1907.	1904.	1905.	1906.	1907.	1904.	1905.	1906.	1907.
									£	£	£	£
New South Wales	145	164	178	190	913	937	1,018	1,047	193,066	210,772	218,566	244,438
Victoria ...	214	215	222	224	1,400	1,381	1,490	1,248	301,423	306,559	307,635	311,241
Queensland ...	51	59	70	83	386	407	1,249	1,351	53,521	77,392	104,157	133,861
South Australia ...	50	53	55	57	155	158	141	213	§	§	§	25,224
Western Australia ...	1	2	2	2	8	13	32	*	1,150	2,600	5,650	*
Tasmania ...	17	26	20	23	102	123	76	73	10,722	13,686	13,351	8,199
Commonwealth	478	519	547	579	2,964	3,019	4,006	3,932	559,382	611,009	649,359	722,963

* See note * to preceding table, § Not available.

(ii.) *Quantity and Value of Production, 1907.* The following table shews the quantity and value of butter and cheese produced, and the quantity of milk used in butter and cheese factories in each State during 1907 :—

PRODUCTION OF BUTTER AND CHEESE FACTORIES, 1907.

Particulars.	N.S.W.	Victoria.	Q'sland.	S. Aust.	W. Aust.*	Tas.	Cwlth.†
QUANTITY.							
Butter lbs.	55,749,140	59,050,231	20,828,080	4,631,773	...	847,860	141,107,084
Cheese "	2,725,930	2,691,957	2,681,024	1,381,947	...	381,939	9,862,797
VALUE.							
Butter £	2,364,311	2,675,531	846,724	195,601	...	36,000	6,118,167
Cheese £	70,381	66,850	80,802	32,537	...	10,000	260,570
MILK USED.							
Butter factories ... gals.	139,942,036	133,798,100	47,447,300	11,323,912	...	2,119,650	334,630,998
Cheese "	2,941,881	2,744,415	2,659,707	1,416,281	...	327,839	10,090,123

* See note † to preceding table. † Exclusive of Western Australia.

11. Meat and Fish Preserving, Ice and Refrigerating Works.—These industries are now of considerable importance in Australia. The freezing of various kinds of produce for export has long been an established industry. Large freezing works have now been installed at many ports in the Commonwealth for the purpose of freezing produce chiefly for export, and insulated space for the carriage of frozen produce is provided by a number of steamship companies trading between Australia and other parts of the world. Particulars regarding the export of frozen beef and mutton may be found on pages 364 and 368 hereof, respectively. Special terms have been made by the Commonwealth Government in its new English mail contract for the provision by the contractors of increased cold-storage facilities. The export of frozen produce is stated to be capable of considerable expansion. The particulars given in the subjoined table include ice-making and freezing works, and also meat-canning factories, separate particulars for all the States not being available :—

MEAT AND FISH-PRESERVING, ICE AND REFRIGERATING WORKS, 1907.

Items.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.*	Cwlth.†
Number of factories	73	28	29	13	6	...	149
" employés	1,383	684	1,209	202	106	...	3,584
" male employés	1,296	676	1,179	202	105	...	3,458
" female employés	87	8	30	...	1	...	126
Actual horse-power of engines employed...	2,547	2,196	2,475	401	338	...	7,957
Average number of months in operation during year	8.5	9.6	;	7.9	10.5	...	...
Approx. value of land and buildings	£ 419,030	227,506	215,502	45,530	47,095	...	954,683
" plant and machinery	£ 400,813	121,783	223,992	6,870	48,019	...	801,474
Total amount of wages paid during year	£ 98,966	49,144	94,376	4,300	13,562	...	280,348

* As there is only one factory in this State, particulars are not disclosed (see para. 1 hereof).
† Exclusive of Tasmania. ‡ Not available.

The following table gives particulars, so far as available, of various classes of meat preserved during the year 1907 :—

MEAT PRESERVING WORKS—PARTICULARS OF ANIMALS TREATED, 1907.

Particulars.	N.S.W.	Vict.‡	Q'land.	S. Aust.†	W. Aust.†	Tas.‡	Cwth.‡
Sheep treated ... No.	554,072	866,498	255,635	...	...	...	1,676,205
Cattle " ... No.	20,788*	10,760*	74,232	...	...	...	105,780
Pigs " ... No.	362	2,196	33,826	...	...	...	36,384

* Quarters, exclusive of calves. † Not available. ‡ See note * to preceding table. § Freezing works only. ¶ Exclusive of South Australia, Western Australia, and Tasmania.

In Victoria 6,413,560 rabbits, 55,196 hares, and 56,275 head of poultry were treated in freezing works. Corresponding particulars for other States are not available.

12. **Biscuit Manufactories.**—The following table gives particulars regarding establishments at which the manufacture of biscuits, cakes, etc., was carried on in each State during the year 1907:—

BISCUIT MANUFACTORIES, 1907.

Items.	N.S.W.	Vic.	Q'ld.	S.A.*	W.A.*	Tas.	Cwth.
Number of factories	6	4	10	...	...	7	31
.. employés	1,123	1,110	298	...	...	125	2,832
.. male employés	580	737	223	...	...	107	1,782
.. female " " " " " "	543	373	75	...	...	18	1,050
Actual horse-power of engines employed	205	141	80	...	...	39	528
Average number of months in operation during year	11.4	12	†	...	...	12	...
Approx. value of land and buildings ... £	87,875	51,300	19,880	...	...	15,950	190,834
.. plant and machinery ... £	65,076	44,592	14,968	...	...	6,405	143,803
Total amount of wages paid during year £	62,897	53,954	17,284	...	...	7,389	155,060

* As there are only two factories in this State particulars are not given separately, but are included in the total for the Commonwealth. † Not available.

(i.) *Quantity and Value of Production, 1907.* The following table gives particulars regarding the quantity and value of biscuits, cakes, etc., made and the quantity of flour used in factories in each State during the year 1907:—

PRODUCTION OF BISCUIT AND CAKE FACTORIES, 1907.

Particulars.	N.S.W.	Victoria.*	Q'ld.	S. Aust.*	W. Aust.*	Tas.*	Cwth.†
Biscuits, cakes, etc.—							
Quantity ... lbs.	28,017,225	...	6,414,578	...	...	...	34,431,803
Value ... £	428,691	...	87,553	...	...	...	516,244
Flour used ... Tons	9,800	...	2,220	...	...	...	12,020

* Not available. † New South Wales and Queensland only.

13. **Jam and Fruit Preserving, Pickles, Sauces, and Vinegar Manufactories.**—The jam and fruit-preserving industry has increased in importance of late years with the extension of orcharding and fruit-growing. As an exporting industry it is comparatively young, but is of increasing value, and is stated to be capable of considerable expansion. The subjoined table gives particulars of factories at which these industries were carried on in each State during the year 1907. Separate returns for the individual industries are not available for most of the States:—

JAM AND FRUIT PRESERVING, PICKLES, SAUCES, AND VINEGAR MANUFACTORIES, 1907.

Items.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Cw'ith.
Number of factories	34	27	9	23	4	9	106
.. employés	1,125	1,342	186	464	43	716*	3,876
.. male employés	601	843	144	349	23	554	2,414
.. female	524	499	42	215	20	162	1,462
Actual horse-power of engines employed ...	196	353	50	126	17	251	993
Average number of months in operation during year	11.8	11.3	*	11.6	9.2	12	...
Approx. value of land and buildings ...	£ 67,439	90,897	7,819	5,217	5,779	21,900	199,050
.. .. plant and machinery ...	£ 24,835	41,654	5,610	2,817	1,453	13,670	90,039
Total amount of wages paid during year ...	£ 49,955	67,065	8,556	5,280	2,434	27,999	161,289

* Not available.

(i.) *Quantity and Value of Production, 1907.* The following table shows the quantity and value of jams, pickles, and sauces manufactured in each State during the year 1907:—

QUANTITY AND VALUE OF JAMS, PICKLES, AND SAUCES MANUFACTURED, 1907.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	C'wealth.
QUANTITY.							
Jam lbs.	24,479,960	21,303,632	2,918,124	4,706,500	118,462	15,471,571	68,996,349
Pickles pints	2,104,861	1,253,280	280,000	297,300	122,824	...	4,058,165
Sauce pints	844,600	3,257,471	167,268	1,162,848	244,733	...	5,676,920
VALUE.							
Jam £	326,829	289,622	32,668	54,463	2,028	210,000	915,610
Pickles £	34,788	16,284	4,664	5,950	2,983	...	64,669
Sauce £	22,708	69,900	3,075	18,807	4,552	...	119,142

14. **Confectionery.**—The following table shows the position of the confectionery industry in 1907, and it will be seen how it has expanded in ten years when it is stated that in 1896 there were in New South Wales 17 establishments, with 475 employés; and in Victoria 13 establishments, employing 512 persons and using plant and machinery valued at £16,570. In Tasmania there are no factories of this class.

CONFECTIONERY FACTORIES, 1907.

Items.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Cw'ith.
Number of factories	34	24	9	6	5	...	78
.. employés	1,219	1,339	294	249	110	...	3,211
.. male employés	741	591	179	170	62	...	1,743
.. female	478	748	115	79	48	...	1,468
Actual horse-power of engines employed ...	250	200	43	93	35	...	621
Average number of months in operation during year	11.9	11.5	...	12	12	...	...
Approx. value of land and buildings ...	£ 141,682	50,488	16,370	20,401	10,550	...	239,691
.. .. plant and machinery ...	£ 52,403	38,123	12,943	23,316	6,550	...	133,335
Total amount of wages paid during year ...	£ 60,153	74,357	13,611	15,344	7,901	...	171,366

* Not available.

15. **Flour Mills.**—The following table describes the position of the flour-milling industry in the year 1907 :—

FLOUR MILLS, 1907.

Items.	N.S.W.	Vic.	Q'ld.	S.A.*	W.A.	Tas.	Cwth.
Number of factories	71	68	17	54	19	13	245
" employés	858	837	200	549	162	120	2,725
" male employés	856	833	172	547	160	118	2,686
" female	2	4	28	2	2	2	40
Actual horse-power of engines employed ...	3,664	4,164	781	2,651	605	637	12,502
Average number of months in operation during year	10.7	9.9	†	8.3	9.6	12	...
Approx. value of land and buildings ...	£ 283,198	237,307	64,754	129,801	66,357	38,300	819,717
" plant and machinery ...	£ 273,459	264,566	78,796	148,297	49,537	28,010	842,665
Total amount of wages paid during year ...	92,095	85,544	21,181	61,900	18,520	10,278	289,518

* Including oatmeal factories. † Not available.

(i.) *Production of Flour Mills, 1903 to 1907.* The production of flour by the mills in each State of the Commonwealth in the years 1903 to 1907 was as follows :—

FLOUR MILLS—PRODUCTION 1903 to 1907.*

Year.	N.S.W.	Victoria.	Q'nsland.	Sth. Aust.	West. Aust.	Tasmania.	C'wealth.†
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1903	121,074	115,368	23,839	†	13,711	20,656	294,648†
1904	210,137	202,314	34,211	†	20,185	19,822	486,669†
1905	205,805	209,058	37,505	†	26,420	18,325	497,113†
1906	225,995	219,166	24,219	†	26,977	17,692	514,049†
1907	237,442	235,185	28,532	105,395	28,353	17,056	651,963

* Tons of 2000 lbs. † Exclusive of South Australia. ‡ Not available.

The increase for the whole Commonwealth during the last year is partly due to the inclusion of South Australia, for which State returns for previous years were not available. There has, however, been a satisfactory increase in all the other States, except Tasmania, in which there was a slight decrease.

16. **Sugar Mills.**—The following table shews the position of the cane-crushing branch of the sugar-making industry in 1907. This industry is carried on in Queensland and New South Wales, the only States of the Commonwealth in which the sugar-cane is grown. Reference to the other States is therefore omitted from the table :—

SUGAR MILLS, 1907.

Items.	N.S.W.	Queensland.	Total.
Number of factories	5	52	57
" employés	610	4,155	4,765
" male employés	608	4,147	4,755
" female	2	8	10
Actual horse-power of engines employed ...	3,118	10,225	13,343
Average No. of months in operation during year	6.3	*	...
Approximate value of land and buildings ...	£ 13,567	148,115	161,682
" plant and machinery ...	£ 507,324	1,482,989	1,990,313
Total amount of wages paid during year ...	£ 46,844	229,636	276,480

* Information not available.

The first crushing of sugar for commercial use is said to have taken place in New South Wales about 1850 on the plantation of Mr. Thomas Scott; the planting-out of cane was not, however, taken up by settlers, notwithstanding Mr. Scott's earnest advocacy of the industry, until 1862, when a small growth resulted in the establishment

of a mill in Queensland; the appliances were rude, but the result satisfactory. In April, 1864, a mill with a modern crushing and boiling plant was opened at Cleveland (Q.) by Hon. Lionel Hope, but his success was only partial, and he closed down his works till 1867. In 1866 the Pampania Company opened a small factory in Queensland, and in the following year two other mills started work. Two factories were erected, in the Maryborough district, and in 1868 others were working in the Mackay, Bowen and other districts. The industry was by the end of 1870 firmly established.

The Sugar Works Guarantee Act of 1893 empowered the Queensland Government to guarantee the issue of debentures by companies intending to embark in this industry to raise money for the erection of mills and purchasing plant; and an amending Act of 1895 empowered the Government to take up such debentures, but provided that the total amount so expended should not exceed £500,000, and that when that amount was reached the power of guarantee should also cease. Twelve mills have received advances, which now amount to £417,347. There have been some special temporary advances, which are outside the Acts. The total amount repaid from 1893 to June, 1908, was £286,975.

An unfortunate feature of the industry is that large quantities of molasses have been and still are allowed to run to waste. Part of the molasses produced is used in distillation, part is turned into food cake for cattle, and part is used for manuring land, but the greatest part produced is put to no use whatever.

The product of the sugar mill is raw sugar and molasses, the former being sent to the refineries in different parts of Australia for further treatment. The following tables shew the progress of this industry from the dates at which information is first obtainable:—

SUGAR MILLS, NEW SOUTH WALES, 1870 to 1907.

Items.	1870.	1877.	1886.	1891.	1896.	1901.	1906.	1907.
Number of factories ...	27	50	64	33	23	12	5	5
" employés ...	...	1,065	2,259	1,621	1,475	695	622	610
Sugar produced ... Tons	677	7,537	13,750	16,033	28,557	19,519	23,909	29,172
Molasses produced ... gals.	...	345,543	507,000	1,074,080	2,520,580	1,300,909	1,305,466	1,211,000

During the year 1907, 277,386 tons of cane were crushed in sugar mills in New South Wales. The reduction in the number of New South Wales mills is due chiefly to a tendency, noticeable also in many other branches of industry, to concentrate the cane-crushing in mills fitted with modern machinery, and the consequent closing of the small home mill. On the north coast of New South Wales some land formerly devoted to sugar-growing has been turned into pastures in connection with the dairying industry.

SUGAR MILLS, QUEENSLAND, 1868 to 1907.

Items.	1868.	1876.	1886.	1891.	1896.	1901.	1906.	1907.
Number of factories ...	10	70	118	68	63	52	52	52
" employés ...	...	...	...	...	3,796	...	2,876	4,155
" acres crushed ...	...	7,245	40,756	36,821	66,640	78,160	93,194	1,665,028 ²
Sugar produced ... Tons	...	8,214	59,225	51,219	100,774	120,558	184,377	188,307
Molasses produced ... gals.	68,622	416,415	1,784,266	1,640,662 ¹	2,195,470	3,679,952	8,373,518	7,272,905

1. 1890. 2. Tons of cane crushed.

Information regarding the cultivation of sugar-cane may be found in the section of this book dealing with *Agricultural Production*. (See pages 410 to 413.)

17. **Sugar Refineries.**—The establishment of the sugar-refining industry considerably antedates the establishment of the sugar-milling industry, the raw material operated upon being originally brought chiefly from Mauritius and the East. In 1907 there were two sugar refineries in each of the States of Victoria and Queensland; there was one in

each of the States of New South Wales and South Australia; and there were none in either of the other States. The returns for the individual States cannot be disclosed.

In the six refineries in the Commonwealth an average number of 1387 hands were employed during the year 1907. The actual horse-power of engines used was 2815. The approximate value of land and buildings was £258,891; of plant and machinery, £740,774; and the total amount of wages paid during the year was £131,546.

As regards production, the amount of crude sugar used was 3,168,298 cwt., and of refined sugar produced 3,061,175 cwt., both these amounts being exclusive of the two refineries in Queensland, for which returns are not available.

18. **Breweries.**—Established at an early date in Australia, the main feature of the history of the brewing industry has been the change from the small local brewery in every township of moderate size to the large centralised city brewery. A recent amalgamation in Melbourne resulted in the closing of several large breweries. A workmen's co-operative brewery has been opened in Sydney and a co-operative brewery has been opened in Melbourne by a number of "free" hotelkeepers.

The following table gives particulars of breweries in each State during the year 1907:—

BREWERIES, 1907.

Particulars.	N.S.W.	Victoria.	Q'sland.	S. Aust.	W. Aust.	Tas.	Cwltth.
Number of factories ...	38	37	13	16	28	6	138
.. employes ...	854	1,037	431	301	478	140	3,241
.. male employes	851	1,036	431	299	478	140	3,235
.. female "	3	1	...	2	...	...	6
Actual horse-power of engines employed ...	702	853	213	192	779	89	2,828
Average No. of months in operation during year	12	11.8	*	11.8	11.7	12	...
Approx. value of land and buildings ... £	289,852	529,047	105,784	100,861	186,029	389,818	1,601,391
Approx. value of plant and machinery ... £	252,414	249,579	75,729	66,542	104,724	42,384	791,372
Total amount of wages paid during year ... £	110,963	118,015	46,439	35,354	83,329	17,074	411,164

* Not available.

(i.) *Production and Materials Used, 1907.* The following table shews the quantity and value of ale and stout brewed and the quantity of raw materials used in each State during the year 1907:—

PRODUCTION AND MATERIALS USED IN BREWERIES, 1907.

Particulars.	N.S.W.	Victoria.	Qld.	S. Aust.	W. Aust.	Tasmania.	C'wealth.																																																
QUANTITY.																																																							
Ale ... gals.	14,369,834	16,900,336	4,964,443	3,237,629	4,433,135	1,930,815	46,857,134																																																
Stout ... gals.	624,703							177,717	218,522	VALUE.								Ale ... £	691,644	800,000	312,730	207,694	420,129	94,000	2,596,858	Stout ... £	38,170	12,451	20,040	RAW MATERIALS USED.								Malt ... bush.	533,925	542,806	171,753	98,131	153,768	82,455	1,582,738	Hops ... lbs.	636,650	665,236	240,458	133,270	253,151	116,985	2,045,750	Sugar ... cwt.	73,020
VALUE.																																																							
Ale ... £	691,644	800,000	312,730	207,694	420,129	94,000	2,596,858																																																
Stout ... £	38,170							12,451	20,040	RAW MATERIALS USED.								Malt ... bush.	533,925	542,806	171,753	98,131	153,768	82,455	1,582,738	Hops ... lbs.	636,650	665,236	240,458	133,270	253,151	116,985	2,045,750	Sugar ... cwt.	73,020	106,004	43,503	16,256	28,821	7,435	275,039														
RAW MATERIALS USED.																																																							
Malt ... bush.	533,925	542,806	171,753	98,131	153,768	82,455	1,582,738																																																
Hops ... lbs.	636,650	665,236	240,458	133,270	253,151	116,985	2,045,750																																																
Sugar ... cwt.	73,020	106,004	43,503	16,256	28,821	7,435	275,039																																																

19. **Distilleries.**—The subjoined table gives particulars of distilleries in each State during the year 1907. There are only two distilleries in New South Wales; particulars are therefore not disclosed. There are no distilleries in either of the States of Western Australia or Tasmania :—

DISTILLERIES, 1907.

Particulars.	N.S.W.*	Vic.	Qld.	S.A.	W.A.	Tas.	Cwth.†
Number of factories	7	3	19	...	...	29
.. employes	106	19	57	...	...	182
.. male employes	105	19	57	...	...	181
.. female	1	...	...	...	...	1
Actual horse-power of engines employed	171	23	131	...	...	325
Average time in operation during yr. mths.	7.2	†	8.28	...	...	...
Approximate value of land and buildings £	71,580	5,400	26,714	...	...	103,694
Approx. value of plant and machinery £	57,005	4,500	21,211	...	...	82,716
Total amount of wages paid during year £	11,569	2,491	5,824	...	...	19,884

* There are only two distilleries in New South Wales, particulars are therefore not disclosed.
† Not available. ‡ Exclusive of two distilleries in New South Wales.

(i.) *Production of Spirits and Materials Used, 1907.* The following table gives particulars of the quantity and value of spirits distilled and the raw materials used in the distillation thereof in each State during the year 1907 :—

QUANTITY AND VALUE OF SPIRITS DISTILLED AND MATERIALS USED, 1907.

Particulars.	N.S.W.*	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Cwth.†
QUANTITY.							
Rum ... proof gals.	3,287	117,876	...	...	...	121,163
Brandy	8,927	...	155,367	...	...	164,294
Whisky	281,600	...	1,097	...	...	282,697
Other spirits	78,058	105,697	241,835	...	...	425,590
VALUE.							
Rum £	164	5,894	...	...	...	6,058
Brandy £	1,530	...	26,621	...	...	28,151
Whisky £	63,400	...	247	...	...	63,647
Other spirits £	707	957	49,581	...	...	51,245
MATERIALS USED.							
Molasses cwt.	440	68,800	4,859	...	...	74,099
Wine gals.	413,242	...	1,965,434	...	...	2,378,676

* See note * to preceding table. † Exclusive of New South Wales.

20. **Tobacco, Cigars and Cigarettes.**—During the year 1907 there were thirty-two establishments in which the manufacture of tobacco, cigars, and cigarettes was carried on. In Queensland there were only two such establishments, and particulars are therefore not disclosed. In Tasmania there were no factories engaged in this industry.

TOBACCO, CIGAR, AND CIGARETTE FACTORIES, 1907.

Items.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Cwth.†
Number of factories	11	13	...	3	3	...	30
.. employes	1,103	2,019	...	174	23	...	3,319
.. male employes	612	845	...	131	14	...	1,602
.. female	491	1,174	...	43	9	...	1,717
Actual horse-power of engines employed	329	394	...	44	...	...	767
Average number of months in operation during year	11.3	11.2	...	12	12	...	...
Approx. value of land and buildings £	100,583	163,023	...	10,400	2,840	...	336,846
.. plant and machinery £	111,296	88,341	...	12,716	265	...	212,618
Total amount of wages paid during year £	80,798	118,594	...	12,121	1,650	...	213,163

* As there are only two factories in this State, particulars are not disclosed. † Exclusive of Queensland.

(i.) *Development of Industry.* This industry was early established in Australia, and the figures given in the subjoined table shew its progress during recent years. In 1896 there were in New South Wales eight establishments employing 641 persons, of whom 471 were males and 170 females. The plant and machinery employed were valued at £55,700. In Victoria, in this same year, there were twelve establishments employing 650 persons, of whom 424 were males and 226 were females. The value of the plant and machinery employed was £42,410. The Australian market is now largely supplied with local manufactures.

DEVELOPMENT OF TOBACCO, CIGAR AND CIGARETTE FACTORIES, 1904 to 1907.

State.	Number of Factories.				Number of Persons Employed.				Approximate Value of Plant and Machinery.			
	1904.	1905.	1906.	1907.	1904.	1905.	1906.	1907.	1904.	1905.	1906.	1907.
									£	£	£	£
N.S. Wales ...	7	13	13	11	977	952	1,016	1,103	105,308	104,466	104,051	111,296
Victoria ...	9	10	12	13	1,324	1,638	1,846	2,019	82,386	72,772	78,522	88,341
Queensland ...	3	1	2	...	110	61	63	*	12,583	4,000	4,684	*
South Australia ...	3	3	2	3	248	171	135	174	...	...	...	12,716
West Australia ...	2	2	3	3	18	16	30	23	70	80	235	265
Tasmania ...	...	...	...	...	...	...	...	...	...	...	...	...
Commonwealth	24	29	32	30	2,677	2,838	3,090	3,319	200,347	181,318	187,492	212,618

* See note * to preceding table.

(ii.) *Quantity and Value of Production and Tobacco Leaf Used, 1907.* The following table shews the quantity and value of the production of tobacco factories in each State, and the quantities of imported and Australian-grown leaf used during the year 1907:—

PRODUCTION OF TOBACCO FACTORIES AND QUANTITY OF LEAF USED, 1907.

Particulars.	N.S.W.	Victoria.	Q'sld.*	S. Aust.	W. Aust.	Tas.	Cwth.†
QUANTITY.							
Manufactured tobacco lbs.	3,899,196	4,781,888	...	348,168	2,005	...	9,031,257
lbs.	54,048	176,704	...	10,956	6,373	...	248,081
Cigars ... No.	4,324,000	15,392,000	...	1,000,480	464,650	...	21,181,130
lbs.	972,875	328,448	...	1,146	340	...	1,302,809
Cigarettes ... No.	430,742,400	144,569,500	...	539,000	127,000	...	575,977,900
lbs.	...	993	...	...	...	...	993

TOBACCO LEAF USED.

Australian leaf... lbs.	1,050,107	328,389	...	94,060	...	...	1,472,556
Imported leaf ... lbs.	3,254,656	4,442,132	...	246,959	10,607	...	7,954,354

* See note * to preceding table. † Exclusive of Queensland.

21. **Woolen and Tweed Mills.**—The manufacture of woollens and tweeds was established in Australia at a comparatively early period in its industrial history, the first record in Victoria dating back to 1867. The following table, which gives particulars of the mills in each State during the year 1907, shews that the industry is now well established:—

WOOLLEN AND TWEED MILLS, 1907.

Items.	N.S.W.	Vic.	Q'ld.*	S.A.*	W.A.	Tas.	Cwltth.
Number of factories	5	9	...	...	...	4	21
„ employés	395	1,589	...	...	...	257	2,509
„ male employés	179	742	...	...	...	85	1,116
„ female	216	847	...	...	...	172	1,393
Actual horse-power of engines employed	307	2,187	...	...	...	136	2,765
Average number of months in operation during year	11.7	11.9	...	...	...	12	...
Approx. value of land and buildings	£ 28,250	116,330	...	...	...	22,020	180,419
„ „ plant and machinery	£ 39,433	259,740	...	...	...	45,413	377,800
Total amount of wages paid during year	£ 17,588	86,007	...	...	...	11,381	127,221

* As there is only one woollen mill in Queensland and as there are only two in South Australia, particulars are not disclosed, but are added in with the total for the Commonwealth.

(i.) *Progress of Industry, 1904 to 1907.* The progress of the woollen and tweed cloths manufacturing industry during the last four years is shewn in the following table for each State in which mills were in operation:—

DEVELOPMENT OF WOOLLEN MILLS IN AUSTRALIA, 1904 to 1907.

State.	Number of Factories.				Number of Persons Employed.				Approximate Value of Plant and Machinery.			
	1904.	1905.	1906.	1907.	1904.	1905.	1906.	1907.	1904.	1905.	1906.	1907.
N.S.W. ...	3	3	5	5	245	262	338	395	£ 31,439	£ 31,540	£ 36,400	£ 39,433
Victoria ...	10	11	9	9	1,231	1,315	1,434	1,589	212,286	234,532	236,988	259,740
Q'land *	...	...	...	...	...	...	...	...	...	...	...	...
S. Aust. *	...	...	...	...	...	...	...	...	...	...	...	...
W. Aust. ...	...	...	...	...	...	...	...	...	...	...	...	...
Tasmania ...	3	4	4	4	223	236	274	257	29,600	29,940	42,200	45,413
C'wealth	19	21	21	21	1,963	2,055	2,318	2,509	...	...	...	377,800

* See note to preceding table.

(ii.) *Quantity and Value of Production, 1907.* The production of the woollen mills of Australia consists chiefly of tweed cloths, flannels, and blankets, all of which have acquired a reputation for purity and durability. Detailed particulars for the several States are not generally available. The total value of the production of woollen mills in the Commonwealth during the year 1907 was approximately £410,000. The total length of tweed and cloth manufactured was about 1,500,000 yards, valued at about £160,000. In New South Wales 526,340 yards of tweed and cloth, in Victoria 867,789 yards, and in Tasmania 38,091 yards were manufactured. In Victoria, also, 4,088,383 yards of flannel, 199,743 pairs of blankets, and 12,089 shawls were manufactured; while in Tasmania the quantity of these items produced amounted to 258,098 yards of flannel, 25,737 pairs of blankets, and 1695 rugs and shawls.

No cotton spinning or weaving or linen weaving is carried on in Australia. Cotton ginning has been carried on at periods far apart in the northern States, and a mill was lately reopened at Ipswich in Queensland.

22. *Boots and Shoes.*—Among the specialised secondary industries of Australia the boot and shoe industry stands pre-eminent in respect of the number of factories engaged in it, the employment afforded by it, and the range of its output. The following table shews particulars of this industry for each State during the year 1907:—

BOOT AND SHOE FACTORIES, 1907.

Items.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Cwth.
Number of factories	102	139	32	21	12	23	329
" " employing power	58	85	16	13	5	6	183
" " employés	4,786	6,303	1,134	1,163	249	281	13,916
" " male employés	3,163	4,185	780	733	191	250	9,302
" " female	1,623	2,118	354	430	58	31	4,614
Actual horse-power of engines employed	719	671	113	164	32	13	1,712
Average number of months in operation during year	11.8	10.9	*	11.8	11.2	12	...
Approx. value of land and buildings	£ 191,412	170,127	34,825	60,124	15,420	8,826	480,734
" " plant and machinery	£ 131,884	122,347	22,078	28,352	7,232	4,859	316,752
Total amount of wages paid during year	£ 299,613	368,503	66,066	78,398	19,707	16,770	849,057

* Not available.

(i.) *Progress of Industry, 1904 to 1907.* The progress of the industry in the last four years is shewn in the following table:—

DEVELOPMENT OF BOOT AND SHOE FACTORIES, 1904 to 1907.

State.	No. of Factories.				No. of Persons Employed.				Approximate Value of Plant and Machinery.			
	1904.	1905.	1906.	1907.	1904.	1905.	1906.	1907.	1904.	1905.	1906.	1907.
									£	£	£	£
N.S.W. ...	92	98	102	102	4,317	4,465	4,767	4,786	105,931	122,429	122,580	131,884
Victoria ...	131	136	134	139	5,628	5,873	5,703	6,303	94,334	98,136	99,042	122,347
Q'land. ...	43	39	29	32	1,038	1,047	1,015	1,134	10,920	17,728	20,592	22,078
S. Aust. ...	23	19	17	21	1,292	1,270	1,212	1,162				28,352
W. Aust. ...	18	14	12	12	304	257	236	249	8,729	9,200	6,628	7,232
Tasmania	13	15	15	23	333	332	323	281	6,040	6,915	6,713	4,859
C'wealth	320	321	309	329	12,912	13,244	13,256	13,915	234,954	254,406	255,558	316,752

* Information not available.

(ii.) *Value and Quantity of Production, 1907.* The number and value of boots and shoes, and slippers made at factories in each State during the year 1907. are shewn in the following table:—

PRODUCTION OF BOOT AND SHOE FACTORIES, 1907.

Particulars.	N.S.W.	Vic.	Qld.	S. Aust.	W. Aust.	Tas.	Cwth.
QUANTITY.							
Boots and shoes ... Pairs	3,634,831	4,290,122	732,872	1,027,434	194,362	105,551	9,085,173
Slippers ... Pairs	510,132	*182,039	60,876	41,165	238	†	794,450
Uppers ... Pairs	67,691	120,000	69,885	7,950	4,625	67,320	337,471
VALUE.							
Boots and shoes ... £	998,040	1,235,000	202,659	259,412	57,111	27,000	2,769,222
Slippers ... £	59,705	*30,000	5,436	5,220	37	†	100,445
Uppers ... £	15,208	31,000	16,641	1,422	1,612	15,000	80,883

* Including canvas shoes and house boots. † Not available.

23. **Hats and Caps.**—The manufacture of hats and caps is now well established in several of the States of the Commonwealth. In South Australia there is only one factory of this description, while there are not any either in Western Australia or in Tasmania. The total value of hats and caps manufactured in the Commonwealth during

1907 was estimated at £416,591. The position of the industry in 1907 is shewn in the following table :—

HAT AND CAP FACTORIES, 1907.

Items.	N.S.W.	Vic.	Q'land.	S.A.*	W.A.	Tas.	Cwlth.
Number of factories	22	33	3	...	...	...	58
" employés	1,094	1,404	140	...	...	...	2,638
" male employés	335	576	36	...	...	...	947
" female	759	828	104	...	...	...	1,691
Actual horse-power of engines employed	148	247	10	...	...	...	405
Average number of months in operation during year	12	11.0	†	...	...	...	...
Approx. value of land and buildings	£ 60,961	59,152	9,470	...	...	...	129,583
" plant and machinery	£ 35,653	28,452	7,142	...	...	...	71,247
Total amount of wages paid during year	£ 46,567	83,694	6,102	...	...	...	136,363

* As there is only one factory in this State, particulars are not disclosed. † Not available.

(i.) *Progress of Industry, 1904 to 1907.* As appears from the following table, which shows the progress of this industry in the States in which it was carried on during the years 1904 to 1907, there has been a considerable investment of capital in this industry in New South Wales and Victoria during recent years, and the industry is now in a flourishing condition in both these States:—

DEVELOPMENT OF HAT AND CAP FACTORIES, 1904 to 1907.

State.	Number of Factories.				No. of Persons employed				Approximate Value of Plant and Machinery.			
	1904.	1905.	1906.	1907.	1904.	1905.	1906.	1907.	1904.	1905.	1906.	1907.
New South Wales	18	21	23	22	729	904	1,396	1,094	£ 26,117	£ 29,650	£ 32,750	£ 35,653
Victoria	29	32	32	33	1,165	1,208	1,319	1,404	20,045	21,903	24,588	28,452
Queensland	6	8	4	3	128	144	122	140	7,311	7,161	6,063	7,142
South Australia ...	2	2	2	1	57	56	50	*	†	†	†	*
Commonwealth	55	63	61	59	2,079	2,312	2,527	2,638	53,473	58,714	63,421	71,247

* See note * to preceding table. † No information available.

(ii.) *Quantity and Value of Production, 1907.* Particulars regarding the quantity and value of the production of hat and cap factories in each State are incomplete.

In New South Wales, Queensland, and South Australia together 1,928,760 hats and caps, valued at £186,591, were manufactured during the year 1907. No particulars are available for the State of Victoria.

24. Coach and Wagon Building Works.—This industry (including wheelwrights, etc., forms the principal branch of manufacture in Class XI. (see § 1, 3, above). The subjoined table gives particulars of factories in this branch of industry in each State during the year 1907. The returns include cycle factories and also establishments for the manufacture of wheels, spokes, etc. :—

COACH AND WAGON BUILDING WORKS, 1907.

Items.	N.S.W.	Vic.	Q'ld.	S.A.	W.A.	Tas.	Cwlth.
Number of factories	240	284	72	71	39	29	715
" employés	2,263	2,808	630	740	328	159	8,728
" male employés	2,255	2,597	626	730	328	159	6,695
" female	8	11	4	10	...	...	33
Actual horse-power of engines employed ...	296	278	109	113	98	21	910
Aver. time in operation during year (mths.)	11.7	11.8	*	11.9	11.6	12	...
Approx. value of land and buildings	£ 209,433	208,809	52,071	40,591	32,955	15,020	550,879
" plant and machinery	£ 47,870	49,366	18,553	15,862	13,118	2,545	144,809
Total amount of wages paid during year	£ 159,305	167,501	43,600	50,339	33,484	13,291	467,518

* Not available.

Particulars regarding production are not available.

25. **Furniture and Cabinet Making and Billiard Table Making.**—These industries constitute the principal manufactures in Class XIII. (see § 1, 4, above). The following table gives particulars for 1907:—

FACTORIES FOR FURNITURE AND CABINET MAKING AND BILLIARD TABLE MAKING, 1907.

Items.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Cw'ith.
Number of factories	103	127	46	19	16	10	321
" employés	1,902	1,491	557	431	204	212	4,797
" male employés	1,881	1,455	534	430	202	204	4,706
" female	21	36	23	1	2	8	91
Actual horse-power of engines employed ...	334	251	123	167	57	60	992
Average time in operation during year ...	11.7	11.6	"	12	12	12	"
Approx. value of land and buildings ...	£ 151,708	153,653	45,749	11,556	26,970	17,782	407,418
" " plant and machinery ...	£ 23,370	21,487	9,688	8,867	3,595	2,375	69,382
Total amount of wages paid during year ...	£ 147,944	120,379	32,739	37,561	24,237	13,981	376,841

* Not available.

Particulars as to the quantity or value of furniture manufactured in Australia are not available.

26. **Electric Light and Power Works.**—Particulars of the electric light and power works of the Commonwealth in the year 1907 are given in the subjoined table. In South Australia there is only one electric light and power station, and in Tasmania there are only two. Particulars for these States are therefore not disclosed, but are included in the total for the Commonwealth:—

ELECTRIC LIGHT AND POWER WORKS, 1907.

Items.	N.S.W.	Vic.	Q'land.	S.A.*	W.A.	Tas.*	Cw'ith.
Number of factories	91	11	6	...	17	...	123
" employés	634	398	93	...	221	...	1,509
Actual horse-power of engines employed ...	34,508	9,948	3,496	...	11,975	...	61,595
Average time in operation during year ...	11.8	12	†	...	11.7	...	"
Approx. value of land and buildings ...	£ 353,978	140,844	10,265	...	70,608	...	631,736
" " plant and machinery ...	£ 1,109,535	496,314	69,056	...	492,325	...	3,176,431
Total amount of wages paid during year ...	£ 79,985	44,489	8,856	...	41,063	...	202,490

* As there is only one electric light and power station in South Australia, and only two in Tasmania, particulars are not disclosed, but are included in the total for the Commonwealth.
† Not available.

Further reference to electric light and power stations in each State may be found in the sections of this book dealing with *Tramways* and *Local Government*.

27. **Gas and Coke Works.**—There are gas works in operation in nearly all the chief towns in the Commonwealth. The subjoined table gives particulars of gas and coke works in each State. Further reference to gas works in the capital towns of each State is made in the section of this book dealing with the subject of *Local Government*.

GAS AND COKE WORKS, 1907.

Items.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Cw'ith.
Number of factories	57	48	18	8	4	7	142
" employés	1,161	1,272	322	248	90	149	3,242
" male employés	1,161	1,272	319	248	90	149	3,239
" female ... ..	...	...	3	...	...	...	3
Actual horse-power of engines employed ...	1,685	695	94	44	36	2,725	5,279
Average number of months in operation during year ...	12	12	"	12	12	12	"
Approx. value of land and buildings ...	£ 499,979	463,932	106,302	355,104	26,600	4,023	1,457,940
" " plant and machinery ...	£ 694,737	1,246,374	369,059	11,096	78,240	148,458	2,547,964
Total amount of wages paid during year ...	£ 145,380	157,525	34,402	29,833	13,645	15,615	396,400

* Not available.

The following table gives particulars regarding the quantity and value of the production of gas and coke works in each State during the year 1907 :—

PRODUCTION OF GAS AND COKE WORKS, 1907.

Particulars.	N.S.W.	Vic.	Qld.	S. Aust.	W. Aust.	Tas.	Cwlth.
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QUANTITY.

Gas made ... 1000 cub. ft.	3,033,659	1,975,892	391,069	305,665	80,751	90,167	5,877,203
Coke ... Tons	396,139	112,050	29,015	17,517	4,432	5,018	564,171

VALUE.

Gas £	505,982	490,000	118,304	84,446	27,626	30,000	1,256,358
Coke £	244,788	67,000	13,317	11,775	8,360	3,500	350,740

COAL USED.

Coal Tons	621,468	189,190	53,568	29,161	8,649	7,721	909,957
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§ 9. General Summary of Manufacturing Industries.

1. **Introduction.**—It has not been possible, within the limits of this article, to give anything like a detailed account of the individual manufacturing industries of the Commonwealth. In the last sub-section hereof an attempt was made to give a brief statistical account of certain of the most important individual industries, but otherwise limits of space have necessitated the subject being dealt with under the classification specified in § 1. 3, hereof. It is proposed to give herein a summary of each of the nineteen classes in that classification for each State and the Commonwealth, so as to furnish a comprehensive and comparative view of the totality of the manufacturing industry in Australia.

2. **Comparative Summary of the Manufacturing Industries of Australia.**—In the statement given on pages 578 to 581 hereof a summary will be found specifying certain particulars for each class of industry (see § 1. 3, hereof) and for each State. Particulars regarding the total value of the work turned out and the value of the raw materials (exclusive of fuel, oil, etc.) used or worked up, given in the last two columns of such summary are not available for either of the States of Western Australia or Tasmania; totals are given for the Commonwealth exclusive of these States.

In connection with the paucity of detailed information in regard to certain aspects of the manufacturing industry, allowance must be made for the fact that the information has been collected for the first time in some of the States, while in others, the alteration of the form in which they were asked to supply the information doubtless caused some delay.

SUMMARY OF MANUFACTURING INDUSTRIES, 1907.

State.	Number of Establishments.	Average Number of Persons Employed.			Actual Horse-power of Engines Used.	Approximate Value of—		Total Amount of Salaries and Wages Paid.	Total Value of Work Turned Out.	Value of Material Used or Worked Up.
		Male.	Fem.	Total.		Land and B'ld'gs.	Plant and Mach'ry.			

CLASS I.—TREATING RAW MATERIAL, PRODUCT OF AGRICULTURAL AND PASTORAL PURSUITS, ETC.

	No.	No.	No.	No.	H.P.	£	£	£	£	£
N.S.W.	295	3,702	25	3,727	3,153	294,299	261,074	242,761	4,507,210	3,925,633
Victoria	323	3,170	21	3,191	3,192	325,629	225,496	206,642	2,336,399	1,896,987
Queensland ...	44	645	1	646	859	49,620	87,583	51,109	1,241,370	1,058,399
S. Australia ...	111	1,094	2	1,096	1,473	70,934	48,764	72,717	602,325	479,646
W. Australia ...	18	166	1	167	189	25,315	10,480	15,728	*	*
Tasmania ...	16	129	...	129	141	16,026	11,200	10,681	*	*
C'wealth ...	807	8,906	50	8,956	9,007	781,733	644,597	599,638	†8,687,304	†7,360,865

CLASS II.—TREATING OILS AND FATS, ANIMAL, VEGETABLE, ETC.

	No.	No.	No.	No.	H.P.	£	£	£	£	£
N.S.W.	40	531	108	639	508	152,077	158,923	45,658	686,894	487,451
Victoria	21	550	13	563	287	107,290	112,176	47,193	438,603	299,713
Queensland ...	15	141	1	142	140	22,201	35,562	11,614	96,279	53,674
S. Australia ...	11	288	3	291	117	51,533	14,396	18,824	155,559	107,113
W. Australia ...	3	55	2	57	98	6,323	6,938	5,053	*	*
Tasmania ...	2	35	...	35	13	4,000	3,600	3,400	*	*
C'wealth ...	92	1,600	127	1,727	1,103	343,424	331,595	131,742	†1,377,335	†947,950

CLASS III.—PROCESSES IN STONE, CLAY, GLASS, ETC.

	No.	No.	No.	No.	H.P.	£	£	£	£	£
N.S.W.	258	3,591	84	3,675	4,789	394,886	426,840	306,927	827,680	167,982
Victoria	203	3,341	42	3,383	2,487	288,579	202,403	279,016	684,519	141,939
Queensland ...	36	451	...	451	300	35,170	44,163	29,850	60,688	8,842
S. Australia ...	57	650	5	655	381	48,076	26,898	52,943	115,091	17,302
W. Australia ...	42	515	...	515	455	41,829	44,412	47,843	*	*
Tasmania ...	30	230	...	230	128	11,792	7,368	15,533	*	*
C'wealth ...	626	8,778	131	8,909	8,540	820,332	752,084	732,112	†1,687,978	†336,065

CLASS IV.—WORKING IN WOOD.

	No.	No.	No.	No.	H.P.	£	£	£	£	£
N.S.W.	522	5,872	24	5,896	7,636	390,705	436,816	466,832	2,082,130	1,271,115
Victoria	290	4,635	12	4,647	4,574	237,958	228,263	358,522	1,171,610	565,784
Queensland ...	212	3,055	22	3,077	4,636	139,155	290,121	243,476	763,541	374,411
S. Australia ...	56	1,069	2	1,071	785	86,397	37,686	94,278	443,068	280,335
W. Australia ...	59	3,343	2	3,345	2,769	184,255	417,087	384,965	*	*
Tasmania ...	76	1,408	13	1,421	1,832	52,081	96,960	106,202	*	*
C'wealth ...	1,215	19,382	75	19,457	22,232	1,090,551	1,506,933	1,654,275	†4,460,345	†2,491,645

CLASS V.—METAL WORKS, MACHINERY, ETC.

	No.	No.	No.	No.	H.P.	£	£	£	£	£
N.S.W.	428	18,025	68	18,093	14,694	1,651,096	1,850,946	1,884,144	9,160,698	5,219,699
Victoria	619	13,399	70	13,469	5,678	957,781	947,315	1,226,616	3,815,558	1,870,542
Queensland ...	199	4,091	20	4,111	2,920	230,623	418,993	363,530	1,330,247	531,062
S. Australia ...	142	6,819	7	6,826	4,650	391,234	395,774	642,100	3,301,955	1,867,506
W. Australia ...	68	2,479	10	2,489	2,690	421,165	369,097	301,795	*	*
Tasmania ...	48	2,067	5	2,072	2,698	57,415	255,685	228,975	*	*
C'wealth ...	1,504	46,880	180	47,060	33,330	3,709,314	4,237,810	4,647,160	†17,608,468	†9,488,809

* Not available. † Exclusive of Western Australia and Tasmania.

GENERAL SUMMARY OF MANUFACTURING INDUSTRIES.

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State.	Number of Establishments.	Average Number of Persons Employed.			Actual Horse-power of Engines Used.	Approximate Value of—		Total Amount of Salaries and Wages Paid.	Total Value of Work Turned Out.	Value of Material Used or Worked Up.
		Male.	Fem.	Total.		Land and B'ld'gs.	Plant and Mach'ry.			

CLASS VI.—CONNECTED WITH FOOD AND DRINK, ETC.

	No.	No.	No.	No.	H.P.	£	£	£	£	£
N.S.W.	756	9,518	2,546	12,064	15,222	2,030,840	2,553,063	898,637	10,283,497	7,492,925
Victoria	656	9,421	3,203	12,894	14,161	2,268,112	1,542,235	905,224	10,517,884	7,781,422
Queensland ...	357	8,808	589	9,397	16,548	886,199	2,943,705	590,223	5,757,098	3,772,353
S. Australia ...	249	2,707	392	3,159	4,882	611,015	507,686	246,070	2,372,849	1,656,039
W. Australia ...	149	1,298	113	1,411	2,190	397,583	285,040	173,884	•	•
Tasmania ...	83	1,108	195	1,303	1,262	494,862	108,154	74,750	•	•
C'wealth...	2,250	33,190	7,038	40,228	54,285	6,708,611	7,340,941	2,888,858	†	20,632,739†

CLASS VII.—CLOTHING AND TEXTILE FABRICS, ETC.

	No.	No.	No.	No.	H.P.	£	£	£	£	£
N.S.W.	890	6,967	14,955	21,922	1,791	1,367,641	313,624	1,051,153	3,817,687	2,079,141
Victoria	1,212	8,424	24,397	32,821	4,521	1,303,321	594,382	1,397,053	4,935,774	2,836,249
Queensland ...	115	1,433	3,647	5,130	348	187,581	81,506	238,710	858,796	470,965
S. Australia ...	192	1,484	3,307	4,791	467	314,771	67,320	226,572	790,505	443,009
W. Australia ...	121	571	1,631	2,202	88	144,430	21,072	145,672	•	•
Tasmania ...	131	587	920	1,507	150	78,855	54,179	79,183	•	•
C'wealth...	2,661	19,516	48,857	68,373	7,365	3,396,599	1,132,063	3,128,343	†	†5,831,384

CLASS VIII.—BOOKS, PAPER, PRINTING, AND ENGRAVING.

	No.	No.	No.	No.	No.	£	£	£	£	£
N.S.W.	365	5,901	1,692	7,593	2,499	813,389	767,271	637,883	1,627,489	536,055
Victoria	341	5,722	1,979	7,701	2,524	781,501	711,205	645,205	1,910,979	649,470
Queensland ...	122	1,838	344	2,182	374	361,347	187,860	203,707	468,935	36,412
S. Australia ...	62	1,198	454	1,652	464	204,667	143,449	133,127	225,092	126,973
W. Australia ...	58	932	142	1,074	451	173,220	131,127	146,362	•	•
Tasmania ...	16	472	59	531	108	23,675	52,223	54,291	•	•
C'wealth...	964	16,063	4,670	20,733	6,620	2,357,799	1,993,135	1,820,575	†4,232,495	†1,348,910

CLASS IX.—MUSICAL INSTRUMENTS, ETC.

	No.	No.	No.	No.	No.	£	£	£	£	£
N.S.W.	12	343	37	380	49	20,440	6,292	35,298	118,951	52,910
Victoria	3	34	...	34	8	5,240	1,337	2,299	5,653	1,066
Queensland ...	...	...	...	...	...	...	...	...	...	...
S. Australia ...	1	16	...	16	...	1,725	200	1,306	3,465	1,251
W. Australia ...	...	...	...	...	...	...	...	...	•	•
Tasmania ...	...	...	...	...	...	...	...	...	•	•
C'wealth...	16	393	37	430	57	27,405	7,829	38,903	†128,069	†55,227

CLASS X.—ARMS AND EXPLOSIVES.

	No.	No.	No.	No.	No.	£	£	£	£	£
N.S.W.	3	14	2	16	4	2,954	200	1,220	5,264	3,634
Victoria	5	103	204	307	128	28,198	45,413	18,337	115,481	73,438
Queensland ...	...	...	...	...	...	...	...	...	...	...
S. Australia ...	...	...	...	...	...	...	...	...	•	•
W. Australia ...	...	...	...	...	...	...	...	...	•	•
Tasmania ...	...	...	...	...	...	...	...	...	•	•
C'wealth...	8	117	206	323	132	31,152	45,613	19,557	†120,745	†77,072

* Not available. † Exclusive of Western Australia and Tasmania.

State.	Number of Establishments.	Average Number of Persons Employed.			Actual Horse-power of Engines Used.	Approximate Value of—		Total Amount of Salaries and Wages Paid.	Total Value of Work Turned Out.	Value of Material Used or Worked Up.
		Male.	Fem.	Total.		Land and B'ld'gs.	Plant and Mach'ry.			

CLASS XI.—VEHICLES AND FITTINGS, SADDLERY AND HARNESS, ETC.

	No.	No.	No.	No.	H.P.	£	£	£	£	£
N.S.W. ...	345	3,402	62	3,464	356	377,164	61,922	243,910	690,084	290,931
Victoria ...	377	3,574	59	3,633	390	336,408	63,007	232,408	656,545	281,114
Queensland ...	133	1,136	18	1,154	121	122,346	22,651	77,443	215,269	76,891
S. Australia ...	111	1,209	25	1,234	184	151,416	26,317	84,696	251,450	123,129
W. Australia ...	50	510	2	512	106	65,155	15,943	50,939	*	*
Tasmania ...	55	289	2	291	41	27,370	5,431	20,996	*	*
C'wealth ...	1,071	10,120	168	10,288	1,198	1,079,850	195,271	710,392	†1,813,348	†772,065

CLASS XII.—SHIP AND BOAT BUILDING AND REPAIRING.

	No.	No.	No.	No.	H.P.	£	£	£	£	£
N.S.W. ...	31	1,679	1	1,680	2,436	560,938	163,098	214,018	387,814	105,377
Victoria ...	12	144	...	144	957	401,585	54,375	9,547	24,368	6,906
Queensland ...	11	70	1	71	75	10,821	13,598	7,367	15,099	3,070
S. Australia ...	6	97	...	97	68	19,123	5,250	13,558	24,530	6,551
W. Australia ...	4	19	...	19	20	1,640	1,155	1,939	*	*
Tasmania ...	6	38	...	38	47	4,600	2,515	3,768	*	*
C'wealth ...	70	2,047	2	2,049	3,603	991,907	240,486	250,217	†451,811	†121,904

CLASS XIII.—FURNITURE, BEDDING, AND UPHOLSTERY.

	No.	No.	No.	No.	H.P.	£	£	£	£	£
N.S.W. ...	144	2,309	172	2,481	502	223,158	33,696	190,091	598,412	294,632
Victoria ...	194	2,148	222	2,370	492	233,067	39,364	172,941	596,875	326,670
Queensland ...	59	753	43	796	179	64,239	13,294	51,131	125,564	49,630
S. Australia ...	33	635	7	642	188	48,771	10,944	54,596	140,325	53,260
W. Australia ...	26	262	13	275	95	37,790	5,780	30,924	*	*
Tasmania ...	14	233	22	255	76	20,202	3,535	15,860	*	*
C'wealth ...	470	6,340	479	6,819	1,532	633,237	106,613	515,543	†1,463,176	†724,352

CLASS XIV.—DRUGS, CHEMICALS, AND BY-PRODUCTS.

	No.	No.	No.	No.	H.P.	£	£	£	£	£
N.S.W. ...	58	722	384	1,106	599	142,497	124,208	76,382	595,078	320,817
Victoria ...	64	1,052	271	1,323	1,063	225,428	126,623	94,395	760,008	443,486
Queensland ...	5	37	24	61	20	6,560	6,070	3,737	17,933	8,168
S. Australia ...	9	318	30	348	505	53,715	65,098	22,587	192,931	144,761
W. Australia ...	7	39	6	45	56	15,810	9,850	5,531	*	*
Tasmania ...	1	12	...	12	2	50	500	640	*	*
C'wealth ...	144	2,180	715	2,895	2,245	444,060	332,349	203,272	†1,565,950	†917,232

CLASS XV.—SURGICAL AND OTHER SCIENTIFIC INSTRUMENTS.

	No.	No.	No.	No.	H.P.	£	£	£	£	£
N.S.W. ...	8	66	18	84	8	13,088	2,760	6,348	19,675	5,689
Victoria ...	11	45	5	50	9	8,151	1,500	3,036	8,518	2,147
Queensland ...	5	19	2	21	5	5,850	1,180	1,689	5,838	1,378
S. Australia ...	1	4	1	5	1	1,050	500	691	4,200	3,000
W. Australia ...	1	10	...	10	1	3,640	400	1,084	*	*
Tasmania	*	*
C'wealth ...	26	144	26	170	24	31,779	6,340	12,848	†38,231	†12,214

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State.	Number of Establishments.	Average Number of Persons Employed.			Actual Horse-power of Engines Used.	Approximate Value of—		Total Amount of Salaries and Wages Paid.	Total Value of Work Turned Out.	Value of Material Used or Worked Up.
		Male.	Fem.	Total.		Land and B'ld'gs.	Plant and Mach'ry.			

CLASS XVI.—JEWELLERY, TIMEPIECES, AND PLATEDWARE.

	No.	No.	No.	No.	H.P.	£	£	£	£	£
N.S.W.	46	566	60	626	105	67,944	20,193	48,548	146,043	65,652
Victoria	57	685	42	727	105.	92,030	17,396	62,142	240,327	119,853
Queensland ..	12	109	8	117	11	12,300	3,506	7,773	26,425	15,847
S. Australia ..	12	146	...	146	27	20,180	3,217	12,464	37,225	15,650
W. Australia ..	3	28	...	28	3	3,120	1,100	3,087	*	*
Tasmania ...	12	55	1	56	...	9,160	515	4,517	*	*
C'wealth...	142	1,589	111	1,700	251	204,734	45,927	138,531	†450,020	†217,002

CLASS XVII.—HEAT, LIGHT, AND POWER.

	No.	No.	No.	No.	H.P.	£	£	£	£	£
N.S.W.	166	1,977	63	2,040	36,731	911,519	1,835,803	243,281	1,373,709	299,995
Victoria	70	1,785	79	1,864	11,629	647,927	1,792,948	215,508	890,088	193,153
Queensland ..	25	418	3	421	3,582	119,317	438,488	43,904	202,352	20,050
S. Australia ..	14	419	2	421	1,348	387,214	197,221	45,984	137,812	33,484
W. Australia ..	25	346	4	350	12,020	106,528	571,335	58,888	*	*
Tasmania ...	9	276	...	276	3,103	30,023	372,639	31,932	*	*
C'wealth...	309	5,221	151	5,372	68,413	2,202,528	5,208,454	639,557	†2,543,961	†546,682

CLASS XVIII.—LEATHERWARE, N.E.I.

	No.	No.	No.	No.	H.P.	£	£	£	£	£
N.S.W.	14	241	31	272	64	17,900	5,999	16,805	107,947	75,214
Victoria	24	320	102	422	110	27,463	9,745	25,151	162,153	114,691
Queensland ..	2	34	18	52	2	3,600	384	2,122	9,805	3,089
S. Australia ..	3	21	3	24	...	5,740	145	1,342	6,343	3,689
W. Australia ..	2	13	5	18	...	2,340	250	1,306	*	*
Tasmania ...	...	...	...	...	...	...	...	...	*	*
C'wealth...	45	629	159	788	176	57,043	16,523	46,726	†285,748	†196,683

CLASS XIX.—MINOR WARES, N.E.I.

	No.	No.	No.	No.	H.P.	£	£	£	£	£
N.S.W.	51	527	182	709	118	69,814	21,044	40,819	194,750	120,910
Victoria	48	869	491	1,360	368	80,974	55,717	81,442	480,292	319,598
Queensland ..	7	103	22	125	9	4,610	1,020	6,184	14,776	5,765
S. Australia ..	16	189	38	227	25	27,085	2,789	10,539	33,517	16,939
W. Australia ..	7	81	9	90	5	7,064	1,285	5,708	*	*
Tasmania ...	6	33	20	53	3	4,300	590	1,036	*	*
C'wealth...	135	1,802	762	2,564	528	193,797	82,435	145,728	†723,335	†463,212

TOTAL ALL CLASSES.

	No.	No.	No.	No.	H.P.	£	£	£	£	£
N.S.W.	4,432	65,953	20,514	66,467	91,264	9,508,259	9,043,772	6,650,715	37,231,012	22,746,162
Victoria	4,530	59,691	31,212	90,903	52,703	8,376,642	6,771,458	5,982,677	29,693,634	17,926,128
Queensland ..	1,359	23,191	4,763	27,954	30,329	2,261,539	3,989,679	1,923,639	11,209,515	6,490,086
S. Australia ..	1,086	18,423	4,278	22,701	15,565	2,487,606	1,553,654	1,734,394	8,838,252	5,379,636
W. Australia ..	643	10,667	1,940	12,607	21,176	1,637,207	1,893,351	1,380,708	*	*
Tasmania ...	505	6,972	1,237	8,209	9,604	834,611	975,104	651,844	*	*
C'wealth...	12,555	184,897	63,944	248,841	220,641	25,105,864	24,227,018	18,323,977	†86,972,413	†52,542,012

* Not available. † Exclusive of Western Australia and Tasmania.