

CHAPTER XXII.

MANUFACTURING INDUSTRY.

[NOTE.]—For the year 1922-23 the Queensland, Western Australian and Tasmanian year ended 31st December, 1922, and that of the three remaining States ended 30th June, six months later. In 1923-24 Tasmania adopted the year ended 30th June, and Queensland fell into line during 1924-25. Western Australia made the change over in 1925-26, but included particulars for the eighteen months ended 30th June, 1926.

In all tables relating to employees—except where specially mentioned—"Number of Employees" includes working proprietors.

§ 1. Number and Classification of Factories.

1. General.—The number of factories in each State does not necessarily furnish an accurate indication of the extent or progress of manufacturing throughout Australia, since the larger establishments in many cases tend to absorb smaller enterprises, while on the other hand new factories are constantly springing up, and small plants are as numerous as large ones.

2. Number of Factories in each State, 1922-23 to 1926-27.—The following table gives the number of factories in each State for the years 1922-23 to 1926-27:—

FACTORIES.—NUMBER IN EACH STATE, 1922-23 TO 1926-27.

Year.(a)	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
1922-23 ..	6,702	7,096	1,878	1,609	1,199	689	19,173
1923-24 ..	7,321	7,289	1,912	1,698	1,188	781	20,189
1924-25 ..	7,906	7,425	1,890	1,711	1,188	675	20,795
1925-26 ..	8,196	7,461	1,897	1,791	1,170	727	21,242
1926-27 ..	8,222	7,690	1,877	1,807	1,216	767	21,579

(a) See general note above.

3. Classification of Factories, Australia, 1922-23 to 1926-27.—The following table shows the number of factories in Australia for each year from 1922-23 to 1926-27 classified in the groups agreed upon by the Conferences of Statisticians in 1902 and 1906. Details in regard to some of the principal industries in these groups will be found in § 9 hereinafter:—

FACTORIES.—CLASSIFICATION, AUSTRALIA, 1922-23 TO 1926-27.

Class of Industry.	1922-23.	1923-24.	1924-25.	1925-26.	1926-27.
	(a)	(a)	(a)	(a)	
I. Treating raw material, product of agricultural and pastoral pursuits, etc.	No. 810	No. 799	No. 780	No. 751	No. 710
II. Treating oils and fats, animal, vegetable, etc.	97	99	98	98	98
III. Processes in stone, clay, glass, etc.	782	845	871	900	910
IV. Working in wood	2,236	2,497	2,507	2,552	2,500
V. Metal Works, machinery, etc.	2,349	2,575	2,600	2,656	2,650
VI. Connected with food and drink, etc.	2,635	2,702	2,756	2,840	2,869
VII. Clothing and textile fabrics, etc.	4,225	4,408	4,616	4,635	4,757
VIII. Books, paper, printing and engraving	1,347	1,423	1,477	1,511	1,533
IX. Musical Instruments, etc.	59	50	55	48	55
X. Arms and explosives	14	15	13	12	12
XI. Vehicles and fittings, saddlery and harness, etc.	1,913	2,189	2,338	2,499	2,626
XII. Ship and boat building and repairing	81	88	87	89	88
XIII. Furniture, bedding, and upholstery	1,010	1,160	1,192	1,223	1,273
XIV. Drugs, chemicals, and by-products	327	323	340	333	333
XV. Surgical and other scientific Instruments	81	84	92	93	99
XVI. Jewellery, timepieces, and plated ware	254	258	262	270	269
XVII. Heat, light, and power	590	435	448	436	451
XVIII. Leatherware, n.e.i.	118	120	121	122	(b) 279
XIX. Other Industries, n.e.i.	245	113	142	174	67
Total	19,173	20,189	20,795	21,242	21,579

(a) See general note above. (b) Includes Rubber Goods formerly in Class XIX., Other Industries, n.e.i.

For the purpose of the returns in the above table the definition of a factory adopted at the Conference of Statisticians in 1902 is used, viz., "Any factory, workshop or mill where four or more persons are employed or power is used."

The expansion in the number of factories in Australia has been particularly marked during recent years. More than 600 additional establishments have been added to the total number in each of the past four years. As previously pointed out, however, any increase or decrease in the number of factories from year to year does not necessarily indicate a change in the position of the industry.

4. Classification of Factories, States, 1926-27.—The following table shows the number of factories in each State during 1926-27 classified according to the nature of the industry:—

FACTORIES.—CLASSIFICATION, STATES, 1926-27.

Class of Industry.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
	No.	No.	No.	No.	No.	No.	No.
I. Treating raw material, product of agricultural and pastoral pursuits, etc.	220	241	40	93	43	73	710
II. Treating oils and fats, animal, vegetable, etc.	39	31	11	11	5	1	98
III. Processes in stone, clay, glass, etc.	403	277	45	109	55	21	910
IV. Working in wood	949	680	331	159	152	229	2,500
V. Metal works, machinery, etc.	1,001	1,024	185	245	155	40	2,650
VI. Connected with food and drink, etc.	970	782	491	335	226	115	2,869
VII. Clothing and textile fabrics, etc.	1,832	2,087	252	319	178	89	4,757
VIII. Books, paper, printing, and engraving	600	571	138	108	95	21	1,533
IX. Musical instruments, etc.	29	19	1	6	..	..	55
X. Arms and explosives	3	8	..	1	..	..	12
XI. Vehicles and fittings, saddlery and harness, etc.	1,072	948	169	203	138	96	2,626
XII. Ship and boat building and repairing	48	13	9	7	6	5	88
XIII. Furniture, bedding and upholstery	455	496	107	104	70	41	1,273
XIV. Drugs, chemicals, and by-products	150	125	6	23	15	14	333
XV. Surgical and other scientific instruments	30	44	11	6	8	..	99
XVI. Jewellery, timepieces and plated ware	94	117	14	23	12	9	269
XVII. Heat, light, and power	187	129	48	33	42	12	451
XVIII. Rubber Goods and Leatherware, n.e.i.	103	130	13	20	12	1	279
XIX. Other Industries n.e.i.	37	18	6	2	4	..	67
Total	8,222	7,690	1,877	1,807	1,216	767	21,579

§ 2. Classification of Factories according to Number of Employees.

1. States, 1926-27.—A more satisfactory method of measuring the importance of the manufacturing industry in Australia may, perhaps, be obtained by grouping the factories according to the average number of employees therein.

The following table shows, for each State, the number of factories classified according to the number of hands employed, and the average number of hands employed therein, during 1926-27:—

FACTORIES.—CLASSIFICATION ACCORDING TO NUMBER OF EMPLOYEES, 1926-27.

No. of Persons Employed in each Factory.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
Under 4	2,253	2,051	364	335	373	173	5,549
4	818	811	142	153	84	87	2,095
5 to 10	2,325	2,215	544	626	376	295	6,381
11 to 20	1,188	1,125	347	310	160	104	3,234
21 to 50	976	900	282	234	137	70	2,599
51 to 100	375	340	93	94	59	27	988
Over 100	287	248	105	55	27	11	733
Total	8,222	7,690	1,877	1,807	1,216	767	21,579

FACTORIES.—CLASSIFICATION ACCORDING TO NUMBER OF EMPLOYEES, 1926-27—continued.

No. of Persons Employed in each Factory.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
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AVERAGE NUMBER OF HANDS EMPLOYED.

Under 4 ..	4,550	4,315	789	764	757	387	11,562
4 ..	3,272	3,244	568	612	336	348	8,380
5 to 10 ..	16,053	15,465	3,895	4,347	2,541	2,088	44,389
11 to 20 ..	17,217	16,479	5,073	4,593	2,359	1,493	47,214
21 to 50 ..	30,982	28,774	8,687	7,482	4,415	2,138	82,478
51 to 100 ..	25,983	24,177	6,595	6,214	3,974	1,918	68,861
Over 100 ..	85,136	69,185	22,526	18,152	6,042	3,322	204,363
Total ..	183,193	161,639	48,133	42,164	20,424	11,694	467,247

2. Australia, 1922-23 to 1926-27.—A satisfactory feature disclosed by the classification in the following table is the continued growth of the larger factories, the average number employed in establishments with more than 100 hands increasing from 257 to 279 during the past four years :—

FACTORIES.—CLASSIFICATION ACCORDING TO NUMBER OF EMPLOYEES, AUSTRALIA, 1922-23 TO 1926-27.

Year.(a)	Establishments Employing on the Average—							
	20 hands and under.		21 to 100 hands.		101 hands and upwards.		Total.	
	Es-tablish-ments.	Hands.	Es-tablish-ments.	Hands.	Es-tablish-ments.	Hands.	Es-tablish-ments.	Hands.
1922-23—								
Number	15,176	104,545	3,337	137,998	660	169,867	19,173	412,410
Average per establishment ..	6.89	6.89	41.35	41.35	257.37	257.37	..	21.51
Percentage on total ..	79.15	25.35	17.41	33.46	3.44	41.19	100.00	100.00
1923-24—								
Number	16,086	109,678	3,421	141,549	682	178,768	20,189	429,990
Average per establishment ..	6.82	6.82	41.38	41.38	262.12	262.12	..	21.30
Percentage on total ..	79.68	25.51	16.94	32.92	3.38	41.57	100.00	100.00
1924-25—								
Number	16,672	110,884	3,428	141,773	695	187,292	20,795	439,949
Average per establishment ..	6.65	6.65	41.30	41.30	269.48	269.48	..	21.16
Percentage on total ..	80.17	25.20	16.49	32.23	3.34	42.57	100.00	100.00
1925-26—								
Number	17,053	111,653	3,465	143,724	724	195,543	21,242	450,920
Average per establishment ..	6.55	6.55	41.48	41.48	270.09	270.09	..	21.23
Percentage on total ..	80.28	24.76	16.31	31.87	3.41	43.37	100.00	100.00
1926-27—								
Number	17,250	111,545	3,587	151,339	733	204,363	21,579	467,247
Average per establishment ..	6.46	6.46	42.19	42.19	278.80	278.80	..	21.65
Percentage on total ..	79.98	23.87	16.62	32.39	3.40	43.74	100.00	100.00

(a) See general note on first page of this Chapter.

§ 3. Power used in Factories.

1. States, 1926-27.—The following table shows the number of factories using steam, gas, oil, electricity, or water, and the horse-power of engines or motors during 1926-27 :—

FACTORIES.—HORSE-POWER OF ENGINES USED, 1926-27.

State.	Number of Establishments.			Actual Horse-power of Engines Used.					
	Using Machinery worked by Steam, Gas, Oil, Electricity, or Water.	Others.	Total.	Steam.	Gas.	Oil.	Electricity.	Water.	Total.
	No.	No.	No.	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.
N.S.W. ..	7,395	827	8,222	331,036	13,896	8,778	204,094	1,041	558,845
Victoria ..	6,620	1,070	7,690	268,061	13,548	10,024	123,359	(a)	414,992
Queensland ..	1,622	255	1,877	111,933	15,521	3,991	28,823	52	160,320
S. Australia ..	1,537	270	1,807	97,362	6,524	6,842	35,617	8	146,153
W. Australia ..	1,045	171	1,216	38,972	5,889	1,860	18,501	..	65,222
Tasmania ..	697	70	767	5,901	344	1,164	51,395	70,780	129,584
Australia ..	18,916	2,663	21,579	853,265	55,722	32,459	461,789	71,881	1,475,116

(a) Statistics of Water Power not collected.

The utilization of mechanical power in factories is greatest in New South Wales where the largest number of industries requiring a considerable amount of power is located. Victoria, on the other hand, has the largest number of establishments, such as those connected with clothing and textile fabrics, wherein much less power is utilized.

The number of establishments in Australia during 1926-27 using steam, gas, oil, electricity, or water was 18,916, or 87.66 per cent. of the total; while 2,663 establishments, representing 12.34 per cent., used no mechanical power. The total actual horse-power in use was 1,475,116, distributed in the following proportions :—Steam, 57.84 per cent.; gas, 3.78 per cent.; oil, 2.20 per cent.; electricity, 31.31 per cent.; and water, 4.87 per cent.

2. Australia, 1922-23 to 1926-27.—The following table shows the horse-power of engines used in connexion with factories in Australia during each of the last five years :—

FACTORIES.—HORSE-POWER OF ENGINES USED, AUSTRALIA, 1922-23 TO 1926-27.

Year (a)	Number of Establishments.			Actual Horse-power of Engines Used.					
	Using Machinery worked by Steam, Gas, Oil, Electricity, or Water.	Others.	Total.	Steam.	Gas.	Oil.	Electricity.	Water.	Total.
	No.	No.	No.	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.
1922-23 ..	15,951	3,222	19,173	475,917	59,702	12,240	283,850	35,732	867,441
1923-24 ..	17,056	3,133	20,189	633,683	60,237	16,277	344,085	56,492	1,110,774
1924-25 ..	17,717	3,078	20,795	715,475	59,980	17,232	394,381	73,008	1,260,076
1925-26 ..	18,358	2,884	21,242	753,010	60,645	24,116	425,417	72,014	1,335,202
1926-27 ..	18,916	2,663	21,579	853,265	55,722	32,459	461,789	71,881	1,475,116

(a) See general note on first page of this Chapter.

The growth of electrical power has been one of the chief factors in the rapid increase of mechanical power which has taken place in factories during recent years. From 72,250 horse-power in 1913, or roughly one-sixth of the total horse-power of engines used, it has increased to 461,789 horse-power, or one-third of the total installations in 1926-27. Steam power continues to expand with the development of the larger industries, but the major portion of the quantity recorded is used for the generation of electric light and power. During the past four years an average of 151,919 horse-power has been added each year to the plant actually in use.

3. Classes of Industry, States, 1926-27.—The following table gives a classification of the actual horse-power of engines used in factories of different descriptions in each State during 1926-27 :—

FACTORIES.—HORSE-POWER OF ENGINES USED IN EACH CLASS, 1926-27.

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.
I. Treating raw material, product of agricultural and pastoral pursuits, etc.	8,033	9,029	1,676	1,977	726	727	22,168
II. Treating oils and fats, animal, vegetable, etc.	2,305	1,503	838	506	334	21	5,507
III. Processes in stone, clay, glass, etc.	29,415	20,758	3,683	5,989	2,773	3,910	66,528
IV. Working in wood	26,325	18,713	11,897	4,332	9,347	4,465	75,079
V. Metal works, machinery, etc.	100,435	30,995	10,714	9,968	5,331	37,865	195,308
VI. Connected with food and drink, etc.	47,944	47,539	53,985	12,413	8,038	4,436	174,855
VII. Clothing and textile fabrics, etc.	14,176	24,834	2,331	1,591	975	1,851	45,768
VIII. Books, paper, printing, and engraving	15,255	8,822	2,209	1,968	1,364	336	29,954
IX. Musical instruments, etc.	1,585	376	3	82	..	..	2,046
X. Arms and explosives	625	689	..	4	..	..	1,218
XI. Vehicles and fittings, saddlery and harness, etc.	5,611	4,859	982	3,932	642	357	16,388
XII. Ship and boat building and repairing	10,460	1,358	89	508	35	63	12,513
XIII. Furniture, bedding, and upholstery	6,324	4,957	1,506	2,339	968	448	16,542
XIV. Drugs, chemicals, and by-products	4,782	5,308	227	4,945	1,218	232	16,712
XV. Surgical and other scientific instruments	113	89	19	22	16	..	259
XVI. Jewellery, timepieces, and plated ware	487	546	56	137	18	20	1,264
XVII. Heat, light, and power	280,556	226,006	69,816	95,370	33,286	74,852	779,886
XVIII. Rubber goods and leatherware, n.e.i.	4,320	8,456	195	65	106	1	13,143
XIX. Other Industries, n.e.i.	194	155	94	5	45	..	493
Total	558,845	414,992	160,320	146,153	65,222	129,584	1,475,116

4. Classes of Industry, Australia, 1922-23 to 1926-27.—The following table shows a similar classification of the actual horse-power of engines used in manufacturing industries in Australia during the years 1922-23 to 1926-27 inclusive :—

FACTORIES.—HORSE-POWER OF ENGINES USED, AUSTRALIA, 1922-23 TO 1926-27.

Class of Industry.	1922-23. (a)	1923-24. (a)	1924-25. (a)	1925-26. (a)	1926-27.
I. Treating raw material, product of agricultural and pastoral pursuits, etc.	23,976	24,319	23,225	23,319	22,168
II. Treating oils and fats, animal, vegetable, etc.	3,421	3,848	4,684	4,973	5,507
III. Processes in stone, clay, glass, etc.	42,787	48,614	55,132	50,897	66,528
IV. Working in wood	60,343	68,234	72,935	77,233	75,079
V. Metal works, machinery, etc.	140,009	162,153	167,801	187,129	195,308
VI. Connected with food and drink, etc.	147,160	159,982	160,194	172,519	174,855
VII. Clothing and textile fabrics, etc.	30,382	35,295	36,638	40,469	45,768
VIII. Books, paper, printing, and engraving	21,812	26,599	27,700	29,613	29,954
IX. Musical instruments, etc.	888	1,116	1,192	1,550	2,046
X. Arms and explosives	809	1,236	1,339	1,219	1,218
XI. Vehicles and fittings, saddlery and harness, etc.	8,361	11,454	13,084	14,887	16,388
XII. Ship and boat building and repairing	11,406	11,247	11,775	11,998	12,513
XIII. Furniture, bedding, and upholstery	9,995	11,338	12,084	14,728	16,542
XIV. Drugs, chemicals, and by-products	11,309	12,378	14,166	16,190	16,712
XV. Surgical and other scientific instruments	209	218	290	278	259
XVI. Jewellery, timepieces, and plated ware	1,066	1,120	1,251	1,339	1,264
XVII. Heat, light, and power	344,373	522,621	646,805	666,676	779,886
XVIII. Leatherware, n.e.i.	708	760	805	561	(b)13,143
XIX. Other Industries, n.e.i. . . . .	..	8,427	8,272	11,624	493
Total	867,441	1,110,774	1,260,076	1,335,202	1,475,116

(a) See general note on first page of this Chapter.
 (b) Includes Rubber Goods formerly in Class XIX., Other Industries n.e.i.

The actual horse-power of engines used increased in every branch of industry except Class I. Treating raw materials. An apparent decrease is shown for Class XIX. Other Industries, n.e.i., but this is due to the removal of the rubber goods industry from this Class. The industries using the greatest amount of power were Class XVII. Heat, light, and power; Class V. Metal works, machinery, etc.; and Class VI. Connected with food and drink. These three classes, which together accounted for 77.93 per cent. of the total power used in 1926-27 increased their horse-power from 631,542 to 1,149,549 during the four years under review, and are mainly responsible for the development of mechanical power in factories since 1922-23.

§ 4. Employment in Factories.

1. Total Number Employed.—Each person employed in and about a factory, in whatever capacity, is now included as a factory employee, consequently every proprietor who works in his own business is counted as an employee, and all "outworkers" (see sub-section 5 (ii) hereinafter) are also included. The individuals embraced may be classed under the following heads:—(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.

The following table shows, for each year from 1922-23 to 1926-27 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 Australia; and (c) the numbers employed per ten thousand of the population in each State and Australia:—

FACTORIES.—EMPLOYMENT, 1922-23 TO 1926-27.

Year.(a)	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
AVERAGE NUMBER.							
1922-23 ..	152,266	152,625	43,403	34,695	19,097	10,324	412,410
1923-24 ..	159,674	156,162	44,948	37,275	19,712	12,219	429,990
1924-25 ..	165,760	154,158	48,922	38,353	21,758	10,998	439,949
1925-26 ..	174,101	152,959	50,496	40,051	22,142	11,171	450,920
1926-27 ..	183,193	161,639	48,133	42,164	20,424	11,694	467,247

PERCENTAGE ON AUSTRALIAN TOTAL.

	%	%	%	%	%	%	%
1922-23 ..	36.92	37.01	10.53	8.41	4.63	2.50	100.00
1923-24 ..	37.13	36.32	10.45	8.67	4.59	2.84	100.00
1924-25 ..	37.68	35.04	11.12	8.72	4.94	2.50	100.00
1925-26 ..	38.61	33.92	11.20	8.88	4.91	2.48	100.00
1926-27 ..	39.21	34.60	10.30	9.02	4.37	2.50	100.00

PER 10,000 OF POPULATION.

1922-23 ..	701	960	556	676	562	481	734
1923-24 ..	723	961	554	710	566	557	748
1924-25 ..	735	930	586	712	598	505	749
1925-26 ..	757	908	586	726	595	515	753
1926-27 ..	780	944	546	744	539	545	765

(a) See general note on first page of this Chapter.

2. Rates of Increase, 1922-1923 to 1926-27.—The following table shows the percentage of increase or decrease on the average number of persons employed for the preceding year in each of the years from 1922-23 to 1926-27.

FACTORY EMPLOYEES.—PERCENTAGE OF INCREASE, 1922-23 TO 1926-27.

Year.(a)	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
	%	%	%	%	%	%	%
1921-22—1922-23..	2.28	5.35	2.73	11.31	5.35	1.95	4.30
1922-23—1923-24..	4.87	2.32	3.56	7.44	3.22	18.36	4.26
1923-24—1924-25..	3.81	-1.28	8.84	2.89	10.38	-10.00	2.32
1924-25—1925-26..	5.03	-0.78	3.22	4.43	1.76	1.57	2.49
1925-26—1926-27..	5.22	5.67	-4.68	5.28	-7.76	4.68	3.62

NOTE.—The minus sign indicates decrease.

(a) See general note on first page of this Chapter.

3. Employees in Classes of Industry, Australia, 1922-23 to 1926-27.—The following table gives the average numbers of persons employed in factories under each group in Australia during the years 1922-23 to 1926-27 inclusive :—

FACTORY EMPLOYEES.—CLASSES, AUSTRALIA, 1922-23 TO 1926-27.

Class of Industry.	1922-23. (a)	1923-24. (a)	1924-25. (a)	1925-26. (a)	1926-27.
I. Treating raw material, product of agricultural and pastoral pursuits, etc. ..	11,394	10,842	10,289	10,414	10,323
II. Treating oils and fats, animal, vegetable, etc. ..	3,173	3,424	3,342	3,350	3,243
III. Processes in stone, clay, glass, etc. ..	13,666	20,256	20,342	20,723	21,590
IV. Working in wood ..	33,102	36,319	36,252	35,812	33,050
V. Metal works, machinery, etc. ..	78,614	88,213	90,888	96,782	101,711
VI. Connected with food and drink, etc. ..	60,888	61,550	64,712	66,084	64,911
VII. Clothing and textile fabrics, etc. ..	102,451	100,850	100,830	103,501	111,540
VIII. Books, paper, printing and engraving ..	81,015	82,659	83,043	83,123	83,863
IX. Musical instruments, etc. ..	1,415	1,357	1,441	1,647	1,892
X. Arms and explosives ..	433	803	819	870	936
XI. Vehicles and fittings, saddlery and harness, etc. ..	19,532	22,490	24,234	25,592	28,285
XII. Ship and boat building and repairing ..	6,053	5,794	6,230	6,107	6,298
XIII. Furniture, bedding, and upholstery ..	12,608	15,230	15,697	15,943	16,882
XIV. Drugs, chemicals, and by-products ..	6,884	7,215	7,511	7,747	8,196
XV. Surgical and other scientific instruments ..	582	608	690	697	726
XVI. Jewellery, timepieces, and plated ware ..	2,489	2,447	2,365	2,343	2,209
XVII. Heat, light, and power ..	14,112	12,967	13,735	11,534	11,956
XVIII. Leatherware, n.e.l. ..	2,476	2,576	2,506	2,780	(b) 3,807
XIX. Other Industries n.e.l. ..	6,523	4,390	5,023	5,871	879
Total ..	412,410	429,090	439,949	450,920	467,247

(a) See general note on first page of this Chapter.

(b) Includes Rubber Goods formerly in Class XIX., Other Industries, n.e.l.

On the average during each of the last four years employment has been found for 13,709 additional persons in the manufacturing industries. The classes responsible for the bulk of the increase were Class V. Metal Works, Class VII. Clothing and Textile Fabrics, Class XI. Vehicles etc., and Class XIII. Furniture, Bedding and Upholstery, in several of the principal industries of which classes considerable development has occurred during the period.

4. Employees in Classes of Industry, States, 1926-27.—The following table gives a classification of employees in manufacturing industries in each State during 1926-27 :—

FACTORY EMPLOYEES.—CLASSES, STATES, 1926-27.

Class of Industry.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Aus- tralia.
I. Treating raw material, product of agricultural and pastoral pursuits, etc.	3,698	4,100	725	827	339	634	10,323
II. Treating oils and fats, animal, vegetable, etc.	1,495	941	226	315	225	41	3,243
III. Processes in stone, clay, glass, etc.	10,493	6,117	991	2,370	1,153	466	21,590
IV. Working in wood	10,326	9,146	5,725	2,293	3,358	2,202	33,050
V. Metal works, machinery, etc.	47,938	28,576	8,128	10,835	4,269	1,965	101,711
VI. Connected with food and drink, etc.	20,964	18,881	15,534	4,933	2,683	1,916	64,911
VII. Clothing and textile fabrics, etc.	38,076	55,101	7,047	5,819	3,305	2,192	111,540
VIII. Books, paper, printing and engraving	13,713	11,619	3,843	2,479	1,524	685	33,863
IX. Musical instruments, etc.	1,284	532	10	66	..	..	1,892
X. Arms and explosives	396	537	..	3	..	..	936
XI. Vehicles and fittings, saddlery, and harness, etc.	9,640	8,223	1,672	6,655	1,349	746	28,285
XII. Ship and boat building and repairing	5,457	388	111	291	19	32	6,298
XIII. Furniture, bedding, and upholstery	6,551	5,460	1,725	1,704	1,019	373	16,832
XIV. Drugs, chemicals, and by-products	3,362	2,912	153	1,126	570	73	8,196
XV. Surgical and other scientific instruments	284	269	77	59	37	..	726
XVI. Jewellery, timepieces, and plated ware	798	1,044	112	156	71	28	2,209
XVII. Heat, light, and power	4,661	2,984	1,618	1,975	379	339	11,956
XVIII. Rubber goods and leatherware, n.e.i.	3,579	4,496	399	250	81	2	8,807
XIX. Other Industries, n.e.i.	478	313	37	8	43	..	879
Total	183,193	161,639	48,133	42,164	20,424	11,694	467,247

The largest number employed in any particular class in Australia during 1926-27 was in Class VII., in which there were 111,540 employees, or 23.87 per cent. of the total in all classes. The class affording employment to the smallest number of hands was Class XV., in which there were 726 hands, or 0.15 per cent. of the total. Classes VI., VII., and VIII. include those industries in which female labour is largely employed. (See § 5, 5 hereof.)

5. Employees According to Nature of Employment.—(i) *General.* In the following table the average numbers of persons employed in each State during 1926-27 are classified according to the nature of their employment :—

FACTORY EMPLOYEES.—NATURE OF EMPLOYMENT, 1926-27.

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. (a)	Carters, Messengers and Others.	
New South Wales ..	7,022	6,359	9,348	3,295	154,545	2,624	183,193
Victoria ..	7,334	5,580	6,519	2,036	137,617	2,553	161,639
Queensland ..	1,387	1,834	2,588	2,244	36,547	3,533	48,133
South Australia ..	1,505	1,377	2,624	496	35,413	749	42,164
Western Australia ..	838	820	1,098	397	16,634	637	20,424
Tasmania ..	574	547	790	300	9,220	263	11,694
Australia ..	18,660	16,517	22,967	8,768	389,976	10,359	467,247

(a) Including Outworkers.

(ii) *Outworkers.* The term "outworker" or "homeworker" has acquired a special meaning in connexion with manufacturing industries, and technically embraces only those to whom work is given out by factory owners to be wrought upon in the employees' own homes. Individuals working for themselves are not included. The following table gives particulars of the average number of outworkers connected with factories in each State during each year from 1922-23 to 1926-27 inclusive :—

FACTORIES.—OUTWORKERS(a), 1922-23 TO 1926-27.

Year.(b)	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
1922-1923 ..	547	1,228	33	84	8	32	1,932
1923-1924 ..	470	870	38	35	9	41	1,463
1924-1925 ..	461	728	32	62	4	19	1,306
1925-1926 ..	403	736	23	83	2	24	1,271
1926-1927 ..	336	592	31	66	7	53	1,085

(a) In all tables relating to number of hands employed in factories, outworkers are included.
 (b) See general note on first page of this Chapter.

The Factories Acts in each State contain provisions regulating the employment of outworkers. Records of outwork, specifying the names and remuneration of workers, and stating the places where the work is done, must be kept by factory proprietors. Fuller information regarding the operation of the Factories Acts will be found in Official Year Book No. 16, pp. 540 to 566.

§ 5. Sex Distribution in Factories.

1. *Employment of Females.*—In all the States the employment of female labour in factories is regulated by Acts of Parliament. More extended reference to this matter will be found in Official Year Book No. 16, pp. 540 to 566.

2. *Distribution of Employees according to Sex.*—(i) *General.* In New South Wales the ratio of the number of females employed in factories to the number of males during 1886 was about one to seven; in 1891 one to six; in 1903 it became about one to four; and is now less than one to three. In Victoria the ratio of females to males 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 nearly one to two. In the remaining States the ratio was roughly one female employed to every five males, while that for Australia as a whole was one to three. The employment of women is, however, mainly confined to a few trades.

Increasing activity in the clothing and textile industries is the principal cause of the growth in female employment. Certain occupations are regarded as specially suitable for women, such as clothing and textile manufacture, preparation of food, book-binding, and wrapping and packing connected with various industries. In common also with commercial establishments, a considerable number of factories employ women as clerks and typists.

(ii) *Average Number of Males and Females Employed, 1922-23 to 1926-27.* The following table shows the average number of male and female employees in factories in each State from 1922-23 to 1926-27:—

FACTORIES.—MALES AND FEMALES EMPLOYED, 1922-23 TO 1926-27.

State.	1922-23.(a)	1923-24.(a)	1924-25.(a)	1925-26.(a)	1926-27.
MALES.					
New South Wales ..	114,970	121,845	126,496	132,239	138,309
Victoria ..	103,092	107,578	105,984	104,512	108,969
Queensland ..	35,528	36,788	40,895	42,525	40,493
South Australia ..	27,988	30,261	31,238	33,117	34,980
Western Australia ..	15,851	16,439	18,316	18,634	16,799
Tasmania ..	8,453	10,046	9,016	9,055	9,485
Australia ..	305,882	322,957	331,945	340,082	349,035
FEMALES.					
New South Wales ..	37,296	37,829	39,264	41,862	44,884
Victoria ..	49,533	48,584	48,174	48,447	52,670
Queensland ..	7,875	8,160	8,027	7,971	7,640
South Australia ..	6,707	7,014	7,115	6,934	7,184
Western Australia ..	3,246	3,273	3,442	3,508	3,625
Tasmania ..	1,871	2,173	1,982	2,116	2,209
Australia ..	106,528	107,033	108,004	110,838	118,212

(a) See general note on first page of this Chapter.

During the years specified in the above table there has been an increase in the number of male factory employees in Australia of 43,153, or an annual average of 10,788, whilst the number of female employees increased by 11,684, or an annual average of 2,921.

(iii) *Average Number of Males and Females Employed per 10,000 of Population, 1922-23 to 1926-27.* The following table shows the average number of male and female employees per 10,000 of the male and female population respectively in each State from 1922-23 to 1926-27:—

MALE AND FEMALE FACTORY EMPLOYEES PER 10,000 OF MALE AND FEMALE POPULATION RESPECTIVELY, 1922-23 TO 1926-27.

State.	1922-23.(a)	1923-24.(a)	1924-25.(a)	1925-26.(a)	1926-27.
MALES.					
New South Wales ..	1,038	1,081	1,099	1,129	1,156
Victoria ..	1,307	1,333	1,286	1,246	1,279
Queensland ..	862	868	929	935	870
South Australia ..	1,087	1,140	1,141	1,171	1,194
Western Australia ..	876	883	938	934	827
Tasmania ..	782	917	830	838	892
Australia ..	1,070	1,105	1,108	1,111	1,118

(a) See general note on first page of this Chapter.

MALE AND FEMALE FACTORY EMPLOYEES PER 10,000 OF MALE
AND FEMALE POPULATION RESPECTIVELY—*continued.*

State.	1922-23.(a)	1923-24.(a)	1924-25.(a)	1925-26.(a)	1926-27.
FEMALES.					
New South Wales ..	350	350	356	371	390
Victoria ..	618	593	578	573	613
Queensland ..	213	215	203	196	183
South Australia ..	262	274	269	258	263
Western Australia ..	205	202	204	203	207
Tasmania ..	175	198	181	194	204
Australia ..	386	380	375	378	396

(a) See general note on first page of this Chapter.

3. Rate of Variation for each Sex.—The percentages of annual increase or decrease during the years 1922-23 to 1926-27 in the average number of males and females employed in factories are shown below :—

PERCENTAGES OF ANNUAL INCREASE, MALE AND FEMALE FACTORY
EMPLOYEES, 1922-23 TO 1926-27.

State.	1921-22— 1922-23.(a)	1922-23— 1923-24.(a)	1923-24— 1924-25.(a)	1924-25— 1925-26.(a)	1925-26— 1926-27.(a)
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MALES.

	%	%	%	%	%
New South Wales ..	2.31	5.91	3.82	4.54	4.59
Victoria ..	5.42	4.35	-1.48	-1.39	4.26
Queensland ..	1.36	3.54	11.16	3.99	-4.78
South Australia ..	11.93	8.12	3.23	6.01	5.63
Western Australia ..	2.17	3.71	11.42	1.74	-9.85
Tasmania ..	-0.84	18.84	-10.26	0.43	4.75
Total ..	3.95	5.58	2.78	2.45	2.63

FEMALES.

New South Wales ..	2.14	1.43	3.79	6.62	7.22
Victoria ..	5.19	-1.92	-0.84	0.57	8.72
Queensland ..	9.41	3.62	-1.63	-0.70	-4.15
South Australia ..	8.79	4.58	1.43	-2.54	3.61
Western Australia ..	24.23	0.83	5.16	1.92	3.34
Tasmania ..	16.79	16.14	-8.79	6.76	4.40
Total ..	5.29	0.47	0.91	2.62	6.65

NOTE.—The minus sign indicates decrease.

(a) See general note on first page of this Chapter.

The largest proportion of females is engaged in one or other of the three classes of industry indicated, Class VII. being the most important. The classification of the employment of females in the several industries in that class, and the relation of their number to that of the males so employed, are shown in the following table:—

FEMALES EMPLOYED IN EACH INDUSTRY IN CLASS VII. DURING 1926-27.

Industry.	New South Wales.			Victoria.			Other States.		
	Males.	Females	Femini- nity. (a)	Males.	Females	Femini- nity. (a)	Males.	Females	Femini- nity. (a)
Woollen and tweed mills	979	1,725	27.59	2,972	3,745	11.51	741	906	10.07
Knitting factories ..	780	2,769	56.04	1,100	5,018	64.04	53	300	69.97
Cotton mills ..	331	367	5.16	..	..	..	44	2	-91.30
Boots and shoes ..	3,094	2,375	-13.15	6,595	5,597	- 8.19	1,479	1,077	-15.73
Boot repairing, includ- ing bespoke work ..	1,050	21	-96.08	513	18	-93.22	354	20	-89.30
Clothing (tailoring and slop) ..	2,593	9,242	56.18	2,099	7,083	54.28	1,749	5,643	52.68
Clothing (waterproof and oulskin) ..	22	94	62.07	80	239	49.84	..	..	..
Dressmaking and milli- nery ..	134	3,560	92.74	459	8,361	89.59	29	2,508	97.71
Dyeworks and cleaning	265	182	-18.57	165	176	3.23	127	148	7.64
Furriers ..	248	323	13.13	263	438	24.96	33	78	40.54
Hats and caps ..	624	1,337	36.36	594	1,151	31.92	70	113	23.50
Shirts, ties, and scarves	410	4,537	83.42	588	6,475	83.35	136	2,095	87.81
Rope and cordage ..	240	90	-45.45	512	380	-14.79	117	5	-91.30
Tents and tarpaulins	150	144	-2.04	134	108	-10.74	120	118	- 0.84
Bags and sacks ..	169	221	13.33	115	123	3.36	129	169	13.42
Total, Class VII. ..	11,089	26,987	41.75	16,189	38,912	41.24	5,181	13,182	43.57

NOTE.—The minus sign denotes excess of males over females.

(a) Excess of females over males per 100 of both sexes combined.

§ 6. Child Labour in Factories.

1. Conditions of Child Labour.—The employment of young persons in factories in each State of Australia is regulated by Acts of Parliament, as is the case with the employment of female labour. Reference to the legislation regarding the employment of child labour in factories will be found in Official Year Book No. 16, pp. 540 to 566. 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, 1922-23 to 1926-27.—In the statistical compilations of the various States the term "child" may be taken to denote any person

under sixteen years of age. The following table shows the average number of children of each sex employed in manufacturing industries in each State during the years 1922-23 to 1926-27 :—

CHILDREN EMPLOYED IN FACTORIES, 1922-23 TO 1926-27.

State.	1922-23.(a)	1923-24.(a)	1924-25.(a)	1925-26.(a)	1926-27.
MALES.					
New South Wales ..	3,995	4,128	3,968	4,527	4,594
Victoria ..	4,031	4,057	4,027	3,980	4,567
Queensland ..	1,119	1,236	1,507	1,566	1,281
South Australia ..	1,125	1,199	1,080	1,095	1,215
Western Australia ..	452	530	552	682	614
Tasmania ..	282	360	238	214	311
Australia ..	11,004	11,510	11,372	12,064	12,582
FEMALES.					
New South Wales ..	4,288	4,038	4,256	4,688	5,001
Victoria ..	3,163	3,422	3,223	3,489	4,041
Queensland ..	969	972	979	1,003	927
South Australia ..	795	773	839	783	856
Western Australia ..	251	200	254	248	242
Tasmania ..	266	294	190	191	254
Australia ..	9,732	9,699	9,741	10,402	11,321
TOTAL.					
New South Wales ..	8,283	8,166	8,224	9,215	9,595
Victoria ..	7,194	7,479	7,250	7,469	8,608
Queensland ..	2,088	2,208	2,486	2,569	2,208
South Australia ..	1,920	1,972	1,919	1,878	2,071
Western Australia ..	703	730	806	930	856
Tasmania ..	548	654	428	405	565
Australia ..	20,736	21,209	21,113	22,466	23,903

(a) See general note on first page of this Chapter.

3. Percentage of Children on Total Number of Employees.—The foregoing table shows a general increase in the number of children employed in factories during the past four years. This increase is greater among the females than is the case with the males, the respective gains being 1,589 and 1,578. Examined in conjunction with the total number of persons employed the percentage of children has varied little since 1922-23.

PERCENTAGE OF CHILDREN ON TOTAL NUMBER OF FACTORY EMPLOYEES,
1922-23 TO 1926-27.

State.	1922-23.(a)	1923-24.(a)	1924-25.(a)	1925-26.(a)	1926-27.
	%	%	%	%	%
New South Wales ..	5.44	5.11	4.96	5.29	5.24
Victoria ..	4.71	4.79	4.70	4.88	5.33
Queensland ..	4.81	4.91	5.08	5.09	4.59
South Australia ..	5.53	5.29	5.00	4.69	4.91
Western Australia ..	3.68	3.70	3.70	4.20	4.19
Tasmania ..	5.31	5.35	3.89	3.63	4.83
Australia ..	5.03	4.93	4.80	4.98	5.12

(a) See general note on first page of this Chapter.

4. Industries Employing Child Labour.—The employment of children is largely confined to a limited number of industries, the most important of which are specified in the next table, which shows the average number of children of each sex employed during 1926-27 in the several industries indicated.

CHILDREN EMPLOYED.—VARIOUS INDUSTRIES, 1926-27.

Class.	Industry.	N.S.W.		Victoria.		Q'land.		S. Aust.		W. Aust.		Tas.		Australia.	
		M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
II.	Soap and candles ..	34	33	30	22	7	2	11	20	9	1	1	1	92	79
III.	Bricks, tiles, pottery, and earthenware ..	221	3	70	17	23	2	21	..	15	2	4	..	354	24
IV.	Joinery, boxes, cases, etc. ..	108	..	109	4	46	2	44	1	18	..	5	..	330	7
V.	Saw mills ..	63	..	11	..	80	2	17	2	33	..	22	..	226	4
..	Agricultural imple- ments ..	23	2	103	11	5	..	34	5	6	..	..	..	171	18
..	Engineering, ironworks, and foundries ..	342	6	362	16	59	2	115	1	26	2	5	..	909	27
..	Galvanized ironwork- ing and tinsmithing ..	175	58	215	32	39	22	56	..	14	1	1	..	500	113
..	Railway carriage, rail- way and tramway workshops ..	77	..	181	..	29	..	35	..	5	..	2	..	329	..
..	Wire working ..	101	..	31	..	3	2	12	..	9	..	..	..	156	2
..	Electric apparatus ..	177	18	102	5	1	..	18	1	2	1	1	..	301	25
VI.	Meat and fish preserving ..	1	..	10	..	76	3	..	..	..	..	..	..	87	3
..	Biscuits ..	217	213	92	66	18	15	21	17	52	22	..	..	400	333
..	Confectionery ..	95	286	39	74	37	76	6	46	4	12	35	42	216	536
..	Jams, pickles, sauces, etc. ..	60	13	27	15	10	13	12	13	1	1	41	..	151	55
..	Condiments, coffee, spices, etc. ..	35	40	14	21	..	1	54	9	16	2	..	..	119	73
..	Tobacco, cigars, etc. ..	32	135	74	19	..	..	1	3	5	12	..	..	112	169
VII.	Woollen and tweed mills ..	149	206	399	429	11	44	15	20	16	5	35	92	625	796
..	Knitting factories ..	42	315	54	459	1	5	2	18	3	8	2	21	104	826
..	Boots and shoes ..	180	283	404	500	29	81	30	30	40	15	6	8	689	917
..	Clothing (tailoring and slop) ..	104	940	88	389	42	205	30	190	14	42	8	18	286	1,784
..	Dressmaking and mil- linery ..	15	481	17	635	..	54	..	152	1	55	1	26	34	1,403
..	Shirts, ties, scarves, etc. ..	32	710	36	582	5	227	4	80	1	16	1	16	79	1,631
..	Hats and caps ..	39	103	37	64	1	5	4	1	..	..	..	..	81	233
..	Rope and cordage ..	34	17	58	30	12	..	11	..	..	..	..	..	115	47
VIII.	Printing and binding ..	518	255	411	201	194	50	82	59	72	21	14	10	1,291	596
..	Paper making, paper boxes, etc. ..	85	263	28	78	7	15	18	56	2	5	..	..	140	417
XI.	Coach and wagon building ..	22	1	45	..	17	..	9	1	16	..	12	1	121	3
..	Cycles and motors ..	293	10	268	3	62	2	219	41	60	1	23	..	925	57
XIII.	Billiard tables, cabinet making and furniture ..	97	..	201	1	67	8	105	2	30	..	20	1	520	12
..	Bedding, flock, and upholstery ..	22	11	37	..	8	3	17	5	5	1	6	1	95	21
XIV.	Chemicals, drugs, and medicines ..	48	121	27	33	3	11	5	26	5	..	..	2	88	193
XVIII.	Leather belting, etc. ..	74	69	47	37	14	9	5	29	1	..	..	..	141	144
..	Rubber goods ..	40	6	52	21	16	26	6	1	4	..	..	..	118	54

5. Apprenticeship.—In all the States Acts are in force for the regulation of the age at which children may be employed in gainful occupations. Legislative provision is also made for the regulation of apprenticeship under the various State Factories Acts or Arbitration Acts. These Acts, while laying down general principles, leave to the wages tribunals the actual determination of the conditions under which apprentices may be employed.

§ 7. Salaries and Wages Paid and Value of Production.

[NOTE.]—In all tables relating to Salaries and Wages paid in Factories the amounts given are exclusive of all sums drawn by working proprietors.

1. General.—The importance of the manufacturing industries of Australia is indicated by the fact that the total value of the output for 1926–27 was £408,692,838, of which amount the sum of £232,643,518 represents the value of the raw materials used, and £13,724,047 the value of the fuel and light used. The difference between the sum of the two latter amounts and the value of the output, viz., £162,325,273, 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 during 1926–27 was £90,575,166.

2 Salaries and Wages Paid.—(i) *Total Amount, 1926–27.* The total amount of salaries and wages paid during the year 1926–27 in various classes of factories in Australia is shown in the following table:—

SALARIES AND WAGES PAID IN FACTORIES, 1926–27.

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
	£	£	£	£	£	£	£
I. Treating raw material, product of agricultural and pastoral pursuits, etc.	808,634	872,454	115,639	148,194	54,637	45,027	2,044,585
II. Treating oils and fats, animal, vegetable, etc.	299,020	198,898	49,570	56,880	49,200	10,053	663,621
III. Processes in stone, clay, glass, etc.	2,419,319	1,380,768	203,661	533,868	239,594	91,962	4,869,172
IV. Working in wood	2,093,941	1,905,530	1,086,566	460,823	719,074	336,068	6,602,002
V. Metal works, machinery, etc.	11,480,258	6,461,270	1,858,233	2,534,021	933,021	512,110	23,778,913
VI. Connected with food and drink, etc.	4,190,046	3,922,910	2,902,267	961,673	531,861	318,304	12,827,061
VII. Clothing and textile fabrics, etc.	5,102,628	7,392,127	866,169	686,636	386,286	245,524	14,679,370
VIII. Books, paper, printing, and engraving	2,899,565	2,353,714	835,030	490,412	320,852	157,175	7,056,748
IX. Musical instruments, etc.	296,341	121,403	1,671	11,474	..	..	430,889
X. Arms and explosives	106,822	117,792	..	533	..	..	225,147
XI. Vehicles and fittings, saddlery and harness, etc.	1,720,004	1,547,119	297,361	1,300,313	242,456	110,908	5,218,161
XII. Ship and boat building and repairing	1,416,397	90,672	21,312	73,631	4,135	4,927	1,611,074
XIII. Furniture, bedding, and upholstery	1,242,281	962,645	330,713	285,449	179,213	52,635	3,052,936
XIV. Drugs, chemicals, and by-products	709,614	599,552	20,863	223,960	127,323	14,376	1,695,688
XV. Surgical and other scientific instruments	56,078	44,830	11,871	10,479	5,172	..	128,430
XVI. Jewellery, timepieces, and plated ware	159,246	183,406	20,261	28,913	13,574	3,031	408,431
XVII. Heat, light & power	1,321,524	763,620	616,960	555,993	97,267	79,142	3,434,506
XVIII. Rubber Goods and Leatherware, n.e.i.	701,897	925,147	56,651	26,606	11,619	275	1,722,195
XIX. Other industries, n.e.i.	68,581	45,700	3,572	7,645	7,639	..	126,237
Total	37,992,196	29,889,557	9,298,370	8,390,603	3,922,923	1,981,517	90,575,166

The maximum amount of salaries and wages paid in any particular class during 1926-27 was in Class V., the amount being £23,778,913, or 26.25 per cent. on the total amount; the minimum amount was in Class XIX., £126,237, or 0.14 per cent. on the total. The State in which the largest amount was paid was New South Wales.

(ii) *Totals and Averages, 1922-23 to 1926-27.* The following statement shows the total amount of salaries and wages paid, and the average amount paid per employee in each State, during each of the years 1922-23 to 1926-27. The figures are exclusive of working proprietors and of the amounts drawn from the business by them:—

SALARIES AND WAGES PAID IN FACTORIES.—TOTAL AND AVERAGE PER ANNUM PER EMPLOYEE, 1922-23 TO 1926-27.

Year. (a)	Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
		£	£	£	£	£	£	£
1922-23	Total amount paid ..	27,050,730	25,547,192	7,447,959	5,943,745	3,500,625	1,642,901	71,133,152
	Average per employee	184.44	175.79	173.18	178.83	189.32	167.23	179.92
1923-24	Total amount paid ..	29,772,994	27,472,084	7,764,929	6,727,398	3,640,959	1,899,901	77,278,265
	Average per employee	194.08	184.80	179.21	188.17	190.22	163.60	187.61
1924-25	Total amount paid ..	31,520,849	27,444,141	9,223,454	7,150,658	4,127,839	1,888,080	81,360,021
	Average per employee	193.21	186.81	193.96	193.54	196.03	179.34	192.78
1925-26	Total amount paid ..	33,566,546	27,657,753	9,544,115	7,787,912	6,288,036	1,880,321	86,724,683
	Average per employee	201.04	189.82	194.37	201.84	196.92	176.57	195.77
1926-27	Total amount paid ..	37,092,196	29,889,557	9,298,370	8,390,603	3,922,923	1,981,517	90,575,166
	Average per employee	210.55	193.70	198.91	206.37	200.29	178.19	201.91

(a) See general note on first page of this Chapter.

(b) Average computed on estimated salaries and wages for twelve months ended 30th June, 1926.

In comparing the figures in the preceding 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. In Victoria, for instance, there is a large number of hands employed in Class VII., comprising a heavy percentage of women and children. The highest average wage per employee in 1926-27 was paid in New South Wales, where the more highly skilled industries are largely located.

In consequence of the rapid rise in the cost of living, the salaries and wages paid in factories have advanced considerably during recent years. During the past four years the average was increased by £21.99 or 12.22 per cent., while the additional outlay for wage increases amounted in the aggregate to more than £9,750,000.

(iii) *Earnings of Males and Females, 1926-27.* The following table shows the approximate amount paid in salaries and wages to males and females in each class of industry in each State during the year 1926-27:—

SALARIES AND WAGES.—MALE AND FEMALE FACTORY EMPLOYEES, 1926-27.

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
MALES.							
I. Treating raw material product of agricultural and pastoral pursuits, etc. ..	£ 785,781	£ 866,806	£ 114,719	£ 147,080	£ 54,069	£ 44,807	£ 2,013,262
II. Treating oils and fats, animal, vegetable, etc. ..	258,058	179,355	45,939	51,961	48,385	9,296	592,994
III. Processes in stone, clay, glass, etc. ..	2,392,860	1,361,753	201,863	531,009	235,270	91,742	4,814,497
IV. Working in wood ..	2,063,799	1,837,935	1,075,319	454,460	716,785	332,315	6,535,613
V. Metal works, machinery, etc. ..	11,307,431	6,362,006	1,841,263	2,513,417	927,004	507,862	23,458,983

SALARIES AND WAGES.—MALE AND FEMALE FACTORY EMPLOYEES,
1926-27—*continued.*

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
MALES—<i>continued.</i>							
	£	£	£	£	£	£	£
VI. Connected with food and drink, etc. . .	3,528,697	3,336,038	2,816,867	883,831	488,851	272,687	11,326,971
VII. Clothing and textile fabrics, etc. . .	2,228,825	3,248,847	382,152	265,469	150,862	134,821	6,410,976
VIII. Books, paper, printing, and engraving . .	2,482,860	1,978,103	725,922	423,004	277,684	142,890	6,030,463
IX. Musical instruments, etc. . .	258,847	118,616	..	11,931	..	..	388,294
X. Arms and explosives	105,711	91,518	..	533	..	..	197,762
XI. Vehicles and fittings, saddlery and harness, etc. . .	1,677,789	1,527,184	287,953	1,257,563	233,161	107,097	5,090,747
XII. Ship and boat building and repairing . .	1,408,325	89,917	21,252	78,631	4,135	4,927	1,802,187
XIII. Furniture, bedding, and upholstery . .	1,143,702	894,078	315,296	272,835	171,414	50,813	2,848,133
XIV. Drugs, chemicals, and by-products . .	594,352	507,620	14,420	212,879	122,532	13,519	1,465,322
XV. Surgical and other scientific instruments . .	52,103	42,967	10,443	9,314	4,641	..	119,468
XVI. Jewellery, timepieces, and plated ware . .	149,106	170,369	19,311	28,372	18,231	3,031	383,420
XVII. Heat, light, & power	1,810,859	712,512	610,350	542,013	96,830	78,289	3,350,853
XVIII. Rubber Goods and Leatherware, n.e.i.	519,911	794,782	43,709	21,238	10,404	275	1,390,319
XIX. Other industries, n.e.i.	46,133	28,844	2,951	693	5,440	..	84,061
Total ..	32,319,649	24,199,245	8,529,729	7,700,633	3,560,698	1,794,371	78,104,325

FEMALES.

I. Treating raw material product of agricultural and pastoral pursuits, etc. . .	22,853	5,648	920	1,114	568	220	31,323
II. Treating oils and fats, animal, vegetable, etc. . .	40,962	19,543	3,631	4,919	815	757	70,627
III. Processes in stone, clay, glass, etc. . .	26,459	19,015	1,798	2,859	4,324	220	54,675
IV. Working in wood . .	25,142	17,595	11,247	6,363	2,289	3,753	66,889
V. Metal works, machinery, etc. . .	172,827	99,264	16,970	20,604	6,017	4,248	319,930
VI. Connected with food and drink, etc. . .	661,349	586,872	85,400	77,842	43,010	45,617	1,500,090
VII. Clothing and textile fabrics, etc. . .	2,873,803	4,143,280	484,017	421,167	236,424	110,703	8,268,394
VIII. Books, paper, printing, and engraving . .	416,705	375,611	109,108	67,408	43,168	14,285	1,026,235
IX. Musical instruments, etc. . .	37,994	2,787	1,671	143	..	..	42,595
X. Arms and explosives	1,111	26,274	..	..	..	..	27,385
XI. Vehicles and fittings, saddlery and harness, etc. . .	42,215	19,935	9,408	42,750	9,295	3,311	127,414
XII. Ship and boat building and repairing . .	8,072	755	60	..	..	..	8,887
XIII. Furniture, bedding, and upholstery . .	98,579	68,572	15,417	12,614	7,799	1,822	204,803
XIV. Drugs, chemicals, and by-products . .	115,262	91,932	6,443	11,081	4,791	857	230,366
XV. Surgical and other scientific instruments . .	3,975	1,863	1,428	1,165	531	..	8,962
XVI. Jewellery, timepieces, and plated ware . .	10,140	13,037	950	541	343	..	25,011
XVII. Heat, light, & power	10,665	51,108	6,610	13,980	437	853	83,653
XVIII. Rubber Goods and Leatherware, n.e.i.	181,936	130,365	12,942	5,368	1,215	..	331,876
XIX. Other industries, n.e.i.	22,448	16,856	621	52	2,199	..	42,176
Total ..	4,772,547	5,690,312	768,641	689,970	362,225	187,146	12,470,841

(iv) Total and Average Earnings of Males and Females, 1922-23 to 1926-27. Similar information for the last five years is given in the table hereunder:—

**SALARIES AND WAGES.—MALE AND FEMALE FACTORY EMPLOYEES,
1922-23 TO 1926-27.**

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
MALES.							
1922-23. Amount paid .. £	23,456,421	20,799,146	6,781,882	5,392,340	3,217,947	1,499,750	61,146,886
Per cent. on total ..	86.71	81.41	91.06	90.72	91.91	91.29	85.96
Average per employee £	213.83	215.56	199.57	202.85	210.53	187.99	210.84
1923-24. Amount paid .. £	26,166,890	22,581,677	7,053,196	6,115,958	3,345,430	1,739,153	67,007,804
Per cent. on total ..	87.89	82.20	90.90	90.91	91.88	91.54	86.71
Average per employee £	225.71	224.08	200.39	212.48	210.39	183.75	218.93
1924-25. Amount paid .. £	27,670,943	22,515,561	8,508,263	6,504,470	3,817,930	1,726,833	70,743,899
Per cent. on total ..	87.78	82.04	92.20	90.96	92.49	91.45	86.95
Average per employee £	230.29	220.49	214.83	217.70	216.26	201.69	224.41
1925-26. Amount paid .. £	29,370,062	22,544,903	8,797,552	7,139,556	5,796,981	1,708,209	75,357,263
Per cent. on total ..	87.50	81.51	92.18	91.67	92.19	90.85	86.89
Average per employee £	233.97	230.26	213.66	225.25	216.92	199.93	227.55
1926-27. Amount paid .. £	32,319,649	24,199,245	8,529,729	7,700,633	3,560,698	1,794,371	78,104,325
Per cent. on total ..	87.13	80.96	91.73	91.78	90.77	90.56	86.23
Average per employee £	245.40	236.53	217.86	229.71	222.50	201.14	235.53
FEMALES.							
1922-23. Amount paid .. £	3,594,309	4,748,040	666,077	551,405	283,278	143,151	9,986,266
Per cent. on total ..	13.29	18.59	8.94	9.28	8.09	8.71	14.04
Average per employee £	97.23	97.21	85.13	82.87	88.30	75.55	94.80
1923-24. Amount paid .. £	3,606,104	4,890,407	706,733	611,440	295,529	160,748	10,270,961
Per cent. on total ..	12.11	17.80	9.10	9.09	8.12	8.46	13.29
Average per employee £	96.22	102.12	87.20	87.75	91.21	74.83	97.05
1924-25. Amount paid .. £	3,849,066	4,928,580	720,191	646,188	309,909	161,447	10,616,221
Per cent. on total ..	12.22	17.96	7.80	9.04	7.51	8.55	13.05
Average per employee £	100.20	103.74	90.30	91.42	91.07	82.08	99.41
1925-26. Amount paid .. £	4,196,484	5,112,850	746,563	648,356	491,055	172,112	11,367,420
Per cent. on total ..	12.50	18.49	7.82	8.33	7.81	9.15	13.11
Average per employee £	101.30	106.97	94.17	94.13	99.42	81.76	102.21
1926-27. Amount paid .. £	4,772,547	5,690,312	763,641	689,970	362,225	187,146	12,470,841
Per cent. on total ..	12.87	19.04	8.27	8.22	9.23	9.44	13.77
Average per employee £	107.32	109.44	101.22	96.60	101.10	85.11	106.61

(a) See general note on first page of this Chapter.

(b) Averages computed on estimated salaries and wages for twelve months ended 30th June, 1926.

(v) *Managers, Overseers, and Other Employees.* A further analysis of salaries and wages paid is given in the following table, the amounts paid to managers, overseers, etc., being differentiated from those paid to other employees. As previously mentioned, amounts drawn by working proprietors are excluded in all cases.

**SALARIES AND WAGES.—MANAGERS, OVERSEERS, AND OTHER FACTORY
EMPLOYEES, AUSTRALIA, 1926-27.**

Class of Industry.	Salaries and Wages Paid to—						
	Managers, Overseers, Accountants, and Clerks.		All other Employees.		All Employees.		
	Males.	Females.	Males.	Females.	Males.	Females.	Total.
	£	£	£	£	£	£	£
I. Treating raw material product of agricultural and pastoral pursuits, etc. ..	238,784	12,911	1,774,478	18,412	2,013,262	31,323	2,044,585
II. Treating oils and fats, animal, vegetable, etc. ..	136,358	22,833	456,636	47,794	592,994	70,627	663,621
III. Processes in stone, clay, glass, etc. ..	552,596	30,370	4,261,901	24,305	4,814,497	54,675	4,869,172
IV. Working in wood ..	727,715	55,009	5,807,898	11,380	6,535,613	66,389	6,602,002
V. Metal works, machinery, etc. ..	2,407,581	156,779	21,051,402	163,151	23,458,983	319,930	23,778,913
VI. Connected with food and drink, etc. ..	2,190,330	245,479	9,136,641	1,254,611	11,320,971	1,500,090	12,827,061
VII. Clothing and textile fabrics, etc. ..	1,097,453	440,815	5,313,523	7,827,579	6,410,976	8,268,394	14,679,370
VIII. Books, paper, printing and engraving ..	1,025,224	222,899	5,005,239	803,386	6,030,463	1,026,285	7,056,748
IX. Musical instruments, etc. ..	46,754	12,280	341,540	30,365	388,294	42,595	430,889
X. Arms and explosives	87,886	3,080	159,876	24,295	197,782	27,385	225,147

SALARIES AND WAGES.—MANAGERS, OVERSEERS, AND OTHER
FACTORY EMPLOYEES, AUSTRALIA, 1926-27—*continued.*

Class of Industry.	Salaries and Wages Paid to—						
	Managers, Overseers, Accountants, and Clerks.		All Other Employees.		All Employees.		
	Males.	Females.	Males.	Females.	Males.	Females.	Total.
	£	£	£	£	£	£	£
XI. Vehicles and fittings, saddlery and harness, etc.	555,037	81,947	4,535,710	45,467	5,090,747	127,414	5,218,161
XII. Ship and boat building and repairing.	178,672	7,004	1,423,515	1,883	1,602,167	8,887	1,611,074
XIII. Furniture, bedding, and upholstery	259,070	41,961	2,589,063	162,842	2,848,133	204,803	3,052,936
XIV. Drugs, chemicals, and by-products	327,400	54,114	1,137,922	176,252	1,465,322	230,366	1,695,688
XV. Surgical and other scientific instruments	18,715	3,634	100,753	5,328	119,468	8,962	128,480
XVI. Jewellery, timepieces, and plated ware	32,853	9,434	350,767	15,577	383,420	25,011	408,431
XVII. Heat, light, and power	554,588	27,963	2,796,265	55,690	3,350,853	83,653	3,434,506
XVIII. Rubber Goods and Leatherware, n.e.l.	195,484	28,480	1,194,835	303,396	1,390,319	331,876	1,722,195
XIX. Other industries, n.e.l.	15,709	3,412	68,352	38,764	84,061	42,176	126,237
Total	10,598,009	1,460,364	67,506,316	11,010,477	78,104,325	12,470,841	90,575,166
Average paid per employee	359.71	145.73	223.42	102.94	235.53	106.61	201.91

3. Value of Fuel and Light Used.—(i) *Total Amount, 1926-27.* The expenditure in factories on fuel and light is of considerable importance; in 1926-27 it amounted to £13,724,047. The classes of industry in which fuel was most extensively used were Class V., Metal Works, Machinery, etc., £3,913,064; Class XVII., Heat, Light, Power, etc., £3,282,907, of which amount £2,808,565 was expended on generating electric light and power; Class VI., Connected with Food, Drink, etc., £2,219,138; and Class III., Stone, Clay, Glass, etc., £1,858,956. The following table shows the value of fuel and light used in the different classes of industry during 1926-27:—

VALUE OF FUEL AND LIGHT USED IN FACTORIES, 1926-27.

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
	£	£	£	£	£	£	£
I. Treating raw material, product of agricultural and pastoral pursuits, etc.	154,994	109,513	16,563	22,138	6,029	3,701	312,938
II. Treating oils and fats, animal, vegetable, etc.	56,346	55,442	5,868	10,753	22,773	1,332	152,514
III. Processes in stone, clay, glass, etc.	839,798	562,891	81,611	240,045	75,484	59,127	1,858,956
IV. Working in wood	95,603	51,530	39,937	17,149	17,542	21,096	242,857
V. Metal works, machinery, etc.	2,594,310	409,132	88,296	479,176	56,070	286,080	3,913,064
VI. Connected with food and drink, etc.	772,722	616,644	495,487	186,603	92,643	55,039	2,219,138
VII. Clothing and textile fabrics, etc.	181,635	310,550	21,907	21,834	13,194	31,281	560,401
VIII. Books, paper, printing, and engraving	146,314	118,730	31,076	16,643	11,376	5,356	329,495
IX. Musical instruments, etc.	13,370	2,269	20	229	..	..	15,888
X. Arms and explosives	6,122	17,872	..	24	..	..	24,018
XI. Vehicles and fittings, saddlery and harness, etc.	71,511	57,080	10,685	50,022	8,470	3,720	201,488
XII. Ship and boat building and repairing	73,961	5,686	228	4,304	46	81	84,306
XIII. Furniture, bedding and upholstery	33,398	32,301	10,294	9,685	4,352	1,810	91,840
XIV. Drugs, chemicals, and by-products	81,622	73,614	2,378	35,516	15,049	1,235	209,414
XV. Surgical and other scientific instruments	1,424	1,530	623	420	268	..	4,265
XVI. Jewellery, timepieces, and plated ware	5,928	7,598	678	1,858	455	182	16,699
XVII. Heat, light, and power	1,729,990	842,851	181,259	287,017	224,905	17,185	3,282,907
XVIII. Rubber Goods and Leatherware, n.e.l.	58,065	116,270	3,253	1,498	1,051	9	180,146
XIX. Other industries, n.e.l.	1,901	945	455	23	389	..	3,713
Total	6,919,014	3,392,448	990,618	1,384,937	549,796	487,234	13,724,047

(ii) *Total Amount, 1922-23 to 1926-27.* The following table gives the sums expended on fuel and light during the past five years :—

VALUE OF FUEL AND LIGHT USED IN FACTORIES, 1922-23 TO 1926-27.

Year.(a)	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
	£	£	£	£	£	£	£
1922-23	4,021,068	2,443,681	690,856	948,455	361,990	193,765	8,659,815
1923-24	5,139,848	2,603,239	708,888	1,008,557	380,499	265,409	10,296,440
1924-25	5,833,494	2,964,635	782,384	1,154,902	392,753	535,082	11,713,250
1925-26	6,256,725	3,156,382	1,134,530	1,332,914	701,008	501,667	13,083,226
1926-27	6,919,014	3,392,448	990,618	1,384,937	549,796	437,234	13,724,047

(a) See general note on first page of this Chapter.

4. *Value of Raw Materials Used.—(i) Total Amount, 1926-27.* The value of raw materials worked up (i.e., exclusive of fuel, lubricants, etc.) in factories in Australia during 1926-27 was £232,643,518, which represents 56.92 per cent. of the total value of the final output. (See next sub-section.) The following table shows the value of the raw materials worked up in various classes of industry in each State :—

VALUE OF RAW MATERIALS USED IN FACTORIES, 1926-27.

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
	£	£	£	£	£	£	£
I. Treating raw material, product of agricultural and pastoral pursuits, etc. . .	6,558,491	4,681,952	1,756,674	754,207	402,667	33,192	14,187,273
II. Treating oils and fats, animal, vegetable, etc. . .	1,688,962	957,342	155,511	235,482	109,739	30,420	3,177,456
III. Processes in stone, clay, glass, etc. . .	2,126,870	1,140,620	173,638	428,329	169,715	44,302	4,083,483
IV. Working in wood . .	4,958,015	2,383,396	1,958,847	1,472,570	938,485	190,661	11,901,974
V. Metal works, machinery, etc. . .	26,552,229	7,934,013	1,600,085	6,148,243	782,564	1,421,079	44,439,113
VI. Connected with food and drink, etc. . .	38,376,335	26,299,510	16,290,004	7,147,460	3,342,302	1,465,238	90,920,849
VII. Clothing and textile fabrics, etc. . .	9,022,671	14,331,336	1,480,862	1,235,320	752,304	469,973	27,792,466
VIII. Books, paper, printing, and engraving . .	3,596,066	2,380,117	579,434	550,808	260,082	90,712	7,986,219
IX. Musical instruments, etc. . .	540,350	151,491	1,649	20,808	..	..	714,298
X. Arms and explosives . .	17,429	238,221	..	911	..	..	254,561
XI. Vehicles and fittings, saddlery and harness, etc. . .	1,340,127	1,182,394	281,067	2,138,949	211,591	63,823	5,217,951
XII. Ship and boat building and repairing . .	700,229	39,452	17,052	70,701	4,313	3,142	834,889
XIII. Furniture, bedding, upholstery . .	2,212,320	1,537,409	394,346	416,799	237,420	44,303	4,842,597
XIV. Drugs, chemicals, and by-products . .	2,651,096	1,992,476	56,316	819,310	720,341	114,510	6,354,049
XV. Surgical and other scientific instruments . .	48,182	39,042	10,846	9,765	6,263	..	114,698
XVI. Jewellery, timepieces, and plated ware . .	146,324	228,547	9,639	26,093	14,084	613	425,355
XVII. Heat, light, and power . .	2,171,654	1,842,423	202,161	311,362	68,854	51,537	4,648,496
XVIII. Rubber Goods and leatherware, n.e.i. . .	1,629,280	2,644,993	93,274	59,964	15,771	394	4,443,586
XIX. Other Industries, n.e.i. . .	197,749	97,898	6,034	450	22,074	..	324,205
Total	102,534,388	71,102,047	25,067,489	21,848,126	8,067,569	4,023,899	232,643,518

The largest value of raw materials used was in Class VI., "Connected with Food and Drink, etc." the total being £90,920,849. The next in order of importance was Class V., "Metal Works, Machinery, etc.," in which raw materials valued at £44,439,113 were used. The minimum value appears in Class XV., "Surgical and other Scientific Instruments," the total being only £114,698.

(ii) *Total Amount, 1922-23 to 1926-27.* The following table presents particulars of the values of raw materials used in factories during the past five years:—

VALUE OF RAW MATERIALS USED IN FACTORIES, 1922-23 TO 1926-27.

Year.(a)	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
	£	£	£	£	£	£	£
1922-23 ..	77,222,401	62,658,163	21,403,740	16,015,552	5,553,347	3,229,460	136,082,663
1923-24 ..	85,568,596	62,217,874	22,110,952	17,463,156	5,897,549	3,781,499	197,038,726
1924-25 ..	94,681,328	66,290,693	30,728,434	19,409,892	6,993,731	3,891,000	221,993,978
1925-26 ..	98,868,051	68,788,141	27,385,361	21,430,234	11,137,678	3,725,443	231,834,908
1926-27 ..	102,534,388	71,102,047	25,067,489	21,843,126	8,067,569	4,023,899	232,643,518

(a) See general note on first page of this Chapter.

5. *Total Value of Output.* (i) *Total, 1926-27.* The value of the output of new goods manufactured and of repairs effected in factories of various classes in each State during 1926-27 is shown in the following table. The figures given represent not only the increase in value due to the process of manufacture, but also include the value of the raw materials and the fuel and light used. The difference between the sum of the values of the materials and the fuel and light used and the total output (see sub-section 6 hereof) is the real value of production from manufactories.

TOTAL VALUE OF OUTPUT OF FACTORIES, 1926-27.

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
	£	£	£	£	£	£	£
I. Treating raw material, product of agricultural and pastoral pursuits, etc. ..	8,288,486	6,435,536	1,722,820	1,010,662	544,099	105,118	18,104,730
II. Treating oils and fats, animal, vegetable, etc. ..	2,666,794	1,540,844	290,143	378,175	226,095	49,242	5,151,293
III. Processes in stone, clay, glass, etc. ..	7,402,486	4,084,161	695,848	1,589,880	647,146	238,482	14,657,803
IV. Working in wood ..	8,394,749	5,395,400	3,609,787	2,227,427	2,141,483	686,954	22,455,800
V. Metal works, machinery, etc. ..	47,039,441	17,703,405	3,923,545	9,961,065	2,220,747	2,772,090	83,620,293
VI. Connected with food and drink, etc. ..	49,456,706	36,071,851	22,804,591	9,750,316	4,678,077	2,129,193	124,890,739
VII. Clothing and textile fabrics, etc. ..	17,859,288	27,591,787	2,750,887	2,341,605	1,381,051	916,385	52,840,998
VIII. Books, paper, printing, and engraving ..	8,761,601	6,943,920	1,951,395	1,348,584	899,104	312,951	20,217,555
IX. Musical instruments, etc. ..	1,112,830	337,548	4,087	37,834	..	..	1,492,299
X. Arms and explosives ..	161,314	440,722	..	1,751	..	..	603,787
XI. Vehicles and fittings, saddlery and harness, etc. ..	3,948,309	3,579,931	768,505	3,955,142	581,427	235,206	13,068,520
XII. Ship and boat building and repairing ..	2,257,066	167,572	44,159	172,744	10,837	12,307	2,664,685
XIII. Furniture, bedding, and upholstery ..	4,308,299	3,200,093	903,206	872,824	500,303	128,371	9,913,156
XIV. Drugs, chemicals, and by-products ..	5,303,184	3,432,993	107,534	1,310,395	1,073,962	150,508	11,378,576
XV. Surgical and other scientific instruments ..	141,968	119,518	35,269	42,864	13,582	..	353,201
XVI. Jewellery, timepieces, and plated ware ..	419,054	547,052	45,707	75,327	34,335	6,085	1,127,560
XVII. Heat, light, and power ..	8,665,359	5,066,231	1,476,058	1,698,941	643,507	360,748	17,910,844
XVIII. Rubber Goods and Leatherware, n.e.l. ..	2,764,010	4,560,828	174,877	110,845	39,518	900	7,650,778
XIX. Other Industries, n.e.l. ..	353,507	178,759	19,340	2,288	36,327	..	590,221
Total ..	179,302,446	127,397,951	41,327,767	36,888,469	15,671,600	8,104,545	408,692,838

New South Wales far exceeds the other States in respect of the total value of output, the value being £179,302,446, or 43.87 per cent. on the total for all States. Next in order of value is Victoria, which produced 31.17 per cent.; the value of the output of Queensland was 10.11 per cent.; of South Australia 9.03 per cent.; of Western Australia 3.84 per cent.; and of Tasmania 1.98 per cent. 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.

(ii) *Totals and Averages, 1922-23 to 1926-27.* The following statement shows the value of output of factories, value per employee, and value per head of population in each State during the five years ended 1926-27:—

TOTAL VALUE OF OUTPUT OF FACTORIES, 1922-23 TO 1926-27.

Year.(a)	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
TOTAL.							
	£	£	£	£	£	£	£
1922-23 ..	132,735,140	111,286,348	37,824,101	26,909,775	11,321,551	6,426,226	326,497,136
1923-24 ..	146,359,260	118,921,927	38,867,603	29,650,995	11,976,310	7,801,488	348,577,583
1924-25 ..	159,608,873	118,177,898	49,142,436	32,143,993	13,928,782	7,842,504	380,843,986
1925-26 ..	169,963,146	119,986,439	45,900,668	35,437,147	21,449,799	7,605,194	400,342,393
1926-27 ..	179,302,446	127,397,951	41,327,767	36,888,469	15,671,660	8,104,545	408,692,838

PER EMPLOYEE.

	£	£	£	£	£	£	£
1922-23 ..	872	729	871	775	593	622	792
1923-24 ..	917	790	865	795	608	638	811
1924-25 ..	963	767	1,005	838	640	713	866
1925-26 ..	976	784	909	885	b 646	680	872
1926-27 ..	979	788	859	875	767	693	875

PER HEAD OF POPULATION.

	£	£	£	£	£	£	£
1922-23 ..	61.09	69.98	48.43	52.42	33.33	29.92	58.11
1923-24 ..	66.24	70.09	48.42	56.51	34.39	35.61	60.76
1924-25 ..	70.80	71.32	58.86	59.69	38.25	36.00	61.84
1925-26 ..	73.94	71.25	53.30	64.24	b 38.42	35.04	65.62
1926-27 ..	76.37	74.42	46.85	65.13	41.38	37.71	66.88

(a) See general note on first page of this Chapter.

(b) Averages computed on the estimated output for the twelve months ended 30th June, 1926.

6. *Value added in Process of Manufacture.*—(i) *Total in Classes, 1926-27.* The difference between the figures given in sub-section 5 and the sum of the corresponding figures in sub-sections 3 and 4 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 of manufacturing industries. The following table shows the value added in this manner during 1926-27 in each State for the various classes of factories:—

VALUE ADDED IN PROCESS OF MANUFACTURE, 1926-27.

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
	£	£	£	£	£	£	£
I. Treating raw material, product of agricultural and pastoral pursuits, etc.	1,573,001	1,644,071	-50,408	234,227	135,403	68,225	3,604,519
II. Treating oils and fats, animal, vegetable, etc.	921,486	528,060	128,764	131,940	93,583	17,490	1,821,323
III. Processes in stone, clay, glass, etc.	4,435,809	2,380,650	440,599	921,306	401,947	135,053	8,715,364
IV. Working in wood	3,341,131	2,960,474	1,611,003	737,708	1,185,456	475,197	10,310,969
V. Metal works, machinery, etc.	17,892,602	9,359,360	2,235,164	3,333,646	1,382,113	1,064,931	35,268,116
VI. Connected with food and drink, etc.	12,307,649	9,155,697	6,019,100	2,416,253	1,243,132	608,921	31,750,752
VII. Clothing and textile fabrics, etc.	8,654,977	12,449,901	1,248,118	1,084,451	615,553	415,131	24,468,131
VIII. Books, paper, printing and engraving	5,019,221	3,945,073	1,340,885	781,133	618,646	216,883	11,921,841
IX. Musical instruments, etc.	559,110	183,788	2,418	16,797	..	..	762,113
X. Arms and explosives	137,763	186,629	..	816	..	..	325,208
XI. Vehicles and fittings, saddlery and harness etc.	2,536,671	2,340,457	476,753	1,766,171	361,366	167,663	7,649,081
XII. Ship and boat building and repairing	1,482,876	122,434	26,879	97,739	6,478	9,084	1,745,490
XIII. Furniture, bedding, and upholstery	2,062,581	1,630,383	498,566	446,340	258,591	82,258	4,978,719
XIV. Drugs, chemicals, and by-products	2,570,466	1,366,903	48,840	455,569	338,572	34,763	4,815,113
XV. Surgical & other scientific instruments	92,362	78,346	23,800	32,679	7,051	..	234,238
XVI. Jewellery, timepieces, and plated ware	266,802	310,907	35,340	47,371	19,796	5,290	685,506
XVII. Heat, light and power	4,763,715	2,380,952	1,092,638	1,100,062	350,048	292,026	9,979,441
XVIII. Rubber goods and leather ware, n.e.l.	1,076,665	1,799,455	78,350	49,383	22,696	497	3,027,046
XIX. Other Industries, n.e.l.	153,857	79,916	12,851	1,815	13,864	..	262,303
Total	69,849,044	52,903,456	15,269,660	13,655,406	7,054,295	3,593,412	162,325,273

(ii) *Totals and Averages, 1922-23 to 1926-27.* The amount of the value added is in much the same order as in the case of value of output, the six most important classes being V., VI., VII., VIII., IV. and XVII., in the order named. The value added to raw materials by process of manufacture and the amount per employee and per head of population are shown in the following table for the years 1922-23 to 1926-27:—

FACTORIES.—VALUE ADDED IN PROCESS OF MANUFACTURE,
1922-23 TO 1926-27.

Year.(a)	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
	£	£	£	£	£	£	£
1922-23	51,491,671	46,184,499	15,729,705	9,939,768	5,406,214	3,003,001	131,754,868
1923-24	55,660,316	48,900,814	16,048,663	11,179,232	5,698,262	3,754,580	141,242,417
1924-25	59,044,051	48,922,070	17,633,618	11,579,199	6,542,298	3,415,522	147,136,768
1925-26	64,838,370	48,041,916	16,880,777	12,673,999	9,611,113	3,378,084	155,424,259
1926-27	69,349,044	52,903,456	15,269,660	13,655,406	7,054,295	3,593,412	162,325,273

(a) See general note on first page of this chapter.

FACTORIES—VALUE ADDED IN PROCESS OF MANUFACTURE, 1922-23 TO 1926-27—*continued.*

Year.(a)	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
PER EMPLOYEE.							
1922-23 ..	£ 338	£ 303	£ 362	£ 286	£ 283	£ 291	£ 319
1923-24 ..	349	313	357	300	289	307	328
1924-25 ..	356	317	360	302	301	311	334
1925-26 ..	372	314	334	316	b 289	302	338
1926-27 ..	381	327	317	324	346	307	347
PER HEAD OF POPULATION.							
1922-23 ..	£ 23.70	£ 29.00	£ 20.14	£ 19.37	£ 15.92	£ 13.98	£ 23.45
1923-24 ..	25.19	30.09	19.99	21.30	16.36	17.14	24.62
1924-25 ..	26.19	29.52	21.12	21.50	17.97	15.68	25.05
1925-26 ..	28.21	28.53	21.99	22.98	b 17.22	15.56	25.40
1926-27 ..	29.75	30.90	17.31	24.11	18.63	16.73	26.56

(a) See general note on first page of this Chapter. (b) Averages computed on the estimated added value for the twelve months ended 30th June, 1926.

7. Value of Output and Cost of Production.—As the total value of the output for Australia for 1926-27 was estimated at £408,692,838, there remained, after payment of £232,643,518, the value of the raw materials used, of £90,575,166 for salaries and wages and of £13,724,047 for fuel, the sum of £71,750,107 to provide for all other expenditure and profits. The following table gives corresponding particulars for each State, expressed absolutely, and as percentages on the total value of the output for the year 1926-27 :—

FACTORIES.—VALUE OF OUTPUT AND COST OF PRODUCTION, 1926-27.

State.	Raw Materials Used. (a)	Fuel and Light.	Salaries and Wages.	All other Expenditure, Interest, and Profits.	Total Value of Output.
VALUE AND COST, ETC.					
New South Wales ..	£ 102,534,388	£ 6,919,014	£ 37,092,196	£ 32,756,848	£ 179,302,446
Victoria ..	71,102,047	3,392,448	29,889,557	23,013,899	127,397,951
Queensland ..	25,067,489	990,618	9,298,370	5,971,290	41,327,767
South Australia ..	21,848,126	1,384,937	8,390,603	5,264,803	36,888,469
Western Australia ..	8,067,569	549,796	3,922,923	3,131,372	15,671,660
Tasmania ..	4,023,899	487,234	1,981,517	1,611,895	8,104,545
Australia ..	232,643,518	13,724,047	90,575,166	71,750,107	408,692,838

PERCENTAGE OF COSTS, ETC., ON TOTAL VALUE.

	%	%	%	%	%
New South Wales ..	57.18	3.86	20.69	18.27	100.00
Victoria ..	55.82	2.66	23.46	18.06	100.00
Queensland ..	60.65	2.40	22.50	14.45	100.00
South Australia ..	59.23	3.75	22.75	14.27	100.00
Western Australia ..	51.48	3.51	25.03	19.98	100.00
Tasmania ..	49.65	6.01	24.45	19.89	100.00
Australia ..	56.92	3.36	22.16	17.56	100.00

(a) Including the values of containers, packing, etc., also the cost of tools replaced and repairs to plant.

§ 8. Value of Land, Buildings, Plant, and Machinery.

1. General.—As an indication of the permanent character and stability of the industries which have been established in Australia, it may be noted that the values of land and buildings and of plant and machinery used in the factories are rapidly increasing. Thus, for the whole of Australia the total value of land and buildings and plant and machinery has increased from 1922-23 to 1926-27 by £59,629,145, i.e., from £160,463,218 to £220,092,363, or at the rate of £14,907,286 per annum.

The following statement shows the values of land and buildings and of plant and machinery used in connexion with manufacturing industries in each State during the year 1926-27 :—

VALUE OF LAND, BUILDINGS, PLANT AND MACHINERY, 1926-27.

Value of—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
	£	£	£	£	£	£	£
Land and buildings	46,950,706	32,269,655	8,645,580	8,207,999	4,822,145	2,449,093	103,345,178
Plant and machinery	48,659,375	31,580,350	16,043,679	8,741,929	5,310,140	6,411,712	116,747,185
Total ..	95,610,081	63,850,005	24,689,259	16,949,928	10,132,285	8,860,805	220,092,363

The total capital invested in land, buildings, plant and machinery in manufacturing industries in Australia during the year 1926-27 was approximately £220,092,363 (or £36 Os. 4d. per head of population); of that sum, £103,345,178 was invested in land and buildings occupied as manufactories, the remaining £116,747,185 being the value of the plant and machinery used in connexion therewith.

2. Value of Land and Buildings.—(i) *Total Australia, 1922-23 to 1926-27.* The value of the land and buildings occupied in connexion with manufacturing industries may be conveniently classified according to the nature of the industry concerned.

The following table shows for Australia as a whole the approximate value of land and buildings occupied in connexion with manufacturing industries of various classes during each year from 1922-23 to 1926-27 inclusive :—

VALUE OF LAND AND BUILDINGS.—AUSTRALIA, 1922-23 TO 1926-27.

Class of Industry.	1922-23.(a)	1923-24.(a)	1924-25.(a)	1925-26.(a)	1926-27.
	£	£	£	£	£
I. Treating raw material, product of agricultural and pastoral pursuits, etc.	1,983,100	2,085,336	2,249,180	2,273,275	2,257,921
II. Treating oils and fats, animal, vegetable, etc.	831,004	952,566	1,024,779	1,022,445	982,573
III. Processes in stone, clay, glass, etc.	3,242,782	3,592,378	4,247,108	4,368,411	4,687,979
IV. Working in wood	3,889,858	4,101,394	4,322,832	4,620,929	4,325,257
V. Metal works, machinery, etc.	11,396,988	12,999,237	14,389,282	15,382,362	16,649,605
VI. Connected with food and drink, etc.	17,064,884	18,277,106	19,568,157	20,802,518	21,892,282
VII. Clothing and textile fabrics, etc.	11,588,846	13,247,960	14,841,895	15,289,607	16,464,556
VIII. Books, paper, printing, and engraving	6,132,123	6,747,855	7,376,113	8,022,096	8,544,071
IX. Musical instruments, etc.	304,432	254,266	325,792	356,935	427,333
X. Arms and explosives	207,500	298,217	417,831	573,186	597,519
XI. Vehicles and fittings, saddlery and harness, etc.	4,145,937	5,166,587	6,175,406	7,130,967	8,546,494
XII. Ship and boat building and repairing	1,796,690	1,789,464	1,822,238	1,852,806	1,717,756
XIII. Furniture, bedding, and upholstery	2,109,655	2,498,679	2,993,412	2,947,986	3,155,723
XIV. Drugs, chemicals, and by-products	2,171,915	2,351,728	2,453,897	2,565,553	2,815,161
XV. Surgical and other scientific instruments	189,777	221,256	274,283	259,766	296,435
XVI. Jewellery, timepieces, and plated ware	580,094	620,686	629,775	679,828	666,618
XVII. Heat, light, and power	5,277,183	6,102,870	7,170,769	7,107,993	7,600,312
XVIII. Leatherware, n.e.i.	359,636	394,402	401,588	409,110	61,516,040
XIX. Other industries, n.e.i.	1,108,904	860,074	857,571	869,819	201,543
Total ..	74,381,308	82,562,061	91,241,907	96,535,632	103,345,178

(a) See general note on first page of this Chapter.

(b) Includes Rubber Goods formerly in Class XIX. Other Industries n.e.i.

As shown in the above table, the total net increase during the four years was £28,963,870, or an annual average of £7,240,968. The largest increases were in Classes V., VII., VI., XI., VIII. and XVII., and amounted to £5,252,617; £4,875,710; £4,827,398; £4,400,557; £2,411,948 and £2,323,129 respectively.

(ii) *Value in each State, 1926-27.* The following table gives similar information for each State for the past year:—

VALUE OF LAND AND BUILDINGS.—STATES, 1926-27.

Class of Industry.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
	£	£	£	£	£	£	£
I. Treating raw material, product of agricultural and pastoral pursuits, etc.	1,004,568	916,155	103,755	140,511	77,949	14,983	2,257,921
II. Treating oils and fats, animal, vegetable, etc.	560,853	243,765	76,279	68,954	24,877	7,845	982,573
III. Processes in stone, clay, glass, etc.	2,446,070	1,198,425	181,712	356,548	238,454	266,770	4,687,979
IV. Working in wood	1,923,494	1,145,815	482,356	263,615	384,427	125,550	4,325,257
V. Metal works, machinery, etc.	8,732,743	4,355,310	840,735	1,441,351	834,433	445,033	16,649,605
VI. Connected with food and drink, etc.	8,145,449	5,851,870	4,016,538	2,002,739	1,237,567	638,119	21,892,282
VII. Clothing and textile fabrics, etc.	7,091,027	6,934,000	689,755	891,808	463,232	394,734	16,464,556
VIII. Books, paper, printing, and engraving	4,011,587	2,646,470	798,786	604,328	388,172	94,730	8,544,071
IX. Musical instruments, etc.	240,348	171,670	850	14,465	..	..	427,333
X. Arms and explosives	155,179	437,340	..	5,000	..	..	597,519
XI. Vehicles and fittings, saddlery and harness, etc.	3,692,410	2,413,930	568,589	1,190,591	466,545	214,429	8,546,494
XII. Ship and boat building and repairing	1,493,382	172,870	9,027	34,487	3,985	4,055	1,717,756
XIII. Furniture, bedding, and upholstery	1,330,573	1,117,775	251,095	241,954	164,043	50,283	3,155,723
XIV. Drugs, chemicals, and by-products	1,462,482	741,750	43,730	293,784	204,820	68,595	2,815,161
XV. Surgical and other scientific instruments	152,145	79,050	23,696	23,964	17,580	..	296,435
XVI. Jewellery, timepieces, and plated ware	290,711	257,615	28,955	51,502	28,415	9,420	666,618
XVII. Heat, light, and power	3,495,559	2,746,220	470,700	520,030	254,256	113,547	7,600,312
XVIII. Rubber Goods and leatherware, n.e.l.	602,572	777,960	48,493	59,845	26,170	1,000	1,516,040
XIX. Other industries, n.e.l.	119,554	61,665	10,529	2,525	7,270	..	201,543
Total	46,950,706	32,269,655	8,645,580	8,207,999	4,822,145	2,449,093	103,345,178

The maximum value for Australia of land and buildings in any particular class was in Class VI., amounting to £21,892,282, or 21.18 per cent. on the total value. The next in order of importance were Classes V., VII., XI., VIII., and XVII. in which the values were £16,649,605; £16,464,556; £8,546,494; £8,544,071 and £7,600,312 respectively. The sum of the values for the six classes mentioned amounted to £79,697,320, or 77.12 per cent. on the total value for all classes.

(iii) *Value in each State, 1922-23 to 1926-27.* The total value of factory land and buildings at the end of each year from 1922-23 to 1926-27 is given hereunder.

VALUE OF LAND AND BUILDINGS, 1922-23 TO 1926-27.

Year.(a)	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
	£	£	£	£	£	£	£
1922-23	34,559,510	22,428,525	6,815,350	5,324,484	4,001,366	1,452,073	74,881,308
1923-24	37,979,192	24,972,560	7,284,212	6,312,553	4,206,874	1,806,870	82,562,061
1924-25	41,351,080	28,468,160	7,873,660	6,882,119	4,562,184	2,104,704	91,241,907
1925-26	43,954,312	29,847,370	8,155,604	7,520,625	4,855,612	2,202,560	96,535,632
1926-27	46,950,706	32,269,655	8,645,580	8,207,999	4,822,145	2,449,093	103,345,178

(a) See general note on first page of this Chapter.

Since 1922-23 there has been a marked increase throughout Australia, the States showing the greatest progress being New South Wales, Victoria, and South Australia, with average annual increases of £3,097,799, £2,460,283, and £720,879 respectively.

3. Value of Plant and Machinery.—(i) *Total, Australia, 1922-23 to 1926-27.* The following table shows for Australia as a whole the approximate value of plant and machinery used in factories during each year from 1922-23 to 1926-27 inclusive:—

VALUE OF PLANT AND MACHINERY.—AUSTRALIA, 1922-23 TO 1926-27.

Class of Industry.	1922-23.(a)	1923-24.(a)	1924-25.(a)	1925-26.(a)	1926-27.(a)
	£	£	£	£	£
I. Treating raw material, product of agricultural and pastoral pursuits, etc.	2,064,189	2,170,405	2,065,838	2,130,333	2,043,422
II. Treating oils and fats, animal, vegetable, etc.	1,035,461	1,147,029	1,166,482	1,322,592	1,207,096
III. Processes in stone, clay, glass, etc.	4,841,188	5,462,976	5,781,144	5,928,978	6,509,183
IV. Working in wood	4,734,078	5,291,155	5,405,755	5,362,722	5,171,047
V. Metal works, machinery, etc.	16,701,195	18,410,074	19,723,951	21,015,046	21,836,505
VI. Connected with food and drink, etc.	20,214,770	20,948,905	22,845,337	25,368,336	26,283,623
VII. Clothing and textile fabrics, etc.	5,775,392	6,722,006	7,164,675	7,251,468	8,235,014
VIII. Books, paper, printing, and engraving	5,900,029	6,706,697	7,282,913	7,736,172	8,114,407
IX. Musical instruments, etc.	86,660	94,453	111,238	140,000	195,203
X. Arms and explosives	216,667	252,658	309,017	328,458	337,291
XI. Vehicles and fittings, saddlery and harness, etc.	1,047,440	1,277,937	1,524,491	1,896,950	2,157,518
XII. Ship and boat building and repairing	2,035,576	2,045,117	1,888,127	1,949,848	2,093,447
XIII. Furniture, bedding, and upholstery	559,354	673,810	743,217	891,450	957,976
XIV. Drugs, chemicals, and by-products	1,785,912	2,094,340	2,289,112	2,460,230	2,800,020
XV. Surgical and other scientific instruments	39,577	45,919	55,094	58,143	60,411
XVI. Jewellery, timepieces, and plated ware	137,512	146,907	144,983	159,058	139,185
XVII. Heat, light, and power	17,887,928	25,030,504	29,538,177	26,752,765	27,175,926
XVIII. Leatherware, n.e.i.	91,306	108,574	99,684	93,340	1,357,774
XIX. Other industries, n.e.i.	1,027,676	925,073	1,103,665	1,232,261	72,137
Total	86,081,910	99,552,539	109,242,900	112,273,150	116,747,185

(a) See general note on first page of this Chapter.

(b) Includes Rubber Goods formerly in Class XIX., Other Industries n.e.i.

During the past four years there has been a steady and substantial net increase amounting in all to £30,665,275, or an annual average of £7,666,319. All classes of industry but one participated, the largest increase being in Class XVII., "Heat, Light, and Power," where it amounted to £9,287,998, while the next in order were Class VI., "Connected with Food and Drink, etc.," £6,068,853, and Class V., "Metal Works, Machinery, etc.," £5,135,310.

(ii) *Value in each State, 1922-23 to 1926-27.* The figures in the previous table refer to Australia as a whole. In the following table results are shown for each State, and it will be seen that the increase is general throughout the States. New South Wales shows the largest advance, viz., £11,110,609; while Victoria comes next with £7,585,635.

VALUE OF PLANT AND MACHINERY.—STATES, 1922-23 TO 1926-27.

Year.(a)	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Total.
	£	£	£	£	£	£	£
1922-23	37,548,766	23,994,715	11,098,375	5,519,035	4,218,550	3,702,469	86,081,910
1923-24	41,141,890	28,223,915	12,321,440	6,929,821	4,496,082	6,439,391	99,552,539
1924-25	43,553,900	32,563,815	14,002,476	7,529,854	4,864,253	6,728,602	109,242,900
1925-26	45,994,534	30,549,130	15,226,566	8,322,025	5,480,905	6,704,990	112,273,150
1926-27	48,659,375	31,580,350	16,043,679	8,741,929	5,310,140	6,411,712	116,747,185

(a) See general note on first page of this Chapter.

(iii) *Value according to Industry, 1926-27.* The following table shows the value of plant and machinery used in factories in each State during 1926-27, classified according to the nature of the industry in which used :—

VALUE OF PLANT AND MACHINERY.—INDUSTRIES, 1926-27.

Class of Industry.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
	£	£	£	£	£	£	£
I. Treating raw material, product of agricultural and pastoral pursuits, etc.	922,488	726,975	155,049	101,430	65,092	72,388	2,043,422
II. Treating oils and fats, animal, vegetable, etc.	610,228	309,425	80,715	136,558	67,047	3,123	1,207,096
III. Processes in stone, clay, glass, etc.	3,607,130	1,378,705	303,020	542,090	279,802	393,436	6,509,183
IV. Working in wood	1,590,652	1,243,565	818,608	200,257	1,065,812	252,153	5,171,047
V. Metal works, machinery, etc.	12,933,103	2,805,720	1,102,775	1,822,353	685,872	1,486,682	21,836,505
VI. Connected with food and drink, etc.	8,216,397	5,864,050	3,953,169	1,673,236	1,190,070	386,701	26,283,623
VII. Clothing and textile fabrics, etc.	2,736,524	4,445,195	248,047	261,957	191,563	351,728	8,235,014
VIII. Books, paper, printing, and engraving	3,893,767	2,774,245	593,636	398,610	332,925	121,224	8,114,407
IX. Musical instruments, etc.	148,685	42,115	110	4,287	..	..	195,203
X. Arms and explosives	55,931	280,970	..	390	..	..	337,291
XI. Vehicles and fittings, saddlery and harness, etc.	707,394	666,695	110,529	553,289	83,452	36,159	2,157,518
XII. Ship and boat building and repairing	1,872,209	103,635	27,558	86,930	1,410	1,705	2,093,447
XIII. Furniture, bedding and upholstery	410,007	286,925	85,850	103,041	49,857	22,296	957,976
XIV. Drugs, chemicals, and by-products	373,564	844,935	39,418	559,544	430,939	51,620	2,800,020
XV. Surgical and other scientific instruments	25,975	21,695	5,346	3,933	3,462	..	60,411
XVI. Jewellery, timepieces, and plated ware	53,521	63,245	5,444	11,363	3,494	2,118	139,185
XVII. Heat, light and power	9,490,277	7,856,720	3,483,618	2,272,389	842,594	3,230,328	27,175,926
XVIII. Rubber Goods and Leatherware, n.e.i.	475,030	839,460	22,762	9,683	10,788	51	1,357,774
XIX. Other Industries, n.e.i.	36,493	26,075	3,019	589	5,961	..	72,137
Total	48,659,375	31,580,350	16,043,679	8,741,929	5,310,140	6,411,712	116,747,185

The greatest value for any particular class of industry is for class XVII., "Heat, Light, and Power," and amounts to £27,175,926, or 23.28 per cent. on the total for all classes. The next in order of importance is Class VI., "Connected with Food and Drink, etc.," amounting to £26,283,623, or 22.51 per cent. on the total, followed by Class V., "Metal Works, Machinery, etc.," which amounts to £21,836,505, or 18.70 per cent. on the total value. The total for these three classes amounts to £75,296,054, or 64.49 per cent. on the total value for all classes.

§ 9. Individual Industries.

1. General.—The preceding remarks and tables furnish a general view of the recent development of particular classes of industries in Australia treated under the nineteen categories adopted by the Conference of Statisticians in 1906. In order to make the information complete, it is necessary to furnish details of the development of individual industries. While it is not possible, within the limits of this work, to give a full and detailed account of all the manufacturing industries of Australia, it is proposed to deal herein with such particular industries as are of special importance by reason 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 one or two establishments of a particular class in any State, returns relative to output are not published, in order to avoid disclosing information as to the operations of individual factories.

2. Tanneries.—(i) *Details for each State, 1926-27.* In Class I. the most important industry is tanning. Formerly the production of tanneries in Australia was confined to the coarser class of leathers, but there are now very few kinds which cannot be produced locally, and by reason of their superiority an export trade has been built up in some varieties.

TANNERIES, 1926-27.

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W.A.	Tas.	Aus-tralia.
Number of factories	74	44	16	11	6	1	152
Number of employees	1,256	2,304	305	183	110	48	4,206
Actual horse-power of engines employed	2,783	4,203	585	402	309	110	8,392
Approx. value of land and buildings £	329,141	479,505	31,948	33,894	34,759	8,750	917,997
Approx. value of plant and machinery £	213,914	426,250	31,942	25,144	26,165	7,442	730,857
Total amount of wages paid during year £	285,755	529,430	58,127	38,730	24,644	8,912	945,598
Value of fuel used £	26,396	41,896	5,496	4,396	2,280	810	81,274
Value of raw material worked up £	1,385,602	1,832,058	247,561	108,863	103,635	23,613	3,701,332
Total value of output £	1,964,836	2,760,910	360,545	165,488	154,410	37,150	5,448,334
Value added in process of manufacture £	552,838	886,956	107,488	52,224	48,495	12,727	1,660,728

(ii) *Development in Australia, 1922-23 to 1926-27.* The development of the tanning industry during the period 1922-23 to 1926-27 is shown in the following table :—

TANNERIES.—AUSTRALIA, 1922-23 TO 1926-27.

Items.	1922-23.	1923-24.	1924-25.	1925-26.	1926-27.
Number of factories	163	166	155	156	152
Number of employees	4,542	4,485	4,189	4,347	4,206
Actual horse-power of engines used	7,740	8,182	8,149	8,672	8,392
Approx. value of land and buildings £	769,328	818,212	879,185	902,089	917,997
Approx. value of plant and machinery £	627,560	684,329	694,603	729,546	730,857
Total amount of wages paid £	963,526	964,563	906,492	959,653	945,598
Value of fuel used £	75,064	80,117	80,858	84,041	81,274
Value of raw material worked up £	3,765,981	3,630,198	3,507,778	3,908,737	3,701,332
Value of final output £	5,568,358	5,475,956	5,171,005	5,564,646	5,448,334
Value added in process of manufacture £	1,727,313	1,765,641	1,582,369	1,571,868	1,660,728

Decreases were recorded in both the number of factories and employees in the tanning industry during the past four years. The output, however, remained fairly constant, the production of leather during each of the years 1922-23 to 1926-27 being as follows :— 1922-23, 55,913,930 lb.; 1923-24, 51,957,999 lb.; 1924-25, 48,911,506 lb.; 1925-26, 55,078,267 lb.; and 1926-27, 53,885,830 lb.

(iii) *Raw Material Used and Production, 1926-27.* The quantities of raw material used and leather produced in tanneries in each State are shown in the following table :—

TANNERIES.—RAW MATERIAL USED AND PRODUCTION, 1926-27.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Hides and calf skins No.	1,006,773	1,330,770	176,383	57,691	55,583	18,914	2,648,114
Sheep pelts	2,725,904	1,143,543	92,708	74,390	..	..	4,038,545
Other skins	372,927	343,915	195,310	6,568	3,980	..	922,700
Bark tons	10,255	12,446	1,873	1,078	799	305	28,756
Leather made lb.	21,099,047	25,501,205	3,495,976	1,282,030	2,074,031	433,541	53,885,830
Basins produced	2,816,898	1,160,497	84,380	74,360	..	..	3,635,635

3. *Fellmongering and Wool-scouring Works.*—(i) *Details for each State, 1926-27.* The next industry in importance in Class I. is that of fellmongering and wool-scouring, one of the earliest industries established in Australia. The following table gives particulars of the industry in each State during the past year :—

FELLMONGERING AND WOOL-SCOURING WORKS, 1926-27.

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W.A.	Tas.	Aus- tralia.
Number of factories	35	32	16	4	6	..	93
Number of employees	1,086	571	346	115	77	..	2,175
Actual horse-power of engines used	2,293	1,479	854	191	176	..	4,993
Approx. value of land and buildings £	230,147	188,865	50,866	16,840	31,788	..	527,566
Approx. value of plant and machinery £	298,464	138,280	109,398	23,924	25,566	..	595,632
Total amount of wages paid	251,184	131,014	45,431	20,271	15,413	..	463,313
Value of fuel used	£ 51,212	28,073	9,317	4,035	2,229	..	94,866
Value of raw material worked up	£ 3,667,706	1,681,598	1,447,291	261,850	166,027	..	7,224,472
Value of final output	£ 4,192,862	2,069,151	1,267,471	294,014	208,271	..	8,031,769
Value added in process of manufacture £	473,944	359,480	189,137	28,129	40,015	..	712,431

(ii) *Development in Australia, 1922-23 to 1926-27.* The following return furnishes particulars of fellmongering and wool-scouring establishments in Australia for the last five years :—

**FELLMONGERING AND WOOL-SCOURING WORKS.—AUSTRALIA,
1922-23 TO 1926-27.**

Items.	1922-23.	1923-24.	1924-25.	1925-26.	1926-27.
Number of factories	99	102	94	93	93
Number of employees	2,576	2,161	1,997	2,195	2,175
Actual horse-power of engines used	6,530	6,250	5,458	5,734	4,993
Approx. value of land and buildings £	542,373	594,547	570,258	537,540	527,306
Approx. value of plant and machinery £	733,919	766,689	668,960	704,789	595,632
Total amount of wages paid	£ 546,015	422,788	356,938	398,278	463,313
Value of fuel used	£ 108,019	84,445	75,708	85,308	94,866
Value of raw material worked up	£ 6,848,785	8,158,925	7,818,400	6,324,429	7,224,472
Value of final output	£ 8,602,162	8,977,412	8,343,973	7,130,008	8,031,769
Value added in process of manufacture £	1,645,358	734,042	454,867	720,271	712,431

The wool-scouring industry developed considerably under the régime of the Central Wool Committee, and during 1919-20 the record output of 107,726,653 lb. of scoured wool was produced. The production declined considerably since that date, however, and during 1926-27 only 101,610,339 lb. of greasy wool and 4,768,445 skins were treated for an output of 62,393,422 lb. of scoured wool.

4. *Soap and Candle Factories.*—(i) *Details for each State, 1926-27.* In Class II, soap and candle factories are the most important establishments. The manufacture of these two products is frequently carried on in the same factory, so that separate returns cannot be obtained; it may, however, be noted that the manufacture of soap is the more important. The following table gives particulars of soap and candle factories in each State during the year 1926-27 :—

SOAP AND CANDLE FACTORIES, 1926-27.

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W.A.	Tas.	Australia.
Number of factories	26	18	10	6	5	1	66
Number of employees	1,111	705	175	250	225	41	2,507
Actual horse-power of engines employed	1,215	768	211	384	(a)	(b)	2,933
Approx. value of land and buildings £	345,811	169,845	34,433	53,305	(a)	(b)	636,116
Approx. value of plant and machinery £	384,772	235,705	34,235	118,467	(a)	(b)	843,399
Total amount of wages paid during year £	206,579	142,554	37,957	47,162	(a)	(b)	493,505
Value of fuel used	36,814	40,000	2,333	9,633	(a)	(b)	112,885
Value of raw material worked up	852,017	662,763	106,132	188,646	(a)	(b)	1,949,717
Total value of output	1,518,472	1,111,040	207,343	309,687	(a)	(b)	3,421,879
Value added in process of manufacture £	629,641	408,277	93,878	111,408	(a)	(b)	1,359,277

(a) Particulars not available for publication.

(b) Including Western Australia and Tasmania.

(ii) *Development in Australia, 1922-23 to 1926-27.* The following table gives similar particulars for the last five years as regards Australia as a whole :—

SOAP AND CANDLE FACTORIES.—AUSTRALIA, 1922-23 TO 1926-27.

Items.	1922-23. ^a	1923-24. ^a	1924-25. ^a	1925-26. ^a	1926-27. ^a
Number of factories	69	70	67	66	66
Number of employees	2,419	2,556	2,425	2,487	2,507
Actual horse-power and engines used	2,320	2,622	2,744	2,962	2,933
Approx. value of land and buildings £	563,216	650,163	637,319	636,019	636,116
Approx. value of plant and machinery £	759,192	834,673	775,027	893,712	843,399
Total amount of wages paid	415,651	438,748	454,149	492,789	493,505
Value of fuel used	75,728	77,976	83,138	104,697	112,885
Value of raw material worked up	1,700,540	1,729,946	2,037,505	2,145,157	1,949,717
Value of final output	3,042,506	2,915,030	3,365,010	3,592,832	3,421,879
Value added in process of manufacture £	1,176,238	1,107,108	1,244,367	1,342,778	1,359,277

(a) Including other small establishments in Western Australia.

(iii) *Raw Material Used and Production, 1922-23 to 1926-27.* The following statement shows the quantities of certain raw material used, together with the production, in soap and candle factories in Australia during the years 1922-23 to 1926-27 :—

SOAP AND CANDLE FACTORIES.—RAW MATERIAL USED, AND PRODUCTION, AUSTRALIA, 1922-23 TO 1926-27.

Particulars.	1922-23. ^a	1923-24. ^a	1924-25. ^a	1925-26. ^a	1926-27. ^a
Tallow used cwt.	482,422	434,622	483,756	470,101	473,787
Alkali used	144,092	140,923	168,587	162,887	188,785
Coconut oil used gal.	662,161	739,377	796,400	763,910	800,140
Soap made cwt.	878,238	883,944	997,902	955,893	1,001,378
Candles made "	101,586	86,684	80,771	80,043	75,444

(a) Exclusive of Western Australia.

The total output for the year 1926-27 comprised the following quantities of the various kinds of soap manufactured :—Household, 794,294 cwt. ; toilet, 101,041 cwt. ; sand, 83,278 cwt. ; soft, 19,464 cwt. ; and other, 3,301 cwt.

5. Saw-mills, etc.—(i) *Details for States, 1926-27.* The most important industry in Class IV. is that of saw-milling. As separate particulars of forest saw-mills are not available for some of the States, both forest and other saw-mills, as well as joinery, moulding, and box factories, have been combined in the following table:—

SAW-MILLS, FOREST AND OTHER ; JOINERY, ETC., 1926-27.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	835	587	311	149	147	215	2,244
Number of employees ..	9,312	8,039	5,400	2,138	3,346	1,982	30,217
Actual horse-power of engines employed ..	24,287	16,921	11,229	4,207	9,293	3,876	69,813
Approximate value of land and buildings ..	£ 1,643,693	950,650	447,054	244,365	379,792	91,502	3,757,056
Approximate value of plant and machinery ..	£ 1,427,026	1,100,690	753,879	194,273	1,064,177	220,355	4,760,400
Total amount of wages paid during year ..	£ 1,905,101	1,667,775	1,036,770	433,826	718,020	312,514	6,074,006
Value of fuel used ..	£ 84,663	42,593	36,432	16,187	17,444	17,523	214,842
Value of raw material worked up ..	£ 4,640,006	2,085,389	1,867,087	1,405,809	937,229	161,486	11,097,006
Total value of output ..	£ 7,717,723	4,705,904	3,429,943	2,106,716	2,137,513	614,874	20,712,673
Value added in process of manufacture ..	£ 2,993,054	2,577,922	1,526,424	684,720	1,182,840	435,865	9,400,825

(ii) *Development in Australia, 1922-23 to 1926-27.* The development of forest and other saw-mills, etc., since 1922-23 is shown in the following table:—

**SAW-MILLS, FOREST AND OTHER ; JOINERY, ETC.—AUSTRALIA,
1922-23 TO 1926-27.**

Items.	1922-23.	1923-24.	1924-25.	1925-26.	1926-27.
Number of establishments ..	2,067	2,315	2,312	2,340	2,244
Number of employees ..	31,173	34,092	34,041	33,309	30,217
Actual horse-power of engines used ..	57,615	64,580	69,099	72,924	69,813
Approx. value of land and buildings ..	£ 3,525,233	3,693,174	3,870,005	4,119,714	3,757,056
Approx. value of plant and machinery ..	£ 4,446,516	4,955,110	5,081,439	5,195,973	4,760,400
Total amount of wages paid ..	£ 5,832,137	6,576,474	6,754,128	7,401,907	6,074,006
Value of fuel used ..	£ 128,106	140,152	173,840	221,458	214,842
Value of raw material worked up ..	£ 9,104,572	10,344,024	10,758,499	11,355,761	11,097,006
Value of final output ..	£ 17,912,365	20,755,852	21,228,966	22,223,017	20,712,673
Value added in process of manufacture ..	£ 8,679,687	10,271,676	10,296,627	10,645,808	9,400,825

The effect of the depression in the sawmilling industry is reflected in the decreases recorded in the manufacturing returns during the past two seasons. The sawmill output of native timber declined from 670,023,000 super. feet in 1923-24 to 613,131,000 super. feet in 1926-27.

6. *Agricultural Implement Works.*—(i) *General.* The manufacture of agricultural implements is an important industry in Australia, and is of particular interest, owing to the fact that it was one of the first to which it was sought to apply the so-called "New Protection." The articles manufactured include stripper-harvesters, header harvesters or reaper thrashers, strippers, reapers and binders, stump-jump and other ploughs, harrows, disc and other cultivators, winnowers, corn-shellers and baggers, drills, kerosene and petrol engines, and other implements employed in agriculture. The stripper harvester, which combines the stripper with a mechanism for winnowing and bagging grain, is an Australian invention, and is universally employed in agriculture.

(ii) *Details for States, 1926-27.* The following table gives particulars of the agricultural implement works in each State for the year 1926-27:—

AGRICULTURAL IMPLEMENT WORKS, 1926-27.

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories	30	73	4	42	6	..	155
Number of employees	735	3,820	248	1,501	332	..	6,636
Actual horse-power of engines employed	408	3,911	103	1,262	318	..	6,002
Approx. value of land and buildings £	196,021	318,500	32,402	160,061	60,833	..	767,817
Approx. value of plant and machinery £	62,177	357,325	26,027	199,601	41,691	..	686,821
Total amount of wages paid during year £	165,942	912,325	50,894	293,753	78,811	..	1,501,725
Value of fuel used	£ 5,708	51,620	3,300	18,093	3,930	..	82,651
Value of raw material worked up	£ 195,552	911,398	80,805	334,617	52,120	..	1,574,492
Total value of output	£ 458,606	2,228,570	167,884	777,065	187,324	..	3,819,449
Value added in process of manufacture £	257,346	1,265,552	83,779	424,355	131,274	..	2,162,306

(iii) *Development in Australia, 1922-23 to 1926-27.* The Agricultural Implement industry declined considerably during the war years, but great progress has been made since 1922-23 and considerable increases have occurred in all the items enumerated in the following table. Details for the past five years are as follows:—

AGRICULTURAL IMPLEMENT WORKS.—AUSTRALIA, 1922-23 TO 1926-27.

Items.	1922-23.	1923-24.	1924-25.	1925-26.	1926-27.
Number of factories	154	160	153	148	155
Number of employees	4,674	5,584	5,535	5,691	6,636
Actual horse-power of engines used	3,619	3,807	4,349	5,344	6,002
Approx. value of land and buildings £	499,987	590,066	625,767	695,214	767,817
Approx. value of plant and machinery £	508,921	595,151	559,413	622,165	686,821
Total amount of wages paid	£ 941,778	1,126,002	1,181,572	1,270,555	1,501,725
Value of fuel used	£ 54,546	63,096	70,680	71,137	82,651
Value of raw material worked up	£ 1,190,905	1,442,679	1,569,456	1,385,089	1,574,492
Value of final output	£ 2,685,342	3,132,305	3,283,008	3,228,602	3,819,449
Value added in process of manufacture £	1,439,891	1,626,530	1,642,672	1,772,276	2,162,306

7. *Engineering Works.* Formerly it was impossible to record separate details for the engineering industry owing to the limited classification adopted by some of the States, but in 1926-27 an effort was made to obtain these particulars, and with one or two duplications of minor importance the following figures are representative of the engineering industry:—

ENGINEERING WORKS, 1926-27.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories	300	315	40	53	60	17	785
Number of employees	7,805	6,333	1,908	1,553	740	362	18,701
Actual horse-power of engines employed	8,012	7,451	1,911	1,476	1,148	445	20,443
Approximate value of land and buildings £	1,471,506	1,035,185	182,362	126,621	137,998	40,580	2,994,252
Approximate value of plant and machinery £	1,261,998	1,034,880	230,279	161,022	135,516	46,945	2,870,640
Total amount of wages paid during year	£ 1,744,344	1,454,551	494,862	330,416	154,241	78,177	4,196,591
Value of fuel used	£ 80,387	82,694	27,971	23,409	14,503	6,062	235,026
Value of raw material worked up	£ 2,222,426	1,705,355	307,432	363,755	125,800	47,399	4,772,167
Total value of output	£ 4,945,680	3,948,285	976,700	812,128	384,458	152,502	11,219,753
Value added in process of manufacture	£ 2,642,867	2,160,236	641,297	424,964	244,155	99,041	6,212,560

In addition to engineering works which supply ordinary requirements, there is now a large number of establishments which engage in the manufacture of special classes of machinery and implements. The manufacture of mining, smelting, and textile machinery and apparatus forms an important section of this industry.

8. **Ironworks and Foundries.** The extension of the classification noted in the preceding sub-section has made possible the separate publication of details for the group of industries comprised under the heading of ironworks and foundries. This combination consists of ironworks, foundries, iron safes and doors, steel castings, iron bedsteads, sash weights, steel window frames and sashes, nut and bolt making, oxy-acetylene welding, springs, horse-shoes, screws, lift making, tools, and brickmakers' implements. Particulars for the year 1926-27 are as follows:—

IRONWORKS AND FOUNDRIES, 1926-27.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories	161	130	15	32	15	..	353
Number of employees	8,293	4,042	725	1,237	346	..	14,693
Actual horse-power of engines employed	36,037	6,541	857	1,398	393	..	45,226
Approximate value of land and buildings £	1,376,408	520,895	58,880	146,795	36,203	..	2,139,181
Approximate value of plant and machinery £	3,035,427	586,450	109,625	113,211	47,146	..	3,891,859
Total amount of wages paid during year £	2,066,011	916,762	127,796	259,424	81,023	..	3,451,016
Value of fuel used £	417,634	123,005	13,565	20,383	5,102	..	579,689
Value of raw material worked up £	8,533,078	1,111,426	175,531	312,407	98,566	..	10,231,098
Total value of output	11,779,843	2,630,786	384,175	666,538	216,795	..	15,678,137
Value added in process of manufacture £	2,829,131	1,396,355	195,079	333,658	113,127	..	4,867,350

9. **Railway and Tramway Workshops.**—(i) *Details for each State, 1926-27.* The railway and tramway workshops which form an important item in Class V. are chiefly State-owned institutions. The following table giving details concerning them includes, however, private and municipal establishments for manufacturing and repairing rolling-stock:—

RAILWAY AND TRAMWAY WORKSHOPS, 1926-27.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories	45	21	13	20	20	6	125
Number of employees	14,108	7,048	3,430	3,590	2,200	339	30,715
Actual horse-power of engines employed	12,931	6,854	3,432	2,526	2,796	349	28,938
Approximate value of land and buildings £	2,524,392	1,077,830	307,505	674,376	469,073	9,450	5,062,626
Approximate value of plant and machinery £	3,383,396	944,920	338,616	567,001	397,554	91,297	5,722,784
Total amount of wages paid during year £	3,623,214	1,755,202	920,916	936,160	498,150	81,560	7,815,202
Value of fuel used £	111,233	77,855	20,824	35,649	26,847	6,100	278,508
Value of raw material worked up £	2,660,063	2,037,577	479,213	509,071	332,905	24,548	6,043,377
Total value of output	7,201,413	4,257,700	1,295,725	1,658,948	1,052,852	123,208	15,589,846
Value added in process of manufacture £	4,430,117	2,142,268	765,688	1,114,228	693,100	92,560	9,267,961

In addition to the above, a railway workshop is in operation in the Northern Territory. The work is confined almost exclusively to repairs to rolling-stock, etc., no new goods being manufactured. For the sake of convenience this establishment is not included in any of the tables in this chapter.

(ii) *Development in Australia, 1922-23 to 1926-27.* The following table shows the development of railway and tramway workshops in Australia since 1922-23 :—

RAILWAY AND TRAMWAY WORKSHOPS.—AUSTRALIA, 1922-23 TO 1926-27.

Items.	1922-23.	1923-24.	1924-25.	1925-26.	1926-27.
Number of factories	112	122	123	121	125
Number of employees	23,672	25,130	26,345	28,558	30,715
Actual horse-power of engines used ..	16,603	17,830	20,965	26,168	28,938
Approx. value of land and buildings £	3,429,066	3,887,982	4,174,175	4,491,396	5,062,626
Approx. value of plant and machinery £	3,299,252	3,867,175	4,204,254	5,076,776	5,722,784
Total amount of wages paid .. £	5,591,520	5,799,183	6,140,676	7,192,869	7,815,202
Value of fuel used £	155,795	159,651	175,760	250,632	278,503
Value of raw material worked up .. £	4,459,599	4,596,829	4,919,728	6,008,231	6,043,377
Value of final output £	10,603,049	11,652,306	12,384,177	14,885,994	15,589,846
Value added in process of manufacture £	5,987,655	6,895,826	7,288,689	8,627,131	9,267,961

The growth of the railway and tramway systems, conjointly with heavy increases in passenger and goods traffic throughout Australia, has resulted in corresponding activity in workshops engaged in the manufacture or repair of rolling-stock, etc. During the past four years the number of employees has increased by more than 7,000, and the output has grown from £10,603,049 to £15,589,846.

10. *Metal Extraction and Ore Reduction Works.*—The following table gives particulars of metal extraction and ore reduction works. The classification of these works is not uniform in the several States, and the combination of industries is, therefore, somewhat unsatisfactory. The returns do not include particulars of plants used on mines.

METAL EXTRACTION AND ORE REDUCTION WORKS, 1926-27.

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W.A. (a)	Tas.	Australia.
Number of factories	19	7	8	1	..	3	38
Number of employees	3,246	49	356	1,437	..	1,117	6,205
Actual horse-power of engines employed	27,640	104	3,573	b	..	b	c 70,797
Approx. value of land and buildings £	614,731	14,125	68,234	b	..	b	c 1,192,317
Approx. value of plant and machinery £	2,876,458	9,395	207,420	b	..	b	c 5,068,210
Total amount of wages paid during year £	1,008,437	12,365	71,244	b	..	b	c 1,873,991
Value of fuel used £	1,746,814	2,055	15,964	b	..	b	c 2,407,566
Value of raw material worked up .. £	6,513,010	117,751	111,825	b	..	b	c12,257,107
Total value of output £	11,379,429	152,935	177,475	b	..	b	c19,329,419
Value added in process of manufacture £	3,119,605	33,129	49,686	b	..	b	c 4,664,739

(a) In Western Australia all the plants are worked on the mines, and are therefore not included.
 (b) Information not available for publication. (c) Including South Australia and Tasmania.

11. Bacon-curing Factories.—(i) *Details for each State, 1926-27.* The following table gives particulars of factories engaged in bacon-curing in each State during the past year:—

BACON-CURING FACTORIES, 1926-27.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aus- tralia.
Number of factories	25	21	8	9	7	6	76
Number of employees	350	560	544	183	56	37	1,780
Actual horse-power of engines employed	847	1,821	1,239	386	196	102	4,591
Approximate value of land and buildings £	170,773	194,085	184,455	34,498	27,877	10,718	622,406
Approximate value of plant and machinery £	76,566	125,030	121,063	33,628	11,658	6,594	374,539
Total amount of salaries and wages paid £	100,264	141,623	129,152	45,966	12,872	6,194	436,071
Value of fuel used £	16,422	20,552	19,648	4,604	3,022	1,766	66,014
Value of raw material worked up £	1,071,879	1,068,144	862,187	296,557	140,839	59,674	3,499,280
Total value of output £	1,361,269	1,425,509	1,224,040	381,661	185,371	75,865	4,654,316
Value added in process of manu- facture £	272,968	336,813	342,805	80,500	41,510	14,425	1,089,021

(ii) *Quantity and Value of Production.* The following table shows the number of pigs killed and the quantity and value of the production of bacon-curing factories in each State for the year 1926-27:—

BACON-CURING FACTORIES.—PIGS KILLED, AND PRODUCTION, 1926-27.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Aus- tralia.
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PIGS KILLED.

Number.. .. .	253,907	230,391	204,539	59,010	(a)22,182	13,830	783,859
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PRODUCTS.

Bacon and ham lb.	23,275,890	19,739,524	17,971,692	4,608,542	2,514,531	1,271,810	69,381,989
Lard "	672,992	783,414	767,376	199,166	103,518	75,000	2,601,486

VALUE.

Bacon and ham £	1,203,387	1,170,378	767,498	292,533	156,743	66,793	3,657,332
Lard £	23,023	29,043	27,549	7,315	4,032	3,299	94,261
Other products £	114,027	226,088	430,264	81,813	12,326	5,773	870,291

(a) In Western Australia, a portion of the bacon and ham treated in factories is imported and subsequently smoked in that State.

Bacon and ham and other pig products are dealt with more fully in Chapter XVIII. *Farmyard, Dairy, and Bee Products.*

12. Butter, Cheese, and Condensed Milk Factories.—(i) *Details for each State, 1926-27.* The subjoined table gives particulars of butter, cheese and condensed milk factories in each State during the year 1926-27 :—

BUTTER, CHEESE, AND CONDENSED MILK FACTORIES, 1926-27.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W.A.	Tas.	Aus- tralia.
Number of factories	187	182	125	58	11	36	579
Number of employees	1,371	2,320	1,168	324	86	150	5,419
Actual horse-power of engines employed	6,819	6,456	5,137	1,047	319	370	20,148
Approximate value of land and buildings	£ 742,589	£ 915,035	£ 344,462	£ 207,657	£ 46,287	£ 41,626	£ 2,297,656
Approximate value of plant and machinery	£ 810,410	£ 1,054,245	£ 563,685	£ 124,493	£ 39,244	£ 37,027	£ 2,649,044
Total amount of wages paid	£ 360,448	£ 543,549	£ 233,006	£ 64,880	£ 17,086	£ 23,844	£ 1,242,813
Value of fuel used	£ 101,127	£ 143,344	£ 46,344	£ 14,120	£ 3,072	£ 6,997	£ 315,004
Value of raw material worked up	£ 6,508,343	£ 6,823,158	£ 3,485,536	£ 784,695	£ 244,479	£ 261,115	£ 17,907,326
Total value of output	£ 7,799,040	£ 7,813,409	£ 4,551,867	£ 948,503	£ 279,463	£ 344,828	£ 21,737,110
Value added in process of manufacture	£ 1,189,570	£ 1,046,907	£ 1,019,987	£ 149,688	£ 31,912	£ 76,716	£ 3,514,780

(ii) *Development in Australia, 1922-23 to 1926-27.* The following table shows the progress of the factories in this industry during the past five years :—

BUTTER, CHEESE, AND CONDENSED MILK FACTORIES.—AUSTRALIA, 1922-23 TO 1926-27.

Items.	1922-23.	1923-24.	1924-25.	1925-26.	1926-27.
Number of factories	573	583	600	585	579
Number of employees	5,141	5,233	5,826	5,490	5,419
Actual horse-power of engines used	13,149	14,836	15,934	17,989	20,148
Approx. value of land and buildings	£ 1,490,729	£ 1,770,157	£ 1,863,439	£ 1,964,887	£ 2,297,656
Approx. value of plant and machinery	£ 2,184,761	£ 2,155,632	£ 2,385,027	£ 2,522,367	£ 2,649,044
Total amount of wages paid	£ 1,091,218	£ 1,112,425	£ 1,287,689	£ 1,244,470	£ 1,242,813
Value of fuel used	£ 244,144	£ 249,988	£ 311,685	£ 314,186	£ 315,004
Value of raw material worked up	£ 17,464,258	£ 16,542,862	£ 19,080,739	£ 19,248,172	£ 17,907,326
Value of final output	£ 20,746,782	£ 19,526,119	£ 22,726,214	£ 22,971,416	£ 21,737,110
Value added in process of manufacture	£ 3,038,880	£ 2,733,269	£ 3,338,790	£ 3,409,058	£ 3,514,780

(iii) *Quantity and Value of Production.* The following table shows the quantity and value of butter, cheese, and condensed milk produced, and the quantity of milk used in butter, cheese, and condensed milk factories in each State during the past year :—

BUTTER, CHEESE, AND CONDENSED MILK FACTORIES.—PRODUCTION, 1926-27.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Aus- tralia.
MILK USED (,000 OMITTED).							
Butter factories .. gals.	200,970	174,328	103,996	19,462	4,642	9,984	518,382
Cheese	5,206	5,441	9,798	3,627	..	734	24,806
Condensed milk factories ..	(a)	10,816	(a)	..	..	..	(b) 14,972

(a) Information not available for publication.

(b) Including New South Wales and Queensland.

**BUTTER, CHEESE, AND CONDENSED MILK FACTORIES.—PRODUCTION,
1926-27—continued.**

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Aus- tralia.
PRODUCTS (,000 OMITTED).							
Butter lb.	91,727	78,109	49,055	9,858	2,464	4,269	235,482
Cheese "	5,085	5,482	9,243	3,709	..	740	24,259
Condensed and concentrated milk lb.	(a)	38,646	(a)	..	..	..	(b) 46,716
Powdered milk "	2,925	9,540	..	..	..	..	12,465
VALUE (,000 OMITTED).							
Butter £	7,092	5,938	3,986	786	192	316	18,310
Cheese £	222	247	404	138	..	29	1,040
Condensed and concentrated milk £	(a)	1,012	(a)	..	..	..	(b) 1,287
Powdered Milk £	185	429	..	..	..	..	614

(a) Information not available for publication.

(b) Including New South Wales and Queensland.

The butter, cheese, and condensed milk industries are dealt with more fully in the Chapter entitled *Farmyard, Dairy, and Bee Products*.

13. Meat and Fish Preserving Works.—These industries are now of considerable importance in Australia. Large freezing works have been installed at many ports throughout the continent for the purpose of freezing produce chiefly for export, while 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.

MEAT AND FISH PRESERVING WORKS, 1926-27.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories	3	14	13	1	5	3	39
Number of employees	251	739	3,029	8	279	24	4,330
Actual horse-power of engines employed	(a)	4,812	9,857	(a)	632	(a)	b 15,431
Approximate value of land and buildings £	(a)	690,020	1,461,623	(a)	307,979	(a)	b 2,506,071
Approximate value of plant and machinery £	(a)	401,310	921,733	(a)	402,926	(a)	b 1,755,136
Total amount of wages paid dur- ing year £	(a)	187,632	425,739	(a)	76,157	(a)	b 758,065
Value of fuel used £	(a)	23,389	71,467	(a)	8,383	(a)	b 113,679
Value of raw material worked up ..	(a)	1,686,328	1,501,628	(a)	136,487	(a)	b 3,588,118
Total value of output £	(a)	2,068,333	1,968,756	(a)	290,931	(a)	b 4,695,015
Value added in process of manu- facture £	(a)	358,616	395,661	(a)	146,061	(a)	b 993,218

(a) Not available for publication.

(b) Including New South Wales, South Australia and Tasmania.

Full particulars regarding quantities and values of beef, mutton, and lamb preserved by cold process, exported from Australia during a series of years, will be found in Chapter XVI.

14. Biscuit Factories.—The following table gives particulars regarding establishments at which the manufacture of biscuits, cakes, etc., was carried on in each State during the year 1926-27:—

BISCUIT, ETC., FACTORIES, 1926-27.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas. (a)	Australia.
Number of factories	72	0	27	17	22	..	147
Number of employees	2,871	1,329	739	454	379	..	5,772
Actual horse-power of engines employed	1,353	755	367	348	204	..	3,027
Approximate value of land and buildings £	577,622	134,560	124,100	97,168	52,028	..	985,478
Approximate value of plant and machinery £	222,237	187,665	81,469	76,291	33,955	..	601,617
Total amount of wages paid during year £	483,027	207,977	145,374	73,297	51,212	..	960,887
Value of fuel used £	55,147	23,051	9,590	8,231	6,961	..	102,980
Value of raw material worked up £	1,540,832	732,974	276,589	256,070	182,151	..	2,988,616
Total value of output £	2,645,767	1,220,747	621,257	400,062	287,101	..	5,174,934
Value added in process of manufacture £	1,049,788	464,722	335,078	135,761	97,989	..	2,083,358

(a) Included with confectionery.

15. Jam and Fruit Preserving, Pickles, Sauces, and Vinegar Factories.—(i) *Details for each State, 1926-27.* The subjoined table gives particulars of factories at which these industries were carried on in each State during the year 1926-27.

JAM AND FRUIT PRESERVING, PICKLES, ETC., FACTORIES, 1926-27.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia
Number of factories	45	58	13	17	10	21	164
Number of employees	1,799	2,604	373	560	54	729	6,119
Actual horse-power of engines employed	857	1,860	225	275	67	1,244	4,528
Approximate value of land and buildings £	343,491	442,175	46,823	112,224	14,065	126,057	1,084,835
Approximate value of plant and machinery £	154,894	327,505	32,494	68,607	7,152	44,119	634,771
Total amount of wages paid during year £	221,774	497,011	49,565	89,239	5,527	111,108	974,224
Value of fuel used £	17,752	35,580	3,148	7,479	365	14,987	79,311
Value of raw material worked up £	911,920	1,502,429	228,192	326,039	65,565	477,243	3,511,388
Total value of output £	1,457,957	2,427,373	337,283	514,215	75,737	667,500	5,480,065
Value added in process of manufacture £	528,285	889,364	105,943	180,697	9,807	175,270	1,889,366

(ii) *Development in Australia, 1922-23 to 1926-27.* The following table refers to jam and fruit preserving, etc., establishments in Australia for the last five years:—

JAM AND FRUIT PRESERVING, PICKLES, ETC., FACTORIES.—AUSTRALIA, 1922-23 TO 1926-27.

Items.	1922-23.	1923-24.	1924-25.	1925-26.	1926-27.
Number of factories	170	175	164	165	164
Number of employees	5,983	6,600	6,278	6,189	6,119
Actual horse-power of engines employed	3,698	3,941	3,989	4,520	4,528
Approx. value of land and buildings £	395,513	981,354	937,288	1,038,819	1,084,835
Approx. value of plant and machinery £	606,716	599,857	616,675	615,452	634,771
Total amount of wages paid £	781,429	885,104	881,317	902,859	974,224
Value of fuel used £	56,718	63,406	69,152	70,549	79,311
Value of raw material worked up £	2,704,356	2,939,187	3,127,593	3,135,573	3,511,388
Total value of output £	4,549,216	4,722,383	4,995,671	5,002,487	5,480,065
Value added in process of manufacture £	1,788,142	1,719,790	1,798,926	1,796,365	1,889,366

The progress of the jam-making industry was very marked during the war years, when considerable quantities were exported overseas for the supply of army requirements. With the loss of this trade on the termination of the war, production declined considerably, but a noticeable improvement was recorded in 1926-27, when 85,687,291 lb. were manufactured, compared with 67,388,784 lb. during the previous year. The output of preserved fruit has grown to considerable proportions, and during 1926-27, 57,583,021 lbs. were processed, while the production of pickles and sauces is increasing.

(iii) *Production.* The following table shows the quantity and value of jams, pickles, and sauces manufactured in each State during 1926-27 :—

JAMS, PRESERVED FRUIT, PICKLES AND SAUCES.—OUTPUT, 1926-27.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Aus- tralia.
QUANTITY (,000 OMITTED).							
Jams lb.	22,611	33,692	5,570	8,823	(a)	14,991	85,687
Pulp "	3,561	12,367	374	4,616	(a)	11,254	32,172
Fruit, preserved "	8,240	37,610	6,244	2,627	(a)	2,862	57,583
Pickles pints	2,388	2,615	..	760	(b)	(b)	(c) 5,994
Sauces "	6,258	7,385	943	5,145	(b)	(b)	(c) 19,925
VALUE.							
Jams £	652,872	907,249	148,467	214,783	(a)	405,467	2,328,838
Pulp "	28,635	82,702	3,070	22,514	(a)	146,167	283,091
Fruit, preserved "	178,320	797,364	130,399	57,899	(a)	76,226	1,240,208
Pickles £	81,499	92,350	..	30,684	(b)	(b)	(c) 212,357
Sauces £	357,065	259,660	22,126	166,456	(b)	(b)	(c) 812,467

(a) Particulars not available. (b) Particulars not available for publication.
(c) Including Western Australia and Tasmania.

16. *Confectionery Factories.*—(i) *Details for each State, 1926-27.* The growth of this industry will be apparent when it is stated that at the close of 1900 there were in New South Wales only 16 establishments, with 706 employees, and in Victoria 16 establishments, employing 731 persons, the plant and machinery in the former State being valued at £2,815, and in the latter at £19,070. Returns for 1926-27 are given hereunder :—

CONFECTIONERY FACTORIES, 1926-27.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas. (a)	Australia.
Number of factories	98	134	10	22	12	10	286
Number of employees	3,172	3,912	573	442	302	647	9,048
Actual horse-power of engines employed	3,589	7,834	493	554	262	1,434	14,166
Approximate value of land and buildings £	977,248	635,990	66,318	82,145	63,799	258,733	2,084,233
Approximate value of plant and machinery £	1,008,137	982,030	44,965	89,124	66,226	121,031	2,311,513
Total amount of wages paid during year £	503,607	651,619	67,816	57,667	46,285	99,785	1,426,779
Value of fuel used £	54,199	78,223	4,906	7,914	4,710	15,229	165,181
Value of raw material worked up £	1,559,435	1,736,120	97,374	177,203	197,413	210,545	3,918,090
Total value of output £	2,917,926	3,002,436	297,282	294,972	208,472	376,824	7,097,911
Value added in process of manufacture £	1,804,291	1,188,093	195,002	109,855	66,349	151,050	3,014,640

(a) Including Biscuits.

(ii) *Development in Australia, 1922-23 to 1926-27.* The growth of the confectionery industry during the past four years is exhibited in the following table :—

CONFECTIONERY FACTORIES.—AUSTRALIA, 1922-23 TO 1926-27.

Items.	1922-23.	1923-24.	1924-25. (a)	1925-26. (a)	1926-27. (a)
Number of factories	258	258	276	267	286
Number of employees	7,945	8,724	8,816	8,849	9,048
Actual horse-power of engines employed	6,434	11,668	12,725	13,047	14,166
Approx. value of land and buildings £	1,593,346	1,773,340	2,021,439	2,014,563	2,084,233
Approx. value of plant and machinery £	1,746,738	1,951,422	2,104,208	2,109,860	2,311,513
Total amount of wages paid during year £	1,159,980	1,262,099	1,349,717	1,391,114	1,426,779
Value of fuel used £	114,947	126,547	155,050	166,846	165,181
Value of raw material worked up £	3,336,349	3,318,425	3,619,005	3,384,045	3,918,090
Total value of output £	5,941,691	6,162,631	6,623,828	6,993,566	7,097,911
Value added in process of manufacture £	2,490,395	2,717,656	2,849,778	2,942,675	3,014,640

(a) Including Biscuits in Tasmania.

The confectionery industry has expanded considerably during recent years, largely as a result of the stimulus afforded by the embargo placed on the importation of luxuries during the period of the war. The establishments engaged therein found employment for 9,048 persons in 1926-27, and the value of the output amounted to £7,097,911, or more than 19 per cent. greater than the value of the production in 1922-23. The Australian market has been captured, and an export trade is being developed. Several large British manufacturers of confectionery have established branch works in Australia.

17. Flour Mills.—(i) *Details for States, 1926-27.* The following table shows the position of the flour-milling industry in each State in 1926-27 :—

FLOUR MILLS, 1926-27.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust. (a)	W. Aust.	Tas. (a)	Australia.
Number of factories ..	57	44	10	37	17	10	175
Number of employees ..	1,224	1,094	274	537	426	115	3,670
Actual horse-power of engines employed ..	7,231	6,073	1,301	3,104	2,802	525	21,036
Approximate value of land and buildings ..	£ 755,694	£ 443,080	£ 127,170	£ 190,952	£ 196,987	£ 60,350	£ 1,774,233
Approximate value of plant and machinery ..	£ 924,531	£ 603,095	£ 150,772	£ 297,072	£ 191,764	£ 54,377	£ 2,221,611
Total amount of wages paid during year ..	£ 318,610	£ 255,058	£ 63,468	£ 115,609	£ 85,844	£ 26,575	£ 865,164
Value of fuel used ..	£ 74,862	£ 50,068	£ 10,225	£ 31,755	£ 20,299	£ 3,799	£ 191,008
Value of raw material worked up ..	£ 6,122,755	£ 5,037,318	£ 856,395	£ 1,915,617	£ 1,770,521	£ 372,136	£ 16,074,742
Total value of output ..	£ 7,098,456	£ 5,789,618	£ 1,044,861	£ 2,201,740	£ 2,026,823	£ 436,496	£ 18,597,994
Value added in process of manufacture ..	£ 900,839	£ 702,232	£ 178,241	£ 254,368	£ 236,003	£ 60,561	£ 2,332,244

(a) The manufacture of cornflour, oatmeal, etc., was also carried on in some of these establishments.

(ii) *Production of Flour and By-products, 1922-23 to 1926-27.* The production of flour by the mills in each State for the years 1922-23 to 1926-27 was as follows :—

FLOUR MILLS.—PRODUCTION OF FLOUR, 1922-23 TO 1926-27.

Year (b).	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
	Tons.a	Tons.a	Tons.a	Tons.a	Tons.a	Tons.a	Tons.a
1922-23 ..	354,704	352,002	51,476	109,761	94,316	23,220	985,479
1923-24 ..	409,645	382,204	54,244	113,436	107,990	25,337	1,092,856
1924-25 ..	395,409	359,597	52,592	117,042	122,192	21,866	1,068,698
1925-26 ..	434,407	336,704	61,587	138,127	190,369	24,774	1,185,968
1926-27 ..	431,532	360,051	52,959	140,426	133,919	22,861	1,141,748

(a) Tons of 2,000 lb.

(b) See general note on first page of this Chapter.

The total production of flour in Australia for the last year, viz., 1,141,748 tons, was valued at £14,749,474. In addition, 464,375 tons of bran and pollard, valued at £3,562,612, were made. The total quantity of wheat ground was 54,168,722 bushels.

18. Sugar Mills.—(i) *Details for 1926-27.* The following table shows the position of the cane-crushing branch of the sugar-making industry in Queensland and New South Wales in 1926-27. Sugar-cane is not grown in the other States. Details regarding the area, yield, etc., of sugar-cane will be found in Chapter XVII., *Agricultural Production.*

SUGAR MILLS, 1926-27.

Items.	N.S.W.	Queensland.	Australia.
Number of factories	3	36	39
Number of employees	447	6,502	6,949
Actual horse-power of engines employed	2,097	26,995	29,092
Approximate value of land and buildings £	132,865	921,168	1,054,033
Approximate value of plant and machinery £	529,116	5,922,475	6,451,591
Total amount of wages paid during year ..	£ 109,831	1,364,540	1,474,371
Value of fuel used	£ 15,415	209,287	224,702
Value of raw material worked up	£ 414,490	7,163,294	7,577,784
Total value of output	£ 671,004	9,605,044	10,276,048
Value added in course of manufacture ..	£ 241,099	2,232,463	2,473,562

The products of the sugar mill are raw sugar and molasses, the former being sent to the refineries in different parts of Australia for further treatment. Part of the molasses produced is used for distillation, part is prepared for human consumption, part is turned into food-cake for cattle, and part is used for manuring land, but a considerable quantity is allowed to run to waste.

(ii) *Progress of Industry.* (a) *New South Wales.* The following table shows the progress of this industry in New South Wales since 1922-23 :—

SUGAR MILLS.—NEW SOUTH WALES, 1922-23 TO 1926-27.

Items.	1922-23.	1923-24.	1924-25.	1925-26.	1926-27.
Number of factories ..	3	3	3	3	3
Number of employees ..	446	445	445	487	447
Cane crushed .. tons	147,992	132,084	228,978	297,335	230,254
Sugar produced .. tons	18,580	16,829	26,682	32,385	26,604
Molasses produced gals.	816,720	752,650	1,313,400	1,820,000	1,371,700

The number of New South Wales mills has been reduced to three during recent years owing chiefly to the tendency towards concentration of cane-crushing in mills fitted with modern machinery, and the consequent closing of the small home mill. The stability afforded the sugar industry by Government assistance referred to in the chapter dealing with agriculture has been responsible for considerable progress in the cultivation of sugar cane, and consequently increased activity has occurred in the sugar mills of New South Wales and Queensland during the last three years.

(b) *Queensland.* Details for Queensland from 1911 onwards are given hereunder.

SUGAR MILLS.—QUEENSLAND, 1911 TO 1926-27.

Items.	1911.	1923.	1924-25.	1925-26.	1926-27.
Number of factories ...	49	37	37	40	39
Number of employees ..	4,295	5,555	6,250	7,322	6,949
Cane crushed .. tons	1,534,451	2,045,808	3,175,377	3,653,860	2,930,860
Sugar produced .. tons	173,296	269,175	400,645	479,023	457,914
Molasses—					
Sold to distillers and others .. gals.	2,393,669	2,657,252	5,367,352	3,749,788	3,301,557
Used as fodder .. gals.	789,564	2,448,595	2,236,788	2,176,649	2,828,118
Used as manure .. gals.	223,000	299,600	196,080	1,287,400	89,600
Run to waste or burnt (a) .. gals.	1,847,333	4,883,071	5,921,246	9,360,367	7,295,155
In Stock .. gals.	1,197,626	866,460	1,398,837	1,590,212	1,172,003
Total Molasses (a) .. gals.	6,451,192	11,064,978	15,120,303	18,164,416	14,686,433

(a) Quantity recorded; no record is kept of large quantities run to waste.

19. **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 1926-27 there were two sugar refineries in each of the States of Victoria and Queensland, and one in each of the States of New South Wales and South Australia. The quantity of raw sugar operated upon amounted to 331,463 tons for a yield of 320,842 tons of refined sugar, valued at £11,280,265.

20. **Breweries.**—(i) *Details for each State, 1926-27.* The following table gives particulars concerning breweries in each State:—

BREWERIES, 1926-27.

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust. (a).	Tas.	Australia.
Number of breweries	10	10	10	6	10	2	48
Number of employees	1,250	1,156	564	371	420	83	3,844
Actual horse-power of engines employed	3,515	5,123	1,858	1,097	1,265	285	13,143
Approximate value of land and buildings £	815,030	621,980	293,888	187,467	232,914	54,500	2,205,779
Approximate value of plant and machinery £	1,079,896	810,900	314,727	187,540	234,176	83,080	2,710,319
Total amount of wages paid during year £	374,296	378,419	150,713	115,800	133,507	22,351	1,173,086
Value of fuel used £	94,996	66,509	32,173	27,549	21,110	6,443	248,780
Value of raw material worked up £	1,221,142	1,165,535	206,546	337,741	330,741	53,736	3,315,441
Total value of output £	3,009,909	2,605,704	710,223	772,696	706,023	137,423	7,941,978
Value added in process of manufacture £	1,693,771	1,373,660	471,504	407,406	354,172	77,244	4,377,757

(a) Includes malting.

(ii) *Development in Australia, 1922-23 to 1926-27.* The following table shows the progress of this industry during the past four years:—

BREWERIES.—AUSTRALIA, 1922-23 TO 1926-27.

Items.	1922-23.	1923-24.	1924-25.	1925-26.	1926-27.
Number of breweries	61	57	56	52	48
Number of employees	3,774	3,854	3,965	3,812	3,844
Actual horse-power of engines used	11,492	12,761	13,403	13,246	13,143
Approx. value of land and buildings £	1,710,321	1,778,442	1,996,644	2,141,886	2,205,779
Approx. value of plant and machinery £	2,140,654	2,247,811	2,506,284	2,595,955	2,710,319
Total amount of wages paid £	1,027,689	1,063,250	1,093,323	1,194,424	1,173,086
Value of fuel used £	104,324	197,598	241,918	283,300	248,780
Value of raw material worked up £	2,913,409	2,787,891	3,019,592	3,577,212	3,315,441
Value of final output £	6,872,682	6,887,462	7,117,029	7,842,180	7,941,978
Value added in process of manufacture £	3,764,940	3,901,975	3,855,519	3,981,668	4,377,757

The main feature in the history of the brewing industry, which was established at an early date in Australia, has been the change from the small local brewery in every township of moderate size to the large centralized city brewery. This, however, has not been so much in evidence during the period embraced in the above table, the reduction of the number of establishments during recent years being mainly due to several large amalgamations. The total value of output of breweries in Australia increased from £6,872,682 in 1922-23 to £7,941,978 in 1926-27, and the quantity of ale and stout brewed rose from 66,491,395 to 73,667,050 gallons during the same period. The consumption of ale and stout per head of the population remains fairly constant in Australia, and for the year 1926-27 averaged nearly 1½ gallons.

(iii) *Materials Used and Production.* The table below shows the quantity of raw material used and the quantity and value of ale and stout brewed in each State during the year 1926-27.

BREWERIES.—MATERIALS USED AND PRODUCTION, 1926-27.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
RAW MATERIAL USED.							
Malt .. bushels	929,292	814,298	215,818	207,005	173,028	37,770	2,377,211
Hops .. lb.	897,046	831,317	203,826	226,187	191,829	61,477	2,411,682
Sugar .. cwt.	106,743	121,668	25,849	28,943	28,015	4,307	315,523

RAW MATERIAL USED PER 1,000 GALLONS OF ALE AND STOUT PRODUCED.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
Malt .. bushels	33·95	30·75	32·33	31·62	30·81	38·85	32·27
Hops .. lb.	32·77	31·39	30·53	34·55	34·16	63·23	32·74
Sugar .. cwt.	3·90	4·59	3·87	4·42	4·99	4·43	4·28

ALE AND STOUT BREWED.

Quantity	gallons	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
Value(a)	£	27,372,445	26,483,760	6,675,968	6,547,460	5,815,201	972,218	73,667,050
		2,964,969	2,905,704	710,223	767,154	679,904	137,307	7,865,261

(a) Exclusive of excise duty.

21. *Distilleries.*—Distilleries are located in all the States with the exception of Western Australia and Tasmania. Complete details, however, are not obtainable, as the particulars for New South Wales factories are not available. The materials used in all distilleries during 1926-27 comprised 833,645 cwt. of molasses, 212,022 bushels of malt, and 11,016,665 gallons of wine, while the output of distilled spirit amounted to 6,475,922 proof gallons.

22. *Tobacco, etc., Factories.*—(i) *Details for each State, 1926-27.* During the year 1926-27 there were twenty-four establishments in which the manufacture of tobacco cigars, and cigarettes was carried on. There were no factories engaged in this industry in Queensland or Tasmania.

TOBACCO, CIGAR, AND CIGARETTE FACTORIES, 1926-27.

Items.	N.S.W.	Victoria.	S. Aust.	W. Aust.	Australia.
Number of factories	9	12	1	2	24
Number of employees	2,464	1,701	24	97	4,286
Actual horse-power and engines employed	997	615	..	33	1,645
Approx. value of land and buildings	£ 410,698	251,450	(a)	(a)	b 675,689
Approx. value of plant and machinery	£ 335,782	168,090	(a)	(a)	b 512,441
Total amount of wages paid during year	£ 449,816	347,636	(a)	(a)	b 812,300
Value of fuel used	£ 12,972	8,422	(a)	(a)	b 22,032
Value of raw material worked up ..	£ 3,354,552	1,147,448	(a)	(a)	b 4,523,086
Total value of output	£ 4,817,651	1,921,004	(a)	(a)	b 6,800,026
Value added in process of manufacture	£ 1,450,127	765,134	(a)	(a)	b 2,254,908

(a) Not available for publication.

(b) Including South Australia and Western Australia.

(ii) *Development in Australia.* This industry was among the first to be established in Australia. In 1861 New South Wales had eleven factories, producing 177,744 lb. of manufactured tobacco; in the same year there was one factory in Victoria, but the quantity of tobacco manufactured is not available. The Australian market has

for many years been largely supplied with local manufactures. The imports into Australia during 1926-27 comprised—manufactured tobacco 1,273,873 lb., cigars 121,779 lb., and cigarettes 744,571 lb., while the quantities manufactured in Australian factories were respectively 15,008,232 lb., 409,623 lb., and 5,309,319 lb. The following tables show the development of the tobacco manufacturing industry in Australia during recent years:—

TOBACCO, CIGAR, AND CIGARETTE FACTORIES.—AUSTRALIA,
1922-23 TO 1926-27.

Items.	1922-23.	1923-24.	1924-25.	1925-26.	1926-27.
Number of factories	29	28	27	26	24
Number of employees	4,319	4,312	4,421	4,325	4,286
Actual horse-power of engines used	1,466	1,609	1,676	1,713	1,645
Approx. value of land and buildings	£ 493,597	531,273	620,694	640,239	675,689
Approx. value of plant and machinery	£ 427,825	478,477	497,034	508,100	512,441
Total amount of wages paid	£ 734,070	742,697	781,471	800,615	812,300
Value of fuel used	£ 20,612	18,954	27,172	28,053	22,032
Value of raw material worked up	£ 4,603,218	4,500,304	4,613,357	4,589,301	4,523,086
Value of final output	£ 6,690,701	6,645,451	6,927,087	6,892,332	6,800,026
Value added in process of manufacture	£ 2,066,871	2,126,193	2,286,558	2,274,978	2,254,908

LEAF USED AND PRODUCTION.

Leaf used	1,000 lb.	17,104	17,104	18,073	18,661	18,610
Tobacco made	14,636	14,145	14,978	15,405	15,008
Cigars	483	431	470	456	410
Cigarettes	4,384	4,794	4,873	5,134	5,309

Although the manufacturing side of the tobacco industry is so firmly established in Australia, the production of locally-grown leaf is comparatively small, and manufacturers are dependent on imported leaf for the supply of their raw material. In this connexion, however, see § 17, 4, p. 713, Chapter XVII., *Agricultural Production*. The respective quantities of Australian and imported leaf used during 1926-27 were 1,212,794 and 17,396,718 lb.

23. *Woollen, and Tweed Mills.*—(i) *Details for each State, 1926-27.* The manufacture of woollens and tweeds was established in Australia at an early period in its history, and was under Government control, the first record in New South Wales dating back to 1801, when a few blankets were made by the convicts; the first record in Victoria was in 1867. The following table, which gives particulars for 1926-27 shows that the industry is now well established:—

WOOLLEN AND TWEED MILLS, 1926-27.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W.A.	Tas.	Australia.
Number of factories	14	27	2	3	1	6	53
Number of employees	2,704	6,717	354	232	126	935	11,068
Actual horse-power of engines employed	5,222	13,995	714	540	300	1,670	22,441
Approx. value of land and buildings	£ 498,402	1,047,445	(a)	(a)	(a)	246,952	b 1,892,108
Approx. value of plant and machinery	£ 959,608	2,255,445	(a)	(a)	(a)	314,163	b 3,779,316
Total amount of wages paid during year	£ 398,769	997,217	(a)	(a)	(a)	115,978	b 1,607,595
Value of fuel used	£ 56,170	151,998	(a)	(a)	(a)	27,014	b 251,093
Value of raw material worked up	£ 814,260	2,361,770	(a)	(a)	(a)	294,250	b 3,681,164
Total value of output	£ 1,488,390	4,581,445	(a)	(a)	(a)	541,184	b 6,986,296
Value added in process of manufacture	£ 612,960	2,067,677	(a)	(a)	(a)	219,920	b 3,054,039

(a) Information not available for publication.

(b) Including Queensland, South Australia and Western Australia.

(ii) *Development in Australia, 1922-23 to 1926-27.* The progress of woollen and tweed milling in Australia during the last four years is shown in the following table:—

WOOLLEN AND TWEED MILLS.—AUSTRALIA, 1922-23 TO 1926-27.

Items.	1922-23.	1923-24.	1924-25.	1925-26.	1926-27.
Number of factories	40	47	49	50	53
Number of employees	6,928	7,532	7,941	8,735	11,068
Actual horse-power of engines used	12,347	15,406	16,310	18,426	22,441
Approx. value of land and buildings	£ 1,131,366	1,426,493	1,620,318	1,659,446	1,892,108
Approx. value of plant and machinery	£ 2,428,133	3,043,586	3,297,229	3,247,602	3,779,316
Total amount of wages paid	£ 991,801	1,043,298	1,102,718	1,222,596	1,607,595
Value of fuel used	£ 127,573	128,487	165,724	203,237	251,093
Value of raw material worked up	£ 2,511,204	2,824,178	3,197,773	3,400,316	3,681,164
Total value of output	£ 4,712,984	4,863,657	5,071,124	5,758,267	6,986,296
Value added in process of manufacture	£ 2,074,187	1,910,994	1,707,622	2,154,714	3,054,039

(iii) *Quantity and Value of Production.* The production consists chiefly of tweed cloths, flannels, rugs, blankets and yarn, all of which have acquired a reputation for purity and durability. Detailed particulars for the several States are not available for publication. The total length of tweed and cloth manufactured in Australia during 1926-27 was 7,943,840 yards. In New South Wales 2,378,555 yards of tweed and cloth, and in Victoria, 4,854,389 yards were manufactured. The production of flannel amounted to 9,454,030 yards, while blankets, shawls, and rugs to the number of 1,141,510 were manufactured. The output of yarn reported was 4,359,672 lb., most of which was produced in Victoria.

In addition to the woollen and tweed factories, there were 255 hosiery and knitting mills operating throughout Australia during 1926-27. These establishments provided employment for 10,020 persons, of whom 8,087 were females, and the value of their output amounted to £5,310,228.

Cotton ginning has been carried on intermittently in the Northern States, and the recent development in cotton growing has led to the establishment of modern ginning plants at convenient centres in Queensland. In New South Wales during 1923-24 the first up-to-date mill for the manufacture of cotton goods was erected. There were seven establishments treating cotton in Australia during 1926-27, and these employed 744 hands, while the value of the output was £558,204.

24. *Boot Factories.*—(i) *Boot and Shoe Factories, 1926-27.* Among the manufacturing industries of Australia the boot and shoe industry holds an important place in regard to employment afforded and extent of output. In certain items the operations of these factories have been rather obscured in recent years by the inclusion in the returns of a large number of repair establishments, but this difficulty has been avoided by the collection of separate statistics for each industry, and in the following table the details relate to boot and shoe factories as distinct from those devoted to repairing and bespoke work:—

BOOT AND SHOE FACTORIES, 1926-27.

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories	104	204	18	18	10	6	360
Number of employees	5,469	12,192	1,252	636	431	237	20,217
Actual horse-power of engines employed	1,806	3,366	296	279	213	70	6,030
Approx. value of land and buildings	£ 558,528	863,390	59,591	66,802	43,264	13,615	1,610,790
Approx. value of plant and machinery	£ 261,264	602,050	40,438	32,945	31,749	7,602	976,048
Total amount of wages paid during year	£ 896,991	2,009,337	193,177	94,783	58,444	31,943	3,284,675
Value of fuel used	£ 13,350	40,565	2,183	1,800	1,134	787	59,819
Value of raw material worked up	£ 1,280,907	3,097,875	242,628	139,118	117,919	50,063	4,928,510
Total value of output	£ 2,587,199	6,105,072	494,337	254,406	204,344	94,121	9,739,479
Value added in process of manufacture	£ 1,292,942	2,966,632	249,526	113,488	85,291	43,271	4,751,156

(ii) *Boot repairing, including bespoke work.* The introduction of small power plants in repairing shops has brought this class of establishment within the meaning of a factory for statistical purposes. These shops have spread rapidly throughout the Commonwealth, and during 1926-27 the number recorded amounted to 931, in which 1,976 hands were employed. The sum of £194,913 was distributed in salaries and wages, and the total output value was £846,363.

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

BOOT AND SHOE FACTORIES.—OUTPUT, 1926-27.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
QUANTITY (,000 OMITTED).							
Boots and shoes .. pairs	3,970	8,147	728	452	357	152	13,806
Slippers "	1,129	2,100	12	25	366	..	3,632
Uppers (α) "	41	49	2	8	1	3	104
VALUE.							
Boots and shoes .. £	2,361,895	5,408,922	489,338	231,042	188,195	93,326	8,772,718
Slippers £	106,093	333,217	3,889	5,943	22,112	..	471,254
Uppers (α) £	13,624	11,928	1,207	4,361	1,175	796	33,091

(α) Made for other than factory use.

25. Clothing (Tailoring and Slop) Factories.—(i) *Details for each State, 1926-27.* The importance of this industry in the several States is shown in the following table :—

CLOTHING (TAILORING AND SLOP) FACTORIES, 1926-27.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories	538	530	135	144	78	40	1,465
Number of employees	11,835	9,182	3,023	2,499	1,308	562	28,409
Actual horse-power of engines employed	823	546	234	125	79	26	1,833
Approximate value of land and buildings £	2,060,204	1,228,725	351,793	427,455	215,995	84,550	4,368,722
Approximate value of plant and machinery £	156,981	106,860	51,645	28,336	18,584	5,517	367,923
Total amount of wages paid during year £	1,539,226	1,196,959	358,082	299,478	161,212	59,983	3,664,940
Value of fuel used £	24,884	21,916	7,162	6,727	2,987	1,066	64,742
Value of raw material worked up .. £	2,218,442	2,000,299	490,215	425,291	264,763	57,953	5,456,963
Total value of output £	4,678,121	3,807,553	1,070,852	896,601	511,790	153,366	11,118,283
Value added in process of manufacture £	2,434,795	1,785,338	573,475	464,583	244,040	94,347	5,596,578

(ii) *Development in Australia, 1922-23 to 1926-27.* The tailoring and slop branch of the clothing industry has made little progress during the past four years. The number of factories has increased and their equipment has been added to, but the persons employed have declined and the value of raw material used and output have remained practically constant. It is of interest to note that employment in this industry is approximately 2,000 less than the highest pre-war figure. Details for the past five years are as follows :—

**CLOTHING (TAILORING AND SLOP) FACTORIES.—AUSTRALIA,
1922-23 TO 1926-27.**

Items.	1922-23.	1923-24.	1924-25.	1925-26.	1926-27.
Number of factories	1,418	1,440	1,472	1,481	1,465
Number of employees	28,822	28,148	28,600	28,294	28,409
Actual horse-power of engines used	1,617	1,655	1,823	1,787	1,833
Approx. value of land and buildings .. £	3,445,473	3,899,477	4,291,681	4,403,707	4,368,772
Approx. value of plant and machinery .. £	328,347	358,603	374,079	376,509	367,923
Total amount of wages paid £	3,370,258	3,402,069	3,482,436	3,634,760	3,664,940
Value of fuel used £	56,194	66,492	58,948	65,638	64,742
Value of raw material worked up £	5,521,496	5,257,702	5,407,676	5,582,354	5,456,963
Total value of output £	10,719,900	10,527,577	10,881,684	11,274,588	11,118,283
Value added in process of manufacture .. £	5,142,210	5,213,383	5,415,065	5,626,596	5,596,578

26. Dressmaking and Millinery Establishments.—(i) *Details for each State, 1926-27.* Particulars of dressmaking and millinery establishments are given in the following table:—

DRESSMAKING AND MILLINERY ESTABLISHMENTS, 1926-27.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia
Number of factories	257	505	36	52	45	17	912
Number of employees	3,694	8,820	807	1,063	698	169	15,051
Actual horse-power of engines employed	141	630	14	45	72	4	906
Approximate value of land and buildings £	913,364	1,345,700	48,222	107,894	69,620	13,732	2,498,532
Approximate value of plant and machinery £	38,844	110,365	3,860	7,487	9,276	1,403	171,235
Total amount of wages paid during year £	350,606	923,184	62,000	92,927	66,366	12,390	1,507,373
Value of fuel used £	4,322	14,984	329	1,412	875	249	22,171
Value of raw material worked up £	555,810	1,912,824	90,116	136,557	129,171	16,349	2,840,827
Total value of output £	1,195,195	3,374,749	176,622	292,967	219,807	35,059	5,294,399
Value added in process of manufacture £	635,063	1,446,941	86,177	154,998	89,761	18,461	2,431,401

(ii) *Development in Australia, 1922-23 to 1926-27.* The development of dressmaking and millinery establishments in Australia during the past four years is shown in the following table:—

DRESSMAKING AND MILLINERY ESTABLISHMENTS.—AUSTRALIA, 1922-23 TO 1926-27.

Items.	1922-23.	1923-24.	1924-25.	1925-26.	1926-27.
Number of factories	922	926	922	898	912
Number of employees	16,213	15,623	14,823	14,703	15,051
Actual horse-power of engines used	693	701	699	854	906
Approximate value of land and buildings £	1,732,865	2,047,288	2,270,977	2,308,405	2,498,532
Approximate value of plant and machinery £	150,242	155,011	166,102	173,368	171,235
Total amount of wages paid £	1,435,885	1,448,046	1,383,138	1,462,410	1,507,373
Value of fuel used £	18,252	18,680	19,042	21,344	22,171
Value of raw material worked up £	2,514,140	2,658,051	2,648,815	2,805,062	2,840,827
Value of final output £	4,815,441	4,999,412	4,920,650	5,243,483	5,294,399
Value added in process of manufacture £	2,283,049	2,322,681	2,252,793	2,417,077	2,431,401

27. Electrotyping, Stereotyping, Printing, and Binding Works.—(i) *Details for each State, 1926-27.* Printing ranks high in importance among the industries of Australia. It affords employment for more than 27,000 employees, and pays nearly £6,000,000 in salaries and wages. During 1926-27 the total value of the output amounted to £16,000,811.

The following table gives particulars of these industries in each State for the year 1926-27:—

ELECTROTYPING, STEREOTYPING, PRINTING, AND BINDING ESTABLISHMENTS, 1926-27.

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories	497	482	129	94	84	21	1,307
Number of employees	10,225	9,304	3,607	1,857	1,381	685	27,059
Actual horse-power of engines employed	8,805	6,399	2,129	1,608	1,304	336	20,581
Approximate value of land and buildings £	3,185,802	2,140,620	747,050	482,216	362,481	94,730	7,012,899
Approximate value of plant and machinery £	2,989,806	2,223,455	575,257	330,952	321,018	121,224	6,562,612
Total amount of wages paid during year £	2,310,886	1,967,787	800,258	397,818	300,854	157,175	5,934,778
Value of fuel used £	81,076	56,943	29,872	13,763	10,638	5,356	197,648
Value of raw material worked up £	2,428,936	2,242,227	536,884	421,495	249,437	90,712	5,969,691
Total value of output £	6,428,247	5,512,524	1,855,168	1,051,553	840,368	312,951	16,000,811
Value added in process of manufacture £	3,918,235	3,213,354	1,288,412	616,295	580,293	216,883	9,833,472

(ii) *Development in Australia, 1922-23 to 1926-27.* The development of electrotyping, stereotyping, printing, and binding in Australia since 1922-23 is shown in the following table:—

**ELECTROTYPING, STEREOTYPING, PRINTING AND BINDING ESTABLISHMENTS.—
AUSTRALIA, 1922-23 TO 1926-27.**

Items.	1922-23.	1923-24.	1924-25.	1925-26.	1926-27.
Number of establishments	1,203	1,194	1,238	1,254	1,307
Number of employees	25,857	25,162	25,279	25,213	27,059
Actual horse-power of engines used ..	15,262	17,225	18,203	19,048	20,581
Approximate value of land and buildings ..	5,134,668	5,260,806	5,709,421	6,258,485	7,012,899
Approximate value of plant and machinery £	4,613,369	5,132,411	5,624,487	5,961,076	6,562,612
Total amount of wages paid	£ 5,182,861	5,253,593	5,232,040	5,526,681	5,934,778
Value of fuel used	£ 146,889	148,927	165,046	185,513	197,648
Value of raw material worked up	£ 5,658,994	4,879,459	4,904,536	5,277,369	5,969,691
Total value of output	£ 15,382,659	14,577,413	13,621,903	14,493,764	16,000,811
Value added in process of manufacture ..	£ 9,576,776	9,549,027	8,552,321	9,030,882	9,833,472

The figures shown in the above table for some years were considerably augmented by the inclusion of all details in respect of the newspapers industry, but from 1924-25 onwards only the cost of printing and publishing the papers has been taken into account in computing factory returns.

23. *Motor and Cycle Works.*—(i) *Motors and Motor Cycle and Bicycle Building and Repairing.* The industries catering for the motor trade comprise the principal branches of manufacture in Class XI. They have made rapid progress, and the statistical classification now separates the assembling and repairing of motors from the body building section. The returns for the former industry during the year 1926-27 are as follows:—

**MOTORS AND MOTOR CYCLE, AND BICYCLE BUILDING AND REPAIRING,
1926-27.**

Item.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories	803	599	80	122	88	62	1,754
Number of employees	6,228	3,939	759	1,527	823	463	13,739
Actual horse-power of engines employed	3,174	2,237	463	465	406	237	6,982
Approximate value of land and buildings	£ 2,699,187	1,175,085	397,159	564,586	334,711	156,846	5,327,574
Approximate value of plant and machinery	£ 507,409	299,580	68,051	110,759	61,334	26,855	1,073,988
Total amount of wages paid during year	£ 1,056,651	675,674	144,453	250,578	151,414	71,742	2,350,512
Value of fuel used	£ 50,992	31,771	7,409	10,227	5,009	2,499	107,907
Value of raw material worked up	£ 625,411	96,977	102,094	210,963	77,031	29,685	1,142,161
Total value of output	£ 2,361,546	1,129,733	346,432	591,961	310,479	141,631	4,881,782
Value added in process of manufacture	£ 1,685,143	1,000,985	236,929	370,771	228,439	109,447	3,631,714

(ii) *Motor Body Building and Repairing.* Pending the manufacture of the complete motor car in Australia, special attention has been paid to the body building industry. This industry came into being during the war years, and assisted by a substantial tariff has grown apace with the development of motoring in this country. Approximately 90,000 bodies were manufactured during 1926-27, and the majority of cars now purchased is fitted with Australian bodies. Details of the factories engaging in this trade during 1926-27 are as follows:—

MOTOR BODY BUILDING AND REPAIRING, 1926-27.

Item.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Australia.
Number of factories	53	72	15	11	5	..	156
Number of employees	2,045	2,023	446	4,596	173	..	9,288
Actual horse-power of engines employed	1,409	962	193	3,011	46	..	5,621
Approximate value of land and buildings £	637,547	622,075	59,238	532,474	40,560	..	1,891,894
Approximate value of plant and machinery £	100,678	195,480	14,646	410,974	5,632	..	727,410
Total amount of wages paid during year £	435,006	469,467	84,350	955,658	32,938	..	1,977,419
Value of fuel used £	9,776	10,313	1,055	33,460	617	..	55,221
Value of raw material worked up £	458,762	655,674	87,875	1,806,040	42,368	..	3,050,719
Total value of output £	914,143	1,359,157	205,999	3,092,333	84,263	..	5,636,495
Value added in process of manufacture £	475,605	693,170	117,069	1,252,833	41,878	..	2,580,555

29. Furniture and Cabinet Making and Billiard Table Making Factories.—These industries constitute the principal manufactures in Class XIII. The following table gives particulars for each State :—

FURNITURE AND CABINET MAKING AND BILLIARD TABLE MAKING FACTORIES, 1926-27.

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories	275	347	79	62	50	28	841
Number of employees	4,073	3,562	1,330	1,160	734	275	11,134
Actual horse-power of engines employed	4,272	3,581	1,291	1,852	774	401	12,171
Approximate value of land and buildings £	776,631	767,065	199,781	151,529	126,737	39,253	2,060,996
Approximate value of plant and machinery £	228,513	190,230	72,494	82,304	38,372	19,752	631,665
Total amount of wages paid during year £	826,733	639,051	268,768	208,187	131,276	40,667	2,114,632
Value of fuel used £	22,207	22,705	8,495	7,131	3,170	1,513	65,221
Value of raw material used £	1,168,043	815,015	301,629	237,214	179,127	27,179	2,728,207
Total value of output £	2,520,895	1,902,991	714,124	548,904	376,914	94,736	6,158,564
Value added in process of manufacture £	1,330,645	1,065,271	404,000	304,559	194,617	66,044	3,365,136

30. Electric Light and Power Works.—The increased demand for electrical energy has been responsible for considerable development in the electric light and power works of Australia during recent years. Since 1922-23 the production of electric light and power has increased from 984,688,314 to 1,987,550,648 British units, or by more than 101 per cent. Particulars for the years 1926-27 are as follows :—

ELECTRIC LIGHT AND POWER WORKS, 1926-27.

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories	126	86	30	25	37	9	313
Number of employees	2,034	1,120	873	1,226	290	133	5,676
Actual horse-power of engines employed	271,239	219,626	69,235	94,253	33,075	71,195	758,673
Approximate value of land and buildings £	2,319,937	1,809,715	237,997	493,870	173,327	27,100	5,061,996
Approximate value of plant and machinery £	5,546,535	5,144,035	2,268,658	1,577,313	689,108	3,006,111	18,231,810
Total amount of wages paid during year £	614,886	322,214	326,575	350,559	73,423	33,789	1,721,446
Value of fuel used £	1,496,046	682,482	163,875	246,788	214,674	4,700	2,808,565
Total value of output £	4,271,646	1,768,514	931,263	1,026,332	491,393	227,570	8,716,718

31. Gas and Coke Works.—(i) *Details for each State, 1926-27.* Gas works are in operation in nearly all the chief towns in Australia. In New South Wales there are eleven and in Queensland two coke factories which are worked as separate industries. The subjoined table gives particulars of gas and coke works in each State for the year 1926-27:—

GAS AND COKE WORKS, 1926-27.

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories	59	34	18	8	5	2	126
Number of employees	2,465	1,115	745	749	89	114	5,277
Actual horse-power of engines employed	8,582	3,142	581	1,117	211	157	13,790
Approximate value of land and buildings £	1,121,482	570,485	232,703	26,160	(a)	(a)	62,080,994
Approximate value of plant and machinery £	3,861,593	2,119,435	1,214,960	695,076	(a)	(a)	68,215,312
Total amount of wages paid during year £	672,079	303,507	290,385	205,434	(a)	(a)	61,524,596
Value of fuel used £	228,158	144,356	17,384	40,229	(a)	(a)	6 444,952
Value of raw material used £	2,043,471	1,453,765	192,107	249,270	(a)	(a)	64,024,134
Total value of output £	4,268,066	2,701,048	544,795	672,609	(a)	(a)	68,425,810
Value added in process of manufacture £	1,996,437	1,097,927	335,304	383,110	(a)	(a)	63,956,724

(a) Information not available for publication.

(b) Including Western Australia and Tasmania.

(ii) *Coal Used and Production, 1926-27.* The following table shows the quantity and value of the production of gas and coke works in each State during the year 1926-27:—

GAS AND COKE WORKS.—COAL USED AND PRODUCTION, 1926-27.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
COAL USED.							
Coal tons	1,681,008	442,391	108,460	100,418	(a)	(a)	b 2,363,756
PRODUCTS.							
Gas .. 1,000 cubic feet	10,279,605	5,855,817	1,385,030	1,465,490	(a)	(a)	619,478,569
Coke tons	1,086,604	283,998	62,864	64,655	(a)	(a)	b 1,512,540
VALUE.							
Gas £	2,113,511	1,298,984	541,749	480,251	(a)	(a)	b 4,626,218
Coke £	1,604,966	458,717	56,805	114,214	(a)	(a)	b 2,265,657

(a) Not available for publication.

(b) Including Western Australia and Tasmania.

In order to cope with the general industrial expansion, the production of gas increased from 17,005,977 cubic feet in 1922-23 to 19,478,569 cubic feet in 1926-27, while the output of coke rose from 1,104,639 to 1,512,540 tons during the same period.