

**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, 1925-26 to 1929-30.—The following table gives the number of factories in each State for the years 1925-26 to 1929-30 :—

**FACTORIES.—NUMBER IN EACH STATE, 1925-26 TO 1929-30.**

Year.(a)	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
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
1927-28 ..	8,362	8,245	2,118	1,860	1,398	792	22,775
1928-29 ..	8,465	8,197	2,156	1,844	1,469	785	22,916
1929-30 ..	8,208	8,195	2,172	1,814	1,466	845	22,700

(a) See general note above.

3. Classification of Factories, Australia, 1925-26 to 1929-30.—The following table shows the number of factories in Australia for each year from 1925-26 to 1929-30 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, 1925-26 TO 1929-30.**

Class of Industry.	1925-26.	1926-27.	1927-28.	1928-29.	1929-30.
	(a)				
I. Treating raw material, product of agricultural and pastoral pursuits, etc. . . . .	No. 751	No. 710	No. 658	No. 627	No. 615
II. Treating oils and fats, animal, vegetable, etc. . . . .	98	98	95	97	90
III. Processes in stone, clay, glass, etc. . . . .	900	910	896	877	879
IV. Working in wood . . . . .	2,552	2,500	2,429	2,428	2,373
V. Metal Works, machinery, etc. . . . .	2,656	2,650	2,677	2,680	2,636
VI. Connected with food and drink, etc. . . . .	2,840	2,809	3,928	3,904	3,938
VII. Clothing and textile fabrics, etc. . . . .	4,635	4,757	4,813	4,871	4,741
VIII. Books, paper, printing, and engraving . . . . .	1,511	1,533	1,556	1,562	1,592
IX. Musical instruments, etc. . . . .	48	55	55	56	54
X. Arms and explosives . . . . .	12	12	12	13	12
XI. Motor and other road vehicles and accessories . . . . .	2,499	2,626	2,707	2,794	2,652
XII. Ship and boat building and repairing . . . . .	89	88	90	90	91
XIII. Furniture, bedding, and upholstery . . . . .	1,223	1,273	1,303	1,267	1,191
XIV. Drugs, chemicals, and by-products . . . . .	333	333	330	320	333
XV. Surgical and other scientific instruments . . . . .	93	99	106	106	108
XVI. Jewellery, timepieces, and plated ware . . . . .	270	269	264	273	264
XVII. Heat, light, and power . . . . .	436	451	469	462	472
XVIII. Leatherware, n.e.i. . . . .	122	(b) 279	(b) 322	(b) 342	(b) 369
XIX. Other Industries, n.e.i. . . . .	174	67	70	87	90
Total .. .. .	21,242	21,579	22,775	22,916	22,700

(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 addition of 1,196 factories during the year 1927-28 is due mainly to the inclusion of 951 bakeries, particulars regarding which industry were incorporated for the first time in the year named. The older tendency to increasing numbers has been checked by the depression and the weeding out of unprofitable enterprises. In spite of the stimulus of high protection and embargo, the number of factories in 1929-30 was less than in 1927-28.

4. Classification of Factories, States, 1929-30.—The following table shows the number of factories in each State during 1929-30 classified according to the nature of the industry:—

#### FACTORIES.—CLASSIFICATION, STATES, 1929-30.

Class of Industry.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
I. Treating raw material, product of agricultural and pastoral pursuits, etc. . . . .	No. 157	No. 234	No. 34	No. 78	No. 38	No. 74	No. 615
II. Treating oils and fats animal, vegetable, etc. . . . .	37	26	10	11	5	1	90
III. Processes in stone, clay, glass, etc. . . . .	393	262	50	87	65	22	879
IV. Working in wood . . . . .	853	633	330	147	148	253	2,373
V. Metal works, machinery, etc. . . . .	962	1,022	109	233	178	42	2,636
VI. Connected with food and drink, etc. . . . .	1,200	1,200	682	408	295	153	3,938
VII. Clothing and textile fabrics, etc. . . . .	1,723	2,132	276	303	226	81	4,741
VIII. Books, paper, printing, and engraving . . . . .	613	596	149	115	98	21	1,592
IX. Musical instruments, etc. . . . .	25	20	1	5	3	..	54
X. Arms and explosives . . . . .	3	8	..	1	..	..	12
XI. Motor and other road vehicles and accessories . . . . .	1,131	1,021	197	206	194	103	2,852
XII. Ship and boat building and repairing . . . . .	51	14	6	7	7	6	91
XIII. Furniture, bedding and upholstery . . . . .	424	425	114	92	90	46	1,191
XIV. Drugs, chemicals, and by-products . . . . .	168	102	9	22	18	14	333
XV. Surgical and other scientific instruments . . . . .	30	46	14	6	12	..	108
XVI. Jewellery, timepieces and plated ware . . . . .	82	118	21	21	13	9	264
XVII. Heat, light, and power . . . . .	186	138	48	39	52	9	472
XVIII. Rubber goods and leatherware, n.e.l. . . . .	130	162	16	31	20	10	369
XIX. Other Industries n.e.l. . . . .	40	36	7	2	4	1	90
Total . . . . .	8,208	8,195	2,172	1,814	1,466	845	22,700

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

1. States, 1929-30.—The following table shows, for each State, the number of factories classified according to the number of hands employed, during 1929-30:—

#### FACTORIES.—CLASSIFICATION ACCORDING TO NUMBER OF EMPLOYEES, 1929-30.

No. of Persons Employed in each Factory.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
NUMBER OF FACTORIES.							
Under 4 ..	2,603	2,770	468	434	527	210	7,012
4 ..	753	919	209	194	148	112	2,335
5 to 10 ..	2,235	2,049	677	622	404	316	6,303
11 to 20 ..	1,104	1,013	377	265	165	114	3,038
21 to 50 ..	953	880	258	195	148	57	2,491
51 to 100 ..	297	309	93	72	54	22	847
Over 100 ..	263	255	90	32	20	14	674
Total ..	8,208	8,195	2,172	1,814	1,466	845	22,700

All States show an increase compared with 1928-29 in the number of small factories, but, except Tasmania, a decrease in the larger factories. The falling-off was most marked in New South Wales.

CLASSIFICATION OF FACTORIES ACCORDING TO NUMBER OF EMPLOYEES. 601

The relative importance of large and small factories is better shown by a classification of hands employed according to the size of factory in which they work.

FACTORIES.—CLASSIFICATION OF EMPLOYEES, ACCORDING TO SIZE OF FACTORY, 1929-30—*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 ..	5,210	4,940	1,026	956	1,043	476	13,651
4 ..	3,012	3,676	836	776	592	448	9,340
5 to 10 ..	15,495	14,124	4,712	4,288	2,736	2,164	43,519
11 to 20 ..	16,023	14,755	5,465	3,852	2,471	1,628	44,194
21 to 50 ..	30,214	27,232	7,845	6,236	4,735	1,715	77,977
51 to 100 ..	20,388	21,310	6,412	5,077	3,824	1,469	58,480
Over 100 ..	77,348	64,972	19,823	11,974	4,946	4,323	183,386
<b>Total ..</b>	<b>167,690</b>	<b>151,009</b>	<b>46,119</b>	<b>33,159</b>	<b>20,347</b>	<b>12,223</b>	<b>430,547</b>

2. Australia, 1925-26 to 1929-30.—The proportion of total employees which is employed in factories with more than 100 hands-increased up to 1925-26, but has since remained steady at a little over 43 per cent. with a decline in 1929-30.

FACTORIES.—CLASSIFICATION ACCORDING TO NUMBER OF EMPLOYEES, AUSTRALIA, 1925-26 TO 1929-30.

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.
1925-26—								
Number ..	17,053	111,653	3,455	143,724	724	195,543	21,242	450,920
Average per establishment ..	6.55	41.48	41.48	41.48	270.09	21.23	21.23	21.23
Percentage on total ..	80.28	24.76	16.31	31.87	3.41	43.37	100.00	100.00
1926-27—								
Number ..	17,259	111,545	3,587	151,939	733	204,303	21,579	467,247
Average per establishment ..	6.46	42.19	42.19	42.19	278.80	21.65	21.65	21.65
Percentage on total ..	79.98	23.87	16.62	32.39	3.40	43.74	100.00	100.00
1927-28—								
Number ..	18,502	116,930	3,566	148,001	707	198,365	22,775	464,196
Average per establishment ..	6.32	41.76	41.76	41.76	280.57	20.38	20.38	20.38
Percentage on total ..	81.24	25.19	15.66	32.08	3.10	42.73	100.00	100.00
1928-29—								
Number ..	18,714	115,457	3,477	144,127	725	201,607	22,910	461,191
Average per establishment ..	6.17	41.45	41.45	41.45	278.08	20.13	20.13	20.13
Percentage on total ..	81.66	25.03	15.17	31.25	3.17	43.71	100.00	100.00
1929-30—								
Number ..	18,688	110,704	3,338	136,457	674	183,386	22,700	430,547
Average per establishment ..	5.92	40.88	40.88	40.88	272.09	18.97	18.97	18.97
Percentage on total ..	82.33	25.71	14.70	31.69	2.97	42.00	100.00	100.00

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

### § 3. Power used in Factories.

1. States, 1929-30.—The following table shows the number of factories using steam, gas, oil, electricity, or water, and the horse-power used during 1929-30 :—

FACTORIES.—HORSE-POWER USED, 1929-30.

State.	Number of Establishments.			Horse-power Used.					
	Using Power.	Others.	Total.	Steam.	Gas.	Oil.	Elec- tricity.	Water.	Total.
	No.	No.	No.	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.
N.S.W. ..	7,588	620	8,208	490,116	11,919	19,527	249,606	11,351	782,519
Victoria ..	7,405	790	8,195	259,618	9,671	13,993	155,911	26,546	465,739
Queensland ..	1,805	367	2,172	172,566	11,881	11,584	34,743	10	230,784
S. Australia ..	1,611	203	1,814	116,163	6,162	8,756	45,435	3	176,519
W. Australia ..	1,273	193	1,466	56,610	3,993	5,261	25,204	25	91,093
Tasmania ..	774	71	845	6,668	69	1,508	57,390	76,893	142,528
<b>Australia ..</b>	<b>20,456</b>	<b>2,244</b>	<b>22,700</b>	<b>1,101,741</b>	<b>43,695</b>	<b>60,629</b>	<b>568,289</b>	<b>114,828</b>	<b>1,889,182</b>

Factories in Australia include electric light and power works, and there is consequently a large amount of duplication in the above table. Practically all the horse-power and most of the steam-power is used in generating electric-power and light, and the power so produced is counted again under the heading of electricity. The actual amount of duplication cannot be given for all States, but a fair measure of the amount of power used in factories (in the common sense) is given by deducting the total of Class XVII., Heat, Light and Power, from the gross total for all factories. This is done in the last column of the table below. It must not be inferred that the whole of this deduction is a duplication. Some of it represents the production of light for general purposes and an appreciable amount of the power is not used in factories, but on farms or in private houses.

2. Australia, 1925-26 to 1929-30.—The following table shows the horse-power used in connexion with factories in Australia during each of the last five years :—

FACTORIES.—HORSE-POWER USED, AUSTRALIA, 1925-26 TO 1929-30.

Year. (a)	Number of Establishments.		Horse-power Used.						Total (b)	
	Using Power.	Others.	Steam.	Gas.	Oil.	Elec- tricity.	Water.	Gross.	Less Heat Light and Power Works.	
	No.	No.	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.	
1925-26 ..	18,358	2,884	753,010	60,645	24,116	425,417	72,014	1,335,202	668,526	
1926-27 ..	18,916	2,663	853,265	55,722	32,459	461,789	71,881	1,475,116	695,230	
1927-28 ..	19,926	2,849	879,082	52,351	43,133	507,163	74,580	1,556,309	730,454	
1928-29 ..	20,304	2,612	932,483	49,781	50,197	537,670	109,183	1,679,314	753,991	
1929-30 ..	20,456	2,244	1,101,741	43,695	60,629	568,289	114,828	1,889,182	769,576	

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

The last column of the above table, which may be called roughly the net power used in factories, shows an average increase of about 30,000 horse-power per annum or rather over 4 per cent. per annum for the last five years. The net horse-power per employee increased from 1.4 in 1924-25 to 1.6 in 1928-29, but the decline in hands employed in 1929-30 raised the proportion to 1.8 horse-power per employee in that year. The corresponding figure for the United States was 4.5.

3. **Classes of Industry.**—The following tables give a classification of the horse-power used in factories of different descriptions in each state during 1929-30, and in Australia for the last five years :—

**FACTORIES.—HORSE-POWER USED IN EACH CLASS, 1929-30.**

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aus- tralia.
	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. . .	8,754	8,938	2,021	2,051	847	714	23,325
II. Treating oils and fats, animal, vegetable, etc. . .	2,098	1,479	826	506	143	20	5,072
III. Processes in stone, clay, glass, etc. . .	36,316	24,990	4,413	6,199	4,034	4,180	80,132
IV. Working in wood . . .	26,331	17,831	11,303	4,555	9,783	4,828	74,631
V. Metal works, machinery, etc. . .	98,817	28,784	10,515	11,079	5,926	41,218	196,339
VI. Connected with food and drink, etc. . .	61,738	49,459	61,515	13,979	9,401	5,201	201,293
VII. Clothing and textile fabrics, etc. . .	17,637	27,918	2,382	1,999	1,105	2,178	53,219
VIII. Books, paper, printing, and engraving . . .	13,516	12,882	2,770	1,940	1,841	485	33,434
IX. Musical instruments, etc. . .	2,067	751	3	115	9	..	2,945
X. Arms and explosives . . .	813	865	..	4	..	..	1,682
XI. Motor and other road vehicles and accessories . . .	6,117	6,706	1,024	3,154	879	419	18,299
XII. Ship and boat building and repairing . . .	8,499	1,471	111	110	28	82	10,301
XIII. Furniture, bedding, and upholstery . . .	7,218	5,123	1,697	2,291	1,346	553	18,228
XIV. Drugs, chemicals, and by-products . . .	6,839	7,578	388	5,316	2,049	287	22,457
XV. Surgical and other scientific instruments . . .	110	89	22	18	24	..	263
XVI. Jewellery, timepieces, and plated ware . . .	639	849	59	137	19	18	1,721
XVIII. Rubber goods and leather-ware, n.e.i. . .	10,235	13,460	463	105	74	1,134	25,471
XIX. Other Industries, n.e.i. . .	275	245	160	3	48	23	754
Total less Class XVII . . .	308,019	209,418	99,672	53,561	37,556	61,340	769,566
XVII. Heat, light, and power . . .	474,500	256,321	131,112	122,958	53,537	81,188	1,119,616

**FACTORIES.—HORSE-POWER USED, AUSTRALIA, 1925-26 TO 1929-30.**

Class of Industry.	1925-26. (a)	1926-27.	1927-28.	1928-29.	1929-30.
I. Treating raw material, product of agricultural and pastoral pursuits, etc. . .	23,319	22,162	21,213	21,562	23,325
II. Treating oils and fats, animal, vegetable, etc. . .	4,973	5,597	5,546	6,030	5,072
III. Processes in stone, clay, glass, etc. . .	59,897	66,528	69,403	73,935	80,132
IV. Working in wood . . .	77,233	75,079	75,406	74,465	74,631
V. Metal works, machinery, etc. . .	187,120	195,308	201,496	199,438	196,339
VI. Connected with food and drink, etc. . .	172,519	174,355	186,092	194,295	201,293
VII. Clothing and textile fabrics, etc. . .	40,469	45,758	47,924	50,372	53,219
VIII. Books, paper, printing, and engraving . . .	29,613	29,954	33,348	32,608	33,434
IX. Musical instruments, etc. . .	1,550	2,046	2,420	2,900	2,945
X. Arms and explosives . . .	1,219	1,218	1,150	1,544	1,682
XI. Motor and other road vehicles and accessories . . .	14,887	16,383	17,402	19,315	18,299
XII. Ship and boat building and repairing . . .	11,998	12,513	13,477	12,600	10,301
XIII. Furniture, bedding, and upholstery . . .	14,728	16,542	17,443	18,358	18,228
XIV. Drugs, chemicals, and by-products . . .	15,190	16,712	18,650	19,872	22,457
XV. Surgical and other scientific instruments . . .	278	250	261	255	263
XVI. Jewellery, timepieces, and plated ware . . .	1,339	1,264	1,437	1,574	1,721
XVIII. Leatherware, n.e.i. . .	561	(b)13,143	(b)17,142	(b)24,081	(b)25,471
XIX. Other Industries, n.e.i. . .	11,624	493	635	778	754
Total less Class XVII . . .	668,526	695,230	730,454	753,991	769,566
XVII. Heat, light, and power . . .	666,676	779,886	825,855	925,323	1,119,616

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

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

The net horse-power (excluding heat, light, and power) has increased by 156,000 horse-power in five years. Class VI. (Food and Drink), increased by 41,000 horse-power, Class V. (Metal works), by 29,000 horse-power, Class III. (Bricks, Glass, &c.), by 25,000 horse-power, Class VII. (Textiles), by 17,000 horse-power, and Rubber and Leather by 15,000 horse-power. Increases in other classes have been small.

#### § 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 subsection 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 number of persons employed during the year 1929-30 has been computed in accordance with a resolution of the Conference of Statisticians held in 1928. This method shows the average number of persons employed over the whole year rather than the average over the period worked. Employment figures for previous years have also been recomputed on this basis for purposes of comparison. The tables relating to Classification of Factories according to the Number of Employees (*see* §2 *ante*) are, however, on the old basis. In all other tables relating to employment, average salaries and wages paid, output per employee, etc., the factor used is the average obtained in accordance with the abovementioned resolution.

The following table shows, for each year from 1925-26 to 1929-30 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, 1925-26 TO 1929-30.

Year.(a)	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
AVERAGE NUMBER.							
1925-26	169,748	149,135	47,551	39,050	20,666	10,147	436,297
1926-27	179,364	157,598	44,122	41,075	19,403	10,622	452,184
1927-28	178,094	156,348	44,711	39,044	20,420	11,111	449,728
1928-29	180,806	156,568	45,031	36,807	20,804	10,466	450,482
1929-30	162,913	151,009	42,624	32,185	19,643	10,820	419,194
PERCENTAGE ON AUSTRALIAN TOTAL.							
1925-26	38.91	34.18	10.90	8.95	4.74	2.32	100.00
1926-27	39.67	34.85	9.76	9.08	4.29	2.35	100.00
1927-28	39.60	34.76	9.95	8.68	4.54	2.47	100.00
1928-29	40.14	34.76	9.99	8.17	4.62	2.32	100.00
1929-30	38.86	36.02	10.17	7.68	4.69	2.58	100.00
PER 10,000 OF POPULATION.							
1925-26	722	872	540	685	544	483	714
1926-27	744	906	490	708	496	483	726
1927-28	727	888	486	673	498	485	711
1928-29	729	880	484	635	495	476	703
1929-30	658	850	458	555	471	494	654

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

2. Rates of Increase, 1925-26 to 1929-30.—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 1925-26 to 1929-30.

FACTORY EMPLOYEES.—PERCENTAGE OF INCREASE, 1925-26 TO 1929-30.

Year.(a)	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
	%	%	%	%	%	%	%
1924-25—1925-26..	5.03	-1.62	2.31	3.54	-0.02	1.58	1.93
1925-26—1926-27..	5.66	5.67	-7.21	5.19	-6.11	4.68	3.64
1926-27—1927-28..	-7.08	-7.93	1.33	-4.94	5.24	4.60	-5.43
1927-28—1928-29..	1.52	0.14	0.72	-5.73	1.88	-5.81	0.17
1928-29—1929-30..	-9.90	-3.55	-5.35	-12.56	-5.58	3.38	-6.95

NOTE.—The minus sign indicates decrease.

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

3. Employees in Classes of Industry, Australia, 1925-26 to 1929-30.—The following table gives the average numbers of persons employed in factories under each group in Australia during the years 1925-26 to 1929-30 inclusive :—

FACTORY EMPLOYEES.—CLASSES, AUSTRALIA, 1925-26 TO 1929-30.

Class of Industry.	1925-26. (a)	1926-27.	1927-28.	1928-29.	1929-30.
I. Treating raw material, product of agricultural and pastoral pursuits, etc. . . . .	10,076	9,990	8,870	7,805	7,630
II. Treating oils and fats, animal, vegetable, etc. . . . .	3,241	3,138	2,939	2,969	2,698
III. Processes in stone, clay, glass, etc. . . . .	20,051	20,894	20,720	19,692	17,215
IV. Working in wood . . . . .	34,651	31,985	29,170	25,762	23,320
V. Metal works, machinery, etc. . . . .	93,643	98,482	95,830	98,145	89,842
VI. Connected with food and drink, etc. . . . .	63,941	62,818	68,975	67,029	65,591
VII. Clothing and textile fabrics, etc. . . . .	100,145	107,944	106,358	109,108	102,704
VIII. Books, paper, printing, and engraving . . . . .	32,049	32,771	32,948	33,337	33,095
IX. Musical instruments, etc. . . . .	1,594	1,831	1,713	1,895	1,658
X. Arms and explosives . . . . .	842	906	864	914	788
XI. Motor and other road vehicles and accessories . . . . .	24,762	27,373	25,496	27,094	23,031
XII. Ship and boat building and repairing . . . . .	5,909	6,095	6,543	6,144	4,990
XIII. Furniture, bedding, and upholstery . . . . .	15,426	16,289	16,223	16,006	13,999
XIV. Drugs, chemicals, and by-products . . . . .	7,496	7,932	7,940	8,251	7,852
XV. Surgical and other scientific instruments . . . . .	674	703	749	771	734
XVI. Jewellery, timepieces, and plated ware . . . . .	2,267	2,138	2,180	2,191	2,073
XVII. Heat, light, and power . . . . .	11,160	11,571	11,722	12,216	11,679
XVIII. Leatherware, n.e.l. . . . .	2,690	(b)8,523	(b)9,544	(b)9,587	(b)9,123
XIX. Other Industries, n.e.l. . . . .	5,680	851	935	1,066	1,172
Total . . . . .	436,207	452,184	440,728	450,482	419,104

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

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

The numbers employed in factories, after being almost constant for three years, fell away in 1929-30 by 31,300, or 7 per cent. The only other decline in numbers recorded was in the war years, when there was a decrease of 6 per cent. spread over three years. The decline was spread evenly over most of the principal industries, except Food and Drink, and Printing. It was heaviest in Metal Works and the Motor Trade.

4. Employees in Classes of Industry, States, 1929-30.—The following table gives a classification of employees in manufacturing industries in each State during 1929-30 :—

FACTORY EMPLOYEES.—CLASSES, STATES, 1929-30.

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. . . . .	2,659	3,232	515	692	258	274	7,630
II. Treating oils and fats, animal, vegetable, etc. . . . .	1,301	823	225	243	68	38	2,698
III. Processes in stone, clay, glass, etc. . . . .	8,517	5,135	786	1,185	1,221	371	17,215
IV. Working in wood . . . . .	7,234	6,509	4,407	1,287	2,424	1,459	23,320
V. Metal works, machinery, etc. . . . .	42,579	25,439	7,180	8,354	4,342	1,948	89,842
VI. Connected with food and drink, etc. . . . .	21,359	20,628	14,059	4,736	2,774	2,035	65,591
VII. Clothing and textile fabrics, etc. . . . .	33,369	53,115	6,220	4,532	3,250	2,218	102,704
VIII. Books, paper, printing and engraving . . . . .	13,392	11,451	3,713	2,234	1,609	696	33,095
IX. Musical instruments, etc. . . . .	1,107	466	11	55	19	..	1,658
X. Arms and explosives . . . . .	279	506	..	3	..	..	788
XI. Motor and other road vehicles and accessories . . . . .	7,664	7,646	1,539	4,237	1,250	686	23,031
XII. Ship and boat building and repairing . . . . .	4,331	385	75	115	49	35	4,990
XIII. Furniture, bedding, and upholstery . . . . .	5,670	4,117	1,608	1,119	1,059	426	13,999
XIV. Drugs, chemicals, and by-products . . . . .	3,534	2,522	139	998	591	68	7,852
XV. Surgical and other scientific instruments . . . . .	286	246	90	68	44	..	734
XVI. Jewellery, timepieces, and plated ware . . . . .	654	1,077	131	128	57	26	2,073
XVII. Heat, light, and power . . . . .	4,638	3,231	1,152	1,914	455	289	11,679
XVIII. Rubber goods and leatherware, n.e.l. . . . .	3,738	4,143	596	273	130	243	9,123
XIX. Other Industries, n.e.l. . . . .	602	338	178	12	34	8	1,172
Total .. .. .	162,913	151,009	42,624	32,185	19,643	10,820	419,194

The decline in employment compared with 1928-29 was 10 per cent. in New South Wales, and 12 per cent. in South Australia. It was about the average for Australia in Queensland and Western Australia, but smaller in Victoria. In Tasmania there was a small increase in numbers employed.

5. Employees According to Nature of Employment.—(i) *General*. In the following table the average numbers of persons employed in each State during 1929-30 are classified according to the nature of their employment :—

FACTORY EMPLOYEES.—NATURE OF EMPLOYMENT, 1929-30.

State.	Average Number of Persons Employed.						Total.
	Working Pro- priators.	Managers and Overseers.	Account- ants and Clerks.	Engine- drivers and Firemen.	Workers, Skilled & Unskilled, in Factory Mill or Workshop. (a)	Carters, Messen- gers and Others.	
New South Wales ..	6,285	6,423	9,775	2,597	135,867	1,966	162,913
Victoria ..	6,963	5,797	6,500	1,850	127,920	1,979	151,009
Queensland ..	1,590	1,738	2,558	1,798	31,824	3,116	42,624
South Australia ..	1,387	1,353	2,393	434	25,897	721	32,185
Western Australia..	954	804	1,170	407	15,635	673	19,643
Tasmania ..	462	452	893	235	8,496	282	10,820
Australia ..	17,641	16,567	23,289	7,321	345,639	8,737	419,194

(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 1925-26 to 1929-30 inclusive :—

**FACTORIES.—OUTWORKERS(a), 1925-26 TO 1929-30.**

Year.(b)	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
1925-1926..	403	736	23	83	2	24	1,271
1926-1927..	336	592	31	66	7	53	1,085
1927-1928..	333	380	40	51	5	67	876
1928-1929..	288	240	44	41	2	22	637
1929-1930..	217	182	49	28	2	31	509

(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. A considerable number of women clerks and typists are also included in the returns.

(ii) *Average Number of Males and Females Employed, 1925-26 to 1929-30.* The following table shows the average number of male and female employees in factories in each State from 1925-26 to 1929-30 :—

**FACTORIES.—MALES AND FEMALES EMPLOYED, 1925-26 TO 1929-30.**

State.	1925-26.(a)	1926-27.	1927-28.	1928-29.	1929-30.
<b>MALES.</b>					
New South Wales ..	128,933	135,418	134,488	135,813	122,006
Victoria ..	101,899	106,245	105,366	104,648	100,135
Queensland ..	40,045	37,119	37,381	37,107	35,141
South Australia ..	32,289	34,076	32,214	30,385	26,485
Western Australia ..	17,392	15,959	16,710	16,993	15,921
Tasmania ..	8,225	8,616	8,730	8,164	8,547
Australia ..	328,783	337,433	334,889	333,110	308,235

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

FACTORIES.—MALES AND FEMALES EMPLOYED, 1925-26 TO 1929-30—*continued.*

State.	1925-26.(a)	1926-27.	1927-28.	1928-29.	1929-30.
FEMALES.					
New South Wales .. ..	40,815	43,946	43,606	44,993	40,907
Victoria .. ..	47,236	51,353	50,982	51,920	50,874
Queensland .. ..	7,506	7,003	7,330	7,924	7,483
South Australia .. ..	6,761	6,999	6,830	6,422	5,700
Western Australia .. ..	3,274	3,444	3,710	3,811	3,722
Tasmania .. ..	1,922	2,006	2,381	2,302	2,273
<b>Australia .. ..</b>	<b>107,514</b>	<b>114,751</b>	<b>114,839</b>	<b>117,372</b>	<b>110,959</b>

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

During two of the years specified in the above table there was an increase in the number of male factory employees in Australia, but since 1926-27 the number has declined by about 29,200 persons. The number of female employees, however, increased by 3,445, or an annual average of 689.

3. Rate of Variation for each Sex.—The percentages of annual increase or decrease during the years 1925-26 to 1929-30 in the average number of males and females employed in factories are shown below :—

## PERCENTAGES OF ANNUAL INCREASE, MALE AND FEMALE FACTORY EMPLOYEES, 1925-26 TO 1929-30.

State.	1924-25— 1925-26.(a)	1925-26— 1926-27.(a)	1926-27— 1927-28.	1927-28— 1928-29.	1928-29— 1929-30.
MALES.					
New South Wales .. ..	3.73	5.03	-0.69	0.99	-10.17
Victoria .. ..	-2.22	4.27	-0.83	-0.68	-4.31
Queensland .. ..	3.08	-7.36	0.71	-0.79	-5.30
South Australia .. ..	5.12	5.53	-5.46	-5.68	-12.84
Western Australia .. ..	-0.05	-8.25	4.71	1.69	-6.31
Tasmania .. ..	0.43	4.75	1.32	-6.48	4.69
<b>Total .. ..</b>	<b>1.88</b>	<b>2.63</b>	<b>-0.75</b>	<b>-0.53</b>	<b>-7.47</b>

## FEMALES.

New South Wales .. ..	6.62	7.67	-0.77	3.18	-9.08
Victoria .. ..	-0.28	8.72	-0.72	1.84	-2.01
Queensland .. ..	-1.57	-6.70	4.67	8.10	-5.57
South Australia .. ..	-3.37	3.52	-2.41	-5.97	-11.24
Western Australia .. ..	0.12	5.19	7.72	2.72	-2.36
Tasmania .. ..	6.78	4.37	18.69	-3.32	-1.26
<b>Total .. ..</b>	<b>1.11</b>	<b>6.73</b>	<b>0.77</b>	<b>2.20</b>	<b>-5.46</b>

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 1929-30.**

Industry.	New South Wales.			Victoria.			Other States.		
	Males.	Females.	Femini- nity. (a)	Males.	Females.	Femini- nity. (a)	Males.	Females.	Femini- nity. (a)
Woolen and tweed mills ..	1,152	2,045	178	2,950	3,713	126	763	1,220	160
Knitting factories ..	999	3,094	310	1,824	6,171	338	58	301	519
Cotton mills ..	305	326	107	157	369	235	58	1	2
Boots and shoes ..	2,396	1,920	80	5,717	5,032	88	1,188	903	76
Boot repairing, including bespoke work ..	1,088	25	2	581	13	2	408	22	5
Clothing (tailoring and slop) ..	2,019	7,389	366	1,926	6,201	322	1,342	4,139	308
Clothing (waterproof and oilskin) ..	23	71	309	62	191	308	..	..	..
Dressmaking and millinery ..	106	2,400	2,264	508	7,548	1,486	42	2,105	5,012
Dyeworks and cleaning ..	311	234	75	218	192	88	161	207	129
Furriers ..	162	202	125	221	302	137	55	113	205
Hats and caps ..	628	1,170	186	537	1,162	216	53	108	204
Shirts, ties, and scarves ..	410	4,093	998	619	5,864	947	171	2,237	1,308
Rope and cordage ..	168	97	58	415	267	64	86	4	5
Tents and tarpaulins ..	128	109	85	130	99	76	110	99	80
Bags and sacks ..	172	127	74	68	58	85	128	138	108
<b>Total, Class VII. ..</b>	<b>10,067</b>	<b>23,302</b>	<b>231</b>	<b>15,933</b>	<b>37,182</b>	<b>233</b>	<b>4,623</b>	<b>11,597</b>	<b>251</b>

(a) Number of females per 100 males.

### § 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, 1925-26 to 1929-30.**—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 1925-26 to 1929-30:—

## CHILDREN EMPLOYED IN FACTORIES, 1925-26 TO 1929-30.

State.	1925-26.(a)	1926-27.	1927-28.	1928-29.	1929-30.
MALES.					
New South Wales ..	4,527	4,594	4,016	3,983	3,322
Victoria ..	3,980	4,567	4,231	4,209	3,748
Queensland ..	1,566	1,281	1,272	1,254	1,212
South Australia ..	1,095	1,215	1,073	883	654
Western Australia ..	682	614	677	647	575
Tasmania ..	214	311	343	290	261
Australia ..	12,064	12,582	11,612	11,266	9,772
FEMALES.					
New South Wales ..	4,688	5,001	4,747	5,085	4,196
Victoria ..	3,489	4,041	3,992	4,298	4,019
Queensland ..	1,003	927	850	921	906
South Australia ..	783	856	763	679	529
Western Australia ..	248	242	297	276	226
Tasmania ..	191	254	304	265	252
Australia ..	10,402	11,321	10,953	11,524	10,128
TOTAL.					
New South Wales ..	9,215	9,595	8,763	9,068	7,518
Victoria ..	7,469	8,608	8,223	8,507	7,767
Queensland ..	2,569	2,208	2,122	2,175	2,118
South Australia ..	1,878	2,071	1,836	1,562	1,183
Western Australia ..	930	856	974	923	801
Tasmania ..	405	565	647	555	513
Australia ..	22,466	23,903	22,565	22,790	19,900

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

3. *Percentage of Children on Total Number of Employees.*—The decrease in the number of children employed in factories is greater than that of adult workers, the percentage of child workers on the total number of employees declining from 5.06 per cent. in 1928-29 to 4.75 per cent. in 1929-30. The total decrease amounted to 1,494 in respect of males and 1,396 in respect of females.



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 1929–30 was £390,912,373, of which amount the sum of £220,945,187 represents the value of the materials used, and £13,602,754 the value of the power, fuel and light used. The difference between the sum of the two latter amounts and the value of the output, viz., £156,364,432, represents the value of production as defined by the Conference of Statisticians at Sydney in 1925, i.e., “The value of consumable commodities produced during the year, deducting, so far as possible, the value of goods consumed in process of production.” The total amount of salaries and wages paid in factories during 1929–30 was £84,717,033. This figure shows a decline of £6,269,875 as compared with the total for the previous year.

2. Salaries and Wages Paid.—(i) *Total Amount, 1929–30.* The total amount of salaries and wages paid during the year 1929–30 in various classes of factories in Australia is shown in the following table:—

SALARIES AND WAGES PAID IN FACTORIES, 1929–30.

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. . . . .	646,019	745,639	104,042	120,627	59,415	45,224	1,729,966
II. Treating oils and fats, animal, vegetable, etc. . . . .	270,528	171,597	47,099	46,754	12,723	7,025	556,626
III. Processes in stone, clay, glass, etc. . . . .	2,092,340	1,160,218	174,207	259,276	271,375	76,909	4,034,325
IV. Working in wood . . . . .	1,637,893	1,403,711	834,426	259,943	554,416	265,209	4,955,598
V. Metalworks, machinery, etc. . . . .	10,558,274	5,686,856	1,680,554	2,018,166	1,030,693	484,893	21,459,436
VI. Connected with food and drink, etc. . . . .	4,603,746	4,425,189	3,128,972	961,456	650,803	381,320	14,151,492
VII. Clothing and textile fabrics, etc. . . . .	4,725,738	7,376,401	903,826	557,314	404,476	275,499	14,243,254
VIII. Books, paper, printing, and engraving . . . . .	2,998,670	2,383,719	782,820	470,835	394,106	163,650	7,193,809
IX. Musical instruments, etc. . . . .	256,443	102,090	2,424	10,324	4,541	..	375,822
X. Arms and explosives . . . . .	79,682	117,648	..	208	..	..	197,538
XI. Motor and other road vehicles and accessories . . . . .	1,585,301	1,524,850	275,522	828,208	253,717	106,965	4,574,563
XII. Ship and boat building and repairing . . . . .	1,170,802	95,056	10,421	27,133	11,812	6,745	1,331,560
XIII. Furniture, bedding, and upholstery . . . . .	1,111,218	711,655	286,906	182,612	197,774	63,018	2,553,183
XIV. Drugs, chemicals, and by-products . . . . .	768,901	563,327	25,204	222,417	142,875	14,359	1,737,083
XV. Surgical and other scientific instruments . . . . .	61,310	46,956	14,444	12,240	7,990	..	142,958
XVI. Jewellery, time-pieces, and plated ware . . . . .	129,675	186,003	23,080	20,334	9,716	3,954	372,762
XVII. Heat, light & power . . . . .	1,280,700	823,449	308,437	533,860	120,969	75,438	3,142,853
XVIII. Rubber goods and leatherware, n.e.i. . . . .	805,404	808,729	68,904	36,784	19,976	54,552	1,794,329
XIX. Other industries, n.e.i. . . . .	93,342	54,147	10,575	1,706	7,603	2,494	160,867
Total . . . . .	34,875,995	28,387,840	8,690,872	6,570,186	4,154,980	2,028,160	84,717,033

(ii) *Totals and Averages, 1925-26 to 1929-30.* 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 1925-26 to 1929-30. It should be noted that the average wage paid is not comparable with that shown in similar tables in the Official Year Book issued prior to No. 23, 1930. This is due to the change in method of computing the average number of hands employed as explained heretofore. 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, 1925-26 TO 1929-30.**

Year. (a)	Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
		£	£	£	£	£	£	£
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	206.20	194.09	206.41	207.02	6210.98	194.38	207.35
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	215.04	198.67	216.99	211.84	210.83	196.17	208.65
1927-28	Total amount paid ..	37,818,141	30,030,352	9,140,223	8,164,238	4,210,675	2,001,690	91,365,319
	Average per employee	220.75	201.83	212.33	217.34	216.60	189.30	212.12
1928-29	Total amount paid ..	38,544,687	29,466,767	9,097,624	7,609,813	4,373,090	1,894,927	90,986,908
	Average per employee	221.37	197.41	209.45	215.11	220.87	189.80	210.63
1929-30	Total amount paid ..	34,875,985	28,387,840	8,690,872	6,579,186	4,154,980	2,028,160	84,717,033
	Average per employee	222.67	197.07	211.80	213.02	222.32	195.80	210.97

(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 wages per employee in 1929-30 were paid in New South Wales, and Western Australia.

The increase in rates of salaries and wages paid reached its maximum in 1927-28 when the average amounted to £212.12, as compared with £210.63 in 1928-29, and £210.97 in 1929-30. The fall in the cost of living on which the rates of wage are chiefly based began in the last quarter of 1929-30, and its full effect was not, therefore, apparent in the total for that year.

(iii) *Earnings of Males and Females, 1929-30.* 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 1929-30 :—

**SALARIES AND WAGES.—MALE AND FEMALE FACTORY EMPLOYEES, 1929-30.**

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
<b>MALES.</b>							
	£	£	£	£	£	£	£
I. Treating raw material product of agricultural and pastoral pursuits, etc. . . .	634,141	738,641	102,418	128,825	58,254	45,037	1,707,316
II. Treating oils and fats, animal, vegetable, etc. . . .	227,662	153,829	43,780	40,956	11,337	7,187	484,751
III. Processes in stone, clay, glass, etc. . . .	2,063,587	1,142,714	171,425	257,679	266,403	76,352	3,973,160
IV. Working in wood . . .	1,612,715	1,390,569	823,104	254,565	552,880	262,022	4,895,855
V. Metal works, machinery, etc. . . .	10,365,839	5,571,167	1,654,269	1,995,356	1,022,114	480,901	21,089,646

SALARIES AND WAGES.—MALE AND FEMALE FACTORY EMPLOYEES,  
1929-30—continued.

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
<i>MALES—continued.</i>							
	£	£	£	£	£	£	£
VI. Connected with food and drink, etc. . .	3,870,542	3,850,133	3,024,392	888,262	599,247	338,070	12,570,646
VII. Clothing and textile fabrics, etc. . .	2,115,319	3,267,167	347,959	227,470	153,383	146,529	6,257,827
VIII. Books, paper, printing, and engraving	2,563,489	2,005,299	690,608	411,306	346,877	147,063	6,165,242
IX. Musical instruments, etc. . .	225,505	97,556	2,210	10,078	4,541	..	339,899
X. Arms and explosives	78,642	95,437	..	208	..	..	174,287
XI. Motor and other road vehicles and accessories . .	1,543,003	1,503,446	260,747	797,562	241,762	102,381	4,448,901
XII. Ship and boat building and repairing	1,163,252	95,132	19,421	27,133	11,812	6,745	1,323,495
XIII. Furniture, bedding, and upholstery . .	980,013	639,256	271,396	169,710	187,956	60,356	2,308,687
XIV. Drugs, chemicals, and by-products	639,681	479,956	22,116	210,029	138,898	13,562	1,504,242
XV. Surgical and other scientific instruments . .	56,660	44,658	12,996	10,563	7,464	..	132,341
XVI. Jewellery, timepieces, and plated ware	121,088	172,952	21,362	19,944	9,498	3,912	348,756
XVII. Heat, light, & power	1,263,687	750,358	301,406	517,165	120,284	74,738	3,027,638
XVIII. Rubber Goods and Leatherware, n.e.i.	634,186	648,091	47,728	28,634	17,416	51,074	1,427,129
XIX. Other industries, n.e.i.	69,956	42,245	7,478	1,706	5,227	2,431	129,043
Total . .	30,228,967	22,688,606	7,824,824	5,997,151	3,755,353	1,818,960	72,313,861

FEMALES.

I. Treating raw material product of agricultural pursuits, etc. . .	11,878	6,998	1,624	802	1,161	187	22,650
II. Treating oils and fats, animal, vegetable, etc. . .	42,866	17,768	3,319	5,798	1,386	738	71,875
III. Processes in stone, clay, glass, etc. . .	28,753	17,504	2,782	1,597	4,972	557	56,165
IV. Working in wood . .	25,178	13,142	11,322	5,378	1,536	3,187	59,743
V. Metal works, machinery, etc. . .	192,435	115,689	26,285	22,810	8,579	3,992	369,790
VI. Connected with food and drink, etc. . .	733,204	575,056	104,580	73,194	51,556	43,256	1,580,846
VII. Clothing and textile fabrics, etc. . .	2,610,419	4,109,234	555,867	329,844	251,093	128,970	7,985,427
VIII. Books, paper, printing, and engraving	435,181	378,420	92,221	59,529	47,229	15,987	1,028,567
IX. Musical instruments, etc. . .	30,938	4,534	205	246	..	..	35,923
X. Arms and explosives	1,040	22,211	..	..	..	..	23,251
XI. Motor and other road vehicles and accessories . .	42,298	21,404	14,775	30,646	11,955	4,584	125,662
XII. Ship and boat building and repairing	7,550	524	..	..	..	..	8,074
XIII. Furniture, bedding, and upholstery . .	131,205	72,399	15,510	12,902	9,818	2,662	244,496
XIV. Drugs, chemicals, and by-products	129,220	83,371	3,088	12,388	3,977	797	232,841
XV. Surgical and other scientific instruments . .	4,659	2,298	1,448	1,686	526	..	10,617
XVI. Jewellery, timepieces, and plated ware	8,587	13,051	1,718	390	218	42	24,006
XVII. Heat, light, & power	17,013	73,091	7,031	16,695	685	700	115,215
XVIII. Rubber Goods and Leatherware, n.e.i.	171,218	160,638	21,176	8,130	2,560	3,478	367,200
XIX. Other industries, n.e.i.	23,386	11,902	3,097	..	2,376	63	40,824
Total . .	4,647,028	5,699,234	866,048	582,035	399,627	209,200	12,403,172

(iv) *Total and Average Earnings of Males and Females, 1925-26 to 1929-30.* Similar information for the last five years is given in the table hereunder:—

**SALARIES AND WAGES.—MALE AND FEMALE FACTORY EMPLOYEES,  
1925-26 TO 1929-30.**

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
<b>MALES.</b>							
1925-26. a Amount paid	£ 29,370,052	22,544,903	8,797,552	7,139,556	5,796,081	1,703,209	75,357,263
Per cent. on total	87.50	81.51	92.18	91.67	92.19	90.85	86.89
Average per employee	£ 239.97	236.17	225.89	231.02	b 232.40	220.10	241.59
1926-27. Amount paid	£ 32,319,649	24,109,245	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	£ 250.64	242.59	237.66	235.80	234.21	221.42	243.65
1927-28. Amount paid	£ 32,929,653	24,268,920	8,388,158	7,471,581	3,514,903	1,790,152	78,663,378
Per cent. on total	87.07	80.81	91.77	91.52	90.60	89.43	86.10
Average per employee	£ 257.11	246.31	234.21	242.65	241.80	218.07	248.00
1928-29. Amount paid	£ 33,508,975	23,634,594	8,351,015	6,955,931	3,970,744	1,678,420	78,149,709
Per cent. on total	86.94	80.38	91.79	91.41	90.80	88.57	85.89
Average per employee	£ 258.68	241.51	234.71	239.74	247.57	217.89	247.35
1929-30. Amount paid	£ 30,228,967	22,688,606	7,824,824	5,997,151	3,755,353	1,818,900	72,313,861
Per cent. on total	86.68	79.92	90.03	91.15	90.38	89.69	85.36
Average per employee	£ 260.41	241.87	232.69	238.47	250.17	224.65	247.85
<b>FEMALES.</b>							
1925-26. a 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	8.23	7.81	9.15	13.11
Average per employee	£ 103.89	109.72	100.01	96.54	b 101.04	90.02	106.91
1926-27. Amount paid	£ 4,772,547	5,690,312	768,641	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	£ 109.61	112.25	110.42	99.25	106.41	92.71	109.83
1927-28. Amount paid	£ 4,888,482	5,761,432	752,065	692,657	395,767	211,528	12,701,941
Per cent. on total	12.93	19.19	8.23	8.48	9.40	10.57	13.90
Average per employee	£ 113.06	114.64	103.92	102.27	108.04	89.45	111.88
1928-29. Amount paid	£ 5,035,712	5,782,173	746,579	653,882	402,346	216,507	12,837,199
Per cent. on total	13.06	19.62	8.21	8.59	9.20	11.43	14.11
Average per employee	£ 112.96	112.94	95.05	102.78	107.01	94.92	110.63
1929-30. Amount paid	£ 4,647,028	5,699,234	866,048	582,035	399,627	209,200	12,403,172
Per cent. on total	13.32	20.08	9.97	8.85	9.62	10.31	14.64
Average per employee	£ 112.61	113.44	116.92	103.02	108.65	92.63	112.98

(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, 1929-30.**

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.	£ 215,703	£ 13,429	£ 1,491,613	£ 9,221	£ 1,707,316	£ 22,650	£ 1,729,966
II. Treating oils and fats, animal, vegetable, etc.	122,566	23,744	362,185	48,131	484,751	71,875	556,626
III. Processes in stone, clay, glass, etc.	530,579	33,894	3,447,581	22,271	3,978,100	56,165	4,034,325
IV. Working in wood	634,531	51,447	4,261,324	8,296	4,895,855	59,743	4,955,598
V. Metal works, machinery, etc.	2,505,252	187,766	18,584,394	182,024	21,089,646	369,790	21,459,436
VI. Connected with food and drink, etc.	2,398,053	315,225	10,172,593	1,265,621	12,570,646	1,580,846	14,151,492
VII. Clothing and textile fabrics, etc.	1,169,160	463,977	5,088,667	7,521,450	6,257,827	7,985,427	14,243,254
VIII. Books, paper, printing and engraving	1,061,939	223,873	5,103,303	804,694	6,165,242	1,023,567	7,193,809
IX. Musical instruments, etc.	54,573	16,124	285,326	19,799	339,899	35,923	375,822
X. Arms and explosives	35,002	2,160	139,195	21,091	174,287	23,251	197,538

SALARIES AND WAGES.—MANAGERS, OVERSEERS, AND OTHER  
FACTORY EMPLOYEES, AUSTRALIA, 1929-30—*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. Motor and other road vehicles and accessories ..	677,241	96,752	3,771,660	28,910	4,448,901	125,662	4,574,563
XII. Ship and boat building and repairing ..	180,270	6,132	1,143,225	1,942	1,323,495	8,074	1,331,569
XIII. Furniture, bedding, and upholstery ..	238,017	52,089	2,070,670	192,407	2,308,687	244,406	2,553,183
XIV. Drugs, chemicals, and by-products ..	340,678	59,459	1,163,564	173,382	1,504,242	232,841	1,737,083
XV. Surgical and other scientific instruments ..	24,317	5,907	108,024	4,710	132,341	10,617	142,958
XVI. Jewellery, timepieces, and plated ware ..	38,059	8,933	310,697	15,073	348,756	24,006	372,762
XVII. Heat, light, and power	590,582	31,080	2,437,056	84,135	3,027,638	115,215	3,142,853
XVIII. Rubber Goods and Leatherware, n.e.i.	286,172	43,075	1,140,957	324,125	1,427,129	367,200	1,794,329
XIX. Other industries, n.e.i.	30,418	4,404	98,625	36,420	129,043	40,824	169,867
Total ..	11,133,202	1,639,470	61,180,659	10,763,702	72,313,861	12,403,172	84,717,033
Average paid per employee	383.60	151.34	232.85	108.78	247.85	112.98	210.97

3. Value of Power, Fuel and Light Used.—(i) *Total Amount, 1929-30.* The expenditure in factories on power, fuel and light is of considerable importance; in 1929-30 it amounted to £13,602,754, a decline of £280,652 when compared with the previous year. The following table shows the value of power, fuel and light used in the different classes of industry during 1929-30:—

## VALUE OF POWER, FUEL AND LIGHT USED(a) IN FACTORIES, 1929-30.

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. ..	134,581	110,938	18,462	22,447	7,231	4,236	297,895
II. Treating oils and fats, animal, vegetable, etc. ..	51,582	49,484	6,326	7,871	2,530	1,362	119,155
III. Processes in stone, clay, glass, etc. ..	757,400	507,032	45,785	103,884	79,776	46,917	1,540,794
IV. Working in wood ..	82,066	58,538	37,844	12,782	17,549	21,244	230,023
V. Metal works, machinery, etc. ..	1,881,918	388,699	81,039	448,247	58,781	311,321	3,170,005
VI. Connected with food and drink, etc. ..	835,433	826,514	484,424	201,961	107,607	98,186	2,554,125
VII. Clothing and textile fabrics, etc. ..	204,408	373,434	21,145	21,681	13,946	48,035	682,649
VIII. Books, paper, printing, and engraving ..	172,978	158,727	33,084	17,787	13,117	5,897	401,590
IX. Musical instruments, etc. ..	12,957	3,999	24	230	69	..	17,279
X. Arms and explosives ..	3,550	20,652	..	15	..	..	24,217
XI. Motor and other road vehicles and accessories ..	66,407	73,033	12,856	37,436	10,732	5,917	206,381
XII. Ship and boat building and repairing ..	67,263	4,146	342	858	89	70	72,768
XIII. Furniture, bedding and upholstery ..	46,668	29,955	10,209	8,621	5,104	2,333	102,890
XIV. Drugs, chemicals, and by-products ..	96,662	71,300	4,239	32,835	29,703	1,947	236,686
XV. Surgical and other scientific instruments ..	2,304	2,027	627	493	451	..	5,902
XVI. Jewellery, timepieces, and plated ware ..	5,838	9,534	892	1,693	310	121	18,388
XVII. Heat, light, and power	1,938,622	895,616	187,751	333,685	268,503	30,390	3,654,567
XVIII. Rubber Goods and Leatherware, n.e.i.	106,619	128,360	4,367	2,548	1,718	15,757	259,369
XIX. Other industries, n.e.i.	3,815	2,084	778	72	542	780	8,071
Total ..	6,471,071	3,714,072	950,194	1,255,146	617,758	594,513	13,602,754

(a) Including lubricating oil and water.

(ii) *Total Amount, 1925-26 to 1929-30.* The following table gives the sums expended on power, fuel and light during the past five years :—

**VALUE OF POWER, FUEL AND LIGHT USED IN FACTORIES, 1925-26 TO 1929-30.**

Year.(a)	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
	£	£	£	£	£	£	£
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	487,234	13,724,047
1927-28 .. ..	6,791,285	3,712,686	1,032,303	1,360,853	536,065	483,685	13,973,977
1928-29 .. ..	6,773,214	3,641,148	1,006,627	1,287,729	624,031	550,657	13,883,406
1929-30 .. ..	6,471,071	3,714,072	950,194	1,255,146	617,758	594,513	13,602,754

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

**4. Value of Materials Used.**—(i) *Total Amount, 1929-30.* The value of materials used (which includes the value of containers, packing, etc., the cost of tools replaced and repairs to plant) in factories in Australia during 1929-30 was £220,945,187, which represents 56.52 per cent. of the total value of the final output. (See next sub-section.) The following table shows the value of the materials used in various classes of industry in each State :—

**VALUE OF MATERIALS USED IN FACTORIES, 1929-30.**

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. . . .	3,450,959	3,022,137	868,806	708,231	109,721	34,825	8,284,679
II. Treating oils and fats, animal, vegetable, etc. . . .	1,544,379	848,550	150,516	215,916	79,918	27,893	2,873,178
III. Processes in stone, clay, glass, etc. . .	1,831,547	1,049,405	156,189	230,877	211,180	64,800	3,544,004
IV. Working in wood . .	3,975,096	1,724,948	1,506,334	831,786	810,263	305,994	9,154,421
V. Metal works, machinery, etc. . . .	22,690,237	6,723,030	1,341,794	5,026,433	880,438	1,252,627	37,914,564
VI. Connected with food and drink, etc. . . .	37,295,288	28,167,536	20,799,615	7,096,401	3,412,952	1,622,782	98,394,574
VII. Clothing and textile fabrics, etc. . . .	8,064,553	14,496,801	1,512,325	830,485	760,449	590,279	26,254,892
VIII. Books, paper, printing, and engraving . . .	3,647,824	2,831,829	567,229	470,226	290,466	96,743	7,904,317
IX. Musical instruments, etc. . . .	316,716	134,077	2,600	9,363	742	..	463,498
X. Arms and explosives .	15,219	258,228	..	475	..	..	273,922
XI. Motor and other road vehicles and accessories . . .	1,349,545	896,011	123,713	1,086,945	173,234	52,794	3,682,242
XII. Ship and boat building and repairing . . .	554,755	47,166	11,230	10,506	8,132	2,300	634,089
XIII. Furniture, bedding, upholstery . . . .	2,068,806	1,292,053	395,732	304,332	257,099	60,971	4,378,993
XIV. Drugs, chemicals, and by-products . . . .	2,830,376	2,048,566	195,790	805,848	1,423,088	103,064	7,406,732
XV. Surgical and other scientific instruments . . . .	45,548	43,775	12,885	9,421	4,803	..	116,432
XVI. Jewellery, timepieces, and plated ware . . .	107,593	221,577	11,438	17,080	5,789	419	363,896
XVII. Heat, light, and power . . . .	2,397,864	1,936,064	190,659	349,920	106,833	80,708	5,062,048
XVIII. Rubber goods and leatherware, n.e.i. . . .	1,555,512	1,992,773	86,726	75,063	31,827	97,620	3,839,521
XIX. Other industries, n.e.i. . . .	190,120	103,127	65,660	1,676	28,713	9,889	399,185
<b>Total ..</b>	<b>93,931,937</b>	<b>67,837,659</b>	<b>28,005,241</b>	<b>18,080,989</b>	<b>8,685,647</b>	<b>4,403,714</b>	<b>220,945,187</b>

The largest value of materials used was in Class VI., "Connected with Food and Drink, etc." the total being £98,394,574. The next in order of importance was Class V., "Metal Works, Machinery, etc.", in which raw materials valued at £37,914,564 were used. The minimum value appears in Class XV., "Surgical and other Scientific Instruments," the total being only £116,432.

(ii) *Total Amount, 1925-26 to 1929-30.* The following table presents particulars of the values of materials used in factories during the past five years :—

VALUE OF MATERIALS USED IN FACTORIES, 1925-26 TO 1929-30.

Year.(a)	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
	£	£	£	£	£	£	£
1925-26 ..	98,868,051	68,788,141	27,885,361	21,430,234	11,137,678	3,725,443	231,834,908
1926-27 ..	102,534,388	71,102,047	25,067,489	21,848,126	8,007,509	4,023,899	232,043,518
1927-28 ..	102,807,287	70,954,166	28,620,604	20,571,650	8,579,656	4,083,837	235,617,260
1928-29 ..	104,897,920	71,231,036	29,882,434	19,821,262	8,736,849	4,369,005	238,938,566
1929-30 ..	93,931,937	67,837,659	28,005,241	18,080,989	8,685,647	4,403,714	220,945,187

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

5. *Total Value of Output.*—(i) *Total, 1929-30.* The value of the output of new goods manufactured and of repairs effected in factories of various classes in each State during 1929-30 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 power, 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, 1929-30.

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. ..	4,657,151	4,435,297	1,043,277	937,548	307,074	89,780	11,470,127
II. Treating oils and fats, animal, vegetable, etc. ..	2,425,203	1,446,181	283,316	306,840	114,721	43,117	4,619,378
III. Processes in stone, clay, glass, etc. ..	6,253,909	3,697,796	608,156	789,446	747,927	230,060	12,327,294
IV. Working in wood ..	6,637,995	4,010,961	2,800,122	1,236,439	1,728,546	714,857	17,128,920
V. Metal works, machinery, etc. ..	40,498,532	15,460,865	3,810,992	8,427,633	2,433,329	2,471,676	73,103,027
VI. Connected with food and drink, etc. ..	51,313,959	39,257,923	28,171,457	9,329,400	5,087,702	2,368,765	135,529,206
VII. Clothing and textile fabrics, etc. ..	16,116,154	26,948,594	2,717,595	1,684,413	1,460,111	1,024,636	49,951,503
VIII. Books, paper, printing, and engraving ..	9,041,585	6,975,549	1,877,947	1,242,040	954,824	333,688	20,425,633
IX. Musical instruments, etc. ..	767,686	310,518	8,535	21,148	7,171	..	1,115,058
X. Arms and explosives ..	121,317	495,980	..	900	..	..	618,197
XI. Motor and other road vehicles and accessories ..	3,895,472	3,299,511	643,843	2,343,782	624,296	221,145	11,028,049
XII. Ship and boat building and repairing ..	1,879,989	176,756	36,140	44,740	24,057	13,446	2,175,128
XIII. Furniture, bedding, and upholstery ..	3,892,823	2,527,840	799,997	580,923	547,059	148,223	8,496,865
XIV. Drugs, chemicals, and by-products ..	5,599,390	3,648,944	344,892	1,252,716	1,927,174	154,602	12,927,718
XV. Surgical and other scientific instruments ..	151,009	131,503	47,676	37,317	20,560	..	388,065
XVI. Jewellery, timepieces, and plated ware ..	323,076	552,078	48,958	55,775	23,926	5,787	1,009,600
XVII. Heat, light, and power ..	10,057,832	5,445,617	1,516,818	1,873,264	765,536	459,621	20,118,688
XVIII. Rubber goods and leather-ware, n.e.i. ..	3,216,205	3,786,670	230,022	145,061	73,976	271,478	7,723,412
XIX. Other industries, n.e.i. ..	401,331	202,516	96,195	3,399	43,493	9,571	756,505
Total ..	167,250,618	122,811,099	45,085,938	30,312,784	16,891,482	8,560,452	390,912,373

(ii) *Totals, 1925-26 to 1929-30.* The following statement shows the value of output of factories in each State during the five years ended 1929-30 :—

## TOTAL VALUE OF OUTPUT OF FACTORIES, 1925-26 TO 1929-30.

Year. (a)	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
TOTAL.							
	£	£	£	£	£	£	£
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
1927-28 ..	181,403,084	128,465,317	46,462,840	35,426,174	16,998,184	8,238,410	416,994,009
1928-29 ..	185,298,575	127,897,463	47,641,536	33,677,369	17,454,430	8,475,916	420,445,288
1929-30 ..	187,250,618	122,311,099	45,085,938	30,312,784	16,891,482	8,560,452	390,912,373

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

6. *The Value of Production.* The value of production for any industry was defined by the Conference of Statisticians at Sydney in 1925, as "the value of consumable commodities produced during the year, deducting, so far as possible, the value of goods consumed in process of production."

In accordance with this principle, a rate was adopted for the valuation of factory production by deducting from the value of the output the cost of raw material, containers, power, fuel, light, oil, water, tools replaced, repairs to plant and depreciation. All these, except depreciation, are included in the two items "Value of materials used" and "Value of fuel used" as defined above. On account of the difficulty in obtaining accurate figures for depreciation, it was agreed that for the present no deduction should be made on this account. The value of production as given in the following tables is obtained, therefore, by deducting "Value of materials used" and "Value of fuel used" from the value of the output, and this method of valuing factory production is now in use in all the Australian States.

The figure thus obtained is, therefore, not the net value of production. The deduction for depreciation should probably be about 8 per cent. on the capital value or about £19,000,000 in 1929-30. Many miscellaneous expenses, also, such as insurance and advertising, were not taken into account. Hence, it must not be inferred that when wages and salaries are deducted from value of production, the whole of the "surplus" is available for interest and profit.

(i) *Total in Classes, 1929-30.* The following table shows the value of production during 1929-30 in each State for the various classes of factories.

## VALUE OF PRODUCTION, 1929-30.

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. . . . .	1,071,611	1,302,222	156,009	206,870	100,122	50,719	2,887,553
II. Treating oils and fats, animal, vegetable, etc. . . . .	829,242	548,141	120,474	83,053	32,273	13,862	1,627,045
III. Processes in stone, clay, glass, &c. . . . .	3,664,962	2,141,359	406,182	454,685	456,071	118,337	7,242,496
IV. Working in wood . . . . .	2,580,833	2,227,475	1,255,944	391,871	900,734	387,619	7,744,476
V. Metal works, machinery, etc. . . . .	15,926,377	8,349,136	2,388,159	2,952,948	1,494,110	907,728	32,018,458
VI. Connected with food and drink, etc. . . . .	13,183,238	10,263,873	6,887,418	2,031,038	1,567,143	647,797	34,580,507
VII. Clothing and textile fabrics, etc. . . . .	7,847,193	12,078,359	1,184,125	832,247	685,716	386,322	23,013,962
VIII. Books, paper, printing and engraving . . . . .	5,220,783	3,984,993	1,277,634	754,027	651,241	231,048	12,119,726
IX. Musical instruments, etc. . . . .	438,013	172,442	5,911	11,555	6,360	..	634,281
X. Arms and explosives . . . . .	102,548	217,100	..	410	..	..	320,058
XI. Motor and other road vehicles and accessories . . . . .	2,479,520	2,330,467	507,274	1,219,401	440,330	162,434	7,139,426
XII. Ship and boat building and repairing . . . . .	1,257,971	125,444	24,568	33,376	15,836	11,076	1,468,271
XIII. Furniture, bedding, and upholstery . . . . .	1,777,349	1,205,832	394,056	267,970	284,856	84,919	4,014,982
XIV. Drugs, chemicals, and by-products . . . . .	2,672,352	1,529,078	144,863	414,033	474,383	49,591	5,284,300
XV. Surgical & other scientific instruments . . . . .	103,157	85,701	34,164	27,403	15,306	..	265,731
XVI. Jewellery, timepieces, and plated ware . . . . .	209,645	320,967	36,628	37,002	17,827	5,247	627,316
XVII. Heat, light and power . . . . .	5,721,346	2,613,937	1,138,408	1,189,659	390,200	348,523	11,402,073
XVIII. Rubber goods and leatherware, n.e.i. . . . .	1,554,074	1,665,537	138,929	67,450	40,431	158,101	3,624,522
XIX. Other industries, n.e.i. . . . .	207,396	97,305	29,757	1,651	14,238	-1,098	349,249
Total	66,847,610	51,259,368	16,130,503	10,976,649	7,588,077	3,562,225	156,364,432

(ii) *Totals and Averages, 1925-26 to 1929-30.* The value of production and the amount per employee and per head of population are shown in the following table for the years 1925-26 to 1929-30:—

**FACTORIES.—VALUE OF PRODUCTION, 1925-26 TO 1929-30.**

Year.(a)	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
VALUE.							
	£	£	£	£	£	£	£
1925-26 ..	64,838,370	48,041,916	16,880,777	12,673,909	9,611,113	3,378,084	155,424,259
1926-27 ..	69,849,044	52,903,450	15,269,600	13,655,406	7,054,295	3,503,412	162,325,273
1927-28 ..	71,804,512	53,793,265	16,809,873	13,487,671	7,831,563	3,670,588	167,402,772
1928-29 ..	73,627,441	53,025,279	16,752,475	12,568,377	8,003,550	3,558,194	167,623,516
1929-30 ..	66,847,610	51,259,368	16,130,503	10,976,649	7,588,077	3,562,225	156,364,432

**PER EMPLOYEE.**

Year.	£	£	£	£	£	£	£
1925-26 ..	382	322	355	325	(b) 310	333	356
1926-27 ..	389	336	346	332	364	338	359
1927-28 ..	403	344	376	345	364	330	372
1928-29 ..	407	359	372	341	389	340	372
1929-30 ..	410	339	378	341	386	329	373

**PER HEAD OF POPULATION.**

Year.	£	£	£	£	£	£	£
1925-26 ..	28.21	23.53	21.09	22.08	(b) 17.22	15.56	25.40
1926-27 ..	29.75	30.90	17.31	24.11	18.63	16.73	26.56
1927-28 ..	29.92	30.89	18.69	23.43	19.96	17.01	26.85
1928-29 ..	30.11	30.11	18.27	21.69	19.94	16.43	26.45
1929-30 ..	26.18	28.84	17.33	18.92	18.21	16.26	24.38

(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 1929-30 was estimated at £390,912,373, there remained, after payment of £220,945,187, the value of the materials used, of £84,717,033 for salaries and wages, and of £13,602,754 for fuel, the sum of £71,647,399 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 1929-30:—

**FACTORIES.—VALUE OF OUTPUT AND COST OF PRODUCTION, 1929-30.**

State.	Materials Used. (a)	Power, Fuel and Light. (b)	Salaries and Wages.	All other Expenditure, Interest, and Profits.	Total Value of Output.
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**VALUE AND COST, ETC.**

	£	£	£	£	£
New South Wales ..	93,931,937	6,471,071	34,875,995	31,971,615	167,250,618
Victoria ..	67,837,659	3,714,072	28,387,840	22,871,528	122,811,099
Queensland ..	28,005,241	950,194	8,690,872	7,439,631	45,085,938
South Australia ..	18,080,989	1,255,146	6,579,186	4,397,463	30,312,784
Western Australia ..	8,685,647	617,758	4,154,980	3,433,097	16,891,482
Tasmania ..	4,403,714	594,513	2,028,160	1,534,065	8,560,452
<b>Australia</b> ..	<b>220,945,187</b>	<b>13,602,754</b>	<b>84,717,033</b>	<b>71,647,399</b>	<b>390,912,373</b>

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

(b) Including lubricating oils and water.

FACTORIES.—VALUE OF OUTPUT AND COST OF PRODUCTION, 1929-30—  
*continued.*

State.	Materials Used. (a)	Power, Fuel and Light. (b)	Salaries and Wages.	All other Expenditure, Interest, and Profits.	Total Value of Output.
PERCENTAGE OF COSTS, ETC., ON TOTAL VALUE.					
	%	%	%	%	%
New South Wales ..	56.16	3.87	20.85	19.12	100.00
Victoria ..	55.24	3.02	23.12	18.62	100.00
Queensland ..	62.12	2.11	19.28	16.49	100.00
South Australia ..	59.65	4.14	21.70	14.51	100.00
Western Australia ..	51.42	3.66	24.60	20.32	100.00
Tasmania ..	51.44	6.94	23.69	17.93	100.00
Australia ..	56.52	3.48	21.67	18.33	100.00

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

(b) Including lubricating oils and water.

### § 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 1925-26 to 1929-30 by £36,882,138, i.e., from £208,813,782 to £245,695,920, or at the rate of £9,220,535 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 1929-30 :—

#### VALUE OF LAND, BUILDINGS, PLANT, AND MACHINERY, 1929-30.

Value of—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
	£	£	£	£	£	£	£
Land and buildings	53,785,319	36,988,485	9,690,313	8,937,039	5,670,214	2,996,859	118,068,229
Plant and machinery	53,515,368	35,022,535	15,723,983	10,286,674	6,112,186	6,966,945	127,627,691
Total ..	107,300,687	72,011,020	25,414,296	19,223,713	11,782,400	9,963,804	245,695,920

The values recorded in this section are in general the values standing in the books of the individual firms. Depreciation has been usually allowed for, often on a generous scale. The totals are consequently very different from the amount of capital invested in manufacturing plant now operating. No information is available as to the total capital expenditure, but it may be some 70 or 80 per cent. greater than the capital value as here recorded.

2. *Value of Land and Buildings.*—(i) *Total, Australia, 1925-26 to 1929-30.* 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 1925-26 to 1929-30 inclusive :—

VALUE OF LAND AND BUILDINGS.—AUSTRALIA, 1925-26 TO 1929-30.

Class of Industry.	1925-26.(a)	1926-27.	1927-28.	1928-29.	1929-30.
	£	£	£	£	£
I. Treating raw material, product of agricultural and pastoral pursuits, etc.	2,273,275	2,257,921	2,108,813	2,072,791	2,040,633
II. Treating oils and fats, animal, vegetable, etc.	1,022,445	982,573	1,097,049	1,008,214	972,931
III. Processes in stone, clay, glass, etc.	4,368,411	4,087,979	4,916,868	5,102,907	5,132,550
IV. Working in wood	4,620,929	4,325,257	4,738,003	4,452,016	4,355,057
V. Metal works, machinery, etc.	15,382,362	16,649,605	17,399,778	18,253,678	19,024,705
VI. Connected with food and drink, etc.	20,802,518	21,892,282	24,708,527	26,013,697	26,662,076
VII. Clothing and textile fabrics, etc.	15,289,607	16,464,556	17,222,358	17,770,968	17,411,403
VIII. Books, paper, printing, and engraving	8,022,006	8,544,071	9,310,538	9,526,079	9,974,734
IX. Musical instruments, etc.	356,935	427,333	450,506	466,710	444,875
X. Arms and explosives	573,136	597,519	587,493	619,069	626,310
XI. Motor and other road vehicles and accessories	7,130,967	8,546,494	8,515,210	8,565,875	8,434,754
XII. Ship and boat building and repairing	1,852,896	1,717,756	1,718,777	1,754,487	1,753,933
XIII. Furniture, bedding, and upholstery	2,947,986	3,155,723	3,231,062	3,396,394	3,178,065
XIV. Drugs, chemicals, and by-products	2,565,553	2,815,161	3,199,653	3,467,608	3,791,189
XV. Surgical and other scientific instruments	250,766	296,435	282,113	335,285	292,368
XVI. Jewellery, timepieces, and plated ware	679,828	666,618	682,038	659,734	658,936
XVII. Heat, light, and power	7,107,993	7,600,312	7,805,082	8,523,226	10,142,655
XVIII. Leatherware, n.e.i.	409,110	b1,516,040	b2,065,878	b2,324,083	b2,787,592
XIX. Other industries, n.e.i.	869,819	201,543	283,947	343,540	383,463
Total .. .. .	96,535,632	103,345,178	110,026,393	114,656,061	118,068,229

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

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

(ii) Value in each State, 1929-30. The following table gives similar information for each State for the past year:—

VALUE OF LAND AND BUILDINGS.—STATES, 1929-30.

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.	860,266	873,740	80,497	121,632	92,730	11,718	2,040,633
II. Treating oils and fats, animal, vegetable, etc.	509,221	273,515	67,432	99,295	16,125	7,343	972,931
III. Processes in stone, clay, glass, etc.	2,762,582	1,267,400	192,368	377,676	218,924	313,600	5,132,550
IV. Working in wood	2,030,334	1,069,070	490,541	285,422	343,835	135,955	4,355,057
V. Metal works, machinery, etc.	9,625,251	5,141,345	1,140,984	1,591,700	949,685	575,740	19,024,705
VI. Connected with food and drink, etc.	10,003,260	7,449,105	4,714,344	2,211,389	1,509,030	774,948	26,662,076
VII. Clothing and textile fabrics, etc.	7,145,840	7,592,185	697,207	892,974	669,670	413,527	17,411,403
VIII. Books, paper, printing, and engraving	4,541,480	3,126,735	882,193	834,387	475,342	114,597	9,974,734
IX. Musical instruments, etc.	247,757	166,800	850	22,678	6,790	..	444,875
X. Arms and explosives	167,080	454,230	..	5,000	..	..	626,310
XI. Motor and other road vehicles and accessories	3,537,352	2,676,300	530,224	1,080,701	362,026	248,151	8,434,754
XII. Ship and boat building and repairing	1,504,639	193,115	8,651	31,750	9,551	6,227	1,753,933
XIII. Furniture, bedding, and upholstery	1,537,308	989,835	222,809	194,119	182,500	51,494	3,178,065
XIV. Drugs, chemicals, and by-products	1,705,830	1,184,785	34,537	355,233	442,658	68,246	3,791,189
XV. Surgical and other scientific instruments	106,853	101,505	22,745	38,170	23,095	..	292,368
XVI. Jewellery, timepieces, and plated ware	233,546	282,015	42,076	51,374	24,270	24,755	658,936
XVII. Heat, light, and power	5,807,702	2,871,300	447,233	624,311	283,358	108,751	10,142,655
XVIII. Rubber goods and leatherware, n.e.i.	1,264,458	1,151,685	63,354	114,288	52,250	141,557	2,787,592
XIX. Other industries, n.e.i.	194,560	123,820	51,368	4,890	8,475	350	383,463
Total	53,785,319	36,988,485	9,690,313	8,937,039	5,670,214	2,996,859	118,068,229

(iii) *Value in each State, 1925-26 to 1929-30.* The total value of factory land and buildings at the end of each year from 1925-26 to 1929-30 is given hereunder.

VALUE OF LAND AND BUILDINGS, 1925-26 TO 1929-30.

Year.(a)	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
	£	£	£	£	£	£	£
1925-26 ..	43,954,312	29,847,370	8,155,604	7,520,625	4,855,161	2,202,560	96,535,632
1926-27 ..	46,950,706	32,269,655	8,645,560	8,207,999	4,822,145	2,449,093	103,345,178
1927-28 ..	49,414,310	34,761,340	9,123,821	8,786,280	5,381,864	2,558,778	110,026,393
1928-29 ..	51,375,003	36,184,460	9,665,239	8,934,405	5,808,539	2,688,415	114,656,061
1929-30 ..	53,785,319	36,988,485	9,690,313	8,937,030	5,670,214	2,996,859	113,068,229

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

Of the total increase of £3.4 m. in the value of land and buildings in 1929-30, much the greater part (£2.4 m.) is provided by New South Wales. It is in this State, however, that the value of manufacturing production and the numbers employed have fallen off most seriously in the same year. In 3 (ii) below it will be observed that most of the increase in value of plant and machinery has also taken place in New South Wales. In both cases, the increase is mostly due to Class XVII., Heat, Light and Power, but it has not been accompanied by any increase in the power used by other factories.

3. *Value of Plant and Machinery.—(i) Total, Australia, 1925-26 to 1929-30.* The following table shows for Australia as a whole the approximate value of plant and machinery used in factories during each year from 1925-26 to 1929-30 inclusive :—

VALUE OF PLANT AND MACHINERY.—AUSTRALIA, 1925-26 TO 1929-30.

Class of Industry.	1925-26.(a)	1926-27.	1927-28.	1928-29.	1929-30.
	£	£	£	£	£
I. Treating raw material, product of agricultural and pastoral pursuits, etc. ..	2,130,333	2,043,422	1,804,612	1,802,487	1,715,462
II. Treating oils and fats, animal, vegetable, etc. ..	1,322,592	1,207,096	1,015,775	1,007,548	900,844
III. Processes in stone, clay, glass, etc. ..	5,928,978	6,509,183	6,422,300	6,643,768	6,499,852
IV. Working in wood ..	5,562,722	5,171,047	4,827,638	4,615,488	4,352,660
V. Metal works, machinery, etc.	21,015,046	21,836,505	21,194,939	21,733,398	22,081,984
VI. Connected with food and drink, etc. ..	25,368,336	26,283,623	27,401,095	28,040,258	28,042,678
VII. Clothing and textile fabrics, etc.	7,251,468	8,235,014	8,191,144	8,013,923	8,162,396
VIII. Books, paper, printing, and engraving ..	7,736,172	8,114,407	8,187,155	8,422,027	8,317,935
IX. Musical instruments, etc. ..	140,000	195,203	197,703	218,124	210,365
X. Arms and explosives ..	328,458	337,291	368,901	405,530	420,091
XI. Motor and other road vehicles and accessories ..	1,896,950	2,157,518	2,830,624	2,681,231	2,670,549
XII. Ship and boat building and repairing ..	1,949,848	2,093,447	2,081,791	2,155,557	2,083,404
XIII. Furniture, bedding, and upholstery ..	891,450	957,976	961,486	1,078,168	1,076,150
XIV. Drugs, chemicals, and by-products ..	2,460,230	2,300,020	3,171,262	3,407,246	3,762,568
XV. Surgical and other scientific instruments ..	58,143	60,411	61,329	70,829	68,485
XVI. Jewellery, timepieces, and plated ware ..	159,058	139,185	147,984	136,632	150,733
XVII. Heat, light, and power ..	26,752,765	27,175,926	30,636,949	32,196,267	34,465,715
XVIII. Leatherware, n.e.i. ..	93,340	b 1,357,774	b 1,847,052	b 1,972,401	b 2,527,823
XIX. Other industries, n.e.i. ..	1,232,261	72,137	78,016	91,011	117,997
Total ..	112,278,150	116,747,185	121,227,815	124,692,788	127,627,691

(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 £15,349,541, or an annual average of £3,837,385. All classes of industry but four participated, the largest increase being in Class XVII, "Heat, Light and Power" where it amounted to £7,712,950, while the next in order were Class VI. Food, Drink, &c., £2,674,342, and Class V., Metal Works, £1,066,938. The greatest decrease was recorded in Class IV., Working in Wood, where the value of plant and machinery declined from £5,562,722 in 1925-26 to £4,352,660 in 1929-30.

(ii) *Value in each State, 1925-26 to 1929-30.* 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., £7,520,834; while Victoria came next with £4,483,405, followed by South Australia with £1,964,649.

VALUE OF PLANT AND MACHINERY.—STATES, 1925-26 TO 1929-30.

Year.(a)	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Total.
	£	£	£	£	£	£	£
1925-26 ..	45,994,534	30,549,130	15,226,566	7,529,854	5,480,905	6,704,990	112,278,150
1926-27 ..	48,659,375	31,550,350	16,043,678	8,322,025	5,310,140	6,411,712	116,747,185
1927-28 ..	50,489,075	32,745,680	16,592,358	8,741,929	5,553,295	6,425,605	121,227,815
1928-29 ..	51,365,710	33,724,910	16,719,349	9,421,202	6,154,115	6,346,447	124,662,788
1929-30 ..	53,515,368	35,022,535	15,723,983	10,286,674	6,112,186	6,966,945	127,627,691

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

(iii) *Value according to Industry, 1929-30.* The following table shows the value of plant and machinery used in factories in each State during 1929-30, classified according to the nature of the industry in which used:—

VALUE OF PLANT AND MACHINERY.—INDUSTRIES, 1929-30.

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. . . . .	692,321	657,120	137,861	97,841	63,839	66,480	1,715,462
II. Treating oils and fats, animal, vegetable, etc. . . . .	409,367	313,695	50,704	102,890	21,438	2,750	900,844
III. Processes in stone, clay, glass, etc. . . . .	3,526,644	1,316,055	329,623	536,441	327,641	463,448	6,499,852
IV. Working in wood . . . . .	1,255,526	1,030,225	666,103	185,402	967,689	247,715	4,352,660
V. Metal works, machinery, etc. . . . .	12,313,047	4,247,865	1,161,276	1,983,357	780,493	1,595,946	22,081,984
VI. Connected with food and drink, etc. . . . .	8,627,762	6,475,895	9,367,294	1,735,268	1,394,904	441,555	28,042,678
VII. Clothing and textile fabrics, etc. . . . .	2,617,835	4,440,205	236,811	296,847	175,813	394,885	8,162,396
VIII. Books, paper, printing, and engraving . . . . .	3,734,720	2,743,925	648,497	665,484	394,061	131,248	8,317,935
IX. Musical instruments, etc. . . . .	146,903	56,955	140	5,592	775	..	210,365
X. Arms and explosives . . . . .	104,266	315,425	..	400	..	..	420,091
XI. Motor and other road vehicles and accessories . . . . .	650,287	1,025,460	108,954	740,977	106,689	32,182	2,670,549
XII. Ship and boat building and repairing . . . . .	1,916,834	110,150	36,598	4,039	2,945	12,838	2,083,404
XIII. Furniture, bedding and upholstery . . . . .	511,164	280,655	96,274	103,359	62,363	22,335	1,076,150
XIV. Drugs, chemicals, and by-products . . . . .	991,749	1,253,655	31,478	672,652	764,900	48,134	3,762,568
XV. Surgical and other scientific instruments . . . . .	28,296	24,645	7,161	4,434	3,949	..	68,485
XVI. Jewellery, timepieces, and plated ware . . . . .	58,188	71,695	5,737	10,351	3,073	1,683	150,733
XVII. Heat, light and power . . . . .	14,871,245	9,320,145	2,794,256	3,118,834	1,021,183	3,340,052	34,465,715
XVIII. Rubber Goods and Leatherware, n.e.f. . . . .	995,952	1,306,610	24,914	22,151	13,592	164,604	2,527,823
XIX. Other Industries, n.e.f. . . . .	57,262	32,155	20,302	355	6,839	1,084	117,997
Total ..	53,515,368	35,022,535	15,723,983	10,286,674	6,112,186	6,966,945	127,627,691

### § 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.

Reference has already been made to the change in method of computing the average number of persons employed in manufacturing industries. (See § 4 *ante*.) In the following tables relating to individual industries the number of employees shown in each case for the years 1928–29 and 1929–30 have been computed by the new method, while those for previous years are on the old basis. The employment figures for each year of the period 1925–26 to 1927–28 are, therefore, somewhat in excess of the average number employed over the twelve months.

2. **Tanneries.**—(i) *Details for each State, 1929–30.* 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, 1929–30.

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W.A.	Tas.	Australia.
Number of factories .. ..	69	44	14	8	7	1	143
Number of employees .. ..	1,152	1,838	259	151	109	63	3,572
Actual horse-power of engines employed .. ..	2,901	3,840	509	438	(a)	(a) b	8,224
Approx. value of land and buildings £ .. ..	262,937	454,580	30,261	26,193	(a)	(a) b	824,415
Approx. value of plant and machinery £ .. ..	170,091	336,835	36,870	21,620	(a)	(a) b	603,083
Total amount of wages paid during year £ .. ..	269,828	416,575	54,058	34,630	(a)	(a) b	812,772
Value of fuel used .. ..	£ 27,535	42,273	4,647	3,784	(a)	(a) b	81,660
Value of materials used .. ..	£ 1,229,765	1,434,437	190,589	102,574	(a)	(a)	3,071,761
Total value of output .. ..	£ 1,701,895	2,197,709	253,545	148,709	(a)	(a)	4,467,175
Value of production .. ..	£ 444,505	720,909	58,309	42,351	(a)	(a)	1,313,754

(a) Particulars not available for publication.

(b) Including Western Australia and Tasmania.

(ii) *Development in Australia, 1925–26 to 1929–30.* The development of the tanning industry during the period 1925–26 to 1929–30 is shown in the following table:—

#### TANNERIES.—AUSTRALIA, 1925–26 TO 1929–30.

Items.	1925–26.	1926–27.	1927–28.	1928–29.	1929–30.
Number of factories .. ..	156	152	142	142	143
Number of employees .. ..	4,347	4,206	3,607	(a) 3,688	(a) 3,572
Actual horse-power of engines used .. ..	8,672	8,392	8,041	8,370	8,224
Approx. value of land and buildings .. ..	902,089	917,997	835,376	835,135	824,415
Approx. value of plant and machinery .. ..	729,546	730,857	669,575	628,295	603,083
Total amount of wages paid .. ..	959,653	945,598	825,841	828,078	812,772
Value of fuel used .. ..	84,041	81,274	87,748	82,788	81,660
Value of materials used .. ..	3,908,737	3,701,332	3,835,412	4,027,760	3,071,761
Total value of output .. ..	5,564,646	5,443,334	5,435,810	5,593,756	4,467,175
Value of production .. ..	1,571,868	1,060,728	1,512,650	1,483,268	1,313,754

(a) See § 9.1.

Decreases were recorded in both the number of factories and employees in the tanning industry during the past four years. For the year 1929–30, the output of leather was shown in greater detail than for previous years and complete comparisons on these lines for earlier years are not available.

(iii) *Raw Material Used and Production, 1929-30.* 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, 1929-30.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Hides and calf skins No.	778,432	1,084,013	162,342	35,808	53,404	17,096	2,131,095
Sheep pelts .. ..	2,750,969	468,970	71,283	143,314	..	700	3,435,236
Other skins .. ..	504,980	579,032	135,760	1,715	6,170	..	1,227,657
Bark .. .. tons	9,191	11,709	1,536	682	649	140	23,907
Leather made—							
Sole and harness lb.	9,772,903	12,894,295	2,389,134	739,319	1,651,695	496,218	27,943,564
Upholstery .. ..	a	1,701,186	..	..	..	..	b 1,701,186
Dressed and upper from hides sq. ft.	5,276,798	10,671,374	544,971	473,323	35,802	118,000	17,120,268
Dressed from skins sq. ft.	10,116,388	8,663,751	d129,540	67,849	2,166	6,210	c18,856,364
Upper from horse hides sq. ft.	a	544,604	..	8,024	..	..	b 552,628
Rough tanned hides and splits sq. ft.	a	1,342,676	46,424	a	..	..	b 1,401,100
Basils produced .. lb.	2,025,747	..	a	143,290	..	a	b 2,169,037

(a) Information not available.

(b) Incomplete.

(c) Excluding Queensland.

(d) Number of skins, area not available.

3. *Fellmongering and Wool-scouring Works.*—(i) *Details for each State, 1929-30.* 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, 1929-30.

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W.A.	Tas.	Australia.
Number of factories .. ..	29	33	13	5	5	..	85
Number of employes .. ..	559	449	229	159	78	..	1,474
Actual horse-power of engines used .. ..	2,162	1,846	1,320	336	204	..	5,868
Approx. value of land and buildings £	178,547	183,385	44,137	24,079	44,271	..	474,419
Approx. value of plant and machinery £	140,085	163,260	91,278	30,511	20,599	..	445,733
Total amount of wages paid .. ..	£ 142,286	106,623	43,721	26,438	19,447	..	338,515
Value of fuel used .. ..	£ 29,239	26,496	11,933	6,978	2,807	..	77,453
Value of materials used .. ..	£ 1,199,995	1,158,962	654,104	249,272	87,394	..	3,349,727
Total value of output .. ..	£ 1,460,421	1,411,324	752,747	293,623	115,061	..	4,033,176
Value of production .. ..	£ 231,187	225,866	86,710	37,373	24,860	..	605,996

(ii) *Development in Australia, 1925-26 to 1929-30.* The following return furnishes particulars of fellmongering and wool-scouring establishments in Australia for the last five years :—

FELLMONGERING AND WOOL-SCOURING WORKS.—AUSTRALIA,  
1925-26 TO 1929-30.

Items.	1925-26.	1926-27.	1927-28.	1928-29.	1929-30.
Number of factories .. ..	93	93	90	87	85
Number of employes .. ..	2,195	2,175	1,901	a 1,738	a 1,474
Actual horse-power of engines used .. ..	5,734	4,993	4,798	4,987	5,868
Approx. value of land and buildings £	537,540	527,306	485,521	462,548	474,419
Approx. value of plant and machinery £	704,789	595,632	468,054	460,385	445,733
Total amount of wages paid .. ..	£ 398,278	463,313	387,096	335,860	338,515
Value of fuel used .. ..	£ 85,308	94,866	82,748	71,348	77,453
Value of materials used .. ..	£ 6,324,429	7,224,472	6,989,508	5,400,300	3,349,727
Total value of output .. ..	£ 7,130,008	8,631,769	7,363,212	5,844,511	4,033,176
Value of production .. ..	£ 720,271	712,431	290,956	372,863	605,996

(a) See § 9. 1.

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 1929-30 only 82,726,950 lb. of greasy wool and 4,644,093 skins were treated for an output of 50,754,206 lb. of scoured wool.

4. Soap and Candle Factories.—(i) *Details for each State, 1929-30.* 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 1929-30:—

SOAP AND CANDLE FACTORIES, 1929-30.

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W.A.	Tas.	Australia.
Number of factories .. ..	25	17	9	5	5	1	62
Number of employees .. ..	997	653	180	212	63	38	2,148
Actual horse-power of engines employed	1,040	828	199	365	a	a b	2,595
Approx. value of land and buildings £	330,964	204,895	36,822	85,669	a	a b	681,818
Approx. value of plant and machinery £	274,106	246,020	26,146	84,187	a	a b	654,647
Total amount of wages paid during year £	194,109	135,164	37,951	38,736	a	a b	426,608
Value of fuel used .. ..	£ 35,096	33,745	3,380	6,126	a	a b	82,239
Value of materials used .. ..	£ 759,383	650,111	114,922	165,461	a	a b	1,797,688
Total value of output .. ..	£ 1,389,285	1,138,963	216,392	241,360	a	a b	3,143,838
Value of production .. ..	£ 594,806	455,107	98,090	69,773	a	a b	1,263,911

(a) Particulars not available for publication.

(b) Including Western Australia and Tasmania.

(ii) *Development in Australia, 1925-26 to 1929-30.* The following table gives similar particulars for the last five years as regards Australia as a whole:—

SOAP AND CANDLE FACTORIES.—AUSTRALIA, 1925-26 TO 1929-30.

Items.	1925-26.a	1926-27.a	1927-28.a	1928-29.a	1929-30.a
Number of factories .. ..	66	66	66	67	62
Number of employees .. ..	2,487	2,507	2,362	62,333	62,148
Actual horse-power and engines used .. ..	2,962	2,933	3,084	3,550	2,595
Approx. value of land and buildings £	638,013	636,116	743,823	701,125	681,818
Approx. value of plant and machinery £	893,712	843,399	689,718	718,611	654,647
Total amount of wages paid .. ..	£ 492,789	493,505	473,550	489,341	426,608
Value of fuel used .. ..	£ 104,897	112,885	98,745	100,555	82,239
Value of materials used .. ..	£ 2,145,157	1,949,717	1,988,098	2,133,004	1,797,688
Total value of output .. ..	£ 3,592,832	3,421,879	3,452,912	3,661,958	3,143,838
Value of production .. ..	£ 1,342,778	1,359,277	1,360,069	1,428,399	1,263,911

(a) Including other small establishments in Western Australia.

(b) See § 9.1.

(iii) *Raw Material Used and Production, 1925-26 to 1929-30.* 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 1925-26 to 1929-30:—

SOAP AND CANDLE FACTORIES.—RAW MATERIAL USED, AND PRODUCTION, AUSTRALIA, 1925-26 TO 1929-30.

Particulars.	1925-26.a	1926-27.a	1927-28.a	1928-29.	1929-30.
Tallow used .. .. .cwt.	470,101	473,787	502,903	548,112	491,603
Alkali used .. .. ."	162,887	188,785	204,003	226,156	219,648
Coconut oil used .. .. .gal.	763,910	800,140	807,941	1,012,246	920,531
Soap made .. .. .cwt.	955,893	1,001,378	1,020,192	1,130,947	1,026,373
Candles made .. .. ."	80,043	75,444	66,091	70,526	49,812

(a) Exclusive of Western Australia.

The total output for the year 1929-30 comprised the following quantities of the various kinds of soap manufactured:—Household, 812,538 cwt.; toilet, 124,223 cwt.; sand, 71,532 cwt.; soft, 11,799 cwt.; and other, 6,281 cwt.

5. *Saw-mills, etc.*—(i) *Details for States, 1929-30.* 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., 1929-30.**

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	748	532	316	135	141	237	2,109
Number of employes ..	6,368	5,658	4,106	1,158	2,413	1,254	20,957
Actual horse-power of engines employed ..	24,367	16,003	10,471	4,379	9,733	4,348	69,301
Approximate value of land and buildings .. £	1,754,287	894,280	433,808	264,298	341,829	114,383	3,802,885
Approximate value of plant and machinery .. £	1,093,302	912,900	577,832	177,346	965,794	223,105	3,950,279
Total amount of wages paid during year ..	£ 1,464,097	1,210,078	775,680	235,940	553,913	237,783	4,477,491
Value of fuel used ..	£ 72,999	49,480	33,530	11,714	17,456	17,150	202,329
Value of materials used ..	£ 3,722,375	1,510,845	1,375,656	777,632	809,897	276,161	8,471,366
Total value of output ..	£ 6,067,138	3,482,051	2,577,629	1,134,160	1,724,592	620,136	15,605,706
Value of production ..	£ 2,271,764	1,921,926	1,168,443	344,814	898,239	326,825	6,932,011

(ii) *Development in Australia, 1925-26 to 1929-30.* The development of forest and other saw-mills, etc., since 1925-26 is shown in the following table:—

**SAW-MILLS, FOREST AND OTHER ; JOINERY, ETC.—AUSTRALIA,  
1925-26 TO 1929-30.**

Items.	1925-26.	1926-27.	1927-28.	1928-29.	1929-30.
Number of establishments ..	2,340	2,244	2,168	2,164	2,109
Number of employes ..	33,309	30,217	27,399	a 24,975	a 20,957
Actual horse-power of engines used ..	72,924	69,813	69,912	68,330	69,301
Approx. value of land and buildings .. £	4,119,714	3,757,056	3,878,828	3,877,292	3,802,885
Approx. value of plant and machinery .. £	5,195,973	4,760,400	4,428,949	4,184,260	3,950,279
Total amount of wages paid ..	£ 7,401,907	6,074,006	5,571,162	5,017,539	4,477,491
Value of fuel used ..	£ 221,458	214,842	221,108	201,033	202,329
Value of materials used ..	£ 11,355,751	11,097,006	10,751,059	10,139,429	8,471,366
Value of final output ..	£ 22,223,017	20,712,673	19,705,157	18,178,153	15,605,706
Value of production ..	£ 10,645,808	9,400,825	8,732,990	7,834,691	6,932,011

(a) See § 9.1.

The effect of the depression in the saw-milling industry is reflected in the decreases recorded in the manufacturing returns during the past three years. The saw-mill output of native timber declined from 739,799,000 super. feet in 1925-26 to 484,637,000 super. feet in 1929-30.

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, 1929-30.* The following table gives particulars of the agricultural implement works in each State for the year 1929-30 :—

AGRICULTURAL IMPLEMENT WORKS, 1929-30.

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories .. ..	27	72	5	36	8	..	148
Number of employees .. ..	565	2,639	277	790	192	..	4,463
Actual horse-power of engines employed .. ..	542	2,656	23	1,278	238	..	4,737
Approx. value of land and buildings £ .. ..	169,145	324,305	44,902	164,426	54,176	..	756,954
Approx. value of plant and machinery £ .. ..	77,477	319,705	12,690	201,116	29,812	..	640,800
Total amount of wages paid during year £ .. ..	135,101	583,956	54,463	163,407	48,442	..	985,369
Value of fuel used .. ..	£ 4,975	45,224	5,103	11,141	1,877	..	68,320
Value of materials used .. ..	£ 154,124	551,261	37,222	159,189	18,046	..	919,842
Total value of output .. ..	£ 379,828	1,378,287	131,199	382,615	125,633	..	2,397,562
Value of production .. ..	£ 220,729	781,802	88,874	212,285	105,710	..	1,409,400

(iii) *Development in Australia, 1925-26 to 1929-30.* The agricultural implement industry declined considerably during the war years, but great progress was made thereafter. The fall in world prices of agricultural products resulted, however, in a considerable slackening in employment and output in 1929-30 as compared for example with 1926-27. Details for the past five years are as follow :—

AGRICULTURAL IMPLEMENT WORKS.—AUSTRALIA, 1925-26 TO 1929-30.

Items.	1925-26.	1926-27.	1927-28.	1928-29.	1929-30.
Number of factories .. ..	148	155	157	150	148
Number of employees .. ..	5,691	6,636	5,729	(a) 5,480	(a) 4,463
Actual horse-power of engines used .. ..	5,344	6,002	6,355	4,808	4,737
Approx. value of land and buildings £ .. ..	695,214	767,817	789,966	771,805	756,954
Approx. value of plant and machinery £ .. ..	622,165	686,821	682,270	662,119	640,800
Total amount of wages paid .. ..	£ 1,270,555	1,501,725	1,291,330	1,227,720	985,369
Value of fuel used .. ..	£ 71,137	82,651	87,996	77,642	68,320
Value of materials used .. ..	£ 1,385,089	1,574,492	1,335,986	1,266,128	919,842
Total value of output .. ..	£ 3,228,502	3,819,449	3,303,557	3,167,332	2,397,562
Value of production .. ..	£ 1,772,276	2,162,306	1,870,575	1,823,562	1,409,400

(a) See § 9.1.

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 since 1926-27 these particulars have been obtained, and with one or two duplications of minor importance, the following figures are representative of the engineering industry :—

ENGINEERING WORKS, 1929-30.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories .. ..	282	295	44	56	69	13	759
Number of employees .. ..	6,380	5,693	1,237	1,092	817	211	15,430
Actual horse-power of engines employed .. ..	8,835	7,984	2,873	1,677	1,522	315	23,206
Approximate value of land and buildings £ .. ..	1,470,102	1,314,070	101,693	128,179	214,899	42,248	3,271,191
Approximate value of plant and machinery £ .. ..	1,274,868	1,219,315	263,893	178,509	195,106	33,992	3,165,683
Total amount of wages paid during year .. ..	£ 1,570,639	1,324,913	293,408	237,438	183,159	45,728	3,655,285
Value of fuel used .. ..	£ 73,550	80,205	16,530	15,264	16,288	3,669	205,506
Value of materials used .. ..	£ 1,681,475	1,535,036	213,339	246,667	204,871	29,014	3,910,402
Total value of output .. ..	£ 3,939,666	3,607,883	659,122	594,957	512,669	97,565	9,411,862
Value of production .. ..	£ 2,184,641	1,992,642	429,253	333,026	291,510	64,882	5,295,954

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 1929-30 are as follows:—

#### IRONWORKS AND FOUNDRIES, 1929-30.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories .. ..	167	169	20	29	14	..	399
Number of employees .. ..	6,948	3,883	502	843	346	..	12,522
Actual horse-power of engines employed .. ..	36,050	7,034	708	1,355	335	..	45,482
Approximate value of land and buildings .. .. £	1,563,620	669,330	73,846	125,511	37,141	..	2,469,448
Approximate value of plant and machinery .. .. £	2,806,908	702,420	117,069	67,120	41,715	..	3,735,232
Total amount of wages paid during year .. .. £	1,798,199	822,116	112,070	170,842	87,477	..	2,990,704
Value of fuel used .. .. £	381,361	96,563	12,331	14,575	6,343	..	511,173
Value of materials used .. .. £	7,084,646	890,003	122,434	165,322	81,783	..	8,344,188
Total value of output .. .. £	10,213,855	2,245,262	289,460	395,210	199,040	..	13,342,827
Value of production .. .. £	2,747,848	1,258,696	154,695	215,313	110,914	..	4,487,466

9. **Railway and Tramway Workshops.**—(i) *Details for each State, 1929-30.* 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, 1929-30.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories .. ..	42	20	14	16	22	6	120
Number of employees .. ..	13,304	6,462	3,774	3,115	2,295	389	29,339
Actual horse-power of engines employed .. ..	15,238	4,704	5,033	3,241	2,959	425	31,600
Approximate value of land and buildings .. .. £	2,890,763	1,304,055	700,368	848,623	472,842	13,860	6,230,511
Approximate value of plant and machinery .. .. £	3,023,713	1,084,980	510,417	727,324	433,587	92,117	5,872,138
Total amount of wages paid during year .. .. £	3,520,149	1,635,683	961,382	819,553	572,253	89,985	7,599,005
Value of fuel used .. .. £	108,157	80,081	31,182	41,921	28,249	5,825	295,415
Value of materials used .. .. £	2,343,809	1,605,760	548,228	806,799	385,746	18,986	5,709,328
Total value of output .. .. £	6,802,678	3,810,552	1,867,366	1,870,433	1,138,031	126,530	15,615,590
Value of production .. .. £	4,350,712	2,124,711	1,287,956	1,021,713	724,036	101,719	9,610,847

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, 1925-26 to 1929-30.* The following table shows the development of railway and tramway workshops in Australia since 1925-26 :—

**RAILWAY AND TRAMWAY WORKSHOPS.—AUSTRALIA, 1925-26 TO 1929-30.**

Items.	1925-26.	1926-27.	1927-28.	1928-29.	1929-30.
Number of factories .. ..	121	125	122	122	120
Number of employees .. ..	28,558	30,715	31,315	(a) 31,658	(a) 29,339
Actual horse-power of engines used .. .	26,168	28,938	31,819	32,346	31,600
Approx. value of land and buildings £	4,491,396	5,062,626	5,345,963	5,836,151	6,230,511
Approx. value of plant and machinery £	5,076,776	5,722,784	5,338,210	5,726,639	5,872,138
Total amount of wages paid .. ..	7,192,369	7,815,202	7,967,515	8,058,200	7,599,005
Value of fuel used .. ..	250,632	278,598	294,913	322,936	295,415
Value of materials used .. ..	6,008,231	6,043,377	6,219,442	6,667,634	5,709,328
Total value of output .. ..	£ 14,855,394	15,539,846	16,338,532	17,072,699	15,615,590
Value of production .. ..	£ 8,627,131	9,267,961	9,724,228	10,052,129	9,610,847

(a) See § 9.1.

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 five years prior to 1929-30 the number of employees increased by more than 5,000, and the output rose from £12,384,177 to £17,072,699, but in 1929-30 there was a decrease of over 2,000 employees with a consequent fall in the output as compared with the preceding year.

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, 1929-30.**

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W.A. (a)	Tas.	Australia.
Number of factories .. ..	17	7	7	2	..	5	38
Number of employees .. ..	2,131	41	141	1,338	..	1,203	4,854
Actual horse-power of engines employed ..	19,701	45	884	b	..	b	c 63,635
Approx. value of land and buildings £	528,943	15,215	8,669	b	..	b	c 1,175,523
Approx. value of plant and machinery £	2,827,123	8,440	78,247	b	..	b	c 5,034,949
Total amount of wages paid during year £	714,355	8,884	31,389	b	..	b	c 1,492,565
Value of fuel used .. ..	£ 1,080,197	1,751	7,300	b	..	b	c 1,743,323
Value of materials used .. ..	£ 5,740,872	86,883	58,828	b	..	b	c 10,365,710
Total value of output .. ..	£ 8,632,665	111,187	74,387	b	..	b	c 15,505,609
Value of production .. ..	£ 1,811,596	22,553	8,259	b	..	b	c 3,396,576

(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, 1929-30.* The following table gives particulars of factories engaged in bacon-curing in each State during the past year:—

## BACON-CURING FACTORIES, 1929-30.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories .. ..	23	19	8	8	5	6	69
Number of employees .. ..	348	544	559	169	47	41	1,708
Actual horse-power of engines employed .. ..	1,130	1,798	1,443	410	192	98	5,071
Approximate value of land and buildings .. .. £	153,503	227,670	177,513	56,387	17,330	17,539	649,942
Approximate value of plant and machinery .. .. £	60,969	120,600	116,738	28,349	7,791	6,575	341,022
Total amount of salaries and wages paid .. .. £	98,501	135,157	134,775	44,569	12,634	7,931	433,567
Value of fuel used .. .. £	14,000	26,992	19,801	5,317	2,439	5,525	74,074
Value of materials used .. .. £	1,015,858	1,045,999	952,882	306,089	152,721	82,408	3,555,957
Total value of output .. .. £	1,238,390	1,367,179	1,470,097	395,580	186,828	104,925	4,765,999
Value of production .. .. £	208,332	294,188	497,414	87,174	31,068	16,992	1,135,968

(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 1929-30:—

## BACON-CURING FACTORIES.—PIGS KILLED, AND PRODUCTION, 1929-30.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
PIGS KILLED.							
Number .. ..	233,435	218,799	263,775	51,325	20,315	19,373	807,022
PRODUCTS.							
Bacon and ham .. .. lb.	<sup>a</sup> 20,984,249	18,222,220	18,024,040	4,819,604	<sup>a</sup> 2,601,422	1,696,263	67,247,793
Lard .. .. ..	625,604	1,012,218	939,890	180,863	88,988	104,709	3,002,272
VALUE.							
Bacon and ham .. .. £	1,047,625	1,040,235	1,016,102	273,345	164,804	77,493	3,619,604
Lard .. .. ..	21,968	38,139	37,216	6,607	3,386	4,050	111,366
Other products .. .. £	132,915	279,218	405,195	118,628	18,428	13,084	957,468

(a) A portion of the bacon and ham treated was imported or purchased.

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, 1929-30.* The subjoined table gives particulars of butter, cheese and condensed milk factories in each State during the year 1929-30 :—

**BUTTER, CHEESE, AND CONDENSED MILK FACTORIES, 1929-30.**

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W.A.	Tas.	Aus- tralia.
Number of factories .. ..	138	163	117	44	13	34	509
Number of employees .. ..	1,230	2,387	1,087	271	121	180	5,276
Actual horse-power of engines employed .. ..	8,806	7,003	7,582	866	548	418	25,223
Approximate value of land and buildings .. ..	£ 704,018	1,029,860	523,033	174,870	70,093	30,715	2,538,589
Approximate value of plant and machinery .. ..	£ 814,422	1,010,225	703,808	110,408	57,949	38,373	2,735,185
Total amount of wages paid .. ..	£ 333,415	580,481	263,757	55,510	30,229	27,867	1,291,259
Value of fuel used .. ..	£ 93,493	171,583	56,167	12,656	6,725	15,187	355,811
Value of materials used .. ..	£ 7,270,021	7,426,765	5,525,338	739,986	381,567	448,153	21,791,835
Total value of output .. ..	£ 8,125,666	8,753,102	6,422,374	851,597	459,456	541,051	25,153,846
Value of production .. ..	£ 762,152	1,154,754	840,869	98,955	71,164	78,306	3,006,200

(ii) *Development in Australia, 1925-26 to 1929-30.* The following table shows the progress of the factories in this industry during the past five years :—

**BUTTER, CHEESE, AND CONDENSED MILK FACTORIES.—AUSTRALIA,  
1925-26 TO 1929-30.**

Items.	1925-26.	1926-27.	1927-28.	1928-29.	1929-30.
Number of factories .. ..	585	579	563	523	509
Number of employees .. ..	5,490	5,419	5,520	a 5,441	a 5,276
Actual horse-power of engines used .. ..	17,089	20,148	22,668	24,219	25,223
Approx. value of land and buildings .. ..	£ 1,964,887	2,297,656	2,392,225	2,366,789	2,538,589
Approx. value of plant and machinery .. ..	£ 2,522,367	2,649,044	2,604,018	2,598,702	2,735,185
Total amount of wages paid .. ..	£ 1,244,470	1,242,813	1,298,540	1,289,000	1,291,259
Value of fuel used .. ..	£ 314,186	315,004	342,404	334,556	355,811
Value of materials used .. ..	£ 19,248,172	17,907,326	20,529,240	22,623,740	21,791,835
Total value of output .. ..	£ 22,971,416	21,737,110	24,788,248	26,365,690	25,153,846
Value of production .. ..	£ 3,409,058	3,514,780	3,916,604	3,407,394	3,006,200

(a) See § 9.1.

(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, 1929-30.**

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Aus- tralia.
<b>MILK USED (,000 OMITTED).</b>							
Butter factories .. gals.	210,192	199,974	156,185	14,848	9,255	13,877	604,331
Cheese .. ..	6,648	6,561	12,302	3,260	(a)	747	b 29,518
Condensed milk factories ..	(a)	14,443	(a)	..	..	..	c 14,443

(a) Particulars not available for publication.

(b) Excluding Western Australia.

(c) Victoria only.

BUTTER, CHEESE, AND CONDENSED MILK FACTORIES.—PRODUCTION,  
1929-30—continued.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aus- tralia.
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## PRODUCTS (,000 OMITTED).

Butter .. .. lb.	100,814	87,170	76,104	7,657	4,723	6,440	282,908
Cheese .. .. "	6,163	6,748	12,375	3,537	(a)	762	(c) 29,585
Condensed and concentrated milk .. .. lb.	(a)	39,752	(a)	..	..	..	(b) 39,752
Powdered milk .. .. "	(a)	11,829	..	..	..	..	(b) 11,829

## VALUE (,000 OMITTED).

Butter .. .. £	7,405	6,624	5,798	688	401	498	21,414
Cheese .. .. £	280	370	551	138	(a)	31	(c) 1,370
Condensed and concentrated milk .. .. £	(a)	1,014	(a)	..	..	..	(b) 1,014
Powdered milk .. .. £	(a)	470	..	..	..	..	(b) 470

(a) Information not available for publication.

(b) Victoria only.

(c) Excluding Western Australia.

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 steamship companies trading between Australia and other parts of the world.

## MEAT AND FISH PRESERVING WORKS, 1929-30.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories .. ..	4	13	10	..	4	3	34
Number of employees .. ..	213	907	1,888	..	147	17	3,172
Actual horse-power of engines employed .. ..	181	3,937	7,859	..	660	3	12,640
Approximate value of land and buildings .. .. £	48,004	600,740	1,290,720	..	371,310	2,717	2,313,491
Approximate value of plant and machinery .. .. £	19,996	372,540	758,675	..	385,391	2,876	1,539,478
Total amount of wages paid dur- ing year .. .. £	47,664	242,496	552,434	..	79,594	3,117	925,305
Value of fuel used .. .. £	8,595	34,660	77,571	..	7,701	1,456	129,983
Value of materials used .. ..	166,148	1,617,544	3,172,498	..	170,618	6,855	5,133,663
Total value of output .. .. £	240,396	2,074,443	3,634,224	..	250,470	18,031	6,217,564
Value of production .. .. £	65,653	422,239	384,155	..	72,151	9,720	953,918

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. Bakeries.—The following table gives particulars regarding establishments at which the manufacture of bread, cakes, etc., was carried on in each State during the year 1929-30.

## BAKERIES (INCLUDING CAKES AND PASTRY), 1929-30.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas. (a)	Australia.
Number of factories .. ..	358	464	223	98	63	47	1,253
Number of employees .. ..	3,144	2,951	1,933	781	293	877	9,979
Actual horse-power of engines employed .. ..	2,282	1,944	654	638	287	1,369	7,174
Approximate value of land and buildings .. ..	£ 1,615,114	£ 1,019,260	£ 388,916	£ 273,635	£ 103,791	£ 298,654	£ 3,699,370
Approximate value of plant and machinery .. ..	£ 491,090	£ 366,290	£ 169,605	£ 94,078	£ 34,276	£ 91,965	£ 1,247,304
Total amount of wages paid during year .. ..	£ 726,230	£ 575,383	£ 366,487	£ 142,196	£ 61,690	£ 134,441	£ 2,006,427
Value of fuel used .. ..	£ 97,763	£ 88,005	£ 32,877	£ 19,952	£ 5,474	£ 21,211	£ 268,282
Value of materials used .. ..	£ 2,137,657	£ 2,000,540	£ 730,001	£ 502,245	£ 217,830	£ 327,803	£ 5,016,076
Total value of output .. ..	£ 3,687,427	£ 3,313,820	£ 1,492,644	£ 811,742	£ 383,921	£ 538,099	£ 10,227,653
Value of production .. ..	£ 1,452,007	£ 1,225,275	£ 729,766	£ 289,545	£ 157,617	£ 189,085	£ 4,043,295

(a) Includes Biscuits and Confectionery.

15. Jam and Fruit Preserving, Pickles, Sauces, and Vinegar Factories.—(i) *Details for each State, 1929-30.* The subjoined table gives particulars of factories at which these industries were carried on in each State during the year 1929-30.

## JAM AND FRUIT PRESERVING, PICKLES, ETC., FACTORIES, 1929-30.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories .. ..	39	39	12	18	6	7	121
Number of employees .. ..	1,213	2,261	341	481	41	443	4,780
Actual horse-power of engines employed .. ..	1,616	2,085	747	382	47	1,224	6,101
Approximate value of land and buildings .. ..	£ 326,442	£ 460,635	£ 41,427	£ 120,977	£ 14,222	£ 100,958	£ 1,064,661
Approximate value of plant and machinery .. ..	£ 143,772	£ 286,240	£ 31,851	£ 69,109	£ 5,857	£ 31,004	£ 567,833
Total amount of wages paid during year .. ..	£ 220,262	£ 411,886	£ 49,284	£ 78,745	£ 6,777	£ 106,554	£ 873,508
Value of fuel used .. ..	£ 20,132	£ 40,936	£ 3,794	£ 7,042	£ 1,601	£ 10,079	£ 83,634
Value of materials used .. ..	£ 793,800	£ 1,624,703	£ 240,033	£ 275,949	£ 24,404	£ 331,379	£ 3,290,268
Total value of output .. ..	£ 1,278,633	£ 2,592,061	£ 343,549	£ 414,258	£ 42,853	£ 507,084	£ 5,178,438
Value of production .. ..	£ 464,701	£ 926,372	£ 99,722	£ 131,267	£ 16,848	£ 165,626	£ 1,804,536

(ii) *Development in Australia, 1925-26 to 1929-30.* 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, 1925-26 TO 1929-30.

Items.	1925-26.	1926-27.	1927-28.	1928-29.	1929-30.
Number of factories .. ..	165	164	167	121	121
Number of employees .. ..	6,189	6,119	6,627	5,478	4,780
Actual horse-power of engines employed .. ..	4,520	4,528	5,215	5,198	6,101
Approx. value of land and buildings .. ..	£ 1,038,819	£ 1,084,835	£ 1,177,963	£ 1,058,445	£ 1,064,661
Approx. value of plant and machinery .. ..	£ 615,452	£ 634,771	£ 748,888	£ 601,229	£ 567,833
Total amount of wages paid .. ..	£ 902,869	£ 974,224	£ 1,049,136	£ 869,144	£ 873,508
Value of fuel used .. ..	£ 70,549	£ 79,311	£ 92,373	£ 78,422	£ 83,634
Value of materials used .. ..	£ 3,135,573	£ 3,511,388	£ 3,703,161	£ 3,030,762	£ 3,290,268
Total value of output .. ..	£ 5,002,487	£ 5,480,065	£ 5,967,876	£ 5,054,595	£ 5,178,438
Value of production .. ..	£ 1,796,365	£ 1,889,360	£ 2,172,342	£ 1,945,411	£ 1,804,536

(a) See § 9.1.

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, and in 1929-30 amounted to only 79,698,965 lb., compared with 75,252,189 lb. in 1928-29, and 142,290,204 in 1918-19. The output of preserved fruit has grown to considerable proportions, and during 1929-30, 86,334,408 lb. were processed. The production of pickles and sauces, however, showed a slight decline.

(iii) *Production.* The following table shows the quantity and value of jams, pickles and sauces manufactured in each State during 1929-30 :—

**JAMS, PRESERVED FRUIT, PICKLES AND SAUCES.—OUTPUT, 1929-30.**

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
QUANTITY (,000 OMITTED).							
Jams .. .. lb.	15,806	37,579	6,923	(a)	(a)	12,145	c 79,099
Pulp .. .. "	4,828	16,873	1,492	(a)	(a)	6,954	c 35,718
Fruit, preserved .. "	16,853	57,153	5,074	2,763	..	4,491	86,334
Pickles .. .. pints	1,885	1,452	(a)	556	(a)	(a)	b 4,167
Sauces .. .. "	5,346	8,806	777	4,160	(a)	(a)	b 19,469

VALUE.

Jams .. .. £	456,795	850,125	165,205	(a)	(a)	267,022	c1,885,564
Pulp .. .. £	29,296	85,378	10,580	(a)	(a)	88,327	c 235,976
Fruit, preserved .. £	259,543	998,876	109,643	52,083	..	144,109	1,564,254
Pickles .. .. £	55,812	60,218	11,578	23,352	(a)	(a)	b 159,553
Sauces .. .. £	317,909	304,397	26,797	139,807	(a)	(a)	b 800,210

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

**16. Confectionery Factories.**—(i) *Details for each State, 1929-30.* 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 1929-30 are given hereunder :—

**CONFECTIONERY FACTORIES, 1929-30.**

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas. (a)	Australia.
Number of factories .. ..	74	140	12	17	11	..	254
Number of employees .. ..	2,957	3,097	582	358	266	..	7,260
Actual horse-power of engines employed .. ..	4,033	6,784	716	638	261	..	12,432
Approximate value of land and buildings .. .. £	1,077,023	589,095	182,107	96,226	63,041	..	2,007,492
Approximate value of plant and machinery .. .. £	1,044,522	888,355	158,989	79,023	77,581	..	2,248,470
Total amount of wages paid during year .. .. £	485,766	511,392	79,000	47,879	43,617	..	1,167,654
Value of fuel used .. .. £	54,278	89,331	7,991	11,402	4,824	..	167,526
Value of materials used .. .. £	1,502,044	1,605,520	141,868	159,750	140,491	..	3,549,673
Total value of output .. .. £	2,919,893	2,801,299	359,427	252,355	234,785	..	6,567,759
Value of production .. .. £	1,363,371	1,106,448	209,368	81,203	89,470	..	2,850,560

(a) Included with Bakeries.

(ii) *Development in Australia, 1925-26 to 1929-30.* The growth of the confectionery industry during the past four years is exhibited in the following table :—

**CONFECTIONERY FACTORIES.—AUSTRALIA, 1925-26 TO 1929-30.**

Items.	1925-26. (a)	1926-27. (c)	1927-28. (a)	1928-29. (a)	1929-30. (c)
Number of factories .. ..	267	286	293	320	254
Number of employees .. ..	8,849	9,048	8,610	8,386	b 7,260
Actual horse-power of engines employed .. ..	13,047	14,166	14,241	12,737	b 12,432
Approx. value of land and buildings .. .. £	2,014,563	2,084,233	2,074,074	2,201,885	2,007,492
Approx. value of plant and machinery .. .. £	2,199,860	2,311,513	2,332,479	2,368,208	2,248,470
Total amount of wages paid during year .. .. £	1,391,114	1,426,779	1,365,241	1,385,997	1,167,654
Value of fuel used .. .. £	166,846	165,181	186,323	183,787	167,526
Value of materials used .. .. £	3,884,045	3,918,090	4,054,201	3,998,906	3,549,673
Total value of output .. .. £	6,993,566	7,097,911	7,300,429	7,455,428	6,567,759
Value of production .. .. £	2,942,675	3,014,640	3,059,905	3,272,735	2,850,560

(a) Including Biscuits and Bakeries in Tasmania. (b) See § 9.1. (c) Figures for Tasmania included in Bakeries.

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 7,260 persons in 1929-30, and the value of the output amounted to £6,567,759. The decline in the value of output, etc., in 1929-30 is due to the exclusion of the returns for Tasmania which have been incorporated with Bakeries to avoid disclosing confidential information. 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, 1929-30.* The following table shows the position of the flour-milling industry in each State in 1929-30:—

**FLOUR MILLS, 1929-30.**

Items.	N.S.W.	Victoria.	Q'land.	S. Aust. (a)	W. Aust.	Tas. (a)	Australia.
Number of factories ..	53	38	9	34	19	9	162
Number of employes ..	1,043	898	274	428	350	104	3,097
Actual horse-power of engines employed ..	7,331	5,591	1,411	2,964	2,485	527	20,309
Approximate value of land and buildings ..	£ 810,602	431,710	151,992	217,961	229,883	59,715	1,901,863
Approximate value of plant and machinery ..	£ 864,462	580,835	168,236	322,247	261,594	42,910	2,240,284
Total amount of wages paid during year ..	£ 301,866	235,971	72,354	106,162	91,268	25,743	833,364
Value of fuel used ..	£ 69,576	57,843	12,827	32,099	22,354	5,103	199,802
Value of materials used ..	£ 5,091,862	4,370,908	812,418	1,650,678	1,352,916	317,504	13,596,286
Total value of output ..	£ 5,976,447	5,106,194	985,460	1,846,142	1,605,937	374,391	15,894,571
Value of production ..	£ 815,009	677,443	160,215	163,365	230,667	51,784	2,098,483

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

(ii) *Production of Flour and By-products, 1925-26 to 1929-30.* The production of flour by the mills in each State for the years 1925-26 to 1929-30 was as follows:—

**FLOUR MILLS.—PRODUCTION OF FLOUR, 1925-26 TO 1929-30.**

Year.(b)	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
1925-26 ..	Tons.a 434,407	Tons.a 336,704	Tons.a 61,587	Tons.a 138,127	Tons.a 190,369	Tons.a 24,774	Tons.a 1,185,968
1926-27 ..	431,532	360,051	52,959	140,426	133,919	22,861	1,141,748
1927-28 ..	400,363	367,383	53,858	122,107	127,246	21,675	1,092,632
1928-29 ..	449,011	390,286	54,433	137,202	119,550	21,277	1,171,759
1929-30 ..	432,472	364,682	61,102	138,115	120,595	19,899	1,136,865

(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., 1,136,865 tons was valued at £12,188,550. In addition, 464,909 tons of bran and pollard, valued at £3,419,006 were made. The total quantity of wheat ground was 53,996,662 bushels.

18. Sugar Mills.—(i) *Details for 1929-30.* The following table shows the position of the cane-crushing branch of the sugar-making industry in Queensland and New South Wales in 1929-30. 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, 1929-30.

Items.	N.S.W.	Queensland.	Australia.
Number of factories .. .. .	3	35	38
Number of employees .. .. .	170	5,459	5,629
Actual horse-power of engines employed .. .. .	2,114	32,040	34,154
Approximate value of land and buildings £	135,042	1,026,657	1,161,699
Approximate value of plant and machinery £	540,679	6,283,921	6,824,600
Total amount of wages paid during year .. .. .	£ 75,135	1,223,492	1,298,627
Value of fuel used .. .. .	£ 13,730	175,968	189,698
Value of materials used .. .. .	£ 329,705	7,558,993	7,888,698
Total value of output .. .. .	£ 476,355	10,586,450	11,062,805
Value of production .. .. .	£ 132,920	2,851,489	2,984,409

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, part is used for manuring land, and the balance is either burnt as fuel or is allowed to run to waste. This latter quantity, however, is being reduced each year.

(ii) *Progress of Industry.* (a) *New South Wales.* The following table shows the progress of this industry in New South Wales since 1925-26 :—

## SUGAR MILLS.—NEW SOUTH WALES, 1925-26 TO 1929-30.

Items.	1925-26.	1926-27.	1927-28.	1928-29.	1929-30.
Number of factories ..	3	3	3	3	3
Number of employees ..	487	447	413	(a) 375	(a) 170
Cane crushed .. tons	297,335	230,254	208,612	147,414	174,110
Sugar produced .. tons	32,385	26,604	23,349	16,954	19,568
Molasses produced gals.	1,820,000	1,371,700	1,196,700	914,000	1,064,405

(a) See § 9.1.

The number of mills in New South Wales 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 in Queensland during recent years.

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

## SUGAR MILLS.—QUEENSLAND, 1911 TO 1929-30.

Items.	1911.	1926-27.	1927-28.	1928-29.	1929-30.
Number of factories ..	49	39	35	35	35
Number of employees ..	4,295	6,949	6,005	(a) 6,077	(a) 5,459
Cane crushed .. tons	1,534,451	2,930,860	3,570,743	3,741,715	3,572,068
Sugar produced .. tons	173,296	457,914	479,803	516,081	513,551
Molasses—					
Sold to distillers and others .. gals.	2,393,669	3,301,557	4,823,728	5,676,821	5,854,398
Used as fodder .. gals.	789,564	2,828,118	2,523,390	2,524,136	2,382,192
Used as manure .. gals.	223,000	89,600	473,260	7,200	298,395
Run to waste .. gals.	1,847,333	4,748,015	3,495,063	3,044,889	2,253,083
Burnt as fuel .. gals.		2,547,140	3,204,997	5,131,726	4,202,588
In Stock .. gals.	1,197,626	1,172,003	1,335,366	488,600	871,292
Total Molasses .. gals.	6,451,192	14,686,433	15,855,804	16,873,372	15,861,948

(a) See § 9.1.

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 1929-30 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 328,943 tons, for a yield of 319,804 tons of refined sugar, valued at £11,270,699.

20. Breweries.—(i) *Details for each State, 1929-30.* The following table gives particulars concerning breweries in each State :—

**BREWERIES, 1929-30.**

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust. (a).	Tas.	Australia.
Number of breweries .. ..	8	9	9	6	10	3	45
Number of employees .. ..	1,156	1,153	396	311	462	112	3,590
Actual horse-power of engines employed .. ..	4,609	4,186	2,165	1,478	1,647	715	14,800
Approximate value of land and buildings .. ..	£ 847,108	714,795	292,780	179,333	282,024	141,388	2,457,428
Approximate value of plant and machinery .. ..	£ 1,003,849	1,007,420	276,509	201,311	298,489	169,329	2,956,907
Total amount of wages paid during year .. ..	£ 350,178	409,815	115,940	104,517	151,721	33,209	1,165,380
Value of fuel used .. ..	£ 93,581	81,876	20,690	23,831	20,424	29,797	276,199
Value of raw materials used .. ..	£ 990,968	1,021,035	224,861	242,471	347,261	60,655	2,887,251
Total value of output .. ..	£ 2,856,404	2,334,283	551,553	559,201	805,308	152,124	7,258,933
Value of production .. ..	£ 1,771,915	1,231,372	300,002	292,899	437,623	61,672	4,095,483

(a) Includes malting.

(ii) *Development in Australia, 1925-26 to 1929-30.* The following table shows the progress of this industry during the past four years :—

**BREWERIES.—AUSTRALIA, 1925-26 TO 1929-30.**

Items.	1925-26.	1926-27.	1927-28.	1928-29.	1929-30.
Number of breweries .. ..	52	48	46	45	45
Number of employees .. ..	3,812	3,844	3,881	a 3,874	a 3,590
Actual horse-power of engines used .. ..	13,246	13,143	14,688	14,217	14,800
Approx. value of land and buildings .. ..	£ 2,141,886	2,205,779	2,347,851	2,476,207	2,457,428
Approx. value of plant and machinery .. ..	£ 2,595,955	2,710,319	2,853,623	2,912,078	2,956,907
Total amount of wages paid .. ..	£ 1,194,424	1,173,086	1,208,091	1,208,699	1,165,380
Value of fuel used .. ..	£ 283,300	248,780	272,151	295,908	276,199
Value of raw materials used .. ..	£ 3,577,212	3,315,441	3,318,521	3,310,659	2,887,251
Total value of output .. ..	£ 7,842,180	7,941,978	7,964,626	7,921,010	7,258,933
Value of production .. ..	£ 3,981,668	4,377,757	4,373,954	4,314,443	4,095,483

(a) See § 9.1.

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 decreased from £7,842,180 in 1925-26 to £7,258,933 in 1929-30, and the quantity of ale and stout brewed dropped from 72,505,829 to 66,578,265 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 1929-30 averaged about 10½ 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 1929-30.

**BREWERIES.—MATERIALS USED AND PRODUCTION, 1929-30.**

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
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**RAW MATERIAL USED.**

Malt .. bushels	850,707	754,288	190,326	175,012	210,579	44,784	2,225,696
Hops .. lb.	809,098	619,218	171,549	183,687	193,000	40,864	2,017,416
Sugar .. cwt.	95,313	103,328	24,930	20,520	28,707	3,921	276,719

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

Malt .. bushels	32.58	34.36	31.08	33.85	35.05	37.04	33.43
Hops .. lb.	30.98	28.21	28.01	35.53	32.12	33.80	30.30
Sugar .. cwt.	3.65	4.71	4.07	3.97	4.78	3.24	4.16

**ALE AND STOUT BREWED.**

Quantity gallons	26,113,448	21,952,775	6,124,413	5,170,387	6,008,184	1,209,058	66,578,265
Value(a) £	2,827,267	2,376,797	551,553	554,633	700,297	153,124	7,223,671

(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 1929-30 comprised 881,835 cwt. of molasses, 300,267 bushels of malt, and 8,817,948 gallons of wine, while the output of distilled spirit amounted to 7,240,090 proof gallons.

22. *Tobacco, etc., Factories.*—(i) *Details for each State, 1929-30.* During the year 1929-30 there were twenty-three 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, 1929-30.**

Items.	N.S.W.	Victoria.	S. Aust.	W. Aust.	Australia.
Number of factories .. ..	8	12	1	2	23
Number of employees .. ..	2,505	1,475	14	102	4,096
Actual horse-power of engines employed .. ..	1,221	725	(a)	(a)	b 1,986
Approx. value of land and buildings £	587,033	250,225	(a)	(a)	b 857,787
Approx. value of plant and machinery £	382,545	174,745	(a)	(a)	b 565,556
Total amount of wages paid during year £	481,879	318,559	(a)	(a)	b 818,342
Value of fuel used .. ..	14,554	9,042	(a)	(a)	b 24,941
Value of materials used .. ..	3,983,928	1,185,141	(a)	(a)	b 5,111,443
Total value of output .. ..	5,406,662	2,005,347	(a)	(a)	b 7,523,114
Value of production .. ..	1,498,180	810,564	(a)	(a)	b 2,386,730

(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 1929-30 comprised—manufactured tobacco 882,008 lb., cigars 87,443 lb., and cigarettes 879,112 lb., while the quantities manufactured in Australian factories were respectively 16,064,402 lb., 306,740 lb., and 5,371,005 lb. The following tables show the development of the tobacco manufacturing industry in Australia during recent years:—

TOBACCO, CIGAR, AND CIGARETTE FACTORIES.—AUSTRALIA,  
1925-26 TO 1929-30.

Items.	1925-26.	1926-27.	1927-28.	1928-29.	1929-30.
Number of factories .. .. .	26	24	23	23	23
Number of employees .. .. .	4,325	4,286	4,217	a 4,137	a 4,096
Actual horse-power of engines used .. .. .	1,713	1,645	1,684	1,946	1,986
Approx. value of land and buildings £	640,239	675,089	783,895	794,421	857,787
Approx. value of plant and machinery £	508,100	512,441	510,661	543,462	565,556
Total amount of wages paid .. .. .	£ 800,615	£ 812,300	£ 818,985	£ 808,865	£ 818,342
Value of fuel used .. .. .	£ 28,053	£ 22,032	£ 21,991	£ 24,115	£ 24,941
Value of materials used .. .. .	£ 4,589,301	£ 4,523,086	£ 4,492,363	£ 4,427,806	£ 5,111,443
Value of final output .. .. .	£ 6,892,332	£ 6,800,026	£ 6,817,391	£ 6,812,791	£ 7,523,114
Value of production .. .. .	£ 2,274,978	£ 2,254,908	£ 2,303,037	£ 2,360,870	£ 2,386,730

LEAF USED AND PRODUCTION.

Leaf used .. .. .	1,000 lb.	18,061	18,610	18,620	19,136	19,175
Tobacco made .. .. .	15,405	15,008	15,097	15,678	16,064	16,064
Cigars .. .. .	456	410	390	339	307	307
Cigarettes .. .. .	5,134	5,309	5,391	5,358	5,371	5,371

(a) See § 9. 1.

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 item "Tobacco" in Chapter XVII., *Agricultural Production*. The respective quantities of Australian and imported leaf used during 1929-30 were 1,191,568 and 17,983,113 lb.

23. Woollen and Tweed Mills.—(i) *Details for each State, 1929-30*. 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 1929-30, shows that the industry is now well established:—

WOOLLEN AND TWEED MILLS, 1929-30.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W.A.	Tas.	Australia.
Number of factories .. .. .	15	31	2	3	1	6	58
Number of employees .. .. .	3,197	6,663	353	260	111	1,259	11,843
Actual horse-power of engines employed .. .. .	7,933	14,627	(a)	(a)	(a)	1,963	b 26,407
Approx. value of land and buildings £	601,207	1,135,975	(a)	(a)	(a)	265,974	b 2,124,486
Approx. value of plant and machinery .. .. .	£ 1,048,301	£ 1,835,875	(a)	(a)	(a)	£ 355,496	b £ 3,553,493
Total amount of wages paid during year .. .. .	£ 493,085	£ 1,025,101	(a)	(a)	(a)	£ 159,874	b £ 1,780,514
Value of fuel used .. .. .	£ 71,388	£ 170,249	(a)	(a)	(a)	£ 41,390	b £ 298,212
Value of materials used .. .. .	£ 1,173,662	£ 2,030,093	(a)	(a)	(a)	£ 417,890	b £ 3,758,577
Total value of output .. .. .	£ 2,082,499	£ 3,903,164	(a)	(a)	(a)	£ 675,885	b £ 6,964,160
Value of production .. .. .	£ 837,449	£ 1,702,822	(a)	(a)	(a)	£ 216,605	b £ 2,907,371

(a) Information not available for publication.

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

(ii) *Development in Australia, 1925-26 to 1929-30.* 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, 1925-26 TO 1929-30.

Items.	1925-26.	1926-27.	1927-28.	1928-29.	1929-30.
Number of factories .. ..	50	53	57	53	58
Number of employees .. ..	8,735	11,068	11,638	11,430	11,843
Actual horse-power of engines used .. ..	18,426	22,441	23,158	24,748	26,407
Approx. value of land and buildings .. ..	£ 1,659,446	1,892,108	1,933,654	1,984,124	2,124,486
Approx. value of plant and machinery .. ..	£ 3,247,602	3,779,316	3,688,023	3,487,795	3,553,493
Total amount of wages paid .. ..	£ 1,222,596	1,607,595	1,755,538	1,766,820	1,780,514
Value of fuel used .. ..	£ 203,237	251,093	272,578	270,995	298,212
Value of materials used .. ..	£ 3,400,316	3,681,164	4,172,120	4,363,482	3,758,577
Total value of output .. ..	£ 5,758,267	6,986,296	7,601,435	7,477,295	6,964,160
Value of production .. ..	£ 2,154,714	3,054,039	3,156,737	2,842,818	2,907,371

(a) See § 9.1.

(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 1929-30 was 9,887,273 yards. In New South Wales 3,118,673 yards of tweed and cloth, and in Victoria 6,077,129 yards were manufactured. The production of flannel amounted to 5,994,544 yards, while blankets, shawls, and rugs to the number of 875,888 were manufactured. The output of yarn reported was 7,658,849 lb., most of which was produced in Victoria.

In addition to the woollen and tweed factories, there were 268 hosiery and knitting mills operating throughout Australia during 1929-30. These establishments provided employment for 12,447 persons, of whom 9,566 were females, and the value of their output amounted to £6,525,226.

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 twenty-two establishments treating cotton in Australia during 1929-30, and these employed 1,216 hands, while the value of the output was £892,770.

24. *Boot Factories.*—(i) *Boot and Shoe Factories, 1929-30.* Among the manufactures 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, 1929-30.

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories .. ..	100	197	18	16	8	5	344
Number of employees .. ..	4,316	10,749	1,111	476	355	149	17,156
Actual horse-power of engines employed .. ..	1,843	3,601	300	258	212	60	6,274
Approx. value of land and buildings .. ..	£ 519,115	914,365	67,012	76,959	36,726	13,690	1,627,867
Approx. value of plant and machinery .. ..	£ 251,530	571,325	43,521	26,488	20,218	6,606	919,688
Total amount of wages paid during year .. ..	£ 748,637	1,808,261	166,420	72,904	52,929	26,701	2,875,852
Value of fuel used .. ..	£ 14,781	41,220	2,629	1,523	1,194	740	62,087
Value of materials used .. ..	£ 1,055,745	2,962,116	226,064	101,734	111,694	54,636	4,511,989
Total value of output .. ..	£ 2,176,933	5,726,739	462,175	191,923	195,519	89,125	8,842,414
Value of production .. ..	£ 1,106,407	2,723,403	233,482	88,666	82,631	33,749	4,268,338

(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 1929-30 the number recorded amounted to 1,123, in which 2,137 hands were employed. The sum of £203,964 was distributed in salaries and wages, and the total output value was £916,917.

(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, 1929-30.**

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
QUANTITY (,000 OMITTED).							
Boots and shoes .. pairs	3,517	7,891	695	356	316	120	12,895
Slippers .. "	923	2,567	8	14	203	..	3,718
Uppers (a) .. "	52	20	41	7	..	3	123
VALUE.							
Boots and shoes .. £	1,960,627	5,003,236	454,862	184,241	166,304	88,217	7,857,517
Slippers .. £	128,011	383,159	2,744	2,315	30,986	..	547,215
Uppers (a) .. £	17,062	8,770	4,673	3,409	186	880	34,950

(a) Made for other than factory use.

25. *Clothing (Tailoring and Slop) Factories.*—(i) *Details for each State, 1929-30.* The importance of this industry in the several States is shown in the following table:—

**CLOTHING (TAILORING AND SLOP) FACTORIES, 1929-30.**

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories .. ..	463	485	129	122	89	39	1,327
Number of employees .. ..	9,408	8,127	2,065	1,730	1,235	451	23,016
Actual horse-power of engines employed .. ..	1,076	621	149	106	78	32	2,062
Approximate value of land and buildings .. £	2,031,491	1,135,780	299,107	332,229	266,193	86,555	4,151,355
Approximate value of plant and machinery .. £	139,791	110,340	33,006	23,730	16,013	4,896	328,676
Total amount of wages paid during year .. £	1,260,354	1,085,123	412,723	212,255	164,583	54,648	3,190,686
Value of fuel used .. £	21,475	25,016	6,294	5,673	2,892	1,661	63,011
Value of materials used .. £	1,554,805	1,935,306	421,472	256,834	249,104	56,428	4,473,949
Total value of output .. £	3,421,731	3,576,817	993,333	572,914	517,397	140,313	9,222,505
Value of production .. £	1,845,451	1,616,495	565,567	310,407	265,401	82,224	4,685,545

(ii) *Development in Australia, 1925-26 to 1929-30.* The tailoring and slop branch of the clothing industry made little progress during the four years ended 1928-29. The number of factories and number of persons employed decreased, but the value of raw material used and output remained fairly constant. A considerable decline in the industry, however, was recorded during 1929-30. Details for the past five years are as follow:—

**CLOTHING (TAILORING AND SLOP) FACTORIES.—AUSTRALIA,  
1925-26 TO 1929-30.**

Items.	1925-26.	1926-27.	1927-28.	1928-29.	1929-30.
Number of factories .. ..	1,481	1,465	1,422	1,440	1,327
Number of employees .. ..	28,294	28,409	27,401	a 26,953	a 23,016
Actual horse-power of engines used .. ..	1,787	1,833	1,954	1,802	2,062
Approx. value of land and buildings .. £	4,403,707	4,308,772	4,364,779	4,389,473	4,151,355
Approx. value of plant and machinery .. £	376,509	387,923	370,757	387,057	328,676
Total amount of wages paid .. .. £	3,634,760	3,664,940	3,616,157	3,524,994	3,190,686
Value of fuel used .. .. £	65,638	64,742	65,946	65,100	63,011
Value of materials used .. .. £	5,582,354	5,456,963	5,121,106	5,092,739	4,473,949
Total value of output .. .. £	11,274,583	11,118,283	10,827,374	10,602,874	9,222,505
Value of production .. .. £	5,626,596	5,596,578	5,640,322	5,445,035	4,685,545

(a) See § 9.1.

26. Dressmaking and Millinery Establishments.—(i) *Details for each State, 1929-30.* Particulars of dressmaking and millinery establishments are given in the following table:—

**DRESSMAKING AND MILLINERY ESTABLISHMENTS, 1929-30.**

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories .. ..	182	474	42	54	51	13	816
Number of employees .. ..	2,506	8,056	610	829	630	78	12,709
Actual horse-power of engines employed .. ..	155	670	33	54	55	4	971
Approximate value of land and buildings .. ..	£ 698,622	£ 1,320,695	£ 59,902	£ 124,634	£ 95,935	£ 10,570	£ 2,310,358
Approximate value of plant and machinery .. ..	£ 24,224	£ 104,925	£ 8,677	£ 11,219	£ 6,933	£ 1,073	£ 157,051
Total amount of wages paid during year .. ..	£ 273,004	£ 917,211	£ 57,599	£ 81,601	£ 63,040	£ 6,711	£ 1,399,256
Value of fuel used .. ..	£ 3,994	£ 13,213	£ 592	£ 1,728	£ 1,168	£ 147	£ 23,842
Value of materials used .. ..	£ 415,441	£ 1,774,207	£ 83,728	£ 117,567	£ 104,497	£ 6,160	£ 2,501,600
Total value of output .. ..	£ 892,447	£ 3,220,321	£ 175,315	£ 246,108	£ 203,912	£ 15,803	£ 4,753,906
Value of production .. ..	£ 473,012	£ 1,429,901	£ 90,995	£ 126,813	£ 93,247	£ 9,496	£ 2,223,464

(ii) *Development in Australia, 1925-26 to 1929-30.* The development of dressmaking and millinery establishments in Australia during the past five years is shown in the following table:—

**DRESSMAKING AND MILLINERY ESTABLISHMENTS.—AUSTRALIA,  
1925-26 TO 1929-30.**

Items.	1925-26.	1926-27.	1927-28.	1928-29.	1929-30.
Number of factories .. ..	898	912	916	897	816
Number of employees .. ..	14,703	15,051	15,019	a 14,778	a 12,709
Actual horse-power of engines used .. ..	854	906	898	1,182	971
Approximate value of land and buildings .. ..	£ 2,308,405	£ 2,498,532	£ 2,596,384	£ 2,570,963	£ 2,310,358
Approximate value of plant and machinery .. ..	£ 173,368	£ 171,235	£ 170,653	£ 175,151	£ 157,051
Total amount of wages paid .. ..	£ 1,462,410	£ 1,507,373	£ 1,525,947	£ 1,532,734	£ 1,399,256
Value of fuel used .. ..	£ 21,344	£ 22,171	£ 25,054	£ 24,056	£ 23,842
Value of materials used .. ..	£ 2,805,062	£ 2,840,827	£ 2,590,753	£ 2,724,974	£ 2,501,600
Total value of output .. ..	£ 5,243,483	£ 5,294,390	£ 5,034,713	£ 5,227,620	£ 4,753,906
Value of production .. ..	£ 2,417,077	£ 2,431,401	£ 2,418,906	£ 2,478,590	£ 2,228,464

(a) See § 9.1.

27. Electrotyping, Stereotyping, Printing, and Binding Works.—(i) *Details for each State, 1929-30.* Printing ranks high in importance among the industries of Australia. It affords employment for about 26,000 employees, and pays nearly £6,000,000 in salaries and wages. During 1929-30 the total value of the output amounted to £15,756,005.

The following table gives particulars of these industries in each State for the year 1929-30:—

**ELECTROTYPING, STEREOTYPING, PRINTING, AND BINDING ESTABLISHMENTS,  
1929-30.**

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories .. ..	499	500	137	99	88	21	1,344
Number of employees .. ..	9,929	9,115	3,430	1,749	1,428	696	26,347
Actual horse-power of engines employed .. ..	9,963	8,098	2,666	1,504	1,779	485	24,555
Approximate value of land and buildings .. ..	£ 3,436,072	£ 2,483,530	£ 818,187	£ 692,093	£ 445,660	£ 114,597	£ 7,990,139
Approximate value of plant and machinery .. ..	£ 3,032,819	£ 2,087,465	£ 618,884	£ 586,800	£ 381,221	£ 131,248	£ 6,838,437
Total amount of wages paid during year .. ..	£ 2,380,910	£ 1,963,994	£ 735,900	£ 387,541	£ 361,867	£ 163,650	£ 5,993,862
Value of fuel used .. ..	£ 94,565	£ 67,913	£ 31,464	£ 14,698	£ 12,393	£ 5,897	£ 226,930
Value of materials used .. ..	£ 2,430,022	£ 2,126,465	£ 516,426	£ 352,938	£ 270,140	£ 96,743	£ 5,792,734
Total value of output .. ..	£ 6,476,359	£ 5,368,224	£ 1,736,977	£ 967,323	£ 873,434	£ 333,688	£ 15,756,005
Value of production .. ..	£ 3,951,772	£ 3,173,846	£ 1,189,087	£ 599,687	£ 590,901	£ 231,048	£ 9,736,341

(ii) *Development in Australia, 1925-26 to 1929-30.* The development of electrotyping, stereotyping, printing, and binding in Australia since 1925-26 is shown in the following table :—

**ELECTROTYPING, STEREOTYPING, PRINTING AND BINDING ESTABLISHMENTS.—  
AUSTRALIA, 1925-26 TO 1929-30.**

Items.	1925-26.	1926-27.	1927-28.	1928-29.	1929-30.
Number of establishments .. ..	1,254	1,307	1,322	1,325	1,344
Number of employees .. ..	25,213	27,059	27,049	a 26,067	a 26,347
Actual horse-power of engines used .. ..	19,048	20,581	23,042	23,550	24,555
Approximate value of land and buildings .. ..	£ 0,258,485	7,012,899	7,421,436	7,583,461	7,990,139
Approximate value of plant and machinery .. ..	£ 5,961,070	6,562,612	6,507,575	6,906,523	6,833,437
Total amount of wages paid .. ..	£ 5,526,681	5,934,778	5,980,513	6,059,303	5,993,862
Value of fuel used .. ..	£ 185,513	197,648	209,647	210,085	226,930
Value of materials used .. ..	£ 5,277,369	5,969,691	6,079,643	6,152,030	5,792,734
Total value of output .. ..	£ 14,493,764	16,000,811	16,307,832	16,419,674	15,756,005
Value of production .. ..	£ 9,030,882	9,833,472	10,018,542	10,057,559	9,736,341

(a) See § 9.1.

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

28. *Motor Vehicles and Accessories.*—The industries catering for the motor trade comprise the principal branches of manufacture in Class XI. The statistical classification has been amended and does not now permit the separation of the assembling and repairing of motors from the body building section. The number of bodies manufactured during 1929-30 was 46,409 valued at £3,118,987. The returns for the combined industries during the year 1929-30 are as follow :—

**MOTOR VEHICLES AND ACCESSORIES, 1929-30.**

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories .. ..	967	814	135	147	164	73	2,300
Number of employees .. ..	6,796	5,901	1,183	3,962	1,087	494	19,423
Actual horse-power of engines employed .. ..	5,232	4,667	700	2,780	771	282	14,432
Approximate value of land and buildings .. ..	£ 3,259,964	2,113,405	449,639	1,023,320	288,774	204,310	7,339,412
Approximate value of plant and machinery .. ..	£ 586,259	855,860	87,326	720,590	96,979	25,048	2,372,962
Total amount of wages paid during year .. ..	£ 1,439,262	1,190,452	225,746	790,667	226,171	79,130	3,951,428
Value of fuel used .. ..	£ 58,509	58,234	10,626	34,217	9,454	4,594	175,634
Value of materials used .. ..	£ 1,181,927	595,927	62,467	1,042,791	126,046	31,167	3,040,325
Total value of output .. ..	£ 3,459,180	2,467,797	486,299	2,231,780	531,624	153,968	9,330,648
Value of production .. ..	£ 2,218,744	1,813,636	413,206	1,154,772	396,124	118,207	6,114,639

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, 1929-30.

Items.	N.S.W.	Vic.	Q'land. (b)	S. Aust.	W. Aust. (a)	Tas.	Australia.
Number of factories .. ..	248	285	79	51	64	34	761
Number of employees.. ..	3,098	2,479	1,246	671	730	328	8,552
Actual horse-power of engines employed .. ..	4,732	3,508	1,437	1,810	1,131	484	13,102
Approximate value of land and buildings .. .. £	743,779	618,495	172,905	104,578	138,816	41,398	1,819,971
Approximate value of plant and machinery .. .. £	254,752	179,685	77,718	81,219	49,577	19,489	662,440
Total amount of wages paid during year .. .. £	657,801	432,958	231,766	118,745	144,258	49,561	1,635,089
Value of fuel used .. .. £	22,485	19,008	8,591	5,962	3,889	2,028	61,963
Value of materials used .. ..	922,705	620,785	321,281	164,598	188,819	41,884	2,260,072
Total value of output .. .. £	1,932,890	1,364,551	643,130	335,529	402,620	111,176	4,789,896
Value of production .. .. £	987,700	724,758	313,258	164,969	209,912	67,264	2,467,861

(a) Excluding Billiard Tables.

(b) Includes Furnishing Drapery.

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 1925-26 the production of electric light and power has increased from 1,729,936,637 to 2,435,857,904 British units, or by more than 40 per cent. An increase in the value of land and buildings and plant and machinery in New South Wales was mainly due to the establishment of new works at Bunnerong by the Sydney Municipal Council, the value of the items mentioned being £1,382,000 and £1,884,000 respectively. Particulars for the year 1929-30 are as follow :—

ELECTRIC LIGHT AND POWER WORKS, 1929-30.

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories .. ..	127	91	31	33	47	6	335
Number of employees.. ..	2,188	1,230	761	1,172	336	96	5,783
Actual horse-power of engines employed .. ..	465,645	248,193	130,219	120,619	53,314	77,250	1,095,240
Approximate value of land and buildings .. .. £	4,610,185	1,960,115	302,833	580,993	203,267	28,270	7,685,663
Approximate value of plant and machinery .. .. £	10,680,578	6,559,245	2,110,271	1,924,044	842,496	3,108,574	25,225,208
Total amount of wages paid during year .. .. £	675,336	353,398	202,538	325,340	89,578	25,697	1,671,887
Value of fuel used .. .. £	1,639,731	683,290	171,187	287,860	253,750	3,313	3,039,131
Total value of output .. .. £	5,398,470	1,873,361	840,757	1,123,806	606,990	267,303	10,110,687

31. Gas and Coke Works.—(i) *Details for each State, 1929-30.* Gas works are in operation in nearly all the chief towns in Australia. In New South Wales there are nine coke factories and in Queensland one which are worked as separate industries.

The subjoined table gives particulars of gas and coke works in each State for the year 1929-30 :—

## GAS AND COKE WORKS, 1929-30.

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories .. ..	56	39	17	6	5	2	125
Number of employees .. ..	2,200	1,052	391	742	119	95	4,599
Actual horse-power of engines employed .. ..	8,110	2,965	893	2,339	223	156	14,686
Approximate value of land and buildings .. .. £	1,140,303	589,985	144,400	43,318	80,091	49,243	2,047,340
Approximate value of plant and machinery .. .. £	4,076,371	2,138,240	683,985	1,194,790	178,687	162,153	8,434,226
Total amount of wages paid during year .. .. £	555,220	299,524	105,899	208,520	31,391	25,563	1,226,117
Value of fuel used .. .. £	293,452	167,202	16,564	45,825	14,753	7,891	545,687
Value of materials used .. .. £	2,162,954	1,555,493	166,705	306,765	75,010	36,230	4,303,157
Total value of output .. .. £	4,464,468	2,783,437	676,061	749,458	158,546	96,501	8,928,471
Value of production .. .. £	2,008,062	1,060,742	492,792	396,868	68,783	52,380	4,079,627

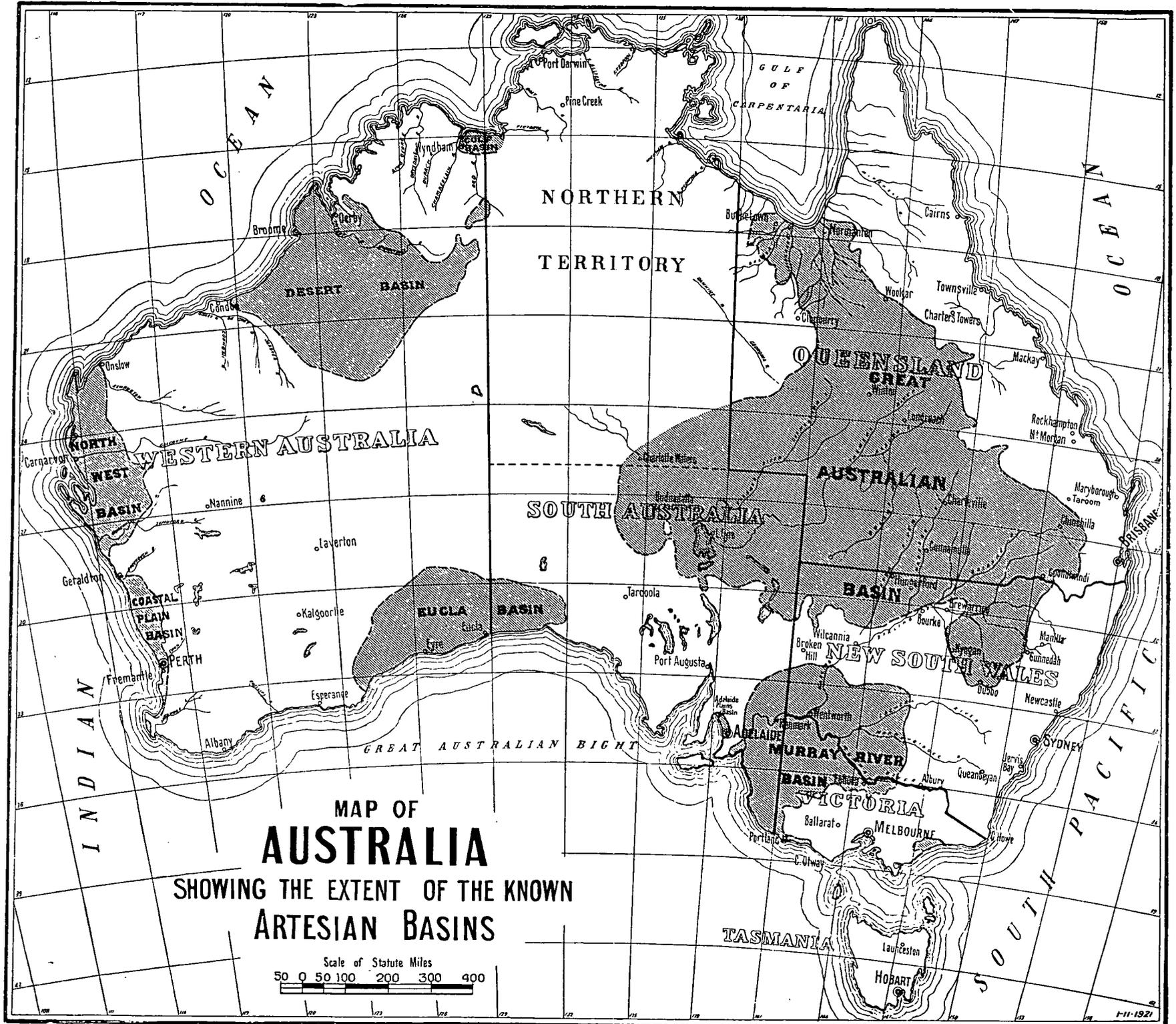
(ii) *Coal Used and Production, 1929-30.* The following table shows the quantity and value of the production of gas and coke works in each State during the year 1929-30 :—

## GAS AND COKE WORKS.—COAL USED AND PRODUCTION, 1929-30.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
COAL USED.							
Coal .. .. tons	1,259,178	399,182	496,205	115,732	20,890	15,484	1,906,671
PRODUCTS.							
Gas .. 1,000 cubic feet	10,991,780	6,409,110	1,381,107	1,547,234	408,213	192,125	20,929,569
Coke .. .. tons	821,257	260,436	453,805	67,422	12,496	5,787	1,221,203
VALUE.							
Gas .. .. £	2,190,737	1,552,759	614,805	575,321	131,694	92,856	5,158,172
Coke .. .. £	1,131,455	416,601	442,458	114,573	19,428	13,815	1,738,330

(a) Relates to Gas Works only.

In order to cope with the general industrial expansion, the production of gas increased from 19,088,340 cubic feet in 1925-26 to 20,929,569 cubic feet in 1929-30. The output of coke decreased from 1,391,370 to 1,221,203 tons during the same period.



This map was included in the Report of the Third Interstate Conference on Artesian Water held in Adelaide during September, 1921. The area has been slightly extended since the year named. See also letterpress on page 651.