## CHAPTER KXIV.

## MANUFACTURING INDUSTRY.

§ 1. Gemeral.

1. Introduction.-A complete statistical account of the growth of the manufacturing industry in Australia cannot be given owing to the fact that prior to 1906 the necessary statistics were not collected by the several States upon a definite and uniform basis. A standard classification of manufacturing industries was formulated at a conference of Australian Statisticians in 1902 and adopted by all States in 1906. Figures upon this basis were prepared for 1907 and subsequent years.

Prior to the federation of the Australian States in 1901, the manufacturing industry in Australia was primarily engaged in the production of goods for local use, mainly of food commodities, furniture, bricks, clothing made from imported materials, printing, the repair rather than the manufacture of machinery, and the preliminary treatment of primary products, such as wool-scouring and sawmilling.

After federation, steady expansion of the manufacturing industry resulted from the removal of interstate trade barriers and the operation of a uniform protective tariff. This expansion was quickened as a result of the demands created by the 1914-18 War, the curtailment of imports, and the rapid growth of spending power within the community. New and more advanced development took place, iron and steel works and many related and subsidiary industries were established, extensive manufacture of machinery began, and a wide range of high-grade products-textiles, metal manufactures, electrical goods, etc. -was added to the list of commodities made in Australia.

A check was made in this expansion by the world-wide economic depression of 1929-33, but returning general prosperity and the opportunities opened to local manufacturers by import restrictions, initiated revival in 1933 and, with depreciation of Australian currency, gave renewed stimulus to manufacturing enterprise. As economic conditions improved, the tariff, revenue duties, and primage were reduced, but without materially prejudicing the progress of local manufactures.

When war broke out in September, 1939, Australia became a major source of supply for Empire countries east of Suez, and in meeting these demands, as well as those arising locally because of interruption of oversea importations, existing manufacturing industries expanded, and new enterprises were developed rapidly for the production of all classes of munitions, aircraft, ships, many new kinds of machinery and metal manufactures, scientific equipment, textiles, chemicals, etc. The outbreak of war with Japan, the basing of Allied armed forces in Australia, and Australian responsibilities for supplies in the South-west Pacific Area, gave added impetus to these developments, and manufacturing in Australia outstripped all previous levels.

The cessation of war production and the transition of industry to a peace-time basis temporarily retarded progress, but from $1945-46$ onward, there was renewed expansion of the manufacturing industries to which an inflow of capital from overseas contributed.
2. Decentralization of Manufacturing Industries.-Following upon a report by the Secondary Industries Commission, the Commonwealth Government called a conference of Commonwealth and State Ministers in August, 1945 to formulate a national policy for the decentralization of secondary industries. It was agreed that the State Governments should seek to promote decentralization along the lines appropriate to each, providing necessary services, assistance and concessions to the full extent of State resources. The Commonwealth undertook to collaborate in all matters of Commonwealth industrial policy affecting the development and location of industry, to investigate in association with the States the prospects of developing secondary industries in selected areas, to advise the States of developments desirable for defence purposes, and to provide financial assistance for projects of national importance where the cost would be great relative to the State's resources.

The Commonwealth has assisted decentralization by allocating to private industry munitions and other defence buildings in decentralized areas and accommodating migrants in provincial centres with prospects of development. Overseas firms contemplating establishment in Australia are encouraged to select locations in rural areas or the less industrialized States.
3. Commonwealth Division of Industrial Development.-The Secondary Industries Commission was established in 1943 to investigate post-war uses for munitions factories, to plan for the transition of secondary industries from war-time to peace-time activities, and generally to seek to increase industrial efficiency and to explore opportunities for new industries. The Commission was disbanded in April, 1950.

The functions of the Division of Industrial Development (formed in February, 1945 as the Secondary Industries Division of the Department of Post-war Reconstruction) were extended in August, 1948 to include the encouragement of industrial development, the exercising of Commonwealth responsibilities for the decentralization of industry, the promotion of industrial efficiency (especially the study of technical, production, and managerial problems and the dissemination and application of new knowledge and methods), the encouragement of the development of technological institutes and the publication of studies of the structure and operation of Australian manufacturing industries. The Division was attached to the Ministry of National Development when formed in March, i950 to plan the development of national resources and to promote decentralization and regional development in conjunction with the States.
4. Customs and Excise Tariffs and Bounties on Manufactures.-Particulars of Australian customs and excise tariffs, and the constitution and functions of the Australian Tariff Board in relation to matters affecting the industrial development of Australia, are given in Chapter XII.-Trade of this volume.

Bounties are paid by the Commonwealth Government to encourage local manufacture of certain products. The Statutory provisions usually fix a term of operation of the bounty, provide for payment at a rate varying according to changes in the corresponding customs duty, specify the annual maximum amount of bounty payable, and require the bounty to be withheld or reduced if a manufacturers' net profit in production of the commodity exceeds a certain rate or if rates of wages ard conditions of employment in production of the commodity do not conform to prescribed standards.
5. Scientific Research and Standardization.-(i) The Commonwealth Scientific and Industrial Research Organization. The function of this Organization, more detailed reference to which appears on p. 1274, is to initiate and conduct research in connexion with industries in Australia, to train research workers, to establish industrial research studentships and fellowships, to make grants in aid of pure scientific research, to establish industrial research associations in various industries, to provide for testing and standardization of scientific equipment, to conduct an information service relating to scientific and industrial matters, and to act for Australia in liaison with other countries in matters of scientific research.
(ii) The Standards Association of Australia. This Association, which is referred to in greater detail on p. 1279, acts as the national standardizing organization of Australia and issucs standard specifications for materials and codes of practice. Specifications and codes are prepared and revised periodically in accordance with the needs of industry, and standards are evolved and accepted by general consent.
(iii) The National Association of Testing Authorities. The National Association of Testing Authorities organizes national testing facilities throughout Australia to serve private and governmental needs. Laboratories may register voluntarily in respect of tests within their competence and the Association is to ensure the maintenance of their standards of testing. It is expected that there will be general acceptance of certificates of tests issued in the name of the Association by the registered laboratories.
6. Definitions in Factory Statistics.-The statistics relating to factories have been compiled from returns supplied annually by manufacturers to, and tabulated by, the several State Statisticians, in the terms of the Statistical Acts of the States. A return must be supplied in respect of every factory, which is defined for this purpose as an establishment where four or more persons are employed or where power (other than manual) is used in any manufacturing process. This definition includes factories in educational and charitable institutions, reformatories, and other public institutions (except penitentiaries) but does not cover smallgoods makers, laundries, farriers, photography studios, florists and seedsmen, and most abattoirs.

If a manufacturing business is conducted in conjunction with any other activity particulars relating to the manufacturing section only are included in the statistics. Where two or more industries are conducted in the same establishment, a separate return is obtained if practicable for each industry.

Manufacturers are requested to state in their returns particulars as to the number, age, wages, etc., of their employees, the value of premises and equipment, the horse-power of machinery, the value, and in most cases the quantities, of raw materials and fuel used, and quantities and values of principal materials and articles produced. The returns obtained from manufacturers are not intended to show a complete record of the income or expenditure of factories nor to show the profits or losses of factories collectively or individually.

The average number of persons employed is quoted on two different bases: the average during the period of operation and the average over the whole year. Of these, the former is simply the aggregate of the average number of persons employed in each factory during its period of operation (whether the whole or only part of the year). This average is used only in respect of details relating to classification according to number of persons employed. The latter, which is used in all other instances, is calculated by reducing the average number working in the factories (irrespective of period of operation) to the equivalent number working for a full year.

Working proprietors are included in all employment figures other than those relating to monthly employment and age dissections, but salaries and wages paid in all cases exclude drawings by working proprietors.

The value of factory output is the value of the goods manufactured or their value after passing through the particular process of manufacture and includes the amount received for repair work, work done on commission and receipts for other factory work. The basis of valuation of the output is the selling value of the goods at the factory, exclusive of all delivery costs and charges and excise duties, but inclusive of bounty and subsidy payments to the manufacturer of the finished article.

The value of production is the value added to raw materials by the process of manufacture. It is calculated by deducting from the value of factory output the value (at the factory) of the materials used, containers and packing, power, fuel, and light used, tools replaced, and materials used in repairs to plant (but not depreciation charges).

In the process of manufacture, many goods are treated in several industries, the output of one becoming the raw materials of another, so that such commodities are counted more than once in the aggregate value of output and of raw materials. Examples are raw sugar passing from the mills to the refinery, metals from the smelters which become raw materials in establishments concerned in the production of metal goods, and timber from the sawmills used in furniture factories and in joinery. On the other hand, the aggregate value of production is assessed without duplication, the value added by each industry being taken into account once only. For this reason the value of production, and not the value of the output, is used as a measure of activity in the manufacturing industries as a whole.

In the special case of Government factories and workshops, the value of output is estimated by adding to per cent. to the value of materials and fuel used and other factory costs, including salaries and wages paid.
7. Classification of Factories.-In the compilation of statistical data relating to factories in Australia, a standard classification of manufacturing industries, formulated at a conference of Australian statisticians in 1902 and reviscd from time to time, was used until the year 1929-30. A new classification was introduced in r930-31, and this in turn, was revised and extended (principally in regard to the placement and composition of sub-classes) in accordance with decisions of the Statisticians' Conference, 1945.

Owing to limitations of space, details published in general tables in this chapter are confined either to the sixteen classes of industry or total factory activity. Particulars of certain of the sub-classes shown below are published in the latter portion of this chapter and full details for all sub-classes may be found in the Secondary Industries Bulletin, published annually.

The principal classes and sub-classes in the current classification of factories are as follows:-

## CLASSIFICATION OF FACTORIES.

Class I.-Treatment of Non-Metalliferous Mine and Quarry Products.
Coke Works.
Briquetting and Pulverized Coal.
Carbide.
Lime, Plaster of Paris, Asphalt.
Fibrous Plaster and Products.
Marble, Slate, etc.
Cement.
Asbestos Cement Sheets, etc.
Other Cement Goods.
Other.

Class II.-Bricks, Pottery, Glass, etc.
Bricks and Tiles, Fire Bricks and Fire-clay Goods.
Earthenware, China, Porcelain, Terra-cotta.
Glass (other than Bottles).
Glass Bottles.
Other.
Class 1II--Chemicals, Dyes, Explosives, Paints, Oils, Grease.
Industrial and Heavy Chemicals and Acids.
Pharmaceutical and Tollet Preparations.
Explosives.
White Lead, Paints, Varnish.
Oils, Vegetable.
Oils, Mineral.
Oils, Animal.
Boiling Down, Tallow Reflning.
Soap and Candles.
Chemical Fertilizers.
Inks, Polishes, etc.
Matches.
Other.
Class IV.-Industrial Metals, Maohines, Tmplements and Confeyances.
Smelting, Converting, Refining, and Rolling of Iron and Steel.
Foundries-Ferrous.
Plant, Equipment and Machinery.
Other Engincering.
Extracting and Refining of other Metals, Alloys.
Electrical Machinery, Cables and Apparatus.
Construction and Repair of Vehicles (io groups).
Ship and Boat Building and Repairing, Marine Engincering.
Cutlery-and Small Hand Tools.
Agricultural DLachines and Implements.
Non-Ferrous Metals-
Rolling and Extrusion.
Foundries, Casting, etc.
Iron and Steel Sheets.
Sheet metal Working, Pressing, and Stamping.
Pipes, Tubes and Fittings-Ferrous.
Wire and Wire Netting (including Nails).
Stoves, Ovens and Ranges.
Gas Fittings and Meters.
Lead Mills.

Class IV.-Industrial aretals, Machines, Implements and Conveyances-continued.
Sewing Machines.
Arms, Ammunition (excluding Explosives).
Wireless and Amplifying Apparatus.
Other Metal Works.
Class V.-Precious Metals, Jewellery, Plate.
Jewellery.
Watches and Clocks (including Repairs).
Electroplating (Gold, Silver, Chromium).
Class VI.-Textiles and Textile Goods (NOT DRESS).
Cotton Ginning.
Cotton Spinning and Weaving.
Wool-Carding, Spinning, Weaving.
Hosicry and other Knitted Goods.
Silk, Natural.
Rayon, Nylon and other Synthetic Fibres.
Flax Mills.
Rope and Cordage.
Canvas Goods, Tents, Tarpaulins, etc.
Bags and Sacks.
Other.
Class Vil.-Skins and Leather (not Clothing or Footivear).
Furriers and Fur 1)ressing.
Woolscouring and Fellmongery.
Tanning, Currying, and Leather Dressing.
Saddlery, Harness, Whips.
Machine Belting.
Bags, Trunks, etc.
Class Vili.-Clothing (except Knitted).
Tailoring and Ready-made Clothing.
Waterproof and Oilskin Clothing.
Dressmaking.
Millinery.
Shirts, Collars, Underclothing.
Foundation Garments.
Handkerchicfs, Ties, Scarves.
Fats and Caps.
Hloves.
Boots and Shoes (not rubber).
Boot and Shoe Repairing.
Hoot and Shoe Accessories.
Umbrellas and Walking Sticks.
1)yeworks and Cleaning.
other.
Class IX.-FOOD, DRINK aNd TOBacoo.
Elour Milling.
Cereal Foods and Starch.
Animal and Bird Foods.
Chaffcutting and Corn Crushing.
Bakeries (including Cakes and Pastry).
Biscuits.
Sugar Mills.

Class IX.-FOOD, DRINK AND TOBACCO-continued.
Sugar Refining.
Sugar Confectionery (including Chocolate).
Jam, Fruit and Vegetable Canning.
Pickles, Sauces, Vinegar.
Bacon Curing.
Butter Factories
Cheese Factories.
Condensed and Dried Milk Factorics.
Margarine.
Meat and Fish Preserving.
Condiments, Coffee, Spices, etc.
Ice and Reirigerating.
Salt Refining.
Aerated Waters, Cordials, etc.
Brewerics.
Distilleries.
Wine Mraking.
Cider and Perry Making.
Malting.
Bottling.
Tobacco, Cigars, Cigarettes, Snuff.
Dehydrated Fruit and Vegetables.
Ice-cream.
Sausage Skins.
Arrowroot.
Other.
Class X.-Wood Working and Basketware.
Sa wmills.
Plywood and Veneer Mills.
Bark Mills.
Joinery.
Cooperage.
Boxes and Cases.
Basketware and Wickerware (inchuding Sea-grass and Bamboo Furniture).
Perambulators,
Wall and Ceiling Boards (not Plaster or Cement). Other.

Class XI.-Furniture, Bedding, eto.
Billiard Tables, Cabinet and Furniture Making and Upholstery.
Bedding and Mattresses.
Furnishing Drapery, etc.

Class XI.-Furniture, Bedding, etc.-continued.
Picture Frames.
Blinds.
Other.
Class XII.-Paper, Stationery, Printing, BOOKBLNDING, ETC.
Newspapers and Periodicals.
Printing
Government.
General, including Bookbinding.
Manufactured Stationery.
Stereotyping and Electrotyping.
Process and Photo Engraving.
Cardboard Boxes, Cartons and Containers.
Paper Bags.
Paper Making
Pencils, Penholders, Chalks, Crayons.
Other.

> CLASS XITI.-RUBBER.

Rubber Goods and Tyres Made.
Tyre Retreading and Repairing.
Class XIV.-Musical Instruments.
Gramophones and Gramophone Records.
Pianos, Piano-Players, Organs.
Other.
Class XV.-Misoellaneous Products.
Linoleum, Leather Cloth, Oil Cloth, etc.
Bone. Horn, Ivory and Shell.
Plastic Mouking and Products.
Brooms and Brushes.
Optical Instruments and Appliances.
Surgical and other Scientific Instruments and Appliances.
Photographic Material, including Developing and Printing.
Toys, Games and Sports Requisites.
Artificial Flowers.
Other.
Class XVI-Heat, Light, and Power.
Electric Light and Power.
Gas Works.
8. Factory Development since 1901-Australia.-The development of the manufacturing industries in Australia at intervals since 1901 is summarized in the following table :-

FACTORIES : AUSTRALIA.


[^0]Single year tables in this issue relate to the year $1949-50$ and in the immediately preceding issue to the year 1947-48. Corresponding tables for $1948-49$ may be found in the Production Bulletin 1948-49, No. 43, Part 1-Secondary Industries.

## § 2. Number of Factories.

I. Number of Factories in each State.-The following table shows the number of factories in each State for the five years 1945-46 to 1949-50 compared with 1938-39 :-

## FACTORIES : NUMBER.

| Year. | N.S.W. | Victoria. | Q'land. | S. Aust. | W. Aust. | Tasmania. | Australia. |  |
| :---: | ---: | ---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $1938-39$ | $\cdots$ | 9,464 | 9,250 | 3,087 | 2,067 | 2,129 | 944 | 26,941 |
| $1945-46$ | $\cdots$ | 12,287 | 10,195 | 2,945 | 2,395 | 2,280 | 1,082 | 31,184 |
| $1946-47$ | $\cdots$ | 13,961 | 10,949 | 3,367 | 2,707 | 2,615 | 1,169 | 34,768 |
| $1947-48$ | $\cdots$ | 15,194 | 11,642 | 3,642 | 2,065 | 2,788 | 1,225 | 37,356 |
| $1948-49$ | $\cdots$ | 16,087 | 12,702 | 4,083 | 2,927 | 2,925 | 1,346 | 40,070 |
| $1949-50$ | $\cdots$ | 16,346 | 13,231 | 4,494 | 3,046 | 3,023 | 1,456 | 41,596 |

2. Number of Factories in Industrial Classes.-(i) Australia. The next table shows the number of factories in Australia during 1938-39 and the years 1945-46 to 1949-50 classified in the industrial classes agreed upon by the Conference of Statisticians in 1930. This classification, which was introduced during 1930-3I, superseded the grouping which had been in use since 1902. Details of some of the principal industries included in the table will be found in § it hereinafter.

FACTORIES : NUMBER IN INDUSTRIAL CLASSES, AUSTRALIA.

| Class of Industry. | 1938-39. | 1945-46. | 1946-47. | 1947-48. | 1948-49. | 1949-50. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| I. Treatment of Non-metalliferous Mine and Quarry Products | 564 | 591 | 743 | 933 | 1,025 | 1,126 |
| II. Bricks, Pettery, Glass, etc. . | 471 | 410 | 485 | 517 | 544 | 561 |
| 111. Chminicals, Dyes, Explusives, Painto, Oils and Grease | 666 | 886 | 929 | 975 | 1,010 | 1,006 |
| IV. Industrial Mitals, Machines and Conveyances | 7,255 | 8,816 | 10,055 | 10,910 | 11,801 | 12,362 |
| V. Precious Motals, Jewellery and Plate. | 290 | 337 | 465 | 555 | 623 | 619 |
| V1. Textiles and Textile Goods (not Jress) | 611 | 883 | 930 | 982 | 1,065 | 1,155 |
| V1I. Skins and leather (not Clothing or Footwear) | 533 | 657 | 703 | 727 | 746 | 751 |
| V11I. Clothing (except Knitted) . | 4.314 | 5,215 | 5,733 | 6,069 | 6,533 | 6,620 |
| IX. Foon, Lrink and Tobacco | 5:202 | 5,865 | 6,236 | 6,475 | 6,659 | 6,796 |
| $X$. Woodworking and Rasketware | 2,822 | 3,1,8 | 3,608 | 4,001 | 4,530 | 4,893 |
| XI. Furniture of Wood, Brdding, etc. | 1,149 | 1,140 | 1,407 | 1,568 | 1,726 | 1,820 |
| XII. Paper, stationery, Printing, liook- | 1.816 | 1,703 | 1,779 | 1,852 | 1,942 | 1,981 |
| X1II, Rubber . . ${ }^{\text {a }}$ | 299 | 308 | 345 | 371 | 39 I | 404 |
| SIV. Musical Instruments | 34 | 4 I | 48 | 56 | 64 | 59 |
| XV. Miscellaueous Produrets | 413 | 714 | 832 | 899 | 947 | 985 |
| Tutal, Classes I. to XV. | 26,439 | 30,708 | 34,294 | 36.890 | 39,606 | 41,138 |
| XVI. Heat, Light and Power | 502 | 476 | 474 | 466 | 46 | 458 |
| Grand Total | 26.941 | 31,184 | 34.768 | 37.3.5 | 40,070 | 41,596 |

Although not the best index of manufacturing activity, the number of factoriea affords some indication of the development of secondary industries. Except for the two war years 1941-42 and 1942-43, where there were decreases, the number factories increased each year from 1931-32 to 1949-50; in the latter year the number of factories in Australia reached the record total of 41,596 or 54.4 per cent. greater than in 1938-39.
(ii) States, 1949-50. The following table shows the number of faotories in each State in 1949-50, classified according to the nature of the industry :-

FACTORIES : NUMBER IN INDUSTRIAL CLASSES, 1949-50.

| Class of Industry. | N.S.W. | Vic. ${ }^{\text {I }}$ | Q'land. | S. Aust. | W. Aust. | Tas. | Aust. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| I. Treatment of Non-Metalliferous Mine and Quarry Products | 396 | 365 | 86 | 129 | 100 | 50 | 1,126 |
| II. Bricks, Pottery, Glass, etc. . . | 268 | 135 | $4^{6}$ | 56 | 41 | 15 | 561 |
| III. Chemicals, Dyes, Explosives, Paints, Oils and Grease | 5001 | 298 ' | 64 | 68 | 53 | 23 | 1,006 |
| IV. Industrial Metals, Machines, Conveyanes | 4,93I | 3,898 | 1,293 | 942 | 948 | 350 | 12,362 |
| V. Precions Metals, Jewellery and Plate | 254 | 218 | 40 | 51 | 49 | 7 | 619 |
| VI. Textiles and Textile Goods (net Dress) | 414 |  | 31 | 45 | 30 | 14 | 1,155 |
| VII. Skins and Leather (not Clothing or Footwear) . . | 330 | 276 | 54 | 45 | 36 | 10 | 751 |
| VIII. Clothing (except Knitted) | 2,895 | 2,373 | 458 | 412 | 409 | 73 | 6,620 |
| IX. Food, Drink and Tobacco | 2,356 | 1,918 | 1,022 | 643 | 561 | 296 | 6,796 |
| X. Woodworking and Basketware .. | I, 813 | 1,213 | 811 | 260 | 318 | 478 | 4,893 |
| XI. Furniture of Wood, Brdding, ete. | 6 II | 581 | 242 | 143 | 160 | 83 | 1,820 |
| XII. Paper, Stationery, Printing, Book- binding, etc. | 812 | 711 | 181 | 123 | 127 | 27 | 1,981 |
| XIII. Rubber ${ }^{\text {a }}$. | 155 | 120 ! | 52 | 40 | 21 | 16 | 404 |
| XIV. Musical Instruments | 25 | 18 | 4 | 7 | 5 |  | 59 |
| XV. Miscellancous Products. . | 455 | 383 | 49 | 43 | 46 | 9 | 085 |
| Total, Classes I. to XV. | 16,215 | 13,128 | 4,433 | 3,007 | 2,904 | 1,451 | 41,138 |
| XVI. Heat, Light and Power | 131 | 103 | 61 | 39 | 119 | 5 | 458 |
| Grand Total | 16,346 | 13,231 | 4,494 | 3,046 | 3,023 | 1,456 | 41,596 |

## § 3. Classification of Factories according to Number of Persons Employed.

I. General.-The size classification of factories is based on the average weekly number of persons employed during the period of operation (including working proprietors). Prior to $1945-46$ there was no dissection of the "over 100 employees" group, but for that and subsequent years this group was subdivided into the seven size groups as shown in the table below.
2. States, 1949-50.-The following table shows, for each State, the number of factories classified according to the average number of persons employed in 1949-50 :-
FACTORIES : CLASSIFICATION ACCORDING TO SIZE OF FACTORY, 1949-50.


The relative importance of large and small factories is illustrated by a classification of the average number of persons employed according to the size of factory in which they work:-

FACTORIES: CLASSIFICATION OF PERSONS EMPLOYED ACCORDING TO SIZE OF FACTORY, 1949-50.

| sise of Fractory (Persons employed). | N.S.W. | Victoria. | Q'land. | 8. Anst. | W. Aust. | Tas. | Australia. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Average Number Employed during Period Worked. |  |  |  |  |  |  |  |
| Under 4 | 9,824 | 8,005 | 2,929 | I,741 | 2,685 | 1,228 | 26,412 |
| 4 | 5,596 | 4,672 | I, $\mathrm{SO}_{4}$ | 1,22.4 | 684 | 668 | 14,648 |
| 5 to 10 | 32,064 | 23.470 | 8,S49 | 5,560 | 5,341 | 2,672 | 77,956 |
| II to 20 | 35,290 | 29,214 | 9,51S | 7,022 | 5,199 | 2,341 | 88,584 |
| 21 to 50 | 59,404 | 51,914 | 15,1 16 | 11,397 | 8,478 | 3,269 | 149,578 |
| 51 to $100 .$. | 4,5,817 | 40,789 | 10,568 | 9,879 | 6,686 | 3,159 | 116,898 |
| IOI to 200 | 46,249 | 38,769 | 14,639 | 9,206 | 5,082 | 1,872 | 115,817 |
| 201 to 300 | 21,205 | 24,714 | 8,942 | 5,329 | 2,184 | 779 | 63,153. |
| 301 to 400 | 1.5,543 | 18,550 | 2,980 | 3.754 | 949 | 711 | 42,487 |
| 401 to 500 | 16,195 | 9,031 | ., 344 | 2,648 | 855 | 482 | 30,555 |
| 501 to 750 | 27,117 | 21,257 | 4,924 | 3,466 | 522 | 1,777 | 59,063 |
| 751 to 1.000 | I 3,663 | 10,209 | 2,541 | 2,533 |  | 1,858 | 30,804 |
| Over 1,000 | 60,548 | 24,316 | 6,402 | 15,458 | 2,753 | 3,539 | 11 3,02I |
| Total | 388,515 | 304,910 | 90,556 | 79.217 | 41,423 | 24,355 | 928,976 |
| Average per Factory | 23.77 | 23.05 | 20.15 | 26.01 | 13.70 | 16.73 | 22.33 |

3. Australia, 1938-39 and 1945-46 to 1949-50.- In the following table factories in Australia during 1938-39 and each of the five years 1945-46 to 1949-50 are classified according to the number of persons employed in conformity with the practice prior to 1945-46.

## FACTORIES : CLASSIFICATION ACCORDING TO NUMBER OF PERSONS EMPLOYED, AUSTRALIA.

| Year. | Establishments Employing on the Average-- |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 20 and under. |  | 21 to 100. |  | ror and upwards. |  | Total. |  |
|  | Es-tablishments. | $\begin{aligned} & \text { Persons } \\ & \text { cm- } \\ & \text { ployed. } \end{aligned}$ | Es-tablishments. | Persons entployed. | Es-tablishments. | Persons employed. | Es-tablishments. | Personz employed. |
| 1938-39- |  |  |  |  |  |  |  |  |
| A verage per establishment |  | 5.89 |  | 42.60 |  | 287.55 |  | 21.25 |
| Proportion of total \% | 81.59 | 22.62 | 14.90 | 29.86 | 3.51 | 47.52 | 100 | 100 |
| 1945-46- |  |  |  |  |  |  |  |  |
| Number . $\quad .$. | 24,819 | 154,242 | 5,080 | 211,781 | 1,285 | 390,538 | 31,184 | 756,561 |
| Average per establashment. |  | 6.21 | $\times 1$ | 41.69 | 1,285 | 303.92 | 31,84 | 24.26 |
| Proportion of total \% . | 79.59 | 20.39 | 16.29 | 27.99 | 4.12 | 51.62 | 100 | 100 |
| 1946-47- |  |  |  |  |  |  |  |  |
| Number - . ${ }^{\text {a }}$ | 27:676 | 173,371 | 5,771 | 239,768 | 1,321 | 399,881 | 34,768 | 813,020 |
| A verage per establishment |  | 6.26 |  | 4 T .55 |  | 302.77 | 100 | 23.38 |
| Proportion of total \% | 79.60 | 21.32 | 16.60 | 29.50 | 3.80 | 49.18 | 100 | 100 |
| $1947-48-1$. | 29,947 | 187,085. | 6,014 | 249,858 | 1,395 | 419,725 | 37,356 | 856,668 |
| Average per pats blishment | 29,947 | $\underline{6.25}$ | 6,014 | 41.55 | 1,395 | 320. 88 |  | 22.93 |
| Proportion of total \% | 80.17 | 21.84 | 16.09 | 29.16 | 3.74 | 49.00 | 100 | 100 |
|  |  |  |  |  |  |  |  |  |
| Number .- .. | 32,394 | 200,889 | 6,226 | 257,204 | $1 ; 450$ | 439,710 | 40,070 | 897,803 |
| Average per establishment |  | 6.20 | $\cdots$ | 41.31 |  | 303.25 | , | 22.41 |
| Proportion of total \% | 80.84 | 22.38 | 15.54 | 28.65 | 3.62 | 48.97 | 100 | 100 |
| 1949-50- |  |  | 6,442 | 266,476 | 1,48 |  |  |  |
| Average per establishment | 33, | -6.17 | 6,442 | 266,476 41.37 | 1,481 | 454,900 307.16 | 41,596 | 928,976 22.33 |
| Proportion of total \% 1 | 80.95 | 22.35 ! | 15.49 | 28.68 | 3.56 | 48.97 | 100 | 100 |

## § 4. Power Equipment in Factories.

I. General.-In 1936-37 statistics of power equipment in factories were collected on a basis different from that previously in use. Information now obtained relates to the " rated horse-power " of engines ordinarily in use and of engines in reserve or idle, omitting obsolete engines. In addition, particulars of the power equipment of Central Electric Stations are collected in greater detail. To avoid duplication it is essential that somo distinction should be made between Central Electric Stations and other classes of industries. In the following tables Central Flectric Stations have been treated eeparately from other factories.

In par. 2 below, 982 factories are shown in $1949-50$ as using no power other than hand-power, the distribution of these factories among the various industries being as follows: Lime, Plaster and Asphalt, 12; Industrial and Heavy Chemicals and Acids and Pharmaceutical and Toilet Preparations, II ; Galvanized Ironworking, Tinsmithing, 36 ; Tailoring and Ready-made Clothing, 297; Dressmaking, 79 ; Millinery, 24 ; Bakeries, I26; Cabinet and Furniture Making, 32 ; all others industries, 265.
2. Rated Horse-power of Engines in Factories other than Central Electric Stations.The following table shows the number of factories using power-driven machinery, those using manual labour only, and the total rated horse-power of engines and electric motors ordinarily in use and in reserve or idle during 1949-50 :-

FACTORIES $(a)$ : TOTAL RATED HORSE-POWER OF ENGINES AND ELECTRIC MOTORS, 1949-50.

| State. | Number of Establishments. |  |  | Rated Horse-power of Engines aud Motors. |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Uslng Power. | Othera. | Total. | Ordinarily in use. | In Reserve or Ide (omittingobsolete) |
| Now South Wales | 16,158 | 96 | 16,254 | 1,285,130 | 179,247 |
| Victoria | 12,890 | 274 | 13,164 | 863,075 | 112,674 |
| Queensland | 4,226 | 223 | 4,449 | 311,559 | 36,905 |
| South Australia | 2,856 | 154 | 3,010 | 240,090 | 33,089 |
| Western Australia | 2,709 | 199 | 2:908 | 120.3 So | IS,160 |
| Tasmanis | 1,417 | 36 | 1,453 | 145,079 | 20,239 |
| Australia. . | 40,2.56 | 982 | 41,238 | 2,965,313 | 400,314 |

(a) Excludes Central Electrio Stations.
3. Rated Horse-power of Engines and Electric Motors Ordinarily in Use.-(i) According to Type, States. Particulars of the types of engines, etc., and the total rated horse-power ordinarily in use in each State are given below :-
FACTORIES $(u)$ : TOTAL RATED HORSE-POWER OF ENGINES AND ELECTRIC MOTORS ORDINARILY IN USE, 1949-50.

| 8 tate. | Total Rated Horse-power of Engines and Electric Motors ordinarily in use, |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Steam. |  | Internal Combustion. |  |  | Water. | Motors driven by electricity. |  | Total. <br> (b) |
|  | Reciprocating. | Turbine. | Gab. | Light Olls. | Heavy <br> Olls. |  | Purchased. | Own Generation. (c) |  |
| N.8.W. | 107,681 | 75,824 | 2,648 | 31,278 | 34,474 | 226 | 1,032,999 | 73,162 | 1,285,130 |
| Victoria | 23,974 | 36,414 | 1,954 | 10,858 | 14,134 | 1,175 | 774,566 | 34,493 | 863,075 |
| Queensland | 81,409 | 15,060 | 6,780 | 8,877 | 19,474 |  | 179,959 | 52,771 | 311,559 |
| S. Australia | 6,642 | 5,746 | 1,719 | 5,405 | 10,684 | 10 | 209,884 | 19,355 | 240,090 |
| W. Australia | 9,719 | 160 | I,933 | 4,679 | I1,583 | -. | 92,306 | 5,745 | 120,380 |
| Tasmania | 2,622 | 2,013 | 1 | 6,889 | 1,802 | 292 | 131,460 | 40 | 145,079 |
| Anstralia | , 232,047 | 135,217 | 15,035 | 67,986 | 92,151 | 1,703 | 2,421,174 | 186,566 | 2,965,313 |

(a) Excludes Central Electric Stations.
(b) Excludes particulars in column (c).
(ii) According to Type, Australia. In the following table details of the total rated horse-power of the various types of engines in use are given for Australia for the years 1945-46 to 1949-50 compared with 1938-39.

FACTORIES( $a$ ) : TYPES AND RATED HORSE-POWER OF ENOINES, ETC., ORDINARILY IN USE, AUSTRALIA.

| Ye |  | Total Rated Horse-power of Engines and Electric Motors ordinarily in use. |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Steam. |  | Internal Combustion. |  |  | Water. | Motors driven by electricity. |  | Total. <br> (b) |
|  |  | Reciprocating. | Turbine. | Gas. | Light Oils. | $\begin{aligned} & \text { Heavy } \\ & \text { Oils. } \end{aligned}$ |  | Parchased. | Own Genera. tion. (c) |  |
|  |  |  |  |  |  |  | 1,616 | 1,017,919 |  |  |
| 1945-46 | $\cdots$ | 236,378 | 117,736 | 20,481 | 23,876 | 56,189 | 1,733 | x,755,036 | 226,692 | 2,211,433 |
| 1946-47 | $\cdots$ | 234,752 | 110,292 | ${ }_{18,522}^{17}$ | 29,283 33656 | 58,262 | r,964 | r,912,926 | 182,112 | 2,366,001 |
| 1947-48 | $\cdots$ | 235,116 | 110,646 |  | 33,636 | 63,728 | I,830 | 2,073:409 | 177,598 | 2,535,567 |
| 1948-49 | . | 229,953 | 120,289 | 16,024 | 55,158 | 72,165 | x,515 | 2,249,360 | 177,296 | 2,744,464 |
| 1949-50 | . | 232,047 | 135,217 | 15,035 | 67,986 | 92,151 | 1,703 | 2,421,174 | 186,566 | 2,965,313 |

(a) Excludes Central Electric Stations.
(b) Excludes particulars in column (c).
(iii) In Classes of Industry, 1949-50. The next table shows the total rated horsepower of engines and electric motors ordinarily in use in the various classes of industry in each State during 1949-50.

FACTORIES $(a)$ : TOTAL RATED HORSE-POWER OF ENGINES AND ELECTRIC MOTORS ORDINARILY IN USE, 1949-50.

| Class of Industry. | N.S.W. | Vic. | Q'land. | S.Aust. | W. Aust. | Tas. | Aust. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1. Treatment of Non-metalli- |  |  |  |  |  |  |  |
| Products | 68,609 | 34,479 | 10,599 | 11,928 | 6,498 | 13,40 | 145,5 18 |
| II. Bricks, Pottery, Glass, etc. .- | 38,843 | 22,765 | 5,278 | 6,461 | 4,820 | 1,246 | 79,413 |
| III. Chemicals, Dyes, Explosives, Paints, Oils and Grease | 69,622 | 71,125 | 4,844 | 15,993 | 8,941 | 1,927 | 172,452 |
| IV. Industrial Metals, Machines, Conveyances | 602,073 | 250,644 | 69,198 | 108,124 | 31,341 | 41,076 | 1,102,456 |
| V. Preclous Metals, Jewellery and Plate | 4,443 | 5,357 | 378 | 108,124 809 | 31,341 460 | 41,076 34 | 11,481 |
| VI. Textiles and Textite Guods (not Dress) | 46,726 | 77,268 | 4,368 | 6,830 | 1,597 | 4,827 | 141,616 |
| VII. Skins and leather (not Clothing or Footwear) | 17,377 | 16,574 | 3,599 | 4,244 | 2,058 | 966 | 44,818 |
| VIII. Clothing (except Kinitted) | 23,417 | 23,180 | 2,744 | 2,478 | 1,666 | 540 | 54,025 |
| IX. Food, Drink and Tobacco ... | 163,401 | 133,8r9 | 130,296 | 43,066 | 29,260 | 13,261 | 513,103 |
| X. Woodworking and Basket- <br> ware | 122,471 | 87,868 | 63,188 | 21,755 | 23,98 1 | 24,462 | 343,725 |
| XI. Furniture of Wood, Bedding, etc. | 15,250 | 13,483 | 6,169 | 5,085 | 3,642 | 1,518 | 45,147 |
| XII. Paper, Stationery, Printing, | 46,981 | 63,413 | 6,672 | 8,754 | 4,088 | 41,115 | 171,023 |
| XIII. Rubber . . .. | 37,026 | 37,455 | 2,038 | 1,480 | 335 | 226 | 78,560 |
| XIV. Musical Instruments | 1,772 | 301 | 32 | 13 | 10 |  | 2,128 |
| XV. Miscellaneous Products | 15,064 | 15:966 | 347 | 1,510 | 415 | 321 | 33,623 |
| Total, Classes I. to XV. .. | 1,273,075 | 853,697 | 309,750 | 238,530 | 119,112 | 144,924 | 2,939,088 |
| XVI. Gas Works | 12,055 | 9,378 | 1,809 | 1,560 | 1,268 | 155 | 26,225 |
| Grand Total | 1,285,130 | 863,075 | 311,559 | 240,090 | 120,380 | 145,079 | 2,965,313 |

(a) Excludes Central Electric Btations.
4. Capacity of Engines and Generators installed in Central Electric Stations(i) According to Type, Australia. Particulars of the type and the capacity of engines and generators installed in Central Electric Stations in Australia in 1949-50 are gived in the following table:-

CENTRAL ELECTRIC STATIONS : POWER EQUIPMENT, AUSTRALIA, 1949-50.

| Particulars. | Capacity of Englnes and Generators. |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 8team. |  | Internal Combustion. |  |  | Water. | Total. |
|  | Recimocating. | Turbine. | Gas. | Light Oils. | Heavy Oils. |  |  |
| Engines installed Rated H.P. | 18,378 | 2,579,735 | 20,967 | 8,734 | 214,848 | 401,219 | 3,243,88I |
| Generaturs installedKilowatt caparity- |  |  |  |  |  |  |  |
| Total installed ... E.W. | 12,436 | 1,910,333 | 14,456 | 4,8.44 | 142,521 | 284,233 | 2,368,823 |
| Effective capacity " | 11,761 $\dagger$ | 1,649,473 | 11,405 | 3,607 | 129,699 | 289,020 | 2,094,965 |
| Horse-power equivalent- |  |  |  |  |  |  |  |
| Total installed .. H.P. | 16,670 | 2,560,763 | 19,378 | 6,493 | 191,047 | 381,008 | 3,175,359 |
| Effective capacity $\quad$ " | 15.765 | 2,211,086 | 15,288 | 4,835 | 173,859 | 387,426 | 2,808,259 |

(ii) States. Details of the capacity of engines and generators installed in Central Electric Stations in each State in 1949-50 are given in the next table.

CENTRAL ELECTRIC STATIONS : POWER EQUIPMENT, 1949-50.


## § 5. Employment in Factories.

1. Number Employed.-(i) General. All persons employed in the manufacturing activities of a factory, including proprietors who work in their own business and "outworkers" (see'par. 4 (ii) hereinafter) are counted as factory employees, while those employed in selling. and distributing, such as salesmen, travellers, collectors, carters employed solely on outward delivery of manufactured goods and retailing storemen are excluded. Prior to $1945-46$ the occupational grouping collected was (i) working proprietors; (ii) managers and overseers; (iii) accountants and clerks; (iv) enginedrivers and firemen; (v) workers in factory, skilled and unskilled; (vi) carters and messengers; and (vii) persons working regularly at home for the establishment. This grouping did not record separate details for technical staff (e.g., chemists, draftsmen, etc.) and supervisory staff and in 1945-46 the set-up on the collection form was amended to obtain the following groupings :-(i) Working proprietors; (ii) managerial and clerical staff including salaried managers and working directors; (iii) chemists, draftsmen and other laboratory and research staff; (iv) foremen and overseers; (v) skilled and unskilled workers; (vi) carters (excluding delivery only), messengers and persons working regularly at home.

Prior to the year 1928-29 average employment in factories was computed by dividing the sum of the number employed each week by the number of weeks worked. The figures therefore, represented the average number employed over the period worked, which, for many factories, was less than a full year. Comnencing with the year 1928-29 the figure represents the equivalent average number employed over a full year of fifty-two weeks. The classification of factories according to the number of persons employed (see § 3 ante), however, is still based on the old method, but for all other purposes the average number engaged over the full year is used.
(ii) Australia, 1938-39 to 1949-50. Particulars of the number employed, the increase in employment and the rate per cent. of such increase are given for years 1938-39 to 1949-50 in the following table:-

FACTORIES : EMPLOYMENT, AUSTRALIA.

| Year. |  | Males. |  |  | Females. |  |  | Persons. |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Number Employed. | Increase on Previous Year. |  | Number Employed. | Increase on Previous Year. |  | $\begin{aligned} & \text { Number } \\ & \text { Em- } \\ & \text { ployed. } \end{aligned}$ | Increase on Previous Year. |  |
|  |  |  | Number. | r cent. |  | Number. | Per cent. |  | Number. | Per cent. |
| 1938-39 | $\cdots$ | 412.591 | 3,989 | 0.98 | 152,515 | 1,957 | 1.30 | 565,106 | 5,946 | 1.06 |
| 1941-42 | . | 524,383 | 51,325 | 10.85 | 200,959 | 23,944 | 13.53 | 725,342 | 75,269 | 11. 58 |
| 1942-43 | - | 535,570 | 12,187 | 2.13 | 223,475 | 22,516 | 11.20 | 759,045 | 33,703 | 4.65 |
| 1943-44 | $\therefore$ | 539.141 | 3.578 | 0.67 | 227,365 | 3,800 | 1. 74 | 766,506 | 7,451 | 0.98 |
| 1944-45 | . | 535,893 | $-3,248$ | -0.60 | 214,686 | -12,679 | $-5.58$ | 750,579 | -15,927 | $-2.08$ |
| 1945-46 | . | 548,888 | 12,995 | 2.42 | 196.370 | -18,316 | -8.53 | 745,258 | -5.321 | -0.71 |
| 1946-47 | $\cdots$ | $60_{4}, 300$ | 55,412 | 10.10 | : 200,629 | 4,259 | 2.17 | 804,929 | 59,671 | 8.01 |
| 1947-48 | $\cdots$ | 640,925 | 36,625 | 6.06 | 207,951 | 7,322 | 3.65 | 848,876 | 43,947 | 5.46 |
| 1948-49 | . | 670,076 | 29,15I | 4.55 | 220,156 | 12,205 | 5.87 | 890,232 | 41,356 | 4.87 |
| 1949-50 | . | 689,508 | 19,432 | 2.90 | 228,153 | 7,997 | 3.63 | 917,661 | 27,429 | 3.08 |

Notr.-Minus bign (-) indicates decrease.
(iii) States, 1938-39 and 1945-46 to 1949-50. The following table shows, for each of the years 1938-39 and 1945-46 to 1949-50 (a) the average number of persons employed in manufacturing industries in each State; (b) for each State, the percentage of the total number employed in Australia; and (c) the number employed per ten thousand of the mean population in each State and Australia.

FACTORIES : EMPLOYMENT.

| Year. | N.s.W. | Victoria. | Q'land. | S. Aust. | V. Aust. | mannia. | Australla. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Average Number Employed durlng Full Year (52 Weers). |  |  |  |  |  |  |  |
| 1938-39 | 228,781 | 201,831 | 54,1 10 | 43,371 | 23,211 | 13,802 | 565,106 |
| 1945-46 | 310,870 | 256,249 | 65,460 | 63,188 | 30,256 | 19,235 | 745,258 |
| 1946-47 | 343,119 | 265,757 | 71,599 | 70.711 | 33,806 | 19,937 | 804,929 |
| 1947-48 | 363,365 | 278,271 | 76,754 | 73,346 | 35,967 | 21,173 | 848,876 |
| 1948-49 | 378,380 | 292,006 | 82,945 | 75,945 | 38,354 | 22,602 | 800,232 |
| 1949-50 | 382,385 | 303,476 | 88,963 | 78,598 | 40,733 | 23.506 | 917,661 |

Peroentage of australian Total.

| $1938-39$ | $\ldots$ | $40.4^{8}$ | 35.72 | 9.58 | 7.67 | 4.11 | 2.44 | 100 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $1945-46$ | $\ldots$ | 41.72 | 34.38 | 8.78 | 8.48 | 4.06 | 2.58 | 100 |
| $1946-47$ | $\cdots$ | 42.63 | 33.01 | 8.90 | 8.78 | 4.20 | 2.48 | 100 |
| $1947-48$ | $\cdots$ | 42.81 | 32.78 | 9.04 | 8.64 | 4.24 | 2.49 | 100 |
| $1948-49$ | $\ldots$ | 42.50 | 32.80 | 9.32 | 8.53 | 4.31 | 2.54 | 100 |
| $19.9-50$ | $\ldots$ | 41.67 | 33.07 | 9.69 | 8.57 | 4.44 | 2.56 | 100 |

FACTORIES : EMPLOYMENT—continued.

| Year. | N.s.w. | Victoria. | Q'land. | 8. Aust. | W. Aust. | Tasmania. | Australla. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Per 10,000 of Porulation. |  |  |  |  |  |  |  |
| 1938-39 | 836 | 1,078 | 537 | 729 | 497 | 58 I | 8 5 5 |
| 1945-46 | 1,060 | 1,272 | 604 | 1,002 | 617 | 769 | 1,003 |
| 1946-47 | 1,158 | 1,303 | 653 | 1,104 | 680 | 783 | 1,070 |
| 1947-48 | 1,209 | 1,345 | 690 | 1,124 | 707 | 809 | 1,1II |
| 1948-49 | 1,235 | 1,382 | 731 | 1,142 | 734 | 843 | 1,I4 1 |
| 1949-50 | 1,206 | I,398 | 765 | I,I44 | 746 | 847 | 1,140 |

2. Rates of Increase, 1938-39 and 1945-46 to 1949-50. -The percentage increase on the average number of persons employed in the preceding year is shown below for each State for 1938-39 and 1945-46 to 1949-50.

FACTORIES: ANNUAL PERCENTAGE INCREASE OF PERSONS EMPLOYED.

| Year. |  |  | N.S.W. | Vic. | Q'land. | S. Aust. | W. Aust. | Tasmania. | Australla. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1938-39 |  | $\ldots$ | 1.74 | 0.02 | 3.82 | -1.62 | 0.34 | 4.80 | 1.06 |
| 1945-46 | .- | - | -1.21 | -0.54 | 2.07 | -3.49 | 3.81 | -1.41 | -0.71 |
| 1946-47 | . | $\ldots$ | 10.37 | $3 \cdot 7 \mathrm{I}$ | 9.38 | 11.91 | 11.73 | 3.65 | 8.01 |
| 1947-48 | - | $\cdots$ | 5.90 | $4 \cdot 71$ | $7 \cdot 20$ | 3.73 | 6.39 | 6.20 | 5.46 |
| 1948-49 | . | $\cdots$ | 4.13 | 4.94 | 8.07 | $3 \cdot 54$ | 6.64 | 6.75 | 4.87 |
| 1949-50 |  | -• | 1.06 | 3.93 | 7.26 | $3 \cdot 49$ | 6.20 | 4.00 | 3.08 |

Nore.-Minus sign ( - ) indicates decrease.
3. Persons Employed in Classes of Industry.-(i) Australia. The following table shows the average number of persons employed in factories in each industrial group in Australia for the years 1938-39 and 1945-46 to 1949-50.

## FACTORIES: PERSONS EMPLOYED IN INDUSTRIAL CLASSES, AUSTRALIA.

| Class of Industry. | 1938-39. | 1945-46. | 1946-47. | 1947-48. | 1948-49. | 1949-50 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| I. Treatment of Non-metaliferous Mine |  |  |  |  |  |  |
| and Quarry Products | 10,343 | 9,929 | 12,673 | 14,263 | 15,572 | 16,598 |
| II. Bricks, Pottery, Glass, etc. .- | 15,709 | 13,466 | 16,535 | 17.536 | 18,702 | 19,241 |
| III. Chemicals, Dyes, Explosives, Paints Oils and Grease | 19,816 | 31,471 | 31,252 | 31,808 | 33,355 | 34,525 |
| V. Industrial Metals, Machines, Conveyances | 177,677 | 292,477 | 300,921 | 320,948 | 333,313 | 344,313 |
| V. Precious Metals, Jewellery and | 3,726 | 3,240 | 4,921 | 6,069 | 6,414 | 6,638 |
| VI. Textiles and Textile Goods (not Dress) | 46,082 | 55,008 | 59,810 | 6r,91I | 64,855 | 65,528 |
| VII. Skins and Leather (not Clothing or Footwear) | 10,767 | 14,492 | 16,080 | 15:624 | 15,902 | 16,277 |
| VIII. Clothing (except Knitted) . | 86,092 | 93,370 | 106,894 | IIf,693 | 118,133 | 118,757 |
| IX. Food, IVrink and Tobacco | 83,846 | 105,878 | 109,840 | 113.595 | 118,259 | 122,783 |
| X. Woodworking and Basketware | 30,739 | 38,346 | 43,457 | 47.052 | 51,206 | 53,169 |
| KI. Furniture of Wood, Bedding, etc. | 15,287 | 13,107 | 16,579 | 18,546 | 20,024 | 21,021 |
| KII. Paper, Stationery, Printing, Bookbinding, etc. | 39,913 | 39,905 | 46,651 | 47,813 | 50,571 | 53,002 |
| XIII. Rublber ${ }^{\text {a }}$ | 7,502 | 8,699 | 10,173 | 10,753 | 11,808 | 12,382 |
| XIV. Minsical Instruments | 451 | 459 | 788 | 887 | 1,250 | 1,456 |
| XV. Miscellaneous Products | 7,727 | 14,833 | 17,059 | 18,235 | :18,123 | 18,561 |
| Total, Classes I, to XV. | 555,677 | 734,685 | 703,633 | 836,733 | 877,487 | 904,251 |
| XVI. Heat, Light and Power | 9,429 | 10,573 | 11,296 | 12,143 | 12,745 | 13,410 |
| Grand Total | 565,106 | 745,258 | 804,929 | 848,876 | 890,232 | 917,661 |

Following the outbreak of war in the Pacific in 1941, the transfer of man-power to the more essential industries became apparent, and industries not directly concerned with Australia's war effort showed a marked decline. The industries which declined were those in Class I., Mine and Quarry Products ; Class II., Bricks, Pottery, Glass, eto. ; Class V., Precious Metals ; Class VIII., Clothing ; Class XI., Furniture ; and Class XII.,

Paper, etc., while industries where the war-time expansion in employment ocourred were thuse in Class III, Chemiculs, etc.; Class IV., Metals, etc.; Class VI., Textiles ; Class VII. Skins and Leather ; and Class IX., Food.

Following some downward movement from war-time levels of employment which occurred in Class III., Chemicals, etc. ; Class TV., Metals, etc. ; and Class VI., Textiles in 1945-46, there was a general upward trend in 1946-47, and this continued in respect of each class of industry in each successive year.
(ii) States. Particulars of the numbers employed in each industrial class are shown in the following table for each State:-

FACTORIES: PERSONS EMPLOYED IN INDUSTRIAL CLASSES, 1949-50.

| Claes of Industry. | N.S.W. | Vic. | 'land. | S. Aust. | W.Aust. ' | Tas. | Aust. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1. Treatment of Non-metalliferous Mine and Quarry Products | 6,763 | 4,998 | 1,508 | 1,368 | 1,267 | 694 | 16,593 |
| II. Bricke. Pottery, Glass, etc. | 10,504 | 4,621 | 1,00S | 1,791 | 1,079 | 238 | 19,24 ${ }^{\text {1 }}$ |
| III. Chemicals, Dyes, Explesives, Paints, Oils and Grease | 16,316 | II,590 | 1,357 | 3,427 | 1,530 | 305 | 34.525 |
| IV. Industrial Mctads, Machines, Gonveyances | 157,987 | 98,852 | 28,724 | 37,427 | 14,418 | 6,905 | 344,313 |
| V. Precious Mctals, Jewellery and Plate | 2,2I | 3,499 | 327 | 346 | 22 | 29 | 6,638 |
| VI. Textiles and Textile Guods (not Diress) | 23,428 | 34,264 | 1,885 | 2,539 | 756 | 2,656 | 65,528 |
| VII. Skins and Trather (not Clothfing or Fostwear) | 6,478 | 5,777 | 1,4 ${ }^{\text {I }}$ | 1,469 | 737 | 455 | 16,277 |
| VIIT. Oh fung (exwnt luitud) | 48,0693 | 48,153 | 9,409 | 7,258 | 4,897 | 997 | 118,757 |
| IX. Food, Drink and Tobaceo | 39,979 | 38,555 | 22,832 | 10,791 | 6,204 | 4,422 | 122,783 |
| X. Woodworking and Hasketware | 18,678 | 13,364 | 9,996 | 3,702 | 4,241 | 3,188 | 53.169 |
| X1. Furniture of Wood, Bedding, pte. | 8,004 | 5,907 | 3,103 | 1,939 | 1,395 | 673 | 21,021 |
| XII. Pajer, Stationery, Printing, Bookbinding, etc. | ${ }^{23,081}$ | 17,439 | 4,504 | 3.371 | 2,187 | 2,420 | 53,002 |
| XIII. Rutber | 5.915 | 4,758 | 883 | 58 | 127 | 114 | 12,382 |
| XIV. Mnsical Instruments | 1,155 | 185 | 37 | 56 | 23 |  | 1,456 |
| XV. Miscellaneous Products | 8,547 | 7.910 | 576 | 873 | 427 | 228 | 18,501 |
| Total, Classes I. to XV. | 377,0 | 9,852 | 87,57 | 76,94 | 39,513 | 23,324 | 904,251 |
| XVI. Heat, | 5,335 | 3,624 | 1,39 |  | 1,220 | 182 | 13,41 |
| Grand Total | 382,385 |  | 88,963 | 78,598 | 40,733 | 23,506 | 917,661 |

4. Persons Employed According to Occupational Status.-(i) General. In the following table the average number of persons employed in each State during 1949-50 are classified according to their occupational status. As mentioned previously, persons employed in factories are now classified on a basis different from that adopted prior to 1945-46. The nature of this change is indicated in §5 par. I.

PERSONS EMPLOYED : OCCUPATIONAL STATUS, 1949-50.

| State. | A verage Number of Persons Employed. |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Working Yroprietors. | Managerial and Cleriral Staft, etc.(a) | Chemists, 1)raftsmen, ete. | Foremen and Overseera. | Workers in Factory (Skilled and Inskilled). | Carters (excluding Delivery only) and Messengers, etc. <br> (b) | Total. |
| New South Wales. | 13.064 | 39.2 .54 | 4,644 | 15.142 | 307.716 | 2,565 | 382,385 |
| Victoria | 11:4.56 | 20,469 | 3,46,2 | 12,615 | 244,052 | 2,422 | 303,476 |
| Queensland | 3.936 | 7.742 | 635 | 2,943 | 73,021 | 686 | 88,963 |
| South Anstralia | 2,121 | 8,313 | I,109 | 3,091 | 63.596 | 368 | 78,598 |
| Western Australis. | 2,224 | 2,925 | 295 | 1,460 | 33,695 | 134 | 40.733 |
| Tasmania | $9 \mathrm{~S}_{4}$ | 2,120 | 307 | 967 | 19,014 | 114 | 23,506 |
| Australia | 33,785 | 89,823 | $10,+52$ | 36,218 | 741,094 | 6,289 | 917,661 |

[^1](b) Includes persons working regularly
(ii) Outworkers. The term "outworker" or " homeworker" has acquired a special meaning in connexion with manufacturing industries, and embraces only persons to whom work is given out by factories to be done at home. Owing to the amended employment groupings adopted in 1945-46 (see §5. I.) persons working regularly at home for factories are now included with carters, messengers and others and separate details are no longer available. The number of "outworkers" employed by factories in 1944-45 was 1,049 .
5. Monthly Employment, 1938-39, 1945-46 and 1947-48 to 1949-50.-The following table shows the number of persons (excluding working proprietors) employed in factories on the pay-day nearest to the 15th of each month for years up to 1949-50.

FACTORIES: MONTHLY EMPLOYMENT, AUSTRALIA. (Excluding Working Proprietors.)

| Month. |  | 1938-39. | 1945-46. | 1947-48. | 1948-49. | 1949-50. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Males. |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| July |  | 387,693 | 518,734 | 602,188 | $627,38_{4}$ | 584,355 |
| August |  | 389,979 | 519,122 | 606,142 | 628,814 | 622,254 |
| September |  | 391,576 | 511,909 | 608,934 | 629,426 | 647,097 |
| October |  | 393,977 | 505,753 | 608,651 | 629,671 | 652,632 |
| November |  | 395,192 | 503,296 | 608,53I | 632,557 | 655,266 |
| December |  | 394,438 | 489,040 | 608,135 | 631,782 | 655,475 |
| January |  | 385,742 | 513,396 | 608,046 | 632,979 | 658,251 |
| February |  | 392,056 | 533,761 | 609,11 1 | 637,181 | 664,716 |
| March . |  | 395,146 | 543,347 | 610,476 | 641,432 | 669,505 |
| April |  | 391,005 | 547,253 | 619,963 | 640,693 | 669,558 |
| May |  | 393,609 | 553,980 | 622,665 | 644,806 | 674,432 |
| June |  | 390,973 | 558,428 | 625,019 | 6.46 .383 | 677,682 |
| Frmales. |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| July |  | 147,282 | 204,705 | 200,857 | 209,489 | 195,017 |
| August |  | 149,294 | 204, 150 | 201,697 | 210,574 | 211,520 |
| September |  | 151,159 | 199,33 1 | 203,009 | 212,656 | 219,868 |
| October |  | 152,473 | 193,587 | 204,329 | 214,062 | 222,681 |
| November |  | 152,806 | 191.689 | 204,931 | 215,239. | 225,064 |
| December |  | 151,16.5 | 183,899 | 203,568 | 214,158 | 223,895 |
| January |  | 141,853 | 184,810 | 200,980 | 211,13I | 223,214 |
| February |  | 151,883 | 188,632 | 205,74 | 215,994 | 228,233 |
| March . |  | 154,854 | 192,699 | 208,250 | 218,429 | 231,239 |
| April . . |  | 152,614 | 192,084 | 208,488 | 218,007 | 230,355 |
| May |  | 150,693 | 192,215 | 207,385 | 218,705 | 231,346 |
| June |  | 148,601 | 192,137 | 208,041 | 219,652 | 231,207 |
| Persons. |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| July |  | 534,975 | 723,439 | 803,045 | 836,873 | 779,372 |
| August |  | 539,273 | 723,272 | 807,839 | 839,388 | 833,774 |
| September | . | 542,735 | 711,240 | 8II,943 | 842,082 | 866,965 |
| October |  | 546,450 | 699.340 | 812,980 | 843,733 | 875,313 |
| November |  | 547,998 | 694,985 | 813,462 | 847,796 | 880.330 |
| December |  | 545,603 | 672,939 | 811,703 | 845,940 | 879,370 |
| January |  | 527,595 | 698,206 | 809,026 | 844,110 | 881,465 |
| February |  | 543,939 | 722,393 | 814,852 | 853,175 | 892,949 |
| March |  | 550,000 | 736,046 | 818,726 | 859,86I | 900,744 |
| April |  | 543,619 | 739,337 | 828,451 | 858,700 | 899,913 |
| May |  | 544,302 | 746,195 | 830,050 | 863,511 | 90,5,778 |
| June |  | 539,574 | 750,565 | 833,060 | 866,035 | 908,889 |

6. Distribution of Employees According to Age.-(i) States. The extension of statistics of employment in factories, decided upon at the Conference of Australian Statisticians held in 1945, permits of a distribution of employees (excluding working proprietors) into seven age-groups from 1945-46 onwards, instead of three as in previous years. The particulars are collected as at June. The numbers employed in each agegroup in June, 1950 are given below:-

FACTORIES : DISTRIBUTION OF EMPLOYEES ACCORDINO TO AGE, JUNE, 1950.
(Excluding Working Proprietors.)

| Age Groupe. | N.S.W. | Vic. | Q'land. | S. Aust. | W. Aust. | Tas. | Aust. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Males. |  |  |  |  |  |  |  |
| Under 16 years | 2,088 | 2,670 | 1,495 | 724 | 716 | 119 | 7,812 |
| 16 уears .. | 4,211 | 2,910 | 1,414 | 863 | 800 | 325 | 10,523 |
| 17 | 5,156 | 3,254 | 1,559 | 1,020 | 901 | 356 | 12,246 |
| 18 | 5,715 | 3,509 | 1,617 | 1,045 | 832 | 424 | 13,142 |
| 19 | 5,938 | 3,575 | 1,599 | 1,060 | 765 | 424 | 13,361 |
| 20 " | 6,263 | 3,865 | 1,530 | 1,144 | 813 | 429 | 14,044 |
| 21 ," and over | 252,500 | 188,788 | 62,832 | 58,072 | 28,074 | 16,288 | 606,554 |
| Total | 281,871 | 208,571 | 72,046 | 63,928 | 32,901 | 18,365 | 677,682 |

Females.


Persons.

(ii) Australia. As comparative details based on the new age grouping are not available for the years prior to 1945-46, the following table shows the age distribution in sexes for Australis in June, 1939 and 1946 to 1950 on the old basis.

FACTORIES: DISTRIBUTION OF EMPloyEES ACCORDING TO AGE, AUSTRALIA-


## § 6. Sex Distribution in Factories.

s. Distribution According to Sex of Persons Employed.-(i) Ceneral. In New South Wales the ratio of the number of females engaged 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 in 1949-50 was one to three. In Victoria the ratio of females to males during the year 1886 was about one to five. Five years later ( I 891 ) it was somewhat less, but in 1896 had increased to about one to three, and in 1949-50 was about two to five, For Australia as a whole the ratio of females employed in factories was highest in 1943-44 at about two females to five males but by 1949-50 the ratio had declined to the level of one female to three males.
(ii) Average Number of Males and Females Employed. The following table shows the average number of males and females employed in factories in each State for 1938-39 and the five years 1945-46 to 1949-50:-

FACTORIES : MALES AND FEMALES EMPLOYED.

| State. | 1938-39. | 1945-46. | 1946-47. | 1947-48. | 1948-49. | 1949-50. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Malers. |  |  |  |  |  |  |
| New South Wales | 167,172 | 227,454 | 255,733 | 272,600 | 282,312 | 284,055 |
| Victoria | 136,218 | 178,951 | 188,758 | 199,003 | 208,184 | 216,198 |
| Queensland. | 43,941 | 53,587 | 59,309 | 63,526 | 68,385 | 72,948 |
| South Australia | 35,406 | 49,523 | 56,739 | 59,071 | 61,005 | 63,294 |
| Western Australia | 18,704 | 24,268 | 27,575 | 29,517 | 31,682 | 33,711 |
| Tasmania | 11,150 | 15,105 | 16,186 | 17.208 | 18,508 | 19,302 |
| Australia | 412,591 | 548,888 | 604,300 | 640,925 | 670,076 | 689,508 |
| Females. |  |  |  |  |  |  |
| New South Wales | 6r,609 | 83,416 | 87,386 | 90,765 | 96,068 | 98,330 |
| Victoria . | 65,613 | 77,298 | 76,999 | 79,268 | 83,822 | 87,278 |
| Queensland. . | 10,169 | 11,873 | 12,290 | 13,228 | 14,560 | 16,015 |
| South Australia | 7,965 | 13,665 | 13,972 | 14,275 | 14,940 | 15,304 |
| Western Australia | 4,507 | 5,988 | 6,231 | 6,450 | 6,672 | 7,022 |
| Tasmania | 2,652 | 4,130 | 3,751 | 3,965 | 4,094 | 4,204 |
| Australia | 152,515 | 196,370 | 200,629 | 207,95I | 220,156 | 228,153 |

2. Rate of Variation for each Sex.-The percentages of increase or decrease on the average numbers of males and females employed in the preceding year are shown below for the years 1938-39 and 1945-46 to 1949-50 :-
annual percentage increases of males and females employed.

| State. | 1938-39. | 1945-46. | 1946-47. | 1947-43 | 9.48-49. | 1949-50. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Males. |  |  |  |  |  |  |
| New South Wales | 1.69 | 1. 65 | 12.43 | 6.60 | $3 \cdot 56$ | 6.17 |
| Victoria | 0.04 | 2.60 | 5.48 | $5 \cdot 43$ | 4.61 | 3.85 |
| Queensland. | 3.79 | 4.09 | 10.68 | 7.11 | 7.65 | 6.67 |
| South Australia | $-2.39$ | 0.95 | 14.57 | 4.11 | 3.27 | 3.75 |
| Western Australia | -0.30 | 8.32 | 13.63 | 7.0 | 7.33 | 6.40 |
| Tasmania | $4 \cdot 40$ | 2.37 | 7.16 | 6.3 | $7 \cdot 55$ | 4.29 |
| Total | 0.98 | 2.42 | 10.10 | 6.06 | 4.55 | 2.90 |


| Femaleg. |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| New South Wales | I. 88 | - 8.24 | 4.76 | 3.87 | 5.84 | 2.35 |
| Victoria | -0.03 | --7.11 | $-0.39$ | 2.95 | . 5.75 | 4.12 |
| Queensland. . | 3.96 | $-6.16$ | $3 \cdot 51$ | 7.63 | 10.07 | 9.99 |
| South Australia | 1.98 | $-16.76$ | 2.25 | 2.17 | 4.66 | 2.44 |
| Western Australia | 3.06 | -11.18 | 4.06 | 3.5I | 3.44 | 5.25 |
| Tasmania | 6.51 | -13.14 | $-9.18$ | 5.71 | 3.25 | 2.72 |
| Total | I. 30 | $-8.53$ | 2.17 | 3.65 | 5.87 | 3.63 |

Nott.-The minus aign ( - ) indicates decrease.
3. Masculinity of Persons Employed in Factories.-The extent to which females are employed in the factories of Australia may perhaps be more clearly shown by giving the masculinity of persons employed in each State. The following table shows particulars for the years 1938 - 39 and $1945-46$ to 1949-50 :-

FACTORIES : MASCULINITY(a) OF PERSONS EMPLOYED.

|  | Year. | N.s.w. | Vic. | Q'land. | S. Aust. | W. Aust. | Tas. | Australla. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1938-39 |  | 271 | 208 | 432 | 445 | 415 | 420 | 271 |
| 1945-46 |  | 273 | 232 | 451 | 362 | 405 | 366 | 280 |
| 1946-47 |  | 293 | 245 | 483 | 406 | 443 | 432 | 301 |
| 1947-48 |  | 300 | 251 | 480 | 414 | 458 | 434 | 308 |
| 1948-49 |  | 294 | 248 | 470 | 408 | 475 | 452 | 304 |
| 1949-50 |  | 289 | 248 | 455 | 414 | 480 | 459 | 302 |

(a) Number of males per 100 females.

For a number of years prior to $1926-27$ there were on the average 300 males employed in factories for every 100 females, but in that year the proportion of males began to fall with the increasing activity in the clothing and textile industries, in which the number of females to males is relatively high. As these trades were not so seriously affected by the depression as the heavier industries, the proportion of males continued to fall, until in 1932-33 there were only 239 males employed to every 100 females. With the recovery of employment in the heavier industries subsequent to that year, the proportion of males per 100 females had increased to 271 in 1937-38 and 1938-39.

The decrease in masculinity from $1938-39$ to $1943-44$ resulted from the enlistment of men in the armed services and the expansion of industry caused by the war. In many industries the younger men were released for service in the defence forces and large numbers of women were absorbed as an adjustment to the industrial effort of Australia. Following the cessation of hostilities in 1945 and the return of servicemen to civilian life, the number of females employed in factories declined and masculinity increased. In 1949-50 there were 302 males per 100 females employed in factories, compared with 271 in 1938-39.
4. Employment of Females in Particular Industries.-(i) General. The greater number of females in manufacturing industries are employed in four classes, namely:IV., Industrial Metals, Machines, etc. ; VI., Textiles ; VIII., Clothing ; and IX., Food, Drink and Tobacco. In 1949-50 these industries accounted for 80.63 per cent. of all females in factories. In two classes only did the number of females exceed the number of males, namely, in Class VI., Textiles, where there were in females to every 100 males snd in Class VIII., Clothing, with 246 females per 100 males. The following tables show the average number of males and females employed in each of these classes. in 1949-50:-
males and females employed in particular industries, 1949-50.

(ii) Females Employed in Clothing Manufacture. The employment of females in the several industries of Class VIII., Clothing-in which class the largest number of females is employed-and the relation of their number to that of the males so employed are shown: in the following table:-

FEMALES EMPLOYED IN CLOTHING INDUSTRIES, 1949-50.

| Industry. | New South Wales. |  |  | Victoria. |  |  | Other States. |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Males. | Females. | Femininity. <br> (a) | Males. | Females. | Femininity. (a) | Males. | Femsles. | Femi. ninity. (a) |
| Tailoring and Readymade Clothing .. | 3,383 | 15,577 | 460 | 3,14I | 7,501 | 239 | 895 | 5,753 | 304 |
| Waterproof and OIIskin Clothing | 99 | 549 | 555 | 119 | 372 | 313 | $\pm 6$ | 108 | 675 |
| Dressmakling, stitching Hem- | 178 | 2,536 | 2,433 | 1,496 | 10,675 | 714 | 202 | 3,813 | 1,888 |
| Millinery. | 221 | 1,426 | 645 | 217 | 975 | 449 | 43 | 603 | 1,402 |
| Ghirts Collars and Underclothing .. | 622 | 4,756 | 765 | 580 | 4,277 | 737 | 185 | 2,125 | 1,149 |
| $\begin{array}{cc}\text { Foundation } \\ \text { ments } . . & \text { Gar- }\end{array}$ | 127 | 1,527 | 1,202 | 186 | 1,020 | 548 | 24 | 202 | 842 |
| Handkerchiefs, Ties and Scarves .. | 147 | 821 | 559 | 82 | 441 | 538 | 3 | 2 | 67 |
| Hats and Caps . | 664 | 636 | 96 | 445 | 291 | 65 | 29 | 138 | 476 |
| Gloves . . | 106 | 33 I | 312 | 110 | 413 | 375 | 36 | 149 | 414 |
| Boots and Shoes .. | 3,788 | 3,991 | 105 | 5,645 | 5,684 | IOI | 2,181 | 1,821 | 83 |
| Boot and Shoe Repairing | 1,413 | 85 | 6 | 705 | 30 | 4 | 720 | 36 | 5 |
| Boot and Shoe ACcessories | 230 | 242 | 105 | 251 | 260 | 104 | 24 | 2 | 8 |
| Umbrellas and Walking Sticks | 44 | 90 | 205 | 22 | 52 | 236 | 24 | 55 | 229 |
| Dyeworks and Clean- |  |  |  |  |  |  |  |  |  |
| Ing (including Re- |  |  |  |  |  |  |  |  |  |
| novating and |  | 2,012 | 96 | 1592 | 1,283 | 81 | 工,005 | 1,277 | 117 |
| Other .. | 2,105 | 305 | 575 | 1,592 64 | 1,283 204 | 319 | 1,095 | 1,277 | 117 |
| Total .. | 13,179 | 34,884 | 265 | 14,655 | 33,478 | 228 | 6,477 | 16,084 | 248 |

(a) Number of females per 100 males.

## § 7. Child Labour in Factories.

1. Conditions of Child Labour.-The employment of young persons in factories in the States is regulated by Acts of Parliament, as is the case with the employment of female labour. The object of the restrictions imposed is to ensure, amongst other things, that a proper period shall be devoted to primary education, and that the early years of labour shall not exhaust the worker before the attainment of full growth.
2. Number of Children Employed, 1939 and 1946 to 1950.-In the returns for the various States, the term "child" denotes any person under sixteen years of age. The decline in the number of children employed from the peak of 33,553 reached in June, 1940 to 13,867 in June, 1950, which is most marked in all States excepting Western Australia, was probably caused by several factore, including (i) the raising of the school leaving age in New South Wales and Tasmania, (ii) fewer children available for employment owing to the decline in the birth rate which occurred about 1929, and (iii) the high level of employment which enabled parents to keep their children at school beyond the statutory leaving age.

The following table shows the number of children of each sex employed in manufacturing industries in June of the years 1939 and 1946 to 1950.

FACTORIES: CHILDREN EMPLOYED, JUNE.

| State. | 1939. | 1946. | 1947. | 1948. | 1949. | 1950. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Malees. |  |  |  |  |  |  |
| New South Wales | 5,759 | 2,45I | 2,186 | 2,125 | 2,115 | 2,088 |
| Victoria. | 6,167 | 3,449 | 2,929 | 2,743 | 2,806 | 2,670 |
| Queensland | 1,790 | 1,237 | 1,236 | 1,265 | 1,336 | I,495 |
| South Australia | 1,296 | 829 | 788 | 732 | 722 | 724 |
| Western Australia | 705 | 739 | 673 | 704 | 665 | 716 |
| Tasmania | 392 | 3 II | 186 | 165 | 147 | 119 |
| Australia | 16,109 | 9,016 | 7,998 | 7,734 | 7,79 ${ }^{\text {1 }}$ | 7,812 |
| Females. |  |  |  |  |  |  |
| New South Wales | 7,084 | 2,265 | 2,094 | I,83I | 1,736 | 1,584 |
| Victoria. . | 5,005 | 3,007 | 2,810 | 2,564 | 2,354 | 2,181 |
| Queensland | 1,334 | 1,020 | 998 | 955 | 1,068 | 1,140 |
| South Australia | 1,053 | 885 | 884 | 722 | 683 | 716 |
| Western Australia | 52 I | 478 | 454 | 357 | 390 | 362 |
| Tasmania | 500 | 226 | 161 | 120 | 95 | 72 |
| Australia | 15,497 | 7,881 | 7,401 | 6,549 | 6,326 | 6,055 |
| Total. |  |  |  |  |  |  |
| New South Wales | 12,843 | 4,716 | 4,280 | 3,956 | 3,851 | 3,672 |
| Victoria.. | 11,172 | 6,456 | 5,739 | 5,307 | 5,160 | 4,851 |
| Queensland | 3,124 | 2,257 | 2,234 | 2,220 | 2,404 | 2,635 |
| South Australia | 2,349 | 1,714 | 1,672 | r,454 | 1,405 | 1,440 |
| Western Australia | 1,226 | 1,217 | J,127 | 1,061 | 1,055 | 1,078 |
| Tasmania | 892 | 537 | 347 | 285 | 242 | 191 |
| Australia | 31,606 | 16,897 | 15,399 | 14,283 | 14,117 | 13,867 |

3. Proportion of Children Employed to Total Employees.-The following table shows the proportion of children to total employees (excluding working proprietors) employed in factories in the various States in June of each of the six years 1939 and 1946 to 1950 . In r950 the proportion was highest in Queensland and lowest in Tasmania.

| (Extluding Working Proprietors.) |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| State. |  | 1939. | 1946. | 1947. | 1948. | 1949. | 1950. |
| New South Wales | $\cdots$ | 5.85 | 1.48 | 1.26 | I. II | I. 06 | 0.96 |
| Victoria.. |  | 5.81 | 2.53 | 2.20 | 1.95 | 1.82 | I. 64 |
| Queensland |  | 6.01 | 3.63 | 3.14 | 2.88 | 2.91 | 2.98 |
| South Australia |  | 5.78 | 2.64 | 2.41 | 2.01 | I. 87 | 1.82 |
| Western Australia |  | 5.61 | 3.99 | 3.40 | 3.04 | 2.85 | 2.69 |
| Tasmania | $\cdots$ | 6.78 | 2.77 | 1.75 | I. 35 | 1.08 | 0.83 |
| Australia .. |  | 5.86 | 2.25 | 1.94 | 1.71 | I. 63 | I. 53 |

4. Industries Employing Child Labour.-The distribution of children employed in factories in June, 1950, and the proportion of children employed to total employees is given in the following table according to the class of industry :-

FACTORIES : CHILDREN EMPLOYED, BY CLASSES, JUNE, 1950.

| Class of Industry. | Chlldren Employed. |  | Total Employees. <br> (a) |  | Proportion of Children Employed to Total Employees. <br> (a) |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Males. | Females. | Males. | Females. | Males. | Females. |
| I. Treatment of Non-metalliferous Mine and Quarry Products. . | 126 | 7 | 16,043 | 605 | $\%$ 0.79 | \% 1.16 |
| II. Bricks, Pottery, Glass, etc. . | 99 | 20 | 18,300 | 1,516 | 0.54 | 1.32 |
| III. Chemicals, Dyes, Explosives, Paints, Oils and Grease | 151 | 139 | 26,623 | 8,633 | 0.56 | 1.61 |
| IV. Industrial Metals, Machines. Conveyanees | 3,329 | 541 | 316,260 | 34,922 | 1.05 | 1.55 |
| V. Precious Metals, Jewellery and Plate | 98 | 39 | 5,003 | 1,136 | 1.96 | 3.43 |
| VI. Textiles and Textile Goods (not Dress) | 540 | 993 | 29,690 | 36,654 | 1.82 | 2.71 |
| VII. Shins and Leather (not Clothing or Pootwear) | 108 | 57 | 12,20I | 3,964 | 0.89 | 1.44 |
| VIII. Clothing (except Knitited) .. | 457 | 2,988 | 29,422 | 84,030 | 1.55 | 3.56 |
| IX. Food, Drink and Tobacco . . | 856 | 568 | 85,410 | 30,378 | 1.00 | 1.87 |
| X. Woodworking and . Basketware | 567 | 54 | 47,587 | 2,085 | 1. 19 | 2.59 |
| XI. Furniture of Wood, Bedding, cte. | 585 | 72 | 16,845 | 3,189 | 3.47 | 2.26 |
| XII. Paper, Stationery, Printing. | 651 | 385 | 37,945 | 14,332 | 1.72 | 2.69 |
| XIII. Rubber . . . | 50 | 22 | 10,149 | 2,808 | 0.49 | 0.78 |
| XIV. Musical Instruments | 30 | 7 | 1,152 | + 395 | 2.60 | 1.77 |
| XV. Miscellaneous Products | 145 | 161 | 11,616 | 6,458 | 1.25 | 2.49 |
| Total, Classes I. to XV. | 7,792 | 6,053 | 664,246 | 231,105 | 1.17 | 2.62 |
| XVI. Heat, Light and Power.. .. | 20 | 2 | 13:436 | 102 | 0.15 | 1.96 |
| Grand Total | 7,812 | 6,055 | 677,682 | 231,207 | 1.15 | 2.62 |

(a) Excludes working proprietors.
5. Apprenticeship. - In all the States, acts are in force for the regulation of the age at which children may be employed in gainful oocupations. 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.

## § 8. Salaries and Wages Paid and Value of Production.

Note.-In all tables relating to salaries and wages paid in factories the amounts drawn by working proprietors are excluded.
r. General.-The importance of the manufacturing industries of Australia is indicated by the fact that the total value of the output for $1949-50$ was $£ 1,645,411,497$, of which amount $£ 929,094,287$ represented the value of the materials used, including containers, etc., tools replaced and repairs to plant and buildings, and $\mathfrak{f}_{54}, 829,516$ the value of the power, fuel and light used. The difference between the sum of the last two amounts and the value of the output, namely $£ 661,487,694$, 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 in 1949-50 was $£ 385,895,806$. This figure, which excludes amounts drawn by working proprictors, was the highest ever recorded and shows an increase of $£ 46,608,646$ or 13.74 per cent. on that for the previous year.
2. Salaries and Wages Paid.-(i) In Classes of Industry, 1949-50. The amounts of salaries and wages paid in the various classes of industry in each State are shown in the


FACTORIES: SALARIES AND WAGES PAID, 1949-50.
( $£$.

(ii) Totals and Averages, 1938-39 and 1945-46 to 1949-50. The following statement shows the total amount of salaries and wages paid, and the average amount paid per employee in each State, for each of the years indicated. The average wage paid is not comparable with that shown in similar tables in issues of the Official Year Book prior
to No. 23, 1930, on account of the change in the method of computing the average number of hands employed, as explained earlier. The figures exclude working proprietors and the smounts drawn by them:-

FACTORIES : TOTAL AND AVERAGE SALARIES AND WAGES PAID.
(£.)

| Y | Particulars. | 8. |  | '18 | S. | W.A | Tas | Australia. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1938-39 |  |  |  |  |  |  |  |  |
| 1945-46 |  |  |  | 18,011,966 | 16,769,768 | 4 | 5,006,511 |  |
|  | A verage | 290.75 | 264.09 | 285.00 | 272.71 | 273. | 269.85 |  |
| 1946-47 | Total amount paid | 587 | 65 | 20,3 | 538,958 | 105,010 | 5,637,933 | 237,173,766 |
|  | Average per employ | 31 | 303.82 | 295.51 | 298.72 | 284.35 | 294.39 | 12 |
| 1947-48 | Total amount pa |  | 88 | 24,163,216 | 24,852,998 | 10,735,647 | 6,865,337 | 285,765,264 |
|  | Average |  |  | 327.72 | 348.42 | 316.26 | 8, 337.45 | 348.95 |
| 1948-49 | Total am Average | $146,535,642$ 401.06 | 2410441 399.86 | $29,446,634$ <br> 371.11 | $29,510,207$ 399.22 | $12,927,830$ | $8,456,406$ | 339,287,160 |
|  | Average per emp Total amount pa | $\begin{array}{r} 401.06 \\ , 147,094 \end{array}$ | $\begin{array}{r} 399.86 \\ 130254694 \end{array}$ | $\begin{aligned} & 371,11 \\ & 747,789 \end{aligned}$ | $\begin{gathered} 399.22 \\ 806,729 \end{gathered}$ | $\begin{array}{r} 357.18 \\ ;, 293,241 \end{array}$ | $\begin{aligned} & 57 \\ & 59 \end{aligned}$ | $\begin{aligned} & 395.60 \\ & 395,806 \end{aligned}$ |
| 50 | A verage per employ | 439.04 | 446.05 ! | 408.67 | 442.05 | 397.13 | 428.30 |  |

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 Statea than in others. In Victoria, for instance, there is a large number of hands employed in Class VIII., Clothing, comprising a relatively high percentage of women and children. The highest average wages per employee in 1949-50 were paid in Victoria, South Australia and New South Wales in that order.

The average earnings per employee rose annually from 1938-39 to 1943-44 when a record high level of £291 was attained as a result of war-time conditions. In 1944-45 the average dropped to $£_{285}$ and remained at this level in 1945-46. From 1945-46 average earnings rose each year and in 1949-50 reached a new record level of over $£_{43} 6$.
(iii) Earnings of Males and Females, 1949-50. The following table shows the amount of salaries and wages paid to males and females in each class of industry in each State during the year 1949-50 :-
SALARIES AND WAGES: MALE AND FEMALE FACTORY EMPLOYEES, 1949-50. ( $\mathrm{E}_{\mathrm{L}}$ )


## SALARIES AND WAGES: MALE AND FEMALE FACTORY EMPLOYEES, 1949-50-continued.

(£.)
Class of Industry. , N.S.W. : Victoria.; Q'land. S. Aust. ' W. Aust. ${ }^{\text {I }}$ Tas. : Australia.

## Females.


(iv) Total and Average Earnings of Males and Females, 1938-39 and 1945-46 to 1949-50. Particulars for these years are given in the table hereunder :-

## TOTAL AND AVERAGE SALARIES AND WAGES: MALES AND FEMALES.

| Particularg. | N.B.W. | Victoria. | Q'land. | S. Aust. | W.Aust. | Tas. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |

## males.

| 1938-39. | Amount paid ${ }^{\text {¢ }}$ | 8,271,867 | 29,005,746 | $9,920,001$ | 7,487,828 | 4,128,824 | $\|2,234,413\|$ | $\begin{array}{r} 91,048,679 \\ 85,30 \end{array}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Proportion of total \% | 85.80 | 80.51 | $91 \times 12$ | 91.66 | 90.28 | $90.10$ |  |
|  | Average per employee $£$ | 239.24 | 224.47 | ${ }^{238} 8.39$ | 220.95 | 235.49 | 212.09 | 31.84 |
| 1945-46. | Amount paid | 73,380,046 | 56,772,773 | 6,177,606 | 654,533 | -37,530 | 4,353.562 | $\begin{array}{r} 172,376,050 \\ 83.75 \end{array}$ |
|  | Proportion of total \% | r3.38.72 | [ 80.53 | 89.82 | 87.39 | 89.27 | 86.96 |  |
|  | Average per employee f | 335.34 | 330.86 | 914.36 | 305.70 | 306.74 | 301.35 | 326.99 |
| 1946-47. | Amount paid | 87,122,808! | 63,035,226i | 8,279.9961 | 18,194,115, | 8,148,191 | 4,991,4931 | 199,778,829 |
|  | Proportion of total \% | 84.12 | 80.82 | 90.00 | 88.58 | 89.49 | 88.53 | 84.23 |
|  | A verage per employee $£$ | 355.02 | ( 349.29 | 322.54 | $33 \mathrm{r} \cdot 31$ | 315.15 | 323.62 | 241,731,849 |
| 1947-48. | Amount paid | 106,027,823 | 76,312,216 | 21,658,839 | 22,035,219 | 9,529,341 | 6,068,411 |  |
|  | Proportion of total \% | S4.58 | 81.35' | $89.64{ }^{\prime}$ | 88.66 | 89.70 | 88.39 | 84.59 |
|  | A verage per employee $£$ | 405.77 | 401.521 | 357.14 | 385.31 | 349.33 | 369.89 | 394.24 |
| 1948-49. | Amount patd | 123262747 | 90,764,923' | 6,330,646 | 26,139,989 | 1155546 I | $\begin{array}{\|r} 7,503,261 \\ 88.73 \end{array} \quad 8,557,027$ |  |
|  | Proportion of total \% | 84.12 | 80.74! | 89.42 | 88.58 | 89.38 |  |  |  |
|  | Average per employee 5 | 455.88 | 457.85 | 405.20 | 442.11 | 390.29 | 425.40 | 446.20 |
|  | Amount paid | 135875101 | 10513548713 | $0,947,853$ | $9,907,392$ | 691695 | 8,537,495 | 324,095,023 |
| 1949-50. | Proportion of total \% | $83.80$ | $80.71$ | $89.06$ | $88.47$ | 89.53 | \| 88.51 | 83.99 |
|  | A verage per employee $£$ | 499.33 | 510.86 | 446.87 | 487.75 | 433.40 | 465.44 | 492.23 |

TOTAL AND AVERAGE SALARIES AND WAGES: MALES AND FEMALES -continued.

(v) Managers, Clerical Staff and Other Employees. A further analysis of salaries and wages paid is given in the following table for 1949-50 and shows the amounts paid to managers, clerioal staff, etc., and those paid to other employees. As previously mentioned, amounts drawn by working proprietors are excluded in all cases :-

SALARIES AND WAGES : MANAGERS, CLERICAL STAFF, ETC., AND OTHER EMPLOYEES, 1949-50.
( f.$)$

| Class of Industry. | Salaries and Wages Paid to- |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Managers, Clerical Staff, Chemists, Draftsmen, etc. |  | All Other Employees. |  | All Employees. |  |  |
|  | Males. | Females. | Males. | Females. | Males. | Females. | Total. |
| I. Treatment of Nonmetalliferons Mino |  |  |  |  |  |  |  |
| and Quarry Pro- |  |  |  |  |  |  |  |
| II. Bricks, Pottery, Glass, etc. | 893,883 655,988 | ,002 | $6,601,867$ $7,531,633$ | 33,908 26,175 | $7,495,750$ $8,187,621$ | 152,910 | ,648,660 |
| III Cbemicals, Dyes, Explosives, Paints, Oils and Grease .. | $3,045,154$ | 680,243 | 10,675,034 | 1,576,790 | 13,720,188 | 2,257,033 | 15,977,221 |
| IV. Industrial Metals, Machines, Conveyances |  |  |  |  |  |  |  |
| V. Precions Metale. Jewellery and Plate | 20,070,504 ${ }^{233,477}$ | 49,695 82,548 | $128,445,466$ $2,157,253$ | 250,453 | $2,390,730$ | ,100,148 300,635 | $57,616,118$ $2,691,365$ |
| VI. Textiles and Textile Goods (not Dress) | 1,873,781 | 715,202 | 12,746,960 | 9,237,507 | 14,620,74 | 9,952,709 | 24,573,450 |
| VII. Skins and Leather (not Cluthing or Footwear) | 727,596 | 133,289 | 5,491,898 | 923,513 | 6,219,494 | 1,056,802 | 7,276,296 |
| VIII. Clothing (except Knitted) |  | 13,28, |  | 21,638,761 |  |  |  |
| LX. Food, Drink and | 2, |  |  | 21, |  | 22,665,733 |  |
| Tobacco | 6,346, | 1,529,327 | 36,726,458 | 6,946,416 | 43,073,074 | 8,475,743 | 51,548,817 |
| $X$. Woodworking and Basketware .. | 1,89 | 331,321. | 18,298,197 | 186,862 | 20,191,128 | 518,183 | 20,709,311 |
| XI. Furnitire of Wood, Brdding, etc. | 589,78I | 177,389 | 6,269,535 | 637,572 | 6,859,31 | 814,961 | 7,674,277 |
| XII. Paper, Stationery. Printing, Book- | 58,78x |  | 6, | -37,57 |  |  | 7,074,277 |
| binding, etc. . . | 2,804,727 | 920,876 | 16,843,886 | 2,758,675 | 19,648,613 | 3,679,551 | 23,328,164 |
| XIII. Rubber $\quad \cdots \quad$. | 800,582 | 161,492 | 4,642,146 | 580,511 | 5,442,728 | 742,003 | 6,184,731 |
| XIV. Musical Instruments | 49,285 | 17,143 | 416,939 | 59,172 | 466,224 | 76,315 | 542,539 |
| $\begin{array}{cc}\text { XV. Miscellaneous } \\ \text { ducta } & \text { Pro- }\end{array}$ | 940,313 | 285,842 | 4,715,437 | 1,337,383 | 5,655,750 | 1,623,225 | 7,278,975 |
| Total, Classes I. to XV. | 43,059,577 | 10,156,307 | 273,574,948 | 51,6II,785 | 316,634,525 | 61,768,092 | 378,402,617 |
| XVI. Heat, Light and | 701,500 | 27,793 | 6,758,998 | 4,898 | 7,460,498 | 32,69x | 7,493,189 |
| Grand Total | 43,761,077 | 10,184,100 | 280,333,946 | 51,616,683 | 324,095,023 | 61,800,783 | 385,895,806 |
| Average paid per employee | 673.86 | 288.22 | 472.35 | 271.50 | 492.23 | 274.12 | 436.59 |

3. Power, Fuel and Light Used.-(i) In Classes of Industry, 1949-50. The expenditure by factories on power, fuel and light, including the value of lubricancs and water, is of considerable importance; in 1949-50 it amounted to a new high level of $\mathfrak{£}_{54,829,516 \text {, an increase of }} £ 8,767,694$ as compared with the previous year and approximately three and one half times the corresponding value in 1938-39. The following table shows the value of power, fuel and light, etc., used in the different classes of industry in 1949-50:-

FACTORIES: VALUE OF POWER, FUEL AND LIGHT USED (a), 1949-50.
(. .)

(a) Includes value of lubricants and water.
(ii) Values of Items, 1949-50. The following table shows the values of the various items of power, fuel and light used in factories in each State during the year 1949-50:-
FACTORIES : VALUE OF ITEMS OF POWER, FUEL AND LIGHT USED(a), 1949-50. (£.)

| Particulars. |  | N.S.W. | Victoria. | Q'land. | 8. Aust. | W. Aust. | Tas. | Australia. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Coal, Black | $\ldots$ | 8,723,158 | 1,724,520 | 2,739,796 | b1,725,443 | 965,240 | 264,767 | 616,142,924 |
| - Brown | $\cdots$ |  | 2,174,717 |  |  |  |  | 2,174,717 |
| Brown Cosil Briquettes | $\cdots$ |  | 1,155,359 |  |  |  |  | 1,155,359 |
| Coke | . | 4,232,695 | 625,771 | 67,347 | c1,063,380: | 71,353 | 56,730 | c6,117,276 |
| Wood | . | 372,302 | 730,486 | 322,669 | 297,791 | 575,143 | 174,491 | 2,472,882 |
| Fuel Ofl. | - | 3,570,280 | 2,308,369 | 522,134 | 1,061,571 | 653,564 | 180,568 | 8,296,486 |
| Tar (Fuel) | - | 285,736 | 166,226, | 1,609 | 55,536. | 18,326 | 11,603 | 539,036 |
| Electrictity |  | 5,622,259 | 3,390,33I | 956,424 | 1,270,180 | 598,920 | 572,874 | 12,410,988 |
| Gas | . | 1,178,437 | 319,184! | 61,141 | 79,236 ${ }^{+}$ | 26,694 | 8,813 | 1,673,505 |
| Other (Charcosl, atc.) | $\ldots$ | 56,650 | 227,04I | 91,168 | 143,073 | 72,171 | 2,042 | 592,145 |
| Water |  | 922,150 | 516,33I | 149,916 | 130,153 | 104,593 | 34,966 | 1,898.109 |
| Labrioating Oils | . | 571,560, | 355,901 | 207,191 | 115,677 | 98,24I | 47,519 | 1,396,089 |
| Total | - | 5,535,227, | 13,694,236 | 5,119,395: | 5,942,040 | 3,184,245 | 1,354,373 | 54,829,516 |

[^2] Leigh Creek coal.
(c) Includes $£ 13,546$, the value of 16,009 tons of coke breeze.
(iii) Quantities of Fuel used, 1949-50. The following table shows the quantities of fuel used in factories in each State during the year 1949-50:-

FACTORIES : QUANTITIES OF FUEL USED, 1949-50.

(a) Includes 246,800 tons of Leigh Creek coal.
(b) Includes 16,009 tons of coke breeze.
(iv) Total Falue, 1938-39 and 1945-46 to 1949-50. The next table shows the sums expended on power, fuel and light during the years $1945-46$ to $1949-50$ compared with r938-39:-

## FACTORIES : VALUE OF POWER, FUEL AND LIGHT USED.(a)

(む.)

(a) Includes value of lubricants and water.
4. Value of Materials Used.-(i) In Classes of Industry, 1949-50. 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 in 1949-50 reached $\mathbf{x 9 2}^{9} 9,094,287$ representing 56.46 per cent. of the value of the final output (see par. 5). The following table shows the value of the materials used in various classes of industry in each State :-

FACTORIES : VALUE OF MATERIALS USED, 1949-50.
( .)

(ii) Total Amount, 1938-39 and 1945-46 to 1949-50. The following table shows the values of msterials used in factories for the years 1945-46 to $1949-50$ compared with 1938-39 :-

FACTORIES: VALUE OF MATERIALS USED.
(. .)

| Year. | N.S.W. | ctoria. | and. | S. Aust. | W. Aust. | Tasmania. | Australia. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1938-39 | 120,501,795 | 82,971,603 | 42,596,049. | 20,308,797 |  |  |  |
| 1945-46 | 201,706,086 | 159,797,94 | 58,633,079 |  | 18,360,635 | 12,019,637 | 488,287,428 |
| 1946-47 | 245,436,182 | 176,106,507 | 62,134,914 | $52,015,85_{4}$ | 20,472,010 | 12,978,867 | 569,144,364 |
| 1947-48 | 292,556,789 | 209,896,1001 | 79, 573,835 | 65,620;640, | 24,956,9721 | 15,524,694 | 683,729,030 |
| 1948-49 | 336,913,96x | 252,741,001 | 97,044,670 | 75,227,229 | 29,198,424. | 19,422,419, | 810,547,704 |
| 1949-50 | 384,467,255 | 293,527,537 | 108,682,527 | 83,277,203 ${ }^{1}$ | 34,749,766 | 24,389,999 | 929,094,287 |

5. Value of Output.-(i) In Classes of Industry, 1949-50. The value of the output of factories in the various classes in cach State in I949-50 is shown in the following table. It represents the selling value at the factory of goods made or processed during the year, including by-products. In addition, it includes the amount received for other work done such as repair work, assembling and making up for customers. The difference between the sum of the values of the materials and of the power, fuel and light used, and the value of output is the real value of factory production (see par. 6).

FACTORIES : VALUE OF OUTPUT, 1949-50.
( $\mathrm{f}_{\mathrm{s}}$ )

(ii) Total, 1938-39 and 1945-46 to 1949-50. The following table shows the value of ontput in each State during each of the years shown.

FACTORIES : VALUE OF OUTPUT.
(. .)

| Year. |  | N.S.W. | Victoria. | Q'land. | S. Alust. | W. Aust. | Tasmania. | Australla. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1938-99 |  | $218,419,313$ 367092,216 | $152,967,61 \times$ <br> $86,089,408$ | 63,321,073 | 35,005,264 | 19:548,511 | 11,158,205 | 500,419,977 |
| 1945-46 | $\cdots$ | 367,092,216 | 286,989,408 | 91,200,751 | 66,222,998 | 34,022,839 | 22,119,305 | 867,647,517 |
| 1946-47 | $\cdots$ | 445,947, 542 | 315,437,679 | 100,099,090 | 86,702,572 | 38,269,975 | 24,569,748 | 1,011,026,206 |
| 1947-48 | . | 528,481,585 | 377,412,025 | 125,244,343 | 104,571,084 | 45,625,796 | 28,784,564 | I, $210,119,397$ |
| 1948-49 |  | 609,724,181 | 446,837,879 | 154,669,803 | 124,018,152 | 53,417,492 | 36,657,036 | 1,425,324,543 |
| 1949-50 | . | 693,203,003 | 526,466,280 | 175,155,989 | 141,528,229 | 63,978,037 | 45,079,959 | 1,645,411,497 |

6. Value of Production.-(i) In Classes of Industry, 1949-50. The value of production for any industry was defined at the Conference of Statisticians at Sydney in 1925 as "the value of consumable commodities produced during the year, deduoting, so far as possible, the value of goods consumed in process of production ".

In accordance with this definition, it was agreed that a deduction consisting of the oosts of raw material, containers, power, fuel, light, lubricants, water, tools replaced, repairs to plant and depreciation should be made from the "value of output". All these deductions with the exception of depreciation are included in the items "value of materials used" and " value of fuel used " as defined above. On account of the difficulty experienced in securing accurate figures for depreciation, it was agreed that no deduction should be made on this account for the present. 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".

The figure thus calculated is, however, not the net value of production. The deduction for depreciation, particulars of which are shown in § 9, par. 4, was estimated at £29,103,162 for 1949-50. Many miscellaneous expenses, such as taxation, insurance, advertising and other sundry charges have not been taken into account. Therefore, it must not be inferred that when wages and salaries are deducted from the value of production the whole of the "surplus" is available for interest and profit.

The value of factory production therefore approximates "net value added" in the manufacturing process. It amounted in 1949-50 to $\mathfrak{f 6 6 1 . 5 \text { million to which Class IV., }}$ Industrial Metals, etc., with $£_{246} .2$ million or almost four times the value of production of this class in 1938-39, made the greatest contribution. This total value of production in 1949-50 represented an increase of $£_{92} .8$ million over the figure for 1948-49 and $£_{458}$ million ( 225 per cent.) over the value of production recorded in 1938-39.

The following table shows the value of production in 1949-50 in each State for the various classes of industry :-

## FACTORIES: VALUE OF PRODUCTION, 1949-50.

( f.$)$

(ii) Total and Averages, 1938-39 and 1945-46 to 1949-50. The value of production and the amount per person employed and per head of population are shown in the following table for the last five years compared with 1938-39. For Australia as a whole the value of production per head of population increased from $£ 29.4 \mathrm{I}$ per head in 1938-39 to £82.18 per head in 1949-50. For value per person employed, the increase was not so pronounced (from $\mathfrak{£}_{3} 60$ per head in 1938 - 39 to $\mathfrak{f}_{721}$ in 1949-50) owing to the considerable increase in the numbers of persons employed in 1949-50 as compared with 1938-39.

FACTORIES : VALUE OF PRODUCTION.
( .)

| Year. | N.S.W. | Victoria. | Q'land. | S. Aust. | W. Auct. Tasmanla | Australia. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |

Value.

| 1938-39 |  | 90,265,891 | 65,996,069 | 19,301,475 | 13,678,930 | 6 | 9 | 203.416.610 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1945-46 |  | 153,179,489 | 120,250,487 | 30,269,653 | 25,601,628 | 13,826,527 | 9,195,657 | 352,323,441 |
| 1946-47 |  | 186,546,408 | 131,496,150 | 35,336,669 | 31,066,494 | $15,748,476$ | 10,667,545 | 410,861,742 |
| 1947-48 |  | 218,610,856 | 158,501,020 | 42,886,353 | 38,669,705 | 18,384,197 | 12,244:517 | $489,296.648$ |
| 1948-49 |  | 251,198,845 | 1182,760,376 | 53,539,674 | 43,667,633 | 21,473,887 | 16,074,602 | 568,715,017 |
| 1949-50 |  | 283,200,521 | 219,244,507 | 61,354,067 | 52,308,986 | 26,044,026 | 19,335,587 | 66r,487,69. |

Per Person Employed.

| $7935-39$ | $\cdots$ | 395 | 327 | 357 | 315 | 370 | 391 | 360 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $1945-46$ | $\cdots$ | 493 | 469 | 462 | 405 | 457 | 478 | 473 |
| $1946-47$ | $\cdots$ | 544 | 495 | 494 | 439 | 460 | 535 | 510 |
| $1947-48$ | $\cdots$ | 602 | 570 | 559 | 527 | 511 | 578 | 576 |
| $1948-49$ | $\cdots$ | 664 | 626 | 645 | 575 | 560 | 711 | 639 |
| $1949-50$ | $\cdots$ | 741 | 722 | 690 | 666 | 639 | 823 | 721 |

Per Head of Population.

| $1938-39$ | $\ldots$ | 32.99 | 35.25 | 19.15 | 22.99 | 18.79 | 22.72 | 29.41 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $1945-46$ | $\cdots$ | 52.23 | 59.66 | 27.92 | 40.57 | 28.21 | 36.74 | 47.42 |
| $1946-47$ | $\cdots$ | 62.95 | 64.46 | 32.21 | 48.50 | 31.67 | 41.90 | 54.83 |
| $1947-48$ | $\cdots$ | 72.71 | 76.60 | 38.54 | 59.28 | 36.13 | 46.77 | 64.04 |
| $1948-49$ | $\cdots$ | 81.98 | 86.48 | 47.18 | $:$ | 65.65 | 41.12 | 59.92 |
| $1949-50$ | $\cdots$ | 89.28 | 101.02 | 52.75 | 76.16 | 47.72 | 69.70 | 82.92 |

7. Value of Output and Cost of Production.-As the total value of the output for Australia for 1949-50 was estimated at $£ 1,645,4 \mathrm{II}, 497$, there remained, after payment of $\mathfrak{£} 929,094,287$ for the value of the materials used, $£ 385,895,806$ for salaries and wages, and $\mathfrak{£}_{54,829,516}$ for power, fuel and light, a balance of $£_{2} 75,591,888$ to provide for all other costs and overhead expenses such as rent, interest, insurance, pay-roll tax, income tax, depreciation etc., as well as drawings by working proprietors and profit. The following table gives corresponding particulars for each State expressed absolutely and as percentages of the total value of the output for the year 1949-50:-

FACTORIES: VALUE OF OUTPUT AND COST OF PRODUCTION, 1949-50.

| Stato. | Materials Used. (a) | Power, Fuel and Light. <br> (b) | Salarles and Wages. | Balance (Ontput less Materlals, Fuel and Wages.)(c) | Total Value of Output. |
| :---: | :---: | :---: | :---: | :---: | :---: |

Value and Cost, etc.
( $£$.

|  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Victoria |  | 13,694,2 | 130,254, | 88,989, |  |
| Queensland. | 108,682,527 | 5,119,39 | 34,747,789 | 26,606,278 | 175,1 |
| South Australia | 83,277,203 | 5,942,04 | 33,806,729 | 18,502,25 | 141,5 |
| Western Australia | 34,749,76 | 3,184,245 | 15,293,241 | 10,750,7 |  |
| Tasmania | 24,389,999 | 1,354,373 | 9,646,259 | 9,689.328 | 45, |
| Australia | [929,094,287 | 54,829,516 | 385,895,806 | 275,5 | 1,645, |

[^3]FACTORIES: VALUE OF OUTPUT AND COST OF PRODUCTION, 1949-50continued.

| State. | Materlals <br> Used. <br> $(a)$ | Power, Fuel <br> and Light. <br> $(b)$ | Salaries and <br> Wages. | Balance <br> (Output less <br> Materials, <br> Fuel and <br> Wages.)(c) | Total Vaine <br> of Output. |
| :---: | :---: | :---: | :---: | :---: | :---: |

Proportion of Costs, etc., to Total Valde. (Per cent.)

| New South Wales |  | 55.46 | 3.68 | 23.40 | 17.46 | 100 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Victoris | $\cdots$ | 55.75 | 2.60 | 24.75 | 16.90 | 100 |
| Queensland. . | . | 62.05 | 2.92 | 19.84 | 15.19 | 100 |
| South Australia | $\cdots$ | 58.84 | 4.20 | 23.89 | 13.07 | 100 |
| Western Australia | . | 54.32 | 4.98 | 23.90 | 16.80 | 100 |
| Tasmania | . | 54.10 | 3.01 | 21.40 | 21.49 | 100 |
| Australia | $\cdots$ | 56.47 | $3 \cdot 33$ | 23.45 | 16.75 | 100 |

(a) Includea the value of containers, packing, etc., also the cost of tools replaced and repairs to plant. (b) Includes lubricants and water. (c) See paragraph preceding this table.

## § 9. Value of Land, Buildings, Plant and Machinery.

1. General.-The following statement shows the value of land and buildings and of plant and machinery used in connexion with manufacturing industries during the year 1949-50 :-

FACTORIES: VALUE OF LAND, BUILDINGS, PLANT AND MACHINERY(a), 1949-50. ( $£$.

(a) Tacludes estimated value of rented premises and plant.

The values recorded in this section are generally the values apportioned in the books of the individual firms after allowance has been made for depreciation, but they include estimates of the capital value of premises and plant rented. The totals shown in the table consequently do not represent the actual amount of capital invested in the items specified.
2. Value of Land and Buildings.-(i) Total for Australia, 1938-39 and 1945-46 to 1949-50. The following table shows for Australia as a whole the approximate value of land and buildings occupied in connexion with manufacturing industries for 1938-39 and 1945-46 to 1949-50.

FACTORIES : VALUE OF LAND AND BUILDINGS( $a$ ), AUSTRALIA.
( E.$)$

(a) Includes estimated value of rented premises.
(ii) In Classes of Industry in States, 1949-50. The following table gives partionlars of the various classes of industry in each State.

FACTORIES : VALUE OF LAND AND BUILDINGS(a), 1949-50.
( E.$)$

(a) Iacludes estimated value of rented premises.
(iii) Totals in each State. The following table shows the value of land and buildings In each State for the years 1938-39 and 1945-46 to 1949-50 :-

## FACTORIES: VALUE OF LAND AND BUILDINGS.(a)

(. .)

| Year. | N.S.W. | Victoria. | Q'land | S. Aust. | W. Aust. | Tasmania. | Australia. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1938-39 | 57,353,625 | 42,026,245 | 12,299,089 | 8,710,700 | 6,813,6,53 | 3,717,102 | 130,920,4 14 |
| 1945-46 | 80,308,347 | 60,264,953 | 14,331,556 | 18,446,966 | 8,282,694 | 5,304,703 | 186.930,219 |
| 1946-47 | $8 \mathrm{r}, \dot{6} 94,595$ | 62,771,493 | $15.391,033$ | 18,659,534 | 8.756,924 | 5,678,205 | 193, $5.51,75_{4}$ |
| 1947-48 | 91,860,303 | 65.229 .391 | 16.608,760 | 20.690 .827 | $0.482,660$ | 6,271. 365 | 211.143.102 |
| 1948-49 | 101,240,784 | 73,383,784 | 18,508,165 | 22,217,619 | 10,054,598 | 7,334,9II | 232,739,861 |
| 1949-50 | 110,597,506 | 84,123,892 | 20,806,450 | 24,316,806 | 11,055, 002 | 8,649,734 | 259,549.390 |

(a) Includes estimated value of rented premises.

Prior to 1929-30 the increase in the value of land and buildings was uninterrupted. rising from $£ 23$ million in 1903 to fri8 million in $1929-30$, a growth of $£ 95$ million in 27 years. During the three years ended 1932-33, there was a decline of $\mathfrak{£}_{12}$ million to $£_{105} 8$ million, but since that year the value has risen annually and stood at $£_{259} .5$ million in 1949-50.
3. Value of Plant and Machinery.-(i) Total for Australia, 1938-39 and 1945-46 to 1949-50. The following table shows for Australia the approximate value of plant and machinery used in factories in 1938-39 and each of the five years ended 1949-50 :-
factories : Value of Plant and machinery(a), australia.
( $\ddagger$.

| Class of Industry. | 1938-39. | $1945^{-46}$ | 1946-47. | 19.47-48. | 1948-49. | 1949-50. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| I. Treatment of Non-metalliferous Mine and Quarry |  |  |  |  |  |  |
| Products .. $\quad$. | 7,028,382 | 4.916 .338 | 5.129.881 | 6,060,951. | 7,341,753 | 8.055.137 |
| II. Bricks, Pottery, Glass, etc. | 3,144,586 | 2,967.696: | $3.423 .14^{2}$ | 3.699.337 | 4,332,836 | 4,990,571 |
| III. Chemicals, Dyes, Explosives, Paints, Oils and Grease | $6,754,248$ | 17,791,778 | 15,271,732 | 7.515,884 | 9,254,924 | 23,518,260 |
| IV. Industrial $\cdots$ Metals, Muchines. Cunveyinces | 33,037,80ı | 53,901,719 ${ }^{\text {i }}$ | 52,895,953 | 1,079,926 | 70,154,863 | 77,596,963 |
| V. Precious Metals, Jewellery and Plate | 197,059 | 253,062. | 375,783. | 580,634 | 721,509 | 770,542 |
| VI. Textiles and Textile Goods (nut Dress) | 6,657,416 | 7,736,737 | 8,370,807 | 10,200,808. | 12,797,123 | $17,484,824$ |
| VII. Shins and Leather (art Clething or Footwear) | 973.181 ! | 1.584,051, | 1.70\%,214 | 1,86.4,369: | 2,062,810 | 2,535,421 |
| VIII. Ulothing (exrept Knitted) | 2,557,388, | 4,134,906 | 4,862.5171 | 5,905,080 | 6,923,613 | 7,791,840 |
| IX. Food, Drink and Tobacco | 32,100,675 | 33,233:935 | 35,133,478 | 37,999,396 | 42,795,618 | 48,317,299 |
| X. Woodworking and Basketware | $3,907,551$ | $5,023,174$ | 5,862,676 | 6,940,700 | 8,481,35I | 10,376,027 |
| XI. Furniture of Wood, Bedding, atc. | 727,857 | 740,677 | 929.55 ${ }^{\prime}$ | 1,189.427 | 1,426,914 | 1,679,010 |
| XII. Paper, Stationery, Printing, Bookbinding, etc. | 9,188,227 | 8,556,477 | 9,800,832 | 11,517,261 | 15,026,711 | 19,192,982 |
| XITI. Ruhber - . | 1,367,859, | 1,218,861 | I:416,650 | 1,855,042 | 2,243,634 | 2,753,822 |
| XIV. Musical Instraments | 11,702 | 23.571 | 65,738 | 80,304 | 134,080 | 154,348 |
| $\mathbf{X} \mathbf{V}$. Miscollaneous Products | 758,273 | 1,855,93 $\mathrm{I}_{1}$ | 1,847:270 | 2:356,419 | 2,806,582 | 3,275,458 |
| Total, Classes I. to XV. . . | 08,412,205 | 143,938,863, | 47,393,260 | 8,896,128 | 196,504,32I | 228,493,004 |
| XVI. Feat, Light and Power | 35,249,922 | 41,606.077 | 42,299.831 | 44,823,210 | 49,989,886 | 57,109,297 |
| Grand Total | 43,662,127 | 185,544,940 | 89,693,091 | 213,719,338 | 246,494,207 | 285,602,301 |

(a) Includes estimated value of rented plant and machinery.

Except for the years 1930-31 to 1933-34, when decreases were recorded, there has been a continuous increase in the value of plant and machinery in Australia. The increase in 1949-50 of $\mathfrak{f}_{39}$.1 million over 1948-49 extended over all industrial classes. The greatest increase occurred in Class XVI., Heat, Light and Power.
(ii) Totals in each State. The following table shows the value of plant and machinery in each State during the years 1945-46 to 1949-50 compared with 1938-39. During 1949-50 increases occurred in all States, Victoria showing the largest increase, $\mathfrak{f}_{1} 6.7$ million.

# FACTORIES : VALUE OF PLANT AND MACHINERY.(a) 

( $£$. )

| Year | N.S.W. | Victoria. | Q'land. | S. Aust. | W. Aust. | Tabmania. | Australia. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1938-39 | 62,692,956 | 38,626,743 | 18,095,415 | 9,749,679 | 8,095,064 | 6,402,270 | 143,662,127 |
| 1945-46 | 72,560,630 | 58,537,394 | 18,690,541 | 19,017,955 | 8,507,705 | 8,230,715 | 185,544,940 |
| 1946-47 | 75,234,273 | 59,124,802 | 19,995,249 | 18,408,224 | 8,430,574 | 8,499,969 | 189,693,091 |
| $1947-48$ | 86,714,082 | 65,829,201 | 21,830,685 | 20,239,623 | 9,189.910 | 9,915,837 | 213,719,338 |
| 1948-49 | 99,812,061 | 76,079,598 | 25,756,957 | 22,791,991 | 9,800,130 | 12,253,470 | 246,494,207 |
| 1949-50 | 113,864,379 | 92,748,475 | 28,903,570 | 24,900,949 | 11,456,767 | 13,728,161 | 285,602,301 |

(a) Includes estimated value of rented plant and machinery.
(iii) Valueaccording to Class of Industry, 1949-50. The following table shows the value of plant and machinery used in factories in each State during 1949-50 according to class of industry.

## factories : Value of Plant and machinery $a$ ), 1949-50. ( $£$.


(a) Includes estimated value of rented plant and machinery.
4. Depreciation of Land and Buildings and Plant and Machinery.-The following table shows the allowance made for the depreciation of land and brildings and plant and maohinery used in connexion with the manufacturing industries in each State during the year 1949-50 as recorded by factory proprietors at the annual census of factory production.

## allowance for depreciation of land and buildings and plant AND MACHINERY, 1949-50.



In the following table partioulars are given of the recorded values of land and buildings and plant and machinery in use by factories in Australia as at 30th June of the years 1939 and 1946 to 1950 and the value of additions and replacements made and depreciation allowed during each year.

## Value of land and buildingi, plant and machinery : australia.

( $\left.£^{\prime} 000.\right)$

(a) Includes estimated value of rented premises, plant and machinery,

## 10. Principal Factory Products.

The monthly factory production of certain commodities is shown in the monthly and quarterly publications of this Bureau and in the Secondary Industries Bulletin.

The following table shows the total recorded production of some of the principal articles manufactured in Australia during the years ended 30th June, 1948 to 1950. A more complete list, together with values, where available, is published in the Secondary Industries Bulletin.

## QUANTITY OF PRINCIPAL ARTICLES PRODUCED IN FACTORIES : AUSTRALIA.


(a) Not a vailable.

QUANTITY OF PRINCIPAL ARTICLES PRODUCED IN FACTORIES: AUSTRALIA-continued.

(a) Excludes Motor Car, Motor Cycle, Tractor and Aero Engines.
(b) Includes Canned Apple, all types.

## QUANTITY OF PRINCIPAL ARTICLES PRODUCED IN FACTORIES:

AUSTRALIA-continued.

| Article. |  |  | Unit of Quantity. | 1947-48. | 1948-49. | 1949-50. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Milk- |  |  |  |  |  |  |
| Condensed | .. | . | 1 b . | 102,133,162 | 107,011,808 | 111,476,645 |
| Concentrated (Whole) |  |  |  | 30,113,950 | 29,517,306 | 38,684,962 |
| Powdered (Whole) | .. | $\cdots$ | " | 45,681,635 | 57,981,479 | 71,273,882 |
| Mops |  |  | Gross | 8,224 | 11,150 | 12,968 |
| Motor Bodies |  |  | No. | 58,354 | 68,230 | 67,346 |
| Motor Spirit (including Benzol) |  |  | Gal. | 55,530,523 | 71,137,699 | 81,328,515 |
| Motors, Electric | .. | .. | No. | (a) | 300,854 | 368,878 |
| Nails .. |  |  | Ton | 20,324 | 19,442 | 17,808 |
| Neckties | . |  | Doz. | 514,618 | 485,659 | 430,758 |
| Oatmeal |  |  | Cwt. | 679,217 | 460,314 | 432,667 |
|  |  |  |  |  |  |  |
| Water |  | $\ldots$ | 1 lb . | 10,335,684 | 11,017,659 | 16,209,22I |
| O11 | . | .. | Gal. | 3,495,472 | 3,695,583 | 3,960,418 |
| Peanut Butter | . |  | 1 lb . | 3,231,477 | 3,864,462 | 3,737,370 |
| Perambulators |  |  | No. | 121,556 | 106,711 | 107,420 |
| Pickles |  |  | Pint | 8,774,899 | 8,464,087 | 9,427,463 |
| Plywood, to inch | . | .. | Sq. ft. | 139,077,009 | 146,284,627 | 157,033,067 |
| Pollard .. | . | .. | Ton (2,000 lb.) | 326,189 | 354,957 | 316,795 |
|  |  |  |  |  |  |  |
| And Nightdresses, Women's | .. | .. |  | 180,558 | 270,214 | 275,617 |
| Refrigerators- |  |  |  |  |  |  |
| Commercial .. ${ }^{\text {a }}$ | $\ldots$ | $\ldots$ | No. | 4,797 | 4,086 | 5,016 |
| Domestic Rice (Dressed) | . |  |  | 112,349 | ${ }^{146,074}$ | 150,878 707,652 |
| Rice (Dressed) ${ }_{\text {Ropes and }}$ |  | $\cdots$ | Cwt. | 668,294 125,699 | 672,498 117,215 | 707,652 117,504 |
| Sauce.. | $\because$ | $\cdots$ | rint | 30,727,855 | 32,301,074 | 32,299,043 |
| Sausage Casings |  | .. | Cwt. | 75,948 | 83,786 | 94,057 |
| Semolina |  |  |  | 166,952 | 248,984 | 275,013 |
| Shirts |  | $\cdots$ | Doz. | 800,388 | 880,045 | 904,787 |
| Sink Heaters |  |  | No. | (a) | 18,556 | 22,434 |
| Soap- |  |  |  |  |  |  |
| Flakes and Chips | $\ldots$ | $\ldots$ | ", | 48,698 | 59,434 | 592,562 |
| Industrial | . |  | " | 58,431 | 99,235 | 79,927 |
| Sand | . | .. | " | 63,293 | 51,088 | 44,981 |
| Toilet | . |  | " | 269,526 | 274,259 | 267,793 |
| Soft | .. | $\cdots$ | " | 23,458 | 20,199 | 19,561 |
| ${ }_{\text {Shampoo }}$ |  |  | " | 81,528 | 88,274 | 84,503 |
| Shampoo ${ }_{\text {Soap Extracts }}$ and Powd | . | $\cdots$ | " | 6,396 | \%,83I | 69,173 |
|  |  |  |  |  |  |  |
| Men's .. | $\cdots$ | $\ldots$ | Doz. pr. | 1,264,373 | 1,275,403 | 1,158,630 |
| Women's | . | . | " | 1,567,448 | 1,536,549 | 1,708,647 |
| Children's ${ }^{\text {c }}$. |  |  | Piot | 717,724 | 705,059 | 656,936 |
| Soup (Tinned) . | $\cdots$ | $\cdots$ | Pint | 21,102,041 | 42,032,297 | 32,611,448 |
| Starch- |  |  |  |  |  |  |
| Edible .. | $\cdots$ | .. | Cwt. | 113,640 | 159,391 | 279,350 |
| Inedible | . | .. |  | 101,302 | 81,769 | 87,752 |
| Steel, Structural, Fabricated | . | .. | Ton | 86,043 | 77,942 | 74,909 |
| Stoves, Ovens and Ranges- |  |  |  |  |  |  |
| Solid Fuel.. | $\cdots$ | $\cdots$ | No. | 53,257 | 61,434 | 67,857 |
| Gas . | . | . | " | 39,706 | 49,556 | 46,709 |
| Electric | . | . | " | 98,584 | 101,230 | 103,042 |
| Sugar- |  |  |  |  |  |  |
| Reffned | $\cdots$ |  | Ton | 435.584 | 428,269 | 937,179 422,675 |
| Sulphate of Ammonia | $\cdots$ |  | ", | - 39,489 | 53,247 | 48,736 |
| Superphosphate | . |  |  | $1,186,062$ 24,178 | 1,423,137 | 1,483,458 |
| Tallow- | . | . | Cwt. |  | 23,015 | 25,112 |
| Raw | . | . | " | 655,043 | 710,532 |  |
| Refined | . | .. |  | 296,967 | 320,064 | 418,858 |
| Tennis Racquet Frames . | . | . | Doz. | 30,788 | 23,677 | 19,950 |
| $\underset{\text { Cement }}{\text { Tiles, Roong- }}$ |  |  |  |  |  |  |
| Terra Cotta .. | $\because$ | $\because$ | 000 | 20,280 41,790 | 28,294 44,162 | 40,638 $45,4 \times 5$ |
| Timber- $\underset{\text { Froin Native Logs- }}{ }$ |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| Hardwood | - | $\cdots$ | 'ooo super. ft. | 844,493 | 907,704 | 965,142 |
| Softwood . $\quad$. | . . |  |  | 272,820 | 276,384 | 257,9:8 |
| Frorn Imported Logs- |  |  |  |  |  |  |
| Hardwood. . | - |  |  | 2,167 | 1,028 | 1,820 |
| $\underset{\text { Soitwood }}{\text { Tosters, Electric }}$ ( |  |  |  | 5,448 | 10,362 | 18,629 |
| Toasters. Electric .. | $\ldots$ | .. | No. | 140,725 | ILRR. 272 | 175.054 |

## QUANTITY OF PRINCIPAL ARTICLES PRODUCED IN FACTORIES: AUSTRALIA-continued.



## § 11. Individual Industries.

1. General.-Particulars in pages $1089-1118$, §§ 2-9 afford a general view of the magnitude of industries in the sixteen groups adopted by the Conference of Statisticians in 1930. While it is not possible, within the limits of this work to give a detailed account of each industry, particular industries dealt with hereunder are of special importance because of the employment which they provide for labour and capital or for other features of special interest. Where there are only one or two establishments in a particular industry in the State or the Commonwealth, details of activities are not published, but are combined with some other factory group so that operations of individual concerns will not be disclosed.

Details of some of the principal articles produced in factories in Australia during the years $1947-48$ to $1949-50$ are shown in the table in the preceding pages (§ 10).
2. Portiand Cement and Cement Goods.-The manufacture of portland cement and cement goods is an important industry included in Class I. Particulars for the three industries under this general heading are shown for 1949-50 in the following table.

PORTLAND CEMENT, ASBESTOS CEMENT SHEETS ETC., AND OTHER CEMENT GOODS : AUSTRALIA, 1949-50.

| Items. |  |  |
| :--- | :--- | :--- | ---: | ---: | ---: | ---: |

The principal articles produced in factories included in the foregoing table during 1949-50 were :-Portland cement $\mathrm{I}, \mathrm{I} 67, \mathrm{I} 89$ tons, valued at $£ 5,400,048$; Asbestos cement building shects $18,344,694$ square yards, $f 2,380,216$; cement roofing tiles $39,082,000$, £1,047,867 ; cement bricks and blocks $£ 434,187$; concrete pipes $£ 1,549,756$; ready-mixed conerete 296,36 I cubic yards, $\mathfrak{f} 927,699$.
3. Chemicals. Drugs and Medicines.-In 1945-46 the classification of factories was amended to provide for the separate tabulation of factories engaged in the production of Industrial and Heavy Chemicals and Acids and those engaged in producing Pharmaceutical and Toilet Preparations, which previously had been combined. Details for each of these industries are given in the next two tables for 1949-50. However, it should be noted that in order to avoid the publication of confidential information, particulars relating to Industrial and Heavy Chemicals include details for the Explosives industry.

INDUSTRIAL AND HEAVY CHEMICALS AND ACIDS (INCLUDING EXPLOSIVES), 1949-50.

| Items. | N.B.W. | Vlatoria. | Qland. | S. Aust. | W. Aust. | Tas. | Australia. |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |

(a) Not avallable for publication; included with total for Australia.

PHARMACEUTICAL AND TOILET PREPARATIONS, 1949-50.

| Itoma. | N.S.W. | Victoria. | Q'land. | S. Aust. | W.Aust. | Tas. | Australis. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Number of factories | 130 | 49 | 5 | I | 7 |  | 205 |
| Number of persons employed | 2,974 | 1,454 | 87 | (a) | (a) | (a) | 5,157 |
| Value of land and buildings ${ }^{5}$ | 1,040,303 | 469,583, | 18,542 | (a) | (a) | (a) | 1,705,906 |
| Value of plant and machinery $£$ | 373,2831 | 309,519 | 4,6361 | (a) | (a) | (a) | 767,208 |
| Ealaries and wages paid $£$ | I, $052,81 \mathrm{I}$ | 546,407 | 29,267. | (a) | (a) | (a) | 1,839,900 |
| Value of power, iuel, etc., usedf | 30,036 | 23,555 | 1,078 | (a) | (a) | (a) | 72,690 |
| Falue of materials used | 3,383,63 I | 2,239,114 | 85,506 | (a) | (a) | (a) | 6,370,83I |
| Total value of output | 7,917,226. | 3,965,171 | 128,758 | (a) | (a) | (a) | 13,009,957 |
| Falue of production . . £ | 4,503,559 | 1,702,502 | 42,174 | (a) | (a) | (a) | 6,566,436 |

(a) Not available for publication; included with total for Australia.
4. White Lead, Paint and Varnish,-(i) Details for each State. The following table shows particulars of this industry for each State during 1949-50:-

## WHITE LEAD, PAINT AND VARNISH FACTORIES, 1949-50.

| Items. | N.S.W. | Victoria. | Q'land. | S. Aust. | .Aust. | Teв. | Australia. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Number of factories | 64 | 5 I | 12 |  | 7 |  | 49 |
| Number of persons employed | 2,836 | 1,027 | 200 |  | (a) | (a) | 4,526 |
| Value of land and buildings $£$ | 1,091,049 | 627,594 | 62,555 | 211,579 | (a) | (a) | 2,037,916 |
| Value of plant and machinery $£$ | 674,495 | 450,985 | 46,335 | 150,810 | (a) | (a) | 1,344,63 |
| Salaries and wages paid £ | 1,329,250 | 483,524 | 82,146 | 175,812 | (a) | (a) | 2,096,891 |
| Value of power, fuel, etc., used£ | 126,269 | 30,946 | 2,69 I | 9,525' | (a) | (a) | 170,815 |
| Value of materials used fid | 6,201,736 | 2,792,853 | 565,608 | 1,152,394 | (a) | (a) | 10,902,742 |
| Total value of output | 9,402,723 | 4,181,1II | 752,4161 | 1,748,670 | (a) | (a) | 16,369,535 |
| Valuc ${ }^{\text {of production . . }}$ ¢ | 3,074,718 | 1,357,312 | 184,117 | 586,75I | (a) | (a) | 5,295,978 |

(a) Not available for publication; fagres aro inciuded in lie tutal for Australia.
(ii) Total for Australia. The next table shows particulars for the years 1945-46 to 1949-50 compared with 1938-39:-

## WHITE LEAD, PAINT AND VARNISH FACTORIES : AUSTRALIA.

| Items. | 1938-39. | 1945-46. | 1946-47. | 1947-48. | 1948-49. | 1949-50. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Number of factories | 102 | 122 | 133 | 143 | 152 | 149 |
| Number of persons employed | 2,271 | 3,197 | 3,612 | 3,980 | 4,240 | 4,526 |
| Value of land and buildings $£$ | 761,345 | 973,166 | 1,064,876 | 1,474,227 | 1,594,771 | 2,037,916 |
| Value of plant and muchintry $£$ | 324,222 | 524,065 | 602,967 | 882,794 | 989,143 | 1,344,632 |
| Salaries and wages paid | 535,014 | 1,005,121 | 1,243,482 | 1,565,684 | 1,797,275 | 2,096,891 |
| Value of power, fuel, etc., usedf | 44,992 | 80,675 | 94,115 | 109.255 | 127,297 | 170,815 |
| Value of materials used $\quad £$ | 2,275,027 | 4,775,075 | 5,950,115 | 8,155,047 | 9,048,001 | 10,902,742 |
| Total value of output $£$ | 3.905,104 | 7,304,167 | 9,233,244 | 12,240,763 | 13,550,950 | 16,369,535 |
| Value of production $£$ | 1,585,085 | 2,448,417 | 3,189,014 | 3,976,465 | 4,375,652 | 5,295,978 |

5. Soap and Candle Factories.-(i) Details for each State. The following table shows particulars of factories in the soap and candle industry in each State for 1949-50 :-

SOAP AND CANDLE FACTORIES, 1949-50.

| Items. | N.S.W. | Victoria. | Q'land. | S. Aust. | W.Aust. | Tab. | Australia. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Number of factories | 47 | 19 | 10 | 6 |  | 4 | 90 |
| Number of persons employed . | 2,227 | 773 | 355 | 193 | 82 | 16 | 3,646 |
| Value of land and buildinga $£$ | 572,751 | 332,393 | 59,728 | 91,601 | 38,645 | 20,087 | 1,115,205 |
| Value of plant and machinery $£$ | 500,343 | 540,615 | 43,242, | 89,346: | 24,558 | 3,234 | 1,201,338 |
| Salaries and wages paid £ | 972,888 | 382,592 | 136,937, | 80,035 | 26,499 | 5,386 | 1,604,837 |
| Value of power, fuel, etc., useds | 108,297 | 154.636 | 8,178, | 9,738 | 3,155 | 658 | 284,662 |
| Value of materials used $\quad \pm$ | 3,243,567 | 1,609,856 | 271,230 | 217,051 | 135,834 | 21,284 | 5,498,822 |
| Total value of output | 6,240,160 | 2,927,453 | 492,0931 | 319,762 | 207,043 | 39,146 | 10,225,657 |
| Value of production . . | 2,888,296 | 1,162,96I | 212,685 | 92,973 | 68,054 | 17,204 | 4,442,173 |

(ii) Total for Ausiralia. The next table shows similar particulars for the years 1945-46 to 1949-50 compared with 1938-39:-

SOAP AND CANDLE FACTORIES : AUSTRALIA.

| Items. | 1938-39. | 1945-46. | 1946-47. | 1947-48. | 1948-49. | 1949-50. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Number of factories | 63 | 73 | 79 | 88 | 91 | 0 |
| Number of persons employed | 2,620 | 3,020 | 3,181 | 3,204 | 3,578 | 3,646 |
| Value of land aud buildings $£$ | 669,546 | 676,405 | 705,060 | 709,054 | 715,160 | 1,115,205 |
| Valte of plant and machinery $£$ | 576,732 | 372,940 | 376,810 | 398,057 | 517,916 | 1,201,338 |
| Salaries and wages paid ${ }_{\text {d }}$ | 501.174 | 860,354 | 946,193 | 1,123,933 | 1,461,066 | 1,604,837 |
| Value of power, fucl, etc., used $£$ | 76,283 | 123,250 | 127,517 | 172,344 | 258,505 | 284,662 |
| Value of materinls used $\quad$ ¢ | 1.567,999 | 3,051,046 | 3,062,673 | 4.295,165 | 5,277,026 | 5,498,822 |
| Total value of output | 3,529,723 | 5,801,953 | 5,904,437 | 7,402,849 | 9,351,668 | 10,225,657 |
| Value of production . ${ }^{\text {¢ }}$ | 1,885,44 | 2,627,657 | 2,714.247 | 2,934,840 | 3,816,137 | 4,442,173 |

(iii) Materials Used and Production. The following statement shows the quantities of certain materials used and the production in soap and candle factories in Australia for the years $1945-46$ to $1949-50$ compared with $1938-39$ :-

SOAP AND CANDLE FACTORIES : MATERIALS USED AND PRODUCTION, AUSTRALIA.

| Particulars. | 1938-39. | 1945-46. | 1946-47. | 1947-48. | 1948-49. | 1949-50. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Tallow used . . cwt. | 535,511 | 834,057 | 768.939 | 893,826 | 972,474 | 994,011 |
| Alkali used $\quad \cdots$ | 229,881 | 160,304 | 153,036 | 156,042 | 177,162 | 170,470 |
| Coconut oil used-refined and unrefined.. .. cwt. | 138,954 | 86,576 | 57,191 | 80,518 | 98,751 | 78,261 |
| $\operatorname{Soap}(a) \quad \cdots \quad$ - $\quad$ " | 978,113 | 1,065,439 | 1,046,826 | 1,150,774 | 1,149,868 | 1,174,605 |
| Soap Extracts and Powders , | 191,232 | 469,865 | 432,051 | 529,971 | 609,631 | 697,848 |
| Candles made | 27,459 | 23,194 | 10,539 | 11,298 | 13,619 | 21,245 |

(a) Soap made in all factories including those not classified as "Soap and Candles" factories.

The output for the year 1949-50 comprised the following quantities of soap:Household, 599,422 cwt. ; Flakes and Chips, Household, 52,562 cwt. ; Flakes and Chips, Industrial, 7,688 cwt. ; Sand, 44,981 cwt. ; Toilet and Hand, 267,793 cwt.; Shaving (including Sticks and Creams), 8,995 cwt.; Industrial, 79,927 cwt. ; Soft, 19,561 cwt.; Liquid, S4,503 cwt. ; Shampoo (Powder), 577 cwt. ; Shampoo (liquid), 8,596 cwt. ; Soap Extract and Powders-Household, 686,288 cwt., Industrial, $11,560 \mathrm{cwt}$. This includes $168,580 \mathrm{cwt}$. of soap made in establishments not classified as Soap and Candle Factories.
6. Chemical Fertilizers.-(i) Details for each State. The following table shows particulars of the factories engaged in the manufacture of chemical fertilizers in eaoh State during 1949-50. Details of the consumption, imports and exports of fertilizers will be found in Chapter XX.-Agricultural Production.

CHEMICAL FERTILIZERS, 1949-50.

| Itams. | N.S.W. | Victoria. | Q'land. | S. Aust. | W. Aust. | Tas. | Australla. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Number of factortes . . . . | $14^{1}$ |  | 7 |  | 6 | 8 | 51 |
| Number of persons employed .. | 7821 | 1,246 | 252 | 799 | 730 | 80 | 3,889 |
| Value of land and buildings if | 1,984,387 | 577,699 | 89,375; | 346,262 | 589,485 | 46,072 | 3,633,280 |
| Value of plant and machinery $£$ | 2,079,925, | 1,061,668 | 125,452 | 710,777 | 823,295 | 48,060 | 4,849,177 |
| Salaries and wages paid $£$ | 406,858 | 702,840 | 120,310 | 394,696 | 372,935 | 52,887 | 2,050,526 |
| Value of power, fuel, etc., used¢ | 133,326 | 107,058 | 7,661 | 55,984 | 101,147 | 2,184 | 407,360 |
| Value of materials used | 1,427,177 | 4,715,393 | 1,042,210 | $1,913,089$ | 3,165,087 | 474,048 | 12,737,004 |
| Total value of output | 2,151,962 | 6,461,135 | 1,282,781, | 2,613,691 | 4,029,784 | $602,563$ | $17,141,916$ |
| Value of production .. £ | 591,459 | I,638,684 | 232,910 | 644,618 | 763,550 | 126,33I | 3,997,552 |

(ii) Total for Australia. The development of this industry since $1938-39$ is set out hereunder:-

CHEMICAL FERTILIZERS : AUSTRALIA.

| Items. | 1938-39. | 1945-46. | 1946-47 | 19, $7^{-4} 48$ | I948-49. | 1949-50. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| - ---.-- - - - - - - |  |  |  | - . . . |  |  |
| Number of fnctories | 36 | 38 | 39 | 47 | 50 | 51 |
| Number of persons employed | $2.540^{\circ}$ | 3,227 | 3,459 | 3,621 | 3,394 | 3,889 |
| Value of land and buildings $\{$ | 1.449,157 | 1,571,948, | 1,657,313 | 1,721,533 | 3,511,279' | 3,633,280 |
| Value of plant and machinery $£$ | 2,352,819 | 2,409,368 | 2,396,530 | 2,856,957 | 4,781,939 | 4,849,177 |
| Salaries and wages paid | 601,477 | 1,091,2751 | 1,283,8171 | 1,519,1971 | 1,846,614 | 2,050,526 |
| Value of power, fuel, ete., used $f$ | 113,749 | 181,418 | 205,302 | 269,605 | 371,718, | 407,360 |
| Value of materiols used $\quad \underset{\sim}{\text { a }}$ | 3,231,053 | 7,898,4931 | 8,288,987 | 9,958,424 | 11,909,725 | 12,737,004 |
| Total value of output | 4,944,800 | 10,046,710 | 10,577,165! | 13,107,526 | 15,681, 1 I | 17,141,916 |
| Value of production .. $x$ | I,599,998 | 1,966,799 | 2,082,876 | 2,879,4971 | 3,399,675 | 3,997,552 |

7. Iron and Steel Works and Engineering.-(i) General. In 1945-46 the classification of factories was amended to provide for the tabulation in four separate groups of those industries previously included under Iron and Steel and Engineering. The first group (Smelting, Converting, Refining and Rolling of Iron and Steel) covers blast furnaces, steel works and rolling mills. The seoond group, Foundries (Ferrous), covers those engaged in the founding of iron and steel. The third group (Plant, Equipment and Machinery including Machine Tools) covers those industries engaged in the production of boilers, engines, machines and machinery, machine tools, structural steel fabrications, steel furniture, etc. The fourth group (Other Engineering) includes jobbing and general engineers, not elsewhere included.
(ii) Smelting, Converting, Refining and Rolling of Iron and Steel. In the following table particulars are shown for $1949-50$ for each State for the group Smelting, Converting, Refining and Foiling oit Iron and Steel.
SMELTING, CONVERTING, REFINING AND ROLLING OF IRON AND STEEL, 1949-50.

(a) Not available for publication; igures are included in the total for Australia.
(iii) Foundries (Ferrous). Particulars covering those industries classified as founding of iron and steel are shown for each State for 1949-50 in the following table :-

FOUNDRIES (FERROUS), 1949-50.

(iv) Plant, Equipment and Machinery including Machine Tools. In the nest table particulars are shown for 1949-50 for those factories included in the third group mentioned previously.

PLANT, EQUIPMENT AND MACHINERY (INCLUDING MACHINE TOOLS), 1949-50.

| Items. | N.S.W. ! | Victoria. | Qland. | S. Aust. ${ }^{\prime}$ | W.Aust. | Tas. | Australia. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Number of factories | $748^{\prime}$ | 499 | 93 | 97 | 61 |  | 1,498 |
| Number of persons employed | 26,746 | 16,943' | 4,968 | 5,928 | 1,759 |  | 56,344 |
| Value of land and buildings $£$ | 6,239,583 | 4,335,911 | 653,642 | 1,035,926 | 414,703 |  | 12,679,765 |
| Value of plant and machinery $£$ | 6,056,165 | 4,405,708 | 709,610 | 1,210,678 | 428,758 | . . | 12,510,919 |
| Salaries and wages paid | 12,655,899 | 8,213,668 | 2,036,878 | 2,863,590 | 724.740 |  | 26,494,775 |
| Value of power, fuel, etc., useds | $\mid$ 475,770 | 331,576 | 81,622 | 145,143 | 41,394 | . | 1,075,505 |
| Vatue of materials used | 18,353,274, | 12,490,654 | 2,269,988 | 4,498,247 | 844,490 |  | 38,456,653 |
| Total value of output ${ }_{\text {c }}$ | '38,095,732, | 26,086,387, | 5,338,279 | 8,983,155 | 1,986,365 |  | 80,489,918 |
| Falue of production .. | 19,266,688 | 13,264,157 | 2,986,669 | 4,339,765 1 | $1,100,481$ | . | 40,957,760 |

(v) Other Engineering. Details covering jobbing and general engineering works not elsewhere included are shown for each State for 1949-50 in the following table.

OTHER ENGINEERING, 1949-50.

| Items. | N.S.W. | Victoria. | Q'land. | S. Aust. | W Aust. | Tas. | Australia. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Number of factories | 566 | 530 | 98 | 125 | 100 | 76 |  |
| Number of persons employed | 4,399 | 6,913 | 1,42I | 2,441 | 534 | 1,090 | - 16,798 |
| Value of land and buildings $x$ | 2,092,757 | 1,843,029 | 272,927 | 380,639 | 144,520 | 367,095 | 5,100,967 |
| Value of plant and machinery $£$ | 935,881 | 1,561,140 | 225,428 | 429,296 | 94,065 | 269,541 | 3,515,351 |
| Salaries and wages paid if | 1,665,317 | 3,149,632 | 547,843 | 982,579 | 176,111 | 455,845 | 6,977,327 |
| Falue of power, fuel, etc., usedf | 65,841 | 98,410 | 15,070 | 33,335 | 10,349 | 17,517 | 240,522 |
| Value of materials used $\quad \leq$ | 1,695,868 | 2,835,334 | 533,4.2 | 946,693 | 266,772 | 358,510 | 6,636,598 |
| Total value of output | 4,759,790 | 7,768,892 | 1,330,224 | 2,460,188 | 594,159 | 1,050,347 | 17,963,600 |
| Value of production... $\boldsymbol{E}$ | 2,998,081 | 4,835,148 | 781,733 | 1,480,160 | 317,038 | 674,320 | II,086,480 |

8. Extracting and Refining of Non-ferrous Metals ; Alloys.-(i) Details for each State. The following table shows particulars of establishments engaged in metal extraction and ore reduction including secondary recovery of metals, but excludes blast furnaccs engaged in production of pig iron from iron ore.

EXTRACTING AND REFINING OF NON-FERROUS METALS; ALLOYS, 1949-50.

(a) In Western Australia the mafority of the plants are worked at the mines and are therefore not included. (b) Not avoliable for publication; fgures are included in the total for Australla.
(ii) Total for Australia. The development of this industry since 1938-39 ie set out hereunder:-

EXTRACTING AND REFINING OF NON-FERROUS METALS ; ALLOYS : AUSTRALIA.

| Items. | 1938-39. | 1945-46. | 1946-47. | 1947-48. | 1948-49. | 1949~50. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Number of factories | 42 | 49. | 5 I | 54 | 56 | 62 |
| Number of persons employed .. | 5.532 | 6,060 | 6,597 | 6,343 | 7,040 | 7,394 |
| Value of land and buildings $£$ | 1,177,348 | 1,384,721 | 1,577,706 | 1,461,458 | 1,648,983 | 1,861,254 |
| Value of plant and machinery ${ }_{\text {d }}$ | 3,525,659 | 3,795,038 | 3,680,348 | 3,833,901 | 4,266,759 | 4,605,203 |
| Salaries and wages paid £ | 1,613,107 | 2,279,972 | 2,856, 150 | 3,379,030 | 3,919,107 | 4,324,331 |
| Value of power, fuel, etc., used ${ }^{\text {f }}$ | 597,951 | 1,057,934 | I,166,337 | 1,358, +63 | 1,711,969 | 1,907,881 |
| Value of materials used f | 16,844,310 | 18,042,070 | 26,806,144 | 30,757,008 | 41,487,792 | 38,993,366 |
| Total value of output | 25,333,872 | 24,626,910 | 37,406,311 | 42,779,193 | 59,231,273 | 56,618,997 |
| Value of production . . $£$ | 3,891,61 | 5,526,906 | 9,433,830 | 10,663,722 | 16,031,512 | 15,717,750 |

9. Electrical Machinery, Cables and Apparatus.-(i) Details for Each State. The following table shows particulars of this industry for each State during 1949-50:-

ELECTRICAL MACHINERY, CABLES AND APPARATUS, 1949-50.

| Items. | N.9.w. | Victoria. | Qland. | S. Aust. | W.Aust. | 'l'as. | Australia. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Number of factories | 39 | 238 | 46 | 57. | 63 | 17 | $\begin{array}{r} .\left[\begin{array}{rl} 2 \times 1+1 \\ 8 I I \end{array}\right. \end{array}$ |
| Number of persons employed | 20,977 | 7,178 | 853 | 1,080 | 729 | 139 | 30,956 |
| Falue of land and buildings $£$ | 4,181,067 | 1,532,387 | 149,95S | 203,974 | 169,608 | 56,027 | .6,293,018 |
| Value of plant and machinery $£$ | 2,740,259 | 1,099,824 | 100,388 | 91,604 | 56,089 | 38,988 | 4,127,152 |
| Salaries and pages paid $£$ | 9,354,845 | 3,172,695 | 329,262 | 391, 173 | 262,185 | 53,300 | 13,563,460 |
| Value of power, fuel, etc., usedf. | 321,060 | -97,629 | 7,803 | 15,506 | 9,2701 | 2,318 | -453,586 |
| Falue of materials used | 14,685,921 | 4,964,411 | 493,43 ${ }^{\text {I }}$ | 549,886 | 365,040 | 90,484 | 21,149,173 |
| Total value of output | 29,678,060 | 9,900,113 | 979,498 | 1,214,520 | 795,188 | 189,004 | 42,756,383 |
| Value of production .. £ | 14,671,079 | 4,838,073 | 478,264 | 649,128 | 420,878 | 96,202 | 21,153,624 |

(ii) Total for Australia. The increased outpot of eleotrical energy in Australia within recent years, referred to in par. 39 below, caused a corresponding demand for electriasl equipment. Difficulties, due to war, in obtaining electrical equipment from abroad have been responsible for considerable development in the manufacture of electrical goods and equipment in Australia, as shown in the following table.

ELECTRICAL MACHINERY, CABLES AND APPARATUS : AUSTRALIA.

| Items. | 1938-39. | 1945-46. | 1946-47. | 1947-48. | 1948-49. | 1949-50. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Number of factories | 360 | 551 | 658 | 732 | 791 | 81 |
| Number of persons employed .. | 10,666 | 22,825 | 25,077 | 27,579 | 29,961 | 30,956 |
| Value of land and buildings f | 1,627,183 | 3,507,375 | 3,950,804 | 4,488,206 | 5,382,287 | 6,293,018 |
| Value of plant and machinery $£$ | 896,553 | 2,084,018 | 2,524,818 | 2,987,963 | 3,664,289 | 4,127,152 |
| Salaries and wages paid ${ }_{\text {d }}$ | 1,031,098 | 6,301,035 | 7,455,375 | 9,454,291 | 11,703,047 | 13,563,460 |
| Value of power, fuel, etc., used $\boldsymbol{f}$ | 104,594 | 208,729 | 244,384 | 291,417 | 365,925 | 453,586 |
| Value of materials used | 3,195,032 | 8,085,443 | 10,467,524 | 14,310,252 | 16,510,308 | 21,149,173 |
| Total value of output $\mathrm{E}^{\text {S }}$ | 6,954,498 | 17,789,829 | 21,996,743 | 27,891,275 | 34,710,482 | 42,756,383 |
| Value of production ... £ | 3,654,872 | 9,495,65\% | 11,284,835 | 13.289,606 | 17,834,249 | 21,153,624 |

10. Railway and Tramway Workshops.-(i) Details for each State, 1949-50. The railway and tramway workshops. which form an important item in Class IV., are ohiefly owned by State Governments and Local Authorities. Workshops (fourteen in 19.19-50) controlled by non-public bodies are not included in the figures below :-

TRAMCARS AND RAILWAY ROLLING STOCK ( $a$ ), 1949-50.

(a) Government and Local Authority only.

A railway workshop in the Northern Territory is chiefly engaged in making repairs to rolling stock, etc., no new goods being manufactured. Particulars of this establishment are not inoluded in any of the tables in this chapter.
(ii) Total for Australia. The following table shows the development of railway and tramway workshops in Australia since 1938-39:-
tramcars and railway rollina stock $(a)$ : australia.

| 1tertis. | 1938-39. | 2945-46. | 9.4-47. | 1977-48. | 1948-49. | 1949-50. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Number of factorits |  |  | I 15 | 128 | 128 | 127 |
| Number of persons employed | 27,310, | 36.962. | 37.347 | 37,496 | 37,993 | 38,432 |
| Valur of hand and buildings $£$ | 6,736,924 | 6,060,491! | 7.081,749 | 7.513 .508 | 7,773,371 | 8,050,645 |
| Value of plant aud machlnery $\underset{\sim}{¢}$ | 5,390,179 | 6,034,499' | 5.647.996 | 6.525,a18 ${ }^{\circ}$ | 7,206,190 | 7,924,855 |
| Salaries and wages paid $\frac{¢}{s}$ | 6,720,990 | 11,656,718 | 12,051,260 | 14, 297,402 | 16,357,427 | 18,057,100 |
| Value of power, fucl, etc., used $¢$ | 226,108 | 371,865 | 370,715 | 371,6261 | 449,808 | 499,789 |
| Value of materials used | 4,976,353 | 8,143,346 | 8.131,025 | 9.074:3721 | 9,533,164 | 11,132,736 |
| Total value of output £ | 13,223,114 | 22,308,803 | 22,773,668 | 26.833.047 | 29,247,553 | 33,275,676 |
| Valat of proturtioni . . £ | 8,020,653 | 13,793.592 | 14.271,028 | 17,387,049 | 19,264,581 | 21,643,151 |

(a) Government and Local Authority only.
11. Motor Vehicles.-The industries catering for the motor trade are inaluded in Class IV., Industrial Metals, Machines and Conveyances. In the table below a summary is given of the principal statistics for 1949-50 for each branch of industry associated with the motor trade of Australia.

MOTOR VEHICLES : CONSTRUCTION, ASSEMBLY, REPAIRS, ETC. : AUSTRALIA, 1949-50.

| Itens |  |  | $\begin{aligned} & \text { Construc- } \\ & \text { tion and } \\ & \text { Assembly. } \end{aligned}$ | Motor Bodies. | Repalrs. | Motor Actores cories. | Total. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Number of factories <br> Number of persons employed <br> Value of land and buildings <br> Value of plant and machinery <br> Salaries and wages paid <br> Value of power, iuel, etc., used <br> Total value of ontput. <br> Value of production |  |  | , |  |  |  |  |
|  |  |  | ${ }_{\substack{11,357 \\ 2,213,264}}$ | ${ }_{2,880,726}$ | 1235,228 |  | 8,600,684 <br> , 874 |
|  |  | ${ }_{\text {c }}$ | $\left.\right\|_{2,0 \pm 1,042} ^{2,24,}$ | 2, $2,088,887$ | $\underset{\substack{12,502,337 \\ 4,117 \times 16}}{ }$ |  | 18,800,684 |
|  |  | ¢ | 5,902,890 | 7,546,906 | ${ }_{12,860,832}$ | 2,775,17 | ,685,798 |
|  |  | ¢ | 181,935: | 202,7371 | ${ }^{3888,332}$ | 121,882 | 894,886 |
|  |  | E | ${ }_{15,737,004}$ | 21,918,822 |  | 6,880,66 | 2,420,959 |
|  |  | \& | $10,833,050$ | $10,328,255$ | 20,098,986 | 3,830,873 | 45,091,164 |

In the next table similar details are shown on a State basis for these branohea combined.

MOTOR VEHICLES : CONSTRUCTION, ASSEMBLY, REPAIRS, ETC., 1949-50.

| Items. | N.S.W. | Victoria. | Q'land. | S. Aust. | W.Aust. | Tas. <br> (a) | Australia. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Number of factories | 2,026 | 1,520 | 728 | 360 | 491 | 205 | 5,330 |
| Number of persons employed | 20,759 | 23,372 | 7,168 | 10,917 | 4,232. | 1,426 | 67,874 |
| Value of land and buildings £ | 7,268,387 | 6,135,190 | 1,689,665 | 1,783,147 | 1,297,251 | 627,044 | 18,800,684 |
| Value of plant and machinery $£$ | 2,799,503 | 3,491,748 | 732,001 | 1,733,620 | 579,415 | 127,343! | 9,463,630 |
| Salaries and wages paid £ | 8,247,080 | 10,777,670 | 2,461,871 | 5,135,744 | 1,579,261 | 484,172 | 28,685,798 |
| Value of power, fuel, etc., used $£$ | 255,125 | 332,667' | 78,416 | 158,716 | 59,404 | 10,558, | 894,886 |
| Value of materials ured | 9,174,626 | 10,898,989 | 2,568,542 | 7,194,432 | $2,114,781$ | 475,589 | 32,426,959 |
| Toial value of output | 22,583,442 | 27,579,554 | 7,698,065 | 14630700 | 4,701,511 | 1,219,737 | 78,413,009 |
| Value of production .. £ | $13,153,691$ | 16,347,898 | 5,051,107 | 7,277,552 | 2,527,326 | 733,590 | $45,09 \mathrm{x}, 164$ |

(a) Includes horse-drawn vehicles.

The table below shows the output of motor bodies together with the number imported into Australia for 1938-39 and the years 1944-45 to 1949-50:-

MOTOR BODIES ( $a$ ) : PRODUCTION AND IMPORTS, AUSTRALIA.

| Items. |  | $1938-39$. | $1944-45$. | $1945-46$. | $1946-47$. | $1947-48$. | $1948-49$. |
| :---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |

(a) Excludes sidecars.

In the next table particulars are given of the number and value of motor chassis imported into Australia for the years shown.

MOTOR CHASSIS : IMPORTS, AUSTRALIA.

12. Agricultural Machines and Implements.-(i) General. Owing to the extensive agricultural activities conducted in Australia and the demand for modern mechanized farm equipment, the manufacture of agricultural implements constitutes an important branch of Australian industry. The articles manufactured include a wide range of implements for tillage, seeding and planting and the harvesting of crops. Other farm machinery made includes windmills, chaff-cutters and machinery used in the dairying industry.
(ii) Details for States. The following table shows details of agricultural implement works in each State for 1949-50 :-

AGRICULTURAL MACHINES AND IMPLEMENTS, 1949-50.

| Items. | N.S.W. | Victoria. | Q'land. | S. Aust. | W. Aust. | Tas. | Australia. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Number of factories | 64 | 72 | 24 | 31 | 17 | . | 208 |
| Number of persons employed | 1,918 | 5,578 | 1,369 | 1,345 | 244 | . | 10,454 |
| Value of land and buildings $£$ | 471,300 | 1,255,510 | 168,257 | 172,844 | 133,417 |  | 2,201,328 |
| Value of plant and machinery $£$ | 295,888 | 1,501,751 | 137,054 | 246,819 | 33,836 |  | 2,215,348 |
| Salaries and wages paid $f$ | 948,080 | 2,798,859 | 542,922 | 623,768 | 98,242 |  | 5,011,871 |
| Value of power, fuel, etc., used f | 34,086 | 180,926 | 22,646 | 52,343 | 1,954. |  | 291,955 |
| Value of materials used | 1,213,454 | 4,286,694 | 674,225 | 678,777 | 57,208 |  | 6,910,358 |
| Total value of output | 2,606,923 | 8,348,522 | 1.461,527 | 1.565,115 | 203,319 |  | 14,185,406 |
| Value of production . . £ | 1,359,383 | 3,880,902 | 764,656 | 833,095 | 144,157 | $\cdots$ | 6,983,093 |

(iii) Total for Ausiralia. Comparative statistics for 1938-39 and the years 1945-46 to 1949-50 are shown hereunder:-

AGRICULTURAL MACHINES AND IMPLEMENTS : AUSTRALIA.

\begin{tabular}{|c|c|c|c|c|c|c|}
\hline Items. \& 1938-39. \& 1945-46 \& 1946-47. \& 1947-48. \& 1948-49. \& 1949-50. <br>
\hline Number of factories \& 161 \& 172 \& 181 \& 186 \& 196 \& 208 <br>
\hline Number of persons employed \& 6,563 \& 9,510 \& 8,743 \& 9,185 \& 9,629 \& 10,454 <br>
\hline Value of land and buildings $£$ \& 996,949 \& 1,199,952 \& 1,251,975 \& 1,530,940 \& 1,912,806 \& 2,201,328 <br>
\hline Value of plant and machinery $\mathfrak{E}$ \& 910,520 \& 1,229,597 \& 1,232,482 \& 1,625,335 \& 1,938,236 \& 2,215,348 <br>
\hline Salaries and wages paid ${ }_{\text {S }}$ \& 1,373,213 \& 2,893,892 \& 2,856,273 \& 3,498,858 \& 4,198,793 \& 5,011,871 <br>
\hline Value of power, fuel, etc., used $¢$ \& 81,736 \& 186,150

2 \& 172,416 \& 204.060
3 \& 233,260

4 \& 291,955 <br>
\hline Value of materials used \& 1,485,018 \& 2,717,302 \& 2,901,313 \& 3,578,619 \& 4,479,860 \& 6,910,358 <br>
\hline Total value of output \& 3,403,091 \& 6,701,344 \& 6,717,194 \& 8,397,643 \& 10,384,176 \& 14,185,406 <br>
\hline Value of production . . £ \& 1,836,337 \& 3,797,892 \& 3, $6+3,465$ \& +,614,964 \& 5,671,056 \& 6,983,093 <br>
\hline
\end{tabular}

13. Wireless and Amplifying Apparatus.-The introduction of wireless broadcasting in 1923 gave rise to a new industry in Australia. Early statistical details of the industry are not available as they were grouped together with other electrical apparatus. In 1930-31 a new classification of factories was adopted and "Wireless Apparatus" was shown as a separate industry. The industry is confined mainly to New South Wales and Victoria, but is becoming increasingly important in South Australia. The number of broadcast listeners' licences increased from 331,128 in 1930-31 to 2,245,307 at December, 1951, and this increase reflects the advancement of the industry during that period. During the war years considerable expansion took place in the industry to meet the requirements of the fighting services and apart from a slight drop in output in 1945-46, this expansion bas continued.

## WIRELESS AND AMPLIFYING APPARATUS: AUSTRALIA.

| Items. | 1938-99. | 1945-46. | 1946-47. | 1947-48. | 1948-49. | 1949-50. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Number of factories | 72 | 97 | 127 | 134 | I36 | 29 |
| Number of persons employed | 4,828 | 8,709 | 8,935 | 9,543 | 9,213 | 9,283 |
| Value of land and buildings $£$ | 557,953 | 969,105 | 1,133,159 | I, 115,494 | 1,105,944 | 1,204,813 |
| Value of plant and machinery $£$ | 305,468 | 711,805 | 587,179 | 643,732 | 688,162 | 770,185 |
| Salaries and wages paid ${ }_{\text {S }}$ | 754,302 | 2,295,866 | 2,560,401 | 3,070,698 | 3,362,259 | 3,744,637 |
| Value of power, fuel, etc., used $£$ | 23,525 | 58,240 | 62,365 | 91,072 | 102,703 | 100,916 |
| $\checkmark$ Value of materials used ${ }^{\text {d }}$ | 1.355,683 | 3,446,056 | 4,169,444 | 4,919,968 | 5,196,786 | 6,408,842 |
| Total value of output | 2,502,338 | 6,514,933 | 7,721,018 | 9,235,86I | 9,911,873 | 11,761,450 |
| Value of production . . | 1,123,130 | 3,010,639 | 3,489,209 | 4,224,82I | 4,612,384 | 5,251,692 |
| Domestic receiving sets made No. | 163,82I | 93,0.4 8 | 261,359 | 335,208 | 294,119 | 343,323 |

14. Cotton.-(i) General. Cotton has been grown in Australia since 1860, but never on a very large scale. The average annaal quantity of unginned cotton produced during the five years ended 1938-39 was 18 million lb . and slightly under 2 million lb . in the five years ended r949-50. Arising out of the development in the local manufacture of cotton materials and the further expansion following the outbreak of war in 1939, plans were completed for an extension of the area devoted to the cultivation of this crop, but since the commencement of the Pacific War there has been a definite downward trend. The growing of cotton, which is restricted to Queensland, is referred to in some detail in Chapter XX.-Agricultural Production.
(ii) Ginning. The ginning and marketing of cotton is controlled by the Queensland Cotton Board. The Board operates ginneries and processes by-products. The production of raw cotton is insufficieat for local factory requirements and is supplemented by imports from overseas, chiefly from India, Brazil and the United States of America.
(iii) Spinning and Weaving. The recent expansion in the spinning and weaving section of the cotton industry marks an important event in its development. New faotories have been established and Australia is now producing an extensive range of
cotton goods, including duck and canvas from cotton or flax, denims, drill, etc., tyre cord and tyre cord fabric. The number of establishments engaged in cotton spinning and weaving in Australia and other particulars of the industry are shown in the following table for the five years ended 1949-50 in comparison with 1938-39.
cotton spinning and weavina : australia.

| Items. | 1938-39. | 1945-46. | 1946-47. | 1947-48. | 1948-49. | 1949-50. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Number of factories | 331 | 78 | 3 r | 79 | 9 I | 93 |
| Number of persons employed .. | 3,589 | 7,253 | 7,705 | 7,702 | 8,246 | 8,377 |
| Value of land and buildings £ | 703,790 | 1,529,150 | 1,709.711 | 1,867,737 | 2,077,982 | 2,843,639 |
| Value of plant and machinery $£$ | 735,529 ${ }^{\text {i }}$ | 1,913.775 | 1,985,327 | 2,042.326 | 2,748,439 | 4,117,589 |
| Salaries and wages paid it | 493,109 | 1,714,669 | 2,152,044 | 2,511,918 | 2,939,115 | 3,306,022 |
| Valur of power, fucl, etc., used $£$ | 50,011 | 149,990 | 186,563 | 209,096 | 250,739 | 308,156 |
| Value of materials used $\mathfrak{E}$ | r,357,280 | 4,559,560 | 5,574,689 | 6,075,570 | 7,856,804 | 9,889,139 |
| Total value of output f | 2,385,990 | 7,936,716 | 9,499,843 | 10,371,439 | 12,896,178 | I6,188,407 |
| Value of production .. £ | 978,699 | 3,227,166 | 3,738.591 | 4,086,773 | 4,788,635 | 5,991,112 |

15. Wool Carding, Spinning and Weaving.-(i) Details for each State. The importance of this industry is emphasized by the fact that Australia is the world's chief source of wool and the development of the woollen industry since its establishment at an early period in Australian history is of singular interest. The production consists chiefly of woollen cloth and tweed, worsted cloth, rugs, blankets and yarn, all of which have acquired a reputation for purity and durability. The following table shows particulars for 1949-50.

W00L CARDING, SPINNING AND WEAVING, 1949-50.

| Itemb. | N.S.W. | Victoria. | Q'land. | S. Aust. | W.Aust. | Tas. | Australia. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Number of factories |  |  | 4 | 3. |  | 6 | 168 |
| Number of persons employed | 7,987 | 12,114 | 920 | 599 | 328 | 2,406 | 24:354 |
| Value of land and buildings $£$ | 1,548,052 | 2,358,1661 | 109,829 | 37,568 | 81,887 | 211,767 | 4,347,269 |
| Value of plant and machinery $£$ | 1,694,035 | 2,871,8571 | 235,568 | 63,762 | 84,906 | 279,608 | 5,234,732 |
| Galarieg and wages paid | 2,900,595 | 4,954,740 | 279,180 | 226,889 | 118,580 | 924,357 | 9,404,341 |
| Value of power, fuel, etc., usedf | 2,988,892 | $\begin{array}{r}4790,550 \\ \hline\end{array}$ | 20,093 | 23,1961 | 14,0971 | 54,228 | 9,431,056 |
| Value of materials used $\quad £$ | 9,435,031 | 17,467,095 | 1,075,209 | 859,515 | 776,128 | 3,128,541 | 32,741,519 |
| Total value of output ${ }^{\text {c }}$ | 14,005,877 | 26,818,728 | 1,532,382 | 1,361,880 | 1,215,553 | 5,063,999 | 49,998,419 |
| Value of production.. | 4,321,954 | 8,881,083 | 437,080 | 479,169 | 425,328 | 1,881,230 | 16,425,844 |

(ii) Total for Australia. The extent of the wool textile industry in Australia in the years 1945-46 to 1949-50 compared with 1938 - 39 is shown in the following table. Detailed particulars for the several States are not available for publication.

WOOL CARDING, SPINNING AND WEAVING: AUSTRALIA.

16. Hosiery and Other Knitted Goods.-(i) Details for each State. There were 496 hosiery and knitting mills operating in Australia during 1949-50. The total number of persons employed in these establishments was 21,577, of whom 14,951 were females. Details for each State are shown in the following table :-

HOSIERY AND OTHER KNITTED GOODS, 1949-50.

| Items. | N.S.W. | Victoria. | Q land. | 3. Aust. | W.Aust. | Tas. | Australia. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Number of factories | 143 | 327 | 6 | 8 | 8 |  | 96 |
| Number of persons employed | 6,471 | 14,204 | 2 | 113 | 180 | 97 | 21,577 |
| Value of land and buildings | 1,212,421 | 2,506,414 | 97,357 | 24, 155 | 22,922 | 13,329 | 3,876,598 |
| Value of plant and machinery $£$ | 1,000,747 | 2,666,497 | 104,665 | 13,271 | 14,496 | 15,058 | 3,814,734 |
| Salaries and wages paid | 2,243,082 | 4,881,239 | 144,804 | 33,93r | 49,494 | 29,259 | 7,381,809 |
| Value of power, fuel, etc., usedf | 86,086 | =20,603 |  | $\underset{\substack{1 \\ 1,209}}{ }$ | I,936 | 1,607 | 315,108 |
| Value of materials used $£$ | 5,398,518 | 10,334,455 | 656,969 | 50,602 | 123,119 | 73,220 | 16,636,883 |
| Total value of output £ | 9,220,795 | 1 $18,775,268$ | 931,622 | 105,073 | 201,955 | If6,006 | 29,350,719 |
| Value of production .. $\quad$ £ | 3,736,191 | 8,220,210 | 270,986 | 53,262 | 76,900 | 41,179 | 12,398,728 |

(ii) Total for Australia. Comparative statistics for 1938-39 and the years 1945-46 to 1949-50 are shown in the following table :-

HOSIERY AND OTHER KNITTED G00DS : AUSTRALIA.

| Items. | 1938-39. | 1945-46. | 1946-47. | 1947-48. | 1948-49. | 1949-50. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Number of factories | 313 | 376 | 397 | 420 | 465 | 496 |
| Number of persons employed | 18,159 | 17,091 | 19,264 | 20,33\% | 21,116 | 21,577 |
| Value of land and buildings $£$ | 1,962,336 | 2,444,369 | 2,608,352 | 2,753,994 | 3,210,207 | 3,876,598 |
| Value of plant and machinery $\mathfrak{E}$ | 1,930,564 | 1,358,482 | 1,521,026 | 1,964,505 | 2,763,161 | 3,814,734 |
| Salaries and wages maid $£$ | 2,331,536 | 3,687,445 | 4,502,549 | 5,469,665 | 6,526,281 | 7,381,809 |
| Value of power fuel, etr., used $£$ | 133,154 | 185,159 | 212,469 | 235.077 | 271,553 | 315,108 |
| Value of materials used | 4,284,216 | 7,202,997 | 8.786,552 | 10,897,809 | 14,137,338 | 16,636,883 |
| Total value of output | 8,226,468 | 13,252,876 | 16,831,684 | 20,661, 106 | 24,951,041 | 29,350,719 |
| Value of production . . $\quad$ ¢ | 3,809,098 | 5,864,720 | 7,832,663 | 9,528,220 | 10,542,150 | 12,398.728 |

(iii) Materials used and Production, 1949-50. The following quantities of yarn were used in these establishments during 1949-50, viz. :-Worsted, $8,524,701 \mathrm{lb}$. ; woollen, $142,828 \mathrm{lb}$. ; cotton, $8,773,975 \mathrm{Ib}$. ; mercerised cotton, $568,023 \mathrm{lb}$. ; rayon, $6,512,710 \mathrm{Ib}$.; silk, $196,136 \mathrm{lb}$. ; nylon, $530,742 \mathrm{lb}$. ; other, including mixtures, $216,893 \mathrm{lb}$. Production comprised $42,094,068$ garments, valued at $£_{15,844,571}$; and $3,524,213$ dozen pairs of socks and stockings, valued at $£ 9,220,238$.

I'7. Tanning, Currying and Leather Dressing.-(i) Details for each State. In Class VII. the most important industry is tanning. Formerly the production of tanneries in Australia was confined to the coarser sorts of leathers, but there are now very few kinds which cannot be produced locally, and an export trade has been built up in some varieties.

TANNING, CURRYING AND LEATHER DRESSING, 1949-50.

| Items. | N.S.W. | Victoria. | Q'land. | S. Aust. | W.Aust. | Tas. | Australla. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Number of factories | 71 | 46 | 2, | $10^{\prime}$ | 5 |  | 145 |
| Number of persons employed . | 1,901 | 2,497 | 618 | 215 | (a) | (a) | 5,473 |
| Value of land and buildings $£$ | 596,758 | 582,479 | 64,530 | 65,239 | (a) | (a) | 1,355,319 |
| Value of plant and machinery $£$ | 500,884 | 426,46I, | 107,907 | 91,749 | (a) | (a) | 1,170,945 |
| Salaries and wages paid $£$ | 1,001,042 | 1,277,156 | 275,654 | 96,337 | (a) | (a) | 2,755,456 |
| Falue of power, fuel, etc., usedf | 100,522 | 108,255 | 17,948! | 8,766! | (a) | (a) | 242,943 |
| Value of materials used ${ }^{\text {c }}$ | 2,731,081 | 2,841,802 | 776,292 | 222,208 | (a) | (a) | 6,846,103 |
| Total value of output | 4,337,125 | 5,023,446 | 1,224,516 | 373,516, | (a) | (a) | 11,419,328 |
| Value of production . . E | 1,505,522 | 2,073,389 | 430,276 | $142,542$ | (a) | (a) | 4,330,282 |

(a) Not availsble for publication; flgures aro included in the total for Australia.
(ii) Total for Australia. The development of the tanning industry during the years 1938-39 and 1945-46 to 1949-50 is shown in the following table :-

TANNING, CURRYING AND LEATHER DRESSING : AUSTRALIA.

| Items. | 1938-39. | 1945-46. | 19+6-47. | 1947-48. | 1948-49. | 1949-50. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |
| Namber or factories | 132 | 152 | 154 | 149 | 144 | 145 |
| Number of persons employed | 4,375 | 5,022 | 5,428 | 5,361 | 5,42Y | 15,473 |
| Value of land and buiddings $£$ | 813,713 | 1,048,240 | 1,127,454 | 1,154,301 | 1,270,961 | 1,355,319 |
| Value of plant and machinery ${ }_{\text {f }}$ | 523,538 | 704,551 | 785,894 | 857,186 | 979,592 | 1,170,945 |
| Salaries and wages paid | 919.781 | 1,662,156 | 1,953,573 | 2,182,874 | 2,501,897 | 2,755,456 |
| Value of power, fuel, etc., used $\mathcal{E}$ | 87,670 | 127,824 | 148,501 | 165,777 | 188,670 | 242,943 |
| Value of materials used $\quad \mathrm{f}$ | 2,983,04 1 | 5,237,697 | 6,218,200 | 6,308,195 | 6,465,893 | 6,846,103 |
| Total value of output | 4,592,642 | 8,055,696 | 9,646,0 0 | 9,804, 867 | 10,525,558 | 11,419,328 |
| Value of production .. $£$ | 1,521,931 | 2,690,175 | 3,279,319 | 3,330,895 | 3,870,995 | 4,330,282 |

(iii) Material Used and Production. The quantities of materials used and leather produced in tanneries in each State in 1949-50 are shown in the following table. Some leather is also produced in works other than tanneries, but this is excluded.

TANNERIES : MATERIAL USED AND PRODUCTION, 1949-50.
 an amount produced or used in other works.
18. Tailoring and Ready-made Clothing Factories.-(i) Delails for each State. Statistics showing the distribution of this industry between States in 1949-50 are shown in the following table :-

TAILORING AND READY-MADE CLOTHING FACTORIES, 1949-50.

| Items. ${ }_{\text {a }}$ N.S.W. | Victoria. | Q'land. | S. Aust. | W. Aust. | Tas. | Australla. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Number of factories . . $\quad . .1879$ | 560 | 160 | 39 | 143. | 2 I | 1,902 |
| Number of persons employed . . 18,960 | 10,642 | 3,196 | 2,688 | 1,338. | 426 | 37,250 |
| Value of land and buildings $f$ 3,102,095 | 1,603,767; | 381,700 | 453,111 | 267,192; | 63,830 | 5,871,695 |
| Value of plant and machinery $£$ | 473,549 ${ }^{\prime}$ | 82,204 | 9x,402 | 30,925 | 11,502 | 1,665,817 |
| Salaries and wages paid $f, 5,702,690$ | 3,557,969 | 808,513. | 714,259 | 343,456 | 1 19,544 | II,246,43 |
| Value of power, fuel, ete., usedf \| 97,258 | 70,229 | 13,935 | 15,0521 | 5,832, | 1,889 | 204,195 |
| Value of materials used $\quad$ ¢ $10,790,555$ | 6,496,568. | 1,423,750 | 890,948 | 464, 168 | 121,235 | 20,187,224 |
| Total value of output $£$ ¢ $9,428,443$ | 12,208,493 ${ }^{\prime}$ | 2,699,44 | 1,882,856 | 976,101! | 280,589 | 37,475,923 |
| Value of production . . $£$; 8,540,630 | 5,641,696: | 1,261,756 | 976,856 | 506,101 | 157,465 | 17,084,504 |

(ii) Tolal for Australia. Details for the five years 1945-46 to 1949-50, compared with 1938-39 are as follows :-

TAILORING AND READY-MADE CLOTHING FACTORIES : AUSTRALIA.

| Items. | 1938-39. | 1945-46. | 1946-47. | 1947-48. | 1948-49. | -1949-50. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Number of fartories | 1,177 | 1,420 | 1,576 | 1,68> | 1,874 | 1,902 |
| Number of persons employed | 26,499 | 30,047 | 33,441 | 35,37s | 37,958 | 37,250 |
| Value of land and buildings ${ }^{\text {s }}$ | 3,175,748 | 4,141,584 | 4,655,424. | 4,915,366 | 5,549,818 | 5,871,695 |
| Value of plant and machinery $\mathbf{f}$ | 355,503 | 828,695 | 965,847. | 1,215,375 | 1,460,516 | 1,665,817 |
| Salaries and wages paid ${ }_{\text {E }}$ | 3,168,472 | 5,506,614 | 6,899,245 | 8,186,135 | 10,323,392 | II, 246,43I |
| Value of power, fuel, etc., used $£$ | 72,431 | 116,616, | 133,904 | 149,72C | 186,648 | 204,195 |
| Value of materials used f | 4,946,519 | 9,616,801 | 12,255,029! | 15,232,733 | 19,343,976 | 20,187,224 |
| Total value of output | 9,830,646 | 18,614,368 | $23,244,804$ | 27,872,664 | 35,199,165 | 37,475,923 |
| Value of production .. E | 4,811,696 | 8,880,951, | 10,855,871 | 12,490,213 | 15,668,54 | 17,084,504 |

19. Dressmaking and Millinery Establishments.-Particulars of dressmaking and millinery establishments in Australia for the five years ended r949-50 compared with 1938-39 are shown in the following table :-

| DRESSMAKING AND | MILLINERY E |  | ESTABLISHMENTS : |  | AUSTRALIA. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Iterns. | 1938-39. | 2945-46. | 1946-47. | 1947-48. | 1948-49. | 1949 -50. |
| Number of factorics | 869 | 998 | 1,002 | 1:175 | 1,270 | 1,313 |
| Number of persons employed | 16,398 | 18,051 | 20,437 | 20,893 | 21,934 | 22,384 |
| Value of land and buildings $£$ | 2,051,611 | 2,723,617 | 2,956,635 | 3,303,687 | 3,420,815 | 3,626,294 |
| Value of plant and machinery $\mathfrak{f}$ | 189,263 1 | 262,065 3 | $2,938,127$ 4 | 5, 509,603 | 3,401,092 | 713,220 6 |
| Salaries and wages pain $£$ | 1,652,808 | 3,037,698 | 3,768,483 | 4,367,523 | 5,496,616 | 6,243,588 |
| Value of power, fucl, etc., used $f$ | -63,067 | 5, 57,379 | 666,489 | 8,77,300 | 94,801 | 8111,617 |
| Value of materials used $\quad £$ | 2,609,363 | 5,280,433 | 6,238,057 | 8,300,052 | 10,103,876 | 8,996,084 |
| Total value of output $£$ | 5,234,727 | 10,507,792 | 12,330,358 | 15,665,395 | 18,986,443 | 18,920,277 |
| Value of production .. | 2,592,297 | 5,169,980 | 6,025,812 | 7,288,043 | 8,787,766 | 9,812,576 |

20. Shirts, Collars and Underclothing.-(i) Details for each State. Particulars of this industry are shown for 1949-50 in the following table :-

SHIRTS, COLLARS AND UNDERCLOTHING, 1949-50.

| Items. | N.S.W. | Victoria. | Q'land. | S. Aust. | W. Aust. | Tas. | Australia. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Number of factorles | 184 | I37 | 25 | 33 | 20 | 2 | 397 |
| Number of persons employed | 5,378 | 4,857, | 1,166 | $5 \times 7$ | (a) | (a) | 12,545 |
| Value of land and buildings $\mathrm{E}^{\text {e }}$ | 864,567 | 708,923 | 119,171 | 76,981 | (a) | (a) | 1,833,29r |
| Falue of plant and machinery $£$ | 336,669 | 261,865 | 42,167 | 27,055 | (a) | (a) | 692,593 |
| Galaries and wages paid £ | 1,545,328 | I,398,390 | 297,854 | 131,500 | (a) | (a) | 3,514,706 |
| Value of power, fuel, etc., used£ | 27,374 | 24,238 | 4,274 | 2,325 | (a) | (a) | 59,913 |
| Falue of materials used $\quad$ f | 4,316,154 | 3,676,256 | 514,901 | 172,775 | (a) | (a) | 8,915,340 |
| Total value of output | 6,891,721 | 6,285,680 | 967,909 | 356,772 | (a) | (a) | 14,952,587 |
| Valoe of production.. | 2,548,193 | 2,585,186 | 448,734 | 181,672 | (a) | (a) | 5,977,334 |

(a) Not available for separate publication; flgures are Included in total for Australia.
(ii) Total for Australia. The following table shows the progress of the industry since 1938-39:-

SHIRTS, COLLARS AND UNDERCLOTHING: AUSTRALIA.

| Items. | $1938-39$. | $1945-46$. | $1946-47$. | $1947-48$. | $1948-49$. | $1949-50$. |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
|  |  |  |  |  |  |  |

21. Boot and Shoe Making.-(i) Boot and Shoe Factories. The boot and shoe factories hold an important place both in regard to employment afforded and extent of output. The following table relates to 1949-50 and refers to boot and shoe factories as distinct from those devoted to repairing. It has been necessary to include details of Boot and Shoe Repairing in Tasmania, in order to conceal confidential information for that State. Factories engaged in the manufacture of rubber boots and shoes are excluded, being classified under Rubber Goods, vide par. 38.

BOOT AND SHOE FACTORIES, 1949-50.

| Items. | N.S.W. | Victoria. | Q'land. | S. Aust. | W.Aust. | Tas. (a) | Australia. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Number of factories | 196 | 235 | 30 | $20^{\prime}$ | 12 | 17 | 510 |
| Number of persons employed | 7,779 | 11,329 | 1,619 | 1,520 | 770 | 163 | 23,180 |
| Value of land and bulldiags $f$ | 874,686 | 1,068,787 | 123,668 | 163,410 | 72,199 | 25,251 | 2,328,001 |
| Value of plant and machinery $£$ | 561,481; | 962,138 | 127,936 | 122,997, | 90,067 | 12,367 | 1,876,986 |
| Salaries and wagea paid $£$ | 2,732,956 | 4,285,370 | 526,340 | 549,457 | 262,303 | 53,658 | 8,410,084 |
| Valus of power, fuel, etc., usedf | 39,906 | 64,406, | $\checkmark 5,188$ | 7,638. | 5,573 | 706 | 123,417 |
| Value of materials used | 3,769,228 | 6,743,248 | 725,093 | 694,280 | 355,011 | 65,476 | 12,352,336 |
| Total value of output | 7,882,385 ${ }^{1}$ | 12,887,888 | I,4II,604 | 1,356,905 | 691,808 | 137,241 | 24,367,831 |
| Value of production... £ | 4,073,25I, | $6,080,234$ | $681,323$ | $654,987$ | 331,224 | 71,059 | $17,892,078$ |

(a) Includer details of Boot and Shoe Repairing.
(ii) Quantity and Value of Production. The number and value of boots, shoes and slippers made in factories producing and repairing boots and shoes in each State are shown for $1949-5^{\circ}$ in the following table. Particulars relating to the output of rubber boots and shoes are not included :-

BOOT AND SHOE FACTORIES, OUTPUT, 1949-50.

| Particulars. |  | N.S.W. | Victoria. | Q'land. | S. Aust. | W.Aust. | Tas. | Australia. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Quantity. |  |  |  |  |  |  |  |  |
| Boots, shoes and sandals | pairs ! 6,023,575 |  | $\begin{array}{r} 8,010,572 \\ 4,294,827 \\ 154,098 \end{array}$ | $\begin{gathered} 1,160,776 \\ 842,188 \\ (a) . \end{gathered}$ | $\begin{array}{cc}1,298,504 \\ 154,207 \\ (a) & (a) \\ 492,206 \\ 1 a)\end{array}$ |  | (a) | $\begin{array}{r} 17,198,713 \\ 8,605,062 \\ 167,439 \end{array}$ |
| Slippers .. .- | paira | 2,821,634 |  |  |  |  |  |  |
| 0 ppers (b) | " | 11,097 |  |  |  |  | . . |  |

Valde.

| Boote, shoes and sandals | £ | 6,737,210 | 9,694,992' | 1,137,0131 | [1,287,635 ${ }^{\prime}$ | (a) | (a) | 199,462,355 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| glippers .. . | £ | 939,882 | 1,608,857, | 254,650 | 39,577 | 180,795 | (a) | 1 3,023,761 |
| Uppers (b) .. | $\pm$ | 7,486 | 21,959 | (a) | (a) | (a) | $\ldots$ | 31,942 |

(a) Not available for publication : fgures are included in total for Australia.
$\begin{array}{ll}\text { as such. } & \text { (c) Not available. }\end{array}$
(b) Mado for sale (c) Not available.
22. Flour-milling.-(i) Details for States. The following table shows the pasition of the grain-milling industry in each State for the year 1949-50.

FLOUR-MILLINO, 1949-50.

| Items. | N.S.W. | Victoria. | Q'land. | S. Aust. | W.Aust. | Tas. | Australia. |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
|  |  |  |  |  |  |  |  |

(ii) Production of Flour and By-products. The production of flour by the mills In each State for the years 1938-39 and 1945-46 to 1949-50 was as follows :-

FLOUR-MILLING: PRODUCTION OF FLOUR.
(Tons of $\mathbf{2 , 0 0 0} \mathrm{lb}$.)

| Year. | N.S.W. | Victoria. | 'land. | S. Aust. | W. Aust. | Tasmanis. | Austrulis. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1938-39 | 547,162 | 436,829 | 84,314 | 146,262 | 138,583 | 19,582 | 1,372,732 |
| 1945-46 | 451,895 | 315,525 | 96,984 | 164,986 | 166,791 | 22,657 | 1,218,838 |
| 1946-47 | 541,469 | 449,170 | 98,232 | 202,366 | 176,727 | 21,695 | 1,489,659 |
| 1947-48 (a) | 552,784 | 501,325 | 108,022 | 215,155 | 197,104 | 23.753 | 1,598,143 |
| 1948-49 (a) | 667,645 | 479,288 | 110,843 | 211,787 | 183,143 | 26,484 | 1,679,190 |
| 1949-50 (a) | 597,491 | 447,784 | 112,995 | 162,259 | 161,251 | 27,243 | 1,509,023 |

(a) Includes Wheatmeal for Baking.

The 1949-50 production of $1,509,023$ tons of flour in Australia was Falued at
 made. The quantity of wheat ground was $71,891,045$ bushels.
23. Bakeries.-Information regarding establishments in which the manufacture of bread, cakes, etc., was carried on in the year 1949-50 is given in the table below. It should be noted, however, that the details refer only to establishments coming within the definition of a factory as explained in § 1 , par. 6, page 1086. For that reason the table does not give complete details of the industry, as a large number of bakehouses not coming within the definition are excluded. This is true of all other industries covered by the statistics of manufacturing production, but, in view of the omission of such a large number of establishments in this instance, special mention is deemed necessary.

BAKERIES (INCLUDING CAKES AND PASTRY), 1949-50.

| Items. | N.S.W. | Victoria. | Q'land. | S. Aust. | W. Aust. | Tas.(a) | Australia. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Number of factories | 1,144 | 897 | 435 | 194 | 266 |  | 3,064 |
| Number of persons employed | 6,864 | 4,846 | 2,566 | 1,216 | 945 | 1,488 | 17,925 |
| Value of land and buildings $f$ | 3,936,949 | 2,607,930 | 783,796 | 551,654: | 418,997 | 517,386 | 8,816,712 |
| Value of plant and machinery ${ }_{\text {c }}$ | 1,402,044 | 1,015,6471 | 382,627 | 338,253i | 191,022 | 305,829 | 3,635,422 |
| Salaries and wages paid f | 2,323,372 | 1,616,564, | 740,039 | 435,187 | 272,558 | 503,135 | 5,890,855 |
| Value of power, fuel, etc., useds | 371,446 | 246,488! | 117,850 | 71,446\| | 47,069 | 62,973 | 917,272 |
| Value of materials used $£$ | 6,883,183 | 4,749,205 | 2,396,045 | 1,306,108 | 897,080 | 12,174,230 | 18,405,851 |
| Total value of output | 12,285,863 | 8,583,092 | 4,306,032 | 2,250,252 | 1,543,159 | 3,342,078 | 32,310,476 |
| Value of production .. £ | 5,031,234 | 3,587,399 | 1,792,137 | 872,698 | 599,010 | 1,104,875 | 12,987,353 |

(a) Includes confectionery.


#### Abstract

24. Sugar-mills.-(i) General. Sugar-cane is grown in New South Wales and Queensland and particulars of area, yield, etc., are given in extended detail in Chapter XX.-Agricaltaral Production.


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. Particulars of cane crushed and sugar produced embodied in the following two tables refer to the quantities treated during the years ended 30th June, irrespective of the season in which the cane was grown ; consequently the figures relating to cane crushed and sugar produced may differ slightly from those given in Chapter XX.-Agricultural Production, whioh relate to harvest years.
(ii) Dedails for New South Wales. The following table shows details of the operations of sugar mills in New South Wales for the years 1938-39, and 1945-46 to 1949-50 :-

SUGAR-MILLS : NEW SOUTH WALES.

| Items. | 1938-39. | $1945-46$. | $1946-47$. | $1947-48$. | $1948-49$. | $1949-50$. |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |

(a) Not available for publication.
(iii) Details for Queensland. Particulars relating to the operstions of sugar-mills in Queensland are shown in the following table for the years 1938-39 and 1945-46 to 1949-50. Particulars of the distribution of molasses as recorded by the mills are also shown.

SUGAR-MILLS : QUEENSLAND.

| Items. |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |

25. Sugar Refineries.-The establishment of the sugar-refining industry considerably antedates the establishment of the sugar-milling industry, the raw material operated on in the earlier years coming chiefly from Mauritius and the East. In 1949-50 there were two sugar refineries in the States of Victoria and Queensland, and one in each of the States of New South Wales, South Australia and Western Australia. The quantity of raw sugar treated amounted to 440,87 I tons, for a yield of 422,675 tons of refined sugar, valued at $£ 16,232,309$.
26. Confectionery Factories.-(i) Details for each State. The figures for 1949-50 are shown hereunder :-

CONFECTIONERY PACTORIES, 1949-50.

| Items, | N.S.W. | Victoria. | Qland. | S. Aust. | W.Aust. | Tas. | Australis. (b) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Number of factories | 104 | 103 | 25 | 24 | II | (a) | 267 |
| Number of persons employed | 3,335 | 3,468 | 422 | 430 | 409 | (a) | 8,064 |
| Falue of land and buildings \& | 1,005,494 | 701,735 | 114,680 | 164,517 | 84,912 | (a) | 2,071,338 |
| Falue of plant and machinery ${ }^{\text {a }}$ | 876,4 10 | 996,192 | 65,628 | 70,970 | 77,595 | (a) | 2,086,795 |
| Salaries and wages paid $£$ | 1,279,842 | I,344,346 | 109,404 | 127,278 | 113,084 | (a) | 2,973,954 |
| Value of power, fuel, etc., usedf | I16,104 | 116,574 | 7,285 | 12,501 | 10,531 | (a) | 262,995 |
| Value of materials used $£$ | 4,611,796 | 3,974,267 | 314,100 | 285,728 | 385,216 | (a) | 9,571,107 |
| Total value of output | 7,794,968 | 6,972,528 | 562,985. | 501,846 | 642,337 | (a) | 16,474,664 |
| Value of production .. £ | 3,067,068 | 2,885,687 | 241,600 | 203,617 | 246,590 | (a) | 6,640,562 |

(a) Not avallable for publication.
(b) Excludes Tasmania.
(ii) Total for Australia, excluding Tasmansa. Particulars of the confectionery industry during the last five years are compared with 1938-39 in the following table. Confectionery establishments in Tasmania have been combined with bakeries in order to conceal confidential information. Production in Australia is more than sufficient to supply looal requirements.

## CONFECTIONERY FACTORIES( $a$ ) : AUSTRALIA.

| Items. | 1938-39. | 1945-46. | 1946-47. | $1947-48$. | 1948-49. | 1949-50. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Number of tactories | 148 | 198 | 237 | 242 | 263 | 267 |
| Number of persons employed | 7,256 | 5,965 | 6,574 | 7,061 | 7,505 | 8,064 |
| Value of land and buildings $£$ | 1,423,406 | 1,556,321 | 1,640,081 | 1,709,572 | 1,906,456 | 2,071,338 |
| Value of piant and machinery $£$ | 1,363,619 | 1,14 2,484 | 1,295,007 | 1,393,106 | 1,628,929 | 2,086,795 |
| Salaries and wages paid | r,040,984 | 1,389,479 | 1,660,411 | 1,978,030 | 2,396,197 | 2,973,954 |
| Valuc of power, fuel, etc., used $£$ | 106.869 | 138,512 | 160,280 | 179,635 | 215,012 | 262,995 |
| Value of materials used $\quad$ \& | 3,101,955 | 4,668,928 | 5,436,6,40 | 6,624,193 | 8,556,054 | 9,571,107 |
| Total value of output | 5,627,247 | 8,121,623 | 9,281,800 | 11,128,404 | 14,456,903 | 16,474,664 |
| Value of production . . £ | 2,418,423 | 3,314,183 | 3,684,880 | 4,324:576 | 5,685,837 | 6,640,562 |

(a) Excludes Tasmania.
27. Jam, Fruit and Vegetable Canning, Pickles, Sauces, Vinegar Factories.(i) Details for each State. The following table shows particuiars of factories included in chis class for 1949-50 :-

JAM, FRUIT AND VEGETABLE CANNING, PICKLES, ETC., FACTORIES, 1949-50.

| Itemg. | N.S.W. | Victoria. | Q'land. | S. Aust. | W.Aust. | Tas. | Australia. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Number of factories | 70 | 59, | 19 | 16, |  | 21 | 197 |
| Number of persong employed . | 3,321 | 4,914: | 1,307 | 1,141 | 183 | I,334 | 12,200 |
| Falue of land and buildings ${ }^{\text {¢ }}$ | 1,045,182 | 1,416,4871 | 303,204 | 310,381 | 68,644 | 346,247 | 3,490,145 |
| Value of plant and machinery ${ }_{5}$ | 1,894,320 | 1,427,070 | 301,517 | 214,901 | 54,253 | 226,098 | 3,118,159 |
| Salaries and wages paid $\mathcal{E}$ | 1,372,409 | 2,059,358 | 477,703 | 415,786 | 61,58 | 514,097 | 4,900,934 |
| Value of power, fuel, etc., useds | 123,933 | 188,134 | 28,919 | 32,224 | 4,481 | 37,371 | 415,062 |
| Value of materials used $\quad £$ | 4,741,991 | 7,749,452 | 2,207,85I | 1,101,210 | 150,738 | 1,529,771 | 17,481,013 |
| Total value of output | 7,137,136 | 11,644,558 | 3,179,001 | 1,732,953 | 262,550 | 2.314,137 | 26,270,335 |
| Value of production . . £ | 2,271,212 | 3,706,972 | 942,23I | 599,519 | 107,331 | 746,995 | 8,374,260 |

(ii) Total for Australia. Particulars of these establishments in Australia for the five years 1945-46 to 1949-50 compared with 1938-39 are shown hereunder :-

Jam, FRUIT and VEgETABLE CANNING, PICKLES, ETC., FACTORIES: AUSTRALIA.


During the 1939-45 War, production of jams expanded greatly and a high level of output of 171 million lb. was attained in 1940-44. Production afterwards receded, but attained a new record of 198.5 million lb . in $1947-48$. It dropped to 134.6 million lb . in 1949-50. The peak output of fruit preserved occurred in 1949-50 with 208.4 million lb ., compared with the previous highest level of 189. I million lb . attained in 1947-48.

There has also been a marked development in the production of canned vegetables. In 1938-39 output totalled $10,255,000 \mathrm{lb}$. but, as a result of the war-time demand by the armed services, production reached the record level of $119,149,000 \mathrm{lb}$. in 1944-45. However, it has since declined to $70,583,000 \mathrm{lb}$. in 1949-50.
(iii) Production. The following table shows the total quantity and value of jams, pickles, sauces and other items manufactured in each State in 1949-50:-

JAMS, PRESERVED FRUIT AND VEGETABLES, PICKLES AND SAUCES : OUTPUT,

| Particulars. | N.S. W. | Victoria. | Q'land. | S. Aust. | W. Aust. | Tas. | Australla. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |

Quantity.

| Jams ... ${ }^{\text {a }}$ '0oo lb. | 34,549 | (a)71,008 | 16,121 | 11,461 | 1,438 | (b) | 134,577 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Fruit Pulp- |  |  |  |  |  |  |  |
| $\begin{array}{ccc}\text { Consumed } & \text { in } & \text { own } \\ \text { works } & \text { cwt. }\end{array}$ | 35,763 | 25.990 | (c) | 10,100 | (c) | 16,080 | 92,343 |
| For sale or addition to stock .. cwt. | 23,718 | 127,416 | II,I5I | 1,607 | 1,14\% | 117,362 | 282,401 |
| Tomato Pulp- . |  |  |  |  |  |  |  |
| $\begin{array}{ccc}\begin{array}{c}\text { Consumed } \\ \text { works }\end{array} & \text { in } & \text { own } \\ \text { cwt. }\end{array}$ | 33,284 | 138,393 | (c) | 26,424 | 10,349 | (c) | 210,915 |
| For sale or addition to stock .. cwt. | 37,284 27,59 | 337,690 | ( | (c) | 12,019 | (c) | 391,650 |
| Fruit, preserved in liquid |  |  |  |  |  |  |  |
| '000 lb. | 31,748 | 97,486 | 37,366 | 17,784 | 343 | 23,657 | 208,384 |
| Vegetables, preserved in |  |  |  |  |  |  |  |
| iuquid. . $\quad . \cdot$,ooo lb. | 32,265 | 27,845 | 3,045 | 3,100 | 335 | 4,153 |  |
| Pickles . . . .'ooo pints | 3,828 | 2,765 | (c) | 2,297 | (c) 38 | (c) | $9,428$ |
| Sauces - " " | 12,221 | 14,289 | 1,625 | 2,974 | (c) | (c) | 32,300 |

Value (£).

| Jams |  | 1,363,64I | a2,655,936 | 703,733 | 434,388 | 76,396 | (b) | 5,234,094 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Fruit, preserved in liquid |  | 1,274,010 | 3,314,385 | 1,886,76x | 645,712 | 10,316 | 878,156 | 8,009,340 |
| Vegetables, preserved | in |  |  |  |  |  |  |  |
| liquid. | . | 1,721,030 | 1,406,763 | 118,755 | rox,785. | 31,734 | 252,122 | 3,632,189 |
| Pickles. |  | 303,375 | 176,491 | (c) | 181,358 | 18,508 | (c) | 695,237 |
| 8auces | . | I,071,624 | 927,152 | 78,72I | 174,884 | (c) | (c) | 2,316,024 |

(a) Includes Tasmania.
(b) Included with Victoria.
(c) Not available for publication; figures are included in total for Australia.
28. Bacon-curing Factories.-(i) Details for each State. The table hereunder shows particulars of factories engaged in bacon-curing in each State for 1949-50 :-

BACON-CURING FACTORIES, 1949-50.

| Items. | N.S.W. | Victoria. | Q'land. | S. Aust. | W.Aust. | Tas. | Australia. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Number of factories | 35 | 17 | 8 | I2 | 4 | 10 | 86 |
| Number of persons employed | 743 | 665 | 837 | 315 | 2731 | 74 | 2,907 |
| Value of land and buildings ${ }^{\text {a }}$ | 366,035 | 222,683 | 268,295 | 139,967 | 51,563 | 30,086 | 1,078,629 |
| Value of plant and machinery $£$ | 153,967 | 110,722 | I50,225, | 78,002 | 35,309 | 8,820 | 537,045 |
| Salaries and wages paid £ | 339,187 | 306,253 | 391,223 | 141,528 | 109,896 | 30,317 | 1,318,404 |
| Falue of power, fuel, etc., usedf. | 41,00r | 36,986 | 38,802 | 32,428 | 16,851 | 3,913 | 169,981 |
| Value of materials used $\quad \mathcal{L}$ | 2,983,694 | 2,854,592 | 3,755,686 | 1,272,130 | 1,279,896 | 371,743 | 12,517,741 |
| Total value of output | 3,825,675 | 3,315,312 | 4,342,632 | 1,491,263 | 1,562,557 | 433,031 | $14,970,470$ |
| Value of production . . $£$ | SoO,980 | 423,734 | 548,144 | 186,705 | 265,810 | 57,375 | 2,282,748 |

(ii) Quantity and Value of Production. The number of pigs cured and the quantity and value of production of factories in each State for 1949-50 are shown in the following table :-

BACON-CURING FACTORIES : PIGS CURED AND PRODUCTION, 1949-50.

(a) Not available for publication: figures are included in total for Australia.
(b) Includes particulars of articles produced in other works:

Bacon and ham and other pig products are dealt with more fully in Chapter XXI. -Farmyard, Dairy and Bee Products:
29. Butter, Cheese and Condensed Milk Factories.-(i) Details for each State. The following table shows particulars of butter, cheese and condensed milk factories in each State for 1949-50:-

BUTTER, CHEESE AND CONDENSED MILK FACTORIES, 1949-50.

| Items. | N.S.W. | Victoria. | Q'land. | S. Aust. | W.Aust. | Tas. | Australia. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Number of factories | 99 | 14 | 95 | 45 | 18 | 27 | 428 |
| Number of persons employed | 2,228 | 4,920 | 1,657 | 936 | 367 | 36 x | 10,469 |
| Value of land and buildings $f$ | 1,138,656 | 1,888,358 | 859,067 | 343,434 | 139,550 | 192,333 | 4,561,898 |
| Value of plant and machinery f | 1,490,158 | 2,311,347 | 991,255 | 327,878 | 207,146 | 219,442 | 5,547,226 |
| Salaries and wages paid | 1,048,471 | 2,463,922 | 711,429 | 412,971 | 156,256 | 148,276 | 4,941,325 |
| Value of power, fuel, etc., usedf | 331,874 | 684,966 | 149,399 | -90,573 | 43,210 | 40,330 | 1,340,352 |
| Value of materials used $\quad \mathcal{£}$ | 11,720,782 | 26,187,960 | 15,314,296 | 3,781,480 | 2,015,185 | I,742,082 | 60,761,785 |
| Total value of output | $13,644,594$ | 30,954,124 | 16,681,163 | ,4,517,995 | 2,376,685 | 2,026,843 | 70,201,404 |
| Value of production .. $£$ | 1,591,938 | 4,081,198 | 1,217,468 | [ 645,942 | 318,290 | 244,43I | 8,099,267 |

(ii) Total for Australia. The progress of industries included in this group during the five years 1945-46 to 1949-50 is compared with 1938-39 in the following table :-
BUTTER, CHEESE AND CONDENSED MILK FACTORIES : AUSTRALIA.

| Items. | 1938-39. | 1945-46. | 1946-47. | 1947-48. | 1948-49. | 1949-50. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Nuntion of factories | 523 | 462 | 460 | 449 | 434 | 428 |
| Number of persons employed | 6,851 | 8,896 | 9,223 | 9,642 | 10,016 | 10,469 |
| Value of land and buildings $f$ | 2,880,323 | 3,506,020 | 3.689,495 | 4,072,933 | 4,235,559 | 4,561,898 |
| Value of plant and machinery $\mathrm{f}^{\text {d }}$ | 3,066,840 | 3,597,366 | 3,690,273 | 4,156,415 | 4,678,802 | 5,547,226 |
| Salarics and wages paid ${ }_{\text {d }}$ | 1,569,531 | 2,737,217 | 3,014,595 | 3.578,020 | 4.237,381 | 4,941,325 |
| Value of power. fuel, etc., used $£$ | 389,501 | 755,755 | 781,736 | 873,999 | 1,070,074 | 1,340,352 |
| Value of materials used $\quad$ f | 29,161,983 | 34,990.910 | 35:619.549 | 44,419,318 | 52,837,132 | 60, $76 \mathrm{r}, 785$ |
| Total value of output $f$ | 133,094,851 | 140,771,127 | 42,134,803 | [52,402,951 | 61,242,465 | 70,201,404 |
| Value of production . . £ | 3,543,367 | 5,024,462 | 5,733,518 | 7,109,634 | 7,335,259 | 8,099,267 |

(iii) Quantity and Value of Production. The next table shows the quantities and values of butter, cheese and condensed milk produced and the quantities of milk used in their production during 1949-50. These details are restricted to factory production and thereiore eaclude form output.
BUTTER, CHEESE AND CONDENSED MILK FACTORIES : PRODUCTION, 1949-50.


| Produdors (Tons). |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Butter | 36,817 | 62,988 | 48,196 | 8,236 | 6,769 | 5,059 | 168,075 |
| Cheese .. $\quad$. | 2,827 | 2T,193 | (c) 9,050 | 10,587 | 702 | 418 | 44,777 |
| Condensed and concentrated milk | 10,927 | 37,942 | (a) | (a) | (a) | (a) | 63,509 |
| Powdered milk- |  |  |  |  |  |  |  |
| Full cream | 6,302 | 3,866 | (a) | (a) | (a) |  | 11,390 |
| Skim | 1,604 | 7,398 |  | (a) |  | (a) | 9,279 |


| Value (f'ooo). |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Butter | 9,305 | 16,079 | 12,062 | 2,087 | 1,744 | 1,300 | 42,577 |
| Cheese . . . | 457 | 3,278 | (c) 1,267 | 1,497 | 111 | 57 | 6,667 |
| Condensed and concentrated milk .. | 738 | 3,832 | (a) | (a) | (a) | (a) | 5,984 |
| Powdered milk- |  |  |  |  |  |  |  |
| Full cream | 1,270 | 585 | (a) | (a) | (a) |  | 2,045 |
| Skim . . . . . . | 121 | 593. | (a) | (a) | . | (a) | 731 |

(a) Not available for publication; figures are included in total for Australia. (b) Includes Whole Milk equivalent of cream and butter fat purchased as such. ( $r$ ) Includes 172 tons of cheese valued at $£_{23,126}$, made in establishments not classified as factories.

The butter, cheese and condensed milk industries are dealt with more fully in Chapter XXI.-Farmyard, Dairy and Bee Products.
30. Meat and Fish Preserving Works.-The industries included in this group are engaged chiefly in the freezing and preserving of meat. Works have been established at the seaports for the purpose of handling beef, lamb and mutton for export, and insulated space for the carriage of chilled and frozen produce is provided by shipping companies trading between Australia and other parts of the world. The substitution of chilled for frozen meat exported has already been referred to in Chapter XIX.Pastoral Production. In recent years there has been considerable expansion in the canning of meat and fish.

MEAT AND FISH PRESERVING WORKS, 1949-50.

|  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Items. |  |  |  |  |

Particulars of the quantities and values of beef, mutton and lamb preserved by cold process exported from Australia over a series of years will be found in Chapter XIX. -Pastoral Production.
31. Breweries.-(i) Details for each State. The following table gives particulars of breweries in each State for the year 1949-50. It should be noted, however, that the data shown below are not strictly comparable throughout, owing to the inability or failure of some breweries to furnish a separate return for each branch of activity. Consequently the figures for some States include details of employment, wages, output, etc., not connected with the brewing of beer, although associated with it. These extraneous activities include cooperage, malt works, aerated waters, etc.

BREWERIES, 1949-50.

| Items. | N.S.W. | Victoria. | Q'land. | S. Aust. | W.Aust. ${ }^{\text {P }}$ | Tas. | Australia. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |
| Number of persons employed | 1,493 | I, 885 | 582 |  | (a) | (a) | 5,258 |
| Value of land and buildings $£$ | 1,299,341 | 756,370 | 650,724 | 262,484 | (a) | (a) | 3,507,166 |
| Galaries and wages paid | 762,746, | $1,203,068$ $1,088,757$ | 587,181 284,353 | 335,819 | (a) | (a) | 3,896,261 |
| Value of power, fuel, etc., used\& | ${ }_{278,442}$ | 1,69,682 | 69,435 | 39,297 | (a) | (a) | 704,339 |
| Value of materials used ${ }^{\text {e }}$ | 2,226,361 | 2,625,705 | 611,755 | 809,820 | (a) | (a) | 7,583,454 |
| Total value of output (b) $\quad \mathfrak{f}$ | 5,300,803 | 4,826,651 | 1,549,856 | 1,530,456 | (a) | (a) | 15,850,582 |
| Value of production.. | 2,796,300 | 2,031,264 | 868,666 | 641,339, | (a) | (a) | 7,562,789 |

## (a) Not available for publication; flgures are included in total for Australia. <br> (b) Excludes

 Excise Duty.(ii) Total for Australia. The next table shows the extent of this industry for 1938-39 and the five years 1945-46 to 1949-50:-

BREWERIES : AUSTRALIA.

| 1 tems. | 1938-39. | 1945-46 | $1946-47$. | 1947-48. | $194^{8-49}$ | 1949-50. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Number of factories | 34 | 33 | 33 | 32 | 32 | 30 |
| Nimber of persons employed | 3,698 | 4,121 | 4,516 | 4,677 | 5,007 | 5,258 |
| Value of land and buildings $£$ | 2,801,147 | 3,185,582 | 3,215:403 | 3,241,603 | 3,328,699 | 3,507,166 |
| Value of plant and machinory $f$ | 2,737,042 | 2,484,442 | 2,617,866 | 2,795,685 | 3,203,682 | 3,622,860 |
| Salaries and wages paid $£$ | 1,215,473 | 1,585,306 | 1,805,196 | 2,029,578 | 2,489,100 | 2,896,2011 |
| Value of power, fuel, ete., used £ | 251,286 | 351, 184 | 425,596 | 452,699 | 570,632 | 704,339 |
| Value of materials used $£$ | 3,406,572 | 4,255,684 | 4,998,158 | 5,108,560 | 6,212,981 | 7,583,454 |
| Total value of output $£$ | 9,030,309 | 10,476,340 | 12,267,499 | 11,954,243 | 13,526,477 | 15,850,582 |
| Value of production $£$ | 5,372,451 | 5,869,472 | 6,843.745 | 6,392,984 | 6,742,864 | 7,562,789 |

The quantity of ale, stout and beer brewed fell from 73.7 million gallons in 1928-29 to 49.8 million gallons in 1931-32, but thereafter increased each year to 109.2 million gallons in 1941-42. Under the Control of Liquor Order which operated between March, 1942 and March, 1946, the production of beer was restricted and consequently output remained static at about roo million gallons from 1942-43 to 1944-45. Production rose to 154 million gallons in 1949-50 and to 173 million gallons in 1950-51.

The average annual consumption of ale, stout and beer prior to the economio depression of the early thirties exceeded in gallons per head of the population ; it dropped to 7.32 gallons in 1931-32, increased to 13.76 . gallons in 1941-42 and declined again to about 13 gallons during the period of control. The consumption per head increased to 18.23 gallons in 194950 and to 19.73 gallons in 1950-51.
(iii) Materials Used and Production. The table below shows the quantities of raw materials used and the quantity and value of alc, stout and beer brewed in each State during 1949-50:-

BREWERIES : MATERIALS USED AND PRODUCTION, 1949-50.

32. Distilleries.-Distilleries are located in all the States except Tasmania. The following table, which has been compiled from returns of the Excise Branch of the Department of Trade and Customs, shows the materials used in distilleries in Australia and the quantity of spirits distilled therefrom for the years 1945-46 to 1949-50 compared with the year 1938-39.

DISTILLERIES : AUSTRALIA.

| Particulars. | Unit of Quantity. | 1938-39. | 1945-46. | 1946-47. | 1947-48. | 1948-49. | 1949-50. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |

Principal Materials Used.

| Barjey Malt | $\bullet$ | bus. | 89,528 | 296,002 | 349,070 | 340,000 | 337,211 | 261,443 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Barley | - | " | 80,548 | 208,847 | 263,460 | 172,644 | 187,483 | 182,450 |
| Wheat |  | " |  | 108,590 | 90,503 | 16,497 | 85,678 | 67,744 |
| Malted Wheat |  | ," |  | 46,912 | 27,190 | 27,900 | 31,338 | 28,074 |
| Maize |  | , | 7,643 | 58,688 | 15,532 | 52.640 | 57,710 | 6,344 |
| Molasses |  | cwt. | 1,405,271 | 1,158,439 | 1,808,5I7 | 1,849,988 |  |  |
| Sugar |  | , |  | 522.982 | 86,433 | 44,655 ${ }^{\text {4 }}$ | 2,549,721 | $\}^{2,335,378}$ |
| Sugar Syrup | . |  |  | 240,216 | 100,294 | 91,204 | 45,852 |  |
| Wine |  | gal. | I 1,364,208 | $15,749,146$ | 19:80.4.405 | 18,916,227 | 21,814,262 | 20,678,189 |
| Raisins | . | cwt. | 19,521 | 14,477 | $47,3^{86}$ | 30,690 | 27,423 | 46,876 |

Spirits Distilled (Proof Gallons).

(a) Not available separately.
33. Tobacco, etc. Factories.-(i) Details for each State. During 1949-50 there were 37 establishments in which the manvfacture of tohacco, cigars or cigarettes was carried on. There are no such factories in Tasmania.

TOBACCO, CIGAR AND CIGARETTE FACTORIES, 1949-50.

| Items. | N.S.W. | Victoria. | Q'land. | S. Aust. | W. Aust. | Australia. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Number of factories | 14 | 15 | 6 | I | I | 37 |
| Number of persons amployed | 2,771 | 2,041 | (a) | (a) | (a) | 5,167 |
| Value of land and buildings $£$ | 709,045 | 512,064 | (a) | (a) | (a) | 1,275,897 |
| Value of plant and machinery $£$ | 502,538 | 500,369 | (a) | (a) | (a) | 1,060,076 |
| Salaries and wages paid £ | 1,068,637 | 810,182 | (a) | (a) | (a) | 1,992,095 |
| Value of tower, fuel, etc., usedf | 62,731 | 23,178 | (a) | (a) | (a) | 188,461 |
| Value of materials used | 9,665,350 | 5,029,209 | (a) | (a) | (a) | 15,016,360 |
| Total value of output $£$ | II,536,427 | 6,927,956 | (a) | (a) | (a) | 18,974,086 |
| Value of production . . £ | 1,808,346 | 1,875,569 | (a) | (a) | (a) | 3,869,265 |

(a) Not available for publication; fgures are included in total for Australia.
(ii) Total for Australia. This industry was among the first to be established in Australia. In 1861 New South Wales had eleven factories and Victoria one. The Australian market has for many years been largely supplied with local manufartures from the imported leaf. Impnrts during 1949-50 comprised-manufactured tobacco 773,772 lb., cigars $34,599 \mathrm{lb}$., and cigarettes $8,273,974 \mathrm{lb}$., and the quantities manufactured in

Australian factories were respectively $20.168,000 \mathrm{lb} ., 169,000 \mathrm{lb}$., and $10,341,000 \mathrm{lb}$. The following tables show the extent of the industry in Australia for the five years 1945-46 to 1949-50 compared with 1938-39:-

TOBACCO, CIGAR AND CIGARETTE FACTORIES: AUSTRALIA.

| Items. | 1938-39. | 1945-46. | 1946-47. | 194.7-48. | 1948-49. | 1949-50. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Numbur of factories | 30 | 26 | 31 | 33 | 37 | 7 |
| Number of persons employed | 5,544 | 5,255 | 5,641 | 5,470 | 5,219 | 5,167 |
| Vabne of land and buildngs | 1,041,798 | 959,192 | 1,159,772 | 1, $1+3,363$ | 1,174,503 | 1,275,897 |
| Value of plant and machinery $\mathrm{f}^{\text {a }}$ | 942,644 | 723,962 | 840,171 | 932,616 | 1,008,889 | 1,060,076 |
| Salirifes and wages paid $£$ | 1,095,912 | 1,300,481 | 1:536,796 | 1,676.954 | 1,827,819 | 1,992,095 |
| Vnlue of power, funl, etc., used $f$ | 34,483 | 52,174 | 61,127 | 62.339 | 73,941 | 88,461 |
| Value of materials used $f$ | 7,080,574 | 10,602,03 | 1 13,657,489 | $14,+92,198$ | 13,750,779 | I5,016,360 |
| Total value of output | 9,800,413 | 13,042,558 | $116.364,16$ S | 17,915,412 | 17,613,106 | 18,974,086 |
| Value of production . . £ | 2,685,356 | : $2,388,3+9$ | 2,6.45,5.49 | 3,360,875 | 3,788,386 | 3,869,265 |


| Leaf Used and Production ('ooo Ib). |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Jeaf used- |  |  |  |  |  |  |
| Australian (stemmed) | 4,489 | 4,685 | 3,6\%1 | 2,924 | 3,084 | 3,313 |
| Tmported (stemmed) | 16,011 | 18,822 | 23.441 | 23.675 | 22,775 | 24,043 |
| Tobaceo made | 16,305 | 17,901 | 20,190 | 19.715 | 19,256 | 20,168 |
| Cigars made | 238 | 125 | 139 | 163 | 169 | 169 |
| Cigurettes made | 6,731 | 8,482 | 10,082 | 10, 147 | 9,701 | 10,34 1 |

For many years the production of locally-grown leaf was comparatively small, and manufacturers were dependent on imported leaf for the supply of their raw materiai. Increased import duties stimulated local production, and the quantity of Australian leaf used by manufacturers rose from 1.2 million lb. in 1929-30 to over 3 million lb . in 1930-3I. During the 1939-45 War about 4.7 million lb. of Australian-grown leaf was used annually, but in subsequent years the figure fell to the 1949-50 level of 3.3 million lb. In this connexion, see Chapter XX.-Agricultural Production.
34. Sawmills, etc.-(i) Details for States. The most important industry in Class X. is that of sawmilling. Because of difficulties asscciated with the classifying of sawmills into forest and town, they have been combined in the following tables, together with plywood and bark mills.

SAWMILLS, PLYWOOD AND BARK MILLS, 1949-50.

| SAW | PLYW00D |  | AR | M1LLS | 1949-50. |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Items. | N.S.W. | Victoria. | Q'land. | S. Aust. | W. Aust. | Tas. | Australia. |
| Number of factories | 949 | 576 | 607 | 84 | 198 | 367 | 2,781 |
| Number of persons employed | 9,968 | 6,250 | 7,882 | 1,922 | 3,121 | 2,350 | 31,493 |
| Value of land and buildings $\mathcal{E}$ | 1,752,504 | 1,038,835 | 710,587 | 439,329 | 336,782 | 198,919 | 4,476,952 |
| Value of plant and machinery $£$ | 2,291,315 | 1,692,093 | 1,418,743 | 287,845 | 776,664 | 610,668 | 7,077,328 |
| Salarles and wages paid $f$ | 3,760,785 | 2,544,600 | 2,945,346 | 805,487 | 1,127,411 | 847,215 | 12,030,844 |
| Value of power, fuel, etc., usedt | 252,901 | 196,647 | 156,934 | 36,10x | 94,096 | 67,629 | 809,308 |
| Value of materials used | 10,092,366 | 6,106,707 | 4,591,696 | 2,815,358 | 1,804,228 | 1,609,221 | 27,019,576 |
| Total value of output | 17,079,311 | 10,990,699 | 9,309,052 | 4,354,528 | 3,756,694 | 3,060,691 | 48,550,975 |
| Value of production.. E | 6,734,044 | 4,687,345 | 4,560,422 | 1,503,069 | 1,858,370 | 1,383,841 | 20,727,091 |

(ii) Total for Australia. Comparative statistics for 1938-39 and 1945-46 to 1949-50 are shown in the following table :-

SAWMILLS, PLYWOOD AND BARK MILLS : AUSTRALIA.

| Items. | 1938-39. | 1945-46. | $1946-47$. | 1947-48. | 1948-49. | 1949-50. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Numbrr of factories | 1,660 | 1,765 | 1,996 | 2,24I | 2,541 | 2,781 |
| Number of persons employed | 19,104 | 22,591 | 29,723 | 27,811 | 30,067 | 31,493 |
| Value of land and builoings $\ddagger$ | 2,054,611 | 2.523,249 | 2,840,497 | 3,291,577 | 3,824,676 | 4,476,952 |
| Value of plant and machinery $\mathcal{E}$ | 2,785,716 | 3,460,945 | 4,079.916 | 4,677,370 | 5,715,512 | 7,077,323 |
| Salaries and wages paid f | 3,634,627 | 5,841,968 | 7.119.598 | 8,537.051 | 10,401,646 | 12,030,8.44 |
| Value of power, fuel, etc., used $£$ | 225,782 | 375,437 | 449.405 | 534.171 | \|r56,563 | 804,308 |
| Value oi materials used $\quad$ \& | 8,522,895 | ,12,174,016 | 16,001,148 | 19,971,233 | 23,428,182 | 27,019,576 |
| Total value of output $£$ | 14,537,888 | 21,707,972 | 27,889.108 | 34.958,061 | 141,590,009 | 43,550,975 |
| Value of production . . s | 5.789,21I | 9,158,519 | 11,438,55, | 14,452,657 | 17,505,264 | 20,1/27,091 |

The sawmill output of native timber, which declined from 740 million super. feet in 1925-26 to the abnormally low figure of 237 million super. feet during the depth of the depression, recovered to 717 million super. feet in $1938-39$ and rose to 1,223 million super. feet in 1949-50. Further reference is made to the sawmilling industry in Chapter XXII.-Forestry.
35. Cabinet and Furniture Making and Upholstery Factories.-These industries constitute the principal manufactures in Class XI. The following table shows particulars for each State in 1949-50:-

CABINET AND FURNITURE MAKING AND UPHOLSTERY FACTORIES, 1949-50.

| Items. |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |

36. Printing Works.-Printing and bookbinding works rank high in importance among the industries of Australia, and in 1949-50 afforded employment for 34,213 employees, and paid $£ 15,169,000$ in salaries and wages, while the value of output smounted to $£_{49}, 664,000$. The first table below gives particulars of establishments engaged in general printing in each State for 1949-50. These establishments include those engaged in lithographic printing, bookbinding, paper ruling and linotyping and Government printing works. Establishments producing newspapers and periodicals are shown separately in the second table to follow :-

GOVERNMENT AND GENERAL PRINTING WORKS, 1949-50.


NEWSPAPERS AND PERIODICALS, 1949-50.

| Items. | N.S.W. | Victoria. | Qland. | S. Aust. | W.Aust. ${ }_{\text {, }}$ | Tas. | Australia. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Number of factories | 1771 | $117{ }^{\circ}$ | 57 | 34: | 32i | 7 |  |
| Number of persons employed | 5,993 | 3,125' | 1,729 | 909 | 653 | 314 | 12,723 |
| Value of land and buildings | 2,122,842 | 901,989 | 590,678 | 433,344 ${ }^{1}$ | 274,196 ${ }^{1}$ | 54,615 | 4,377,664 |
| Value of plant and machinery $£$ | I,989,327. | 1,599,025 | 656,110 | 163,875 | 200,143 | 84,036 | 4,692,516 |
| Salaries and wages paid £ | 2,977,460 | 1,603,167, | 768,466 ${ }^{\prime}$ | 445,670 | 309,300' | 155,253 | 6,259,316 |
| Value of power, fnel, etc., useds | 108,119 | 48,674 | 32,276! | 15,921 | 15,759 | 4,652 | 225,401 |
| Value of materials used $\quad\{$ | 5,992,36I' | 3,434,471 | 1,112,7491 | 754,954 | 509,240. | 140,212 | 11,943,987 |
| Total value of output f | 12,208,921: | 5,926,473i | 2,529,340 | 1,591,3621 | 1,168,801 | 346,589 | 23,771,486 |
| Value of production . . £ | 6,108,441 | 2,443,328 | 1,384,315 | 820,497 | 643,802' | 201,725 | 11,602,098 |

37. Paper Making.-Although the paper manufacturing industry has been established in Anstralia for many years it was not until the manufacture of paper pulp from indigenoustimber commenced in 1938-39 that any marked development occurred.

Plants producing pulp from eucalypt timber are operating in Victoria and Tasmania whilst in South Australia pulp is being produced from locally-grown softwoods. The production of pulp rose from 6,000 tons in 193 $8-39$ to 88,000 tons in 1946-47, dropped slighty in the two succeeding years and recovered to 88,000 tons in 1949-50.

The number of factories operating in 1949-50 comprised two in New South Wales, seven in Fictoria, one in Queensland, South Australia and Western Australia and two in Tasmania. In the latter State, newsprint, writing and printing papers are produced, and in the other States wrappings, other papers and boards. Particulars for this industry are shown in the following table for the years 193S-39 and 1945-46 to 1949-50.

## PAPER MAKING, including Pulp mills : aUstralia.

| Items. | 1938-39. | 2945-46. | 1996-47. | 1947-48. | 2948-49. | 1949-50. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Number af factories | 7 | 12 | 12 | 12 | 14 | 14 |
| Number of persons employed | 1,961 | 4.705 | 5,078 | 5,260 | 5,991 | 6,160 |
| Value of land and buildings $f$ | 849,578 | 1,525,187 | 1,659,960 | 1, 332,994 | 2,526,299 | 3,331,186 |
| Vatue of phant and machinery $\pm$ | 1,712,662 | 2,509,426 | 2,923,9,37 | 3.584.740 | 4,640,972 | 5,753,609 |
| Salaries and wares paid | 466,548 | 1,577,146 | 1,933,649 | 2,350,435 | 2,881,436 | 3,183,48I |
|  | 200,998 | 598.979 | 782,039 | 849,308 | 940,849 | 998,035 |
| Value of matcrials tused $\ddagger$ | 1,095,318 | 3,802,205 | 4,056,766 | 4.978 .685 | 5.767.853 | 6.154,049 |
| Tortai value of output | 2,301,531 | 7,417,772 | 3,655,231 | 10,258.026 | $12,358,136$ | 13,733,129 |
| Value of production . E | 1,005,215 | 3,016,588 | 3,817.127 | 4, 4 30,033 | 5,649,434 | 6,581,045 |

38. Rubber Goods.-The following table shows particulars of this industry for each State during 1949-50 and excludes establishments engaged primarily in the retreading and repairing of tyres.

RUBBER G00DS, 1949-50.

| Items. | N.S.W. | Victoria. | Q'land. | S. Aust. | W.Aust. | Тав. | Australia, |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Number of factories | 27 |  | 5 | 8 | 2 |  | 78 |
| Number of persons employed | 5,221 | 4,327 | (a) | 398 | (a) |  | 10,514 |
| Value of land and buildings $£$ | 771,128 | 1,173,510 | (a) | 37,063 | (a) |  | 2,036,163 |
| Value of plant and machinery $£$ | 853,631 | 1,233,706 | (a) | 84,340 | (a) |  | 2,220,337 |
| Salaries and wages paid £ | 2,789,677 | 2,297,523 | (a) | 163,832 | (a) |  | 5,482,283 |
| Value of power, fuel, etc., usedf | 340,954 | 402,302. | (a) | 15,146 | (a) |  | 772,237 |
| Value of materials used | 6,956,887 | 6,399,727 | (a) | 211,401 | (a) |  | 13,902,207 |
| Total value of output | 10,498,543 | 10,901,885. | (a) | 487,615 | (a) |  | 22,630,489 |
| Value of production .. $£$ | 3,200,702 | 4,099,856 | (a) | 261,068 | (a) | . | 7,956,045 |

(a) Not available for separate publication; figures included in total for Australia.
39. Electric Light and Power Works.*-(i) Details for each State. The increased demand for electrical energy has been responsible for considerable development in electric light and power works during recent years. Since 1938-39 the production of electric light and power has increased from 4,688 to 9,509 million kWh . in 1949-50 or by nearly 103 per cent. Particulars for the year 1949-50 are as follows :-

ELECTRIC LIGHT AND POWER WORKS, 1949-50.

| Items. | N.S.W. 'Victoria. | Q'land. | S. Aust. | W.Aust. | Tas. | Australla. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Number of factories | 92.67 |  | 36 | 115 | 3 | 358 |
| Number of persons employed | 3,968 2,294 | 967 | 1,209 | 1,029 | 128 | 9,595 |
| Value of land and buildings is | 6,427,655 $2,772,6531$ | 1,136,259 | 2,050,031 | 352,934 | 746,316 | I $3,485,848$ |
| Value of plant and machinery $£$ | 15,788,376,14,797,107 | 4,108,239 | 4,771,414 | 1,731,966 | 4,256,434 | 45,453,536 |
| Salaries and wages paid $£$ | 2,227,383' $1,452,885$ | 505,726; | 687,291 | 525,414 | 67,317 | 5,466,016 |
| Value of power, fuel, etc., useds | $\begin{array}{\|cc\|}6,649,678 & 3,347,562\end{array}$ | 2,265,444 | 1,698,491 | 1,529,818 | 208 | I5,491,201 |
| Value of materials used | 1,171,048 345,101 | 354,139 | 139,360 | 146,371 | 24,176 | 2,180,195 |
| Total value of output | 15,017,542: 6,214,850 | 3,476,503 | 2,788,136 | 2,430,501 | 584, I 12 | 30,511,644 |
| Value of production .. £ | 7,196,816, 2,522,187 | 856,920 | 950,285 | 754,312 | 559,728 | 12,840,248 |

*See also Chapter XXV.-Electric Power Generation and Distribution-E. Statistical Summary,
S39-40 and $1949-50$, pp. $1197-1200$. 1939-10 and 1949-50, pp. 1197-1200.

Particulars of the types of engines and generators installed in Electric Light and Power Works and their rated horse-power ars given on page 1094.
(ii) Production. The increase in the production of electric light and power in each of the States since 1938-39 is shown in the following table :-

ELECTRIC LIGHT AND POWER WORKS: ELECTRICITY PRODUCED. ('000 kWh.)

| Year. | ('000 kWh.) |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | N.S.W. | Victoria. | Q'land. | S. Aust. | W. Aust. | Tasmania. | Australia. |
| 1938-39 | 1,948,490 | 1,222,505 | 387,368 | 256,283 | 307,002 | 566,691 | 4,688,339 |
| 1945-46 | 2,331,801 | 1,904,403 | 612,672 | 402, 134 | 338,799 | 819.958 | 6,909,767 |
| 1945-47 | 3,228,670 | 2.001 .904 | 655,797 i | 458.899 | 378,260 | So3, 501 | 7,527: 27 |
| 1947-48 | 3.546,345 | 2.250,938 | 750,080, | 519.53 L | 402.300 | 872.6R0 | 8.350 .674 |
| 1948-49 | 3,717,030 | 2,503,981 | 890,258 | 566,606 | 398,594 | 976,474 | 9,052,943 |
| 1949-50 | 3,758,004 | 2,706,081 | 975,630 | 593,808 | 417,499 | 1,061,639 | 9,508,661 |

4o. Gas-works.-(i) Netails for each State. Gas-works are in operation in the majority of important towns in Australia. The following table shows particulars of gas-works in each State for the year 1949-50 :-

GAS-WORKS, 1949-50.

(a) Not available for pullication ; fgares are included in total for Australia.
(ii) Coal Used and Production. The following table shows details for 1949-50:-

GAS-WORKS : COAL USED AND PRODUCTION, 1949-50.

|  | Particulars. |  | N.S.W. | victoria. | Oland. | S. Aust. | W. Aust. | Tas. | ${ }^{1}$ Australia. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Coal Usen. |  |  |  |  |  |  |  |  |
| Coal | $\cdots \quad$ - | tons | 870,055 | 608,453 | 195,985 | 121,932 | (a) | (a) | 1,864,6,30 |

Products.

| Gas produced *ooo cubie ft. | 17,845,995 | 10,746,793 | 2,700,399 | 2,026,177 | (a) | (a) | 34,897,963 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (7as sold 'ooo cuble ft. | T $5,563,585$ | 9,445,085 | 2,343,534 | 1,781,645 | (a) | (a) | 30.490, 856 |
| Coke produced (b) tons | 573,607 | 334,875 | 88,971 | 68,988 | (a) | (a) | 1,094,982 |

[^4]Since 1938-39, when the output of gas was 21 thousand million cubic feet, production has increased each year and reached nearly 35 thousand million cubic feet in 1949-50.


[^0]:    (a) 1901 and $19 \times 1-$ average employment during period of operation. Later years relate to average employment over whole year. Working proprietors included in all years. (b) Excludes drawings by working proprietors. (c) Value of output less value of materials and fuel, etc., used.
    (d) Not
    a vallable.

[^1]:    (a) Includes salarled managers and morking directors.

[^2]:    (a) Includes value of lubricants and water.
    (b) Includes $£ 408,512$, the value of 246,800 tons of

[^3]:    (a) Includes the value of containers, packing, etc., also the cost of tools replaced and repairs to plant. (b) Jncludes lubricants and water.
    (c) See paragraph preceding this table.

[^4]:    (a) Not available for publication; figures are included in total for Australia.
    (b) In addition, 1, 182,773 tons of metallurgical coke were made in Coke Works in 1949-50.

