

## MANUFACTURES : MISSISSIPPI

## STATISTICS OF MANUFACTURES FOR THE STATE, CITIES, AND INDUSTRIES

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## INTRODUCTION.

This advance bulletin gives the statistics of manufactures for the state of Mississippi for the calendar year 1909 as shown by the Thirteenth Census. It will be reprinted without change as a part of the Compendium of the Census for Mississippi, and in the final reports of the Thirteenth Census.

The text summarizes the general results of the census inquiry, presenting a series of special tables in which the main facts printed in the general tables are given in convenient form for the state as a whole and for important industries. It also presents tables in which the statistics for the industries of the state as a whole and for a few important industries are classified by character of ownership, size of establishments, number of wage earners, and prevailing hours of labor, information which could not be presented in general tables for each industry without disclosing the facts for individual establishments.

At the end of the bulletin are two general tables.

Table I gives for 1909, 1904, and 1899 the number of establishments and of persons engaged in the industries, primary power, capital, salaries and wages, cost of materials, value of products, and value added by manufacture reported for all industries combined and for certain important industries in the state. It also gives the same items for all industries combined for every city having in 1910 a population of over 10,000.

Table II gives statistics in detail for 1909 for the state and for a larger number of industries.

**Scope of census: Factory industries.**—Census statistics of manufactures are compiled primarily for the purpose of showing the absolute and relative magnitude of the different branches of industry covered and their growth or decline. Incidentally, the effort is made to present data throwing light upon character of organization, location of establishments, size of establishments, labor force, and similar subjects. When use is made of the data for these purposes it is imperative that due attention should be given to the limitations of the figures. Particularly is this true when the attempt is made to derive from them figures purporting to show average wages, cost of production, or profits. These limitations will be fully discussed in the general report on manufactures for the United States as a whole. It is impossible to reproduce such discussion in the bulletins relative to the individual states.

The census of 1909, like that of 1904, was confined to manufacturing establishments conducted under the factory system, as distinguished from the neighborhood, hand, and building industries. Where statistics for 1899 are given they have been reduced to a comparable basis by eliminating the latter classes of industries.

The census does not include establishments which were idle during the entire year, or had a value of products of less than \$500, or the manufacturing done in educational, eleemosynary, and penal institutions, or in governmental establishments, except those of the Federal Government.

**Period covered.**—The returns cover the calendar year 1909, or the business year which corresponds most nearly to that calendar year. The statistics cover a year's operations, except for establishments which began or discontinued business during the year.

**The establishment.**—The term "establishment" comprises the factories, mills, or plants which are under a common ownership or control, and for which one set of books of account is kept.

If, however, the plants constituting an establishment as thus defined were not all located within the same city or state, separate reports were secured in order that the separate totals might be included in the statistics for each city or state. In some instances separate reports were secured for different industries carried on in the same establishment.

**Classification by industries.**—The establishments were assigned to the several classes of industries according to their products of chief value. The products reported for a given industry may thus, on the one hand, include minor products very different from those covered by the class designation, and, on the other hand, may not include the total product covered by this designation, because some part of this product may be made in establishments in which it is not the product of chief value.

**Selected industries.**—The general tables at the end of this bulletin give the principal facts separately for the industries of the state. A selection has been made of the leading industries of the state for more detailed consideration. Sometimes an industry of greater importance than some of those selected is omitted because it comprises so few establishments that these detailed presentations would reveal the operations of individual concerns.

**Comparisons with previous censuses.**—Owing to the changes in industrial conditions it is not always possible to classify establishments by industries in such a way as to permit accurate comparison with preceding censuses. Table I, giving comparable figures for 1909, 1904, and 1899, therefore, does not embrace all the industries shown for 1909 in Table II.

**Influence of increased prices.**—In considering changes in cost of materials, value of products, and value added by manufacture, account should be taken of the general increase in the prices of commodities during recent years. To the extent to which this factor has been influential the figures can not be taken as an exact measure of increase in the volume of business.

**Persons engaged in industry.**—At the censuses of 1909, 1904, and 1899, the following general classes of persons engaged in manufacturing industries have been distinguished: (1) Proprietors and firm members, (2) salaried officers of corporations, (3) superintendents and managers, (4) clerks, and (5) wage earners. In the censuses of 1904 and 1899 these five classes were shown according to the three main groups: (1) Proprietors and firm members, (2) salaried officials, clerks, etc., and (3) wage earners. The second group included the three classes of salaried officers of corporations, superintendents and

managers, and clerks. In the present census an entirely different grouping is employed: That into (1) proprietors and officials, (2) clerks, and (3) wage earners. The first group includes proprietors and firm members, salaried officers of corporations, and superintendents and managers.

At this census the number of persons engaged in the industries, segregated by sex, and, in the case of wage earners, also by age (whether under 16 or 16 and over), was reported for December 15, or the nearest representative day. The 15th of December was selected as representing for most industries normal conditions of employment, but where conditions were exceptional, and particularly in the case of certain seasonal industries, such as canning, the December date could not be accepted as typical and an earlier date had to be chosen.

In the case of employees other than wage earners the number thus reported on December 15 or other representative day has been treated as equivalent to the average for the year, since the number of employees of this class does not vary much from month to month in a given industry. In the case of wage earners the average is obtained in the manner explained in the next paragraph.

**Wage earners.**—In addition to the report by sex and age of the number of wage earners on December 15 or other representative day, a report was obtained of the number employed on the 15th of each month, without distinction of sex or age. From these figures the average number of wage earners for the year has been calculated by dividing the sum of the numbers reported each month by 12. The average thus obtained represents the number of wage earners that would be required to perform the work done if all were constantly employed during the entire year. Accordingly, the importance of any industry as an employer of labor is believed to be more accurately measured by this average than by the number employed at any one time or on a given day.

The number of wage earners reported for the representative day, though given for each separate industry, is not totaled for all industries combined, because in view of the variations of date such a total is believed not to be significant. It would involve more or less duplication of persons working in different industries at different times, would not represent the total number employed in all industries at any one time, and would give an undue weight to seasonal industries as compared with industries in continual operation.

In particular, totals by sex and age for the wage earners reported for the representative day would be misleading because of the undue weight given to seasonal industries, in some of which, such as canning and preserving, the distribution of the wage earners by sex and age is materially different from that in most industries of more regular operation. In order to determine as nearly as possible the sex and age distribution of the average number of wage earners in the state as a whole, the following procedure has been adopted:

The percentage distribution by sex and age of the wage earners in each industry, for December 15 or the nearest representative day, has been calculated from the actual numbers reported for that date. This percentage has been applied to the average number of wage earners for the year in that industry, to determine the average number of men, women, and children employed. These calculated averages for the several industries have been added up to give the average distribution for the state as a whole.

In 1899 and 1904 the schedule called for the average number of wage earners of each sex 16 years and over, and the total number under 16 years of age, for each month, and these monthly statements were combined in an annual average. Comparatively few manufacturing concerns, however, keep their books in such way as to show readily the number of men, women, and children (under 16) employed each month. These monthly returns by sex and age were, in fact, largely estimates. It was believed that a more accurate and reliable sex and age distribution could be secured by taking as a basis of estimate the actual numbers employed on a single day.

**Prevailing hours of labor.**—The census made no attempt to ascertain the number of employees working a given number of hours per week. The inquiry called merely for the prevailing practice

followed in each establishment. Occasional variations in hours in an establishment from one period to another are disregarded, and no attention is given to the fact that a limited number of employees may have hours differing from those of the majority. In the tables all the wage earners of each establishment are counted in the class within which the establishment itself falls. In most establishments, however, all or practically all the employees work the same number of hours, so that these figures give a substantially correct picture of the hours of labor in manufacturing industries.

**Capital.**—For reasons stated in prior census reports, the statistics of capital secured by the census canvass are so defective as to be without value, except as indicating very general conditions. The instructions on the schedule for securing capital were as follows:

The answer should show the total amount of capital, both owned and borrowed, on the last day of the business year reported. All the items of fixed and live capital may be taken at the amounts carried on the books. If land or buildings are rented, that fact should be stated and no value given. If a part of the land or buildings is owned, the remainder being rented, that fact should be so stated and only the value of the owned property given. Do not include securities and loans representing investments in other enterprises.

**Materials.**—Cost of materials refers to the materials used during the year, which may be more or less than the materials purchased during the year. The term materials includes fuel, rent of power and heat, mill supplies, and containers, as well as materials forming a constituent part of the product. Fuel includes all fuel used, whether for heat, light, or power, or for the process of manufacture.

**Expenses.**—Under "Expenses" are included all items of expense incident to the year's business, except interest, whether on bonds or other forms of indebtedness and allowances for depreciation.

**Value of products.**—The value of products for any industry includes the total value of all products manufactured in establishments whose products of chief value fall under the industry designation. The amounts given represent the selling value at the factory of all products manufactured during the year, which may differ from the value of the products sold. Amounts received for work on materials furnished by others are included.

**Value added by manufacture.**—The value of products is not a satisfactory measure of either the absolute or the relative importance of a given industry, because only a part of this value is actually created by the manufacturing process carried on in the industry itself. Another part of it, and often by far the larger part, represents the value of the materials used, which have been produced by agriculture or mining or by other industrial establishments. For many purposes, therefore, the best measure of the importance of different classes of industry is the value created as the result of the manufacturing operations carried on within the industry. This value is obtained by deducting the cost of the materials consumed from the value of the product. The figure thus obtained is termed in the census reports "value added by manufacture."

There is a further statistical advantage which "value added" has over gross value of products. In combining the value of products for all industries the value of products produced by one establishment and used as materials in another is duplicated, and the total, therefore, gives a greatly exaggerated idea of the wealth created. No such duplication takes place in the total "value added by manufacture."

**Cost of manufacture and profits.**—Census data do not show the entire cost of manufacture, and consequently can not be used to show profits. No account has been taken of interest and depreciation. Even if the amount of profit could be determined by deducting the expenses from the value of the products the rate of profit on the investment could not properly be calculated, because of the very defective character of the returns regarding capital.

**Primary power.**—The figures given for this item show the total of the primary power used by the establishments. They do not cover the power developed by motors operated by such power, the inclusion of which would evidently result in duplication.

**Location of establishments.**—The Census Bureau has classified establishments by their location in cities or classes of cities. In

interpreting these figures due consideration should be given to the fact that often establishments are located just outside the boundaries of cities, and are necessarily so classified, though locally they are looked upon as constituting a part of the manufacturing interests of the cities.

**Laundries.**—The census of 1909 was the first to include statistics of laundries. The reports are confined to establishments using

mechanical power. The data are presented separately and are not included in the general total for manufacturing industries, in order to avoid interference with comparisons with prior censuses.

**Custom grist and saw mills.**—In order to make the statistics for 1909 comparable with those for 1904 the data for these mills have been excluded from all the tables presenting general statistics, and are given in a separate table at the end of this report.

**INDUSTRIES IN GENERAL.**

**General character of the state.**—Mississippi, with a gross area of 46,865 square miles, of which 503 represent water surface, ranks thirty-first in area among the states and territories of continental United States. Its population in 1910 was 1,797,114, as compared with 1,551,270 in 1900 and 1,289,600 in 1890. It ranked twenty-first among the 49 states and territories as regards population in 1910 and twentieth in 1900. The density of population for the entire state is 38.8 per square mile, the corresponding figure for 1900 being 33.5. Eleven and five-tenths per cent of the entire population of the state resided in incorporated cities having a population of 2,500 inhabitants or over in 1910, as against 7.7 per cent in 1900.

The state has five cities having a population of over 10,000: Hattiesburg, Jackson, Meridian, Natchez, and Vicksburg. These five cities contain only 4.9 per cent of the total population of the state, and are credited with 14.8 per cent of the total value of its manufactures.

The transportation facilities are good, as the state has direct connection with several large railroad systems of the Middle West and is bordered for practically its entire length by the Mississippi River, and the prox-

imity to the port of New Orleans by means of this river places the state in a favorable position for domestic or foreign shipments.

**Importance and growth of manufactures.**—Though Mississippi is not preeminently a manufacturing state, its manufactures have somewhat more than kept pace with the growth of the population. During 1849–50 an average of 3,154 wage earners, representing five-tenths of 1 per cent of the total population, was employed in manufactures, while in 1909 an average of 50,384 wage earners, or 2.8 per cent of the total population, were so engaged. During this period the gross value of products per capita of the total population of the state increased from \$5 to \$45. At each census from 1849–50 to 1909 the manufactures of the state have represented about the same proportion of the total value of products of the manufacturing industries of the country. This proportion in 1849–50 was three-tenths of 1 per cent; in 1909 it was four-tenths of 1 per cent.

The following table gives the most important figures relative to all classes of manufactures combined for 1909, 1904, and 1899, together with the percentages of increase from census to census:

|  | NUMBER OR AMOUNT. |              |              | PER CENT OF INCREASE. |           |
|--|-------------------|--------------|--------------|-----------------------|-----------|
|  | 1909              | 1904         | 1899         | 1904-1909             | 1899-1904 |
| Number of establishments.....  | 2,598             | 1,520        | 1,294        | 70.9                  | 17.5      |
| Persons engaged in manufactures.....                                       | 56,761            | 42,966       | (1)          | 32.1                  | (1)       |
| Proprietors and firm members.....  | 2,974             | 1,588        | (1)          | 87.3                  | (1)       |
| Salaried employees.....  | 3,403             | 2,688        | 1,260        | 26.6                  | 113.3     |
| Wage earners (average number).....   | 50,384            | 38,690       | 26,799       | 30.2                  | 44.4      |
| Primary horsepower.....  | 206,222           | 110,338      | 65,738       | 86.9                  | 67.8      |
| Capital.....   | \$72,393,000      | \$50,256,000 | \$22,712,000 | 44.0                  | 121.3     |
| Expenses.....  | 68,707,000        | 49,074,000   | 27,461,000   | 40.0                  | 78.7      |
| Services.....  | 22,422,000        | 17,417,000   | 9,003,000    | 28.7                  | 93.5      |
| Salaries.....  | 3,654,000         | 2,598,000    | 1,093,000    | 40.6                  | 137.7     |
| Wages.....   | 18,768,000        | 14,819,000   | 7,910,000    | 26.6                  | 87.3      |
| Materials.....   | 36,926,000        | 25,801,000   | 16,543,000   | 43.1                  | 56.0      |
| Miscellaneous.....   | 9,359,000         | 5,856,000    | 1,915,000    | 59.8                  | 205.8     |
| Value of products.....   | 80,555,000        | 57,451,000   | 33,718,000   | 40.2                  | 70.4      |
| Value added by manufacture (value of products less cost of materials)..... | 43,629,000        | 31,650,000   | 17,175,000   | 37.8                  | 84.3      |

<sup>1</sup>Figures not available.

In 1909 the state of Mississippi had 2,598 manufacturing establishments which gave employment to an average of 56,761 persons during the year and paid out \$22,422,000 in salaries and wages. Of the persons employed, 50,384 were wage earners. These establishments turned out products to the value of \$80,555,000, to produce which materials costing \$36,926,000 were used. The value added by manufacture was thus

\$43,629,000, which figure, as explained in the Introduction, best represents the net wealth created by manufacturing operations during the year.

In general, this table brings out the fact that the manufacturing industries of Mississippi have developed rapidly during the 10-year period 1899–1909, the figures for 1909 for practically every item shown in the table being considerably more than twice as great as

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that for 1899. During the period from 1904 to 1909 the number of establishments increased 70.9 per cent, the average number of wage earners 30.2 per cent, and the amount paid in wages 26.6 per cent, while the value of products increased 40.2 per cent and the value added by manufacture 37.8 per cent. For the earlier five-year period the percentages of increase in general were much greater. As pointed out in the Introduction, it would

be improper to infer that manufactures increased in volume to the full extent indicated by these figures regarding values, since the increase shown is certainly due, in part, to the increase that has taken place in the price of commodities.

The relative importance and growth of the leading manufacturing industries of the state are shown in the following table:

| INDUSTRY.   | Number of establishments. | WAGE EARNERS.   |                        | VALUE OF PRODUCTS. |                        | VALUE ADDED BY MANUFACTURE. |                        | PER CENT OF INCREASE. <sup>1</sup> |           |                             |           |
|---|---------------------------|-----------------|------------------------|--------------------|------------------------|-----------------------------|------------------------|------------------------------------|-----------|-----------------------------|-----------|
|   |                           | Average number. | Per cent distribution. | Amount.            | Per cent distribution. | Amount.                     | Per cent distribution. | Value of products.                 |           | Value added by manufacture. |           |
|   |                           |                 |                        |                    |                        |                             |                        | 1904-1909                          | 1899-1904 | 1904-1909                   | 1899-1904 |
| All Industries.....   | 2,598                     | 50,384          | 100.0                  | \$80,555,000       | 100.0                  | \$43,629,000                | 100.0                  | 40.2                               | 70.4      | 37.8                        | 84.3      |
| Lumber and timber products.....   | 1,047                     | 33,397          | 66.3                   | 42,793,000         | 53.1                   | 28,586,000                  | 65.5                   | 63.6                               | 57.0      | 49.2                        | 94.7      |
| Oil, cottonseed, and cake.....  | 87                        | 2,503           | 5.0                    | 15,966,000         | 19.8                   | 3,797,000                   | 8.7                    | 26.8                               | 88.4      | 50.0                        | 45.7      |
| Cars and general shop construction and repairs by steam-railroad companies..... | 10                        | 2,672           | 5.1                    | 3,233,000          | 4.0                    | 1,811,000                   | 4.2                    | 12.0                               | 116.8     | 16.5                        | 79.2      |
| Cotton goods, including cotton small wares.....                                 | 14                        | 2,645           | 5.2                    | 3,102,000          | 3.8                    | 1,060,000                   | 2.4                    | 25.9                               | 67.2      | 30.2                        | 15.3      |
| Fertilizers.....  | 10                        | 440             | 0.9                    | 2,125,000          | 2.6                    | 740,000                     | 1.7                    | 96.4                               | 119.5     | 228.0                       | 49.0      |
| Turpentine and rosin.....   | 64                        | 2,573           | 5.1                    | 1,475,000          | 1.8                    | 1,120,000                   | 2.6                    | -37.7                              | 33.5      | -42.0                       | 83.6      |
| Printing and publishing.....  | 225                       | 736             | 1.5                    | 1,008,000          | 1.6                    | 1,008,000                   | 2.3                    | 42.8                               | 26.7      | 30.8                        | 25.2      |
| Foundry and machine-shop products.....  | 50                        | 583             | 1.2                    | 1,088,000          | 1.4                    | 616,000                     | 1.4                    | 18.3                               | 87.8      | 0.2                         | 93.8      |
| Bread and other bakery products.....  | 79                        | 285             | 0.6                    | 878,000            | 1.1                    | 362,000                     | 0.8                    | 76.0                               | 195.3     | 52.1                        | 197.5     |
| Ice, manufactured.....  | 51                        | 341             | 0.7                    | 866,000            | 1.1                    | 653,000                     | 1.5                    | 43.6                               | 120.1     | 42.6                        | 110.1     |
| Canning and preserving.....   | 11                        | 847             | 1.7                    | 824,000            | 1.0                    | 316,000                     | 0.7                    | -45.3                              | 66.0      | -33.3                       | 64.0      |
| Brick and tile.....   | 73                        | 939             | 1.9                    | 794,000            | 1.0                    | 590,000                     | 1.4                    | 1.4                                | 50.0      | -2.6                        | 43.3      |
| Clothing, men's, including shirts.....  | 6                         | 482             | 1.0                    | 775,000            | 1.0                    | 236,000                     | 0.5                    | -38.6                              | .....     | -52.0                       | .....     |
| Carriages and wagons and materials.....   | 41                        | 365             | 0.7                    | 642,000            | 0.8                    | 368,000                     | 0.8                    | 30.0                               | 63.6      | 31.0                        | 64.3      |
| Furniture and refrigerators.....  | 8                         | 259             | 0.5                    | 392,000            | 0.5                    | 198,000                     | 0.5                    | 9.2                                | .....     | -9.2                        | .....     |
| Gas, illuminating and heating.....  | 8                         | 101             | 0.2                    | 250,000            | 0.3                    | 170,000                     | 0.4                    | 104.8                              | 52.4      | 97.7                        | 32.3      |
| Marble and stone work.....  | 11                        | 71              | 0.1                    | 176,000            | 0.2                    | 97,000                      | 0.2                    | .....                              | .....     | .....                       | .....     |
| Shipbuilding, including boat building.....                                      | 15                        | 91              | 0.2                    | 161,000            | 0.2                    | 95,000                      | 0.2                    | -34.0                              | 110.3     | -34.5                       | 107.1     |
| Flour-mill and gristmill products.....  | 13                        | 18              | ( <sup>2</sup> )       | 153,000            | 0.2                    | 21,000                      | ( <sup>2</sup> )       | 39.1                               | -73.3     | 40.0                        | -69.4     |
| Confectionery.....  | 10                        | 60              | 0.1                    | 123,000            | 0.2                    | 48,000                      | 0.1                    | -54.1                              | 165.3     | -66.2                       | 389.7     |
| All other industries.....   | 105                       | 1,077           | 2.1                    | 3,425,000          | 4.3                    | 1,731,000                   | 4.0                    | .....                              | .....     | .....                       | .....     |

<sup>1</sup> Per cent of increase is based on figures in Table I, and a minus sign (-) denotes a decrease. Where percentages are omitted, the figures are not comparable.

<sup>2</sup> Less than one-tenth of 1 per cent.

It should be borne in mind, in considering this table, that the value of products in some of the industries involves a certain amount of duplication due to the use of the product of one establishment in the industry as material for another establishment. Although a few industries predominate in importance, it will be seen from Table II that on the whole there is considerable diversity in the manufacturing activities of the state. The most important industries listed in the table given above, in which they are arranged in the order of the value of products, call for brief consideration.

*Lumber and timber products.*—This industry embraces establishments engaged in logging operations and also sawmills, planing mills, and establishments manufacturing wooden packing boxes. It is one of the oldest industries in the state and by far the most important, and shows a decided growth from 1899 to 1909. In 1909 it gave employment to 33,397 wage earners, or 66.3 per cent of the total average number of wage earners reported by the manufacturing industries of the state, as against 22,431, or 58 per cent, in 1904. The extraordinary increase in the number of establishments reported, from 664 in 1904 to 1,647 in 1909, is largely due to a more complete enumeration of the smaller rural mills in 1909. The value of prod-

ucts, which was \$42,793,000 in 1909, represented 53.1 per cent of the total value of products of all manufacturing industries in the state.

*Oil, cottonseed, and cake.*—The statistics presented include those for all establishments engaged primarily in extracting oil from cotton seed or in refining the oil. Measured either by value of products or by value added by manufacture, this industry is the second in importance in the state. The state ranked third among the states in this industry in value of products in 1909 and fourth in 1904. Prior to 1890 the industry was of little importance in the state, and its growth is of particular interest, because it is so largely based on the profitable utilization of what was at one time practically a waste product. The value of products in 1909 was \$15,966,000, as compared with \$12,587,000 in 1904 and \$6,681,000 in 1899.

*Cars and general shop construction and repairs by steam-railroad companies.*—Although there were only 10 railroad repair shops reported in 1909, as compared with 15 in 1904, the value of their products, which is equivalent to the cost of repairs to rolling stock and equipment, increased from \$2,886,000 in 1904 to \$3,233,000 in 1909. This industry represents the repair work and construction done in shops operated by



steam-railroad companies, but does not include minor repairs made in roundhouses.

*Cotton goods, including cotton small wares.*—The number of establishments reported for this industry was the same in 1909 as in 1904; but the industry shows a considerable advance in the value of its operations, the value of products having increased from \$2,463,000 in 1904 to \$3,102,000 in 1909. The capital invested, the amount paid in wages, and the value of products all more than doubled during the decade 1899-1909.

*Fertilizers.*—This classification includes establishments engaged primarily in the manufacture of fertilizers. A number of cottonseed-oil mills produce fertilizers as by-products, and therefore the statistics for the independent establishments do not fully represent the statistics for the industry. The increase in value of products during the 10 years 1899-1909 has more than trebled.

*Turpentine and rosin.*—There was a decrease in the value of products of this industry from \$2,366,000 in 1904 to \$1,475,000 in 1909. This decrease was due largely to unfavorable market conditions and destructive storms. Mississippi ranked fourth among the states in the production of turpentine and rosin both in 1904 and in 1909.

Measured by value added by manufacture the six industries treated above hold generally the same relative rank as when measured by value of products, although the turpentine and rosin industry becomes fourth, displacing the cotton-goods industry, which falls to fifth place, and the fertilizer industry drops to seventh place.

This table shows also the percentages of increase for the leading industries in respect to value of products and value added by manufacture. The gas industry showed a greater rate of increase from 1904 to 1909 in value of products than any other of the industries shown separately, namely, 104.8 per cent, and the fertilizer industry the greatest rate of increase in value added by manufacture, 228.9 per cent. The fertilizer, bakery, and the lumber industries showed the next largest relative increases in value of products.

It will be noticed that from 1904 to 1909 there were five of the industries listed separately which decreased in value of products and seven (including these five) which decreased in value added by manufacture. During the preceding five years the flour-mill and gristmill industry, which showed a decrease in both of these particulars, was the only one reporting a decrease in either item.

In addition to the industries presented separately in the preceding table, there are three others of importance in the state which are included with all other industries because the returns do not properly present the true condition, as they are more or less interwoven with one or more other industries of similar character. These industries are the manufacture of food preparations, mineral and soda waters, and the preserving of wood.

**Persons engaged in manufacturing industries.**—The following table shows, for 1909, the distribution of the number of persons engaged in manufactures, the average number of wage earners being distributed by sex and age. It should be borne in mind, however, that the sex and age classification of the average number of wage earners in this and other tables is an estimate obtained by the method described in the Introduction:

| CLASS.                                 | PERSONS ENGAGED IN MANUFACTURES. |        |         |
|--|----------------------------------|--------|---------|
|  | Total.                           | Male.  | Female. |
| All classes.....                       | 56,761                           | 54,057 | 2,704   |
| Proprietors and officials.....         | 4,665                            | 4,603  | 62      |
| Proprietors and firm members.....      | 2,974                            | 2,918  | 56      |
| Salaried officers of corporations..... | 305                              | 302    | 3       |
| Superintendents and managers.....      | 1,386                            | 1,383  | 3       |
| Clerks.....                            | 1,712                            | 1,550  | 162     |
| Wage earners (average number).....     | 50,384                           | 47,898 | 2,486   |
| 16 years of age and over.....          | 40,326                           | 47,287 | 2,030   |
| Under 16 years of age.....             | 1,058                            | 611    | 447     |

The average number of persons engaged in manufactures during 1909 was 56,761, of whom 50,384 were wage earners. Of the remainder, 4,665 were proprietors and officials and 1,712 were clerks. Corresponding figures for individual industries will be found in Table II.

The following table shows, for 1909, the percentage of proprietors and officials, clerks, and wage earners, respectively, among the total number of persons employed in manufactures. It covers all industries combined and 12 important industries individually.

| INDUSTRY.   | PERSONS ENGAGED IN MANUFACTURES. |                            |         |                                |
|---|----------------------------------|----------------------------|---------|--------------------------------|
|   | Total number.                    | Per cent of total.         |         |                                |
|   |                                  | Proprietors and officials. | Clerks. | Wage earners (average number). |
| All industries.....   | 56,761                           | 8.2                        | 3.0     | 88.8                           |
| Bread and other bakery products.....  | 417                              | 27.1                       | 4.6     | 68.3                           |
| Brick and tile.....   | 1,088                            | 12.1                       | 1.6     | 86.3                           |
| Canning and preserving.....   | 904                              | 3.5                        | 2.8     | 93.7                           |
| Cars and general shop construction and repairs by steam-railroad companies..... | 2,709                            | 1.8                        | 3.2     | 94.9                           |
| Cotton goods, including cotton small wares.....                                 | 2,720                            | 1.6                        | 1.1     | 97.2                           |
| Fertilizers.....  | 524                              | 5.5                        | 8.3     | 85.7                           |
| Foundry and machine-shop products.....  | 711                              | 12.2                       | 5.8     | 82.0                           |
| Ice, manufactured.....  | 477                              | 19.5                       | 9.0     | 71.5                           |
| Lumber and timber products.....   | 37,118                           | 7.9                        | 2.2     | 90.0                           |
| Oil, cottonseed, and cake.....  | 3,014                            | 8.7                        | 8.2     | 83.0                           |
| Printing and publishing.....  | 1,132                            | 28.6                       | 6.4     | 65.0                           |
| Turpentine and rosin.....   | 2,811                            | 5.3                        | 3.1     | 91.5                           |
| All other industries.....   | 3,136                            | 13.8                       | 6.0     | 80.2                           |

Of the total number of persons engaged in all manufacturing industries, 8.2 per cent were proprietors and officials, 3 per cent clerks, and 88.8 per cent wage earners. In the printing and publishing and the bakery industries, owing to the fact that a majority of the establishments are small, as compared with other industries in the state, the work is to a large extent done by the proprietors or their immediate representatives, so that the proportion of persons engaged in these two industries falling in the class of proprietors

and officials is much higher than for other industries, or for all industries combined. In the manufactured ice, foundry and machine shop, and brick and tile industries, also, the proportion of proprietors and officials is considerably above the average, but in these industries the condition is largely due to the employment of a relatively large number of managers and superintendents, who are classed as officials.

In the cotton-goods industry and in railroad repair shops, on the other hand, proprietors and officials constitute only 1.6 per cent and 1.8 per cent, respectively, and wage earners form a greater proportion than in any of the other industries. This is due to the fact that the average establishment in each of these industries is comparatively large. In the case of railroad repair shops not only are the establishments operated by corporations which report no proprietors, but the general officials are not, as a rule, assigned to this particular branch of work.

The following table shows, in percentages, for 1909 for all industries combined, the distribution of the average number of wage earners by age periods, and for those 16 years of age and over, by sex, calculated in the manner described in the Introduction. It also shows for some of the important industries separately a similar distribution of wage earners as reported for December 15, or the nearest representative day. As a means of judging the importance of the several industries the average total number employed for the year is also given in each case.

| INDUSTRY.   | WAGE EARNERS.                |                           |            |            |                        |
|---|------------------------------|---------------------------|------------|------------|------------------------|
|   | Average number. <sup>1</sup> | Per cent of total.        |            |            | Under 16 years of age. |
|   |                              | 16 years of age and over. |            |            |                        |
|   |                              | Male.                     | Female.    |            |                        |
| <b>All industries.....</b>  | <b>50,384</b>                | <b>93.9</b>               | <b>4.0</b> | <b>2.1</b> |                        |
| Bread and other bakery products.....  | 285                          | 90.2                      | 4.9        | 4.9        |                        |
| Brick and tile.....   | 939                          | 94.2                      | .....      | 5.8        |                        |
| Canning and preserving.....   | 847                          | 40.1                      | 38.3       | 21.6       |                        |
| Cars and general shop construction and repairs by steam-railroad companies..... | 2,572                        | 99.9                      | 0.1        | .....      |                        |
| Cotton goods, including cotton small wares.....                                 | 2,645                        | 38.0                      | 41.7       | 20.3       |                        |
| Fertilizers.....  | 449                          | 100.0                     | .....      | .....      |                        |
| Foundry and machine-shop products.....  | 583                          | 100.0                     | .....      | .....      |                        |
| Ice, manufactured.....  | 341                          | 94.7                      | .....      | 5.3        |                        |
| Lumber and timber products.....   | 33,397                       | 99.6                      | (?)        | 0.4        |                        |
| Oil, cottonseed, and cake.....  | 2,503                        | 99.6                      | 0.4        | .....      |                        |
| Printing and publishing.....  | 736                          | 81.7                      | 13.3       | 5.0        |                        |
| Turpentine and rosin.....   | 2,573                        | 97.6                      | 0.6        | 1.7        |                        |
| All other industries.....   | 2,514                        | 79.5                      | 18.4       | 2.1        |                        |

<sup>1</sup> For method of estimating the distribution, by sex and age periods, of the average number in all industries combined, see Introduction.

<sup>2</sup> Less than one-tenth of 1 per cent.

For all industries combined, 93.9 per cent of the average number of wage earners were males 16 years of age and over, 4 per cent females 16 years of age and over, and 2.1 per cent persons under 16 years of age. The larger part of the women and children employed were in the cotton mills and in the canning and preserving industry. In each of these industries women constituted about 40 per cent of the total

number of wage earners and children under 16 years about 20 per cent.

In order to compare the distribution of persons engaged in manufactures in 1909 with that shown at the census of 1904, it is necessary to use the classification employed at the earlier census. (See Introduction.) The following table makes this comparison according to occupational status:

| CLASS.                            | PERSONS ENGAGED IN MANUFACTURES. |                        |               |                        | Per cent of increase, 1904-1909. |
|-----------------------------------|----------------------------------|------------------------|---------------|------------------------|----------------------------------|
|                                   | 1900                             |                        | 1904          |                        |                                  |
|                                   | Number.                          | Per cent distribution. | Number.       | Per cent distribution. |                                  |
| <b>Total.....</b>                 | <b>56,761</b>                    | <b>100.0</b>           | <b>42,966</b> | <b>100.0</b>           | <b>32.1</b>                      |
| Proprietors and firm members..... | 2,974                            | 5.2                    | 1,588         | 3.7                    | 87.3                             |
| Salariated employees.....         | 3,403                            | 6.0                    | 2,688         | 6.3                    | 26.6                             |
| Wage earners (average number).... | 50,384                           | 88.8                   | 38,690        | 90.0                   | 30.2                             |

Comparable figures are not obtainable for 1899. The table shows that the greatest percentage of increase was among proprietors and firm members.

The following table shows the average number of wage earners, distributed according to age periods, and in the case of those 16 years of age and over, according to sex, for 1909, 1904, and 1899. The averages for 1909 are estimated on the basis of the actual number reported for a single representative day. (See Introduction.)

| CLASS.                     | AVERAGE NUMBER OF WAGE EARNERS. |                        |               |                        |               |                        |
|----------------------------|---------------------------------|------------------------|---------------|------------------------|---------------|------------------------|
|                            | 1900                            |                        | 1904          |                        | 1899          |                        |
|                            | Number.                         | Per cent distribution. | Number.       | Per cent distribution. | Number.       | Per cent distribution. |
| <b>Total.....</b>          | <b>50,384</b>                   | <b>100.0</b>           | <b>38,690</b> | <b>100.0</b>           | <b>26,799</b> | <b>100.0</b>           |
| 16 years of age and over.. | 49,326                          | 97.9                   | 37,418        | 96.7                   | 25,784        | 96.2                   |
| Male.....                  | 47,287                          | 93.9                   | 35,364        | 91.4                   | 24,336        | 90.8                   |
| Female.....                | 2,039                           | 4.0                    | 2,054         | 5.3                    | 1,448         | 5.4                    |
| Under 16 years of age....  | 1,058                           | 2.1                    | 1,272         | 3.3                    | 1,015         | 3.8                    |

This table indicates that although the number of women and children employed in all industries has decreased since 1904, the number employed in 1909 was still somewhat in excess of the number in 1899. The proportion of both women and children in the total number of wage earners, however, decreased throughout the decade. In 1909 males 16 years of age and over formed 93.9 per cent of all wage earners, as compared with 91.4 per cent in 1904 and 90.8 per cent in 1899.

**Wage earners employed by months.**—The following table gives the number of wage earners employed on the 15th of each month during the year 1909 for all industries combined; it gives also the percentage which the number reported for each month is of the greatest number reported for any month. In Table II, page 18, are shown for practically all of the important industries in the state, the largest number and the smallest

number of wage earners reported for any month. The figures are for the 15th day or the nearest representative day of the month.

| MONTH.        | WAGE EARNERS, ALL INDUSTRIES. |                      | MONTH.         | WAGE EARNERS, ALL INDUSTRIES. |                      |
|---------------|-------------------------------|----------------------|----------------|-------------------------------|----------------------|
|               | Number.                       | Per cent of maximum. |                | Number.                       | Per cent of maximum. |
| January.....  | 49, 148                       | 87.1                 | July.....      | 47, 237                       | 83.7                 |
| February..... | 49, 511                       | 87.7                 | August.....    | 50, 341                       | 89.2                 |
| March.....    | 49, 839                       | 88.3                 | September..... | 53, 195                       | 94.3                 |
| April.....    | 47, 851                       | 84.8                 | October.....   | 55, 387                       | 98.1                 |
| May.....      | 45, 178                       | 80.1                 | November.....  | 56, 436                       | 100.0                |
| June.....     | 45, 198                       | 80.1                 | December.....  | 55, 285                       | 98.0                 |

For all industries combined the maximum employment occurred in November and the minimum in May. Table II shows that the total number of wage earners in the lumber industry in May, the month of minimum employment, was 83.3 per cent of the number reported for November, the month of maximum employment. This industry, therefore, which in 1909

reported nearly two-thirds of the total number of wage earners in the state, shows a little less variation than all industries combined. Both in May and in June the total number of wage earners employed in the manufacturing industries of the state was 80.1 per cent of the number in November. The cottonseed-oil industry is the most important seasonal industry, the number of wage earners varying from 871 in July to 4,276 in November, but their number was too small to affect greatly the totals for all industries combined.

**Prevailing hours of labor.**—In the following table wage earners have been classified according to the hours of labor prevailing in the establishments in which they are employed. In making this classification the average number of wage earners employed during the year 1909 is used, and the number employed in each establishment is classified as a total according to the hours prevailing in that establishment, even though a few employees work a greater or less number of hours.

| INDUSTRY.   | Total.        | 48 and under. | Between 48 and 54. | 54.          | Between 54 and 60. | 60.           | Between 60 and 72. | 72.          | Over 72.   |
|---|---------------|---------------|--------------------|--------------|--------------------|---------------|--------------------|--------------|------------|
|   |               |               |                    |              |                    |               |                    |              |            |
| <b>All industries.....</b>  | <b>50,384</b> | <b>2,794</b>  | <b>982</b>         | <b>2,024</b> | <b>1,555</b>       | <b>22,967</b> | <b>16,810</b>      | <b>1,998</b> | <b>364</b> |
| Bread and other bakery products.....  | 285           | 12            | .....              | 14           | 8                  | 93            | 36                 | 28           | 94         |
| Brick and tile.....   | 930           | 35            | .....              | 27           | .....              | 850           | 15                 | 12           | .....      |
| Canning and preserving.....   | 847           | 11            | .....              | 125          | 32                 | 581           | 98                 | .....        | .....      |
| Carriages and wagons and materials.....   | 365           | .....         | .....              | 8            | 07                 | 214           | 76                 | .....        | .....      |
| Cars and general shop construction and repairs by steam-railroad companies..... | 2,572         | .....         | 522                | 1,577        | .....              | 436           | 37                 | .....        | .....      |
| Clothing, men's, including shirts.....  | 482           | 20            | 93                 | 73           | .....              | 296           | .....              | .....        | .....      |
| Confectionery.....  | 50            | 1             | .....              | 22           | .....              | 26            | .....              | 1            | .....      |
| Cotton goods, including cotton small wares.....                                 | 2,645         | .....         | .....              | .....        | 118                | 1,434         | 1,093              | .....        | .....      |
| Fertilizers.....  | 449           | 1             | .....              | .....        | .....              | 448           | .....              | .....        | .....      |
| Foundry and machine-shop products.....  | 583           | 1             | 13                 | 184          | .....              | 377           | 8                  | .....        | .....      |
| Furniture and refrigerators.....  | 259           | .....         | .....              | 8            | .....              | 251           | .....              | .....        | .....      |
| Gas, illuminating and heating.....  | 101           | .....         | .....              | .....        | .....              | .....         | 41                 | 4            | 56         |
| Ice, manufactured.....  | 341           | .....         | .....              | .....        | .....              | 39            | 37                 | 84           | 181        |
| Lumber and timber products.....   | 33,397        | 387           | 311                | 406          | 1,241              | 16,323        | 14,477             | 62           | .....      |
| Marble and stone work.....  | 71            | .....         | 9                  | 20           | .....              | 36            | .....              | .....        | .....      |
| Oil, cottonseed, and cake.....  | 2,508         | .....         | .....              | .....        | .....              | 50            | 632                | 1,788        | 33         |
| Printing and publishing.....  | 736           | 337           | 7                  | 117          | 24                 | 247           | 3                  | 1            | .....      |
| Shipbuilding, including boat building.....                                      | 91            | 2             | .....              | 83           | .....              | 6             | .....              | .....        | .....      |
| Turpentine and rosin.....   | 2,573         | 1,830         | 24                 | .....        | .....              | 921           | 98                 | .....        | .....      |
| All other industries.....   | 1,095         | 57            | 3                  | 104          | 65                 | 629           | 159                | 18           | .....      |

It is evident from these figures that the prevailing hours of labor for nearly half of the wage earners employed in the manufacturing industries of Mississippi are 60 a week, and that a large proportion work between 60 and 72 hours a week. Only 16.4 per cent of the total number are employed less than 60 hours a week and only 4.7 per cent 72 hours or more.

In the lumber industry, as in all industries combined, nearly one-half the employees work 60 hours a week, and the greater part of the remainder work between 60 and 72 hours per week. In the cottonseed-oil industry the prevailing hours of labor per week are 72; in the car shops they are 54 hours per week; and in the turpentine and rosin industry the greater part of the employees work 48 hours a week or less.

**Location of establishments.**—The next table shows the extent to which the manufactures of Mississippi are carried on in cities with a population of 10,000 or over. (See Introduction.) The statistics for 1904 are

omitted from this table, because there was no Federal census of population for that year, and it was impossible to determine the cities that came within the group having 10,000 inhabitants or over.

| ITEM.                               | Year. | Total.       | LOCATION OF ESTABLISHMENTS.                   |                    | PER CENT OF TOTAL.                            |                    |
|-------------------------------------|-------|--------------|---|--------------------|---|--------------------|
|                                     |       |              | In cities with population of 10,000 and over. | Outside districts. | In cities with population of 10,000 and over. | Outside districts. |
| Population.....                     | 1910  | 1,797,114    | 88,885  | 1,708,229          | 4.9   | 95.1               |
|                                     | 1900  | 1,551,270    | 41,094  | 1,510,176          | 2.6   | 97.4               |
| Number of establishments.....       | 1909  | 2,598        | 202   | 2,396              | 7.8   | 92.2               |
|                                     | 1899  | 1,294        | 82  | 1,212              | 6.3   | 93.7               |
| Average number of wage earners..... | 1909  | 50,384       | 4,601   | 45,783             | 9.1   | 90.9               |
|                                     | 1899  | 26,799       | 2,409   | 24,390             | 9.2   | 90.8               |
| Value of products.....              | 1909  | \$80,555,410 | \$11,944,730                                  | \$68,610,680       | 14.8  | 85.2               |
|                                     | 1899  | 33,718,517   | 4,407,113                                     | 29,311,404         | 13.1  | 86.9               |
| Value added by manufacture.....     | 1909  | 43,629,828   | 5,040,255                                     | 38,589,573         | 11.6  | 88.4               |
|                                     | 1899  | 17,176,488   | 1,995,613                                     | 15,179,875         | 11.6  | 88.4               |

While the greater part of the industrial activity of the state was carried on outside of cities of 10,000 and over, it may be noted that the average size of establishments located in such cities was larger than in the rest of the state, and that 14.8 per cent of the total value of products of the state was reported from these cities, although they contained but 4.9 per cent of the total population. The figures indicate that between 1899 and 1909 the relative importance of the industries located in cities of 10,000 inhabitants or over has increased—which may be explained chiefly by the fact that two cities, Hattiesburg and Jackson, which had less than 10,000 inhabitants in 1900, were added to this group in 1910.

The population, for 1910 and 1900, of the five cities which had 10,000 inhabitants or over in 1910, is given in the following statement:

| CITY.            | 1910   | 1900   |
|------------------|--------|--------|
| Meridian.....    | 23,285 | 14,050 |
| Jackson.....     | 21,202 | 7,816  |
| Vicksburg.....   | 20,814 | 14,834 |
| Natchez.....     | 11,791 | 12,210 |
| Hattiesburg..... | 11,733 | 4,175  |

The relative importance in manufacturing industry of each of these five cities is shown in the following table, in which the value of products and average number of wage earners are shown separately for 1909, 1904, and 1899:

| CITY.            | AVERAGE NUMBER OF WAGE EARNERS. |                  |                  | VALUE OF PRODUCTS. |                  |                  |
|------------------|---------------------------------|------------------|------------------|--------------------|------------------|------------------|
|                  | 1909                            | 1904             | 1899             | 1909               | 1904             | 1899             |
|                  | Meridian.....                   | 1,524            | 1,346            | 834                | \$1,237,476      | \$3,267,600      |
| Jackson.....     | 709                             | ( <sup>1</sup> ) | ( <sup>1</sup> ) | 3,112,031          | ( <sup>1</sup> ) | ( <sup>1</sup> ) |
| Vicksburg.....   | 1,202                           | 1,031            | 987              | 2,220,344          | 1,887,924        | 1,307,832        |
| Hattiesburg..... | 648                             | ( <sup>1</sup> ) | ( <sup>1</sup> ) | 1,250,892          | ( <sup>1</sup> ) | ( <sup>1</sup> ) |
| Natchez.....     | 428                             | 316              | 648              | 1,114,087          | 810,729          | 1,114,816        |

<sup>1</sup> Figures not available.

The three cities for which comparative figures are available show increases in value of products from 1904 to 1909, while Meridian and Vicksburg show increases from 1899 to 1904. In Meridian, which was the leading manufacturing city of the state in 1909, the cottonseed-oil industry was the most important, the manufacture of fertilizers, the steam-railroad repair shops, and the lumber industry ranking next in importance as measured by value of products. In Jackson also the cottonseed-oil industry ranked first, the lumber industry and the manufacture of fertilizers, and printing and publishing following in order. In Vicksburg steam-railroad repair work, cottonseed-oil mills, and the manufacture of furniture were the leading industries, while the fertilizer industry was the most important in Hattiesburg and the manufacture of cottonseed products in Natchez.

**Character of ownership.**—The table that follows has for its purpose the presentation of conditions in respect to the character of ownership, or legal organization, of manufacturing enterprises. For all industries combined comparative figures are given covering the censuses of 1909 and 1904. Comparative data for 1899 are not available. Figures for 1909 only are presented for several important industries individually. In order to avoid disclosing the operations of individual concerns, it is necessary to omit several important industries from this table and the one following.

| INDUSTRY AND CHARACTER OF OWNERSHIP.                | Number of establishments. | Average number of wage earners. | Value of products. | Value added by manufacture. |
|---|---------------------------|---------------------------------|--------------------|-----------------------------|
| <b>ALL INDUSTRIES:</b>                              |                           |                                 |                    |                             |
| 1909.....   | 2,598                     | 50,384                          | \$80,555,410       | \$43,629,828                |
| 1904.....   | 1,520                     | 38,690                          | 57,451,445         | 31,060,560                  |
| <b>Individual:</b>                                  |                           |                                 |                    |                             |
| 1909.....   | 1,353                     | 9,779                           | 11,674,333         | 8,169,366                   |
| 1904.....   | 672                       | 5,694                           | 7,597,544          | 5,282,232                   |
| <b>Firm:</b>  |                           |                                 |                    |                             |
| 1909.....   | 685                       | 7,126                           | 10,137,903         | 6,697,408                   |
| 1904.....   | 396                       | 5,882                           | 7,639,517          | 5,206,076                   |
| <b>Corporation:</b>                                 |                           |                                 |                    |                             |
| 1909.....   | 555                       | 33,467                          | 58,719,954         | 28,742,265                  |
| 1904.....   | 447                       | 27,085                          | 42,169,292         | 21,045,145                  |
| <b>Other:</b>                                       |                           |                                 |                    |                             |
| 1909.....   | 5                         | 12                              | 23,130             | 20,789                      |
| 1904.....   | 5                         | 29                              | 45,092             | 20,207                      |
| <b>Per cent of total:</b>                           |                           |                                 |                    |                             |
| 1909.....   | 100.0                     | 100.0                           | 100.0              | 100.0                       |
| 1904.....   | 100.0                     | 100.0                           | 100.0              | 100.0                       |
| <b>Individual:</b>                                  |                           |                                 |                    |                             |
| 1909.....   | 52.1                      | 19.4                            | 14.5               | 18.7                        |
| 1904.....   | 44.2                      | 14.7                            | 13.2               | 16.7                        |
| <b>Firm:</b>  |                           |                                 |                    |                             |
| 1909.....   | 26.4                      | 14.1                            | 12.0               | 15.4                        |
| 1904.....   | 26.1                      | 15.2                            | 13.3               | 16.7                        |
| <b>Corporation:</b>                                 |                           |                                 |                    |                             |
| 1909.....   | 21.4                      | 66.4                            | 72.9               | 65.9                        |
| 1904.....   | 29.4                      | 70.0                            | 73.4               | 66.5                        |
| <b>Other:</b>                                       |                           |                                 |                    |                             |
| 1909.....   | 0.2                       | ( <sup>1</sup> )                | ( <sup>1</sup> )   | ( <sup>1</sup> )            |
| 1904.....   | 0.3                       | 0.1                             | 0.1                | 0.1                         |
| <b>Foundry and machine-shop products, 1909.....</b> |                           |                                 |                    |                             |
| Individual.....                                     | 50                        | 583                             | \$1,088,324        | \$615,807                   |
| Firm.....   | 24                        | 131                             | 232,023            | 151,934                     |
| Corporation.....                                    | 13                        | 123                             | 188,572            | 129,333                     |
| Other.....  | 13                        | 329                             | 607,720            | 334,633                     |
| <b>Per cent of total.....</b>                       |                           |                                 |                    |                             |
| Individual.....                                     | 100.0                     | 100.0                           | 100.0              | 100.0                       |
| Firm.....   | 48.0                      | 22.5                            | 21.3               | 24.7                        |
| Corporation.....                                    | 26.0                      | 21.1                            | 17.3               | 21.0                        |
| Other.....  | 26.0                      | 56.4                            | 61.4               | 54.3                        |
| <b>Lumber and timber products, 1909.....</b>        |                           |                                 |                    |                             |
| Individual.....                                     | 1,647                     | 33,397                          | \$42,792,844       | \$28,586,246                |
| Firm.....   | 920                       | 7,893                           | 8,413,371          | 6,210,909                   |
| Corporation.....                                    | 507                       | 5,612                           | 7,540,553          | 5,324,757                   |
| Other.....  | 220                       | 10,982                          | 26,838,920         | 17,044,580                  |
| <b>Per cent of total.....</b>                       |                           |                                 |                    |                             |
| Individual.....                                     | 100.0                     | 100.0                           | 100.0              | 100.0                       |
| Firm.....   | 55.9                      | 23.4                            | 19.7               | 21.7                        |
| Corporation.....                                    | 30.8                      | 16.8                            | 17.0               | 18.0                        |
| Other.....  | 13.4                      | 50.8                            | 62.7               | 59.6                        |
| <b>Printing and publishing, 1909.....</b>           |                           |                                 |                    |                             |
| Individual.....                                     | 225                       | 736                             | \$1,307,604        | \$1,007,511                 |
| Firm.....   | 159                       | 439                             | 721,905            | 558,451                     |
| Corporation.....                                    | 37                        | 152                             | 262,044            | 187,748                     |
| Other.....  | 24                        | 133                             | 290,955            | 240,523                     |
| Per cent of total.....                              | 5                         | 12                              | 23,130             | 20,789                      |
| <b>Per cent of total.....</b>                       |                           |                                 |                    |                             |
| Individual.....                                     | 100.0                     | 100.0                           | 100.0              | 100.0                       |
| Firm.....   | 70.7                      | 59.6                            | 55.2               | 55.4                        |
| Corporation.....                                    | 16.4                      | 20.7                            | 20.1               | 18.6                        |
| Other.....  | 10.7                      | 18.1                            | 22.0               | 23.0                        |
| Other.....  | 2.2                       | 1.6                             | 1.8                | 2.1                         |
| <b>Turpentine and rosin, 1909.....</b>              |                           |                                 |                    |                             |
| Individual.....                                     | 64                        | 2,573                           | \$1,474,620        | \$1,126,620                 |
| Firm.....   | 15                        | 242                             | 150,349            | 118,076                     |
| Corporation.....                                    | 22                        | 368                             | 251,589            | 197,364                     |
| Other.....  | 27                        | 1,033                           | 1,063,031          | 809,180                     |
| <b>Per cent of total.....</b>                       |                           |                                 |                    |                             |
| Individual.....                                     | 100.0                     | 100.0                           | 100.0              | 100.0                       |
| Firm.....   | 23.4                      | 9.4                             | 10.8               | 10.6                        |
| Corporation.....                                    | 34.4                      | 15.1                            | 17.1               | 17.5                        |
| Other.....  | 42.2                      | 75.5                            | 72.1               | 71.9                        |

<sup>1</sup> Less than one-tenth of 1 per cent.

The most important distinction shown is that between corporate and all other forms of ownership. For all industries combined, 21.4 per cent of the total number of establishments were in 1909 under corporate ownership, as against 78.6 per cent under all other forms. The corresponding figures for 1904 were 29.4 per cent and 70.6 per cent, respectively. There was, on the other hand, an increase in the proportion of establishments operated by individuals from 44.2 per cent in 1904 to 52.1 per cent in 1909 while the proportion under firm ownership remained approximately the same. Special conditions in the lumber industry, which contributed nearly two-thirds of the total number of establishments in 1909, are largely responsible for the increase in individual ownership. In 1904 this industry showed a relatively high percentage of establishments under individual ownership, and in 1909 the proportion had increased to 55.9 per cent, owing largely to the enumeration in that year of many establishments not reported in 1904. Leaving the lumber industry out of consideration, the remaining industries show a slight increase in the proportion of establishments under corporate ownership (from 34.2 per cent in 1904 to 35.2 per cent in 1909) instead of the considerable decrease noted above for all industries, including the lumber industry. The establishments under individual ownership, too, in these remaining industries show only the small increase from 43.6 per cent in 1904 to 45.6 per cent in 1909, while the proportion under firm ownership decreased from 21.7 per cent in 1904 to 18.7 per cent in 1909.

For all industries combined, the proportion of the total value of products reported by corporations was 72.9 per cent in 1909, as compared with 73.4 per cent in 1904; the proportion reported by firms also decreased slightly, while that reported by individual concerns increased from 13.2 per cent to 14.5 per cent. The situation referred to as existing in connection with the figures for the lumber industry was of course largely responsible for these changes. It will be observed that the average value of output per establishment was much greater for establishments under corporate ownership than for those under any other form of ownership.

Individual ownership predominates in number of establishments in each of the four industries shown separately in the table, with the exception of the turpentine and rosin industry, in which establishments under corporate ownership are the most numerous. In all of these industries except printing and publishing, however, by far the larger part of the total value of products is reported by establishments operated by corporations. The steam-railroad repair shops, cotton-goods, and cottonseed-oil industries, are among the leading industries, but are so largely carried on by a single class, corporations, that they are not presented in the table by character of ownership.

**Size of establishment.**—The tendency for manufacturing to become concentrated in large establishments, or the reverse, is a matter of interest from the standpoint of industrial organization. In order to throw some light upon it, the following table groups the establishments according to the value of their products.

| INDUSTRY AND VALUE OF PRODUCTS.                     | Number of establishments. | Average number of wage earners. | Value of products.  | Value added by manufacture. |
|---|---------------------------|---------------------------------|---------------------|-----------------------------|
| <b>ALL INDUSTRIES:</b>                              |                           |                                 |                     |                             |
| 1909.....   | 2,598                     | 59,384                          | \$80,555,410        | \$43,629,828                |
| 1904.....   | 1,520                     | 38,690                          | 57,451,445          | 31,050,560                  |
| Less than \$5,000:                                  |                           |                                 |                     |                             |
| 1909.....   | 1,150                     | 3,260                           | 2,573,206           | 1,018,351                   |
| 1904.....   | 766                       | 1,045                           | 1,172,458           | 871,600                     |
| \$5,000 and less than \$20,000:                     |                           |                                 |                     |                             |
| 1909.....   | 785                       | 9,838                           | 8,080,215           | 5,717,616                   |
| 1904.....   | 510                       | 4,351                           | 5,551,003           | 3,872,481                   |
| \$20,000 and less than \$100,000:                   |                           |                                 |                     |                             |
| 1909.....   | 407                       | 12,470                          | 19,433,830          | 12,336,122                  |
| 1904.....   | 383                       | 11,457                          | 16,350,354          | 10,256,820                  |
| \$100,000 and less than \$1,000,000:                |                           |                                 |                     |                             |
| 1909.....   | 190                       | 27,097                          | 50,259,150          | 23,457,730                  |
| 1904.....   | 152                       | 21,836                          | 34,377,512          | 16,049,799                  |
| Per cent of total:                                  |                           |                                 |                     |                             |
| 1909.....   | 100.0                     | 100.0                           | 100.0               | 100.0                       |
| 1904.....   | 100.0                     | 100.0                           | 100.0               | 100.0                       |
| Less than \$5,000:                                  |                           |                                 |                     |                             |
| 1909.....   | 44.5                      | 6.5                             | 3.2                 | 4.4                         |
| 1904.....   | 30.7                      | 2.7                             | 2.0                 | 2.8                         |
| \$5,000 and less than \$20,000:                     |                           |                                 |                     |                             |
| 1909.....   | 30.2                      | 13.6                            | 10.0                | 13.1                        |
| 1904.....   | 34.1                      | 11.2                            | 9.7                 | 12.2                        |
| \$20,000 and less than \$100,000:                   |                           |                                 |                     |                             |
| 1909.....   | 18.0                      | 25.2                            | 24.4                | 28.3                        |
| 1904.....   | 25.2                      | 29.6                            | 28.5                | 32.4                        |
| \$100,000 and less than \$1,000,000:                |                           |                                 |                     |                             |
| 1909.....   | 7.3                       | 54.8                            | 62.4                | 54.2                        |
| 1904.....   | 10.0                      | 56.4                            | 59.8                | 52.6                        |
| Average per establishment:                          |                           |                                 |                     |                             |
| 1909.....   | 19                        | 19                              | \$31,007            | \$16,794                    |
| 1904.....   | 25                        | 25                              | 37,797              | 20,823                      |
| <b>Foundry and machine-shop products, 1909.....</b> | <b>50</b>                 | <b>583</b>                      | <b>\$1,088,324</b>  | <b>\$615,897</b>            |
| Less than \$5,000.....                              | 14                        | 20                              | 34,920              | 24,420                      |
| \$5,000 and less than \$20,000.....                 | 23                        | 151                             | 248,505             | 166,005                     |
| \$20,000 and less than \$100,000.....               | 13                        | 412                             | 804,899             | 424,863                     |
| Per cent of total.....                              | 100.0                     | 100.0                           | 100.0               | 100.0                       |
| Less than \$5,000.....                              | 28.0                      | 3.4                             | 3.2                 | 4.0                         |
| \$5,000 and less than \$20,000.....                 | 46.0                      | 25.9                            | 22.8                | 27.1                        |
| \$20,000 and less than \$100,000.....               | 26.0                      | 70.7                            | 74.0                | 69.0                        |
| Average per establishment.....                      | 12                        | 12                              | \$21,766            | \$12,318                    |
| <b>Lumber and timber products, 1909.....</b>        | <b>1,647</b>              | <b>33,397</b>                   | <b>\$42,792,844</b> | <b>\$28,586,246</b>         |
| Less than \$5,000.....                              | 805                       | 2,610                           | 1,698,245           | 1,319,164                   |
| \$5,000 and less than \$20,000.....                 | 455                       | 4,644                           | 4,760,790           | 3,614,496                   |
| \$20,000 and less than \$100,000.....               | 209                       | 8,480                           | 12,495,579          | 8,079,012                   |
| \$100,000 and less than \$1,000,000.....            | 88                        | 17,683                          | 23,832,230          | 14,073,574                  |
| Per cent of total.....                              | 100.0                     | 100.0                           | 100.0               | 100.0                       |
| Less than \$5,000.....                              | 48.9                      | 7.8                             | 4.0                 | 4.6                         |
| \$5,000 and less than \$20,000.....                 | 27.6                      | 13.9                            | 11.1                | 12.6                        |
| \$20,000 and less than \$100,000.....               | 18.2                      | 25.3                            | 29.2                | 30.4                        |
| \$100,000 and less than \$1,000,000.....            | 6.3                       | 52.9                            | 55.7                | 52.4                        |
| Average per establishment.....                      | 20                        | 20                              | \$25,982            | \$17,357                    |
| <b>Printing and publishing, 1909.....</b>           | <b>225</b>                | <b>736</b>                      | <b>\$1,307,604</b>  | <b>\$1,007,511</b>          |
| Less than \$5,000.....                              | 154                       | 266                             | 354,280             | 270,188                     |
| \$5,000 and less than \$20,000.....                 | 57                        | 240                             | 459,131             | 354,838                     |
| \$20,000 and less than \$100,000.....               | 14                        | 230                             | 494,184             | 382,485                     |
| Per cent of total.....                              | 100.0                     | 100.0                           | 100.0               | 100.0                       |
| Less than \$5,000.....                              | 68.4                      | 36.1                            | 27.1                | 26.8                        |
| \$5,000 and less than \$20,000.....                 | 25.3                      | 32.6                            | 35.1                | 35.2                        |
| \$20,000 and less than \$100,000.....               | 6.2                       | 31.2                            | 37.8                | 38.0                        |
| Average per establishment.....                      | 3                         | 3                               | \$5,812             | \$4,478                     |
| <b>Turpentine and rosin, 1909.....</b>              | <b>64</b>                 | <b>2,573</b>                    | <b>\$1,474,629</b>  | <b>\$1,125,520</b>          |
| Less than \$5,000.....                              | 13                        | 47                              | 42,164              | 24,135                      |
| \$5,000 and less than \$20,000.....                 | 32                        | 526                             | 372,174             | 284,150                     |
| \$20,000 and less than \$100,000.....               | 16                        | 889                             | 552,123             | 401,729                     |
| \$100,000 and less than \$1,000,000.....            | 3                         | 1,111                           | 508,168             | 355,506                     |
| Per cent of total.....                              | 100.0                     | 100.0                           | 100.0               | 100.0                       |
| Less than \$5,000.....                              | 20.3                      | 1.8                             | 2.9                 | 2.1                         |
| \$5,000 and less than \$20,000.....                 | 50.0                      | 20.4                            | 25.2                | 25.2                        |
| \$20,000 and less than \$100,000.....               | 25.0                      | 34.6                            | 37.4                | 41.0                        |
| \$100,000 and less than \$1,000,000.....            | 4.7                       | 43.2                            | 34.5                | 31.6                        |
| Average per establishment.....                      | 40                        | 40                              | \$23,041            | \$17,586                    |

<sup>1</sup> Includes the group "\$1,000,000 and over."

<sup>2</sup> Includes the group "\$100,000 and less than \$1,000,000."

The table also shows the average size of establishments for all industries combined and for important industries separately, as measured by number of wage earners, value of products, and value added by manufacture. The totals for all industries are shown for the last two censuses, while for certain important industries figures are given for 1909 only.

This table shows that, in 1909, of the 2,598 establishments only 190, or 7.3 per cent, had a value of product exceeding \$100,000. These establishments, however, employed an average of 27,607 wage earners, or 54.8 per cent, of the total number in all establishments, and reported 62.4 per cent of the total value of products and 54.2 per cent of the total value added by manufacture.

On the other hand, the very small establishments—that is, those having a value of products less than \$5,000—constituted a considerable proportion (44.5 per cent) of the total number of establishments, but the value of their products amounted to only 3.2 per cent of the total.

The proportion of the total value of products reported from establishments having products valued at between \$20,000 and \$100,000 decreased from 28.5 per cent in 1904 to 24.4 per cent in 1909, while the proportion reported for each of the other classes increased, the largest increase being shown for those having products valued at not less than \$100,000. The average value of products per establishment decreased from \$37,797 in 1904 to \$31,007 in 1909 and the value added by manufacture from \$20,823 to \$16,794. The average number of wage earners per establishment decreased during the same period from 25 to 19. This decrease in the average size of the establishment is confined almost entirely to the lumber industry, where, as elsewhere explained, there has been a marked increase in the number of small establishments reported.

In the lumber industry 48.9 per cent of the 1,647 establishments had a product valued at less than \$5,000, and only 5.3 per cent a product valued at

\$100,000 or over; the 88 establishments included in the latter group, however, reported 55.7 per cent of the total value of products of the industry.

In some respects, and especially from the standpoint of conditions under which persons engaged in manufactures work, the best classification of establishments to bring out the feature of size is a classification according to the number of wage earners employed. The next table shows, for 1909, such a classification for all industries combined and for 12 important industries individually, and gives not only the number of establishments falling in each group but also the average number of wage earners employed.

The per cent distribution of the number of establishments is not shown in this table. Of the 2,598 establishments reported for all industries, 2.7 per cent employed no wage earners; 50 per cent, from 1 to 5; 29.9 per cent, 6 to 20; and only 1.2 per cent employed more than 250 wage earners. The most numerous single group consists of the 1,299 establishments employing from 1 to 5 wage earners, and the next of the 777 establishments employing from 6 to 20 wage earners. There were 22 establishments that employed between 250 and 500 wage earners, and 1 which employed over 1,000.

Of the total number of wage earners 45.9 per cent were in establishments employing over 100 wage earners. The single group having the largest number of employees was the group of establishments employing from 21 to 50 wage earners. This group employed 9,131 wage earners, or 18.1 per cent of the total. Ten of the 14 cotton mills employed over 100 wage earners each, totaling 91.4 per cent of all the wage earners in the industry, while in the railroad repair shop industry 76.4 per cent of all wage earners were in shops employing over 250 wage earners each. In the cottonseed-oil industry, on the other hand, 81.7 per cent of the wage earners were in mills employing not more than 50 wage earners each.



| INDUSTRY.   | Total. | ESTABLISHMENTS EMPLOYING— |                      |                       |                        |                         |                          |                          |                            |                          |
|---|--------|---------------------------|----------------------|-----------------------|------------------------|-------------------------|--------------------------|--------------------------|----------------------------|--------------------------|
|   |        | No wage earners.          | 1 to 5 wage earners. | 6 to 20 wage earners. | 21 to 50 wage earners. | 51 to 100 wage earners. | 101 to 250 wage earners. | 251 to 500 wage earners. | 501 to 1,000 wage earners. | Over 1,000 wage earners. |
| NUMBER OF ESTABLISHMENTS.   |        |                           |                      |                       |                        |                         |                          |                          |                            |                          |
| All industries.....   | 2,598  | 71                        | 1,299                | 777                   | 286                    | 80                      | 53                       | 22                       | 9                          | 1                        |
| Bread and other bakery products.....  | 79     | 7                         | 56                   | 16                    | 1                      | 1                       | 1                        | 1                        | 1                          | 1                        |
| Brick and tile.....   | 73     | 1                         | 29                   | 31                    | 11                     | 1                       | 1                        | 1                        | 1                          | 1                        |
| Canning and preserving.....   | 11     | 1                         | 1                    | 2                     | 2                      | 3                       | 2                        | 1                        | 1                          | 1                        |
| Cars and general shop construction and repairs by steam-railroad companies..... | 10     | 1                         | 1                    | 1                     | 1                      | 2                       | 2                        | 2                        | 2                          | 1                        |
| Cotton goods, including cotton small wares.....                                 | 11     | 1                         | 1                    | 1                     | 1                      | 3                       | 7                        | 3                        | 1                          | 1                        |
| Fertilizers.....  | 10     | 1                         | 1                    | 2                     | 3                      | 3                       | 1                        | 1                        | 1                          | 1                        |
| Foundry and machine-shop products.....  | 50     | 1                         | 24                   | 19                    | 5                      | 1                       | 1                        | 1                        | 1                          | 1                        |
| Ice, manufactured.....  | 51     | 1                         | 32                   | 18                    | 1                      | 1                       | 1                        | 1                        | 1                          | 1                        |
| Lumber and timber products.....   | 1,647  | 19                        | 707                  | 540                   | 182                    | 53                      | 35                       | 14                       | 6                          | 1                        |
| Oil, cottonseed, and cake.....  | 87     | 1                         | 6                    | 27                    | 47                     | 7                       | 1                        | 1                        | 1                          | 1                        |
| Printing and publishing.....  | 225    | 25                        | 173                  | 24                    | 3                      | 1                       | 1                        | 1                        | 1                          | 1                        |
| Turpentine and rosin.....   | 64     | 2                         | 9                    | 27                    | 18                     | 3                       | 3                        | 1                        | 1                          | 1                        |
| All other industries.....   | 277    | 16                        | 171                  | 79                    | 13                     | 5                       | 2                        | 1                        | 1                          | 1                        |
| AVERAGE NUMBER OF WAGE EARNERS.   |        |                           |                      |                       |                        |                         |                          |                          |                            |                          |
| All industries.....   | 50,384 | 3,592                     | 8,872                | 9,131                 | 5,099                  | 8,467                   | 8,038                    | 5,467                    | 1,118                      | 1,118                    |
| Bread and other bakery products.....  | 285    | 140                       | 145                  | 145                   | 100                    | 239                     | 284                      | 1,101                    | 1,118                      | 1,118                    |
| Brick and tile.....   | 939    | 98                        | 358                  | 383                   | 100                    | 243                     | 284                      | 1,101                    | 1,118                      | 1,118                    |
| Canning and preserving.....   | 817    | 4                         | 20                   | 57                    | 239                    | 243                     | 284                      | 1,101                    | 1,118                      | 1,118                    |
| Cars and general shop construction and repairs by steam-railroad companies..... | 2,572  | 8                         | 29                   | 174                   | 395                    | 805                     | 1,101                    | 1,118                    | 1,118                      | 1,118                    |
| Cotton goods, including cotton small wares.....                                 | 2,645  | 9                         | 107                  | 218                   | 1,227                  | 1,191                   | 1,191                    | 1,118                    | 1,118                      | 1,118                    |
| Fertilizers.....  | 449    | 1                         | 27                   | 107                   | 189                    | 125                     | 125                      | 1,118                    | 1,118                      | 1,118                    |
| Foundry and machine-shop products.....  | 583    | 54                        | 215                  | 164                   | 150                    | 150                     | 150                      | 1,118                    | 1,118                      | 1,118                    |
| Ice, manufactured.....  | 341    | 116                       | 195                  | 30                    | 30                     | 30                      | 30                       | 1,118                    | 1,118                      | 1,118                    |
| Lumber and timber products.....   | 33,397 | 2,325                     | 6,086                | 5,644                 | 3,804                  | 5,560                   | 5,140                    | 3,711                    | 1,118                      | 1,118                    |
| Oil, cottonseed, and cake.....  | 2,503  | 25                        | 413                  | 1,606                 | 450                    | 450                     | 450                      | 1,118                    | 1,118                      | 1,118                    |
| Printing and publishing.....  | 736    | 408                       | 242                  | 86                    | 164                    | 522                     | 253                      | 655                      | 1,118                      | 1,118                    |
| Turpentine and rosin.....   | 2,573  | 13                        | 375                  | 591                   | 164                    | 522                     | 253                      | 655                      | 1,118                      | 1,118                    |
| All other industries.....   | 2,514  | 408                       | 779                  | 434                   | 352                    | 245                     | 296                      | 1,118                    | 1,118                      | 1,118                    |
| PER CENT OF AVERAGE NUMBER OF WAGE EARNERS.                                     |        |                           |                      |                       |                        |                         |                          |                          |                            |                          |
| All industries.....   | 100.0  | 7.1                       | 17.6                 | 18.1                  | 11.3                   | 16.8                    | 16.0                     | 10.9                     | 2.2                        | 2.2                      |
| Bread and other bakery products.....  | 100.0  | 40.1                      | 50.9                 | 40.8                  | 10.6                   | 28.7                    | 33.5                     | 42.8                     | 11.1                       | 3.3                      |
| Brick and tile.....   | 100.0  | 10.4                      | 38.1                 | 40.8                  | 10.6                   | 28.2                    | 33.5                     | 42.8                     | 11.1                       | 3.3                      |
| Canning and preserving.....   | 100.0  | 0.5                       | 2.4                  | 6.7                   | 28.2                   | 28.7                    | 33.5                     | 42.8                     | 11.1                       | 3.3                      |
| Cars and general shop construction and repairs by steam-railroad companies..... | 100.0  | 0.3                       | 1.1                  | 6.8                   | 15.4                   | 33.6                    | 45.0                     | 42.8                     | 11.1                       | 3.3                      |
| Cotton goods, including cotton small wares.....                                 | 100.0  | 0.3                       | 0.3                  | 8.2                   | 46.4                   | 45.0                    | 45.0                     | 42.8                     | 11.1                       | 3.3                      |
| Fertilizers.....  | 100.0  | 0.2                       | 6.0                  | 23.8                  | 42.1                   | 27.8                    | 25.7                     | 11.1                     | 3.3                        | 3.3                      |
| Foundry and machine-shop products.....  | 100.0  | 9.3                       | 36.0                 | 28.1                  | 25.7                   | 25.7                    | 25.7                     | 11.1                     | 3.3                        | 3.3                      |
| Ice, manufactured.....  | 100.0  | 34.0                      | 57.2                 | 8.8                   | 8.8                    | 16.6                    | 15.4                     | 11.1                     | 3.3                        | 3.3                      |
| Lumber and timber products.....   | 100.0  | 7.0                       | 18.2                 | 16.0                  | 11.4                   | 16.6                    | 15.4                     | 11.1                     | 3.3                        | 3.3                      |
| Oil, cottonseed, and cake.....  | 100.0  | 1.0                       | 16.5                 | 64.2                  | 18.3                   | 18.3                    | 18.3                     | 11.1                     | 3.3                        | 3.3                      |
| Printing and publishing.....  | 100.0  | 55.4                      | 32.9                 | 11.7                  | 6.4                    | 20.3                    | 9.8                      | 25.5                     | 11.1                       | 3.3                      |
| Turpentine and rosin.....   | 100.0  | 0.5                       | 14.6                 | 23.0                  | 6.4                    | 20.3                    | 9.8                      | 25.5                     | 11.1                       | 3.3                      |
| All other industries.....   | 100.0  | 16.2                      | 31.0                 | 17.3                  | 14.0                   | 9.7                     | 11.8                     | 11.1                     | 3.3                        | 3.3                      |

Expenses.—As stated in the Introduction, the census does not purport to furnish figures that can be used for determining the cost of manufacture and profits. Facts of interest can, however, be brought out concerning the relative importance of the different classes of expenses which make up the total.

The following table shows in percentages, for 1909, the distribution of expenses among the classes indicated for all industries combined and for certain important industries separately. The figures on which the percentages are based appear in Table II, page 18.

This table shows that, for all industries combined, 53.7 per cent of the total expense was incurred for materials, 32.6 per cent for services—that is, salaries and wages—and but 13.6 per cent for other purposes.

As would be expected, these proportions vary greatly in the different industries.

| INDUSTRY.   | PER CENT OF TOTAL EXPENSES REPORTED. |        |            |                         |
|---|--------------------------------------|--------|------------|-------------------------|
|   | Salaries.                            | Wages. | Materials. | Miscellaneous expenses. |
| All industries.....   | 5.3                                  | 27.3   | 53.7       | 13.6                    |
| Bread and other bakery products.....  | 2.4                                  | 17.9   | 72.0       | 7.7                     |
| Brick and tile.....   | 10.3                                 | 45.7   | 32.4       | 11.6                    |
| Canning and preserving.....   | 9.9                                  | 13.0   | 68.0       | 9.1                     |
| Cars and general shop construction and repairs by steam-railroad companies..... | 4.6                                  | 48.2   | 44.0       | 3.3                     |
| Cotton goods, including cotton small wares.....                                 | 3.6                                  | 23.6   | 69.2       | 3.6                     |
| Fertilizers.....  | 4.1                                  | 8.0    | 79.1       | 8.7                     |
| Foundry and machine-shop products.....  | 9.8                                  | 31.6   | 50.7       | 7.9                     |
| Ice, manufactured.....  | 14.2                                 | 31.3   | 35.3       | 10.2                    |
| Lumber and timber products.....   | 5.1                                  | 36.3   | 39.9       | 19.7                    |
| Oil, cottonseed, and cake.....  | 3.9                                  | 5.8    | 84.2       | 6.2                     |
| Printing and publishing.....  | 13.1                                 | 41.1   | 31.9       | 13.9                    |
| Turpentine and rosin.....   | 10.8                                 | 47.4   | 28.5       | 13.3                    |
| All other industries.....   | 7.4                                  | 20.3   | 64.2       | 8.1                     |

Engines and power.—The following table shows, for all industries combined, the number of engines or other motors, according to their character, employed in generating power (including electric motors operated by purchased current) and their total horsepower at the censuses of 1909, 1904, and 1899. It also shows separately the number and horsepower of electric motors, including those operated by current generated in the manufacturing establishments.

| POWER.   | NUMBER OF ENGINES OR MOTORS. |                  |                   | HORSEPOWER.    |                  |                   | PER CENT DISTRIBUTION OF HORSEPOWER. |                  |              |
|--|------------------------------|------------------|-------------------|----------------|------------------|-------------------|--------------------------------------|------------------|--------------|
|  | 1909                         | 1904             | 1899 <sup>1</sup> | 1909           | 1904             | 1899 <sup>1</sup> | 1909                                 | 1904             | 1899         |
| <b>Primary power, total.....</b>               | <b>3,261</b>                 | <b>1,534</b>     | <b>1,137</b>      | <b>206,222</b> | <b>110,338</b>   | <b>65,738</b>     | <b>100.0</b>                         | <b>100.0</b>     | <b>100.0</b> |
| Owned.....                                     | 2,924                        | 1,534            | 1,137             | 203,661        | 109,805          | 65,236            | 98.8                                 | 99.5             | 99.2         |
| Steam.....                                     | 2,747                        | 1,475            | 1,102             | 202,307        | 109,418          | 64,731            | 98.1                                 | 99.2             | 98.5         |
| Gas.....                                       | 166                          | 53               | 17                | 1,077          | 220              | 144               | 0.5                                  | 0.2              | 0.2          |
| Water wheels....                               | 11                           | 3                | 18                | 238            | 65               | 361               | 0.1                                  | 0.1              | 0.5          |
| Water motors....                               | 3                            | ( <sup>2</sup> ) |                   | 12             | ( <sup>2</sup> ) |                   | ( <sup>2</sup> )                     | ( <sup>2</sup> ) |              |
| Other.....                                     |                              |                  |                   | 39             | 90               |                   | ( <sup>2</sup> )                     | 0.1              |              |
| Rented.....                                    | 327                          | ( <sup>2</sup> ) | ( <sup>2</sup> )  | 2,561          | 533              | 502               | 1.2                                  | 0.5              | 0.8          |
| Electric.....                                  | 327                          | ( <sup>2</sup> ) | ( <sup>2</sup> )  | 2,496          | 508              | 382               | 1.2                                  | 0.5              | 0.6          |
| Other.....                                     |                              |                  |                   | 65             | 25               | 120               | ( <sup>2</sup> )                     | ( <sup>2</sup> ) | 0.2          |
| <b>Electric motors.</b>                        | <b>517</b>                   | <b>50</b>        | <b>15</b>         | <b>7,627</b>   | <b>1,367</b>     | <b>590</b>        | <b>100.0</b>                         | <b>100.0</b>     | <b>100.0</b> |
| Run by current generated by establishment..... | 190                          | 50               | 15                | 5,131          | 859              | 208               | 67.3                                 | 62.8             | 35.3         |
| Run by rented power.....                       | 327                          | ( <sup>2</sup> ) | ( <sup>2</sup> )  | 2,496          | 508              | 382               | 32.7                                 | 37.2             | 64.7         |

<sup>1</sup> Includes the neighborhood industries and hand trades, omitted in 1904 and 1909.

<sup>2</sup> Not reported.

<sup>3</sup> Less than one-tenth of 1 per cent.

The table indicates that the increase in primary power was mainly in power generated by steam, which constituted 98.1 per cent of the total in 1909. Among the minor sources of power, an increased use of gas

engines is shown, the number being 166 in 1909, as against 53 in 1904, and 17 in 1899. The figures also show that the practice of renting power is on the increase, 1.2 per cent of the total being rented in 1909, as against but five-tenths of 1 per cent in 1904. The use of electric motors for the purpose of applying the power generated within the establishments is also shown to be rapidly becoming more common, the horsepower of such motors having increased from 208 in 1899 to 859 in 1904 and 5,131 in 1909.

Fuel.—Closely related to the question of kind of power employed is that of the fuel consumed in generating this power, or otherwise used as material in the manufacturing processes. The following table shows the quantity of each kind of fuel used in 1909 by totals for all industries combined and for certain selected industries:

| INDUSTRY.   | Anthracite coal (tons). | Bituminous coal (tons). | Coke (tons). | Wood (cords). | Oil, including gasoline (barrels). | Gas (1,000 feet). |
|---|-------------------------|-------------------------|--------------|---------------|------------------------------------|-------------------|
| <b>All industries<sup>1</sup>.....</b>  | <b>3,762</b>            | <b>409,390</b>          | <b>5,254</b> | <b>88,325</b> | <b>10,908</b>                      | <b>11,292</b>     |
| Bread and other bakery products.....  | 597                     | 150                     | 4,184        | 85            | 136                                |                   |
| Brick and tile.....   | 41,897                  | 295                     | 39,575       | 4             |                                    |                   |
| Canning and preserving.....   | 1,996                   | 18                      | 1,794        | 158           | 434                                |                   |
| Cars and general shop construction and repairs by steam-railroad companies..... |                         | 31,574                  | 649          |               | 2,391                              |                   |
| Cotton goods, including cotton small wares.....                                 |                         | 31,103                  |              | 9,990         |                                    |                   |
| Fertilizers.....  |                         | 18,080                  | 23           | 1,540         |                                    |                   |
| Foundry and machine-shop products.....  | 1,269                   | 8,050                   | 1,766        | 463           | 669                                |                   |
| Gas, illuminating and heating.....  | 12,734                  | 1,767                   |              |               | 5,306                              |                   |
| Ice, manufactured.....  | 45,487                  |                         |              | 8,450         | 14                                 |                   |
| Lumber and timber products.....   | 1,760                   | 51,135                  | 100          | 10,582        | 1,009                              |                   |
| Oil, cottonseed, and cake.....  | 720                     | 147,191                 |              | 859           |                                    |                   |
| Printing and publishing.....  | 1                       | 484                     |              | 62            | 486                                | 652               |
| Turpentine and rosin.....   |                         |                         |              | 7,035         | 200                                | 10,000            |
| All other industries.....   | 72                      | 19,044                  | 463          | 3,611         | 584                                | 70                |

<sup>1</sup> In addition there were 981 tons of other varieties of fuel reported.

SUPPLEMENTARY DATA REGARDING IMPORTANT INDUSTRIES.

(With statistics for laundries and custom sawmills and gristmills.)

For certain industries the Census Bureau collects, by means of special schedules, details regarding the quantity and cost of materials and the quantity and value of products, and the number and kind of machines used in manufactures which do not appear on the general schedule. Certain data of this character for six important industries in Mississippi are here presented.

**Lumber.**—The lumber industry showed a considerable growth from 1899 to 1909. A statement of the principal products of the sawmill branch of the industry as reported at the censuses of 1909 and 1899 is given below.

| PRODUCT.                       | QUANTITY. |           |
|--------------------------------|-----------|-----------|
|                                | 1909      | 1899      |
| Rough lumber..... M feet b. m. | 2,572,669 | 1,206,265 |
| Shingles..... thousands..      | 151,303   | 32,027    |
| Lath..... thousands..          | 90,920    | 6,983     |

The production of rough lumber increased from 1,206,265 M feet board measure in 1899 to 2,572,669 M feet board measure in 1909. Of the entire cut for 1909, 82.2 per cent was yellow pine. The other principal varieties sawed, in the order of their importance, were oak, gum, cottonwood, cypress, poplar, hickory, ash, tupelo, and elm, ranging in quantity from 168,508 M feet to 6,090 M feet board measure.

**Oil, cottonseed, and cake.**—This industry, which ranks second in the state in value of products, shows a substantial increase for the decade. The following table shows in detail the quantity of cotton seed crushed and the quantities of crude products manufactured for the census years 1909, 1904, and 1899:

| MATERIAL OR PRODUCT.             | QUANTITY.  |            |            |
|----------------------------------|------------|------------|------------|
|                                  | 1909       | 1904       | 1899       |
| Cotton seed, crushed..... tons.. | 550,357    | 550,396    | 394,078    |
| Crude products manufactured:     |            |            |            |
| Oil..... gallons..               | 24,380,280 | 22,075,991 | 15,033,565 |
| Meal and cake..... tons..        | 244,738    | 228,122    | 141,529    |
| Hulls..... tons..                | 181,797    | 198,464    | 185,060    |
| Linters..... pounds..            | 24,237,536 | 17,418,033 | 9,190,737  |

The figures presented include all cotton seed crushed, whether by establishments where the exclusive or chief products were those obtained from cotton seed,

or by such mills as were primarily engaged in the manufacture of other products but incidentally crushed some cotton seed. Furthermore, the crude products reported represent the total production derived from crushing cotton seed, whether sold as such or used as intermediate products in further processes of manufacture, such as the refining of oil and the mixing of fertilizer and feed.

Of the 89 cottonseed-oil mills reported in 1909 as crushing seed, 6 crushed less than 1,000 tons each during the census year; 5 crushed 1,000 but less than 2,000 tons; 27 crushed 2,000 but less than 5,000 tons; 34 crushed 5,000 but less than 10,000 tons; and 17 crushed 10,000 tons but less than 20,000 tons.

In 1909 the ratios which the weight of the several products bore to the total weight of the seed when received at the mill were: Crude oil, 16.3 per cent; meal and cake, 43.8 per cent; hulls, 32.5 per cent; and linters, 2.2 per cent; whereas, in 1904 the proportions were: Crude oil, 15.5 per cent; meal and cake, 41. per cent; hulls, 35.7 per cent; and linters, 1.6 per cent. It is interesting to note that from 1899 to 1909 there was an increase of 2 in the percentage of oil, 7.9 in that for meal and cake, and 1 in that for linters, while in the percentage for hulls there was a decrease of 14.4. The reduction in the weight of hulls may be accounted for by the closer delinting of the seed, which permits a better segregation of the meats from the hulls, and also by the introduction of cold-process mills which extract the oil from the seed without hulling, the resulting cake being disposed of as cake and meal.

**Cotton goods.**—The growth of cotton manufactures in the South is one of the most important features of recent industrial development. The progress of the industry in Mississippi during the past 10 years is shown in the following table, which gives statistics in regard to materials, products, and machinery for 1909, 1904, and 1899.

The principal material used is domestic cotton, of which 16,371,192 pounds were consumed in 1909, as compared with 10,363,458 pounds in 1899. The principal product is bleached and unbleached sheetings and shirtings, the output of which increased from 3,797,382 square yards in 1899 to 17,225,461 square yards in 1909, or 353.6 per cent. The quantities of drills, ticks, denims, and stripes, and of yarns manufactured for sale reported were all smaller in 1909 than in 1904.

The number of producing spindles increased from 75,122 in 1899 to 153,804 in 1909, and the number of looms from 2,464 to 4,733.

| MATERIAL, PRODUCT, OR MACHINE.  | 1909               | 1904               | 1899               |
|---|--------------------|--------------------|--------------------|
| <b>Materials used, total cost.....</b>  | <b>\$2,042,150</b> | <b>\$1,648,842</b> | <b>\$767,327</b>   |
| Cotton, domestic:   |                    |                    |                    |
| Pounds.....   | 16,371,192         | 13,007,025         | 10,363,458         |
| Cost.....   | \$1,797,222        | \$1,404,662        | \$623,576          |
| Starch.....   | \$12,769           | \$12,272           | \$7,275            |
| Chemicals and dyestuffs.....  | \$31,012           | \$30,363           | \$33,912           |
| Fuel and rent of power and heat.....  | \$101,557          | \$93,388           | \$45,709           |
| All other materials.....  | \$99,500           | \$90,157           | \$46,855           |
| <b>Products, total value.....</b>   | <b>\$3,102,398</b> | <b>\$2,462,808</b> | <b>\$1,472,835</b> |
| Brown or bleached sheetings and shirtings:                                      |                    |                    |                    |
| Square yards.....   | 17,225,461         | 7,740,785          | 3,797,382          |
| Value.....  | \$908,094          | \$337,979          | \$363,764          |
| Drills:   |                    |                    |                    |
| Square yards.....   | 7,705,349          | 8,883,005          | 4,436,078          |
| Value.....  | \$437,721          | \$472,705          | \$281,240          |
| Ticks, denims, and stripes:   |                    |                    |                    |
| Square yards.....   | 3,000,420          | 4,611,716          | .....              |
| Value.....  | \$226,833          | \$395,688          | .....              |
| Yarns, for sale:  |                    |                    |                    |
| Pounds.....   | 1,119,504          | 1,401,411          | 1,089,493          |
| Value.....  | \$220,920          | \$273,667          | \$126,756          |
| Cotton waste, for sale:   |                    |                    |                    |
| Pounds.....   | 1,018,718          | 868,038            | 1,181,753          |
| Value.....  | \$28,550           | \$37,581           | \$14,366           |
| All other products.....   | \$1,280,269        | \$945,188          | \$686,709          |
| <b>Machinery:</b>   |                    |                    |                    |
| Spindles (producing, not including doubling and twisting spindles), number..... | 153,804            | 125,352            | 75,122             |
| Looms, number.....  | 4,733              | 3,472              | 2,464              |

**Fertilizers.**—The principal products manufactured during 1909 and 1904, by kind, quantity, and value, are shown in the following statement:

| PRODUCT.                                    | 1909               | 1904               |
|---|--------------------|--------------------|
| <b>Total value.....</b>                     | <b>\$2,125,029</b> | <b>\$1,082,387</b> |
| Superphosphates from minerals, bones, etc.: |                    |                    |
| Tons.....                                   | 59,902             | 5,976              |
| Value.....                                  | \$540,200          | \$62,740           |
| Complete fertilizers:                       |                    |                    |
| Tons.....                                   | 72,193             | 50,153             |
| Value.....                                  | \$1,107,632        | \$811,394          |
| Other fertilizers:                          |                    |                    |
| Tons.....                                   | 1,006              | 4,243              |
| Value.....                                  | \$17,424           | \$59,737           |
| All other products.....                     | \$390,773          | \$148,510          |

The table does not include fertilizers to the value of \$616,052 made in 13 establishments in 1909, of which 12 were engaged primarily in the manufacture of cottonseed oil and cake and 1 in the manufacture of food preparations. A total of 33,971 tons of fertilizers was made by these establishments, representing 21,030 tons of complete fertilizers, 8,936 tons of ammoniated fertilizers, 1,512 tons of concentrated phosphates, and 2,493 tons of other fertilizers.

Both the total quantity and value of all kinds of fertilizers shown in the above table practically doubled during the period 1904-1909. Complete fertilizers was the chief product both as to quantity and value in both years, representing more than one-half of the total quantity and value of all fertilizer products in 1909 and about three-fourths in 1904.

**Turpentine and rosin.**—The recent decline in this industry is brought out in the following table, which gives the quantities and values of the different products for 1909, 1904, and 1899:

| PRODUCT.                  | 1909               | 1904               | 1899               |
|---------------------------|--------------------|--------------------|--------------------|
| <b>Total value.....</b>   | <b>\$1,474,629</b> | <b>\$2,365,720</b> | <b>\$1,772,435</b> |
| Spirits of turpentine:    |                    |                    |                    |
| Gallons.....              | 1,588,786          | 3,160,371          | 3,277,617          |
| Value.....                | \$732,334          | \$1,473,530        | \$1,253,934        |
| Rosin:                    |                    |                    |                    |
| Barrels (280 pounds)..... | 192,508            | 362,835            | 409,869            |
| Value.....                | \$739,799          | \$892,028          | \$461,165          |
| All other products.....   | \$2,496            | \$102              | \$57,336           |

The working unit in turpentine operations is called a crop, which consists of 10,500 boxes or cups. In 1909 there were 1,053 crops produced in the state, of which 271 were from virgin trees, 301 from the second year, 328 from the third year, and 153 from older trees. Of the total number of crops worked, 182 were gathered through the new cup system, comprising 90 crops from virgin trees, 49 from second year, 40 from third year, and 3 from older trees.

**Printing and publishing.**—The following table, containing statistics of the newspaper and periodical branch of the printing and publishing industry, shows the number of publications, with total circulation, classified according to frequency of issue:

| PERIOD OF ISSUE.       | NUMBER OF PUBLICATIONS. |            |            | AGGREGATE CIRCULATION PER ISSUE. |                |                |
|------------------------|-------------------------|------------|------------|----------------------------------|----------------|----------------|
|                        | 1909                    | 1904       | 1899       | 1909                             | 1904           | 1899           |
| <b>Total.....</b>      | <b>219</b>              | <b>207</b> | <b>181</b> | <b>315,731</b>                   | <b>222,028</b> | <b>168,942</b> |
| Daily.....             | 18                      | 14         | 13         | 47,492                           | 22,250         | 16,348         |
| Sunday.....            | 7                       | 4          | 3          | 36,322                           | 12,800         | (1)            |
| Semiweekly.....        | 5                       | 4          | 2          | 6,000                            | 4,050          | 1,582          |
| Weekly.....            | 182                     | 176        | 156        | 221,402                          | 167,903        | 142,792        |
| Monthly.....           | 5                       | 6          | 4          | 3,025                            | 7,725          | 6,610          |
| All other classes..... | 2                       | 3          | 2          | 1,400                            | 7,300          | 1,700          |

<sup>1</sup> Included in circulation for daily.

<sup>2</sup> Includes one triweekly.

Except in the case of the monthlies and the publications included under the head of "All other," the table indicates a considerable growth. Particularly interesting is the increase in the circulation of daily papers. In 1909 there were 5 morning papers with a circulation of 18,200 and 13 evening papers with a circulation of 29,292, as compared with 3 morning papers with a circulation of 5,750 and 11 evening papers with a circulation of 16,500 in 1904. The increase for the five-year period 1904-1909 in the total daily circulation was 113.4 per cent and in the circulation of the Sunday papers 183.8 per cent. Mississippi is one of the four states in the United States to report no publications in any foreign language in 1909.

**Laundries.**—Statistics for steam laundries are not included in the general tables or in the totals for manu-

facturing industries. In 1909 there were 30 such establishments in Mississippi. The following statement summarizes the statistics:

|                                      |           |
|--------------------------------------|-----------|
| Number of establishments.....        | 30        |
| Persons engaged in the industry..... | 603       |
| Proprietors and firm members.....    | 32        |
| Salaried employees.....              | 42        |
| Wage earners (average number).....   | 529       |
| Primary horsepower.....              | 821       |
| Capital.....                         | \$332,302 |
| Expenses.....                        | 318,354   |
| Services.....                        | 201,908   |
| Materials.....                       | 80,973    |
| Miscellaneous.....                   | 35,473    |
| Amount received for work done.....   | 440,579   |

Fourteen establishments were operated by individuals, 9 by firms, and 7 by corporations. Five establishments had receipts for the year's business of less than \$5,000; 15, receipts of \$5,000 but less than \$20,000; and 10, receipts of \$20,000 but less than \$100,000.

The number of wage earners employed each month and the per cent which this number represented of the greatest number employed in any month were as follows:

| MONTH.        | WAGE EARNERS. |                      | MONTH.         | WAGE EARNERS. |                      |
|---------------|---------------|----------------------|----------------|---------------|----------------------|
|               | Number.       | Per cent of maximum. |                | Number.       | Per cent of maximum. |
| January.....  | 495           | 88.2                 | July.....      | 561           | 100.0                |
| February..... | 498           | 88.8                 | August.....    | 554           | 98.8                 |
| March.....    | 507           | 90.4                 | September..... | 548           | 97.7                 |
| April.....    | 530           | 94.5                 | October.....   | 524           | 93.4                 |
| May.....      | 542           | 96.6                 | November.....  | 521           | 92.0                 |
| June.....     | 549           | 97.0                 | December.....  | 513           | 91.4                 |

The different kinds of primary power, the number of engines or motors, and the total horsepower used in 1909 are shown in the following tabular statement:

| KIND.                     | Number of engines or motors. | Horsepower. |
|---------------------------|------------------------------|-------------|
| Primary power, total..... |                              | 821         |
| Owned—Steam.....          | 29                           | 765         |
| Rented:                   |                              |             |
| Electric.....             | 5                            | 36          |
| Other.....                |                              | 20          |

The kind and amount of fuel used are shown in the following statement:

| KIND.                | Unit.           | Quantity. |
|----------------------|-----------------|-----------|
| Bituminous coal..... | Tons.....       | 7,048     |
| Wood.....            | Cords.....      | 3,184     |
| Oil.....             | Barrels.....    | 108       |
| Gas.....             | 1,000 feet..... | 366       |

Custom sawmills and gristmills.—Statistics for custom sawmills and gristmills are not included in the general tables or in the totals for manufacturing industries, but are presented in the following summary:

|                                      | Custom sawmills. | Custom gristmills. |
|--------------------------------------|------------------|--------------------|
| Number of establishments.....        | 27               | 596                |
| Persons engaged in the industry..... | 95               | 1,495              |
| Proprietors and firm members.....    | 35               | 837                |
| Salaried employees.....              |                  | 10                 |
| Wage earners (average number).....   | 60               | 648                |
| Primary horsepower.....              | 663              | 15,852             |
| Capital.....                         | \$26,600         | \$475,776          |
| Expenses.....                        | 13,809           | 1,120,279          |
| Services.....                        | 10,133           | 34,489             |
| Materials.....                       | 933              | 1,073,848          |
| Miscellaneous.....                   | 2,743            | 11,942             |
| Value of products.....               | 28,769           | 1,258,318          |

<sup>1</sup> Includes estimate of all grain ground. A similar estimate for value of lumber sawed by custom sawmills is impracticable.

## MANUFACTURES—MISSISSIPPI.

TABLE I.—COMPARATIVE SUMMARY FOR 1909, 1904, AND 1899.  
THE STATE—ALL INDUSTRIES COMBINED AND SELECTED INDUSTRIES.

| INDUSTRY.  | Cen-<br>sus. | Number<br>of estab-<br>lish-<br>ments. | PERSONS ENGAGED IN<br>INDUSTRY. |   |                                       |  | Pri-<br>mary<br>horse-<br>power. | Capital.        | Sala-<br>ries. | Wages.          | Cost of<br>mate-<br>rials. | Value<br>of pro-<br>ducts. | Value<br>added<br>by manu-<br>facture. |                         |                |        |                            |                            |  |
|--|--------------|--|---------------------------------|---|---------------------------------------|--|----------------------------------|-----------------|----------------|-----------------|----------------------------|----------------------------|--|-------------------------|----------------|--------|----------------------------|----------------------------|--|
|  |              |  | Total.                          | Pro-<br>pri-<br>etors<br>and<br>firm<br>mem-<br>bers. | Sala-<br>ried<br>em-<br>ploe-<br>ees. | Wage<br>ear-<br>ners<br>(aver-<br>age<br>num-<br>ber). |                                  |                 |                |                 |                            |                            |  | Expressed in thousands. |                |        |                            |                            |  |
|  |              |  |                                 |   |                                       |  |                                  |                 |                |                 |                            |                            |  | Capital.                | Sala-<br>ries. | Wages. | Cost of<br>mate-<br>rials. | Value<br>of pro-<br>ducts. | Value<br>added<br>by manu-<br>facture. |
| <b>STATE—All industries.....</b>   | <b>1909</b>  | <b>2,598</b>                           | <b>56,761</b>                   | <b>2,974</b>  | <b>3,403</b>                          | <b>50,384</b>  | <b>206,222</b>                   | <b>\$72,393</b> | <b>\$3,654</b> | <b>\$18,768</b> | <b>\$36,926</b>            | <b>\$80,555</b>            | <b>\$43,629</b>                        |                         |                |        |                            |                            |  |
|  | <b>1904</b>  | <b>1,520</b>                           | <b>42,966</b>                   | <b>1,588</b>  | <b>2,088</b>                          | <b>38,690</b>  | <b>110,338</b>                   | <b>50,256</b>   | <b>2,598</b>   | <b>14,819</b>   | <b>25,801</b>              | <b>57,451</b>              | <b>31,650</b>                          |                         |                |        |                            |                            |  |
|  | <b>1899</b>  | <b>1,204</b>                           | <b>42,966</b>                   | <b>1,588</b>  | <b>1,260</b>                          | <b>26,799</b>  | <b>65,738</b>                    | <b>22,712</b>   | <b>1,093</b>   | <b>7,910</b>    | <b>16,543</b>              | <b>33,718</b>              | <b>17,175</b>                          |                         |                |        |                            |                            |  |
| Bread and other bakery products.....   | 1909         | 70                                     | 417                             | 105   | 27                                    | 285  | 92                               | 287             | 17             | 128             | 516                        | 878                        | 362                                    |                         |                |        |                            |                            |  |
|  | 1904         | 57                                     | 237                             | 62  | 15                                    | 180  | 141                              | 184             | 5              | 69              | 261                        | 499                        | 238                                    |                         |                |        |                            |                            |  |
|  | 1899         | 22                                     | 92                              | 23  | 2                                     | 67   | .....                            | 57              | 2              | 23              | 89                         | 169                        | 80                                     |                         |                |        |                            |                            |  |
| Brick and tile.....  | 1909         | 73                                     | 1,088                           | 73  | 76                                    | 939  | 3,653                            | 1,288           | 65             | 287             | 204                        | 794                        | 590                                    |                         |                |        |                            |                            |  |
|  | 1904         | 74                                     | 1,054                           | 88  | 63                                    | 903  | 2,368                            | 847             | 45             | 272             | 177                        | 783                        | 606                                    |                         |                |        |                            |                            |  |
|  | 1899         | 74                                     | 1,040                           | 94  | 38                                    | 908  | 1,483                            | 495             | 20             | 201             | 99                         | 622                        | 423                                    |                         |                |        |                            |                            |  |
| Canning and preserving.....  | 1909         | 11                                     | 904                             | 2   | 55                                    | 847  | 378                              | 674             | 74             | 97              | 508                        | 824                        | 316                                    |                         |                |        |                            |                            |  |
|  | 1904         | 11                                     | 827                             | 13  | 57                                    | 757  | 550                              | 980             | 31             | 172             | 1,032                      | 1,506                      | 474                                    |                         |                |        |                            |                            |  |
|  | 1899         | 8                                      | 672                             | 6   | 16                                    | 650  | 214                              | 328             | 17             | 123             | 618                        | 907                        | 289                                    |                         |                |        |                            |                            |  |
| Carriages and wagons and materials.....  | 1909         | 41                                     | 454                             | 50  | 39                                    | 365  | 1,350                            | 649             | 41             | 154             | 274                        | 642                        | 368                                    |                         |                |        |                            |                            |  |
|  | 1904         | 24                                     | 375                             | 24  | 33                                    | 313  | 1,003                            | 473             | 31             | 132             | 213                        | 494                        | 281                                    |                         |                |        |                            |                            |  |
|  | 1899         | 30                                     | .....                           | .....   | 9                                     | 228  | 211                              | 183             | 7              | 88              | 131                        | 302                        | 171                                    |                         |                |        |                            |                            |  |
| Cars and general shop construction and repairs<br>by steam-railroad companies..... | 1909         | 10                                     | 2,700                           | .....   | 137                                   | 2,572  | 2,232                            | 1,412           | 147            | 1,558           | 1,422                      | 3,233                      | 1,811                                  |                         |                |        |                            |                            |  |
|  | 1904         | 15                                     | 2,755                           | .....   | 102                                   | 2,653  | 1,019                            | 1,337           | 108            | 1,421           | 1,332                      | 2,886                      | 1,551                                  |                         |                |        |                            |                            |  |
|  | 1899         | 9                                      | 1,579                           | .....   | 45                                    | 1,531  | 1,040                            | 742             | 41             | 808             | 464                        | 1,331                      | 867                                    |                         |                |        |                            |                            |  |
| Clothing, men's, including shirts.....   | 1909         | 6                                      | 532                             | .....   | 50                                    | 482  | 119                              | 572             | 57             | 115             | 539                        | 775                        | 236                                    |                         |                |        |                            |                            |  |
|  | 1904         | 7                                      | 743                             | .....   | 65                                    | 678  | 220                              | 1,235           | 49             | 169             | 762                        | 1,263                      | 501                                    |                         |                |        |                            |                            |  |
| Confectionery.....   | 1909         | 10                                     | 71                              | 10  | 11                                    | 50   | 109                              | 112             | 8              | 16              | 75                         | 123                        | 48                                     |                         |                |        |                            |                            |  |
|  | 1904         | 9                                      | 135                             | 5   | 15                                    | 115  | 54                               | 119             | 16             | 43              | 126                        | 268                        | 142                                    |                         |                |        |                            |                            |  |
|  | 1899         | 6                                      | .....                           | .....   | 5                                     | 44   | .....                            | 50              | 3              | 15              | 72                         | 101                        | 29                                     |                         |                |        |                            |                            |  |
| Cotton goods, including cotton small wares....                                     | 1909         | 14                                     | 2,720                           | .....   | 75                                    | 2,645  | 8,045                            | 5,336           | 105            | 695             | 2,042                      | 3,102                      | 1,060                                  |                         |                |        |                            |                            |  |
|  | 1904         | 14                                     | 2,225                           | .....   | 64                                    | 2,161  | 5,867                            | 4,520           | 79             | 518             | 1,649                      | 2,403                      | 811                                    |                         |                |        |                            |                            |  |
|  | 1899         | 6                                      | 1,723                           | 2   | 46                                    | 1,675  | 3,365                            | 2,210           | 60             | 340             | 767                        | 1,473                      | 706                                    |                         |                |        |                            |                            |  |
| Fertilizers.....   | 1909         | 10                                     | 524                             | .....   | 75                                    | 449  | 1,823                            | 2,607           | 72             | 141             | 1,385                      | 2,125                      | 740                                    |                         |                |        |                            |                            |  |
|  | 1904         | 5                                      | 371                             | .....   | 23                                    | 348  | 645                              | 1,049           | 28             | 70              | 857                        | 1,082                      | 225                                    |                         |                |        |                            |                            |  |
|  | 1899         | 3                                      | 109                             | .....   | 15                                    | 94   | .....                            | 353             | 19             | 33              | 342                        | 493                        | 151                                    |                         |                |        |                            |                            |  |
| Flour-mill and gristmill products.....   | 1909         | 13                                     | 37                              | 14  | 5                                     | 18   | 609                              | 71              | 2              | 5               | 132                        | 153                        | 21                                     |                         |                |        |                            |                            |  |
|  | 1904         | 9                                      | 38                              | 10  | 8                                     | 20   | 422                              | 71              | 5              | 7               | 95                         | 110                        | 15                                     |                         |                |        |                            |                            |  |
|  | 1899         | 8                                      | .....                           | .....   | 2                                     | 34   | .....                            | 60              | 1              | 11              | 363                        | 412                        | 49                                     |                         |                |        |                            |                            |  |
| Foundry and machine-shop products.....   | 1909         | 50                                     | 711                             | 53  | 75                                    | 583  | 1,372                            | 1,682           | 92             | 295             | 472                        | 1,088                      | 616                                    |                         |                |        |                            |                            |  |
|  | 1904         | 35                                     | 622                             | 45  | 61                                    | 516  | 782                              | 875             | 73             | 260             | 356                        | 920                        | 561                                    |                         |                |        |                            |                            |  |
|  | 1899         | 30                                     | 392                             | 27  | 24                                    | 341  | 622                              | 300             | 31             | 159             | 199                        | 490                        | 291                                    |                         |                |        |                            |                            |  |
| Furniture and refrigerators.....   | 1909         | 8                                      | 286                             | 5   | 22                                    | 259  | 638                              | 408             | 28             | 96              | 194                        | 392                        | 198                                    |                         |                |        |                            |                            |  |
|  | 1904         | 6                                      | 287                             | 5   | 20                                    | 262  | 470                              | 405             | 19             | 85              | 141                        | 350                        | 218                                    |                         |                |        |                            |                            |  |
| Gas, illuminating and heating.....   | 1909         | 8                                      | 139                             | .....   | 38                                    | 101  | 148                              | 661             | 25             | 30              | 86                         | 256                        | 170                                    |                         |                |        |                            |                            |  |
|  | 1904         | 5                                      | 79                              | .....   | 24                                    | 55   | 111                              | 305             | 12             | 24              | 39                         | 125                        | 84                                     |                         |                |        |                            |                            |  |
|  | 1899         | 5                                      | 35                              | .....   | 11                                    | 24   | 55                               | 422             | 11             | 9               | 17                         | 82                         | 65                                     |                         |                |        |                            |                            |  |
| Ice, manufactured.....   | 1909         | 51                                     | 477                             | 25  | 111                                   | 341  | 7,003                            | 1,851           | 85             | 189             | 213                        | 866                        | 653                                    |                         |                |        |                            |                            |  |
|  | 1904         | 37                                     | 376                             | 23  | 79                                    | 274  | 4,171                            | 1,206           | 64             | 119             | 145                        | 603                        | 458                                    |                         |                |        |                            |                            |  |
|  | 1899         | 21                                     | 192                             | 12  | 26                                    | 154  | 1,874                            | 579             | 23             | 55              | 65                         | 274                        | 209                                    |                         |                |        |                            |                            |  |
| Lumber and timber products.....  | 1909         | 1,047                                  | 37,118                          | 2,117   | 1,604                                 | 33,397   | 149,715                          | 39,455          | 1,818          | 12,583          | 14,207                     | 42,793                     | 28,586                                 |                         |                |        |                            |                            |  |
|  | 1904         | 604                                    | 24,415                          | 768   | 1,216                                 | 22,431   | 68,905                           | 24,819          | 1,300          | 9,242           | 7,005                      | 20,162                     | 19,157                                 |                         |                |        |                            |                            |  |
|  | 1899         | 608                                    | .....                           | .....   | 581                                   | 15,660   | .....                            | 10,800          | 497            | 4,558           | 6,826                      | 16,664                     | 9,838                                  |                         |                |        |                            |                            |  |
| Marble and stone work.....   | 1909         | 11                                     | 98                              | 13  | 14                                    | 71   | 80                               | 116             | 13             | 41              | 79                         | 170                        | 97                                     |                         |                |        |                            |                            |  |
|  | 1904         | 9                                      | 61                              | 9   | 5                                     | 47   | 34                               | 53              | 4              | 27              | 50                         | 126                        | 76                                     |                         |                |        |                            |                            |  |
|  | 1899         | 3                                      | .....                           | .....   | 2                                     | 11   | .....                            | 8               | 2              | 6               | 12                         | 20                         | 17                                     |                         |                |        |                            |                            |  |
| Oil, cottonseed, and cake.....   | 1909         | 87                                     | 3,014                           | 17  | 494                                   | 2,503  | 24,534                           | 10,133          | 562            | 833             | 12,169                     | 15,906                     | 3,797                                  |                         |                |        |                            |                            |  |
|  | 1904         | 91                                     | 2,956                           | 6   | 451                                   | 2,499  | 20,156                           | 8,552           | 455            | 732             | 10,070                     | 12,587                     | 2,517                                  |                         |                |        |                            |                            |  |
|  | 1899         | 41                                     | 1,732                           | 12  | 109                                   | 1,521  | 8,833                            | 3,712           | 211            | 461             | 4,953                      | 6,681                      | 1,728                                  |                         |                |        |                            |                            |  |
| Printing and publishing.....   | 1909         | 225                                    | 1,132                           | 249   | 147                                   | 736  | 496                              | 1,173           | 123            | 387             | 300                        | 1,308                      | 1,008                                  |                         |                |        |                            |                            |  |
|  | 1904         | 211                                    | 861                             | 242   | 70                                    | 549  | 265                              | 733             | 53             | 254             | 195                        | 910                        | 721                                    |                         |                |        |                            |                            |  |
|  | 1899         | 181                                    | 738                             | 197   | 36                                    | 505  | .....                            | 475             | 29             | 194             | 147                        | 723                        | 570                                    |                         |                |        |                            |                            |  |
| Shipbuilding, including boat building.....   | 1909         | 15                                     | 111                             | 10  | 4                                     | 91   | 301                              | 58              | 3              | 51              | 66                         | 161                        | 95                                     |                         |                |        |                            |                            |  |
|  | 1904         | 13                                     | 139                             | 14  | .....                                 | 125  | 289                              | 40              | .....          | 85              | 99                         | 244                        | 145                                    |                         |                |        |                            |                            |  |
|  | 1899         | 13                                     | 91                              | 13  | 5                                     | 73   | 197                              | 55              | 5              | 46              | 46                         | 116                        | 70                                     |                         |                |        |                            |                            |  |
| Turpentine and rosin.....  | 1909         | 64                                     | 2,811                           | 71  | 167                                   | 2,573  | 286                              | 1,251           | 132            | 582             | 349                        | 1,475                      | 1,126                                  |                         |                |        |                            |                            |  |
|  | 1904         | 124                                    | 3,030                           | 183   | 220                                   | 2,633  | 300                              | 598             | 146            | 737             | 394                        | 2,366                      | 1,972                                  |                         |                |        |                            |                            |  |
|  | 1899         | 145                                    | 2,033                           | 198   | 147                                   | 2,288  | 10                               | 798             | 68             | 530             | 668                        | 1,772                      | 1,074                                  |                         |                |        |                            |                            |  |
| All other industries.....  | 1909         | 165                                    | 1,408                           | 154   | 177                                   | 1,077  | 3,239                            | 2,597           | 185            | 476             | 1,694                      | 3,425                      | 1,731                                  |                         |                |        |                            |                            |  |
|  | 1904         | 100                                    | 1,374                           | 91  | 97                                    | 1,186  | 2,566                            | 1,795           | 75             | 372             | 803                        | 1,689                      | 886                                    |                         |                |        |                            |                            |  |
|  | 1899         | 81                                     | .....                           | .....   | 51                                    | .....  | .....                            | 995             | 46             | 246             | 635                        | 1,177                      | 542                                    |                         |                |        |                            |                            |  |

<sup>1</sup> Figures can not be shown without disclosing individual operations.

<sup>2</sup> Excluding statistics for two establishments, to avoid disclosure of individual operations.

<sup>3</sup> Excluding statistics for one establishment, to avoid disclosure of individual operations.



MANUFACTURES—MISSISSIPPI.

TABLE I.—COMPARATIVE SUMMARY FOR 1909, 1904, AND 1899—Continued.

CITIES OF 10,000 OR MORE INHABITANTS—ALL INDUSTRIES COMBINED.

| CITY.            | Cen-<br>sus. | Num-<br>ber of<br>estab-<br>lish-<br>ments. | PERSONS ENGAGED IN<br>INDUSTRY. |   |                                       |  | Pri-<br>mary<br>horse-<br>power. | Capital. | Sala-<br>ries. | Wages. | Cost of<br>mate-<br>rials. | Value<br>of<br>prod-<br>ucts. | Value<br>added<br>by<br>manu-<br>fac-<br>ture. |                         |                |        |                            |                               |  |
|------------------|--------------|---|---------------------------------|---|---------------------------------------|--|----------------------------------|----------|----------------|--------|----------------------------|-------------------------------|--|-------------------------|----------------|--------|----------------------------|-------------------------------|--|
|                  |              |   | Total.                          | Pro-<br>pri-<br>etors<br>and<br>firm<br>mem-<br>bers. | Sala-<br>ried<br>em-<br>ploy-<br>ees. | Wage<br>earn-<br>ers<br>(aver-<br>age<br>num-<br>ber). |                                  |          |                |        |                            |                               |  | Expressed in thousands. |                |        |                            |                               |  |
|                  |              |   |                                 |   |                                       |  |                                  |          |                |        |                            |                               |  | Capital.                | Sala-<br>ries. | Wages. | Cost of<br>mate-<br>rials. | Value<br>of<br>prod-<br>ucts. | Value<br>added<br>by<br>manu-<br>fac-<br>ture. |
| Hattiesburg..... | 1909         | 20  | 742                             | 22  | 72                                    | 048  | 2,273                            | \$1,341  | \$70           | \$297  | \$625                      | \$1,251                       | \$620  |                         |                |        |                            |                               |  |
|                  | 1904         |   |                                 |   |                                       |  |                                  |          |                |        |                            |                               |  |                         |                |        |                            |                               |  |
|                  | 1899         |   |                                 |   |                                       |  |                                  |          |                |        |                            |                               |  |                         |                |        |                            |                               |  |
| Jackson.....     | 1909         | 45  | 965                             | 36  | 130                                   | 709  | 3,417                            | 1,783    | 146            | 377    | 1,968                      | 3,113                         | 1,145  |                         |                |        |                            |                               |  |
|                  | 1904         |   |                                 |   |                                       |  |                                  |          |                |        |                            |                               |  |                         |                |        |                            |                               |  |
|                  | 1899         |   |                                 |   |                                       |  |                                  |          |                |        |                            |                               |  |                         |                |        |                            |                               |  |
| Meridian.....    | 1909         | 54  | 1,790                           | 45  | 230                                   | 1,524  | 5,361                            | 3,816    | 220            | 702    | 2,474                      | 4,238                         | 1,764  |                         |                |        |                            |                               |  |
|                  | 1904         | 53  | 1,529                           | 55  | 128                                   | 1,346  |                                  | 2,516    | 120            | 588    | 2,052                      | 3,207                         | 1,215  |                         |                |        |                            |                               |  |
|                  | 1899         | 42  |                                 |   | 68                                    | 834  |                                  | 1,402    | 62             | 327    | 1,115                      | 1,924                         | 809  |                         |                |        |                            |                               |  |
| Natchez.....     | 1909         | 27  | 513                             | 17  | 68                                    | 428  | 1,481                            | 931      | 69             | 160    | 680                        | 1,114                         | 425  |                         |                |        |                            |                               |  |
|                  | 1904         | 24  | 375                             | 15  | 44                                    | 316  |                                  | 632      | 42             | 134    | 503                        | 820                           | 317  |                         |                |        |                            |                               |  |
|                  | 1899         | 16  |                                 |   | 38                                    | 648  |                                  | 1,243    | 34             | 174    | 581                        | 1,115                         | 534  |                         |                |        |                            |                               |  |
| Vicksburg.....   | 1909         | 47  | 1,364                           | 48  | 114                                   | 1,202  | 2,037                            | 1,236    | 125            | 637    | 1,148                      | 2,229                         | 1,081  |                         |                |        |                            |                               |  |
|                  | 1904         | 32  | 1,148                           | 28  | 89                                    | 1,031  |                                  | 1,255    | 90             | 524    | 993                        | 1,888                         | 895  |                         |                |        |                            |                               |  |
|                  | 1899         | 24  |                                 |   | 55                                    | 987  |                                  | 1,145    | 55             | 421    | 710                        | 1,368                         | 652  |                         |                |        |                            |                               |  |

1 Figures not available.

TABLE II.—DETAIL STATEMENT FOR

| INDUSTRY.  | Number of establishments. | PERSONS ENGAGED IN INDUSTRY. |                               |   |         |         |                 |                     |                     |        |              | WAGE EARNERS—NUMBER DEC. 15, OR NEAREST REPRESENTATIVE DAY. |           |         |         |  | Primary horse-power. |
|--|---------------------------|------------------------------|-------------------------------|---|---------|---------|-----------------|---------------------|---------------------|--------|--------------|---|-----------|---------|---------|--|----------------------|
|  |                           | Total.                       | Proprietors and firm members. | Salaried officers, superintendents, and managers. | Clerks. |         | Average number. | Wage earners.       |                     | Total. | 16 and over. |   | Under 16. |         |         |  |                      |
|  |                           |                              |                               |   | Male.   | Female. |                 | Number.             |                     |        | Male.        | Female.   | Male.     | Female. |         |  |                      |
|  |                           |                              |                               |   |         |         |                 | Maximum month.      | Minimum month.      |        |              |   |           |         |         |  |                      |
| 1 All industries.....  | 2,598                     | 56,761                       | 2,974                         | 1,691   | 1,556   | 156     | 50,384          | No 56,436           | My 45,178           | (1)    | (1)          | (1)   | (1)       | (1)     | 200,222 |  |                      |
| 2 Artificial stone.....  | 6                         | 25                           | 4                             | 2   | 1       | 18      | Se 28           | Mh 3                | 27                  | 26     |              | 1   |           |         | 26      |  |                      |
| 3 Bread and other bakery products.....   | 79                        | 417                          | 105                           | 8   | 10      | 3       | 285             | No 294              | Ap <sup>2</sup> 278 | 290    | 262          | 14  | 14        |         | 26      |  |                      |
| 4 Brick and tile.....  | 73                        | 1,088                        | 73                            | 59  | 15      | 2       | 939             | My 1,234            | Fe 445              | 1,350  | 1,273        |   | 77        |         | 3,655   |  |                      |
| 5 Canning and preserving.....  | 11                        | 904                          | 2                             | 30  | 19      | 6       | 847             | De 1,358            | My 140              | 1,371  | 550          | 524   | 140       | 187     | 378     |  |                      |
| 6 Carriages and wagons and materials.....  | 41                        | 484                          | 50                            | 20  | 18      | 1       | 365             | No 420              | Ja 327              | 1,489  | 1,488        |   | 1         |         | 1,358   |  |                      |
| 7 Cars and general shop construction and repairs by steam-railroad companies.....  | 10                        | 2,709                        |                               | 49  | 78      | 10      | 2,572           | No 3,059            | Je 1,967            | 3,044  | 3,041        | 3   |           |         | 2,232   |  |                      |
| 8 Cars and general shop construction and repairs by street-railroad companies..... | 6                         | 51                           |                               | 8   | 3       | 1       | 39              | Je 43               | Ap <sup>2</sup> 37  | 38     | 38           |   |           |         | 4       |  |                      |
| 9 Clothing, men's, including shirts.....   | 6                         | 532                          |                               | 17  | 32      | 1       | 482             | De 526              | Ja 434              | 526    | 101          | 425   |           |         | 119     |  |                      |
| 10 Confectionery.....  | 10                        | 71                           | 10                            | 2   | 8       | 1       | 50              | No <sup>2</sup> 62  | My <sup>2</sup> 42  | 55     | 42           | 12  |           | 2       | 199     |  |                      |
| 11 Copper, tin, and sheet-iron products.....                                       | 15                        | 143                          | 17                            | 5   | 2       |         | 119             | Je 134              | Ja 107              | 118    | 116          |   |           |         |         |  |                      |
| 12 Cotton goods, including cotton small wares.....                                 | 14                        | 2,720                        |                               | 44  | 25      | 6       | 2,645           | Mh 2,792            | De 2,506            | 2,716  | 1,031        | 1,134   | 201       | 350     | 8,045   |  |                      |
| 13 Fertilizers.....  | 10                        | 524                          |                               | 20  | 41      | 5       | 449             | Mh <sup>2</sup> 811 | Je 216              | 523    | 523          |   |           |         | 1,823   |  |                      |
| 14 Flour-mill and gristmill products.....  | 13                        | 37                           | 14                            | 3   | 2       |         | 18              | De <sup>2</sup> 19  | Jy <sup>2</sup> 18  | 19     | 19           |   |           |         | 199     |  |                      |
| 15 Foundry and machine-shop products.....  | 50                        | 711                          | 53                            | 34  | 35      | 6       | 583             | No 608              | Fe 550              | 620    | 620          |   |           |         | 1,372   |  |                      |
| 16 Furniture and refrigerators.....  | 8                         | 286                          | 5                             | 14  | 6       | 2       | 259             | De 303              | Mh <sup>2</sup> 217 | 295    | 282          | 3   | 10        |         | 68      |  |                      |
| 17 Gas, illuminating and heating.....  | 8                         | 139                          |                               | 14  | 20      | 4       | 101             | Oc 110              | Au 90               | 102    | 102          |   |           |         | 16      |  |                      |
| 18 Ice, manufactured.....  | 51                        | 477                          | 25                            | 68  | 37      | 6       | 341             | Au 500              | Ja 185              | 409    | 388          |   |           | 21      | 7,010   |  |                      |
| 19 Lumber and timber products.....   | 1,647                     | 37,118                       | 2,117                         | 798   | 747     | 59      | 33,397          | No 30,622           | My 30,493           | 41,281 | 41,128       | 8   | 145       |         | 149,715 |  |                      |
| 20 Marble and stone work.....  | 11                        | 98                           | 13                            | 6   | 6       | 2       | 71              | Je 76               | Oc 64               | 71     | 71           |   |           |         | 80      |  |                      |
| 21 Mattresses and spring beds.....   | 6                         | 45                           | 8                             | 3   | 1       | 1       | 40              | De <sup>2</sup> 49  | Mh 33               | 49     | 41           | 8   |           |         | 10      |  |                      |
| 22 Oil, cottonseed, and cake.....  | 87                        | 3,014                        | 17                            | 240   | 240     | 8       | 2,563           | No 4,276            | Jy 871              | 4,142  | 4,124        | 18  |           |         | 24,639  |  |                      |
| 23 Printing and publishing.....  | 226                       | 1,132                        | 249                           | 75  | 52      | 20      | 736             | De 765              | My 712              | 776    | 634          | 103   | 38        | 1       | 46      |  |                      |
| 24 Shipbuilding, including boat building.....                                      | 15                        | 111                          | 16                            | 2   | 2       |         | 91              | Ja 106              | Oc 71               | 96     | 96           |   |           |         | 39      |  |                      |
| 25 Tobacco manufactures.....   | 5                         | 14                           | 4                             | 1   |         |         | 9               | Ja 11               | De <sup>2</sup> 8   | 10     | 5            | 1   | 4         |         | 28      |  |                      |
| 26 Turpentine and rosin.....   | 64                        | 2,811                        | 71                            | 79  | 88      |         | 2,573           | My 2,063            | Fe 2,413            | 2,862  | 2,794        | 18  | 50        |         | 28      |  |                      |
| 27 All other industries <sup>3</sup> .....   | 127                       | 1,122                        | 121                           | 75  | 62      | 12      | 852             |                     |                     |        |              |   |           |         | 3,075   |  |                      |

<sup>1</sup> No figures given for reasons explained in the Introduction, page 2. See also discussion of wage earners, page 6.

<sup>2</sup> Same number reported for one or more other months.

<sup>3</sup> All other industries embrace—

|   |   |   |    |  |   |
|---|---|---|----|--|---|
| Agricultural implements.....  | 2 | Cordage and twine and jute and linen goods.....                 | 3  | Pottery, terra-cotta, and fire-clay products.....      | 5 |
| Awnings, tents, and sails.....  | 1 | Flavoring extracts.....   | 1  | Saws.....  | 1 |
| Brooms.....   | 2 | Food preparations.....  | 2  | Scales and balances.....                               | 1 |
| Cars, steam-railroad, not including operations of railroad companies..... | 1 | Hats, fur-felt.....   | 1  | Stoves and furnaces, including gas and oil stoves..... | 1 |
| Coffee and spice, roasting and grinding.....                              | 1 | Hosiery and knit goods.....                                     | 1  | Upholstering materials.....                            | 1 |
| Coffins, burial cases, and undertakers' goods.....                        | 1 | Leather goods.....  | 7  | Vinegar and cider.....                                 | 1 |
| Cooperage and wooden goods, not elsewhere specified.....                  | 2 | Mineral and soda waters.....                                    | 79 | Washing machines and clothes wringers.....             | 1 |
|   |   | Patent medicines and compounds and druggists' preparations..... | 6  | Wood preserving.....                                   | 3 |
|   |   |   |    | Wood, turned and carved.....                           | 5 |

THE STATE, BY INDUSTRIES: 1909.

|    | Capital.     | EXPENSES.    |             |             |               |                         |              |                  |                                    |                |             | Value of products. | Value added by manufacture. |
|----|--------------|--------------|-------------|-------------|---------------|-------------------------|--------------|------------------|------------------------------------|----------------|-------------|--------------------|-----------------------------|
|    |              | Total.       | Services.   |             |               | Materials.              |              | Miscellaneous.   |                                    |                |             |                    |                             |
|    |              |              | Officials.  | Clerks.     | Wage earners. | Fuel and rent of power. | Other.       | Rent of factory. | Taxes, including internal revenue. | Contract work. | Other.      |                    |                             |
| 1  | \$72,393,485 | \$68,706,842 | \$2,275,683 | \$1,377,961 | \$18,767,723  | \$1,271,788             | \$35,653,794 | \$111,763        | \$693,167                          | \$2,591,240    | \$5,963,723 | \$80,555,410       | \$43,629,828                |
| 2  | 31,634       | 24,782       | 1,800       | 1,200       | 9,368         | 225                     | 10,360       | 75               | 57                                 | 800            | 897         | 30,560             | 19,615                      |
| 3  | 286,748      | 716,496      | 8,060       | 8,869       | 128,430       | 14,411                  | 501,449      | 17,954           | 2,571                              | 34,762         | 34,762      | 878,353            | 302,493                     |
| 4  | 1,287,689    | 629,339      | 56,370      | 8,440       | 287,491       | 139,015                 | 35,029       | 268              | 8,004                              | 10,172         | 54,541      | 794,145            | 590,101                     |
| 5  | 673,900      | 746,974      | 58,975      | 15,020      | 97,131        | 14,439                  | 493,403      | 420              | 5,799                              | 61,737         | 61,737      | 824,233            | 316,391                     |
| 6  | 648,500      | 535,943      | 22,189      | 19,265      | 154,105       | 5,539                   | 268,205      | 3,100            | 3,850                              | 16,500         | 43,190      | 641,957            | 368,213                     |
| 7  | 1,412,480    | 3,233,288    | 75,864      | 71,412      | 1,557,533     | 57,126                  | 1,364,406    | .....            | 16,883                             | 9,161          | 80,903      | 3,233,288          | 1,811,756                   |
| 8  | 174,308      | 59,169       | 6,940       | 1,200       | 21,152        | 800                     | 22,381       | .....            | 4,760                              | .....          | 1,876       | 59,169             | 35,928                      |
| 9  | 572,087      | 754,790      | 21,685      | 35,173      | 114,942       | 4,420                   | 534,418      | 2,600            | 2,097                              | 25             | 38,530      | 775,029            | 236,191                     |
| 10 | 111,685      | 108,001      | 3,440       | 4,690       | 16,197        | 1,498                   | 73,916       | 1,160            | 1,227                              | .....          | 5,033       | 122,511            | 47,097                      |
| 11 | 105,755      | 181,148      | 5,700       | 1,860       | 69,125        | 495                     | 90,757       | 1,639            | 1,327                              | .....          | 10,345      | 210,993            | 110,741                     |
| 12 | 5,336,477    | 2,949,375    | 69,456      | 35,975      | 695,456       | 101,557                 | 1,940,593    | .....            | 24,701                             | 250            | 81,387      | 3,102,398          | 1,060,248                   |
| 13 | 2,606,692    | 1,749,831    | 42,456      | 29,910      | 140,869       | 45,769                  | 1,339,189    | 600              | 24,599                             | .....          | 120,529     | 2,125,029          | 740,071                     |
| 14 | 70,571       | 141,018      | 1,365       | 1,000       | 4,981         | 3,156                   | 128,380      | .....            | 577                                | .....          | 1,559       | 153,010            | 21,474                      |
| 15 | 1,682,330    | 932,342      | 54,718      | 37,112      | 294,773       | 36,365                  | 436,062      | 1,754            | 9,945                              | .....          | 61,613      | 1,088,324          | 615,807                     |
| 16 | 408,000      | 342,064      | 19,432      | 8,804       | 65,645        | 5,455                   | 188,654      | 900              | 2,320                              | .....          | 20,854      | 301,845            | 197,736                     |
| 17 | 600,874      | 189,732      | 14,179      | 11,112      | 39,119        | 58,572                  | 27,196       | .....            | 8,808                              | .....          | 30,746      | 255,582            | 169,814                     |
| 18 | 1,850,644    | 602,683      | 54,190      | 31,158      | 188,610       | 135,085                 | 76,708       | 1,115            | 22,544                             | 1,004          | 90,769      | 866,358            | 653,665                     |
| 19 | 39,454,659   | 35,634,040   | 1,129,169   | 689,046     | 12,582,847    | 154,352                 | 14,062,246   | 21,163           | 388,012                            | 2,527,222      | 4,089,083   | 42,792,844         | 28,556,246                  |
| 20 | 116,296      | 145,772      | 7,160       | 5,580       | 40,681        | 1,957                   | 76,916       | 1,332            | 698                                | .....          | 11,448      | 176,441            | 97,568                      |
| 21 | 52,211       | 100,099      | 1,832       | 585         | 25,459        | 1,346                   | 65,236       | 720              | 450                                | 125            | 3,349       | 117,506            | 50,024                      |
| 22 | 10,132,964   | 14,456,188   | 367,245     | 194,890     | 833,355       | 392,607                 | 11,776,064   | 12,730           | 129,497                            | 8,079          | 741,721     | 15,905,543         | 3,790,872                   |
| 23 | 1,172,781    | 940,064      | 75,002      | 47,952      | 386,737       | 21,274                  | 278,819      | 29,841           | 9,623                              | 15,960         | 74,866      | 1,307,694          | 1,007,511                   |
| 24 | 57,960       | 124,529      | 1,200       | 1,530       | 51,223        | 506                     | 65,065       | 932              | 433                                | .....          | 3,640       | 161,416            | 95,845                      |
| 25 | 3,028        | 11,206       | 240         | .....       | 3,730         | 30                      | 5,071        | 436              | 1,245                              | .....          | 544         | 12,558             | 7,457                       |
| 26 | 1,250,071    | 1,225,748    | 76,719      | 55,333      | 581,532       | 915                     | 348,194      | 130              | 6,018                              | .....          | 156,907     | 1,474,629          | 1,125,520                   |
| 27 | 2,232,175    | 2,172,731    | 100,288     | 60,855      | 340,235       | 43,914                  | 1,455,077    | 13,054           | 15,412                             | 1,952          | 135,944     | 2,094,145          | 1,466,164                   |

## MANUFACTURES : MISSOURI

## STATISTICS OF MANUFACTURES FOR THE STATE, CITIES, AND INDUSTRIES

Prepared under the supervision of W. M. STEUART, Chief Statistician for Manufactures

## INTRODUCTION.

This advance bulletin gives the statistics of manufactures for the state of Missouri for the calendar year 1909, as shown by the Thirteenth Census. It will be reprinted without change as a part of the Compendium of the Census for Missouri, and in the final reports of the Thirteenth Census.

The text summarizes the general results of the census inquiry, presenting a series of special tables in which the main facts printed in the general tables are given in convenient form for the state as a whole and for important industries. It also presents tables in which the statistics for the industries of the state as a whole and for a few important industries are classified by character of ownership, size of establishments, number of wage earners, and prevailing hours of labor, information which could not be presented in general tables for each industry without disclosing the facts for individual establishments.

At the end of the bulletin are two general tables.

Table I gives for 1909, 1904, and 1899 the number of establishments and of persons engaged in the industries, primary power, capital, salaries and wages, cost of materials, value of products, and value added by manufacture, reported for all industries combined and for certain important industries (1) for the state as a whole and (2) for the cities of Kansas City, St. Joseph, and St. Louis. It also gives the same items for all industries combined for every city having in 1910 a population of over 10,000 but less than 50,000.

Table II gives statistics in detail for 1909 for the state and for a larger number of industries.

**Scope of census: Factory industries.**—Census statistics of manufactures are compiled primarily for the purpose of showing the absolute and relative magnitude of the different branches of industry covered and their growth or decline. Incidentally, the effort is made to present data throwing light upon character of organization, location of establishments, size of establishments, labor force, and similar subjects. When use is made of the data for these purposes it is imperative that due attention should be given to the limitations of the figures. Particularly is this true when the attempt is made to derive from them figures purporting to show average wages, cost of production, or profits. These limitations will be fully discussed in the general report on manufactures for the United States as a whole. It is impossible to reproduce such discussion in the bulletins relative to the individual states.

The census of 1909, like that of 1904, was confined to manufacturing establishments conducted under the factory system, as distinguished from the neighborhood, hand, and building industries. Where statistics for 1899 are given they have been reduced

to a comparable basis by eliminating the latter classes of industries. The census does not include establishments which were idle during the entire year, or had a value of products of less than \$500, or the manufacturing done in educational, eleemosynary, and penal institutions, or in governmental establishments, except those of the Federal Government.

**Period covered.**—The returns cover the calendar year 1909, or the business year which corresponds most nearly to that calendar year. The statistics cover a year's operations, except for establishments which began or discontinued business during the year.

**The establishment.**—The term "establishment" comprises the factories, mills, or plants which are under a common ownership or control, and for which one set of books of account is kept.

If, however, the plants constituting an establishment, as thus defined, were not all located within the same city or state, separate reports were secured in order that the separate totals might be included in the statistics for each city or state. In some instances separate reports were secured for different industries carried on in the same establishment.

**Classification by industries.**—The establishments were assigned to the several classes of industries according to their products of chief value. The products reported for a given industry may thus, on the one hand, include minor products very different from those covered by the class designation, and, on the other hand, may not include the total product covered by this designation, because some part of this product may be made in establishments in which it is not the product of chief value.

**Selected industries.**—The general tables at the end of this bulletin give the principal facts separately for the industries of the state. A selection has been made of the leading industries of the state for more detailed consideration. Sometimes an industry of greater importance than some of those selected is omitted because it comprises so few establishments that these detailed presentations would reveal the operations of individual concerns.

**Comparisons with previous censuses.**—Owing to the changes in industrial conditions it is not always possible to classify establishments by industries in such a way as to permit accurate comparison with preceding censuses. Table I, giving comparable figures for 1909, 1904, and 1899, therefore, does not embrace all the industries shown for 1909 in Table II.

**Influence of increased prices.**—In considering changes in cost of materials, value of products, and value added by manufacture, account should be taken of the general increase in the prices of commodities during recent years. To the extent to which this factor has been influential the figures can not be taken as an exact measure of increase in the volume of business.

**Persons engaged in industry.**—At the censuses of 1909, 1904, and 1899, the following general classes of persons engaged in manufacturing industries have been distinguished: (1) Proprietors and firm members, (2) salaried officers of corporations, (3) superintendents and managers, (4) clerks, and (5) wage earners. In the censuses of 1904 and 1899 these five classes were shown according to the three main groups: (1) Proprietors and firm members, (2) salaried officials, clerks, etc., and (3) wage earners. The second group included the three classes of salaried officers of corporations, superintendents and managers, and clerks. In the present census an entirely different

grouping is employed: That into (1) proprietors and officials, (2) clerks, and (3) wage earners. The first group includes proprietors and firm members, salaried officers of corporations, and superintendents and managers.

At this census the number of persons engaged in the industries, segregated by sex, and, in the case of wage earners, also by age (whether under 16 or 16 and over), was reported for December 15, or the nearest representative day. The 15th of December was selected as representing for most industries normal conditions of employment, but where conditions were exceptional, and particularly in the case of certain seasonal industries, such as canning, the December date could not be accepted as typical, and an earlier date had to be chosen.

In the case of employees other than wage earners the number thus reported on December 15, or other representative day, has been treated as equivalent to the average for the year, since the number of employees of this class does not vary much from month to month in a given industry. In the case of wage earners the average is obtained in the manner explained in the next paragraph.

**Wage earners.**—In addition to the report by sex and age of the number of wage earners on December 15, or other representative day, a report was obtained of the number employed on the 15th of each month, without distinction of sex or age. From these figures the average number of wage earners for the year has been calculated by dividing the sum of the numbers reported each month by 12. The average thus obtained represents the number of wage earners that would be required to perform the work done if all were constantly employed during the entire year. Accordingly, the importance of any industry as an employer of labor is believed to be more accurately measured by this average than by the number employed at any one time or on a given day.

The number of wage earners reported for the representative day, though given for each separate industry, is not totaled for all industries combined, because, in view of the variations of date, such a total is believed not to be significant. It would involve more or less duplication of persons working in different industries at different times, would not represent the total number employed in all industries at any one time, and would give an undue weight to seasonal industries, as compared with industries in continual operation.

In particular, totals by sex and age for the wage earners reported for the representative day would be misleading, because of the undue weight given to seasonal industries, in some of which, such as canning and preserving, the distribution of the wage earners by sex and age is materially different from that in most industries of more regular operation. In order to determine as nearly as possible the sex and age distribution of the average number of wage earners in the state as a whole, the following procedure has been adopted:

The percentage distribution by sex and age of the wage earners in each industry, for December 15, or the nearest representative day, has been calculated from the actual numbers reported for that date. This percentage has been applied to the average number of wage earners for the year in that industry, to determine the average number of men, women, and children employed. These calculated averages for the several industries have been added up to give the average distribution for the state as a whole.

In 1899 and 1904 the schedule called for the average number of wage earners of each sex 16 years and over, and the total number under 16 years of age, for each month, and these monthly statements were combined in an annual average. Comparatively few manufacturing concerns, however, keep their books in such way as to show readily the number of men, women, and children (under 16) employed each month. These monthly returns by sex and age were, in fact, largely estimates. It was believed that a more accurate and reliable sex and age distribution could be secured by taking as a basis of estimate the actual numbers employed on a single day.

**Prevailing hours of labor.**—The census made no attempt to ascertain the number of employees working a given number of hours per week. The inquiry called merely for the prevailing practice

followed in each establishment. Occasional variations in hours in an establishment from one period to another are disregarded, and no attention is given to the fact that a limited number of employees may have hours differing from those of the majority. In the tables all the wage earners of each establishment are counted in the class within which the establishment itself falls. In most establishments, however, all or practically all the employees work the same number of hours, so that these figures give a substantially correct picture of the hours of labor in manufacturing industries.

**Capital.**—For reasons stated in prior census reports, the statistics of capital secured by the census canvass are so defective as to be without value, except as indicating very general conditions. The instructions on the schedule for securing capital were as follows:

The answer should show the total amount of capital, both owned and borrowed, on the last day of the business year reported. All the items of fixed and live capital may be taken at the amounts carried on the books. If land or buildings are rented, that fact should be stated and no value given. If a part of the land or buildings is owned, the remainder being rented, that fact should be so stated and only the value of the owned property given. Do not include securities and loans representing investments in other enterprises.

**Materials.**—Cost of materials refers to the materials used during the year, which may be more or less than the materials purchased during the year. The term materials includes fuel, rent of power and heat, mill supplies, and containers, as well as materials forming a constituent part of the product. Fuel includes all fuel used, whether for heat, light, or power, or for the process of manufacture.

**Expenses.**—Under "Expenses" are included all items of expense incident to the year's business, except interest, whether on bonds or other forms of indebtedness and allowances for depreciation.

**Value of products.**—The value of products for any industry includes the total value of all products manufactured in establishments whose products of chief value fall under the industry designation. The amounts given represent the selling value at the factory of all products manufactured during the year, which may differ from the value of the products sold. Amounts received for work on materials furnished by others are included.

**Value added by manufacture.**—The value of products is not a satisfactory measure of either the absolute or the relative importance of a given industry, because only a part of this value is actually created by the manufacturing process carried on in the industry itself. Another part of it, and often by far the larger part, represents the value of the materials used, which have been produced by agriculture or mining or by other industrial establishments. For many purposes, therefore, the best measure of the importance of different classes of industry is the value created as the result of the manufacturing operations carried on within the industry. This value is obtained by deducting the cost of the materials consumed from the value of the product. The figure thus obtained is termed in the census reports "value added by manufacture."

There is a further statistical advantage which "value added" has over gross value of products. In combining the value of products for all industries the value of products produced by one establishment and used as materials in another is duplicated, and the total, therefore, gives a greatly exaggerated idea of the wealth created. No such duplication takes place in the total "value added by manufacture."

**Cost of manufacture and profits.**—Census data do not show the entire cost of manufacture, and consequently can not be used to show profits. No account has been taken of interest and depreciation. Even if the amount of profit could be determined by deducting the expenses from the value of the products, the rate of profit on the investment could not properly be calculated, because of the very defective character of the returns regarding capital.

**Primary power.**—The figures given for this item show the total of the primary power used by the establishments. They do not cover the power developed by motors operated by such power, the inclusion of which would evidently result in duplication.

**Location of establishments.**—The Census Bureau has classified establishments by their location in cities or classes of cities. In interpreting these figures due consideration should be given to the fact that often establishments are located just outside the boundaries of cities, and are necessarily so classified, though locally they are looked upon as constituting a part of the manufacturing interests of the cities.

**Laundries.**—The census of 1909 was the first to include statistics

of laundries. The reports are confined to establishments using mechanical power. The data are presented separately and are not included in the general total for manufacturing industries, in order to avoid interference with comparisons with prior censuses.

**Custom sawmills and gristmills.**—In order to make the statistics for 1909 comparable with those for 1904 the data for these mills have been excluded from all the tables presenting general statistics, and are given in a separate table at the end of this report.

### INDUSTRIES IN GENERAL.

**General character of the state.**—Missouri, located in the central part of the Mississippi Basin, with a gross area of 69,420 square miles, of which 693 represent water surface, ranks eighteenth in size among the states and territories of continental United States. Its population was 3,293,335 in 1910, as compared with 3,106,665 in 1900 and 2,679,185 in 1890. It ranked seventh in population in 1910 and fifth in 1900 among the 49 states and territories. The increase in population during the last decade was largely due to the growth of the cities of St. Louis and Kansas City and to gains in a number of the smaller cities and towns, the increases in these places being sufficient to offset the decreases which were reported for a large number of the counties of the state and for the city of St. Joseph. The density of population for the state in 1910 was 47.9 persons per square mile, the corresponding figure for 1900 being 45.2.

In 1910 three cities in the state each had a population of over 50,000—St. Louis, with 687,029, Kansas City, with 248,381, and St. Joseph, with 77,403. There were also seven cities having a population of over 10,000 but less than 50,000, as follows: Springfield, Joplin, Hannibal, Sedalia, Jefferson City, Webb City, and Moberly. Forty-two and five-tenths per cent of the entire population of the state resided in incorporated places having a population of 2,500 inhabitants or over, as against 36.3 per cent in 1900. Apart from the 10 cities having over 10,000 inhabitants only 7.6 per cent of the population resided in incorporated places reporting over 2,500 inhabitants. With numerous steam-railroad systems having a total mileage of 8,045,<sup>1</sup> and more miles of navigable rivers on and within its borders than any other state,<sup>2</sup> Missouri is excellently equipped with transportation facilities.

**Importance and growth of manufactures.**—Missouri ranks high as an agricultural, mining, and manufacturing state. Its prominent position in manufacturing is largely due to the activity of the industries of St. Louis and Kansas City. The state ranked well as a manufacturing state as early as 1849–50, in which year it ranked tenth among the states in value of products, and in 1909 it held the same relative position. The growth of population in the state, although con-

siderably less in proportion, has been closely related to the increase in the importance of its manufactures. In 1849 the 2,923 manufacturing establishments gave employment to an average of 15,808 wage earners, representing 2.3 per cent of the total population of the state, and reported a total value of manufactured products of \$24,324,000. In 1909 the number of establishments had increased to 8,375, employment was given to 152,993 wage earners, representing 4.6 per cent of the population of the state, and the value of products reached a total of \$574,111,000. During this period, the gross value of products per capita of the total population of the state increased from \$36 to \$174.

The state contains large deposits of bituminous coal and other minerals accessible for industrial purposes, which fact has resulted in the development of such industries as smelting and refining, copper, lead, and zinc, marble and stone work, iron and steel, blast furnaces, kaolin and ground earths, glass, and paints; and extensive timber areas have provided abundant material for the development of the lumber and kindred industries. The location of the cities of the state in the midst of a great agricultural region, and their proximity and access to raw materials, as well as their excellent shipping facilities, are factors favorable to the growth of their manufacturing industries.

The table on page 4 gives the most important figures relative to all classes of manufactures combined for the state as returned at the censuses of 1909, 1904, and 1899, together with the percentages of increase from census to census.

In 1909 the state of Missouri had 8,375 manufacturing establishments, which gave employment to an average of 185,705 persons during the year and paid out \$109,837,000 in salaries and wages. Of the persons employed, 152,993 were wage earners. These establishments turned out products to the value of \$574,111,000, to produce which materials costing \$354,411,000 were used. The value added by manufacture was thus \$219,700,000, which figure, as explained in the Introduction, best represents the net wealth created by manufacturing operations during the year.

In general, the table shows a considerable development in the manufactures of Missouri during the decade. While the number of establishments was

<sup>1</sup> Statistics of Railways in the United States, Interstate Commerce Commission, 1909.

<sup>2</sup> Official Manual of the State of Missouri, 1909–1910.



smaller in 1904 than in 1899, showing a decrease of 5.7 per cent, there was a net increase of 1,522, or 22.2 per cent, for the decade. During the period 1904 to 1909 the number of wage earners increased 14.9 per cent, wages 21.3 per cent, total expenses 34.8 per cent, and the value of products 30.6 per cent, as compared with increases of 23.6 per cent in the average number of wage earners, 42.7 per cent in wages, 39.4 per cent in the total expenses, and 39 per cent in the value of products

for the period 1899 to 1904. The percentages of increase for most of the items were larger from 1899 to 1904 than from 1904 to 1909. As pointed out in the Introduction, it would be improper to infer that manufactures increased in volume to the full extent indicated by these figures representing values, since the increase shown is certainly due, in part, to the increase that has taken place in recent years in the price of commodities.

|  | NUMBER OR AMOUNT. |               |                  | PER CENT OF INCREASE. <sup>1</sup> |                  |
|--|-------------------|---------------|------------------|------------------------------------|------------------|
|  | 1909              | 1904          | 1899             | 1904-1909                          | 1899-1904        |
| Number of establishments.....  | 8,375             | 6,464         | 6,853            | 29.6                               | -5.7             |
| Persons engaged in manufactures.....                                       | 185,705           | 156,585       | ( <sup>2</sup> ) | 18.6                               | ( <sup>2</sup> ) |
| Proprietors and firm members.....  | 8,226             | 6,299         | ( <sup>2</sup> ) | 30.6                               | ( <sup>2</sup> ) |
| Salaried employees.....  | 24,486            | 17,119        | 12,474           | 43.0                               | 37.2             |
| Wage earners (average number).....   | 152,993           | 133,167       | 107,704          | 14.9                               | 23.6             |
| Primary horsepower.....  | 340,467           | 247,861       | 189,117          | 37.4                               | 31.1             |
| Capital.....   | \$444,343,000     | \$379,369,000 | \$223,781,000    | 17.1                               | 69.5             |
| Expenses.....  | 522,276,000       | 387,427,000   | 277,839,000      | 34.8                               | 39.4             |
| Services.....  | 109,837,000       | 85,646,000    | 60,009,000       | 28.2                               | 42.7             |
| Salaries.....  | 28,994,000        | 19,002,000    | 13,295,000       | 52.6                               | 42.9             |
| Wages.....   | 80,843,000        | 66,644,000    | 46,714,000       | 21.3                               | 42.7             |
| Materials.....   | 354,411,000       | 252,258,000   | 184,189,000      | 40.5                               | 37.0             |
| Miscellaneous.....   | 58,028,000        | 49,523,000    | 33,641,000       | 17.2                               | 47.2             |
| Value of products.....   | 574,111,000       | 439,549,000   | 316,304,000      | 30.6                               | 39.0             |
| Value added by manufacture (value of products less cost of materials)..... | 219,700,000       | 187,291,000   | 132,115,000      | 17.3                               | 41.8             |

<sup>1</sup> A minus sign (—) denotes a decrease.

<sup>2</sup> Figures not available.

The relative importance and growth of the leading manufacturing industries of the state are shown in the table on page 5.

It should be borne in mind, in considering this table, that the value of products in some of the industries involves a certain amount of duplication, due to the use of the products of one establishment in the industry as material for another establishment.

Although a few industries greatly predominate in importance, it will be seen from Table II that there is on the whole considerable diversity in the manufacturing activities of the state. The most important industries listed in the next table, in which they are arranged in the order of the value of products, call for brief consideration.

*Slaughtering and meat packing.*—The state is located in the center of a hog-raising area; it is one of the great corn-growing states and has extensive feeding and grazing areas for cattle in the prairies of northern Missouri and for sheep in the Ozarks of southern Missouri. These features have been very important factors in the development of slaughtering and meat packing in the state. Measured by value of products, this is the leading industry of the state, with products in 1909 valued at \$79,581,000, or 13.9 per cent of the total of all manufactured products.

From 1899 to 1909 the average number of wage earners increased 49.6 per cent and the value of products 84.4 per cent. When measured by the average

number of wage earners and the value added by manufacture this industry is exceeded by several industries of the state. The stockyards at South St. Joseph and those at St. Louis centralize in a large degree the activity in this form of production.

*Boots and shoes, including cut stock and findings.*—This industry, which was second in importance in the state in 1909, when measured by value of products, has shown a remarkable development, having advanced from sixth place in 1904 and eighth place in 1899. The value of products more than doubled during each of the two five-year periods shown. As a result of this pronounced growth Missouri has become second in the industry among the states, ranking fourth in 1904 and eighth in 1899. This industry gave employment to more wage earners than any other in the state and was exceeded by only two in value added by manufacture. In number of establishments there was a decrease from 57 to 39 for the earlier five-year period, but the loss was more than made up during the later period. In value of products, there was an increase of 325.5 per cent during the 10-year period.

*Flour-mill and gristmill products.*—This is one of the most important industries in the state, occupying third place in value of products in 1909. The number of wage earners and the value added by manufacture are both comparatively small, due to the fact that much of the labor is performed by the proprietors or their immediate representatives and also that the proc-

esses involved in the manufacture are simple and to a large extent mechanical. In an agricultural state as highly developed as Missouri the growth of this industry depends largely upon the crop conditions, although the general rise in the value of cereal products should be considered in this connection. Most of the

mills are small and are located in the rural districts, but there are several very large mills in the cities of the state.

The general statistics for the industry do not include the operations of custom gristmills, figures for which are presented separately on page 20.

| INDUSTRY.  | Number of establishments. | WAGE EARNERS.   |                        | VALUE OF PRODUCTS. |                        | VALUE ADDED BY MANUFACTURE. |                        | PER CENT OF INCREASE. <sup>1</sup> |           |                             |           |
|--|---------------------------|-----------------|------------------------|--------------------|------------------------|-----------------------------|------------------------|------------------------------------|-----------|-----------------------------|-----------|
|  |                           | Average number. | Per cent distribution. | Amount.            | Per cent distribution. | Amount.                     | Per cent distribution. | Value of products.                 |           | Value added by manufacture. |           |
|  |                           |                 |                        |                    |                        |                             |                        | 1904-1900                          | 1890-1904 | 1904-1900                   | 1890-1904 |
| <b>All industries</b> .....  | 8,375                     | 152,003         | 100.0                  | \$874,111,000      | 100.0                  | \$219,700,000               | 100.0                  | 30.6                               | 39.0      | 17.3                        | 41.8      |
| Slaughtering and meat packing.....   | 45                        | 4,674           | 3.1                    | 70,581,000         | 13.0                   | 7,383,000                   | 3.4                    | 32.4                               | 30.3      | 22.8                        | 51.0      |
| Boots and shoes, including cut stock and findings.....                           | 59                        | 17,306          | 11.4                   | 48,751,000         | 8.5                    | 14,211,000                  | 6.5                    | 107.1                              | 105.5     | 65.5                        | 157.7     |
| Flour-mill and gristmill products.....   | 680                       | 2,108           | 1.4                    | 44,508,000         | 7.8                    | 5,682,000                   | 2.6                    | 17.0                               | 50.6      | 11.5                        | 34.2      |
| Printing and publishing.....   | 1,322                     | 10,700          | 7.1                    | 20,651,000         | 5.2                    | 21,024,000                  | 9.6                    | 21.5                               | 47.6      | 10.4                        | 53.6      |
| Liquors, malt.....   | 31                        | 5,646           | 3.7                    | 27,447,000         | 4.8                    | 19,879,000                  | 9.0                    | 13.0                               | 75.3      | 11.0                        | 67.2      |
| Lumber and timber products.....  | 1,008                     | 13,522          | 8.8                    | 23,261,000         | 4.0                    | 12,647,000                  | 5.8                    | 26.8                               | 11.7      | 6.0                         | 39.4      |
| Foundry and machine-shop products.....   | 320                       | 7,443           | 4.0                    | 10,975,000         | 3.5                    | 10,819,000                  | 4.9                    | 36.0                               | .....     | 25.5                        | .....     |
| Bread and other bakery products.....   | 954                       | 4,743           | 3.1                    | 18,524,000         | 3.2                    | 7,695,000                   | 3.5                    | 46.2                               | 74.0      | 42.7                        | 58.0      |
| Clothing, men's, including shirts.....   | 54                        | 7,094           | 5.2                    | 15,407,000         | 2.7                    | 6,336,000                   | 2.9                    | 40.2                               | 5.4       | 32.4                        | 11.1      |
| Coffee and spice, roasting and grinding.....                                     | 40                        | 730             | 0.5                    | 12,062,000         | 2.1                    | 2,870,000                   | 1.3                    | 66.1                               | 37.0      | 35.4                        | 120.0     |
| Cars and general shop construction and repairs by steam-railroad companies.....  | 35                        | 8,121           | 5.3                    | 9,812,000          | 1.7                    | 6,684,000                   | 2.6                    | 12.5                               | 33.7      | 23.4                        | 31.5      |
| Carriages and wagons and materials.....  | 243                       | 3,302           | 2.2                    | 8,493,000          | 1.5                    | 3,609,000                   | 1.6                    | 10.3                               | 10.1      | 5.6                         | 2.8       |
| Copper, tin, and sheet-iron products.....  | 207                       | 2,637           | 1.7                    | 7,827,000          | 1.4                    | 3,229,000                   | 1.5                    | 36.8                               | .....     | 32.8                        | .....     |
| Patent medicines and compounds and druggists' preparations.....                  | 185                       | 980             | 0.6                    | 7,630,000          | 1.3                    | 5,103,000                   | 2.3                    | 38.6                               | 10.8      | 44.7                        | 1.0       |
| Furniture and refrigerators.....   | 99                        | 3,427           | 2.2                    | 7,380,000          | 1.3                    | 4,053,000                   | 1.8                    | 52.6                               | 20.1      | 42.2                        | 20.7      |
| Paint and varnish.....   | 32                        | 685             | 0.4                    | 6,828,000          | 1.2                    | 2,130,000                   | 1.0                    | 6.7                                | 40.5      | 28.1                        | 39.0      |
| Stoves and furnaces, including gas and oil stoves.....                           | 20                        | 2,013           | 1.3                    | 6,713,000          | 1.2                    | 3,807,000                   | 1.8                    | 13.2                               | .....     | 0.5                         | .....     |
| Confectionery.....   | 61                        | 1,882           | 1.2                    | 6,050,000          | 1.2                    | 2,725,000                   | 1.2                    | 43.8                               | -6.2      | 36.4                        | 13.8      |
| Leather goods.....   | 106                       | 1,814           | 1.2                    | 6,508,000          | 1.1                    | 2,714,000                   | 1.2                    | 21.4                               | .....     | 0.7                         | 50.8      |
| Clothing, women's.....   | 68                        | 2,750           | 1.8                    | 5,439,000          | 0.9                    | 2,250,000                   | 1.0                    | 63.7                               | 6.3       | 48.3                        | 9.9       |
| Food preparations.....   | 37                        | 471             | 0.3                    | 5,384,000          | 0.9                    | 1,130,000                   | 0.5                    | 70.3                               | 10.0      | 10.7                        | 20.0      |
| Iron and steel, steel works and rolling mills.....                               | 4                         | 2,227           | 1.5                    | 5,014,000          | 0.9                    | 2,154,000                   | 1.0                    | 67.2                               | -6.3      | 52.7                        | -11.5     |
| Soup.....  | 10                        | 557             | 0.4                    | 4,719,000          | 0.8                    | 1,064,000                   | 0.8                    | 51.6                               | .....     | 34.0                        | .....     |
| Gas, illuminating and heating.....   | 29                        | 941             | 0.6                    | 4,038,000          | 0.8                    | 3,415,000                   | 1.6                    | -17.0                              | 94.1      | -10.3                       | 70.5      |
| Pottery, terra-cotta, and fire-clay products.....                                | 20                        | 3,138           | 2.1                    | 4,069,000          | 0.7                    | 2,093,000                   | 1.4                    | 32.0                               | 85.5      | 28.4                        | 80.4      |
| Brick and tile.....  | 120                       | 2,009           | 2.0                    | 3,676,000          | 0.6                    | 2,664,000                   | 1.2                    | 41.4                               | 30.7      | 38.0                        | 27.3      |
| Chemicals.....   | 9                         | 619             | 0.4                    | 3,640,000          | 0.6                    | 1,416,000                   | 0.6                    | 11.0                               | 81.8      | 27.9                        | 130.5     |
| Marble and stone work.....   | 100                       | 1,342           | 0.9                    | 3,441,000          | 0.6                    | 1,904,000                   | 0.9                    | 40.3                               | 80.5      | 42.3                        | 93.5      |
| Wirework, including wire rope and cable.....                                     | 14                        | 710             | 0.6                    | 3,306,000          | 0.6                    | 1,662,000                   | 0.8                    | 45.4                               | 94.0      | 50.8                        | 140.6     |
| Electrical machinery, apparatus, and supplies.....                               | 20                        | 1,000           | 0.7                    | 3,251,000          | 0.6                    | 2,147,000                   | 1.0                    | 86.7                               | 91.1      | 80.2                        | 104.1     |
| Cooperage and wooden goods, not elsewhere specified.....                         | 43                        | 1,088           | 0.7                    | 3,079,000          | 0.5                    | 1,177,000                   | 0.5                    | -17.1                              | 77.0      | -18.7                       | 55.5      |
| Butter, cheese, and condensed milk.....  | 50                        | 150             | 0.1                    | 2,969,000          | 0.5                    | 460,000                     | 0.2                    | 125.2                              | 204.2     | 63.7                        | 172.8     |
| Brass and bronze products.....   | 18                        | 297             | 0.2                    | 2,221,000          | 0.4                    | 567,000                     | 0.3                    | 45.4                               | 19.4      | 65.3                        | 10.6      |
| Ice, manufactured.....   | 92                        | 701             | 0.5                    | 2,084,000          | 0.4                    | 1,417,000                   | 0.6                    | 84.4                               | 76.3      | 93.8                        | 70.1      |
| Leather, tanned, curried, and finished.....                                      | 20                        | 220             | 0.1                    | 2,035,000          | 0.4                    | 436,000                     | 0.2                    | 80.4                               | 38.1      | 10.7                        | 61.5      |
| Glass.....   | 4                         | 1,755           | 1.1                    | 1,993,000          | 0.3                    | 1,046,000                   | 0.5                    | 11.0                               | 132.5     | -2.5                        | 100.0     |
| Awnings, tents, and sails.....   | 18                        | 429             | 0.3                    | 1,784,000          | 0.3                    | 577,000                     | 0.3                    | 44.2                               | 25.6      | 30.7                        | -8.8      |
| Automobiles, including bodies and parts.....                                     | 17                        | 308             | 0.2                    | 1,677,000          | 0.3                    | 652,000                     | 0.3                    | .....                              | .....     | .....                       | .....     |
| Millinery and lace goods.....  | 35                        | 934             | 0.6                    | 1,647,000          | 0.3                    | 762,000                     | 0.3                    | 207.6                              | -1.8      | 262.0                       | 20.0      |
| Canning and preserving.....  | 222                       | 952             | 0.6                    | 1,574,000          | 0.3                    | 569,000                     | 0.3                    | 19.0                               | .....     | 20.0                        | .....     |
| Coffins, burial cases, and undertakers' goods.....                               | 11                        | 540             | 0.4                    | 1,565,000          | 0.3                    | 789,000                     | 0.4                    | 25.6                               | 60.8      | 31.0                        | 111.3     |
| Photographic apparatus and materials.....  | 4                         | 248             | 0.2                    | 1,415,000          | 0.2                    | 831,000                     | 0.4                    | -0.9                               | 30.7      | -2.8                        | 90.8      |
| Boxes, fancy and paper.....  | 27                        | 1,113           | 0.7                    | 1,376,000          | 0.2                    | 707,000                     | 0.3                    | 78.7                               | 57.8      | 73.7                        | 25.6      |
| Cars and general shop construction and repairs by street-railroad companies..... | 7                         | 605             | 0.6                    | 1,204,000          | 0.2                    | 703,000                     | 0.3                    | -0.6                               | 124.3     | -2.5                        | 132.6     |
| Lime.....  | 31                        | 602             | 0.5                    | 1,031,000          | 0.2                    | 570,000                     | 0.3                    | 30.2                               | .....     | 20.5                        | .....     |
| Agricultural implements.....   | 25                        | 438             | 0.3                    | 981,000            | 0.2                    | 477,000                     | 0.2                    | -8.1                               | 11.0      | -22.6                       | 12.6      |
| Mattresses and spring beds.....  | 33                        | 345             | 0.2                    | 959,000            | 0.2                    | 502,000                     | 0.2                    | -15.0                              | 86.3      | -12.8                       | 130.4     |
| Paper goods, not elsewhere specified.....  | 11                        | 435             | 0.3                    | 925,000            | 0.2                    | 475,000                     | 0.2                    | 54.2                               | .....     | 43.1                        | .....     |
| Jewelry.....   | 19                        | 376             | 0.2                    | 873,000            | 0.1                    | 550,000                     | 0.2                    | 48.2                               | 77.4      | 55.4                        | 57.3      |
| Brooms and brushes.....  | 61                        | 226             | 0.1                    | 849,000            | 0.1                    | 369,000                     | 0.2                    | 60.8                               | -13.0     | 25.8                        | -2.0      |
| Gas and electric fixtures and lamps and reflectors.....                          | 10                        | 232             | 0.2                    | 642,000            | 0.1                    | 315,000                     | 0.1                    | 40.8                               | 35.3      | 16.7                        | 26.2      |
| Liquors, distilled.....  | 28                        | 34              | (*)                    | 613,000            | 0.1                    | 512,000                     | 0.2                    | 167.0                              | 123.9     | 253.1                       | 116.4     |
| Blacking and cleansing and polishing preparations.....                           | 32                        | 110             | 0.1                    | 600,000            | 0.1                    | 297,000                     | 0.1                    | 255.0                              | 40.8      | 253.6                       | 5.0       |
| Cutlery and tools, not elsewhere specified.....                                  | 22                        | 280             | 0.2                    | 600,000            | 0.1                    | 307,000                     | 0.1                    | 46.7                               | 267.1     | 42.1                        | 213.0     |
| Photo-engraving.....   | 18                        | 187             | 0.1                    | 450,000            | 0.1                    | 368,000                     | 0.2                    | 110.5                              | 173.3     | 115.2                       | 163.1     |
| Belting and hose, leather.....   | 7                         | 47              | (*)                    | 445,000            | 0.1                    | 155,000                     | 0.1                    | 40.8                               | 41.1      | 42.2                        | 84.7      |
| Hats and caps, other than felt, straw, and wool.....                             | 14                        | 182             | 0.1                    | 440,000            | 0.1                    | 225,000                     | 0.1                    | 33.3                               | 38.1      | 54.2                        | 2.9       |
| Show cases.....  | 8                         | 209             | 0.1                    | 435,000            | 0.1                    | 253,000                     | 0.1                    | -20.7                              | 144.8     | -22.4                       | 151.1     |
| Pipes, tobacco.....  | 7                         | 307             | 0.2                    | 306,000            | 0.1                    | 227,000                     | 0.1                    | 20.4                               | 26.1      | 23.4                        | 10.8      |
| All other industries.....  | 1,347                     | 22,307          | 14.6                   | 103,636,000        | 18.0                   | 38,243,000                  | 17.4                   | .....                              | .....     | .....                       | .....     |

<sup>1</sup> Per cent of increase is based on figures in Table I, and a minus sign (-) denotes a decrease. Where percentages are omitted, the figures are not comparable.  
<sup>2</sup> Less than one-tenth of 1 per cent.

*Printing and publishing.*—This classification includes the printing and publishing of books, newspapers, periodicals, and music; bookbinding and blank-book

making; engraving on steel and copper plate, including plate printing; lithographing; and job printing. The industry shows a substantial growth in value of prod-

ucts during the decade, most of which occurred during the earlier five-year period. The industry was first in the state in 1909 in number of establishments, first in value added by manufacture, and third in average number of wage earners.

*Liquors, malt.*—Although the value of products for the brewery industry practically doubled during the decade, the increase from 1904 to 1909 was slight. The average number of wage earners employed in 1909 was 5,646, while the value added by manufacture, \$19,879,000, was larger than that shown for any other industry in the state, with the single exception of printing and publishing.

*Lumber and timber products.*—This classification includes logging camps, sawmills other than small custom mills, planing mills, and establishments which manufacture wooden packing boxes. The logging and milling operations are confined largely to the wooded Ozark region of southern Missouri, while many of the planing mills and box factories were reported from the cities. With the exception of the boot and shoe factories, this industry gave employment to more persons than any other industry in the state. The value of products shows a substantial increase from 1904 to 1909.

*Foundry and machine-shop products.*—In addition to the foundries and machine shops, this industry embraces such manufactures as bells, gas machines and gas and water meters, hardware, plumbers' supplies, steam fittings, and structural ironwork. Comparable figures for 1899 are not available because of the inclusion under this classification at that census of statistics for important establishments which in 1904 and 1909 were shown under other classifications. The industry was really of greater importance in the state than is indicated by the statistics, as some machine shops manufactured distinctive products and were assigned to other classifications.

*Clothing, men's, and clothing, women's.*—These two industries are closely allied. Combined they gave employment in 1909 to an average number of 10,744 wage earners and turned out products valued at \$20,846,000. Included with men's clothing are establishments which manufacture shirts.

*Coffee and spice, roasting and grinding.*—This industry, which is of considerable importance in Missouri, is largely centered in St. Louis. The processes involved in the industry are simple, and many wholesale and retail grocery and drug establishments, not included in the census reports, engage in this form of manufacture; consequently, the statistics do not fully indicate the importance of the industry.

*Bread and other bakery products.*—This industry is common to all centers of population in the states. In 1909 the bakeries of Missouri gave employment to an average of 4,743 wage earners, and reported products valued at \$18,524,000.

*Cars and general shop construction and repairs by steam-railroad companies.*—This class of manufacture represents the work done in the car repair shops of steam-railroad companies, and is practically confined to repairs to the rolling stock and equipment of their own roads. The statistics do not include minor repairs made in roundhouses. This industry gave employment to an average of 8,121 wage earners in 1909, ranking fourth in this respect among the manufacturing industries of the state.

*Pipes, tobacco.*—This is one of the distinctive industries of the state in that the world's supply of corn-cob pipes is largely manufactured here. In 1909 there were seven establishments which gave employment to 307 wage earners and reported products valued at \$396,000.

In addition to the industries presented separately, there are 40 industries each of which had a value of products in 1909 in excess of \$300,000. They are included under the head of "All other industries" in the table because in some instances the operations of individual establishments would be disclosed if they were shown separately; in others, because the returns do not properly represent the true condition of the industry, as it is interwoven with one or more other industries; while for others comparable statistics for the different census years can not be presented on account of changes in classification. The most important of these industries are: Babbit metal and solder; bags, other than paper; cars, steam-railroad, not including operations of railroad companies; cars, street-railroad, not including operations of railroad companies; cement; cordage and twine and jute and linen goods; explosives; furnishing goods, men's; galvanizing; iron and steel, blast furnaces; mineral and soda waters; oil, cottonseed, and cake; petroleum, refining; smelting and refining, lead; smelting and refining, zinc; tobacco manufactures; and window shades and fixtures.

This table also shows the percentages of increase for these leading industries in respect to value of products and value added by manufacture in all cases where comparative statistics can be presented. Many of the industries show widely varying rates of increase for the two periods. The millinery and lace-goods industry showed a greater rate of increase from 1904 to 1909 in value of products than any of the other industries shown in the table, namely, 267.6 per cent, followed by the manufacture of blacking and cleansing and polishing preparations, with 255 per cent, and the manufacture of distilled liquors, with 197.6 per cent. For an industry already so extensive, the boot and shoe industry shows very large gains for both periods in value of products and value added by manufacture. During the five-year period 1904 to 1909, the highest rates of increase in value added by manufacture were those for the millinery and lace-goods industry, 262.9 per cent; the manufacture of blacking and cleansing and polishing preparations, 253.6 per cent;

the distillery industry, 253.1 per cent; the photo-engraving industry, 115.2 per cent; the manufactured-ice industry, 93.8 per cent; and the manufacture of electrical machinery, apparatus, and supplies, 89.2 per cent. None of the industries listed separately in the table showed a decrease in value of products or in value added by manufacture for both five-year periods. Seven industries decreased in value of products from 1904 to 1909, while four decreased during the earlier period 1899 to 1904. Eight industries decreased in value added by manufacture from 1904 to 1909, while only three decreased in this respect during the first half of the decade.

Slaughtering and meat packing, the leading industry in the state in value of products, becomes seventh when measured by value added by manufacture. The printing and publishing and malt-liquor industries, which are fourth and fifth, respectively, in value of products, rank first and second, respectively, in value added by manufacture.

Persons engaged in manufacturing industries.—The following table shows for 1909 the distribution of the number of persons engaged in manufactures, the average number of wage earners being distributed by sex and age. It should be borne in mind, however, that the sex and age classification of the average number of wage earners in this and other tables is an estimate obtained by the method described in the Introduction.

| CLASS.                                 | PERSONS ENGAGED IN MANUFACTURES. |         |         |
|--|----------------------------------|---------|---------|
|  | Total.                           | Male.   | Female. |
| All classes.....                       | 185,705                          | 150,750 | 34,955  |
| Proprietors and officials.....         | 14,820                           | 14,423  | 397     |
| Proprietors and firm members.....      | 8,226                            | 7,950   | 276     |
| Salaried officers of corporations..... | 3,010                            | 2,924   | 86      |
| Superintendents and managers.....      | 3,584                            | 3,510   | 74      |
| Clerks.....                            | 17,892                           | 14,061  | 3,831   |
| Wage earners (average number).....     | 152,993                          | 122,266 | 30,727  |
| 16 years of age and over.....          | 149,175                          | 119,980 | 29,195  |
| Under 16 years of age.....             | 3,818                            | 2,286   | 1,532   |

The average number of persons engaged in manufactures during 1909 was 185,705, of whom 152,993 were wage earners. Of the remainder, 14,820 were proprietors and officials, and 17,892 were clerks. Corresponding figures for individual industries will be found in Table II, page 28.

The following table shows for 1909 the percentages of proprietors and officials, clerks, and wage earners, respectively, among the total number of persons employed in manufactures. It covers all industries combined and 20 important industries individually.

Of the total number of persons engaged in all manufacturing industries, 8 per cent were proprietors and officials, 9.6 per cent clerks, and 82.4 per cent wage earners. The proportions vary greatly in the different

industries. The percentage of proprietors and officials in the flour-mill and gristmill industry was 30.3, the highest shown in the table. This is due to the fact that there are a large number of small establishments in this industry, many of which are operated by the proprietors or their immediate representatives, or with the assistance of only one or two wage earners. Many small establishments in which much of the labor is performed by proprietors are also reported for the bakery, patent medicine and compound, printing and publishing, lumber and timber, carriage and wagon, and copper, tin, and sheet-iron products industries. The result is that the proportion of persons engaged in these industries falling in the class of proprietors and officials is higher than for other industries or for all industries combined. On the other hand, on account of the large average number of wage earners to an establishment, the proportion of proprietors and officials in the boot and shoe industry was only 1.3 per cent; that in the railroad repair shops, 1.6 per cent; in the men's clothing industry, 1.9 per cent; in the steel works and rolling mills, 1.2 per cent; in the breweries, 2.2 per cent; and in the slaughtering and meat-packing industry, 2.3 per cent.

| INDUSTRY.   | PERSONS ENGAGED IN MANUFACTURES. |                            |         |                                |
|---|----------------------------------|----------------------------|---------|--------------------------------|
|   | Total number.                    | Per cent of total.         |         |                                |
|   |                                  | Proprietors and officials. | Clerks. | Wage earners (average number). |
| All industries.....   | 185,705                          | 8.0                        | 9.6     | 82.4                           |
| Boots and shoes, including cut stock and findings.....                          | 18,665                           | 1.3                        | 5.5     | 93.2                           |
| Bread and other bakery products.....  | 6,797                            | 16.6                       | 13.6    | 69.8                           |
| Carriages and wagons and materials.....   | 3,940                            | 11.2                       | 4.0     | 83.8                           |
| Cars and general shop construction and repairs by steam-railroad companies..... | 8,620                            | 1.6                        | 4.2     | 94.2                           |
| Clothing, men's, including shirts.....  | 8,067                            | 1.9                        | 5.8     | 92.2                           |
| Clothing, women's.....  | 3,122                            | 4.5                        | 7.4     | 88.1                           |
| Confectionery.....  | 2,337                            | 5.1                        | 14.3    | 80.5                           |
| Copper, tin, and sheet-iron products.....                                       | 3,228                            | 10.2                       | 8.1     | 81.7                           |
| Flour-mill and gristmill products.....  | 3,802                            | 30.3                       | 8.7     | 61.0                           |
| Foundry and machine-shop products.....  | 9,051                            | 7.8                        | 9.9     | 82.2                           |
| Furniture and refrigerators.....  | 3,977                            | 6.3                        | 7.5     | 86.2                           |
| Iron and steel, steel works and rolling mills.....                              | 2,370                            | 1.2                        | 5.2     | 93.6                           |
| Leather goods.....  | 2,308                            | 9.2                        | 12.2    | 78.6                           |
| Liquors, malt.....  | 6,348                            | 2.2                        | 8.9     | 88.9                           |
| Lumber and timber products.....   | 15,814                           | 11.4                       | 3.1     | 85.5                           |
| Paint and varnish.....  | 1,034                            | 9.9                        | 23.0    | 66.2                           |
| Patent medicines and compounds and druggists' preparations.....                 | 1,957                            | 16.5                       | 33.5    | 50.1                           |
| Printing and publishing.....  | 15,792                           | 13.3                       | 18.4    | 68.3                           |
| Slaughtering and meat packing.....  | 5,529                            | 2.3                        | 13.1    | 84.5                           |
| Stoves and furnaces, including gas and oil stoves.....                          | 2,430                            | 3.7                        | 13.4    | 82.8                           |
| All other industries.....   | 60,108                           | 8.6                        | 10.3    | 81.1                           |

The following table shows, for 1909, in percentages, for all industries combined, the distribution of the average number of wage earners by age periods, and for those 16 years of age and over by sex, calculated in the manner described in the Introduction. It also shows, for some of the important industries separately, a similar distribution of wage earners as reported for December 15, or the nearest representative day. As a means of judging the importance of the several industries the average number employed for the year in all industries is also given in each case.

## MANUFACTURES—MISSOURI.

| INDUSTRY.   | WAGE EARNERS.   |                           |             |                        |
|---|-----------------|---------------------------|-------------|------------------------|
|   | Average number. | Per cent of total.        |             |                        |
|   |                 | 16 years of age and over. |             | Under 16 years of age. |
|   |                 | Male.                     | Female.     |                        |
| <b>All industries.....</b>  | <b>152,993</b>  | <b>78.4</b>               | <b>19.1</b> | <b>2.5</b>             |
| Boots and shoes, including cut stock and findings.....                          | 17,396          | 60.6                      | 31.8        | 7.6                    |
| Bread and other bakery products.....  | 4,743           | 68.1                      | 29.0        | 2.8                    |
| Carriages and wagons and materials.....   | 3,302           | 97.5                      | 2.2         | 0.4                    |
| Cars and general shop construction and repairs by steam-railroad companies..... | 8,121           | 99.9                      | 0.1         | .....                  |
| Clothing, men's, including shirts.....  | 7,994           | 21.5                      | 76.4        | 2.1                    |
| Clothing, women's.....  | 2,750           | 18.7                      | 79.1        | 2.2                    |
| Confectionery.....  | 1,882           | 38.6                      | 59.4        | 2.1                    |
| Copper, tin, and sheet-iron products.....                                       | 2,637           | 91.8                      | 6.8         | 1.4                    |
| Flour-mill and gristmill products.....  | 2,198           | 99.3                      | 0.4         | 0.4                    |
| Foundry and machine-shop products.....  | 7,443           | 98.8                      | 0.4         | 0.8                    |
| Furniture and refrigerators.....  | 3,427           | 95.0                      | 2.4         | 2.6                    |
| Iron and steel, steel works and rolling mills.....                              | 2,227           | 99.0                      | .....       | 0.4                    |
| Leather goods.....  | 1,814           | 89.7                      | 9.5         | 0.8                    |
| Liquors, malt.....  | 5,646           | 90.5                      | 8.5         | 1.1                    |
| Lumber and timber products.....   | 13,522          | 97.0                      | 0.6         | 1.8                    |
| Paint and varnish.....  | 685             | 92.6                      | 6.4         | 1.0                    |
| Patent medicines and compounds and druggists' preparations.....                 | 980             | 40.3                      | 57.7        | 2.0                    |
| Printing and publishing.....  | 10,790          | 71.5                      | 26.0        | 2.5                    |
| Slaughtering and meat packing.....  | 4,674           | 96.0                      | 3.3         | 0.1                    |
| Stoves and furnaces, including gas and oil stoves.....                          | 2,013           | 99.1                      | 0.1         | 0.8                    |
| All other industries.....   | 48,740          | 80.6                      | 16.9        | 2.5                    |

<sup>1</sup> For method of estimating the distribution, by sex and age periods, of the average number in all industries combined, see Introduction.

For all industries combined, 78.4 per cent of the average number of wage earners were males 16 years of age and over; 19.1 per cent females 16 years of age and over; and 2.5 per cent children under 16 years of age. In the women's clothing industry nearly four-fifths of the wage earners were women 16 years of age and over; in the men's clothing industry the proportion was more than three-fourths; and in the confectionery industry and the manufacture of patent medicines and compounds nearly three-fifths. The boot and shoe, the bakery, and the printing and publishing industries also show large proportions of adult female wage earners. The highest proportions of men employed are shown for railroad repair shops, steel works and rolling mills, flour mills and gristmills, and stove and furnace establishments. The proportion of children under 16 years of age was larger in the boot and shoe industry than in any of the other industries shown in the table.

In order to compare the distribution of persons engaged in manufactures in 1909 with that shown at the census of 1904 it is necessary to use the classification employed at the earlier census. (See Introduction.) The following table makes this comparison according to occupational status:

| CLASS.                            | PERSONS ENGAGED IN MANUFACTURES. |                        |                |                        | Per cent of increase, 1904-1909. |
|-----------------------------------|----------------------------------|------------------------|----------------|------------------------|----------------------------------|
|                                   | 1909                             |                        | 1904           |                        |                                  |
|                                   | Number.                          | Per cent distribution. | Number.        | Per cent distribution. |                                  |
| <b>Total.....</b>                 | <b>185,705</b>                   | <b>100.0</b>           | <b>156,585</b> | <b>100.0</b>           | <b>18.6</b>                      |
| Proprietors and firm members..... | 8,226                            | 4.4                    | 6,290          | 4.0                    | 30.6                             |
| Salaried employees.....           | 24,486                           | 13.2                   | 17,119         | 10.9                   | 43.0                             |
| Wage earners (average number)     | 152,993                          | 82.4                   | 133,167        | 85.0                   | 14.9                             |

Comparable figures are not obtainable for 1899. The table shows the greatest percentage of increase in the salaried employees. While the number of wage earners increased, their proportion of the total number employed was less in 1909 than in 1904.

The following table shows the average number of wage earners, distributed according to age periods, and in the case of those 16 years of age and over according to sex, for 1909, 1904, and 1899. The averages for 1909 are estimated on the basis of the actual number reported for a single representative day. (See Introduction.)

| CLASS.                        | AVERAGE NUMBER OF WAGE EARNERS. |                        |                |                        |                |                        |
|-------------------------------|---------------------------------|------------------------|----------------|------------------------|----------------|------------------------|
|                               | 1909                            |                        | 1904           |                        | 1899           |                        |
|                               | Number.                         | Per cent distribution. | Number.        | Per cent distribution. | Number.        | Per cent distribution. |
| <b>Total.....</b>             | <b>152,993</b>                  | <b>100.0</b>           | <b>133,167</b> | <b>100.0</b>           | <b>107,704</b> | <b>100.0</b>           |
| 16 years of age and over..... | 149,175                         | 97.5                   | 128,606        | 96.6                   | 103,974        | 96.5                   |
| Male.....                     | 119,980                         | 78.4                   | 105,927        | 79.5                   | 84,084         | 78.1                   |
| Female.....                   | 29,195                          | 19.1                   | 22,769         | 17.1                   | 19,890         | 18.5                   |
| Under 16 years of age.....    | 3,818                           | 2.5                    | 4,471          | 3.4                    | 3,730          | 3.5                    |

This table indicates that for all industries combined there was a decrease during the 10 years in the proportion of children under 16 years of age. The total number of children employed in 1909 was slightly larger than in 1899, and somewhat less than in 1904. The proportion of adult female wage earners decreased from 18.5 per cent in 1899 to 17.1 per cent in 1904, but increased to 19.1 per cent in 1909, while the actual number of such wage earners employed in manufactures increased throughout the decade. In 1909 males 16 years of age and over formed 78.4 per cent of all wage earners, as compared with 79.5 per cent in 1904 and 78.1 per cent in 1899.

Wage earners employed by months.—The following table gives the number of wage earners employed on the 15th of each month during the year 1909 for all industries combined; it also gives the percentage which the number reported for each month is of the greatest number reported for any month. In Table II, page 28, are shown for practically all of the important industries in the state, the largest number and the smallest number of wage earners reported for any month. The figures are for the 15th day, or the nearest representative day, of the month.

| MONTH.        | WAGE EARNERS, ALL INDUSTRIES. |                      | MONTH.         | WAGE EARNERS, ALL INDUSTRIES. |                      |
|---------------|-------------------------------|----------------------|----------------|-------------------------------|----------------------|
|               | Number.                       | Per cent of maximum. |                | Number.                       | Per cent of maximum. |
| January.....  | 141,268                       | 86.4                 | July.....      | 150,909                       | 92.3                 |
| February..... | 145,022                       | 88.7                 | August.....    | 157,351                       | 96.2                 |
| March.....    | 148,776                       | 91.0                 | September..... | 163,514                       | 100.0                |
| April.....    | 147,979                       | 90.5                 | October.....   | 161,110                       | 98.5                 |
| May.....      | 148,053                       | 90.5                 | November.....  | 161,540                       | 98.8                 |
| June.....     | 150,028                       | 91.8                 | December.....  | 160,294                       | 98.0                 |

There are no seasonal industries of importance in Missouri which give employment to a large number of persons at certain periods of the year only. On the contrary, all of the more important industries show comparatively little fluctuation in the number of wage earners employed. For all industries combined the number employed in January, the month of least activity, represented a variation of only 13.6 per cent from the number in September, the month of greatest activity. For nine months of the year the variation from the maximum was less than 10 per cent, and for three of these nine months it was 2 per cent or less. Fluctuation in employment in such industries as canning and preserving, manufactured

ice, and the manufacture of millinery and lace goods, was considerable, but the number of wage earners employed was not sufficiently large to influence to any great extent the variation shown for all industries combined.

Prevailing hours of labor.—In the following table wage earners have been classified according to the hours of labor prevailing in the establishments in which they are employed. In making this classification the average number of wage earners employed during the year is used, and the number employed in each establishment is classified as a total according to the hours prevailing in that establishment, even though a few employees work a greater or less number of hours.

| INDUSTRY.  | AVERAGE NUMBER OF WAGE EARNERS IN ESTABLISHMENTS GROUPED ACCORDING TO PREVAILING HOURS OF WORK PER WEEK. |               |                    |        |                    |        |                    |       |          |
|--|--|---------------|--------------------|--------|--------------------|--------|--------------------|-------|----------|
|  | Total.   | 48 and under. | Between 48 and 54. | 54.    | Between 54 and 60. | 60.    | Between 60 and 72. | 72.   | Over 72. |
| All industries.....  | 152,983  | 23,276        | 10,671             | 36,711 | 28,034             | 46,446 | 3,350              | 1,737 | 1,868    |
| Agricultural implements.....   | 438  | 6             | 128                | 43     | 201                | .....  | .....              | ..... | .....    |
| Automobiles, including bodies and parts.....                                     | 308  | 25            | 3                  | 289    | 27                 | 24     | .....              | ..... | .....    |
| Awnings, tents, and sails.....   | 429  | 90            | 10                 | 62     | 27                 | 204    | .....              | ..... | .....    |
| Blacking and cleansing and polishing preparations.....                           | 110  | 11            | 28                 | 40     | 21                 | 10     | .....              | ..... | .....    |
| Boots and shoes, including cut stock and findings.....                           | 17,306   | 4             | .....              | 2,464  | 9,017              | 5,011  | .....              | ..... | .....    |
| Boxes, fancy and paper.....  | 1,113  | 52            | 120                | 348    | 468                | 95     | 30                 | ..... | .....    |
| Brass and bronze products.....   | 297  | 4             | 7                  | 286    | .....              | .....  | .....              | ..... | .....    |
| Bread and other bakery products.....   | 4,743  | 252           | 181                | 1,122  | 215                | 2,870  | 66                 | 21    | 16       |
| Brick and tile.....  | 2,909  | 17            | 5                  | 42     | 26                 | 2,814  | 33                 | 62    | .....    |
| Brooms and brushes.....  | 225  | 42            | 12                 | 70     | 14                 | 88     | .....              | ..... | .....    |
| Butter, cheese, and condensed milk.....  | 150  | 12            | .....              | 5      | .....              | 53     | 85                 | 4     | .....    |
| Canning and preserving.....  | 952  | 217           | 23                 | 23     | 30                 | 651    | 8                  | ..... | .....    |
| Carriages and wagons and materials.....  | 3,302  | 471           | 182                | 881    | 417                | 1,220  | 130                | 1     | .....    |
| Cars and general shop construction and repairs by steam-railroad companies.....  | 8,121  | 1,397         | .....              | 5,237  | 530                | 280    | 647                | ..... | 21       |
| Cars and general shop construction and repairs by street-railroad companies..... | 905  | .....         | 3                  | 614    | .....              | 271    | 2                  | ..... | 16       |
| Chemicals.....   | 610  | .....         | 374                | 7      | .....              | 210    | .....              | 28    | .....    |
| Clothing, men's, including shirts.....   | 7,994  | 2,174         | 3,024              | 2,180  | 503                | 113    | .....              | ..... | .....    |
| Clothing, women's.....   | 2,750  | 134           | 956                | 1,158  | 462                | 40     | .....              | ..... | .....    |
| Coffee and spice, roasting and grinding.....                                     | 730  | 2             | 96                 | 203    | 174                | 255    | .....              | ..... | .....    |
| Coffins, burial cases, and undertakers' goods.....                               | 540  | .....         | 101                | 21     | .....              | 418    | .....              | ..... | .....    |
| Confectionery.....   | 1,882  | 289           | 123                | 432    | 237                | 700    | 2                  | ..... | .....    |
| Cooperage and wooden goods, not elsewhere specified.....                         | 1,088  | 114           | 28                 | 224    | 465                | 257    | .....              | ..... | .....    |
| Copper, tin, and sheet-iron products.....  | 2,637  | 593           | 128                | 443    | 860                | 613    | .....              | ..... | .....    |
| Cutlery and tools, not elsewhere specified.....                                  | 280  | 1             | 171                | 85     | 9                  | 2      | .....              | ..... | .....    |
| Electrical machinery, apparatus, and supplies.....                               | 1,060  | 27            | 239                | 636    | 159                | 8      | .....              | ..... | .....    |
| Flour-mill and gristmill products.....   | 2,108  | 119           | 6                  | 32     | 6                  | 949    | 368                | 709   | 9        |
| Food preparations.....   | 471  | 29            | 3                  | 88     | 12                 | 236    | .....              | 3     | .....    |
| Foundry and machine-shop products.....   | 7,443  | 200           | 561                | 4,661  | 664                | 1,357  | .....              | ..... | .....    |
| Furniture and refrigerators.....   | 3,427  | 488           | 392                | 727    | 250                | 1,570  | .....              | ..... | .....    |
| Gas and electric fixtures and lamps and reflectors.....                          | 232  | 87            | 45                 | 71     | .....              | 79     | .....              | ..... | .....    |
| Gas, illuminating and heating.....   | 941  | 4             | .....              | 1      | 6                  | 13     | 71                 | 33    | 813      |
| Glass.....   | 1,755  | .....         | 102                | .....  | 224                | .....  | 1,066              | 363   | .....    |
| Hats and caps, other than felt, straw, and wool.....                             | 182  | 53            | 7                  | 58     | 64                 | .....  | .....              | ..... | .....    |
| Ice, manufactured.....   | 761  | 13            | .....              | .....  | 14                 | 147    | 37                 | 41    | 509      |
| Iron and steel, steel works and rolling mills.....                               | 2,227  | 840           | .....              | .....  | .....              | 1,381  | .....              | ..... | .....    |
| Jewelry.....   | 370  | 4             | 81                 | 280    | .....              | .....  | 5                  | ..... | .....    |
| Leather goods.....   | 1,814  | 6             | 34                 | 275    | 1,043              | 455    | .....              | 1     | .....    |
| Leather, tanned, curried, and finished.....                                      | 220  | .....         | .....              | .....  | 11                 | 200    | .....              | ..... | .....    |
| Lime.....  | 692  | 4             | .....              | 57     | .....              | 530    | 14                 | 15    | 72       |
| Liquors, malt.....   | 5,646  | 4,755         | 4                  | 789    | 7                  | 78     | .....              | ..... | 13       |
| Lumber and timber products.....  | 13,522   | 1,155         | 720                | 1,677  | 223                | 9,677  | 67                 | 2     | 1        |
| Marble and stone work.....   | 1,342  | 320           | 26                 | 410    | 41                 | 540    | .....              | 5     | .....    |
| Mattresses and spring beds.....  | 345  | 35            | .....              | 113    | 16                 | 181    | .....              | ..... | .....    |
| Millinery and lace goods.....  | 934  | 101           | 30                 | 524    | 189                | .....  | .....              | ..... | .....    |
| Paint and varnish.....   | 685  | 10            | 28                 | 130    | 15                 | 432    | .....              | ..... | 64       |
| Paper goods, not elsewhere specified.....  | 435  | 37            | 5                  | 57     | 284                | 52     | .....              | ..... | .....    |
| Patent medicines and compounds and druggists' preparations.....                  | 980  | 204           | 348                | 258    | 118                | 52     | .....              | ..... | .....    |
| Photographic apparatus and materials.....  | 248  | .....         | .....              | .....  | 248                | .....  | .....              | ..... | .....    |
| Photo-engraving.....   | 187  | 184           | 1                  | .....  | 2                  | .....  | .....              | ..... | .....    |
| Pipes, tobacco.....  | 307  | .....         | .....              | 140    | 163                | 4      | .....              | ..... | .....    |
| Pottery, terra-cotta, and fire-clay products.....                                | 3,138  | 65            | .....              | 241    | 1,700              | 1,126  | .....              | ..... | .....    |
| Printing and publishing.....   | 10,790   | 0,457         | 974                | 1,883  | 856                | 614    | 5                  | 1     | .....    |
| Show cases.....  | 209  | 1             | .....              | 80     | .....              | 119    | .....              | ..... | .....    |
| Slaughtering and meat packing.....   | 4,674  | 4             | .....              | 1,900  | 50                 | 2,650  | .....              | 1     | .....    |
| Soap.....  | 554  | 2             | 46                 | 310    | 41                 | 155    | .....              | ..... | .....    |
| Stoves and furnaces, including gas and oil stoves.....                           | 2,013  | 72            | 502                | 512    | 99                 | 828    | .....              | ..... | .....    |
| Wirework, including wire rope and cable.....                                     | 710  | 4             | .....              | 232    | 434                | .....  | .....              | ..... | .....    |
| All other industries.....  | 22,388   | 2,037         | 808                | 4,375  | 7,710              | 5,962  | 714                | 447   | 385      |



## MANUFACTURES—MISSOURI.

For nearly three-fourths of the wage earners employed in the manufacturing industries of Missouri the prevailing hours of labor range from 54 to 60 a week. Twenty-two and two-tenths per cent of the total are employed in establishments where the prevailing hours are less than 54 a week and 4.5 per cent in establishments where they are more than 60 a week.

In only seven of the industries shown separately in the table, chief among which are the men's clothing, malt-liquor, printing and publishing, and patent-medicine industries, do most of the wage earners work less than 54 hours per week. Of the wage earners in breweries, 84.2 per cent, and of those in printing and publishing establishments, 59.8 per cent, work 48 hours or under

per week. Most of the wage earners in the gas, glass, and manufactured-ice industries and nearly one-half of those in the flour mills and gristmills are in plants where the prevailing hours are over 60 per week, while for the majority of the wage earners in 14 of the industries shown separately the prevailing hours are 60 per week.

**Location of establishments.**—The next table shows the extent to which the manufactures of Missouri are centralized in cities of 10,000 population and over. (See Introduction.) The statistics for 1904 are omitted from this table because there was no Federal census of population for that year, from which to determine the cities that came within the group having over 10,000 inhabitants.

| ITEM.                               | Year.        | Aggregate.                    | CITIES HAVING A POPULATION OF 10,000 AND OVER. |                    |                           |                    |                              |                    | DISTRICTS OUTSIDE OF CITIES HAVING A POPULATION OF 10,000 AND OVER. |                    |
|-------------------------------------|--------------|-------------------------------|--|--------------------|---------------------------|--------------------|------------------------------|--------------------|---|--------------------|
|                                     |              |                               | Total.   |                    | 10,000 to 25,000.         |                    | 25,000 and over.             |                    | Number or amount.   | Per cent of total. |
|                                     |              |                               | Number or amount.                              | Per cent of total. | Number or amount.         | Per cent of total. | Number or amount.            | Per cent of total. |   |                    |
| Population.....                     | 1910<br>1900 | 3,293,335<br>3,106,665        | 1,150,840<br>919,270                           | 34.9<br>29.6       | 70,753<br>51,278          | 2.1<br>1.6         | 1,080,087<br>807,902         | 32.8<br>27.9       | 2,142,495<br>2,187,395  | 65.1<br>70.4       |
| Number of establishments.....       | 1909<br>1899 | 8,375<br>6,853                | 4,247<br>3,602                                 | 50.7<br>53.4       | 232<br>202                | 2.8<br>2.9         | 4,015<br>3,460               | 47.9<br>50.5       | 4,128<br>3,191  | 49.3<br>46.6       |
| Average number of wage earners..... | 1909<br>1899 | 152,993<br>107,704            | 116,250<br>84,165                              | 76.0<br>78.1       | 5,885<br>3,857            | 3.8<br>3.6         | 110,305<br>80,308            | 72.1<br>74.6       | 36,743<br>23,530  | 24.0<br>21.9       |
| Value of products.....              | 1909<br>1899 | \$574,111,070<br>\$16,304,095 | \$427,078,288<br>238,424,508                   | 74.4<br>75.4       | \$16,734,760<br>7,415,910 | 2.9<br>2.3         | \$410,343,528<br>231,008,598 | 71.5<br>73.0       | \$147,032,782<br>77,870,587   | 25.6<br>24.6       |
| Value added by manufacture.....     | 1909<br>1899 | 219,099,919<br>132,115,065    | 180,078,818<br>111,156,471                     | 82.2<br>84.1       | 5,945,511<br>3,015,240    | 2.8<br>2.3         | 174,733,307<br>108,141,231   | 79.5<br>81.9       | 39,021,101<br>20,958,594  | 17.8<br>15.9       |

With but 34.9 per cent of the total population in 1910, the cities having 10,000 inhabitants and over reported 50.7 per cent of the total number of establishments, 76 per cent of the average number of wage earners, and 74.4 per cent of the total value of products in 1909. The figures indicate that on the whole the industries located outside of such cities have gained slightly on those of the cities, in spite of the fact that the proportion of the total population living outside of such cities decreased during the 10 years. The proportion of manufactures reported from the districts outside is due, in part, to the development of the slaughtering and meat-packing industry at South St. Joseph, adjacent to St. Joseph, the establishments of which place reported over 65 per cent of the total value of products of this industry in the state.

The population in 1900 was used as the basis in making the classification for 1899 and that of 1910 for the 1909 grouping. The fluctuations in the population of different cities have affected somewhat the grouping in the table. In 1900 Springfield was

included in the group of cities having from 10,000 to 25,000 inhabitants, but during the following decade its population increased to such an extent that it is now included with those cities having 25,000 inhabitants and over. At the census of 1900 a population of less than 10,000 was reported for Jefferson City, Moberly, and Webb City, so that these cities were included with the districts outside in 1899. Principally as a result of the addition of these three cities to the group, the manufacturing industries of cities having from 10,000 to 25,000 inhabitants show a slight increase in relative importance as measured by average number of wage earners and value of products in 1909, as compared with 1899. Of the total value of products reported for the state in 1909, 2.9 per cent was reported from the five cities having from 10,000 to 25,000 inhabitants, and 71.5 per cent from the five cities having 25,000 inhabitants and over.

The population, for 1910 and 1900, of the 10 cities which had 10,000 inhabitants or over in 1910 is given in the next statement.

| CITY.             | 1910    | 1900    | CITY.                | 1910   | 1900   |
|-------------------|---------|---------|----------------------|--------|--------|
| St. Louis .....   | 687,020 | 575,238 | Hannibal .....       | 18,341 | 12,780 |
| Kansas City ..... | 248,381 | 163,752 | Sedalia .....        | 17,822 | 15,231 |
| St. Joseph .....  | 77,403  | 102,070 | Jefferson City ..... | 11,850 | 9,604  |
| Springfield ..... | 35,201  | 23,267  | Webb City .....      | 11,817 | 9,201  |
| Joplin .....      | 32,073  | 26,023  | Moberly .....        | 10,023 | 8,612  |

The relative importance in manufacturing industry of each of the 10 cities having a population of 10,000 and over in 1910 is shown in the following table, in which the value of products and average number of wage earners are shown separately for 1909, 1904, and 1899.

| CITY.                       | AVERAGE NUMBER OF WAGE EARNERS. |        |        | VALUE OF PRODUCTS. |               |               |
|-----------------------------|---------------------------------|--------|--------|--------------------|---------------|---------------|
|                             | 1909                            | 1904   | 1899   | 1909               | 1904          | 1899          |
| St. Louis .....             | 87,371                          | 82,608 | 64,832 | \$328,405,313      | \$267,307,038 | \$193,732,788 |
| Kansas City .....           | 14,643                          | 11,039 | 9,699  | 54,704,510         | 35,573,049    | 23,588,653    |
| St. Joseph .....            | 5,300                           | 4,063  | 5,005  | 17,025,082         | 11,573,720    | 11,301,039    |
| Hannibal <sup>1</sup> ..... | 2,445                           | 1,811  | 1,238  | 6,105,129          | 3,563,842     | 2,698,720     |
| Jefferson City .....        | 1,336                           | 202    | 299    | 5,445,518          | 3,926,432     | 3,061,438     |
| Springfield .....           | 2,131                           | 2,158  | 1,710  | 5,382,098          | 5,203,315     | 3,433,800     |
| Joplin .....                | 830                             | 680    | 682    | 4,135,925          | 3,006,203     | 2,325,218     |
| Sedalia .....               | 935                             | 974    | 900    | 2,333,072          | 1,661,727     | 1,283,300     |
| Moberly .....               | 900                             | 496    | 656    | 1,983,971          | 800,569       | 701,978       |
| Webb City .....             | 170                             | 138    | 126    | 777,070            | 637,065       | 353,566       |

<sup>1</sup> Figures do not agree with those published in 1904, because it was necessary to revise the totals in order to include data only for those establishments located within the corporate limits of the city.

Every city shows an increase in value of products both from 1904 to 1909 and from 1899 to 1904. The greatest relative gain, made from 1904 to 1909 by any of the 10 cities, 147.8 per cent, is shown for Moberly, due chiefly to the establishment of the boot and shoe industry in the city since 1904.

St. Louis, the largest and most important city in the state, showed an increase in 1909, as compared with 1904, of 22.9 per cent in the value of products, and 5.6 per cent in the average number of wage earners. St. Louis occupied fourth place in value of manufactured products among the cities of the United States in 1909 and in 1904. The manufacturing industries of St. Louis gave employment to 57.1 per cent of the total average number of wage earners employed in manufactures in the state in 1909, 62.1 per cent in 1904, and 60.2 per cent in 1899. The value of products for the city amounted to 57.2 per cent of the total value of manufactured products for the state in 1909, 60.8 per cent in 1904, and 61.2 per cent in 1899. In 1909 St. Louis occupied third place among the cities of the United States in the manufacture of boots and shoes, having advanced from fourth place in 1904 and sixth place in 1899. Over two-thirds of the total value of the products of the state in the boot and shoe industry, which includes the manufacture of cut stock and findings, was reported from this city in 1909. All of the tanneries and the baking-powder establishments of the state and practically all of the soap works were located here, and more than nine-tenths of the total value of the tobacco products and over eight-tenths of the value of malt liquors in Missouri were

reported from St. Louis. In 1909 the boot and shoe industry was the leading industry in the city, having displaced tobacco manufactures, which occupied first place in 1904 and 1899. This latter industry ranked second in importance in 1909, displacing the brewery industry, which dropped to fourth place, while slaughtering and meat packing advanced to third place.

The total value of the manufactured products of Kansas City more than doubled during the decade, and shows an increase of 53.8 per cent from 1904 to 1909. The leading industries of the city in 1909 were printing and publishing, bakeries, flour mills and grist-mills, and the lumber and timber industry. In 1909 the value of products of the manufacturing establishments of Kansas City formed 9.5 per cent of the total for the state, as compared with 8.1 per cent in 1904. Nine and six-tenths per cent of the total number of wage earners engaged in manufactures in the state were employed in this city in 1909 and 8.3 per cent in 1904.

In St. Joseph, which shows an increase of 52.3 per cent in total value of products from 1904 to 1909, the most important industries were men's clothing, the bakeries, and flour mills and gristmills. The manufacture of boots and shoes was the leading industry in Hannibal, Jefferson City, and Moberly, while the flour-mill and gristmill industry was important in Joplin, Jefferson City, Hannibal, Springfield, and Webb City, being of first importance in the two last-named cities. The smelting of lead was the chief industry of Joplin, and in Sedalia the manufacture of men's clothing and the steam-railroad repair shops.

Character of ownership.—The next table has for its purpose the presentation of conditions in respect to the character of ownership, or legal organization, of manufacturing enterprises. For all industries combined, comparative figures are given covering the censuses of 1909 and 1904. Comparative data for 1899 are not available. Figures for 1909 only are presented for several important industries individually. In order to avoid disclosing the operations of individual concerns it is necessary to omit several important industries from this table and the one following.

The most important distinction shown is that between corporate and all other forms of ownership. For all industries combined, 29.2 per cent of the total number of establishments were under corporate ownership in 1909, as against 70.8 per cent under all other forms. The corresponding figures for 1904 were 28.6 per cent and 71.4 per cent, respectively. In respect to value of products, however, the establishments operated by corporations in 1909 reported 88.6 per cent of the total value, as against 11.4 per cent for those under all other forms of ownership, while in 1904 the corresponding figures were 86.3 per cent and 13.7 per cent, respectively. There was a decrease from 1904 to 1909 in the proportion of establishments

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operated by firms, this being 18.2 per cent of the total number of establishments in 1909, as compared with 19.5 per cent in 1904. Although 51.8 per cent of the total number of establishments were operated by indi-

viduals in 1909, such establishments reported only 6.6 per cent of the total value of products and employed but 9 per cent of the total average number of wage earners for the state.

| INDUSTRY AND CHARACTER OF OWNERSHIP.                           | Number of establishments. | Average number of wage earners. | Value of products. | Value added by manufacture. | INDUSTRY AND CHARACTER OF OWNERSHIP.            | Number of establishments. | Average number of wage earners. | Value of products. | Value added by manufacture. |
|--|---------------------------|---------------------------------|--------------------|-----------------------------|---|---------------------------|---------------------------------|--------------------|-----------------------------|
| <b>ALL INDUSTRIES:</b>   |                           |                                 |                    |                             | <b>Flour-mill and gristmill products, 1909</b>  |                           |                                 |                    |                             |
| 1909.....  | 8,376                     | 152,993                         | \$574,111,070      | \$219,699,919               | Individual.....                                 | 680                       | 2,198                           | \$44,608,106       | \$5,682,478                 |
| 1904.....  | 8,404                     | 133,167                         | 438,548,957        | 187,290,540                 | Firm.....                                       | 309                       | 414                             | 5,157,588          | 910,818                     |
| <b>Individual:</b>   |                           |                                 |                    |                             | Corporation.....                                | 212                       | 400                             | 6,837,764          | 1,135,062                   |
| 1909.....  | 4,335                     | 13,755                          | 38,121,508         | 19,340,145                  | Per cent of total.....                          | 100.0                     | 100.0                           | 100.0              | 100.0                       |
| 1904.....  | 3,310                     | 13,776                          | 33,042,863         | 17,114,127                  | Individual.....                                 | 45.4                      | 18.8                            | 11.6               | 16.0                        |
| <b>Firm:</b>   |                           |                                 |                    |                             | Firm.....                                       | 31.2                      | 18.2                            | 15.4               | 20.0                        |
| 1909.....  | 1,526                     | 8,534                           | 26,327,324         | 10,362,165                  | Corporation.....                                | 23.4                      | 63.0                            | 73.0               | 64.0                        |
| 1904.....  | 1,261                     | 9,319                           | 25,535,217         | 11,179,777                  | <b>Foundry and machine-shop products, 1909</b>  |                           |                                 |                    |                             |
| <b>Corporation:</b>  |                           |                                 |                    |                             | Individual.....                                 | 329                       | 7,443                           | \$19,975,149       | \$10,819,432                |
| 1909.....  | 2,447                     | 130,514                         | 508,761,173        | 189,480,214                 | Firm.....                                       | 110                       | 494                             | 1,262,878          | 767,468                     |
| 1904.....  | 1,847                     | 109,821                         | 379,405,293        | 168,470,510                 | Corporation.....                                | 38                        | 464                             | 931,324            | 588,011                     |
| <b>Other:</b>  |                           |                                 |                    |                             | Per cent of total.....                          | 100.0                     | 100.0                           | 100.0              | 100.0                       |
| 1909.....  | 67                        | 190                             | 901,005            | 517,395                     | Individual.....                                 | 33.4                      | 6.6                             | 6.5                | 7.1                         |
| 1904.....  | 40                        | 251                             | 945,584            | 526,126                     | Firm.....                                       | 11.6                      | 6.2                             | 4.7                | 5.4                         |
| <b>Per cent of total:</b>                                      |                           |                                 |                    |                             | Corporation.....                                | 55.0                      | 87.1                            | 88.9               | 87.5                        |
| 1909.....  | 100.0                     | 100.0                           | 100.0              | 100.0                       | <b>Furniture and refrigerators, 1909</b>        |                           |                                 |                    |                             |
| 1904.....  | 100.0                     | 100.0                           | 100.0              | 100.0                       | Individual.....                                 | 99                        | 3,427                           | \$7,380,091        | \$4,053,522                 |
| <b>Individual:</b>   |                           |                                 |                    |                             | Firm.....                                       | 31                        | 294                             | 610,278            | 346,541                     |
| 1909.....  | 51.8                      | 9.0                             | 6.6                | 8.8                         | Corporation.....                                | 0                         | 154                             | 297,691            | 161,705                     |
| 1904.....  | 51.3                      | 10.3                            | 7.7                | 9.1                         | Per cent of total.....                          | 100.0                     | 100.0                           | 100.0              | 100.0                       |
| <b>Firm:</b>   |                           |                                 |                    |                             | Individual.....                                 | 31.8                      | 8.6                             | 8.3                | 8.5                         |
| 1909.....  | 18.2                      | 5.6                             | 4.4                | 4.7                         | Firm.....                                       | 9.1                       | 4.5                             | 4.0                | 4.0                         |
| 1904.....  | 19.5                      | 7.0                             | 5.8                | 6.0                         | Corporation.....                                | 59.0                      | 86.9                            | 87.7               | 87.5                        |
| <b>Corporation:</b>  |                           |                                 |                    |                             | <b>Liquors, malt, 1909</b>                      |                           |                                 |                    |                             |
| 1909.....  | 29.2                      | 85.3                            | 88.6               | 86.2                        | Individual.....                                 | 31                        | 5,646                           | \$27,446,504       | \$10,878,748                |
| 1904.....  | 28.6                      | 82.5                            | 86.3               | 84.6                        | Individual.....                                 | 6                         | 22                              | 112,707            | 80,244                      |
| <b>Other:</b>  |                           |                                 |                    |                             | Corporation.....                                | 25                        | 5,624                           | 27,333,797         | 19,798,504                  |
| 1909.....  | 0.8                       | 0.1                             | 0.2                | 0.2                         | <b>Per cent of total:</b>                       |                           |                                 |                    |                             |
| 1904.....  | 0.6                       | 0.2                             | 0.2                | 0.3                         | Individual.....                                 | 100.0                     | 100.0                           | 100.0              | 100.0                       |
| <b>Boots and shoes, including out stock and findings, 1909</b> |                           |                                 |                    |                             | Individual.....                                 | 19.4                      | 0.4                             | 0.4                | 0.4                         |
| Individual.....  | 59                        | 17,896                          | \$48,751,235       | \$14,211,534                | Corporation.....                                | 80.6                      | 99.6                            | 99.6               | 99.6                        |
| Firm.....  | 5                         | 34                              | 75,418             | 47,749                      | <b>Lumber and timber products, 1909</b>         |                           |                                 |                    |                             |
| Corporation.....   | 3                         | 271                             | 646,912            | 184,273                     | Individual.....                                 | 1,098                     | 13,522                          | \$23,260,926       | \$12,647,273                |
| <b>Per cent of total:</b>                                      |                           |                                 |                    |                             | Firm.....                                       | 633                       | 3,268                           | 4,094,764          | 2,040,595                   |
| 1909.....  | 100.0                     | 100.0                           | 100.0              | 100.0                       | Corporation.....                                | 286                       | 1,800                           | 2,247,280          | 1,508,404                   |
| 1904.....  | 100.0                     | 100.0                           | 100.0              | 100.0                       | Per cent of total.....                          |                           |                                 |                    |                             |
| <b>Individual:</b>   |                           |                                 |                    |                             | Individual.....                                 | 57.7                      | 24.2                            | 17.0               | 10.0                        |
| 1909.....  | 8.5                       | 0.2                             | 0.2                | 0.3                         | Firm.....                                       | 26.0                      | 14.0                            | 9.7                | 11.0                        |
| 1904.....  | 5.1                       | 1.6                             | 1.3                | 1.3                         | Corporation.....                                | 16.3                      | 61.8                            | 72.7               | 67.1                        |
| <b>Firm:</b>   |                           |                                 |                    |                             | <b>Printing and publishing, 1909</b>            |                           |                                 |                    |                             |
| 1909.....  | 19.5                      | 7.0                             | 5.8                | 6.0                         | Individual.....                                 | 1,322                     | 10,790                          | \$29,651,153       | \$21,024,401                |
| <b>Corporation:</b>  |                           |                                 |                    |                             | Firm.....                                       | 772                       | 2,154                           | 5,794,603          | 4,181,760                   |
| 1909.....  | 29.2                      | 85.3                            | 88.6               | 86.2                        | Corporation.....                                | 208                       | 740                             | 1,337,608          | 1,001,995                   |
| 1904.....  | 28.6                      | 82.5                            | 86.3               | 84.6                        | Other.....                                      | 303                       | 7,800                           | 22,013,459         | 15,498,367                  |
| <b>Other:</b>  |                           |                                 |                    |                             | Per cent of total.....                          |                           |                                 |                    |                             |
| 1909.....  | 0.8                       | 0.1                             | 0.2                | 0.2                         | Individual.....                                 | 100.0                     | 100.0                           | 100.0              | 100.0                       |
| 1904.....  | 0.6                       | 0.2                             | 0.2                | 0.3                         | Individual.....                                 | 58.4                      | 20.0                            | 19.5               | 19.9                        |
| <b>Bread and other bakery products, 1909</b>                   |                           |                                 |                    |                             | Firm.....                                       | 15.7                      | 6.8                             | 4.5                | 4.8                         |
| Individual.....  | 954                       | 4,743                           | \$18,523,826       | \$7,694,492                 | Corporation.....                                | 22.9                      | 72.4                            | 74.2               | 73.3                        |
| Firm.....  | 820                       | 1,193                           | 5,159,331          | 2,316,254                   | Other.....                                      | 3.0                       | 0.8                             | 1.7                | 2.1                         |
| Corporation.....   | 87                        | 168                             | 661,773            | 294,510                     | <b>Slaughtering and meat packing, 1909</b>      |                           |                                 |                    |                             |
| <b>Per cent of total:</b>                                      |                           |                                 |                    |                             | Individual.....                                 | 45                        | 4,674                           | \$79,581,294       | \$7,383,030                 |
| 1909.....  | 100.0                     | 100.0                           | 100.0              | 100.0                       | Firm.....                                       | 15                        | 35                              | 548,208            | 87,877                      |
| 1904.....  | 100.0                     | 100.0                           | 100.0              | 100.0                       | Corporation.....                                | 8                         | 35                              | 811,011            | 110,365                     |
| <b>Individual:</b>   |                           |                                 |                    |                             | Per cent of total.....                          |                           |                                 |                    |                             |
| 1909.....  | 86.0                      | 25.2                            | 27.9               | 30.1                        | Individual.....                                 | 100.0                     | 100.0                           | 100.0              | 100.0                       |
| 1904.....  | 9.1                       | 3.5                             | 3.6                | 3.8                         | Individual.....                                 | 33.3                      | 0.7                             | 0.7                | 1.2                         |
| <b>Corporation:</b>  |                           |                                 |                    |                             | Firm.....                                       | 17.8                      | 0.7                             | 1.0                | 1.6                         |
| 1909.....  | 4.9                       | 71.3                            | 68.6               | 66.1                        | Corporation.....                                | 48.9                      | 98.5                            | 98.3               | 97.3                        |
| 1904.....  | 4.9                       | 71.3                            | 68.6               | 66.1                        | <b>Carriages and wagons and materials, 1909</b> |                           |                                 |                    |                             |
| <b>Individual:</b>   |                           |                                 |                    |                             | Individual.....                                 | 243                       | 3,302                           | \$8,468,856        | \$3,609,026                 |
| 1909.....  | 109                       | 417                             | 721,434            | 448,509                     | Firm.....                                       | 109                       | 417                             | 721,434            | 448,509                     |
| 1904.....  | 70                        | 368                             | 767,542            | 428,970                     | Corporation.....                                | 64                        | 2,517                           | 6,979,880          | 2,731,547                   |
| <b>Corporation:</b>  |                           |                                 |                    |                             | <b>Per cent of total:</b>                       |                           |                                 |                    |                             |
| 1909.....  | 28.3                      | 76.2                            | 82.4               | 75.7                        | Individual.....                                 | 100.0                     | 100.0                           | 100.0              | 100.0                       |
| 1904.....  | 28.3                      | 76.2                            | 82.4               | 75.7                        | Individual.....                                 | 44.9                      | 12.6                            | 8.5                | 12.4                        |
| <b>Other:</b>  |                           |                                 |                    |                             | Firm.....                                       | 28.8                      | 11.1                            | 9.1                | 11.9                        |
| 1909.....  | 0.8                       | 0.1                             | 0.2                | 0.2                         | Corporation.....                                | 26.3                      | 76.2                            | 82.4               | 75.7                        |
| 1904.....  | 0.6                       | 0.2                             | 0.2                | 0.3                         | <b>Clothing, men's, including shirts, 1909</b>  |                           |                                 |                    |                             |
| <b>Boots and shoes, including out stock and findings, 1909</b> |                           |                                 |                    |                             | Individual.....                                 | 84                        | 7,994                           | \$16,407,193       | \$6,335,883                 |
| Individual.....  | 59                        | 17,896                          | \$48,751,235       | \$14,211,534                | Firm.....                                       | 21                        | 276                             | 406,541            | 216,769                     |
| Firm.....  | 5                         | 34                              | 75,418             | 47,749                      | Corporation.....                                | 13                        | 135                             | 405,000            | 212,961                     |
| Corporation.....   | 3                         | 271                             | 646,912            | 184,273                     | <b>Per cent of total:</b>                       |                           |                                 |                    |                             |
| <b>Per cent of total:</b>                                      |                           |                                 |                    |                             | Individual.....                                 | 100.0                     | 100.0                           | 100.0              | 100.0                       |
| 1909.....  | 100.0                     | 100.0                           | 100.0              | 100.0                       | Individual.....                                 | 25.0                      | 3.4                             | 2.6                | 3.4                         |
| 1904.....  | 100.0                     | 100.0                           | 100.0              | 100.0                       | Firm.....                                       | 15.5                      | 1.7                             | 2.6                | 3.4                         |
| <b>Individual:</b>   |                           |                                 |                    |                             | Corporation.....                                | 59.5                      | 94.9                            | 94.7               | 93.2                        |
| 1909.....  | 51.8                      | 9.0                             | 6.6                | 8.8                         | <b>Flour-mill and gristmill products, 1909</b>  |                           |                                 |                    |                             |
| 1904.....  | 51.3                      | 10.3                            | 7.7                | 9.1                         | Individual.....                                 | 680                       | 2,198                           | \$44,608,106       | \$5,682,478                 |
| <b>Firm:</b>   |                           |                                 |                    |                             | Individual.....                                 | 309                       | 414                             | 5,157,588          | 910,818                     |
| 1909.....  | 18.2                      | 5.6                             | 4.4                | 4.7                         | Firm.....                                       | 212                       | 400                             | 6,837,764          | 1,135,062                   |
| 1904.....  | 19.5                      | 7.0                             | 5.8                | 6.0                         | Corporation.....                                | 159                       | 1,384                           | 32,512,754         | 3,636,598                   |
| <b>Corporation:</b>  |                           |                                 |                    |                             | <b>Per cent of total:</b>                       |                           |                                 |                    |                             |
| 1909.....  | 29.2                      | 85.3                            | 88.6               | 86.2                        | Individual.....                                 | 100.0                     | 100.0                           | 100.0              | 100.0                       |
| 1904.....  | 28.6                      | 82.5                            | 86.3               | 84.6                        | Individual.....                                 | 45.4                      | 18.8                            | 11.6               | 16.0                        |
| <b>Other:</b>  |                           |                                 |                    |                             | Firm.....                                       | 31.2                      | 18.2                            | 15.4               | 20.0                        |
| 1909.....  | 0.8                       | 0.1                             | 0.2                | 0.2                         | Corporation.....                                | 23.4                      | 63.0                            | 73.0               | 64.0                        |
| 1904.....  | 0.6                       | 0.2                             | 0.2                | 0.3                         | <b>Foundry and machine-shop products, 1909</b>  |                           |                                 |                    |                             |
| <b>Bread and other bakery products, 1909</b>                   |                           |                                 |                    |                             | Individual.....                                 | 329                       | 7,443                           | \$19,975,149       | \$10,819,432                |
| Individual.....  | 954                       | 4,743                           | \$18,523,826       | \$7,694,492                 | Individual.....                                 | 110                       | 494                             | 1,262,878          | 767,468                     |
| Firm.....  | 820                       | 1,193                           | 5,159,331          | 2,316,254                   | Firm.....                                       | 38                        | 464                             | 931,324            | 588,011                     |
| Corporation.....   | 87                        | 168                             | 661,773            | 294,510                     | Corporation.....                                | 181                       | 6,485                           | 17,750,947         | 9,463,993                   |
| <b>Per cent of total:</b>                                      |                           |                                 |                    |                             | <b>Per cent of total:</b>                       |                           |                                 |                    |                             |
| 1909.....  | 100.0                     | 100.0                           | 100.0              | 100.0                       | Individual.....                                 | 100.0                     | 100.0                           | 100.0              | 100.0                       |
| 1904.....  | 100.0                     | 100.0                           | 100.0              | 100.0                       | Individual.....                                 | 33.4                      | 6.6                             | 6.5                | 7.1                         |
| <b>Individual:</b>   |                           |                                 |                    |                             | Firm.....                                       | 11.6                      | 6.2                             | 4.7                | 5.4                         |
| 1909.....  | 51.8                      | 9.0                             | 6.6                | 8.8                         | Corporation.....                                | 55.0                      | 87.1                            | 88.9               | 87.5                        |
| 1904.....  | 51.3                      | 10.3                            | 7.7                | 9.1                         | <b>Furniture and refrigerators, 1909</b>        |                           |                                 |                    |                             |
| <b>Firm:</b>   |                           |                                 |                    |                             | Individual.....                                 | 99                        | 3,427                           | \$7,380,091        | \$4,053,522                 |
| 1909.....  | 18.2                      | 5.6                             | 4.4                | 4.7                         | Individual.....                                 | 31                        | 294                             | 610,278            | 346,541                     |
| 1904.....  | 19.5                      | 7.0                             | 5.8                | 6.0                         | Firm.....                                       | 0                         | 154                             | 297,691            | 161,705                     |
| <b>Corporation:</b>  |                           |                                 |                    |                             | Corporation.....                                | 59                        | 2,979                           | 6,472,122          | 3,546,276                   |
| 1909.....  | 29.2                      | 85.3                            | 88.6               | 86.2                        | <b>Per cent of total:</b>                       |                           |                                 |                    |                             |
| 1904.....  | 28.6                      | 82.5                            | 86.3               | 84.6                        | Individual.....                                 | 100.0                     | 100.0                           | 100.0              | 100.0                       |
| <b>Other:</b>  |                           |                                 |                    |                             | Individual.....                                 | 31.8                      | 8.6                             | 8.3                | 8.5                         |
| 1909.....  | 0.8                       | 0.1                             | 0.2                | 0.2                         | Firm.....                                       | 9.1                       | 4.5                             | 4.0                | 4.0                         |
| 1904.....  | 0.6                       | 0.2                             | 0.2                | 0.3                         | Corporation.....                                | 59.0                      | 86.9                            | 87.7               | 87.5                        |
| <b>Boots and shoes, including out stock and findings, 1909</b> |                           |                                 |                    |                             | <b>Liquors, malt, 1909</b>                      |                           |                                 |                    |                             |
| Individual.....  | 59                        | 17,896                          | \$48,751,235       | \$14,211,534                | Individual.....                                 | 31                        | 5,646                           | \$27,446,504       | \$10,878,748                |
| Firm.....  | 5                         | 34                              | 75,418             | 47,749                      | Individual.....                                 | 6                         | 22                              | 112,707            | 80,244                      |
| Corporation.....   | 3                         | 271                             | 646,912            | 184,273                     | Corporation.....                                | 25                        | 5,624                           | 27,333,797         | 19,798,504                  |
| <b>Per cent of total:</b>                                      |                           |                                 |                    |                             | <b>Per cent of total:</b>                       |                           |                                 |                    |                             |
| 1909.....  | 100.0                     | 100.0                           | 100.0              | 100.0                       | Individual.....                                 | 100.0                     | 100.0                           | 100.0              | 100.0                       |
| 1904.....  | 100.0                     | 100.0                           | 100.0              | 100.0                       | Individual.....                                 | 19.4                      | 0.4                             | 0.4                | 0.4                         |
| <b>Individual:</b>   |                           |                                 |                    |                             | Corporation.....                                | 80.6                      | 99.6                            | 99.6               | 99.6                        |
| 1909.....  | 8.5                       |                                 |                    |                             |   |                           |                                 |                    |                             |

important industries separately as measured by number of wage earners, value of products, and value added by manufacture.

The totals for all industries are shown for the last two censuses, while for certain important industries figures are given for 1909 only.

| INDUSTRY AND VALUE OF PRODUCTS.                                 | Number of establishments. | Average number of wage earners. | Value of products. | Value added by manufacture. | INDUSTRY AND VALUE OF PRODUCTS.                 | Number of establishments. | Average number of wage earners. | Value of products. | Value added by manufacture. |
|---|---------------------------|---------------------------------|--------------------|-----------------------------|---|---------------------------|---------------------------------|--------------------|-----------------------------|
| <b>ALL INDUSTRIES:</b>  |                           |                                 |                    |                             | <b>Flour-mill and gristmill products, 1909.</b> |                           |                                 |                    |                             |
| 1909  | 8,375                     | 152,093                         | \$574,111,070      | \$219,099,919               | Less than \$5,000                               | 680                       | 2,198                           | \$44,508,106       | \$5,682,478                 |
| 1904  | 6,404                     | 133,107                         | 439,548,957        | 187,290,540                 | \$5,000 and less than \$20,000                  | 138                       | 60                              | 364,738            | 79,242                      |
| Less than \$5,000:  |                           |                                 |                    |                             | \$20,000 and less than \$100,000                | 251                       | 287                             | 2,801,137          | 574,739                     |
| 1909  | 3,649                     | 5,107                           | 8,272,292          | 5,293,090                   | \$100,000 and less than \$1,000,000             | 221                       | 624                             | 9,718,475          | 1,601,347                   |
| 1904  | 2,524                     | 3,542                           | 6,055,336          | 4,077,458                   | \$1,000,000 and over                            | 42                        | 776                             | 10,019,790         | 2,304,640                   |
| \$5,000 and less than \$20,000:                                 |                           |                                 |                    |                             | Average per establishment                       | 8                         | 451                             | 12,003,966         | 1,032,510                   |
| 1909  | 2,505                     | 10,999                          | 25,001,039         | 14,240,500                  | Per cent of total                               | 100.0                     | 100.0                           | 100.0              | 100.0                       |
| 1904  | 1,983                     | 10,000                          | 20,344,306         | 11,879,533                  | Less than \$5,000                               | 20.3                      | 2.7                             | 0.8                | 1.4                         |
| \$20,000 and less than \$100,000:                               |                           |                                 |                    |                             | \$5,000 and less than \$20,000                  | 36.9                      | 13.1                            | 0.3                | 10.1                        |
| 1909  | 1,444                     | 23,948                          | 65,057,234         | 32,157,387                  | \$20,000 and less than \$100,000                | 32.5                      | 28.4                            | 21.8               | 29.8                        |
| 1904  | 1,304                     | 23,756                          | 50,375,635         | 29,100,054                  | \$100,000 and less than \$1,000,000             | 0.1                       | 35.3                            | 42.7               | 40.6                        |
| \$100,000 and less than \$1,000,000:                            |                           |                                 |                    |                             | \$1,000,000 and over                            | 1.2                       | 20.5                            | 28.3               | 18.2                        |
| 1909  | 683                       | 64,791                          | 204,184,575        | 84,650,927                  | Average per establishment                       | 3                         |                                 | \$65,453           | \$3,357                     |
| 1904  | 585                       | 60,886                          | 107,436,806        | 70,028,084                  | <b>Foundry and machine-shop products, 1909.</b> |                           |                                 |                    |                             |
| \$1,000,000 and over:   |                           |                                 |                    |                             | Less than \$5,000                               | 329                       | 7,443                           | \$19,975,149       | \$10,819,432                |
| 1909  | 94                        | 48,148                          | 271,595,930        | 83,342,049                  | \$5,000 and less than \$20,000                  | 86                        | 121                             | 215,108            | 151,958                     |
| 1904  | 68                        | 34,023                          | 189,336,754        | 60,205,391                  | \$20,000 and less than \$100,000                | 86                        | 407                             | 948,320            | 624,568                     |
| Per cent of total:  |                           |                                 |                    |                             | \$20,000 and less than \$100,000                | 107                       | 1,680                           | 4,077,756          | 2,542,307                   |
| 1909  | 100.0                     | 100.0                           | 100.0              | 100.0                       | \$100,000 and less than \$1,000,000             | 50                        | 5,226                           | 14,133,875         | 7,500,599                   |
| 1904  | 100.0                     | 100.0                           | 100.0              | 100.0                       | Per cent of total                               | 100.0                     | 100.0                           | 100.0              | 100.0                       |
| Less than \$5,000:  |                           |                                 |                    |                             | Less than \$5,000                               | 20.1                      | 1.6                             | 1.1                | 1.4                         |
| 1909  | 43.6                      | 3.3                             | 1.4                | 2.4                         | \$5,000 and less than \$20,000                  | 20.1                      | 5.5                             | 4.7                | 5.8                         |
| 1904  | 30.0                      | 2.7                             | 1.4                | 2.2                         | \$20,000 and less than \$100,000                | 32.5                      | 22.7                            | 23.4               | 23.5                        |
| \$5,000 and less than \$20,000:                                 |                           |                                 |                    |                             | \$100,000 and less than \$1,000,000             | 16.2                      | 70.2                            | 70.8               | 69.3                        |
| 1909  | 29.9                      | 7.2                             | 4.4                | 6.5                         | Average per establishment                       | 23                        |                                 | \$60,715           | \$32,836                    |
| 1904  | 30.7                      | 7.6                             | 4.0                | 6.3                         | <b>Furniture and refrigerators, 1909.</b>       |                           |                                 |                    |                             |
| \$20,000 and less than \$100,000:                               |                           |                                 |                    |                             | Less than \$5,000                               | 99                        | 3,427                           | \$7,380,091        | \$4,053,522                 |
| 1909  | 17.2                      | 15.7                            | 11.3               | 14.0                        | \$5,000 and less than \$20,000                  | 13                        | 0                               | 27,404             | 18,079                      |
| 1904  | 20.2                      | 17.8                            | 12.8               | 15.5                        | \$20,000 and less than \$100,000                | 21                        | 115                             | 210,717            | 132,948                     |
| \$100,000 and less than \$1,000,000:                            |                           |                                 |                    |                             | \$20,000 and less than \$100,000                | 45                        | 1,184                           | 2,556,453          | 1,421,988                   |
| 1909  | 8.2                       | 42.3                            | 35.6               | 38.5                        | \$100,000 and less than \$1,000,000             | 20                        | 2,119                           | 4,676,427          | 2,480,507                   |
| 1904  | 9.0                       | 45.7                            | 38.1               | 40.0                        | Per cent of total                               | 100.0                     | 100.0                           | 100.0              | 100.0                       |
| \$1,000,000 and over:   |                           |                                 |                    |                             | Less than \$5,000                               | 13.1                      | 0.3                             | 0.4                | 0.4                         |
| 1909  | 1.1                       | 31.5                            | 47.3               | 37.9                        | \$5,000 and less than \$20,000                  | 21.2                      | 8.4                             | 3.0                | 3.3                         |
| 1904  | 1.1                       | 26.2                            | 43.1               | 35.3                        | \$20,000 and less than \$100,000                | 45.5                      | 34.5                            | 34.6               | 35.1                        |
| Average per establishment:                                      |                           |                                 |                    |                             | \$100,000 and less than \$1,000,000             | 20.2                      | 61.8                            | 62.0               | 61.2                        |
| 1909  |                           | 18                              | \$68,551           | \$26,233                    | Average per establishment                       | 35                        |                                 | \$74,546           | \$40,045                    |
| 1904  |                           | 21                              | 68,000             | 28,974                      | <b>Liquors, malt, 1909.</b>                     |                           |                                 |                    |                             |
| <b>Boots and shoes, including out stock and findings, 1909.</b> |                           |                                 |                    |                             | Less than \$5,000                               | 31                        | 5,646                           | \$27,446,504       | \$19,878,748                |
| \$5,000 and less than \$20,000                                  | 59                        | 17,398                          | \$48,751,235       | \$14,211,534                | \$5,000 and less than \$20,000                  | 0                         | 17                              | 54,697             | 40,788                      |
| \$20,000 and less than \$100,000                                | 7                         | 42                              | 85,288             | 48,408                      | \$20,000 and less than \$100,000                | 12                        | 112                             | 549,454            | 303,943                     |
| \$100,000 and less than \$1,000,000                             | 4                         | 69                              | 157,600            | 65,082                      | \$100,000 and less than \$1,000,000             | 8                         | 417                             | 3,048,848          | 2,341,633                   |
| \$1,000,000 and over  | 32                        | 6,435                           | 17,520,727         | 5,062,898                   | \$1,000,000 and over                            | 5                         | 5,100                           | 23,793,505         | 17,102,384                  |
| Per cent of total   | 100.0                     | 100.0                           | 100.0              | 100.0                       | Per cent of total                               | 100.0                     | 100.0                           | 100.0              | 100.0                       |
| \$5,000 and less than \$20,000                                  | 11.9                      | 0.2                             | 0.2                | 0.3                         | Less than \$5,000                               | 19.4                      | 0.3                             | 0.2                | 0.2                         |
| \$20,000 and less than \$100,000                                | 6.8                       | 0.4                             | 0.3                | 0.5                         | \$5,000 and less than \$20,000                  | 38.7                      | 2.0                             | 2.0                | 2.0                         |
| \$100,000 and less than \$1,000,000                             | 54.2                      | 37.0                            | 35.9               | 39.8                        | \$20,000 and less than \$100,000                | 28.8                      | 7.4                             | 11.1               | 11.8                        |
| \$1,000,000 and over  | 27.1                      | 62.4                            | 63.6               | 59.4                        | \$100,000 and less than \$1,000,000             | 16.1                      | 90.3                            | 88.7               | 86.0                        |
| Average per establishment                                       |                           | 295                             | \$826,292          | \$240,873                   | Average per establishment                       |                           | 182                             | \$885,371          | \$641,250                   |
| <b>Bread and other bakery products, 1909.</b>                   |                           |                                 |                    |                             | <b>Lumber and timber products, 1909.</b>        |                           |                                 |                    |                             |
| Less than \$5,000   | 954                       | 4,743                           | \$18,523,826       | \$7,694,492                 | Less than \$5,000                               | 1,098                     | 13,522                          | \$23,260,926       | \$12,647,273                |
| \$5,000 and less than \$20,000                                  | 473                       | 312                             | 1,345,051          | 617,347                     | \$5,000 and less than \$20,000                  | 626                       | 1,448                           | 1,200,823          | 889,695                     |
| \$20,000 and less than \$100,000                                | 408                       | 851                             | 3,406,054          | 1,584,225                   | \$20,000 and less than \$100,000                | 278                       | 2,335                           | 2,728,425          | 1,801,100                   |
| \$100,000 and less than \$1,000,000                             | 58                        | 607                             | 2,425,794          | 1,024,140                   | \$100,000 and less than \$1,000,000             | 151                       | 4,301                           | 7,087,774          | 4,173,050                   |
| \$1,000,000 and over  | 11                        | 887                             | 3,440,970          | 1,462,361                   | \$1,000,000 and over                            | 43                        | 6,348                           | 12,293,904         | 5,783,428                   |
| Per cent of total   | 100.0                     | 100.0                           | 100.0              | 100.0                       | Per cent of total                               | 100.0                     | 100.0                           | 100.0              | 100.0                       |
| Less than \$5,000   | 49.6                      | 6.6                             | 7.3                | 8.0                         | Less than \$5,000                               | 57.0                      | 10.7                            | 5.2                | 7.0                         |
| \$5,000 and less than \$20,000                                  | 42.8                      | 17.9                            | 18.7               | 20.0                        | \$5,000 and less than \$20,000                  | 25.3                      | 17.3                            | 11.7               | 14.2                        |
| \$20,000 and less than \$100,000                                | 6.1                       | 12.8                            | 13.1               | 13.3                        | \$20,000 and less than \$100,000                | 13.8                      | 32.5                            | 30.3               | 33.0                        |
| \$100,000 and less than \$1,000,000                             | 1.1                       | 18.7                            | 18.0               | 19.0                        | \$100,000 and less than \$1,000,000             | 3.0                       | 39.5                            | 52.0               | 46.7                        |
| \$1,000,000 and over  | 0.4                       | 44.0                            | 42.3               | 39.1                        | Average per establishment                       |                           | 12                              | \$21,185           | \$11,618                    |
| Average per establishment                                       |                           | 5                               | \$19,417           | \$8,000                     | <b>Printing and publishing, 1909.</b>           |                           |                                 |                    |                             |
| <b>Carriages and wagons and materials, 1909.</b>                |                           |                                 |                    |                             | Less than \$5,000                               | 1,322                     | 10,790                          | \$29,651,153       | \$21,024,401                |
| Less than \$5,000   | 243                       | 3,302                           | \$8,468,856        | \$3,609,026                 | \$5,000 and less than \$20,000                  | 782                       | 1,112                           | 1,810,400          | 1,455,657                   |
| \$5,000 and less than \$20,000                                  | 100                       | 147                             | 273,785            | 108,166                     | \$20,000 and less than \$100,000                | 362                       | 1,737                           | 3,516,225          | 2,749,492                   |
| \$20,000 and less than \$100,000                                | 87                        | 500                             | 846,331            | 543,392                     | \$100,000 and less than \$1,000,000             | 125                       | 2,074                           | 5,191,019          | 3,792,000                   |
| \$100,000 and less than \$1,000,000                             | 38                        | 759                             | 1,511,179          | 765,552                     | \$1,000,000 and over                            | 48                        | 4,185                           | 10,008,559         | 7,649,293                   |
| \$1,000,000 and over  | 18                        | 1,896                           | 5,837,561          | 2,131,916                   | Average per establishment                       | 5                         | 1,682                           | 8,224,950          | 5,377,959                   |
| Per cent of total   | 100.0                     | 100.0                           | 100.0              | 100.0                       | Per cent of total                               | 100.0                     | 100.0                           | 100.0              | 100.0                       |
| Less than \$5,000   | 41.2                      | 4.5                             | 3.2                | 4.7                         | Less than \$5,000                               | 59.2                      | 10.3                            | 6.1                | 6.9                         |
| \$5,000 and less than \$20,000                                  | 35.8                      | 15.1                            | 10.0               | 15.1                        | \$5,000 and less than \$20,000                  | 27.4                      | 10.1                            | 11.9               | 13.1                        |
| \$20,000 and less than \$100,000                                | 15.0                      | 23.0                            | 17.8               | 21.2                        | \$20,000 and less than \$100,000                | 9.5                       | 19.2                            | 17.5               | 18.0                        |
| \$100,000 and less than \$1,000,000                             | 7.4                       | 57.4                            | 68.9               | 69.1                        | \$100,000 and less than \$1,000,000             | 3.6                       | 38.8                            | 36.8               | 36.4                        |
| Average per establishment                                       |                           | 14                              | \$34,851           | \$14,852                    | \$1,000,000 and over                            | 0.4                       | 15.6                            | 27.7               | 25.6                        |
| <b>Clothing, men's, including shirts, 1909.</b>                 |                           |                                 |                    |                             | Average per establishment                       |                           | 8                               | \$22,429           | \$15,903                    |
| Less than \$5,000   | 84                        | 7,994                           | \$15,407,193       | \$6,335,883                 | <b>Slaughtering and meat packing, 1909.</b>     |                           |                                 |                    |                             |
| \$5,000 and less than \$20,000                                  | 9                         | 26                              | 15,811             | 13,086                      | Less than \$5,000                               | 45                        | 4,674                           | \$79,581,204       | \$7,383,930                 |
| \$20,000 and less than \$100,000                                | 18                        | 214                             | 203,360            | 120,100                     | \$5,000 and less than \$20,000                  | 11                        | 14                              | 113,272            | 23,910                      |
| \$100,000 and less than \$1,000,000                             | 30                        | 1,016                           | 7,174,392          | 703,843                     | \$20,000 and less than \$100,000                | 14                        | 52                              | 760,020            | 110,678                     |
| \$1,000,000 and over  | 23                        | 3,953                           | 7,555,797          | 3,125,792                   | \$100,000 and less than \$1,000,000             | 12                        | 274                             | 4,284,842          | 518,027                     |
| Average per establishment                                       |                           | 4                               | 5,917,833          | 2,313,062                   | \$1,000,000 and over                            | 8                         | 4,334                           | 74,433,151         | 6,732,515                   |
| Per cent of total   | 100.0                     | 100.0                           | 100.0              | 100.0                       | Per cent of total                               | 100.0                     | 100.0                           | 100.0              | 100.0                       |
| Less than \$5,000   | 10.7                      | 0.3                             | 0.1                | 0.2                         | Less than \$5,000                               | 24.4                      | 0.3                             | 0.1                | 0.3                         |
| \$5,000 and less than \$20,000                                  | 21.4                      | 2.7                             | 1.3                | 1.9                         | \$5,000 and less than \$20,000                  | 91.1                      | 1.1                             | 0.9                | 1.5                         |
| \$20,000 and less than \$100,000                                | 35.7                      | 12.7                            | 11.1               | 12.1                        | \$20,000 and less than \$100,000                | 20.7                      | 5.0                             | 5.4                | 7.0                         |
| \$100,000 and less than \$1,000,000                             | 27.4                      | 40.4                            | 49.0               | 49.3                        | \$100,000 and less than \$1,000,000             | 17.8                      | 92.7                            | 93.5               | 91.2                        |
| \$1,000,000 and over  | 4.8                       | 34.8                            | 38.4               | 36.5                        | Average per establishment                       |                           | 104                             | \$1,768,478        | \$164,067                   |
| Average per establishment                                       |                           | 95                              | \$183,419          | \$75,427                    |   |                           |                                 |                    |                             |

1 Includes the group "Less than \$5,000."

1 Includes the group "up \$1,000,000 and over."

This table shows that, of the total of 8,375 establishments reported in 1909 only 94, or 1.1 per cent, had a value of products exceeding \$1,000,000 each. The establishments in this group, however, employed an average of 48,148 wage earners, or 31.5 per cent of the total number in all establishments, and reported 47.3 per cent of the total value of products and 37.9 per cent of the total value added by manufacture. In 1904, of a total of 6,464 establishments, 68, or 1.1 per cent, reported products valued at more than \$1,000,000. These establishments employed an average of 34,923 wage earners, or 26.2 per cent of the total, reported 43.1 per cent of the total value of products, and 35.3 per cent of the total value added by manufacture. The value of products of the establishments of this class averaged \$2,889,318 in 1909 and \$2,784,364 in 1904.

The largest value added by manufacture, for both years, is shown for that class of establishments having products of \$100,000 but less than \$1,000,000 in value. This class also employed a larger number of wage earners than any other class and was second in value of products in both years. In 1909 the three classes of smaller establishments combined, while constituting 90.7 per cent of the total number, contributed but 17.1 per cent of the total value of products, and added only 23.5 per cent of the value accruing from processes of manufacture. For all classes of establishments combined the average number of wage earners per establishment was 18, a decrease of 3 since 1904; the average value of products, \$68,551, a slight increase since the previous census; and the average value added by manufacture, \$26,233, a decrease of \$2,741 during the five-year period. Of the industries shown separately in the table, the boot and shoe, malt-liquor, and slaughtering and meat-packing industries were conducted principally in large establishments, while in general the others were conducted in small establishments.

In some respects, and especially from the standpoint of conditions under which persons engaged in manufactures work, the best classification of estab-

lishments to bring out the feature of size is a classification according to the number of wage earners employed. The next table shows for 1909 such a classification for all industries combined and for twenty important industries individually, and gives not only the number of establishments falling into each group but also the average number of wage earners employed.

Of the 8,375 establishments reported for all industries, 13.4 per cent employed no wage earners; 56.5 per cent, from 1 to 5 wage earners; 17.3 per cent, 6 to 20; 6.3 per cent, 21 to 50; and only 6.4 per cent 51 or over. The most numerous single group consists of the 4,736 establishments employing from 1 to 5 wage earners and the next of the 1,447 employing from 6 to 20 wage earners. There were 1,123 establishments employing no wage earners. Of a total of 115 establishments employing over 250 wage earners, 13 employed over 1,000 wage earners. Only 3.6 per cent of the establishments employed more than 100 wage earners each.

Of the total number of wage earners, 60.8 per cent were reported by establishments employing more than 100, and 17.2 per cent by those employing fewer than 21. The single group having the largest number of wage earners was the group comprising the establishments employing from 101 to 250, and the group next in importance was made up of the establishments employing from 251 to 500. These groups employed, respectively, 29,048 and 26,584 wage earners, or 19 per cent and 17.4 per cent of the total.

Each of the steel works and rolling mills employed over 250 wage earners. Only 3.1 per cent of all wage earners in the boot and shoe industry were employed in establishments employing less than 100 wage earners. The corresponding figure for car repair shops was 5 per cent, for breweries 9.7 per cent, for the slaughtering and meat-packing industry 10 per cent, and for the stove and furnace industry 16.6 per cent. In the flour and grist mills 86.2 per cent of all wage earners worked in establishments employing less than 50 wage earners.

| INDUSTRY.  | Total.         | ESTABLISHMENTS EMPLOYING— |                      |                       |                        |                         |                          |                          |                            |                          |
|--|----------------|---------------------------|----------------------|-----------------------|------------------------|-------------------------|--------------------------|--------------------------|----------------------------|--------------------------|
|  |                | No wage earners.          | 1 to 5 wage earners. | 6 to 20 wage earners. | 21 to 50 wage earners. | 51 to 100 wage earners. | 101 to 250 wage earners. | 251 to 500 wage earners. | 501 to 1,000 wage earners. | Over 1,000 wage earners. |
| NUMBER OF ESTABLISHMENTS.  |                |                           |                      |                       |                        |                         |                          |                          |                            |                          |
| <b>All industries</b>  | <b>8,375</b>   | <b>1,133</b>              | <b>4,736</b>         | <b>1,447</b>          | <b>529</b>             | <b>235</b>              | <b>190</b>               | <b>78</b>                | <b>24</b>                  | <b>13</b>                |
| Boots and shoes, including cut stock and findings                          | 59             | 3                         | 4                    | 5                     | 1                      | 5                       | 14                       | 19                       | 6                          | 2                        |
| Bread and other bakery products  | 954            | 217                       | 670                  | 37                    | 10                     | 3                       | 4                        | 3                        | 1                          | 1                        |
| Carriages and wagons and materials   | 243            | 22                        | 130                  | 61                    | 16                     | 0                       | 4                        | 1                        | 1                          | 1                        |
| Cars and general shop construction and repairs by steam-railroad companies | 35             | 1                         | 7                    | 2                     | 3                      | 12                      | 6                        | 1                        | 1                          | 3                        |
| Clothing, men's, including shirts  | 84             | 3                         | 15                   | 15                    | 22                     | 8                       | 12                       | 6                        | 2                          | 1                        |
| Clothing, women's  | 98             | 2                         | 6                    | 20                    | 17                     | 7                       | 6                        | 1                        | 1                          | 1                        |
| Confectionery  | 61             | 4                         | 28                   | 11                    | 0                      | 4                       | 8                        | 1                        | 1                          | 1                        |
| Copper, tin, and sheet-iron products                                       | 207            | 0                         | 131                  | 41                    | 14                     | 5                       | 7                        | 1                        | 1                          | 1                        |
| Flour-mill and gristmill products  | 680            | 131                       | 468                  | 65                    | 12                     | 3                       | 1                        | 1                        | 1                          | 1                        |
| Foundry and machine-shop products  | 329            | 19                        | 137                  | 101                   | 32                     | 20                      | 17                       | 3                        | 1                          | 1                        |
| Furniture and refrigerators  | 99             | 5                         | 21                   | 20                    | 20                     | 12                      | 5                        | 1                        | 1                          | 1                        |
| Iron and steel, steel works and rolling mills                              | 4              | 1                         | 1                    | 1                     | 1                      | 1                       | 1                        | 1                        | 1                          | 1                        |
| Leather goods  | 106            | 8                         | 59                   | 20                    | 9                      | 4                       | 6                        | 1                        | 1                          | 1                        |
| Liquors, malt  | 31             | 1                         | 5                    | 13                    | 3                      | 4                       | 1                        | 1                        | 3                          | 1                        |
| Lumber and timber products   | 1,098          | 35                        | 600                  | 258                   | 83                     | 35                      | 14                       | 7                        | 1                          | 1                        |
| Paint and varnish  | 32             | 1                         | 13                   | 13                    | 2                      | 1                       | 1                        | 1                        | 1                          | 1                        |
| Patent medicines and compounds and druggists' preparations                 | 185            | 51                        | 103                  | 19                    | 6                      | 0                       | 0                        | 1                        | 1                          | 1                        |
| Printing and publishing  | 1,322          | 282                       | 778                  | 172                   | 48                     | 24                      | 12                       | 5                        | 1                          | 1                        |
| Slaughtering and meat packing  | 45             | 5                         | 17                   | 10                    | 5                      | 2                       | 1                        | 2                        | 2                          | 1                        |
| Stoves and furnaces, including gas and oil stoves                          | 20             | 1                         | 4                    | 3                     | 4                      | 2                       | 4                        | 3                        | 1                          | 1                        |
| All other industries   | 2,713          | 325                       | 1,471                | 541                   | 208                    | 78                      | 62                       | 18                       | 5                          | 5                        |
| AVERAGE NUMBER OF WAGE EARNERS.  |                |                           |                      |                       |                        |                         |                          |                          |                            |                          |
| <b>All industries</b>  | <b>152,998</b> | <b>10,384</b>             | <b>15,958</b>        | <b>16,974</b>         | <b>16,845</b>          | <b>29,043</b>           | <b>26,584</b>            | <b>10,961</b>            | <b>20,294</b>              | <b>3,450</b>             |
| Boots and shoes, including cut stock and findings                          | 17,396         | 13                        | 74                   | 23                    | 437                    | 2,000                   | 6,419                    | 4,380                    | 3,450                      | 1,008                    |
| Bread and other bakery products  | 4,743          | 1,191                     | 400                  | 302                   | 194                    | 509                     | 1,232                    | 859                      | 538                        | 296                      |
| Carriages and wagons and materials   | 3,302          | 334                       | 643                  | 555                   | 629                    | 603                     | 603                      | 538                      | 296                        | 1,008                    |
| Cars and general shop construction and repairs by steam-railroad companies | 8,121          | 5                         | 89                   | 70                    | 234                    | 1,546                   | 2,342                    | 530                      | 3,296                      | 1,008                    |
| Clothing, men's, including shirts  | 7,994          | 48                        | 171                  | 691                   | 557                    | 1,968                   | 2,234                    | 1,317                    | 1,008                      | 1,008                    |
| Clothing, women's  | 2,750          | 23                        | 437                  | 561                   | 553                    | 896                     | 280                      | 1,317                    | 1,008                      | 1,008                    |
| Confectionery  | 1,882          | 73                        | 101                  | 178                   | 328                    | 1,202                   | 1,110                    | 1,317                    | 1,008                      | 1,008                    |
| Copper, tin, and sheet-iron products                                       | 2,637          | 341                       | 423                  | 432                   | 331                    | 1,110                   | 1,110                    | 1,317                    | 1,008                      | 1,008                    |
| Flour-mill and gristmill products  | 2,198          | 868                       | 695                  | 342                   | 202                    | 101                     | 101                      | 1,317                    | 1,008                      | 1,008                    |
| Foundry and machine-shop products  | 7,443          | 344                       | 1,173                | 977                   | 1,484                  | 2,589                   | 806                      | 340                      | 1,317                      | 1,008                    |
| Furniture and refrigerators  | 3,427          | 53                        | 342                  | 907                   | 559                    | 800                     | 340                      | 1,317                    | 1,008                      | 1,008                    |
| Iron and steel, steel works and rolling mills                              | 2,227          | 123                       | 243                  | 236                   | 326                    | 886                     | 715                      | 1,317                    | 1,008                      | 1,008                    |
| Leather goods  | 1,814          | 16                        | 133                  | 90                    | 301                    | 498                     | 2,188                    | 2,424                    | 2,424                      | 2,424                    |
| Liquors, malt  | 5,046          | 1,004                     | 2,819                | 2,014                 | 2,465                  | 1,977                   | 2,043                    | 2,424                    | 2,424                      | 2,424                    |
| Lumber and timber products   | 13,522         | 25                        | 147                  | 64                    | 64                     | 127                     | 258                      | 2,424                    | 2,424                      | 2,424                    |
| Paint and varnish  | 685            | 210                       | 167                  | 196                   | 407                    | 1,714                   | 1,525                    | 714                      | 1,008                      | 1,008                    |
| Patent medicines and compounds and druggists' preparations                 | 980            | 1,844                     | 1,721                | 1,691                 | 1,681                  | 1,714                   | 1,525                    | 714                      | 1,008                      | 1,008                    |
| Printing and publishing  | 10,790         | 38                        | 126                  | 170                   | 125                    | 134                     | 996                      | 1,410                    | 1,008                      | 1,008                    |
| Slaughtering and meat packing  | 4,074          | 9                         | 41                   | 150                   | 134                    | 780                     | 919                      | 1,008                    | 1,008                      | 1,008                    |
| Stoves and furnaces, including gas and oil stoves                          | 2,013          | 3,182                     | 6,008                | 6,753                 | 5,554                  | 9,406                   | 5,891                    | 3,502                    | 3,450                      | 3,450                    |
| All other industries   | 48,740         | 10,384                    | 15,958               | 16,974                | 16,845                 | 29,043                  | 26,584                   | 10,961                   | 20,294                     | 3,450                    |
| PER CENT OF AVERAGE NUMBER OF WAGE EARNERS.                                |                |                           |                      |                       |                        |                         |                          |                          |                            |                          |
| <b>All industries</b>  | <b>100.0</b>   | <b>6.8</b>                | <b>10.4</b>          | <b>11.1</b>           | <b>11.0</b>            | <b>19.0</b>             | <b>17.4</b>              | <b>11.1</b>              | <b>13.8</b>                | <b>19.8</b>              |
| Boots and shoes, including cut stock and findings                          | 100.0          | 0.1                       | 0.4                  | 0.1                   | 2.5                    | 14.9                    | 36.0                     | 25.2                     | 18.0                       | 19.8                     |
| Bread and other bakery products  | 100.0          | 25.1                      | 8.4                  | 6.4                   | 4.1                    | 12.0                    | 26.0                     | 18.0                     | 10.3                       | 19.8                     |
| Carriages and wagons and materials   | 100.0          | 10.1                      | 19.5                 | 16.8                  | 19.0                   | 18.3                    | 18.3                     | 10.3                     | 10.3                       | 19.8                     |
| Cars and general shop construction and repairs by steam-railroad companies | 100.0          | 0.1                       | 1.1                  | 0.9                   | 2.9                    | 10.0                    | 28.8                     | 6.6                      | 40.6                       | 12.6                     |
| Clothing, men's, including shirts  | 100.0          | 0.6                       | 2.1                  | 8.0                   | 7.0                    | 24.6                    | 27.9                     | 16.5                     | 12.6                       | 12.6                     |
| Clothing, women's  | 100.0          | 0.8                       | 15.9                 | 20.4                  | 20.1                   | 32.0                    | 10.2                     | 10.2                     | 10.2                       | 12.6                     |
| Confectionery  | 100.0          | 3.9                       | 5.4                  | 9.5                   | 17.4                   | 63.9                    | 42.1                     | 42.1                     | 42.1                       | 12.6                     |
| Copper, tin, and sheet-iron products                                       | 100.0          | 12.0                      | 16.0                 | 16.4                  | 12.6                   | 42.1                    | 42.1                     | 42.1                     | 42.1                       | 12.6                     |
| Flour-mill and gristmill products  | 100.0          | 36.0                      | 31.6                 | 15.6                  | 9.2                    | 4.6                     | 12.0                     | 12.0                     | 12.0                       | 12.6                     |
| Foundry and machine-shop products  | 100.0          | 4.6                       | 15.8                 | 13.1                  | 19.7                   | 34.8                    | 10.1                     | 10.1                     | 10.1                       | 12.6                     |
| Furniture and refrigerators  | 100.0          | 1.5                       | 10.0                 | 28.2                  | 25.1                   | 25.1                    | 32.1                     | 67.0                     | 67.0                       | 12.6                     |
| Iron and steel, steel works and rolling mills                              | 100.0          | 6.8                       | 13.4                 | 13.0                  | 18.0                   | 48.8                    | 48.8                     | 38.8                     | 42.9                       | 12.6                     |
| Leather goods  | 100.0          | 0.3                       | 2.4                  | 1.7                   | 5.3                    | 8.6                     | 38.8                     | 42.9                     | 42.9                       | 12.6                     |
| Liquors, malt  | 100.0          | 11.9                      | 20.8                 | 19.3                  | 18.2                   | 14.6                    | 15.1                     | 37.7                     | 37.7                       | 12.6                     |
| Lumber and timber products   | 100.0          | 3.6                       | 21.5                 | 9.3                   | 9.3                    | 18.5                    | 37.7                     | 37.7                     | 37.7                       | 12.6                     |
| Paint and varnish  | 100.0          | 21.4                      | 17.0                 | 20.0                  | 41.5                   | 15.9                    | 14.1                     | 6.6                      | 35.6                       | 12.6                     |
| Patent medicines and compounds and druggists' preparations                 | 100.0          | 17.1                      | 15.9                 | 14.7                  | 15.0                   | 15.9                    | 14.1                     | 6.6                      | 35.6                       | 12.6                     |
| Printing and publishing  | 100.0          | 0.8                       | 2.7                  | 3.8                   | 2.7                    | 2.9                     | 21.3                     | 30.3                     | 35.6                       | 12.6                     |
| Slaughtering and meat packing  | 100.0          | 0.4                       | 2.0                  | 7.5                   | 6.7                    | 37.8                    | 45.7                     | 45.7                     | 45.7                       | 12.6                     |
| Stoves and furnaces, including gas and oil stoves                          | 100.0          | 0.4                       | 2.0                  | 7.5                   | 6.7                    | 37.8                    | 45.7                     | 45.7                     | 45.7                       | 12.6                     |
| All other industries   | 100.0          | 6.5                       | 12.3                 | 13.9                  | 11.4                   | 19.3                    | 12.1                     | 7.2                      | 17.3                       | 12.6                     |

Expenses.—As stated in the Introduction, the census does not purport to furnish figures that can be used for determining the cost of manufacture and profits. Facts of interest can, however, be brought out concerning the relative importance of the different classes of expenses which make up the total.

The next table shows for 1909, in percentages, the distribution of expenses among the classes indicated for all industries combined and for certain impor-

tant industries separately. The figures on which the percentages are based appear in Table II.

This table shows that, for all industries combined, 67.9 per cent of the total expenses was incurred for materials, 21.1 per cent for services—that is, salaries and wages—and 11.1 per cent for other purposes. As would be expected, these proportions vary greatly in the different industries.

For the flour-mill and gristmill and slaughtering and



meat-packing industries the cost of materials constituted over 90 per cent of the total expenses, due to the fact that the manufacturing operations in these industries are comparatively simple and do not add greatly to the value of the materials treated. On the other hand, in the malt-liquor and printing and publishing industries the cost of materials was less than 35 per cent of the total expenses. In the latter industry the cost for services was high, while in the former the largest item was miscellaneous expenses, which included internal-revenue taxes and cost of advertising. The manufacture of patent medicines and compounds also reported large miscellaneous expenses, the greater part of which was for advertising.

| INDUSTRY.   | PER CENT OF TOTAL EXPENSES REPORTED. |        |            |                         |
|---|--------------------------------------|--------|------------|-------------------------|
|   | Salaries.                            | Wages. | Materials. | Miscellaneous expenses. |
| <b>All industries</b> .....   | 5.6                                  | 15.5   | 67.9       | 11.1                    |
| Boots and shoes, including out stock and findings.                              | 3.1                                  | 17.5   | 74.2       | 5.1                     |
| Bread and other bakery products.....  | 6.1                                  | 15.4   | 67.2       | 11.2                    |
| Carrriages and wagons and materials.....  | 6.0                                  | 23.3   | 63.6       | 7.1                     |
| Cars and general shop construction and repairs by steam-railroad companies..... | 4.8                                  | 51.9   | 42.1       | 1.2                     |
| Clothing, men's, including shirts.....  | 5.4                                  | 21.0   | 65.5       | 7.5                     |
| Clothing, women's.....  | 6.7                                  | 22.6   | 63.1       | 7.7                     |
| Confectionery.....  | 3.7                                  | 12.9   | 66.1       | 12.3                    |
| Copper, tin, and sheet-iron products.....                                       | 6.6                                  | 21.1   | 65.3       | 7.0                     |
| Flour-mill and gristmill products.....  | 1.5                                  | 2.6    | 93.5       | 2.4                     |
| Foundry and machine-shop products.....  | 9.5                                  | 27.7   | 62.1       | 10.0                    |
| Furniture and refrigerators.....  | 9.1                                  | 29.3   | 60.9       | 10.7                    |
| Iron and steel, steel works and rolling mills.....                              | 4.2                                  | 26.2   | 66.8       | 12.8                    |
| Leather goods.....  | 7.8                                  | 17.7   | 64.8       | 9.7                     |
| Liquors, malt.....  | 5.8                                  | 17.4   | 33.8       | 42.9                    |
| Lumber and timber products.....   | 5.7                                  | 30.1   | 54.3       | 10.0                    |
| Paint and varnish.....  | 8.1                                  | 5.0    | 75.7       | 10.3                    |
| Patent medicines and compounds and druggists' preparations.....                 | 16.9                                 | 7.0    | 43.0       | 33.0                    |
| Printing and publishing.....  | 16.9                                 | 26.3   | 34.3       | 22.5                    |
| Slaughtering and meat packing.....  | 1.1                                  | 3.4    | 92.2       | 3.3                     |
| Stoves and furnaces, including gas and oil stoves.....                          | 10.5                                 | 25.0   | 50.0       | 14.5                    |
| All other industries.....   | 6.1                                  | 14.9   | 65.8       | 13.2                    |

**Engines and power.**—The next table shows, for all industries combined, the number of engines or other motors, according to their character, employed in generating power (including electric motors operated by purchased current), and their total horsepower at the censuses of 1909, 1904, and 1899. It also shows separately the number and horsepower of electric motors, including those operated by current generated in the manufacturing establishments.

The table indicates that the increase in owned primary power was mostly in that generated by steam engines, although the percentage which such power constituted of the total horsepower decreased from 91.6 in 1899 to 89.2 in 1904 and to 82.4 in 1909. Power generated by water wheels shows a slight decrease from 1904 to 1909, while the forms of owned power included under the head of "Other" have practically disappeared. The table shows a decided tendency toward the more general use of gas engines, the number of such engines reported having increased from 432 in 1899 to 658 in 1904 and 1,200 in 1909. The figures also show that the practice of renting electric power is increasing, 12.9 per cent of the total power being of this character in 1909, as compared with 5.6 per cent in 1904 and 3 per cent in 1899. The use of electric motors for the purpose of applying

the power generated within the establishments is also shown to be rapidly increasing, the horsepower of such motors having increased from 7,101 in 1899 to 23,706 in 1904 and 62,885 in 1909.

| POWER.   | NUMBER OF ENGINES OR MOTORS. |                  |                   | HORSEPOWER. |         |                   | PER CENT DISTRIBUTION OF HORSEPOWER. |       |                  |
|--|------------------------------|------------------|-------------------|-------------|---------|-------------------|--------------------------------------|-------|------------------|
|  | 1909                         | 1904             | 1899 <sup>1</sup> | 1909        | 1904    | 1899 <sup>1</sup> | 1909                                 | 1904  | 1899             |
| <b>Primary power, total</b> .....              | 11,545                       | 4,083            | 4,151             | 340,467     | 247,861 | 189,117           | 100.0                                | 100.0 | 100.0            |
| Owned.....                                     | 5,140                        | 4,083            | 4,151             | 295,391     | 232,566 | 180,194           | 86.8                                 | 93.8  | 95.3             |
| Steam.....                                     | 3,802                        | 3,257            | 3,575             | 280,480     | 221,215 | 173,271           | 82.4                                 | 89.2  | 91.6             |
| Gas.....                                       | 1,200                        | 658              | 432               | 11,159      | 4,960   | 3,270             | 3.3                                  | 2.0   | 1.7              |
| Water wheels.....                              | 121                          | 141              | 144               | 3,532       | 3,581   | 3,113             | 1.0                                  | 1.4   | 1.6              |
| Water motors.....                              | 17                           | 27               | ( <sup>2</sup> )  | 206         | 146     | ( <sup>2</sup> )  | 0.1                                  | 0.1   | ( <sup>2</sup> ) |
| Other.....                                     |                              |                  |                   | 5           | 2,664   | 531               | ( <sup>2</sup> )                     | 1.1   | 0.3              |
| Rented.....                                    | 6,405                        | ( <sup>2</sup> ) | ( <sup>2</sup> )  | 45,076      | 15,295  | 8,923             | 13.2                                 | 6.2   | 4.7              |
| Electric.....                                  | 6,405                        | ( <sup>2</sup> ) | ( <sup>2</sup> )  | 44,056      | 13,965  | 5,624             | 12.9                                 | 5.6   | 3.0              |
| Other.....                                     |                              |                  |                   | 1,020       | 1,330   | 3,299             | 0.3                                  | 0.5   | 1.7              |
| <b>Electric motors</b> .....                   | 11,534                       | 2,382            | 597               | 106,941     | 37,671  | 12,725            | 100.0                                | 100.0 | 100.0            |
| Run by current generated by establishment..... | 5,129                        | 2,382            | 597               | 62,885      | 23,706  | 7,101             | 58.8                                 | 62.9  | 55.8             |
| Run by rented power.....                       | 6,405                        | ( <sup>2</sup> ) | ( <sup>2</sup> )  | 44,056      | 13,965  | 5,624             | 41.2                                 | 37.1  | 44.2             |

<sup>1</sup> Includes the neighborhood industries and hand trades, omitted in 1904 and 1909.  
<sup>2</sup> Not reported.  
<sup>3</sup> Less than one-tenth of 1 per cent.

**Fuel.**—Closely related to the question of kind of power employed is that of the fuel consumed in generating this power or otherwise used as material in the manufacturing processes. The table following shows the quantity of each kind of fuel used in 1909, for all industries combined and for certain selected industries.

| INDUSTRY.   | Anthracite coal (tons). | Bituminous coal (tons). | Coke (tons). | Wood (cords). | Oil, including gasoline (barrels). | Gas (1,000 feet). |
|---|-------------------------|-------------------------|--------------|---------------|------------------------------------|-------------------|
| <b>All industries</b> <sup>1</sup> .....  | 19,631                  | 2,918,358               | 167,965      | 196,636       | 1,032,443                          | 2,768,066         |
| Boots and shoes, including cut stock and findings.....                          | 184                     | 50,555                  | 2            |               | 44                                 | 8,989             |
| Bread and other bakery products.....  | 2,704                   | 25,377                  | 6,028        | 14,038        | 35,898                             | 160,475           |
| Brick and tile.....   | 97                      | 237,021                 | 2,104        | 30,877        | 38                                 | 598,669           |
| Carrriages and wagons and materials.....  | 172                     | 14,056                  | 165          | 1,105         | 467                                | 3,442             |
| Cars and general shop construction and repairs by steam-railroad companies..... | 1,454                   | 155,228                 | 1,580        | 102           | 34,797                             |                   |
| Clothing, men's, including shirts.....  | 9                       | 8,196                   |              | 2             | 477                                | 10,279            |
| Clothing, women's.....  | 32                      | 1,329                   |              |               | 12                                 | 1,843             |
| Confectionery.....  |                         | 12,842                  | 709          |               | 18                                 | 23,135            |
| Copper, tin, and sheet-iron products.....                                       | 77                      | 5,921                   | 538          | 99            | 295                                | 12,155            |
| Flour-mill and gristmill products.....  | 326                     | 137,614                 | 98           | 41,428        | 27,191                             | 21,999            |
| Foundry and machine-shop products.....  | 2,795                   | 57,053                  | 25,471       | 1,021         | 15,313                             | 412,927           |
| Furniture and refrigerators.....  | 97                      | 16,111                  | 971          | 410           | 310                                | 14,514            |
| Gas, illuminating and heating.....  | 3,147                   | 220,558                 | 3,568        |               | 283,744                            | 60                |
| Glass.....  |                         | 109,028                 | 30           | 100           | 27,000                             |                   |
| Ice, manufactured.....  |                         | 224,495                 |              | 1,487         | 60,373                             | 280,374           |
| Iron and steel, steel works and rolling mills.....                              | 3                       | 77,885                  | 3,153        |               | 143,482                            | 7,750             |
| Leather goods.....  | 99                      | 5,484                   | 8            | 33            | 54                                 | 11,811            |
| Lime.....   |                         | 32,980                  |              | 51,827        | 453                                | 7,597             |
| Liquors, malt.....  | 188                     | 238,008                 | 4,044        | 633           | 84,273                             | 150,654           |
| Lumber and timber products.....   | 294                     | 34,871                  |              | 172           | 1,169                              | 4,874             |
| Paint and varnish.....  | 2                       | 20,414                  | 310          | 30            | 40                                 | 3,061             |
| Patent medicines and compounds and druggists' preparations.....                 | 243                     | 5,085                   | 47           | 24            | 8                                  | 6,415             |
| Pottery, terra-cotta, and fire-clay products.....                               |                         | 284,316                 | 30           | 307           | 6,091                              | 599               |
| Printing and publishing.....  | 2,106                   | 28,071                  | 30           | 1,494         | 3,442                              | 70,006            |
| Slaughtering and meat packing.....  | 2,633                   | 187,072                 |              | 1,440         | 6,589                              | 305,289           |
| Stoves and furnaces, including gas and oil stoves.....                          | 47                      | 12,023                  | 3,653        | 36            |                                    | 7,332             |
| All other industries.....   | 2,932                   | 605,775                 | 114,526      | 40,065        | 300,850                            | 581,916           |

<sup>1</sup> In addition there were 23,980 tons of other varieties of fuel reported.

SUPPLEMENTARY DATA REGARDING IMPORTANT INDUSTRIES.

(With statistics for laundries and custom sawmills and gristmills.)

For certain industries the Census Bureau collects, by means of special schedules, details regarding the quantity and cost of materials and the quantity and value of products and other information, for securing which no provision is made on the general schedule. Certain data of this character for seven important industries in Missouri are here presented.

**Slaughtering and meat packing.**—The following table shows the quantities and cost of the principal materials used, together with the quantities and values of the principal products, at the censuses of 1909, 1904, and 1899:

| MATERIAL OR PRODUCT.                         | 1909           | 1904             | 1899             |
|--|----------------|------------------|------------------|
| <b>Materials used, total cost.</b> .....     | \$72, 198, 204 | \$54, 098, 762   | \$39, 181, 590   |
| <b>Beeves slaughtered:</b>                   |                |                  |                  |
| Number.....                                  | 530, 356       | 573, 887         | 346, 827         |
| Cost.....                                    | \$24, 332, 919 | \$22, 047, 756   | \$14, 968, 243   |
| <b>Calves slaughtered:</b>                   |                |                  |                  |
| Number.....                                  | 81, 551        | 52, 044          | 22, 825          |
| Cost.....                                    | \$821, 829     | \$389, 123       | \$163, 931       |
| <b>Sheep slaughtered:</b>                    |                |                  |                  |
| Number.....                                  | 546, 640       | 564, 784         | 252, 015         |
| Cost.....                                    | \$2, 659, 215  | \$2, 224, 718    | \$1, 031, 346    |
| <b>Hogs slaughtered:</b>                     |                |                  |                  |
| Number.....                                  | 2, 471, 658    | 2, 126, 932      | 1, 857, 953      |
| Cost.....                                    | \$36, 911, 941 | \$23, 253, 132   | \$10, 075, 986   |
| All other animals slaughtered.....           | \$2, 624       | \$3, 500         | \$11, 725        |
| Fuel and rent of power.....                  | \$363, 710     | \$316, 168       | \$159, 999       |
| All other materials.....                     | \$7, 106, 026  | \$5, 864, 365    | \$3, 770, 369    |
| <b>Products, total value.</b> .....          | \$79, 581, 294 | \$60, 110, 427   | \$43, 162, 335   |
| <b>Beef, fresh:</b>                          |                |                  |                  |
| Pounds.....                                  | 273, 808, 501  | 315, 065, 100    | 165, 944, 314    |
| Value.....                                   | \$20, 038, 884 | \$19, 171, 944   | \$11, 993, 514   |
| <b>Beef, salted or cured:</b>                |                |                  |                  |
| Pounds.....                                  | 1, 668, 474    | 904, 663         | 17, 978, 683     |
| Value.....                                   | \$168, 055     | \$55, 576        | \$1, 076, 431    |
| <b>Veal, fresh:</b>                          |                |                  |                  |
| Pounds.....                                  | 8, 831, 460    | 5, 421, 809      | 1, 728, 989      |
| Value.....                                   | \$767, 841     | \$386, 860       | \$178, 041       |
| <b>Mutton, fresh:</b>                        |                |                  |                  |
| Pounds.....                                  | 21, 896, 982   | 23, 555, 759     | 10, 238, 198     |
| Value.....                                   | \$2, 200, 306  | \$1, 834, 529    | \$782, 067       |
| <b>Pork, fresh:</b>                          |                |                  |                  |
| Pounds.....                                  | 138, 974, 435  | 118, 797, 174    | 106, 701, 224    |
| Value.....                                   | \$13, 492, 080 | \$8, 444, 749    | \$6, 848, 027    |
| <b>Pork, salted or cured:</b>                |                |                  |                  |
| Pounds.....                                  | 222, 224, 021  | 195, 757, 762    | 179, 563, 067    |
| Value.....                                   | \$24, 769, 411 | \$15, 512, 369   | \$11, 667, 022   |
| <b>Sausage, fresh or cured</b> .....         | \$1, 632, 370  | \$1, 383, 767    | \$729, 839       |
| <b>All other fresh meat:</b>                 |                |                  |                  |
| Pounds.....                                  | 10, 867, 868   | 2, 630, 218      | ( <sup>1</sup> ) |
| Value.....                                   | \$1, 450, 509  | \$120, 690       | ( <sup>1</sup> ) |
| <b>Lard:</b>                                 |                |                  |                  |
| Pounds.....                                  | 48, 835, 133   | 33, 215, 200     | 52, 365, 406     |
| Value.....                                   | \$5, 595, 067  | \$2, 313, 586    | \$2, 947, 453    |
| <b>Tallow, oleo stearin, and stearin:</b>    |                |                  |                  |
| Pounds.....                                  | 14, 122, 291   | ( <sup>1</sup> ) | ( <sup>1</sup> ) |
| Value.....                                   | \$1, 156, 139  | ( <sup>1</sup> ) | ( <sup>1</sup> ) |
| <b>Fertilizers and fertilizer materials:</b> |                |                  |                  |
| Tons.....                                    | 10, 482        | 42, 249          | 18, 095          |
| Value.....                                   | \$564, 335     | \$617, 080       | \$347, 309       |
| <b>Hides:</b>                                |                |                  |                  |
| Number.....                                  | 567, 275       | 612, 670         | 369, 652         |
| Pounds.....                                  | 32, 406, 006   | 37, 971, 556     | 19, 907, 122     |
| Value.....                                   | \$4, 427, 484  | \$3, 349, 715    | \$2, 166, 040    |
| <b>Pelts:</b>                                |                |                  |                  |
| Number.....                                  | 281, 627       | 580, 261         | ( <sup>1</sup> ) |
| Value.....                                   | \$330, 199     | \$547, 801       | ( <sup>1</sup> ) |
| All other products.....                      | \$2, 079, 596  | \$6, 371, 761    | \$4, 424, 854    |

<sup>1</sup> Figures not available.

The table shows that during the five years from 1899 to 1904 there were decided increases in the production of beef and pork; during the later five-year period the percentage of increase for pork products did not vary greatly from that for the earlier five-year period, but beef products decreased. During this later period the production of mutton, pelts, hides, and fertilizers decreased, while that of veal and lard increased,

the last mentioned practically regaining what it had lost in the earlier period. The number of calves and of hogs slaughtered have steadily increased throughout the decade, but the numbers of beeves and of sheep slaughtered have decreased slightly during the last five years. The cost of materials and the value of products show decided increases for each of the five-year periods.

**Flour-mill and gristmill products.**—For this industry, which is third in importance in the state when measured by value of products, the following table shows the quantities and values of the different kinds of products reported in 1909, 1904, and 1899:

| PRODUCT.                         | 1909           | 1904           | 1899             |
|----------------------------------|----------------|----------------|------------------|
| <b>Total value.</b> .....        | \$44, 508, 106 | \$38, 026, 142 | \$23, 831, 805   |
| <b>Wheat flour:</b>              |                |                |                  |
| White—                           |                |                |                  |
| Barrels.....                     | 5, 661, 379    | 6, 171, 011    | 5, 022, 043      |
| Value.....                       | \$29, 995, 104 | \$28, 492, 662 | \$17, 020, 182   |
| Graham—                          |                |                |                  |
| Barrels.....                     | 10, 800        | 4, 530         | ( <sup>1</sup> ) |
| Value.....                       | \$58, 024      | \$20, 063      | ( <sup>1</sup> ) |
| <b>Corn meal and corn flour:</b> |                |                |                  |
| Barrels.....                     | 1, 020, 738    | 935, 318       | 1, 296, 866      |
| Value.....                       | \$3, 129, 694  | \$2, 343, 365  | \$2, 265, 592    |
| <b>Rye flour:</b>                |                |                |                  |
| Barrels.....                     | 702            | 1, 843         | 7, 016           |
| Value.....                       | \$3, 320       | \$8, 477       | \$20, 147        |
| <b>Buckwheat flour:</b>          |                |                |                  |
| Pounds.....                      | 69, 440        | 250, 760       | 677, 378         |
| Value.....                       | \$2, 310       | \$9, 113       | \$24, 562        |
| <b>Barley meal:</b>              |                |                |                  |
| Pounds.....                      |                | 208, 000       | 2, 500           |
| Value.....                       |                | \$1, 920       | \$58             |
| <b>Hominy and grits:</b>         |                |                |                  |
| Pounds.....                      | 26, 726, 254   | 58, 814, 607   | 40, 638, 750     |
| Value.....                       | \$413, 234     | \$913, 053     | \$304, 260       |
| <b>Feed:</b>                     |                |                |                  |
| Tons.....                        | 186, 262       | 93, 568        | 145, 562         |
| Value.....                       | \$4, 051, 030  | \$1, 776, 429  | \$2, 100, 518    |
| <b>Offal:</b>                    |                |                |                  |
| Tons.....                        | 239, 265       | 274, 369       | 172, 778         |
| Value.....                       | \$5, 059, 079  | \$4, 751, 531  | \$1, 819, 289    |
| All other products.....          | \$1, 194, 452  | \$8, 819       | \$202, 296       |

<sup>1</sup> Not reported separately.

In general, this table shows decreases in the quantities and increases in the values reported for the various products from 1904 to 1909. The most important product, white flour, decreased 509,632 barrels, but increased \$1,502,412 in value during this five-year period. Graham flour, corn meal and corn flour, and feed show increased production, while rye flour, buckwheat flour, hominy and grits, and offal show decreases. The decreases noted may be to some extent the result of reporting some of these items under the head of "All other products" in 1909, since this latter item shows an extraordinary increase from 1904 to 1909. In 1909 there were reported 5,032 pairs of rolls and 513 runs of stone, as compared with 5,408 pairs of rolls and 363 runs of stone in 1904. One attrition mill was reported in 1909; 18 of the establishments in the industry manufactured barrels and 9 manufactured sacks.

**Butter, cheese, and condensed milk.**—The next table shows the quantities and values of the products of the butter, cheese, and condensed-milk factories for 1909, 1904, and 1899.



| PRODUCT.   | 1909        | 1904        | 1899      |
|--|-------------|-------------|-----------|
| Total value.....                                     | \$2,958,818 | \$1,313,958 | \$431,936 |
| Butter:  |             |             |           |
| Packed solid—  |             |             |           |
| Pounds.....  | 4,452,602   | 1,866,507   | 1,270,604 |
| Value.....   | \$1,213,508 | \$386,379   | \$240,222 |
| Prints or rolls—                                     |             |             |           |
| Pounds.....  | 5,809,274   | 3,940,217   | 170,012   |
| Value.....   | \$1,048,722 | \$806,228   | \$34,898  |
| Cream sold:  |             |             |           |
| Pounds.....  | 122,357     | 308,551     | 102,632   |
| Value.....   | \$18,838    | \$28,329    | \$7,601   |
| All other butter-factory products <sup>1</sup> ..... | \$20,023    | \$19,101    | \$22,831  |
| Cheese:  |             |             |           |
| Full cream—  |             |             |           |
| Pounds.....  | 219,112     | 687,479     | 1,022,751 |
| Value.....   | \$30,122    | \$86,830    | \$98,163  |
| Other kinds—   |             |             |           |
| Pounds.....  |             | 65,968      | 50,000    |
| Value.....   |             | \$839       | \$4,600   |
| All other cheese-factory products <sup>2</sup> ..... | \$200       | \$652       | \$321     |
| All other products not specified <sup>3</sup> .....  | \$27,405    | \$5,600     | \$23,300  |

<sup>1</sup> Includes skim milk and casein.  
<sup>2</sup> Includes whey.  
<sup>3</sup> Includes condensed milk to avoid disclosure of individual operations.

The most important facts shown by this table are the marked increase in the production of butter and the large decrease in the output of cheese. Combined, the butter packed solid and that sold in prints or rolls increased 4,366,108 pounds, or 303.1 per cent, from 1899 to 1904, and 4,455,152 pounds, or 76.7 per cent, from 1904 to 1909, while full cream cheese decreased 335,272 pounds, or 32.8 per cent, during the earlier five-year period, and 468,367 pounds, or 68.1 per cent, during the more recent five-year period.

**Boots and shoes.**—The manufacture of boots and shoes in Missouri is of special interest, because of the rapid development of the industry during recent years and of the important position which the state has assumed in the industry. This development is not confined to the larger cities, but extends to many small cities and towns of the state. The number of pairs of the different classes of footwear made in the three census years 1909, 1904, and 1899 is shown in the following table:

| PRODUCT.                              | NUMBER OF PAIRS. |            |           |
|---------------------------------------|------------------|------------|-----------|
|                                       | 1909             | 1904       | 1899      |
| Boots and shoes.....                  | 24,657,160       | 15,918,052 | 7,790,448 |
| Men's.....                            | 9,303,028        | 5,740,729  | 3,083,759 |
| Boys' and youths'.....                | 2,087,258        | 1,819,192  | 425,970   |
| Women's.....                          | 8,642,965        | 5,993,114  | 3,120,911 |
| Misses' and children's.....           | 4,623,909        | 2,365,017  | 1,159,799 |
| Slippers.....                         | 616,229          | 249,806    | 202,799   |
| Men's, boys', and youths'.....        | 27,551           | 26,500     | 10,296    |
| Women's, misses', and children's..... | 588,678          | 223,306    | 192,503   |
| All other.....                        | 657,718          | 272,000    | 254,000   |

This table shows remarkable increases in nearly every item. In 1904 and 1899 the output of women's boots and shoes slightly exceeded that of men's, but in 1909 the output of men's boots and shoes was the larger, having increased 62.1 per cent since 1904. The number of pairs of misses' and children's boots and shoes practically doubled during each of the five-year periods, while the production of boys' and youths' boots and shoes made a remarkable gain between 1899 and 1904,

but the smallest gain of any of the classes during the later five-year period. The number of pairs of slippers increased 366,423, or 146.7 per cent, from 1904 to 1909; most of this increase as well as most of the production consisted of women's, misses', and children's slippers.

In the following table the output of the industry in 1909 is classified according to method of manufacture:

| PRODUCT.                    | NUMBER OF PAIRS, BY METHOD OF MANUFACTURE. |                       |            |                                 |
|-----------------------------|--|-----------------------|------------|---------------------------------|
|                             | Total.                                     | Machine or hand welt. | McKay.     | All other classes. <sup>1</sup> |
| Boots and shoes.....        | 24,657,160                                 | 7,423,545             | 14,204,733 | 3,028,882                       |
| Men's.....                  | 9,303,028                                  | 5,584,054             | 2,290,792  | 1,419,182                       |
| Boys' and youths'.....      | 2,087,258                                  | 382,802               | 1,533,768  | 170,688                         |
| Women's.....                | 8,642,965                                  | 1,374,610             | 6,056,358  | 1,211,097                       |
| Misses' and children's..... | 4,623,909                                  | 82,070                | 4,314,815  | 227,015                         |
| Slippers.....               | 616,229                                    |                       | 616,229    |                                 |
| All other.....              | 657,718                                    |                       | 657,718    |                                 |

<sup>1</sup> Includes turned, wooden pegged, wire screw, etc.

The total number of McKay boots and shoes manufactured was nearly double the number of welt shoes. Men's boots and shoes made up more than three-fourths of the total output of welt shoes, and constitute the only class in which the number of welt shoes was greater than that of the McKay, which form the great majority in the other classes.

**Printing and publishing.**—Although the printing and publishing industry as a whole in Missouri shows considerable growth during the last five years when measured by value of products as shown in Table I, page 23, the number of publications and the aggregate circulation have decreased, which feature is a good index of the present tendency of the industry. The following table shows the number of publications, classified according to the period of issue, and the aggregate circulation per issue of each class for the census years 1909, 1904, and 1899:

| PERIOD OF ISSUE.       | NUMBER OF PUBLICATIONS. |       |      | AGGREGATE CIRCULATION PER ISSUE. |           |           |
|------------------------|-------------------------|-------|------|----------------------------------|-----------|-----------|
|                        | 1909                    | 1904  | 1899 | 1909                             | 1904      | 1899      |
| Total.....             | 1,003                   | 1,032 | 973  | 7,577,639                        | 8,133,192 | 5,495,802 |
| Daily.....             | 91                      | 92    | 92   | 1,624,621                        | 1,125,700 | 810,402   |
| Sunday.....            | 21                      | 24    | 33   | 978,377                          | 970,071   | ( )       |
| Semiweekly.....        | 12                      | 19    | 15   | 290,739                          | 590,293   | 329,353   |
| Weekly.....            | 731                     | 730   | 696  | 1,871,685                        | 1,739,457 | 1,862,856 |
| Monthly.....           | 117                     | 133   | 101  | 2,295,275                        | 3,366,193 | 1,378,589 |
| All other classes..... | 31                      | 34    | 37   | 547,042                          | 341,503   | 1,114,515 |

<sup>1</sup> Included in circulation for daily.

With only one exception, and that showing an increase of but a single publication, each of the different classes of publications shows a decrease in number in 1909, as compared with 1904, the greatest decline being in the monthlies. The largest number, 731, or 72.9 per cent of the total, were issued weekly. The greatest aggregate circulation per issue for 1909 is shown for monthly publications. The greatest average circulation shown for any class of publication,

46,589, is reported for Sunday editions. The average circulation of semiweeklies in 1909 was 24,228; of monthlies, 19,361; of dailies, 17,853; and of weeklies, 2,560. From 1904 to 1909, Sunday editions, dailies, weeklies, and the publications included under the head of "All other classes" each showed an increase in aggregate circulation, while semiweeklies and monthlies decreased to such an extent that the total circulation for the state shows a decrease.

In 1909 there were published in the state in the German language 6 dailies, 2 Sunday editions, 1 semi-weekly, 18 weeklies, 1 biweekly, and 9 monthlies; in German-English, 3 weeklies, 1 semimonthly, 3 monthlies, and 1 bimonthly; in Bohemian, 1 semiweekly, 1 weekly, and 1 monthly; in Italian, 2 weeklies; in Polish, 1 weekly; in Spanish, 1 monthly; and in Swedish, 1 weekly.

Lumber and timber products.—The following is a statement of the quantity of the lumber, lath, and shingles produced in the sawmills and shingle mills as reported at the censuses of 1909 and 1899:

| PRODUCT.                       | QUANTITY. |         |
|--------------------------------|-----------|---------|
|                                | 1909      | 1899    |
| Rough lumber..... M feet b. m. | 660,159   | 723,754 |
| Lath..... thousands..          | 19,931    | 24,835  |
| Shingles..... thousands..      | 51,932    | 28,227  |

With a large increase in number of mills from 1899 to 1909, the output of rough lumber decreased 63,595 M feet board measure, or 8.8 per cent. Most of the 1909 cut was hardwood, amounting to 482,013 M feet, of which oak constituted 271,623 M feet. Red gum, hickory, elm, and cottonwood in the order named were the other most important hardwoods sawed. The cut of softwoods amounted to 178,146 M feet board measure, of which 142,271 M feet were yellow pine. Practically all of the remainder of the softwood cut was cypress. Lath and shingles are principally minor products of the Missouri mills, and their production depends largely upon local market demands.

Carriages and wagons.—The value of the products of this industry has increased from \$6,446,006 in 1899 to \$7,678,429 in 1904 and \$8,468,856 in 1909. The following table shows the number and value of the different kinds of vehicles manufactured in the three census years.

Family and pleasure carriages showed the greatest value of products in 1899 and 1909, and formed 43.4 per cent and 46.2 per cent, respectively, of the total for the industry. From 1899 to 1909 the number of family and pleasure carriages reported increased 84.5 per cent and their value 39.9 per cent. During the same period the number of wagons decreased 18.2 per cent with but little change in their total value.

| PRODUCT.   | 1909        | 1904             | 1899             |
|--|-------------|------------------|------------------|
| Total value.....   | \$8,468,856 | \$7,678,429      | \$6,446,006      |
| Carriages (family and pleasure):   |             |                  |                  |
| Number.....  | 97,444      | 74,650           | 52,823           |
| Value.....   | \$3,913,909 | \$3,820,342      | \$2,707,118      |
| Wagons:  |             |                  |                  |
| Number.....  | 20,140      | 25,281           | 24,621           |
| Value.....   | \$1,388,699 | \$1,507,225      | \$1,392,102      |
| Business—  |             |                  |                  |
| Number.....  | 2,085       | 2,677            | ( <sup>1</sup> ) |
| Value.....   | \$304,306   | ( <sup>1</sup> ) | ( <sup>1</sup> ) |
| Farm—  |             |                  |                  |
| Number.....  | 18,047      | 22,485           | ( <sup>1</sup> ) |
| Value.....   | \$1,021,853 | ( <sup>1</sup> ) | ( <sup>1</sup> ) |
| Government, municipal, etc.—   |             |                  |                  |
| Number.....  | 8           | 110              | ( <sup>1</sup> ) |
| Value.....   | \$2,480     | ( <sup>1</sup> ) | ( <sup>1</sup> ) |
| Public conveyances (cabs, hacks, hacks, hotel coaches, omnibuses, etc.)— |             |                  |                  |
| Number.....  | 98          | 58               | 85               |
| Value.....   | \$48,558    | \$4,445          | \$24,550         |
| Sleighs and sleds:   |             |                  |                  |
| Number.....  | 53          | 6                | 170              |
| Value.....   | \$783       | \$153            | \$3,204          |
| All other products, including parts and repair work.....                 | \$3,116,847 | \$2,340,204      | \$2,220,032      |

<sup>1</sup> Figures not available.

Laundries.—Statistics for steam laundries are not included in the general tables or in the totals for manufacturing industries. In 1909 there were 171 such establishments in the state of Missouri, 40 of which were in St. Louis, 32 in Kansas City, 8 in Springfield, 7 in Joplin, 6 in St. Joseph, and 3 in Sedalia. The following statement summarizes the statistics:

|                                      |             |
|--------------------------------------|-------------|
| Number of establishments.....        | 171         |
| Persons engaged in the industry..... | 6,113       |
| Proprietors and firm members.....    | 152         |
| Salaried employees.....              | 523         |
| Wage earners (average number).....   | 5,438       |
| Primary horsepower.....              | 5,727       |
| Capital.....                         | \$3,407,985 |
| Expenses.....                        | 4,167,080   |
| Services.....                        | 2,564,005   |
| Materials.....                       | 892,197     |
| Miscellaneous.....                   | 710,828     |
| Amount received for work done.....   | 4,904,249   |

Of the 171 establishments reported for this industry, 62 were operated by individuals, 40 by firms, and 69 by corporations. Thirty-seven establishments had receipts for the year's business of less than \$5,000; 70, receipts of \$5,000 but less than \$20,000; 55, receipts of \$20,000 but less than \$100,000; and 9, receipts of \$100,000 but less than \$1,000,000.

The number of wage earners employed each month and the per cent which this number represented of the greatest number employed in any month were as shown in the statement following.

| MONTH.        | WAGE EARNERS. |                      | MONTH.         | WAGE EARNERS. |                      |
|---------------|---------------|----------------------|----------------|---------------|----------------------|
|               | Number.       | Per cent of maximum. |                | Number.       | Per cent of maximum. |
| January.....  | 5,199         | 91.4                 | July.....      | 5,641         | 99.2                 |
| February..... | 5,171         | 90.9                 | August.....    | 5,680         | 100.0                |
| March.....    | 5,235         | 92.0                 | September..... | 5,652         | 99.3                 |
| April.....    | 5,275         | 92.7                 | October.....   | 5,556         | 97.7                 |
| May.....      | 5,281         | 92.8                 | November.....  | 5,522         | 97.1                 |
| June.....     | 5,525         | 97.1                 | December.....  | 5,505         | 96.8                 |

## MANUFACTURES—MISSOURI.

The different kinds of primary power, the number of engines or motors, and the horsepower used in 1909 are shown in the following tabular statement:

| KIND.                     | Number of engines or motors. | Horsepower. |
|---------------------------|------------------------------|-------------|
| Primary power, total..... |                              | 5,727       |
| Owned:                    |                              |             |
| Steam.....                | 155                          | 5,288       |
| Gas.....                  | 15                           | 289         |
| Rented—Electric.....      | 30                           | 150         |

The kind and amount of fuel used are shown in the next statement.

| KIND.                | Unit.           | Quantity. |
|----------------------|-----------------|-----------|
| Anthracite coal..... | Tons.....       | 676       |
| Bituminous coal..... | Tons.....       | 52,650    |
| Coke.....            | Tons.....       | 10        |
| Wood.....            | Cords.....      | 224       |
| Oil.....             | Barrels.....    | 26,120    |
| Gas.....             | 1,000 feet..... | 207,928   |

Custom sawmills and gristmills.—The statistics for custom sawmills and gristmills are not included in the general tables or in the totals for manufacturing industries, but are presented in the following summary:

|                                      | Custom sawmills. | Custom gristmills. |
|--------------------------------------|------------------|--------------------|
| Number of establishments.....        | 419              | 412                |
| Persons engaged in the industry..... | 1,135            | 730                |
| Proprietors and firm members.....    | 595              | 547                |
| Salaried employees.....              | 4                | 7                  |
| Wage earners (average number).....   | 536              | 176                |
| Primary horsepower.....              | 7,060            | 7,268              |
| Capital.....                         | \$497,026        | \$360,960          |
| Expenses.....                        | 165,370          | 1,205,800          |
| Services.....                        | 117,407          | 33,162             |
| Materials.....                       | 13,568           | 1,155,245          |
| Miscellaneous.....                   | 34,395           | 17,393             |
| Value of products.....               | 414,135          | 1,461,474          |

For the gristmills an estimate has been made of the cost and value of all grain ground. A similar estimate for value of lumber sawed by the custom sawmills is impracticable.

MANUFACTURES—MISSOURI.

TABLE I.—COMPARATIVE SUMMARY FOR 1909, 1904, AND 1899.  
THE STATE—ALL INDUSTRIES COMBINED AND SELECTED INDUSTRIES.

| INDUSTRY.  | Census. | Number of establishments. | PERSONS ENGAGED IN INDUSTRY. |                               |                         |                                | Primary horse-power. | Capital.  | Salaries. | Wages.   | Cost of materials. | Value of products. | Value added by manufacture. |
|--|---------|---------------------------|------------------------------|-------------------------------|-------------------------|--------------------------------|----------------------|-----------|-----------|----------|--------------------|--------------------|-----------------------------|
|  |         |                           | Total.                       | Proprietors and firm members. | Salaries and employees. | Wage earners (average number). |                      |           |           |          |                    |                    |                             |
| Expressed in thousands.  |         |                           |                              |                               |                         |                                |                      |           |           |          |                    |                    |                             |
| STATE—All industries.....  | 1909    | 8,376                     | 185,705                      | 8,220                         | 24,486                  | 152,993                        | 340,467              | \$444,343 | \$28,994  | \$80,843 | \$354,411          | \$574,111          | \$219,700                   |
|  | 1904    | 6,464                     | 156,585                      | 6,299                         | 17,119                  | 133,187                        | 247,801              | 379,369   | 19,002    | 66,644   | 252,258            | 439,549            | 187,291                     |
|  | 1899    | 6,853                     | 156,585                      | 6,299                         | 12,474                  | 107,704                        | 189,117              | 223,781   | 13,295    | 46,714   | 184,189            | 316,304            | 132,115                     |
| Agricultural implements.....   | 1909    | 25                        | 532                          | 16                            | 78                      | 438                            | 1,080                | 1,725     | 80        | 219      | 504                | 981                | 477                         |
|  | 1904    | 21                        | 632                          | 18                            | 89                      | 525                            | 856                  | 1,300     | 93        | 261      | 452                | 1,068              | 616                         |
|  | 1899    | 20                        | 599                          | 25                            | 81                      | 493                            | 937                  | 1,412     | 102       | 242      | 407                | 964                | 547                         |
| Automobiles, including bodies and parts.....                                 | 1909    | 17                        | 440                          | 6                             | 75                      | 368                            | 184                  | 800       | 85        | 252      | 1,025              | 1,677              | 652                         |
|  | 1904    | 13                        | 37                           | 3                             | 13                      | 21                             | 20                   | 24        | 5         | 16       | 31                 | 63                 | 32                          |
|  | 1899    |                           |                              |                               |                         |                                |                      |           |           |          |                    |                    |                             |
| Awnings, tents, and sails.....   | 1909    | 18                        | 554                          | 6                             | 120                     | 429                            | 217                  | 936       | 118       | 193      | 1,207              | 1,784              | 577                         |
|  | 1904    | 12                        | 378                          | 2                             | 67                      | 300                            | 65                   | 641       | 74        | 138      | 824                | 1,237              | 413                         |
|  | 1899    | 15                        |                              |                               | 72                      | 366                            |                      | 202       | 40        | 109      | 532                | 985                | 453                         |
| Belting and hose, leather.....   | 1909    | 7                         | 80                           | 2                             | 31                      | 47                             | 140                  | 472       | 41        | 31       | 290                | 445                | 155                         |
|  | 1904    | 6                         | 63                           | 2                             | 27                      | 34                             | 60                   | 167       | 20        | 19       | 207                | 210                | 109                         |
|  | 1899    | 4                         | 40                           | 1                             | 14                      | 25                             |                      | 112       | 15        | 13       | 165                | 224                | 59                          |
| Blacking and cleansing and polishing preparations.                           | 1909    | 32                        | 194                          | 24                            | 60                      | 110                            | 102                  | 224       | 64        | 55       | 303                | 600                | 297                         |
|  | 1904    | 10                        | 76                           | 8                             | 33                      | 35                             | 100                  | 92        | 28        | 14       | 85                 | 169                | 84                          |
|  | 1899    | 10                        |                              |                               | 27                      | 30                             |                      | 46        | 10        | 10       | 40                 | 120                | 80                          |
| Boots and shoes, including out stock and findings.                           | 1909    | 50                        | 18,605                       | 14                            | 1,255                   | 17,306                         | 11,113               | 15,898    | 1,436     | 3,164    | 34,540             | 48,751             | 14,211                      |
|  | 1904    | 37                        | 10,949                       | 8                             | 490                     | 10,451                         | 5,145                | 8,200     | 668       | 4,349    | 14,953             | 23,541             | 8,588                       |
|  | 1899    | 57                        |                              |                               | 338                     | 5,970                          |                      | 4,218     | 356       | 2,070    | 8,123              | 11,456             | 3,333                       |
| Boxes, fancy and paper.....  | 1909    | 277                       | 1,237                        | 10                            | 114                     | 1,113                          | 657                  | 933       | 127       | 372      | 660                | 1,370              | 707                         |
|  | 1904    | 177                       | 915                          | 5                             | 63                      | 847                            | 363                  | 575       | 65        | 240      | 363                | 770                | 407                         |
|  | 1899    | 12                        | 706                          | 6                             | 42                      | 658                            |                      | 323       | 48        | 134      | 164                | 488                | 324                         |
| Brass and bronze products.....   | 1909    | 18                        | 307                          | 17                            | 53                      | 297                            | 448                  | 1,025     | 80        | 106      | 1,054              | 2,221              | 567                         |
|  | 1904    | 16                        | 257                          | 18                            | 43                      | 196                            | 178                  | 720       | 50        | 122      | 1,184              | 1,527              | 343                         |
|  | 1899    | 15                        | 310                          | 15                            | 30                      | 205                            |                      | 400       | 37        | 135      | 960                | 1,270              | 310                         |
| Bread and other bakery products.....   | 1909    | 954                       | 6,797                        | 1,063                         | 1,051                   | 4,743                          | 3,023                | 17,043    | 986       | 2,487    | 10,820             | 18,524             | 7,605                       |
|  | 1904    | 614                       | 4,062                        | 649                           | 649                     | 3,704                          | 1,944                | 7,416     | 511       | 1,810    | 7,281              | 12,672             | 5,391                       |
|  | 1899    | 582                       | 3,203                        | 600                           | 300                     | 2,204                          |                      | 3,748     | 274       | 955      | 3,885              | 7,284              | 3,399                       |
| Brick and tile.....  | 1909    | 120                       | 3,289                        | 121                           | 169                     | 2,999                          | 8,274                | 7,138     | 220       | 1,499    | 1,012              | 3,676              | 2,604                       |
|  | 1904    | 162                       | 2,679                        | 181                           | 161                     | 2,337                          | 6,645                | 7,458     | 170       | 1,119    | 669                | 2,599              | 1,930                       |
|  | 1899    | 210                       | 2,797                        | 200                           | 97                      | 2,440                          | 4,378                | 6,051     | 113       | 807      | 472                | 1,988              | 1,516                       |
| Brooms and brushes.....  | 1909    | 61                        | 328                          | 62                            | 40                      | 226                            | 150                  | 439       | 35        | 110      | 483                | 849                | 396                         |
|  | 1904    | 72                        | 353                          | 88                            | 39                      | 225                            | 87                   | 308       | 26        | 102      | 237                | 528                | 291                         |
|  | 1899    | 98                        | 405                          | 111                           | 30                      | 264                            |                      | 182       | 24        | 103      | 310                | 607                | 297                         |
| Butter, cheese, and condensed milk.....                                      | 1909    | 56                        | 277                          | 31                            | 87                      | 159                            | 788                  | 701       | 68        | 100      | 2,499              | 2,050              | 460                         |
|  | 1904    | 54                        | 241                          | 42                            | 51                      | 148                            | 573                  | 540       | 33        | 60       | 1,033              | 1,314              | 281                         |
|  | 1899    | 70                        | 164                          | 66                            | 24                      | 74                             | 639                  | 200       | 5         | 31       | 320                | 482                | 103                         |
| Canning and preserving.....  | 1909    | 222                       | 1,705                        | 548                           | 205                     | 952                            | 974                  | 1,781     | 127       | 186      | 1,005              | 1,574              | 569                         |
|  | 1904    | 75                        | 972                          | 78                            | 136                     | 758                            | 1,154                | 1,018     | 72        | 171      | 840                | 1,323              | 474                         |
|  | 1899    | 55                        |                              |                               | 145                     | 840                            |                      | 704       | 90        | 192      | 983                | 1,520              | 540                         |
| Carriages and wagons and materials.....                                      | 1909    | 243                       | 3,040                        | 277                           | 361                     | 3,302                          | 5,858                | 7,883     | 459       | 1,781    | 4,860              | 8,409              | 3,609                       |
|  | 1904    | 248                       | 3,765                        | 293                           | 300                     | 3,163                          | 3,431                | 5,750     | 347       | 1,470    | 4,261              | 7,478              | 3,417                       |
|  | 1899    | 378                       |                              |                               | 222                     | 2,980                          |                      | 4,587     | 247       | 1,121    | 3,122              | 6,046              | 3,324                       |
| Cars and general shop construction and repairs by steam-railroad companies.  | 1909    | 35                        | 8,620                        |                               | 400                     | 8,121                          | 9,042                | 7,438     | 468       | 5,097    | 4,128              | 9,812              | 5,684                       |
|  | 1904    | 34                        | 7,174                        |                               | 414                     | 6,760                          | 4,993                | 2,073     | 366       | 4,165    | 4,112              | 8,720              | 4,608                       |
|  | 1899    | 43                        | 5,823                        |                               | 242                     | 5,581                          | 2,345                | 3,045     | 219       | 3,183    | 3,020              | 6,524              | 3,504                       |
| Cars and general shop construction and repairs by street-railroad companies. | 1909    | 7                         | 931                          |                               | 26                      | 905                            | 3,005                | 1,100     | 31        | 620      | 501                | 1,204              | 703                         |
|  | 1904    | 4                         | 963                          |                               | 28                      | 935                            | 1,720                | 1,391     | 44        | 603      | 490                | 1,211              | 721                         |
|  | 1899    | 4                         | 450                          |                               | 10                      | 440                            |                      | 626       | 8         | 263      | 280                | 540                | 310                         |
| Chemicals.....   | 1909    | 9                         | 845                          | 42                            | 184                     | 619                            | 886                  | 3,050     | 338       | 333      | 2,224              | 3,040              | 1,416                       |
|  | 1904    | 11                        | 827                          | 1                             | 186                     | 640                            | 1,330                | 4,360     | 233       | 310      | 2,172              | 3,279              | 1,107                       |
|  | 1899    | 8                         | 419                          | 1                             | 78                      | 340                            |                      | 1,970     | 112       | 102      | 1,336              | 1,870              | 468                         |
| Clothing, men's, including shirts.....                                       | 1909    | 84                        | 8,067                        | 52                            | 621                     | 7,994                          | 1,559                | 8,109     | 745       | 2,694    | 9,071              | 15,407             | 6,336                       |
|  | 1904    | 73                        | 6,500                        | 55                            | 375                     | 6,070                          | 1,322                | 5,037     | 438       | 2,038    | 5,543              | 10,320             | 4,786                       |
|  | 1899    | 102                       |                              |                               | 448                     | 6,073                          |                      | 5,025     | 578       | 1,632    | 5,404              | 9,801              | 4,307                       |
| Clothing, women's.....   | 1909    | 68                        | 3,122                        | 58                            | 314                     | 2,750                          | 487                  | 2,384     | 337       | 1,137    | 3,180              | 5,439              | 2,259                       |
|  | 1904    | 52                        | 2,113                        | 62                            | 188                     | 1,863                          | 405                  | 1,170     | 172       | 673      | 1,799              | 3,322              | 1,523                       |
|  | 1899    | 48                        | 2,314                        | 56                            | 100                     | 2,068                          |                      | 1,019     | 191       | 564      | 1,739              | 3,125              | 1,386                       |
| Coffee and spice, roasting and grinding.....                                 | 1909    | 40                        | 1,376                        | 15                            | 331                     | 730                            | 2,379                | 5,273     | 837       | 342      | 9,192              | 12,062             | 2,870                       |
|  | 1904    | 26                        | 960                          | 16                            | 300                     | 554                            | 1,340                | 3,129     | 445       | 268      | 5,145              | 7,264              | 2,119                       |
|  | 1899    | 27                        | 802                          | 18                            | 285                     | 499                            |                      | 2,517     | 300       | 170      | 4,303              | 5,200              | 963                         |
| Coffins, burial cases, and undertakers' goods..                              | 1909    | 11                        | 672                          | 2                             | 120                     | 540                            | 663                  | 1,391     | 145       | 296      | 776                | 1,565              | 789                         |
|  | 1904    | 11                        | 534                          | 3                             | 46                      | 485                            | 604                  | 1,091     | 49        | 245      | 648                | 1,246              | 593                         |
|  | 1899    | 5                         | 414                          | 2                             | 62                      | 350                            |                      | 429       | 64        | 150      | 492                | 775                | 283                         |
| Confectionery.....   | 1909    | 61                        | 2,337                        | 50                            | 405                     | 1,882                          | 1,268                | 2,981     | 519       | 770      | 3,934              | 6,659              | 2,725                       |
|  | 1904    | 43                        | 2,129                        | 36                            | 314                     | 1,779                          | 1,048                | 2,348     | 346       | 628      | 2,682              | 4,630              | 1,998                       |
|  | 1899    | 35                        |                              |                               | 413                     | 1,806                          |                      | 2,613     | 349       | 584      | 3,183              | 4,938              | 1,755                       |
| Cooperage and wooden goods, not elsewhere specified.                         | 1909    | 43                        | 1,209                        | 40                            | 81                      | 1,088                          | 2,319                | 1,929     | 102       | 558      | 1,902              | 3,079              | 1,177                       |
|  | 1904    | 46                        | 1,931                        | 34                            | 110                     | 1,781                          | 3,314                | 2,624     | 144       | 739      | 2,264              | 3,712              | 1,448                       |
|  | 1899    | 61                        |                              |                               | 59                      | 1,235                          |                      | 1,291     | 80        | 461      | 1,156              | 2,087              | 931                         |

1 Excluding statistics for one establishment, to avoid disclosure of individual operations.  
2 Not reported separately.  
3 Excluding statistics for two establishments, to avoid disclosure of individual operations.

MANUFACTURES—MISSOURI.

TABLE I.—COMPARATIVE SUMMARY FOR 1909, 1904, AND 1899—Continued.

THE STATE—ALL INDUSTRIES COMBINED AND SELECTED INDUSTRIES—Continued.

| INDUSTRY.   | Census. | Number of establishments. | PERSONS ENGAGED IN INDUSTRY. |                               |                    |                                | Primary horse-power. | Capital. | Salaries. | Wages.  | Cost of materials. | Value of products. | Value added by manufacture. |
|---|---------|---------------------------|------------------------------|-------------------------------|--------------------|--------------------------------|----------------------|----------|-----------|---------|--------------------|--------------------|-----------------------------|
|   |         |                           | Total.                       | Proprietors and firm members. | Salaries employed. | Wage earners (average number). |                      |          |           |         |                    |                    |                             |
| Expressed in thousands.                             |         |                           |                              |                               |                    |                                |                      |          |           |         |                    |                    |                             |
| <b>STATE—Continued.</b>                             |         |                           |                              |                               |                    |                                |                      |          |           |         |                    |                    |                             |
| Copper, tin, and sheet-iron products.....           | 1909    | 207                       | 3,228                        | 203                           | 388                | 2,637                          | 1,556                | \$5,716  | \$465     | \$1,482 | \$4,508            | \$7,827            | \$3,229                     |
|   | 1904    | 106                       | 2,573                        | 112                           | 243                | 2,218                          | 878                  | 6,631    | 203       | 1,099   | 3,288              | 5,720              | 2,432                       |
|   | 1899    | 171                       | .....                        | .....                         | 148                | 906                            | .....                | 1,375    | 125       | 405     | 995                | 1,994              | 999                         |
| Cutlery and tools, not elsewhere specified....      | 1909    | 22                        | 340                          | 19                            | 38                 | 289                            | 663                  | 943      | 42        | 177     | 293                | 600                | 367                         |
|   | 1904    | 117                       | 225                          | 14                            | 10                 | 192                            | 349                  | 556      | 26        | 117     | 193                | 409                | 216                         |
|   | 1899    | 6                         | .....                        | .....                         | 8                  | 52                             | .....                | 75       | 6         | 34      | 34                 | 103                | 60                          |
| Electrical machinery, apparatus, and supplies.      | 1909    | 20                        | 1,419                        | 8                             | 351                | 1,060                          | 1,180                | 3,883    | 405       | 627     | 1,104              | 3,251              | 2,147                       |
|   | 1904    | 20                        | 983                          | 5                             | 183                | 795                            | 824                  | 1,044    | 193       | 412     | 606                | 1,741              | 1,135                       |
|   | 1899    | 17                        | 603                          | 11                            | 50                 | 533                            | 421                  | 982      | 60        | 186     | 355                | 911                | 555                         |
| Flour-mill and gristmill products.....              | 1909    | 680                       | 3,602                        | 810                           | 504                | 2,198                          | 43,175               | 17,066   | 643       | 1,040   | 38,826             | 44,508             | 5,682                       |
|   | 1904    | 582                       | 3,555                        | 752                           | 458                | 2,345                          | 40,262               | 14,834   | 458       | 1,091   | 32,928             | 38,020             | 5,098                       |
|   | 1899    | 544                       | .....                        | .....                         | 332                | 1,517                          | 35,916               | 10,205   | 309       | 787     | 20,034             | 23,832             | 3,788                       |
| Food preparations.....                              | 1909    | 37                        | 606                          | 30                            | 195                | 471                            | 1,551                | 3,061    | 250       | 214     | 4,254              | 5,384              | 1,150                       |
|   | 1904    | 35                        | 775                          | 30                            | 174                | 571                            | 1,630                | 1,370    | 206       | 184     | 2,058              | 3,002              | 914                         |
|   | 1899    | 32                        | .....                        | .....                         | 145                | 484                            | .....                | 988      | 173       | 108     | 1,940              | 2,730              | 781                         |
| Foundry and machine-shop products.....              | 1909    | 320                       | 9,051                        | 202                           | 1,406              | 7,443                          | 13,568               | 20,870   | 1,674     | 4,860   | 9,154              | 10,975             | 10,810                      |
|   | 1904    | 256                       | 8,331                        | 188                           | 988                | 7,155                          | 9,935                | 14,102   | 1,172     | 4,274   | 6,073              | 14,002             | 8,619                       |
|   | 1899    | .....                     | .....                        | .....                         | .....              | .....                          | .....                | .....    | .....     | .....   | .....              | .....              | .....                       |
| Furniture and refrigerators.....                    | 1909    | 99                        | 3,077                        | 54                            | 496                | 3,427                          | 6,203                | 6,708    | 504       | 1,019   | 3,327              | 7,380              | 4,053                       |
|   | 1904    | 77                        | 3,137                        | 50                            | 310                | 2,777                          | 4,009                | 4,487    | 347       | 1,415   | 1,985              | 4,830              | 2,851                       |
|   | 1899    | 57                        | 2,912                        | 37                            | 273                | 2,602                          | .....                | 3,107    | 287       | 1,127   | 1,630              | 3,834              | 2,198                       |
| Gas and electric fixtures and lamps and reflectors. | 1909    | 10                        | 299                          | 5                             | 62                 | 232                            | 214                  | 546      | 77        | 144     | 327                | 642                | 315                         |
|   | 1904    | 10                        | 239                          | 4                             | 49                 | 186                            | 270                  | 307      | 47        | 125     | 186                | 456                | 270                         |
|   | 1899    | 18                        | 285                          | 20                            | 28                 | 237                            | .....                | 443      | 30        | 98      | 123                | 337                | 214                         |
| Gas, illuminating and heating.....                  | 1909    | 29                        | 1,403                        | 32                            | 430                | 941                            | 3,035                | 33,929   | 357       | 636     | 1,223              | 4,038              | 3,415                       |
|   | 1904    | 28                        | 2,411                        | .....                         | 585                | 1,826                          | 3,050                | 43,047   | 236       | 898     | 1,778              | 5,685              | 3,807                       |
|   | 1899    | 25                        | 954                          | .....                         | 160                | 834                            | .....                | 35,504   | 112       | 464     | 750                | 2,877              | 2,121                       |
| Glass.....  | 1909    | 4                         | 1,830                        | .....                         | 75                 | 1,755                          | 8,820                | 6,739    | 150       | 758     | 947                | 1,993              | 1,046                       |
|   | 1904    | 6                         | 1,072                        | .....                         | 111                | 1,591                          | 5,755                | 3,219    | 169       | 938     | 708                | 1,781              | 1,073                       |
|   | 1899    | 8                         | 676                          | .....                         | 26                 | 650                            | 3,110                | 2,198    | 47        | 341     | 232                | 700                | 334                         |
| Hats and caps, other than felt, straw, and wool.    | 1909    | 14                        | 226                          | 16                            | 28                 | 182                            | 39                   | 153      | 38        | 106     | 218                | 440                | 222                         |
|   | 1904    | 9                         | 197                          | 9                             | 17                 | 171                            | 20                   | 184      | 16        | 80      | 180                | 330                | 144                         |
|   | 1899    | 16                        | 213                          | 24                            | 7                  | 182                            | .....                | 64       | 3         | 65      | 90                 | 230                | 149                         |
| Ice, manufactured.....                              | 1909    | 62                        | 975                          | 32                            | 182                | 761                            | 22,904               | 6,947    | 183       | 472     | 667                | 2,084              | 1,417                       |
|   | 1904    | 53                        | 559                          | 30                            | 93                 | 433                            | 18,546               | 3,318    | 91        | 272     | 399                | 1,130              | 731                         |
|   | 1899    | 31                        | 357                          | 13                            | 65                 | 279                            | 7,267                | 1,835    | 66        | 167     | 226                | 641                | 415                         |
| Iron and steel, steel works and rolling mills...    | 1909    | 4                         | 2,370                        | .....                         | 152                | 2,227                          | 6,255                | 5,290    | 211       | 1,320   | 2,550              | 5,013              | 2,154                       |
|   | 1904    | 4                         | 1,410                        | .....                         | 61                 | 1,340                          | 4,692                | 3,672    | 86        | 928     | 1,588              | 2,009              | 1,411                       |
|   | 1899    | 5                         | 1,050                        | .....                         | 52                 | 1,004                          | 3,330                | 1,946    | 82        | 882     | 1,605              | 3,200              | 1,693                       |
| Jewelry.....  | 1909    | 19                        | 472                          | 10                            | 83                 | 376                            | 100                  | 747      | 66        | 272     | 323                | 673                | 350                         |
|   | 1904    | 17                        | 308                          | 20                            | 36                 | 252                            | 87                   | 201      | 136       | 201     | 235                | 659                | 351                         |
|   | 1899    | 11                        | .....                        | .....                         | 6                  | 109                            | .....                | 145      | 8         | 116     | 107                | 332                | 223                         |
| Leather goods.....                                  | 1909    | 106                       | 2,308                        | 96                            | 398                | 1,814                          | 5,986                | 4,579    | 454       | 1,037   | 3,794              | 6,508              | 2,714                       |
|   | 1904    | 74                        | 2,194                        | 68                            | 351                | 1,775                          | 1,122                | 3,610    | 371       | 971     | 2,888              | 5,301              | 2,473                       |
|   | 1899    | 47                        | .....                        | .....                         | 213                | 1,302                          | .....                | 1,782    | 227       | 646     | 1,019              | 3,550              | 1,649                       |
| Leather, tanned, curried, and finished.....         | 1909    | 9                         | 240                          | 3                             | 23                 | 220                            | 519                  | 1,478    | 42        | 140     | 1,599              | 2,035              | 486                         |
|   | 1904    | 9                         | 242                          | 4                             | 21                 | 217                            | 546                  | 1,845    | 37        | 131     | 734                | 1,123              | 391                         |
|   | 1899    | 9                         | 209                          | 4                             | 20                 | 185                            | 388                  | 922      | 35        | 99      | 557                | 817                | 299                         |
| Lime.....   | 1909    | 31                        | 763                          | 15                            | 56                 | 692                            | 1,314                | 2,400    | 61        | 317     | 461                | 1,031              | 679                         |
|   | 1904    | 23                        | 558                          | 8                             | 57                 | 493                            | 615                  | 1,047    | 64        | 221     | 319                | 792                | 473                         |
|   | 1899    | .....                     | .....                        | .....                         | .....              | .....                          | .....                | .....    | .....     | .....   | .....              | .....              | .....                       |
| Liquors, distilled.....                             | 1909    | 28                        | 78                           | 28                            | 16                 | 34                             | 644                  | 346      | 17        | 14      | 101                | 613                | 612                         |
|   | 1904    | 34                        | 105                          | 41                            | 15                 | 49                             | 654                  | 265      | 12        | 25      | 61                 | 206                | 141                         |
|   | 1899    | 35                        | 63                           | 39                            | 3                  | 21                             | .....                | 148      | 2         | 5       | 25                 | 92                 | 67                          |
| Liquors, malt.....                                  | 1909    | 31                        | 6,348                        | 6                             | 996                | 5,646                          | 30,436               | 44,662   | 1,307     | 3,908   | 7,568              | 27,447             | 19,859                      |
|   | 1904    | 50                        | 6,202                        | 10                            | 624                | 5,508                          | 18,769               | 43,020   | 1,207     | 3,408   | 6,252              | 24,164             | 17,962                      |
|   | 1899    | 40                        | 8,561                        | 13                            | 393                | 3,150                          | 13,644               | 25,732   | 836       | 1,890   | 3,073              | 13,777             | 10,764                      |
| Lumber and timber products.....                     | 1909    | 1,098                     | 15,814                       | 1,289                         | 1,003              | 13,522                         | 49,500               | 18,930   | 1,106     | 5,897   | 10,614             | 23,261             | 12,647                      |
|   | 1904    | 495                       | 14,057                       | 505                           | 828                | 12,664                         | 33,047               | 13,688   | 875       | 5,542   | 6,417              | 18,349             | 11,932                      |
|   | 1899    | 762                       | .....                        | .....                         | 546                | 11,391                         | .....                | 12,010   | 513       | 4,155   | 7,869              | 16,426             | 8,537                       |
| Marble and stone work.....                          | 1909    | 109                       | 1,710                        | 174                           | 194                | 1,342                          | 4,306                | 3,079    | 218       | 989     | 1,447              | 3,441              | 1,994                       |
|   | 1904    | 73                        | 1,053                        | 65                            | 106                | 882                            | 2,216                | 1,720    | 130       | 580     | 904                | 2,305              | 1,461                       |
|   | 1899    | 63                        | .....                        | .....                         | 68                 | 658                            | .....                | 1,139    | 72        | 364     | 512                | 1,236              | 724                         |
| Mattresses and spring beds.....                     | 1909    | 33                        | 439                          | 28                            | 66                 | 345                            | 310                  | 580      | 60        | 187     | 457                | 859                | 502                         |
|   | 1904    | 28                        | 563                          | 24                            | 59                 | 480                            | 437                  | 564      | 69        | 270     | 564                | 1,140              | 575                         |
|   | 1899    | 17                        | .....                        | .....                         | 17                 | 242                            | .....                | 243      | 21        | 105     | 362                | 612                | 250                         |
| Millinery and lace goods.....                       | 1909    | 35                        | 1,143                        | 28                            | 181                | 934                            | 94                   | 538      | 130       | 277     | 385                | 1,647              | 762                         |
|   | 1904    | 10                        | 339                          | 9                             | 25                 | 305                            | 42                   | 146      | 20        | 99      | 238                | 448                | 210                         |
|   | 1899    | 13                        | 454                          | 9                             | 27                 | 418                            | .....                | 94       | 15        | 82      | 281                | 456                | 175                         |
| Paint and varnish.....                              | 1909    | 32                        | 1,034                        | 4                             | 345                | 685                            | 2,708                | 5,295    | 503       | 366     | 4,698              | 6,828              | 2,130                       |
|   | 1904    | 30                        | 1,014                        | 15                            | 395                | 604                            | 2,028                | 4,116    | 439       | 313     | 4,737              | 6,400              | 1,663                       |
|   | 1899    | 27                        | 986                          | 14                            | 187                | 515                            | .....                | 3,244    | 241       | 243     | 3,359              | 4,555              | 1,196                       |

1 Excluding statistics for two establishments, to avoid disclosure of individual operations.

2 Figures not comparable.

3 Not reported separately.

MANUFACTURES—MISSOURI.

TABLE I.—COMPARATIVE SUMMARY FOR 1909, 1904, AND 1899—Continued.  
THE STATE—ALL INDUSTRIES COMBINED AND SELECTED INDUSTRIES—Continued.

| INDUSTRY.   | Census. | Number of establishments. | PERSONS ENGAGED IN INDUSTRY. |                               |                         | Primary horse-power. | Capital. | Salaries. | Wages. | Cost of materials. | Value of products. | Value added by manufacture. |                                |
|---|---------|---------------------------|------------------------------|-------------------------------|-------------------------|----------------------|----------|-----------|--------|--------------------|--------------------|-----------------------------|--------------------------------|
|   |         |                           | Total.                       | Proprietors and firm members. | Salari- ed employ- ees. |                      |          |           |        |                    |                    |                             | Wage earners (average number). |
| Expressed in thousands.                                     |         |                           |                              |                               |                         |                      |          |           |        |                    |                    |                             |                                |
| <b>STATE—Continued.</b>                                     |         |                           |                              |                               |                         |                      |          |           |        |                    |                    |                             |                                |
| Paper goods, not elsewhere specified.....                   | 1909    | 11                        | 403                          | 5                             | 53                      | 435                  | 309      | \$730     | \$76   | \$178              | \$447              | \$922                       | \$475                          |
|   | 1904    | 9                         | 349                          | 7                             | 39                      | 303                  | 175      | 394       | 44     | 105                | 266                | 598                         | 332                            |
|   | 1899    | 4                         | .....                        | .....                         | 8                       | 70                   | .....    | 96        | 6      | 22                 | 63                 | 108                         | 45                             |
| Patent medicines and compounds and drugs' preparations..... | 1909    | 185                       | 1,957                        | 159                           | 827                     | 980                  | 908      | 5,126     | 999    | 415                | 2,536              | 7,639                       | 5,103                          |
|   | 1904    | 125                       | 1,476                        | 70                            | 476                     | 924                  | 449      | 3,949     | 530    | 353                | 1,985              | 5,512                       | 3,527                          |
|   | 1899    | 114                       | .....                        | .....                         | 457                     | 951                  | .....    | 3,178     | 406    | 329                | 1,481              | 4,074                       | 3,493                          |
| Photographic apparatus and materials.....                   | 1909    | 4                         | 304                          | .....                         | 50                      | 248                  | 750      | 1,404     | 103    | 136                | 584                | 1,415                       | 831                            |
|   | 1904    | 6                         | 378                          | .....                         | 70                      | 308                  | 614      | 1,306     | 124    | 150                | 573                | 1,428                       | 855                            |
|   | 1899    | 5                         | 354                          | 3                             | 50                      | 301                  | .....    | 612       | 91     | 152                | 574                | 1,022                       | 448                            |
| Photo-engraving.....  | 1909    | 18                        | 269                          | 13                            | 69                      | 187                  | 80       | 161       | 62     | 165                | 82                 | 450                         | 368                            |
|   | 1904    | 10                        | 148                          | 16                            | 19                      | 113                  | 63       | 73        | 22     | 83                 | 34                 | 205                         | 171                            |
|   | 1899    | 7                         | 92                           | 12                            | 4                       | 40                   | .....    | 26        | 5      | 28                 | 10                 | 75                          | 65                             |
| Pipes, tobacco.....   | 1909    | 7                         | 336                          | 5                             | 24                      | 307                  | 243      | 242       | 23     | 107                | 169                | 396                         | 227                            |
|   | 1904    | 6                         | 311                          | 4                             | 22                      | 285                  | 191      | 105       | 21     | 83                 | 145                | 329                         | 184                            |
|   | 1899    | 12                        | 317                          | 11                            | 15                      | 291                  | .....    | 126       | 13     | 82                 | 95                 | 201                         | 166                            |
| Pottery, terra-cotta, and fire-clay products.....           | 1909    | 29                        | 3,437                        | 11                            | 288                     | 3,138                | 7,848    | 13,247    | 405    | 1,554              | 1,076              | 4,069                       | 2,993                          |
|   | 1904    | 33                        | 2,728                        | 18                            | 178                     | 2,532                | 6,089    | 5,378     | 251    | 1,240              | 752                | 3,083                       | 2,331                          |
|   | 1899    | 37                        | 1,757                        | 27                            | 123                     | 1,607                | 2,895    | 2,952     | 162    | 648                | 370                | 1,062                       | 1,292                          |
| Printing and publishing.....                                | 1909    | 1,322                     | 15,792                       | 1,243                         | 3,759                   | 10,790               | 10,472   | 21,098    | 4,256  | 6,610              | 8,027              | 29,651                      | 21,024                         |
|   | 1904    | 1,253                     | 13,912                       | 1,209                         | 2,859                   | 9,757                | 8,384    | 10,358    | 2,934  | 5,330              | 6,801              | 24,412                      | 17,611                         |
|   | 1899    | 1,142                     | 11,319                       | 1,184                         | 2,085                   | 8,050                | .....    | 11,961    | 1,874  | 4,150              | 5,082              | 16,544                      | 11,462                         |
| Show cases.....   | 1909    | 8                         | 237                          | 3                             | 25                      | 209                  | 100      | 314       | 31     | 137                | 170                | 433                         | 263                            |
|   | 1904    | 5                         | 294                          | 3                             | 31                      | 200                  | 234      | 388       | 30     | 151                | 207                | 546                         | 339                            |
|   | 1899    | 5                         | 150                          | 5                             | 12                      | 133                  | .....    | 151       | 0      | 58                 | 88                 | 223                         | 135                            |
| Slaughtering and meat packing.....                          | 1909    | 45                        | 5,529                        | 34                            | 821                     | 4,074                | 11,735   | 18,787    | 845    | 2,073              | 72,198             | 79,581                      | 7,383                          |
|   | 1904    | 38                        | 4,862                        | 29                            | 597                     | 4,236                | 7,685    | 16,449    | 623    | 2,381              | 54,099             | 60,110                      | 6,011                          |
|   | 1899    | 40                        | 3,412                        | 36                            | 251                     | 3,125                | .....    | 7,969     | 260.   | 1,454              | 39,182             | 43,162                      | 3,980                          |
| Soap.....   | 1909    | 10                        | 838                          | 3                             | 281                     | 554                  | 954      | 2,659     | 233    | 272                | 3,655              | 4,719                       | 1,004                          |
|   | 1904    | 10                        | 706                          | 8                             | 160                     | 548                  | 745      | 1,844     | 206    | 237                | 1,871              | 3,113                       | 1,242                          |
|   | 1899    | .....                     | .....                        | .....                         | .....                   | .....                | .....    | .....     | .....  | .....              | .....              | .....                       | .....                          |
| Stoves and furnaces, including gas and oil stoves.....      | 1909    | 20                        | 2,430                        | 4                             | 413                     | 2,013                | 2,241    | 8,295     | 597    | 1,426              | 2,840              | 6,713                       | 3,867                          |
|   | 1904    | 22                        | 2,492                        | 8                             | 337                     | 2,147                | 1,633    | 5,004     | 536    | 1,402              | 2,080              | 5,932                       | 3,846                          |
|   | 1899    | .....                     | .....                        | .....                         | .....                   | .....                | .....    | .....     | .....  | .....              | .....              | .....                       | .....                          |
| Wirework, including wire rope and cable.....                | 1909    | 14                        | 865                          | 9                             | 146                     | 710                  | 902      | 2,260     | 250    | 379                | 1,734              | 3,390                       | 1,662                          |
|   | 1904    | 23                        | 753                          | 28                            | 146                     | 584                  | 894      | 2,631     | 212    | 291                | 1,234              | 2,330                       | 1,102                          |
|   | 1899    | 25                        | 414                          | 24                            | 45                      | 345                  | .....    | 809       | 72     | 180                | 746                | 1,204                       | 458                            |
| All other industries.....                                   | 1909    | 1,347                     | 27,239                       | 1,250                         | 3,673                   | 22,307               | 43,505   | 83,054    | 4,002  | 11,858             | 65,353             | 103,596                     | 38,243                         |
|   | 1904    | 1,228                     | 26,059                       | 1,178                         | 2,260                   | 22,621               | 38,838   | 69,663    | 2,569  | 11,275             | 49,046             | 91,848                      | 42,202                         |
|   | 1899    | 1,661                     | .....                        | .....                         | 3,379                   | 28,704               | .....    | 52,541    | 3,748  | 13,335             | 49,936             | 95,091                      | 45,155                         |

CITIES OF 50,000 INHABITANTS OR MORE—ALL INDUSTRIES COMBINED AND SELECTED INDUSTRIES.

|   |      |     |        |       |       |        |        |          |         |         |          |          |          |
|---|------|-----|--------|-------|-------|--------|--------|----------|---------|---------|----------|----------|----------|
| <b>KANSAS CITY—All industries.....</b>  | 1909 | 902 | 18,651 | 757   | 3,251 | 14,643 | 36,064 | \$42,729 | \$3,478 | \$8,528 | \$30,902 | \$54,705 | \$23,743 |
|   | 1904 | 612 | 13,559 | 519   | 2,001 | 11,039 | .....  | 32,127   | 2,120   | 5,920   | 19,525   | 35,573   | 16,048   |
|   | 1899 | 585 | .....  | ..... | 1,183 | 9,699  | .....  | 22,992   | 1,164   | 4,569   | 12,531   | 23,589   | 11,058   |
| Bread and other bakery products.....  | 1909 | 107 | 1,739  | 108   | 250   | 1,375  | 847    | 5,359    | 287     | 726     | 3,490    | 5,617    | 2,127    |
|   | 1904 | 75  | 1,204  | 69    | 169   | 1,056  | .....  | 2,943    | 209     | 458     | 1,959    | 3,462    | 1,503    |
|   | 1899 | 60  | 332    | 72    | 28    | 232    | .....  | 141      | 14      | 130     | 373      | 657      | 284      |
| Brick and tile.....   | 1909 | 5   | 374    | 2     | 19    | 353    | 480    | 639      | 27      | 161     | 121      | 369      | 268      |
|   | 1904 | 5   | 183    | 1     | 17    | 165    | .....  | 550      | 22      | 84      | 81       | 253      | 172      |
|   | 1899 | 7   | 297    | 7     | 18    | 277    | .....  | 483      | 14      | 150     | 89       | 304      | 275      |
| Brooms and brushes.....   | 1909 | 6   | 35     | 5     | 4     | 26     | 44     | 28       | 3       | 18      | 35       | 77       | 42       |
|   | 1904 | 8   | 31     | 7     | 1     | 23     | .....  | 25       | (*)     | 11      | 15       | 36       | 21       |
|   | 1899 | 7   | 35     | 8     | ..... | 27     | .....  | 16       | .....   | 12      | 22       | 45       | 23       |
| Carriages and wagons and materials.....   | 1909 | 11  | 153    | 4     | 24    | 130    | 252    | 233      | 20      | 78      | 128      | 270      | 142      |
|   | 1904 | 16  | 102    | 10    | 12    | 74     | .....  | 116      | 7       | 42      | 63       | 161      | 98       |
|   | 1899 | 27  | .....  | ..... | 5     | 163    | .....  | 102      | 5       | 83      | 134      | 305      | 174      |
| Cars and general shop construction and repairs by steam-railroad companies..... | 1909 | 4   | 703    | ..... | 41    | 662    | 415    | 1,047    | 49      | 598     | 315      | 883      | 568      |
|   | 1904 | 5   | 840    | ..... | 44    | 796    | .....  | 232      | 33      | 552     | 451      | 1,073    | 592      |
|   | 1899 | 5   | 520    | ..... | 24    | 505    | .....  | 807      | 24      | 289     | 245      | 578      | 333      |
| Clothing, men's, including shirts.....  | 1909 | 15  | 857    | 11    | 27    | 819    | 190    | 459      | 35      | 302     | 631      | 1,129    | 498      |
|   | 1904 | 9   | 847    | 4     | 113   | 730    | .....  | 545      | 67      | 205     | 502      | 659      | 397      |
|   | 1899 | 10  | .....  | ..... | 14    | 1,485  | .....  | 350      | 18      | 325     | 799      | 1,245    | 449      |
| Coffee and spice, roasting and grinding.....                                    | 1909 | 10  | 211    | 5     | 99    | 107    | 850    | 565      | 124     | 51      | 1,393    | 1,879    | 486      |
|   | 1904 | 3   | 74     | 3     | 24    | 47     | .....  | 122      | 82      | 17      | 139      | 219      | 80       |
|   | 1899 | 3   | 64     | 1     | 22    | 41     | .....  | 128      | 27      | 14      | 143      | 243      | 100      |

\* Excluding statistics for two establishments, to avoid disclosure of individual operations.

\* Not reported separately.

\* Less than \$500.

MANUFACTURES—MISSOURI.

TABLE I.—COMPARATIVE SUMMARY FOR 1909, 1904, AND 1899—Continued.

CITIES OF 50,000 INHABITANTS OR MORE—ALL INDUSTRIES COMBINED AND SELECTED INDUSTRIES—Continued.

| INDUSTRY.   | Census. | Number of establishments. | PERSONS ENGAGED IN INDUSTRY. |                               |                     |                                | Primary horse-power. | Capital. | Salaries. | Wages. | Cost of materials. | Value of products. | Value added by manufacture. |
|---|---------|---------------------------|------------------------------|-------------------------------|---------------------|--------------------------------|----------------------|----------|-----------|--------|--------------------|--------------------|-----------------------------|
|   |         |                           | Total.                       | Proprietors and firm members. | Salaried employees. | Wage-earners (average number). |                      |          |           |        |                    |                    |                             |
| Expressed in thousands.                                     |         |                           |                              |                               |                     |                                |                      |          |           |        |                    |                    |                             |
| <b>KANSAS CITY—Continued.</b>                               |         |                           |                              |                               |                     |                                |                      |          |           |        |                    |                    |                             |
| Confectionery.....  | 1909    | 10                        | 254                          | 8                             | 32                  | 214                            | 242                  | \$456    | \$38      | \$76   | \$512              | \$900              | \$478                       |
|   | 1904    | 8                         | 448                          | 9                             | 59                  | 380                            | .....                | 706      | 72        | 118    | 504                | 926                | 332                         |
|   | 1899    | 7                         | .....                        | .....                         | 85                  | 734                            | .....                | 1,221    | 91        | 197    | 1,216              | 817                | 601                         |
| Copper, tin, and sheet-iron products.....                   | 1909    | 59                        | 681                          | 62                            | 66                  | 553                            | 407                  | 1,025    | 77        | 349    | 828                | 1,575              | 747                         |
|   | 1904    | <sup>1</sup> 17           | 408                          | 10                            | 23                  | 366                            | .....                | 1,587    | 45        | 202    | 525                | 973                | 498                         |
|   | 1899    | <sup>2</sup> 24           | .....                        | .....                         | 34                  | 136                            | .....                | 155      | 30        | 70     | 104                | 301                | 197                         |
| Cutlery and tools, not elsewhere specified.....             | 1909    | 4                         | 19                           | 4                             | .....               | 15                             | 7                    | 30       | .....     | 0      | 12                 | 85                 | 23                          |
|   | 1904    | 4                         | 16                           | 5                             | .....               | 11                             | .....                | 18       | .....     | 8      | 6                  | 26                 | 20                          |
|   | 1899    | .....                     | .....                        | .....                         | .....               | .....                          | .....                | .....    | .....     | .....  | .....              | .....              | .....                       |
| Flour-mill and gristmill products.....                      | 1909    | 8                         | 262                          | 3                             | 50                  | 209                            | 3,210                | 1,087    | 71        | 93     | 4,102              | 4,507              | 405                         |
|   | 1904    | 10                        | 271                          | 6                             | 56                  | 209                            | .....                | 1,711    | 77        | 124    | 5,072              | 5,516              | 444                         |
|   | 1899    | 10                        | .....                        | .....                         | 40                  | 106                            | .....                | 1,034    | 47        | 58     | 1,772              | 2,069              | 297                         |
| Foundry and machine-shop products.....                      | 1909    | 58                        | 868                          | 32                            | 101                 | 645                            | 1,223                | 2,300    | 177       | 461    | 775                | 1,820              | 1,051                       |
|   | 1904    | 37                        | 695                          | 26                            | 81                  | 588                            | .....                | 1,460    | 97        | 328    | 485                | 1,257              | 772                         |
|   | 1899    | .....                     | .....                        | .....                         | .....               | .....                          | .....                | .....    | .....     | .....  | .....              | .....              | .....                       |
| Furniture and refrigerators.....                            | 1909    | 20                        | 361                          | 18                            | 50                  | 293                            | 602                  | 558      | 55        | 180    | 406                | 835                | 429                         |
|   | 1904    | 17                        | 291                          | 16                            | 36                  | 239                            | .....                | 689      | 25        | 128    | 285                | 540                | 255                         |
|   | 1899    | <sup>1</sup> 7            | 126                          | 9                             | 15                  | 102                            | .....                | 138      | 16        | 51     | 129                | 240                | 117                         |
| Hand stamps and stencils and brands.....                    | 1909    | 4                         | 32                           | 5                             | 9                   | 18                             | 12                   | 12       | 7         | 12     | 17                 | 51                 | 34                          |
|   | 1904    | 5                         | 28                           | 5                             | 3                   | 20                             | .....                | 14       | 2         | 13     | 7                  | 37                 | 30                          |
|   | 1899    | <sup>1</sup> 4            | 21                           | 3                             | .....               | 18                             | .....                | 8        | .....     | 10     | 8                  | 27                 | 19                          |
| Ice, manufactured.....                                      | 1909    | 7                         | 171                          | .....                         | 31                  | 140                            | 4,830                | 1,003    | 41        | 118    | 104                | 300                | 292                         |
|   | 1904    | 4                         | 83                           | .....                         | 10                  | 73                             | .....                | 413      | 14        | 48     | 73                 | 157                | 84                          |
|   | 1899    | 5                         | 61                           | 6                             | 13                  | 42                             | .....                | 207      | 12        | 30     | 58                 | 138                | 80                          |
| Leather goods.....  | 1909    | 21                        | 516                          | 19                            | 91                  | 406                            | 204                  | 1,120    | 81        | 264    | 1,017              | 1,568              | 551                         |
|   | 1904    | 13                        | 357                          | 15                            | 67                  | 275                            | .....                | 725      | 69        | 171    | 443                | 857                | 414                         |
|   | 1899    | 12                        | .....                        | .....                         | 32                  | 327                            | .....                | 284      | 40        | 170    | 608                | 931                | 323                         |
| Lumber and timber products.....                             | 1909    | 26                        | 942                          | 22                            | 118                 | 802                            | 1,866                | 1,811    | 160       | 519    | 2,141              | 3,398              | 1,257                       |
|   | 1904    | <sup>1</sup> 13           | 531                          | 8                             | 45                  | 478                            | .....                | 1,193    | 54        | 317    | 677                | 1,274              | 597                         |
|   | 1899    | <sup>1</sup> 12           | 467                          | 12                            | 28                  | 427                            | .....                | 744      | 18        | 254    | 557                | 927                | 370                         |
| Marble and stone work.....                                  | 1909    | 12                        | 236                          | 11                            | 24                  | 201                            | 379                  | 285      | 26        | 156    | 255                | 566                | 311                         |
|   | 1904    | 8                         | 146                          | 6                             | 11                  | 129                            | .....                | 142      | 13        | 106    | 111                | 303                | 192                         |
|   | 1899    | 11                        | .....                        | .....                         | 5                   | 143                            | .....                | 139      | 5         | 82     | 94                 | 227                | 133                         |
| Mattresses and spring beds.....                             | 1909    | 7                         | 94                           | 4                             | 10                  | 74                             | 136                  | 98       | 11        | 44     | 133                | 237                | 104                         |
|   | 1904    | 5                         | 77                           | 1                             | 11                  | 65                             | .....                | 69       | 6         | 30     | 79                 | 149                | 70                          |
|   | 1899    | 5                         | .....                        | .....                         | 1                   | 50                             | .....                | 40       | 1         | 28     | 79                 | 137                | 58                          |
| Models and patterns, not including paper patterns.          | 1909    | 5                         | 20                           | 6                             | .....               | 14                             | 29                   | 9        | .....     | 11     | 5                  | 26                 | 21                          |
|   | 1904    | 5                         | 14                           | 6                             | .....               | 8                              | .....                | 18       | .....     | 7      | 3                  | 20                 | 17                          |
|   | 1899    | 7                         | 22                           | 8                             | .....               | 14                             | .....                | 7        | .....     | 10     | 6                  | 25                 | 19                          |
| Patent medicines and compounds and druggists' preparations. | 1909    | 46                        | 184                          | 28                            | 80                  | 70                             | 68                   | 447      | 84        | 26     | 162                | 407                | 305                         |
|   | 1904    | <sup>1</sup> 16           | 72                           | 14                            | 20                  | 38                             | .....                | 95       | 16        | 16     | 51                 | 178                | 127                         |
|   | 1899    | <sup>1</sup> 17           | .....                        | .....                         | 8                   | 48                             | .....                | 37       | 6         | 17     | 37                 | 131                | 94                          |
| Printing and publishing.....                                | 1909    | 179                       | 3,336                        | 142                           | 1,022               | 2,102                          | 8,961                | 4,158    | 976       | 1,465  | 2,352              | 7,548              | 5,195                       |
|   | 1904    | 129                       | 2,257                        | 117                           | 582                 | 1,558                          | .....                | 2,188    | 555       | 999    | 1,418              | 4,505              | 3,087                       |
|   | 1899    | 111                       | .....                        | .....                         | 325                 | 1,526                          | .....                | 1,490    | 283       | 988    | 810                | 2,028              | 2,118                       |
| Surgical appliances and artificial limbs.....               | 1909    | 7                         | 33                           | 5                             | 14                  | 14                             | 10                   | 14       | 14        | 0      | 12                 | 79                 | 67                          |
|   | 1904    | <sup>1</sup> 3            | 16                           | 3                             | 5                   | 8                              | .....                | 4        | 3         | 6      | 3                  | 25                 | 22                          |
|   | 1899    | <sup>4</sup> 3            | 8                            | .....                         | 4                   | 4                              | .....                | 1        | 7         | 2      | 3                  | 21                 | 18                          |
| All other industries.....                                   | 1909    | 271                       | 6,565                        | 253                           | 1,001               | 5,311                          | 11,291               | 19,371   | 1,115     | 2,881  | 12,016             | 20,357             | 8,341                       |
|   | 1904    | 197                       | 4,478                        | 163                           | 612                 | 3,703                          | .....                | 17,471   | 702       | 1,930  | 6,393              | 12,667             | 6,274                       |
|   | 1899    | 225                       | .....                        | .....                         | 478                 | 3,292                          | .....                | 15,355   | 506       | 1,500  | 5,245              | 10,221             | 4,976                       |
| <b>ST. JOSEPH—All industries.....</b>                       |         |                           |                              |                               |                     |                                |                      |          |           |        |                    |                    |                             |
|   | 1909    | 261                       | 6,514                        | 213                           | 911                 | 5,390                          | 7,737                | 12,038   | 873       | 2,710  | 11,054             | 17,626             | 6,578                       |
|   | 1904    | 219                       | 5,552                        | 211                           | 678                 | 4,663                          | .....                | 9,734    | 579       | 2,072  | 6,820              | 11,574             | 4,754                       |
|   | 1899    | 184                       | .....                        | .....                         | 457                 | 5,095                          | .....                | 8,016    | 449       | 1,988  | 6,942              | 11,362             | 4,420                       |
| Boots and shoes, including cut stock and findings.          | 1909    | 5                         | 433                          | 5                             | 18                  | 410                            | 213                  | 276      | 16        | 201    | 724                | 1,025              | 361                         |
|   | 1904    | <sup>1</sup> 3            | 182                          | 1                             | 13                  | 168                            | .....                | 175      | 9         | 65     | 256                | 350                | 94                          |
|   | 1899    | 4                         | 215                          | 3                             | 12                  | 200                            | .....                | 131      | 11        | 73     | 269                | 392                | 93                          |
| Bread and other bakery products.....                        | 1909    | 43                        | 681                          | 42                            | 91                  | 545                            | 321                  | 3,698    | 103       | 261    | 1,307              | 2,174              | 507                         |
|   | 1904    | 35                        | 682                          | 38                            | 145                 | 499                            | .....                | 1,940    | 107       | 182    | 1,343              | 2,054              | 711                         |
|   | 1899    | 24                        | 483                          | 22                            | 72                  | 389                            | .....                | 1,162    | 53        | 119    | 856                | 1,327              | 471                         |
| Brick and tile.....   | 1909    | 4                         | 165                          | 6                             | 10                  | 140                            | 550                  | 273      | 16        | 85     | 40                 | 210                | 161                         |
|   | 1904    | 9                         | 210                          | 8                             | 13                  | 189                            | .....                | 326      | 14        | 80     | 60                 | 195                | 135                         |
|   | 1899    | 10                        | 250                          | 10                            | 4                   | 236                            | .....                | 159      | 4         | 94     | 55                 | 211                | 156                         |
| Carriages and wagons and materials.....                     | 1909    | 9                         | 62                           | 8                             | 5                   | 49                             | 41                   | 67       | 2         | 33     | 40                 | 108                | 63                          |
|   | 1904    | <sup>4</sup> 8            | 80                           | 8                             | 5                   | 67                             | .....                | 95       | 5         | 34     | 30                 | 103                | 73                          |
|   | 1899    | <sup>1</sup> 9            | 87                           | 10                            | 3                   | 74                             | .....                | 88       | 2         | 40     | 58                 | 143                | 85                          |
| Clothing, men's, including shirts.....                      | 1909    | 9                         | 1,320                        | .....                         | 94                  | 1,320                          | 364                  | 1,239    | 78        | 400    | 1,453              | 2,403              | 950                         |
|   | 1904    | 16                        | 1,186                        | 5                             | 30                  | 1,151                          | .....                | 500      | 28        | 371    | 1,061              | 1,557              | 495                         |
|   | 1899    | <sup>1</sup> 9            | 1,754                        | 10                            | 61                  | 1,683                          | .....                | 859      | 99        | 506    | 1,058              | 1,782              | 724                         |

<sup>1</sup> Excluding statistics for one establishment, to avoid disclosure of individual operations.  
<sup>2</sup> Figures can not be shown without disclosing individual operations.

<sup>3</sup> Figures not comparable.  
<sup>4</sup> Excluding statistics for two establishments, to avoid disclosure of individual operations.



MANUFACTURES—MISSOURI.

TABLE I.—COMPARATIVE SUMMARY FOR 1909, 1904, AND 1899—Continued.  
CITIES OF 50,000 INHABITANTS OR MORE—ALL INDUSTRIES COMBINED AND SELECTED INDUSTRIES—Continued.

| INDUSTRY.   | Census. | Number of establishments. | PERSONS ENGAGED IN INDUSTRY. |                               |                       |                                | Primary horse-power. | Capital. | Salaries. | Wages. | Cost of materials. | Value of products. | Value added by manufacture. |
|---|---------|---------------------------|------------------------------|-------------------------------|-----------------------|--------------------------------|----------------------|----------|-----------|--------|--------------------|--------------------|-----------------------------|
|   |         |                           | Total.                       | Proprietors and firm members. | Saln-ried employ-ees. | Wage earners (average number). |                      |          |           |        |                    |                    |                             |
| Expressed in thousands.                                     |         |                           |                              |                               |                       |                                |                      |          |           |        |                    |                    |                             |
| <b>ST. JOSEPH—Continued.</b>                                |         |                           |                              |                               |                       |                                |                      |          |           |        |                    |                    |                             |
| Confectionery.....  | 1909    | 6                         | 436                          | 6                             | 111                   | 313                            | 162                  | \$500    | \$92      | \$142  | \$1,004            | \$1,424            | \$420                       |
|   | 1904    | 4                         | 228                          | 8                             | 32                    | 188                            | 234                  | 257      | 27        | 66     | 234                | 437                | 263                         |
|   | 1899    | 3                         |                              |                               | 35                    | 119                            |                      | 249      | 30        | 43     | 246                | 362                | 116                         |
| Cooperage and wooden goods, not elsewhere specified.        | 1909    | 3                         | 37                           | 6                             | 3                     | 28                             | 24                   | 50       | 1         | 17     | 46                 | 71                 | 25                          |
|   | 1904    | 3                         | 35                           | 5                             | 4                     | 20                             |                      | 32       | 2         | 15     | 31                 | 53                 | 22                          |
|   | 1899    | 3                         |                              |                               | 2                     | 65                             |                      | 41       | 1         | 19     | 58                 | 113                | 55                          |
| Copper, tin, and sheet-iron products.....                   | 1909    | 12                        | 75                           | 11                            | 10                    | 54                             |                      | 86       | 6         | 45     | 76                 | 146                | 70                          |
|   | 1904    | 18                        | 61                           | 10                            | 4                     | 47                             |                      | 35       | 1         | 39     | 50                 | 124                | 74                          |
| Flour-mill and gristmill products.....                      | 1909    | 7                         | 131                          | 2                             | 35                    | 94                             | 1,277                | 865      | 33        | 44     | 1,838              | 1,904              | 156                         |
|   | 1904    | 5                         | 58                           | 3                             | 16                    | 39                             |                      | 390      | 15        | 22     | 593                | 683                | 90                          |
|   | 1899    | 5                         | 86                           | 2                             | 25                    | 59                             |                      | 570      | 30        | 35     | 757                | 957                | 200                         |
| Foundry and machine-shop products.....                      | 1909    | 15                        | 283                          | 10                            | 40                    | 233                            | 390                  | 361      | 43        | 128    | 164                | 436                | 266                         |
|   | 1904    | 17                        | 122                          | 10                            | 8                     | 104                            |                      | 100      | 8         | 58     | 49                 | 150                | 101                         |
|   | 1899    |                           |                              |                               |                       |                                |                      |          |           |        |                    |                    |                             |
| Leather goods.....  | 1909    | 10                        | 268                          | 8                             | 22                    | 238                            | 110                  | 251      | 19        | 152    | 585                | 819                | 234                         |
|   | 1904    | 5                         | 205                          | 3                             | 18                    | 184                            |                      | 175      | 16        | 103    | 326                | 525                | 190                         |
|   | 1899    | 3                         |                              |                               | 6                     | 173                            |                      | 54       | 4         | 82     | 290                | 416                | 126                         |
| Lumber and timber products.....                             | 1909    | 10                        | 243                          | 10                            | 33                    | 200                            | 454                  | 564      | 40        | 136    | 636                | 947                | 311                         |
|   | 1904    | 4                         | 210                          | 4                             | 18                    | 188                            |                      | 413      | 21        | 107    | 412                | 647                | 235                         |
|   | 1899    | 5                         |                              |                               | 11                    | 105                            |                      | 332      | 14        | 74     | 282                | 523                | 241                         |
| Marble and stone work.....                                  | 1909    | 4                         | 20                           | 3                             | 5                     | 12                             | 15                   | 25       | 3         | 10     | 18                 | 39                 | 21                          |
|   | 1904    | 4                         | 37                           | 2                             | 5                     | 30                             |                      | 110      | 5         | 23     | 37                 | 81                 | 44                          |
|   | 1899    |                           |                              |                               |                       |                                |                      |          |           |        |                    |                    |                             |
| Mattresses and spring beds.....                             | 1909    | 4                         | 21                           | 5                             |                       | 16                             | 20                   | 19       |           | 8      | 17                 | 35                 | 18                          |
|   | 1904    | 3                         | 15                           | 4                             |                       | 11                             |                      | 19       |           | 4      | 10                 | 19                 | 9                           |
|   | 1899    |                           |                              |                               |                       |                                |                      |          |           |        |                    |                    |                             |
| Patent medicines and compounds and druggists' preparations. | 1909    | 7                         | 21                           | 4                             | 9                     | 8                              | 6                    | 13       | 3         | 3      | 9                  | 24                 | 15                          |
|   | 1904    | 3                         | 8                            | 1                             | 5                     | 2                              |                      | 37       | 3         | 1      | 3                  | 17                 | 14                          |
|   | 1899    | 4                         | 22                           | 2                             | 12                    | 8                              |                      | 19       | 6         | 3      | 11                 | 34                 | 23                          |
| Printing and publishing.....                                | 1909    | 30                        | 549                          | 25                            | 156                   | 368                            | 278                  | 707      | 157       | 226    | 273                | 1,025              | 752                         |
|   | 1904    | 25                        | 510                          | 30                            | 121                   | 359                            |                      | 472      | 120       | 182    | 215                | 745                | 530                         |
|   | 1899    | 20                        |                              |                               | 45                    | 378                            |                      | 420      | 39        | 193    | 145                | 596                | 451                         |
| All other industries.....                                   | 1909    | 83                        | 1,675                        | 62                            | 269                   | 1,344                          | 3,497                | 2,954    | 261       | 729    | 2,755              | 4,752              | 1,907                       |
|   | 1904    | 86                        | 1,723                        | 71                            | 241                   | 1,411                          |                      | 4,652    | 198       | 711    | 2,110              | 3,834              | 1,724                       |
|   | 1899    | 76                        |                              |                               | 169                   | 1,606                          |                      | 3,926    | 156       | 717    | 2,857              | 4,536              | 1,679                       |
| <b>ST. LOUIS—All Industries.</b>                            |         |                           |                              |                               |                       |                                |                      |          |           |        |                    |                    |                             |
|   | 1909    | 2,667                     | 104,587                      | 1,869                         | 15,347                | 87,371                         | 163,615              | 269,392  | 19,671    | 48,636 | 188,189            | 328,495            | 140,306                     |
|   | 1904    | 2,482                     | 95,962                       | 1,883                         | 11,381                | 82,698                         |                      | 265,937  | 13,475    | 42,642 | 137,740            | 267,307            | 129,567                     |
|   | 1899    | 2,646                     |                              |                               | 8,867                 | 64,832                         |                      | 150,526  | 10,079    | 26,146 | 101,838            | 183,733            | 91,895                      |
| Automobiles, including bodies and parts.....                | 1909    | 11                        | 340                          | 2                             | 50                    | 282                            | 139                  | 620      | 62        | 197    | 727                | 1,302              | 575                         |
|   | 1904    | 13                        | 37                           | 3                             | 13                    | 21                             |                      | 24       | 5         | 16     | 31                 | 63                 | 32                          |
|   | 1899    |                           |                              |                               |                       |                                |                      |          |           |        |                    |                    |                             |
| Baking powders and yeast.....                               | 1909    | 6                         | 65                           | 4                             | 16                    | 45                             | 30                   | 88       | 25        | 19     | 205                | 295                | 90                          |
|   | 1904    | 7                         | 105                          | 3                             | 20                    | 82                             |                      | 123      | 25        | 34     | 243                | 416                | 173                         |
|   | 1899    | 11                        |                              |                               | 42                    | 75                             |                      | 144      | 45        | 23     | 310                | 566                | 220                         |
| Blacking and cleansing and polishing preparations.          | 1909    | 23                        | 164                          | 17                            | 50                    | 97                             | 160                  | 208      | 61        | 53     | 291                | 571                | 280                         |
|   | 1904    | 8                         | 61                           | 8                             | 26                    | 27                             |                      | 52       | 24        | 12     | 77                 | 147                | 70                          |
|   | 1899    | 24                        | 24                           | 6                             | 10                    | 8                              |                      | 8        | 6         | 4      | 8                  | 29                 | 21                          |
| Boots and shoes, including cut stock and findings.          | 1909    | 33                        | 13,006                       | 3                             | 865                   | 12,138                         | 7,547                | 10,593   | 991       | 6,169  | 23,735             | 33,970             | 10,235                      |
|   | 1904    | 22                        | 9,679                        | 1                             | 347                   | 9,331                          |                      | 6,885    | 418       | 3,098  | 12,233             | 19,662             | 7,429                       |
|   | 1899    | 35                        |                              |                               | 176                   | 5,398                          |                      | 2,830    | 199       | 1,898  | 5,682              | 8,487              | 2,505                       |
| Boxes, fancy and paper.....                                 | 1909    | 19                        | 865                          | 9                             | 66                    | 790                            | 493                  | 681      | 81        | 286    | 464                | 960                | 496                         |
|   | 1904    | 12                        | 711                          | 4                             | 52                    | 655                            |                      | 458      | 54        | 187    | 285                | 604                | 319                         |
|   | 1899    | 9                         | 605                          | 4                             | 36                    | 565                            |                      | 285      | 42        | 114    | 131                | 413                | 282                         |
| Brass and bronze products.....                              | 1909    | 11                        | 325                          | 6                             | 50                    | 260                            | 385                  | 963      | 76        | 180    | 1,632              | 2,165              | 533                         |
|   | 1904    | 10                        | 223                          | 10                            | 35                    | 178                            |                      | 693      | 53        | 111    | 1,161              | 1,457              | 296                         |
|   | 1899    | 10                        | 212                          | 8                             | 24                    | 180                            |                      | 353      | 32        | 92     | 915                | 1,132              | 217                         |
| Bread and other bakery products.....                        | 1909    | 448                       | 3,317                        | 438                           | 615                   | 2,204                          | 8,018                | 7,077    | 559       | 1,223  | 4,765              | 8,624              | 3,859                       |
|   | 1904    | 311                       | 2,397                        | 308                           | 215                   | 1,874                          |                      | 3,044    | 185       | 1,013  | 3,385              | 6,098              | 2,713                       |
|   | 1899    | 387                       | 2,121                        | 303                           | 274                   | 1,454                          |                      | 2,266    | 202       | 667    | 2,414              | 4,818              | 2,404                       |
| Brick and tile.....   | 1909    | 7                         | 1,839                        |                               | 66                    | 1,773                          | 2,632                | 4,630    | 112       | 887    | 618                | 2,198              | 1,580                       |
|   | 1904    | 12                        | 1,141                        | 6                             | 71                    | 1,064                          |                      | 5,202    | 98        | 603    | 316                | 1,258              | 942                         |
|   | 1899    | 11                        | 909                          | 4                             | 48                    | 857                            |                      | 4,315    | 70        | 304    | 137                | 643                | 506                         |
| Brooms and brushes.....                                     | 1909    | 23                        | 121                          | 24                            | 13                    | 84                             | 33                   | 97       | 10        | 47     | 120                | 225                | 106                         |
|   | 1904    | 25                        | 173                          | 32                            | 15                    | 126                            |                      | 204      | 12        | 62     | 119                | 257                | 138                         |
|   | 1899    | 28                        | 207                          | 29                            | 14                    | 164                            |                      | 100      | 11        | 67     | 162                | 353                | 191                         |
| Canning and preserving.....                                 | 1909    | 9                         | 203                          | 10                            | 62                    | 191                            | 161                  | 976      | 97        | 75     | 628                | 962                | 334                         |
|   | 1904    | 7                         | 204                          | 6                             | 34                    | 164                            |                      | 512      | 35        | 64     | 397                | 631                | 234                         |
|   | 1899    | 17                        | 224                          | 7                             | 62                    | 155                            |                      | 276      | 63        | 50     | 332                | 544                | 212                         |
| Carriages and wagons and materials.....                     | 1909    | 77                        | 2,560                        | 53                            | 253                   | 2,254                          | 3,144                | 5,146    | 361       | 1,242  | 3,838              | 6,328              | 2,490                       |
|   | 1904    | 93                        | 2,528                        | 91                            | 222                   | 2,215                          |                      | 3,681    | 295       | 1,266  | 3,402              | 5,750              | 2,357                       |
|   | 1899    | 105                       |                              |                               | 182                   | 2,015                          |                      | 2,927    | 214       | 1,044  | 2,402              | 4,638              | 2,230                       |

<sup>1</sup> Excluding statistics for one establishment, to avoid disclosure of individual operations.  
<sup>2</sup> Excluding statistics for two establishments, to avoid disclosure of individual operations.  
<sup>3</sup> Figures not comparable.

<sup>4</sup> Figures can not be shown without disclosing individual operations.  
<sup>5</sup> Not reported separately.

## MANUFACTURES—MISSOURI.

TABLE I.—COMPARATIVE SUMMARY FOR 1909, 1904, AND 1899—Continued.

CITIES OF 50,000 INHABITANTS OR MORE—ALL INDUSTRIES COMBINED AND SELECTED INDUSTRIES—Continued.

| INDUSTRY.   | Census. | Number of establishments. | PERSONS ENGAGED IN INDUSTRY. |                               |                        |                                | Primary horse-power. | Capital. | Salaries. | Wages. | Cost of materials. | Value of products. | Value added by manufacture. |
|---|---------|---------------------------|------------------------------|-------------------------------|------------------------|--------------------------------|----------------------|----------|-----------|--------|--------------------|--------------------|-----------------------------|
|   |         |                           | Total.                       | Proprietors and firm members. | Salaries and employes. | Wage earners (average number). |                      |          |           |        |                    |                    |                             |
| Expressed in thousands.   |         |                           |                              |                               |                        |                                |                      |          |           |        |                    |                    |                             |
| <b>ST. LOUIS—Continued.</b>   |         |                           |                              |                               |                        |                                |                      |          |           |        |                    |                    |                             |
| Cars and general shop construction and repairs by steam-railroad companies. | 1909    | 5                         | 1,813                        | .....                         | 98                     | 1,715                          | 1,485                | \$534    | \$89      | \$879  | \$765              | \$1,742            | \$977                       |
|   | 1904    | 4                         | 1,329                        | .....                         | 69                     | 1,260                          | .....                | 258      | 63        | 844    | 817                | 1,725              | 968                         |
|   | 1899    | 6                         | 1,220                        | .....                         | 66                     | 1,163                          | .....                | 945      | 61        | 672    | 605                | 1,355              | 750                         |
| Clothing, men's, including shirts.....                                      | 1909    | 50                        | 5,246                        | 32                            | 463                    | 4,751                          | 870                  | 5,420    | 582       | 1,060  | 5,382              | 9,687              | 4,305                       |
|   | 1904    | 53                        | 4,198                        | 45                            | 211                    | 3,942                          | .....                | 3,472    | 319       | 1,449  | 3,436              | 6,850              | 3,414                       |
|   | 1899    | 136                       | .....                        | .....                         | 340                    | 3,504                          | .....                | 3,560    | 432       | 1,041  | 3,337              | 6,316              | 2,979                       |
| Clothing, women's.....  | 1909    | 58                        | 2,745                        | 49                            | 257                    | 2,439                          | 438                  | 2,050    | 301       | 1,021  | 2,002              | 4,886              | 1,981                       |
|   | 1904    | 46                        | 1,923                        | 56                            | 163                    | 1,704                          | .....                | 1,128    | 152       | 623    | 1,675              | 3,075              | 1,400                       |
|   | 1899    | 42                        | 2,101                        | 52                            | 182                    | 1,957                          | .....                | 990      | 183       | 529    | 1,671              | 2,987              | 1,316                       |
| Coffee and spice, roasting and grinding.....                                | 1909    | 23                        | 1,091                        | 6                             | 515                    | 570                            | 1,886                | 4,547    | 697       | 268    | 7,217              | 9,514              | 2,207                       |
|   | 1904    | 19                        | 855                          | 11                            | 360                    | 484                            | .....                | 2,926    | 407       | 240    | 4,738              | 6,725              | 1,987                       |
|   | 1899    | 20                        | 602                          | 14                            | 259                    | 419                            | .....                | 2,271    | 270       | 149    | 3,948              | 4,706              | 818                         |
| Coffins, burial cases, and undertakers' goods..                             | 1909    | 6                         | 506                          | .....                         | 106                    | 490                            | 608                  | 1,174    | 132       | 268    | 665                | 1,371              | 506                         |
|   | 1904    | 6                         | 510                          | .....                         | 40                     | 470                            | .....                | 1,039    | 46        | 238    | 627                | 1,204              | 577                         |
|   | 1899    | 5                         | 414                          | 2                             | 62                     | 350                            | .....                | 429      | 64        | 150    | 492                | 775                | 281                         |
| Confectionery.....  | 1909    | 25                        | 1,453                        | 14                            | 217                    | 1,222                          | 823                  | 1,747    | 350       | 512    | 2,175              | 3,848              | 1,673                       |
|   | 1904    | 18                        | 1,334                        | 6                             | 205                    | 1,123                          | .....                | 1,255    | 232       | 416    | 1,691              | 3,052              | 1,361                       |
|   | 1899    | 20                        | .....                        | .....                         | 277                    | 984                            | .....                | 1,114    | 219       | 336    | 1,668              | 2,673              | 1,065                       |
| Copperage and wooden goods, not elsewhere specified.                        | 1909    | 22                        | 1,034                        | 15                            | 61                     | 958                            | 1,942                | 1,566    | 87        | 403    | 1,562              | 2,592              | 1,000                       |
|   | 1904    | 20                        | 993                          | 11                            | 68                     | 914                            | .....                | 1,443    | 88        | 428    | 1,195              | 1,940              | 750                         |
|   | 1899    | 28                        | .....                        | .....                         | 48                     | 874                            | .....                | 1,088    | 72        | 329    | 863                | 1,542              | 679                         |
| Copper, tin, and sheet-iron products.....                                   | 1909    | 100                       | 2,188                        | 85                            | 270                    | 1,833                          | 976                  | 4,066    | 318       | 978    | 2,978              | 5,060              | 2,682                       |
|   | 1904    | 63                        | 1,988                        | 59                            | 208                    | 1,721                          | .....                | 4,930    | 239       | 813    | 2,630              | 4,432              | 1,892                       |
|   | 1899    | 139                       | .....                        | .....                         | 110                    | 728                            | .....                | 1,160    | 92        | 306    | 847                | 1,598              | 751                         |
| Cutlery and tools, not elsewhere specified.....                             | 1909    | 13                        | 236                          | 13                            | 23                     | 200                            | 472                  | 750      | 34        | 128    | 234                | 440                | 206                         |
|   | 1904    | 11                        | 184                          | 8                             | 17                     | 159                            | .....                | 482      | 24        | 97     | 175                | 337                | 162                         |
|   | 1899    | 5                         | .....                        | .....                         | 8                      | 48                             | .....                | 62       | 6         | 32     | 30                 | 91                 | 61                          |
| Electrical machinery, apparatus, and supplies.                              | 1909    | 16                        | 912                          | 7                             | 203                    | 699                            | 650                  | 1,524    | 265       | 380    | 636                | 2,081              | 1,445                       |
|   | 1904    | 16                        | 966                          | 3                             | 179                    | 784                            | .....                | 1,607    | 189       | 407    | 598                | 1,713              | 1,115                       |
|   | 1899    | 11                        | 584                          | 5                             | 57                     | 522                            | .....                | 974      | 65        | 182    | 341                | 875                | 531                         |
| Electroplating.....   | 1909    | 12                        | 88                           | 13                            | 9                      | 66                             | 115                  | 48       | 6         | 45     | 21                 | 103                | 82                          |
|   | 1904    | 9                         | 78                           | 11                            | 4                      | 63                             | .....                | 37       | 4         | 41     | 19                 | 94                 | 77                          |
|   | 1899    | 7                         | .....                        | .....                         | 6                      | 80                             | .....                | 40       | 6         | 39     | 17                 | 88                 | 71                          |
| Enameling and japanning.....  | 1909    | 3                         | 32                           | 3                             | 1                      | 28                             | .....                | 11       | 1         | 17     | 5                  | 31                 | 26                          |
|   | 1904    | 3                         | 68                           | 1                             | 6                      | 61                             | .....                | 70       | 4         | 25     | 43                 | 77                 | 44                          |
|   | 1899    | 3                         | 44                           | 1                             | 8                      | 35                             | .....                | 40       | 6         | 10     | 10                 | 38                 | 28                          |
| Flour-mill and gristmill products.....                                      | 1909    | 8                         | 181                          | 2                             | 43                     | 136                            | 2,027                | 703      | 74        | 86     | 3,210              | 3,551              | 341                         |
|   | 1904    | 9                         | 268                          | 1                             | 71                     | 196                            | .....                | 1,127    | 86        | 124    | 3,459              | 3,974              | 515                         |
|   | 1899    | 15                        | .....                        | .....                         | 56                     | 194                            | .....                | 1,321    | 76        | 107    | 3,177              | 3,600              | 423                         |
| Food preparations.....  | 1909    | 21                        | 559                          | 18                            | 159                    | 382                            | 946                  | 2,377    | 207       | 170    | 3,499              | 4,455              | 959                         |
|   | 1904    | 24                        | 653                          | 21                            | 142                    | 490                            | .....                | 1,109    | 174       | 153    | 1,632              | 2,409              | 777                         |
|   | 1899    | 23                        | .....                        | .....                         | 133                    | 381                            | .....                | 735      | 161       | 156    | 1,054              | 1,695              | 641                         |
| Foundry and machine-shop products.....                                      | 1909    | 160                       | 6,350                        | 80                            | 972                    | 5,298                          | 8,692                | 14,409   | 1,208     | 3,518  | 6,682              | 14,591             | 7,999                       |
|   | 1904    | 143                       | 6,591                        | 83                            | 831                    | 5,677                          | .....                | 10,695   | 999       | 3,412  | 4,828              | 11,573             | 6,745                       |
|   | 1899    | .....                     | .....                        | .....                         | .....                  | .....                          | .....                | .....    | .....     | .....  | .....              | .....              | .....                       |
| Furniture and refrigerators.....  | 1909    | 65                        | 3,310                        | 22                            | 406                    | 2,882                          | 5,163                | 5,690    | 504       | 1,620  | 2,735              | 6,111              | 3,376                       |
|   | 1904    | 51                        | 2,643                        | 25                            | 254                    | 2,364                          | .....                | 3,551    | 307       | 1,213  | 1,589              | 4,057              | 2,468                       |
|   | 1899    | 140                       | 2,532                        | 19                            | 230                    | 2,283                          | .....                | 2,760    | 247       | 996    | 1,367              | 3,269              | 1,992                       |
| Gas and electric fixtures and lamps and reflectors.                         | 1909    | 7                         | 257                          | 4                             | 51                     | 202                            | 185                  | 490      | 65        | 126    | 285                | 547                | 262                         |
|   | 1904    | 9                         | 233                          | 4                             | 48                     | 181                            | .....                | 275      | 47        | 122    | 185                | 448                | 263                         |
|   | 1899    | 12                        | 267                          | 12                            | 26                     | 229                            | .....                | 424      | 30        | 93     | 100                | 293                | 191                         |
| Hand stamps and stencils and brands.....                                    | 1909    | 7                         | 58                           | 7                             | 9                      | 42                             | 23                   | 44       | 10        | 25     | 24                 | 91                 | 67                          |
|   | 1904    | 7                         | 40                           | 5                             | 5                      | 30                             | .....                | 40       | 4         | 16     | 47                 | 104                | 57                          |
|   | 1899    | 6                         | 29                           | 4                             | 5                      | 20                             | .....                | 29       | 5         | 9      | 14                 | 54                 | 49                          |
| Hats and caps, other than felt, straw, and wool.                            | 1909    | 9                         | 146                          | 11                            | 11                     | 124                            | 31                   | 116      | 19        | 78     | 159                | 307                | 148                         |
|   | 1904    | 6                         | 157                          | 6                             | 15                     | 136                            | .....                | 175      | 11        | 69     | 161                | 275                | 114                         |
|   | 1899    | 12                        | .....                        | .....                         | 5                      | 158                            | .....                | 52       | 2         | 55     | 88                 | 205                | 117                         |
| Ice, manufactured.....  | 1909    | 9                         | 236                          | .....                         | 35                     | 201                            | 8,105                | 2,210    | 44        | 151    | 291                | 731                | 459                         |
|   | 1904    | 9                         | 198                          | .....                         | 31                     | 167                            | .....                | 1,523    | 38        | 124    | 186                | 516                | 350                         |
|   | 1899    | 10                        | 160                          | 3                             | 28                     | 129                            | .....                | 1,035    | 34        | 78     | 112                | 306                | 194                         |
| Jewelry.....  | 1909    | 8                         | 268                          | 4                             | 40                     | 224                            | 117                  | 148      | 32        | 153    | 228                | 533                | 305                         |
|   | 1904    | 10                        | 247                          | 12                            | 26                     | 209                            | .....                | 97       | 17        | 165    | 196                | 484                | 288                         |
|   | 1899    | 8                         | 155                          | 7                             | 5                      | 143                            | .....                | 134      | 6         | 99     | 82                 | 268                | 186                         |
| Leather goods.....  | 1909    | 32                        | 1,204                        | 21                            | 223                    | 960                            | 693                  | 2,293    | 272       | 515    | 1,620              | 3,108              | 1,479                       |
|   | 1904    | 30                        | 1,363                        | 31                            | 211                    | 1,121                          | .....                | 2,184    | 219       | 593    | 1,776              | 3,265              | 1,489                       |
|   | 1899    | 25                        | .....                        | .....                         | 139                    | 824                            | .....                | 1,271    | 158       | 377    | 881                | 1,942              | 1,061                       |
| Leather, tanned, curried, and finished.....                                 | 1909    | 9                         | 246                          | 3                             | 23                     | 220                            | 519                  | 1,478    | 42        | 146    | 1,500              | 2,035              | 424                         |
|   | 1904    | 7                         | 232                          | 2                             | 19                     | 211                            | .....                | 1,333    | 36        | 120    | 722                | 1,107              | 383                         |
|   | 1899    | 8                         | .....                        | .....                         | 20                     | 182                            | .....                | 915      | 98        | 98     | 548                | 806                | 258                         |

<sup>1</sup> Excluding statistics for one establishment, to avoid disclosure of individual operations.

<sup>2</sup> Excluding statistics for two establishments, to avoid disclosure of individual operations.

<sup>3</sup> Figures not comparable.

MANUFACTURES—MISSOURI.

TABLE I.—COMPARATIVE SUMMARY FOR 1909, 1904, AND 1899—Continued.

CITIES OF 50,000 INHABITANTS OR MORE—ALL INDUSTRIES COMBINED AND SELECTED INDUSTRIES—Continued.

| INDUSTRY AND CITY.  | Census. | Number of establishments. | PERSONS ENGAGED IN INDUSTRY. |                               |                         |                                 | Primary horse-power. | Capital. | Salaries. | Wages.  | Cost of materials. | Value of products. | Value added by manufacture. |
|---|---------|---------------------------|------------------------------|-------------------------------|-------------------------|---------------------------------|----------------------|----------|-----------|---------|--------------------|--------------------|-----------------------------|
|   |         |                           | Total.                       | Proprietors and firm members. | Salari- ed employ- ees. | Wage- earners (average number). |                      |          |           |         |                    |                    |                             |
| Expressed in thousands.                                       |         |                           |                              |                               |                         |                                 |                      |          |           |         |                    |                    |                             |
| <b>ST. LOUIS—Continued.</b>                                   |         |                           |                              |                               |                         |                                 |                      |          |           |         |                    |                    |                             |
| Liquors, malt.....  | 1909    | 10                        | 5,373                        | 4                             | 550                     | 4,823                           | 24,590               | \$34,747 | \$1,077   | \$3,339 | \$6,474            | \$23,147           | \$16,673                    |
|   | 1904    | 28                        | 5,434                        | 4                             | 483                     | 4,947                           | .....                | 39,687   | 985       | 2,998   | 5,445              | 20,030             | 15,485                      |
|   | 1899    | 28                        | 2,977                        | 5                             | 302                     | 2,670                           | .....                | 23,349   | 709       | 1,660   | 2,633              | 11,674             | 9,041                       |
| Lumber and timber products.....                               | 1909    | 71                        | 3,187                        | 24                            | 351                     | 2,812                           | 8,908                | 6,340    | 443       | 1,669   | 3,884              | 7,367              | 3,483                       |
|   | 1904    | 63                        | 3,255                        | 18                            | 288                     | 2,949                           | .....                | 4,261    | 355       | 1,460   | 2,473              | 4,409              | 1,936                       |
|   | 1899    | 52                        | 2,445                        | 18                            | 210                     | 2,211                           | .....                | 3,297    | 243       | 973     | 1,985              | 4,177              | 2,192                       |
| Marble and stone work.....                                    | 1909    | 39                        | 665                          | 30                            | 78                      | 557                             | 1,073                | 1,220    | 113       | 468     | 723                | 1,580              | 857                         |
|   | 1904    | 25                        | 452                          | 19                            | 52                      | 381                             | .....                | 784      | 72        | 265     | 575                | 1,305              | 730                         |
|   | 1899    | 122                       | .....                        | 10                            | 254                     | .....                           | .....                | 362      | 28        | 151     | 177                | 437                | 260                         |
| Mattresses and spring beds.....                               | 1909    | 14                        | 222                          | 11                            | 32                      | 179                             | 120                  | 356      | 36        | 106     | 204                | 462                | 258                         |
|   | 1904    | 14                        | 306                          | 10                            | 42                      | 344                             | .....                | 413      | 58        | 216     | 398                | 815                | 417                         |
|   | 1899    | 9                         | .....                        | 13                            | 160                     | .....                           | .....                | 164      | 17        | 67      | 240                | 400                | 160                         |
| Millinery and lace goods.....                                 | 1909    | 18                        | 655                          | 13                            | 128                     | 514                             | 64                   | 440      | 97        | 183     | 549                | 1,045              | 496                         |
|   | 1904    | 9                         | 326                          | 8                             | 25                      | 293                             | .....                | 136      | 20        | 96      | 235                | 440                | 205                         |
|   | 1899    | 7                         | 290                          | 5                             | 14                      | 271                             | .....                | 84       | 9         | 56      | 195                | 296                | 161                         |
| Models and patterns, not including paper pat- terns.          | 1909    | 15                        | 141                          | 12                            | 23                      | 106                             | 72                   | 76       | 25        | 78      | 46                 | 211                | 165                         |
|   | 1904    | 16                        | 127                          | 15                            | 19                      | 93                              | .....                | 54       | 20        | 57      | 33                 | 156                | 123                         |
|   | 1899    | 12                        | .....                        | 4                             | 65                      | .....                           | .....                | 32       | 4         | 42      | 18                 | 82                 | 64                          |
| Paint and varnish.....  | 1909    | 23                        | 869                          | 1                             | 270                     | 598                             | 2,139                | 4,661    | 398       | 315     | 3,738              | 5,564              | 1,820                       |
|   | 1904    | 25                        | 928                          | 14                            | 362                     | 552                             | .....                | 3,783    | 398       | 283     | 4,430              | 5,909              | 1,470                       |
|   | 1899    | 18                        | 583                          | 9                             | 126                     | 448                             | .....                | 2,971    | 193       | 268     | 2,865              | 3,869              | 1,004                       |
| Patent medicines and compounds and drug- gists' preparations. | 1909    | 99                        | 1,626                        | 87                            | 677                     | 862                             | 800                  | 4,507    | 880       | 364     | 2,281              | 6,846              | 4,565                       |
|   | 1904    | 95                        | 1,344                        | 55                            | 428                     | 861                             | .....                | 3,741    | 490       | 328     | 1,907              | 5,182              | 3,275                       |
|   | 1899    | 86                        | .....                        | 424                           | 861                     | .....                           | .....                | 3,001    | 177       | 298     | 1,308              | 4,664              | 3,266                       |
| Photo-engraving.....  | 1909    | 11                        | 105                          | 8                             | 43                      | 114                             | 46                   | 85       | 45        | 93      | 59                 | 298                | 239                         |
|   | 1904    | 6                         | 87                           | 9                             | 12                      | 66                              | .....                | 42       | 15        | 53      | 19                 | 131                | 112                         |
|   | 1899    | 5                         | 34                           | 7                             | 2                       | 25                              | .....                | 13       | 4         | 17      | 5                  | 46                 | 41                          |
| Pottery, terra-cotta, and fire-clay products....              | 1909    | 13                        | 2,240                        | 2                             | 195                     | 2,040                           | 4,230                | 8,777    | 295       | 1,061   | 684                | 2,683              | 2,049                       |
|   | 1904    | 15                        | 2,089                        | 4                             | 148                     | 1,937                           | .....                | 4,077    | 218       | 951     | 615                | 2,316              | 1,701                       |
|   | 1899    | 13                        | 1,359                        | 4                             | 101                     | 1,254                           | .....                | 2,394    | 135       | 494     | 289                | 1,258              | 969                         |
| Printing and publishing.....                                  | 1909    | 347                       | 8,090                        | 226                           | 2,156                   | 5,708                           | 14,361               | 10,915   | 2,795     | 3,824   | 5,118              | 17,164             | 12,046                      |
|   | 1904    | 362                       | 8,049                        | 279                           | 1,931                   | 5,839                           | .....                | 10,750   | 2,103     | 3,462   | 4,513              | 16,366             | 11,823                      |
|   | 1899    | 1320                      | 6,098                        | 206                           | 1,573                   | 4,229                           | .....                | 7,778    | 1,466     | 2,356   | 3,653              | 10,828             | 7,175                       |
| Slaughtering and meat packing.....                            | 1909    | 24                        | 1,807                        | 31                            | 310                     | 1,460                           | 5,515                | 5,598    | 850       | 900     | 24,055             | 26,601             | 2,566                       |
|   | 1904    | 20                        | 1,453                        | 13                            | 203                     | 1,237                           | .....                | 3,914    | 254       | 753     | 16,043             | 17,485             | 1,442                       |
|   | 1899    | 125                       | 967                          | 23                            | 103                     | 841                             | .....                | 2,698    | 143       | 448     | 11,120             | 12,943             | 1,823                       |
| Stereotyping and electrotyping.....                           | 1909    | 4                         | 120                          | .....                         | 26                      | 91                              | 146                  | 105      | 38        | 72      | 51                 | 194                | 143                         |
|   | 1904    | 3                         | 71                           | .....                         | 17                      | 54                              | .....                | 44       | 16        | 36      | 16                 | 91                 | 75                          |
|   | 1899    | 3                         | 67                           | 4                             | 13                      | 50                              | .....                | 41       | 12        | 30      | 16                 | 86                 | 70                          |
| Stoves and furnaces, including gas and oil stoves.            | 1909    | 13                        | 2,048                        | 2                             | 373                     | 1,673                           | 1,826                | 7,254    | 435       | 1,199   | 2,458              | 5,923              | 3,465                       |
|   | 1904    | 14                        | 2,185                        | 6                             | 304                     | 1,875                           | .....                | 4,526    | 503       | 1,316   | 1,943              | 5,523              | 3,580                       |
| Surgical appliances and artificial limbs.....                 | 1909    | 8                         | 34                           | 7                             | 4                       | 23                              | 6                    | 60       | 5         | 46      | 10                 | 65                 | 55                          |
|   | 1904    | 9                         | 67                           | 10                            | 26                      | 31                              | .....                | 91       | 22        | 19      | 25                 | 131                | 106                         |
|   | 1899    | 12                        | 43                           | 15                            | 5                       | 23                              | .....                | 23       | 5         | 10      | 12                 | 53                 | 41                          |
| Wirework, including wire rope and cable.....                  | 1909    | 9                         | 832                          | 6                             | 143                     | 683                             | 853                  | 2,242    | 247       | 365     | 1,697              | 3,323              | 1,626                       |
|   | 1904    | 11                        | 692                          | 10                            | 137                     | 545                             | .....                | 2,546    | 204       | 276     | 1,194              | 2,245              | 1,051                       |
|   | 1899    | 12                        | 347                          | 7                             | 42                      | 208                             | .....                | 729      | 70        | 152     | 625                | 1,014              | 389                         |
| All other industries.....                                     | 1909    | 614                       | 23,363                       | 446                           | 3,639                   | 19,278                          | 39,659               | 97,526   | 4,717     | 10,562  | 54,302             | 91,006             | 36,794                      |
|   | 1904    | 673                       | 24,697                       | 536                           | 2,671                   | 21,490                          | .....                | 125,415  | 2,863     | 11,026  | 43,763             | 88,079             | 44,316                      |
|   | 1899    | 932                       | .....                        | .....                         | 2,972                   | 25,094                          | .....                | 68,818   | 3,460     | 12,077  | 42,526             | 84,741             | 42,215                      |

CITIES OF 10,000 TO 50,000 INHABITANTS—ALL INDUSTRIES COMBINED.

|                     |      |     |       |       |     |       |       |         |       |         |         |         |         |
|---------------------|------|-----|-------|-------|-----|-------|-------|---------|-------|---------|---------|---------|---------|
| Hannibal.....       | 1909 | 66  | 2,688 | 65    | 178 | 2,446 | 3,412 | \$2,498 | \$176 | \$1,284 | \$4,316 | \$6,195 | \$1,879 |
|                     | 1904 | 58  | 1,957 | 49    | 97  | 1,811 | ..... | 1,848   | 91    | 825     | 2,156   | 3,564   | 1,408   |
|                     | 1899 | 66  | ..... | ..... | 121 | 1,238 | ..... | 1,754   | 169   | 535     | 1,735   | 2,699   | 964     |
| Jefferson City..... | 1909 | 35  | 1,572 | 19    | 217 | 1,336 | 1,166 | 3,079   | 257   | 391     | 3,652   | 5,446   | 1,794   |
|                     | 1904 | 45  | 474   | 31    | 181 | 262   | ..... | 1,845   | 209   | 117     | 2,487   | 3,927   | 1,440   |
|                     | 1899 | 41  | ..... | ..... | 178 | 290   | ..... | 1,489   | 179   | 92      | 2,131   | 3,061   | 930     |
| Joplin.....         | 1909 | 77  | 1,080 | 73    | 186 | 830   | 3,102 | 2,992   | 184   | 494     | 2,358   | 4,136   | 1,778   |
|                     | 1904 | 56  | 835   | 55    | 100 | 680   | ..... | 2,524   | 119   | 386     | 1,960   | 3,006   | 1,046   |
|                     | 1899 | 45  | ..... | ..... | 50  | 682   | ..... | 1,268   | 53    | 380     | 1,556   | 2,325   | 769     |
| Moberly.....        | 1909 | 31  | 1,155 | 29    | 127 | 999   | 1,270 | 1,320   | 120   | 538     | 1,092   | 1,984   | 892     |
|                     | 1904 | 28  | 564   | 23    | 45  | 496   | ..... | 503     | 42    | 266     | 399     | 801     | 402     |
|                     | 1899 | 32  | ..... | ..... | 41  | 656   | ..... | 459     | 30    | 319     | 360     | 792     | 432     |
| Sedalia.....        | 1909 | 75  | 1,160 | 66    | 149 | 935   | 1,662 | 2,346   | 145   | 461     | 1,216   | 2,333   | 1,117   |
|                     | 1904 | 50  | 1,097 | 42    | 81  | 974   | ..... | 1,307   | 89    | 503     | 825     | 1,692   | 847     |
|                     | 1899 | 57  | ..... | ..... | 60  | 909   | ..... | 1,152   | 53    | 399     | 675     | 1,283   | 608     |
| Springfield.....    | 1909 | 108 | 2,473 | 91    | 251 | 2,131 | 3,685 | 5,517   | 283   | 1,280   | 3,048   | 5,382   | 2,334   |
|                     | 1904 | 82  | 2,431 | 69    | 204 | 2,158 | ..... | 3,926   | 192   | 1,128   | 3,392   | 5,293   | 1,901   |
|                     | 1899 | 70  | ..... | ..... | 108 | 1,710 | ..... | 1,930   | 89    | 853     | 1,991   | 3,434   | 1,443   |
| Webb City.....      | 1909 | 25  | 212   | 24    | 18  | 170   | 511   | 462     | 18    | 108     | 513     | 777     | 264     |
|                     | 1904 | 19  | 171   | 23    | 10  | 138   | ..... | 199     | 10    | 71      | 395     | 638     | 243     |
|                     | 1899 | 12  | ..... | ..... | 7   | 126   | ..... | 181     | 7     | 62      | 214     | 354     | 140     |

<sup>1</sup> Excluding statistics for two establishments, to avoid disclosure of individual operations.

<sup>2</sup> Not reported separately.

<sup>3</sup> Figures do not agree with those published in 1904, because it was necessary to revise the totals in order to include data only for those establishments located within the corporate limits of the city.

TABLE II.—DETAIL STATEMENT FOR

| INDUSTRY.   | Number of establishments. | PERSONS ENGAGED IN INDUSTRY. |                               |   |         |         |                 |                     |                     |        |              | WAGE EARNERS—NUMBER DEC. 15, OR NEAREST REPRESENTATIVE DAY. |           |         |         |  | Primary horsepower. |
|---|---------------------------|------------------------------|-------------------------------|---|---------|---------|-----------------|---------------------|---------------------|--------|--------------|---|-----------|---------|---------|--|---------------------|
|   |                           | Total.                       | Proprietors and firm members. | Salaried officers, superintendents, and managers. | Clerks. |         | Wage earners.   |                     |                     | Total. | 16 and over. |   | Under 16. |         |         |  |                     |
|   |                           |                              |                               |   | Male.   | Female. | Average number. | Number.             |                     |        | Male.        | Female.   | Male.     | Female. |         |  |                     |
|   |                           |                              |                               |   |         |         |                 | Maximum month.      | Minimum month.      |        |              |   |           |         |         |  |                     |
| 1 All industries.....   | 8,375                     | 185,705                      | 8,226                         | 6,594   | 14,061  | 3,831   | 152,993         | Se 163,514          | Ja 141,268          | (1)    | (1)          | (1)   | (1)       | (1)     | 340,467 |  |                     |
| 2 Agricultural implements.....  | 25                        | 532                          | 16                            | 28  | 40      | 10      | 438             | Je 522              | Se 332              | 471    | 460          | 1   | 1         | .....   | 1,089   |  |                     |
| 3 Artificial stone.....   | 117                       | 380                          | 147                           | 17  | 6       | 4       | 206             | Ja 287              | Ja 62               | 352    | 348          | .....   | 4         | .....   | 148     |  |                     |
| 4 Automobiles, including bodies and parts                                       | 17                        | 449                          | 6                             | 38  | 23      | 14      | 368             | Jy 427              | Ja 299              | 412    | 394          | 18  | .....     | .....   | 184     |  |                     |
| 5 Awnings, tents, and sails.....  | 18                        | 554                          | 5                             | 30  | 45      | 36      | 429             | Je 529              | Ja 353              | 401    | 167          | 234   | .....     | .....   | 217     |  |                     |
| 6 Baking powders and yeast.....   | 6                         | 65                           | 4                             | 7   | 6       | 3       | 45              | Se 48               | Jy 39               | 47     | 21           | 26  | .....     | .....   | 59      |  |                     |
| 7 Baskets, and rattan and willow ware...  | 3                         | 25                           | 2                             | 2   | 1       | .....   | 20              | Au 23               | Oc <sup>2</sup> 19  | 20     | 19           | 1   | .....     | .....   | 29      |  |                     |
| 8 Belting and hose, leather.....  | 7                         | 80                           | 2                             | 13  | 12      | 6       | 47              | Se 52               | My 39               | 51     | 51           | .....   | .....     | .....   | 149     |  |                     |
| 9 Blacking and cleansing and polishing preparations.                            | 32                        | 194                          | 24                            | 24  | 25      | 11      | 110             | My <sup>2</sup> 128 | Jy 83               | 115    | 75           | 38  | 2         | .....   | 162     |  |                     |
| 10 Boots and shoes, including cut stock and findings.                           | 59                        | 18,665                       | 14                            | 220   | 776     | 250     | 17,396          | De 18,223           | My 16,820           | 18,241 | 11,048       | 5,801   | 853       | 539     | 11,119  |  |                     |
| 11 Boxes, cigar.....  | 5                         | 124                          | 4                             | 8   | 4       | 3       | 105             | No 114              | Fe <sup>2</sup> 99  | 111    | 36           | 70  | 4         | 1       | 59      |  |                     |
| 12 Boxes, fancy and paper.....  | 27                        | 1,237                        | 10                            | 52  | 43      | 19      | 1,113           | De 1,264            | Jy 1,036            | 1,263  | 336          | 784   | 27        | 116     | 62      |  |                     |
| 13 Brass and bronze products.....   | 18                        | 807                          | 17                            | 21  | 28      | 4       | 297             | No 356              | Mh 266              | 338    | 337          | .....   | 1         | .....   | 48      |  |                     |
| 14 Bread and other bakery products.....   | 954                       | 6,797                        | 1,003                         | 127   | 682     | 242     | 4,743           | No 5,065            | Fe 4,326            | 5,111  | 3,483        | 1,484   | 40        | 164     | 3,023   |  |                     |
| 15 Brick and tile.....  | 120                       | 3,289                        | 121                           | 95  | 67      | 7       | 2,999           | Jy 3,899            | Fe 1,635            | 3,246  | 3,151        | .....   | 95        | .....   | 8,274   |  |                     |
| 16 Brooms.....  | 50                        | 295                          | 52                            | 11  | 15      | 3       | 184             | Fe 213              | Au 156              | 203    | 194          | 7   | 2         | .....   | 126     |  |                     |
| 17 Brushes.....   | 11                        | 63                           | 10                            | 5   | 6       | .....   | 42              | My <sup>2</sup> 43  | Se <sup>2</sup> 41  | 42     | 42           | .....   | .....     | .....   | 24      |  |                     |
| 18 Butter, cheese, and condensed milk.....                                      | 56                        | 277                          | 31                            | 29  | 35      | 23      | 159             | Jy 210              | Fe 121              | 142    | 121          | 21  | .....     | .....   | 288     |  |                     |
| 19 Buttons.....   | 10                        | 385                          | 14                            | 6   | .....   | 3       | 362             | Oc 545              | Jy 332              | 347    | 253          | 91  | 2         | 1       | 232     |  |                     |
| 20 Canning and preserving.....  | 222                       | 1,705                        | 548                           | 95  | 98      | 12      | 952             | Se 4,597            | Ja 178              | 4,701  | 1,394        | 2,509   | 274       | 524     | 974     |  |                     |
| 21 Carpets, rag.....  | 8                         | 38                           | 10                            | .....   | .....   | .....   | 28              | My 41               | Ja 16               | 22     | 16           | 5   | .....     | .....   | 45      |  |                     |
| 22 Carriages and wagons and materials....                                       | 243                       | 3,040                        | 277                           | 166   | 145     | 50      | 3,302           | Ap 3,548            | Ja 3,035            | 3,245  | 3,162        | 71  | 11        | 1       | 5,888   |  |                     |
| 23 Cars and general shop construction and repairs by steam-railroad companies.  | 35                        | 8,620                        | .....                         | 137   | 349     | 13      | 8,121           | Oc 9,215            | Ap 7,103            | 9,014  | 9,005        | 9   | .....     | .....   | 9,642   |  |                     |
| 24 Cars and general shop construction and repairs by street-railroad companies. | 7                         | 931                          | .....                         | 14  | 11      | 1       | 905             | Fe 923              | Ap 891              | 908    | 904          | 1   | 3         | .....   | 3,065   |  |                     |
| 25 Chemicals.....   | 9                         | 845                          | 42                            | 48  | 112     | 24      | 619             | No 648              | Fe <sup>2</sup> 601 | 642    | 533          | 68  | 24        | 17      | 886     |  |                     |
| 26 Clothing, men's, including shirts.....                                       | 84                        | 8,067                        | 52                            | 116   | 437     | 68      | 7,994           | De 8,575            | Ja 7,556            | 8,877  | 1,911        | 6,778   | 19        | 160     | 1,359   |  |                     |
| 27 Clothing, women's.....   | 68                        | 3,122                        | 58                            | 84  | 171     | 50      | 2,750           | Se 2,976            | Ja 2,576            | 2,934  | 548          | 2,321   | 2         | 63      | 487     |  |                     |
| 28 Coffee and spice, roasting and grinding..                                    | 40                        | 1,376                        | 15                            | 89  | 406     | 76      | 730             | No 770              | Je 600              | 738    | 425          | 273   | 31        | 9       | 2,379   |  |                     |
| 29 Coffins, burial cases, and undertakers' goods.                               | 11                        | 672                          | 2                             | 27  | 88      | 15      | 540             | Mh 562              | Je 506              | 539    | 412          | 98  | 20        | 9       | 669     |  |                     |
| 30 Confectionery.....   | 61                        | 2,337                        | 50                            | 70  | 296     | 60      | 1,882           | No 2,250            | Jy 1,685            | 2,275  | 878          | 1,350   | 6         | 41      | 1,268   |  |                     |
| 31 Cooperage and wooden goods, not elsewhere specified.                         | 43                        | 1,209                        | 40                            | 48  | 22      | 11      | 1,088           | Se 1,223            | De 958              | 1,018  | 981          | 8   | 29        | .....   | 2,399   |  |                     |
| 32 Copper, tin, and sheet-iron products....                                     | 207                       | 3,228                        | 203                           | 126   | 202     | 60      | 2,637           | Oc 2,905            | Ja 2,185            | 2,808  | 2,570        | 190   | 30        | 9       | 1,566   |  |                     |
| 33 Cutlery and tools, not elsewhere specified.                                  | 22                        | 346                          | 19                            | 17  | 9       | 12      | 280             | De 321              | Ja 270              | 345    | 330          | 12  | 3         | .....   | 664     |  |                     |
| 34 Dairy-men's, poulterers', and apiarists' supplies.                           | 3                         | 31                           | 1                             | 4   | 1       | 3       | 22              | My <sup>2</sup> 29  | No <sup>2</sup> 13  | 25     | 22           | 1   | 2         | .....   | 58      |  |                     |
| 35 Dentists' materials.....   | 4                         | 22                           | 3                             | 3   | 3       | 2       | 11              | Oc <sup>2</sup> 12  | Ja <sup>2</sup> 11  | 12     | 7            | 3   | 1         | 1       | 9       |  |                     |
| 36 Electrical machinery, apparatus, and supplies.                               | 20                        | 1,410                        | 8                             | 65  | 221     | 65      | 1,060           | De 1,193            | Fe 941              | 1,196  | 937          | 225   | 2         | 32      | 1,190   |  |                     |
| 37 Electroplating.....  | 16                        | 112                          | 20                            | 8   | 1       | 2       | 81              | Oc <sup>2</sup> 87  | Jy 75               | 86     | 82           | .....   | 4         | .....   | 138     |  |                     |
| 38 Enameling and japanning.....   | 3                         | 32                           | 3                             | 1   | .....   | .....   | 28              | Fe 52               | Se 23               | 31     | 30           | 1   | .....     | .....   | .....   |  |                     |
| 39 Flags, banners, regalia, society badges, and emblems.                        | 6                         | 80                           | 6                             | 0   | 18      | 10      | 46              | Se 34               | Fe <sup>2</sup> 43  | 48     | 25           | 10  | 3         | 1       | 21      |  |                     |
| 40 Flour-mill and gristmill products.....                                       | 680                       | 3,602                        | 810                           | 281   | 264     | 49      | 2,198           | Au 2,371            | Je 2,016            | 2,303  | 2,286        | 9   | 8         | .....   | 43,175  |  |                     |
| 41 Food preparations.....   | 37                        | 690                          | 30                            | 38  | 125     | 32      | 471             | No 603              | Je 395              | 504    | 347          | 140   | 8         | .....   | 1,531   |  |                     |
| 42 Foundry and machine-shop products....  | 329                       | 9,051                        | 202                           | 506   | 726     | 174     | 7,443           | No 7,968            | Ja 6,795            | 7,936  | 7,838        | 32  | 66        | .....   | 13,568  |  |                     |
| 43 Fur goods.....   | 8                         | 109                          | 8                             | 5   | 6       | 12      | 78              | De 126              | Mh 41               | 126    | 20           | 96  | 1         | 1       | 29      |  |                     |
| 44 Furnishing goods, men's.....   | 20                        | 399                          | 25                            | 16  | 43      | 10      | 305             | No 374              | Je 250              | 377    | 48           | 310   | 1         | 9       | 48      |  |                     |
| 45 Furniture and refrigerators.....   | 99                        | 3,977                        | 54                            | 197   | 240     | 50      | 3,427           | Oc 3,723            | Jy 3,113            | 3,674  | 3,490        | 88  | 96        | .....   | 6,263   |  |                     |
| 46 Gas and electric fixtures and lamps and reflectors.                          | 10                        | 299                          | 5                             | 24  | 30      | 8       | 232             | De 276              | Je 108              | 276    | 241          | 11  | 22        | 2       | 214     |  |                     |
| 47 Gas, illuminating and heating.....   | 29                        | 1,403                        | 32                            | 56  | 239     | 135     | 941             | Je 1,195            | Ja 732              | 873    | 872          | .....   | 1         | .....   | 3,635   |  |                     |
| 48 Glass.....   | 4                         | 1,830                        | .....                         | 18  | 45      | 12      | 1,755           | No 2,175            | Ja 1,490            | 2,170  | 2,135        | 20  | 15        | .....   | 8,829   |  |                     |
| 49 Hand stamps and stencils and brands....                                      | 15                        | 96                           | 17                            | 12  | 4       | 2       | 61              | De 64               | Je <sup>2</sup> 58  | 64     | 56           | .....   | 8         | .....   | 35      |  |                     |
| 50 Hats and caps, other than felt, straw, and wool.                             | 14                        | 226                          | 16                            | 13  | 13      | 2       | 182             | Au 203              | Fe 163              | 192    | 118          | 71  | 5         | 3       | 59      |  |                     |
| 51 Hats, fur-felt.....  | 4                         | 41                           | 3                             | 2   | 2       | 2       | 32              | Je <sup>2</sup> 34  | Ja <sup>2</sup> 29  | 20     | 15           | 14  | .....     | .....   | 4       |  |                     |
| 52 Ice, manufactured.....   | 92                        | 975                          | 32                            | 114   | 56      | 12      | 761             | Au 1,109            | Ja 401              | 836    | 834          | 1   | 1         | .....   | 22,094  |  |                     |
| 53 Iron and steel, steel works and rolling mills.                               | 4                         | 2,379                        | .....                         | 20  | 107     | 16      | 2,227           | De 3,126            | Ja 1,751            | 3,120  | 3,114        | .....   | 12        | .....   | 6,235   |  |                     |
| 54 Jewelry.....   | 19                        | 472                          | 10                            | 24  | 35      | 27      | 376             | De 396              | Au 345              | 390    | 329          | 53  | 14        | .....   | 169     |  |                     |
| 55 Krollin and ground earths.....   | 6                         | 155                          | .....                         | 15  | 6       | 8       | 131             | Oc 172              | Jy 98               | 177    | 177          | .....   | .....     | .....   | 922     |  |                     |
| 56 Leather goods.....   | 106                       | 2,308                        | 96                            | 117   | 238     | 43      | 1,814           | Mh 1,866            | Ja 1,710            | 1,838  | 1,049        | 174   | 9         | 6       | 5,085   |  |                     |
| 57 Leather, tanned, curried, and finished..                                     | 9                         | 246                          | 3                             | 11  | 8       | 4       | 220             | Au <sup>2</sup> 240 | Ja <sup>2</sup> 200 | 221    | 220          | .....   | 1         | .....   | 519     |  |                     |
| 58 Lime.....  | 31                        | 763                          | 15                            | 31  | 20      | 5       | 692             | Oc 831              | Ja 361              | 688    | 688          | .....   | .....     | .....   | 1,314   |  |                     |
| 59 Liquors, distilled.....  | 28                        | 78                           | 28                            | 11  | 5       | .....   | 34              | Mh 53               | An 11               | 70     | 64           | 0   | .....     | .....   | 644     |  |                     |
| 60 Liquors, malt.....   | 31                        | 6,348                        | 6                             | 133   | 537     | 26      | 5,646           | Au 6,522            | De 5,174            | 5,821  | 5,266        | 493   | 59        | 3       | 30,426  |  |                     |
| 61 Lumber and timber products.....  | 1,098                     | 15,814                       | 1,289                         | 508   | 400     | 95      | 13,522          | No 14,925           | Ja 12,071           | 16,142 | 15,793       | 88  | 284       | 7       | 49,576  |  |                     |
| 62 Marble and stone work.....   | 169                       | 1,710                        | 174                           | 98  | 76      | 20      | 1,342           | Se 1,481            | Ja 952              | 1,419  | 1,416        | 2   | 1         | .....   | 4,396   |  |                     |
| 63 Mattresses and spring beds.....  | 83                        | 439                          | 23                            | 31  | 24      | 11      | 345             | Oc 375              | Au 295              | 373    | 314          | 51  | 6         | 2       | 316     |  |                     |
| 64 Millinery and lace goods.....  | 35                        | 1,143                        | 28                            | 51  | 41      | 89      | 934             | Mh 1,352            | Je 515              | 867    | 127          | 701   | 3         | 36      | 96      |  |                     |
| 65 Mirrors.....   | 6                         | 106                          | 3                             | 9   | 10      | 6       | 99              | Oc 73               | Ja <sup>2</sup> 61  | 70     | 69           | .....   | 1         | .....   | 86      |  |                     |
| 66 Models and patterns, not including paper patterns.                           | 20                        | 161                          | 18                            | 11  | 8       | 4       | 120             | No 140              | Ap 101              | 138    | 119          | 15  | 4         | .....   | 191     |  |                     |

1 No figures given for reasons explained in the Introduction, page 2. See also discussion of wage earners on page 8.

THE STATE, BY INDUSTRIES: 1909.

|    | Capital.      | EXPENSES.     |              |              |               |                         |               |                  |                                    |                |              | Value of products. | Value added by manufacture. |
|----|---------------|---------------|--------------|--------------|---------------|-------------------------|---------------|------------------|------------------------------------|----------------|--------------|--------------------|-----------------------------|
|    |               | Total.        | Services.    |              |               | Materials.              |               | Miscellaneous.   |                                    |                |              |                    |                             |
|    |               |               | Officials.   | Clerks.      | Wage earners. | Fuel and rent of power. | Other.        | Rent of factory. | Taxes, including internal revenue. | Contract work. | Other.       |                    |                             |
| 1  | \$444,343,135 | \$522,275,887 | \$13,003,746 | \$15,080,176 | \$80,842,776  | \$9,780,086             | \$344,022,065 | \$3,180,593      | \$11,436,506                       | \$2,067,451    | \$40,743,488 | \$574,111,070      | \$210,699,919               |
| 2  | 1,724,609     | 804,187       | 46,361       | 39,641       | 210,112       | 16,883                  | 487,668       | 2,405            | 5,174                              | 75             | 76,898       | 981,458            | 476,967                     |
| 3  | 328,958       | 277,672       | 10,835       | 8,682        | 92,118        | 2,137                   | 135,060       | 4,030            | 927                                | 1,900          | 15,068       | 351,585            | 214,379                     |
| 4  | 799,848       | 1,404,317     | 50,852       | 24,003       | 251,848       | 8,523                   | 1,016,021     | 21,859           | 2,306                              | 4,850          | 103,408      | 1,676,810          | 651,606                     |
| 5  | 836,231       | 1,703,280     | 53,413       | 64,290       | 193,475       | 7,074                   | 1,199,363     | 30,288           | 4,052                              | .....          | 150,420      | 1,784,124          | 576,788                     |
| 6  | 88,399        | 209,544       | 11,243       | 13,480       | 18,011        | 1,035                   | 203,802       | 3,168            | 3,383                              | 78             | 17,438       | 204,900            | 90,123                      |
| 7  | 26,143        | 30,272        | 1,650        | 900          | 8,434         | 322                     | 16,827        | 1,805            | 138                                | .....          | 196          | 40,088             | 22,939                      |
| 8  | 472,420       | 410,809       | 24,440       | 16,322       | 31,311        | 3,865                   | 285,708       | 3,150            | 1,178                              | .....          | 44,905       | 445,358            | 165,785                     |
| 9  | 224,699       | 531,036       | 30,311       | 27,239       | 55,201        | 4,656                   | 298,245       | 11,339           | 1,508                              | .....          | 97,437       | 600,365            | 297,464                     |
| 10 | 15,837,749    | 40,532,538    | 507,220      | 928,287      | 8,163,815     | 155,519                 | 34,384,182    | 102,235          | 87,311                             | 183,200        | 2,020,679    | 48,751,235         | 14,211,534                  |
| 11 | 98,019        | 138,355       | 10,301       | 5,266        | 32,476        | 2,050                   | 73,604        | 4,192            | 198                                | .....          | 10,208       | 164,699            | 89,045                      |
| 12 | 932,858       | 1,280,498     | 80,082       | 38,085       | 371,667       | 27,256                  | 642,125       | 37,402           | 3,880                              | 300            | 70,695       | 1,376,340          | 706,959                     |
| 13 | 1,025,133     | 2,004,732     | 46,707       | 32,965       | 196,300       | 21,146                  | 1,632,803     | 4,120            | 4,633                              | .....          | 68,058       | 2,221,038          | 567,080                     |
| 14 | 17,043,475    | 10,113,211    | 243,455      | 742,794      | 2,487,491     | 289,491                 | 10,539,363    | 271,861          | 70,702                             | 13,038         | 1,453,636    | 18,523,826         | 7,694,492                   |
| 15 | 7,138,407     | 3,040,987     | 108,222      | 58,185       | 1,468,929     | 710,154                 | 362,167       | 8,702            | 20,790                             | 77,983         | 216,816      | 3,676,274          | 2,063,953                   |
| 16 | 369,192       | 601,413       | 13,785       | 11,229       | 88,564        | 3,636                   | 407,048       | 4,764            | 1,077                              | .....          | 22,345       | 708,373            | 297,659                     |
| 17 | 69,770        | 119,684       | 4,740        | 4,926        | 27,822        | 707                     | 71,853        | 3,180            | 307                                | .....          | 6,649        | 140,474            | 68,414                      |
| 18 | 709,817       | 2,704,900     | 30,394       | 38,023       | 100,267       | 20,721                  | 2,478,295     | 10,070           | 8,225                              | 36             | 78,020       | 2,958,818          | 459,802                     |
| 19 | 180,269       | 211,987       | 5,484        | 856          | 107,713       | 3,968                   | 82,894        | 1,874            | 235                                | .....          | 8,903        | 265,736            | 178,874                     |
| 20 | 1,780,772     | 1,452,513     | 43,232       | 83,973       | 185,873       | 14,374                  | 990,635       | 8,340            | 4,422                              | .....          | 121,664      | 1,573,835          | 508,826                     |
| 21 | 12,564        | 26,227        | .....        | .....        | 16,101        | 9,949                   | 3,392         | 2,185            | 370                                | .....          | 3,117        | 33,536             | 20,195                      |
| 22 | 7,883,062     | 7,646,070     | 284,126      | 175,184      | 1,780,649     | 62,083                  | 4,797,747     | 103,010          | 32,782                             | 8,675          | 401,814      | 8,468,856          | 3,609,026                   |
| 23 | 7,437,664     | 0,811,812     | 173,545      | 294,692      | 5,006,627     | 268,732                 | 3,850,520     | 4,400            | 19,965                             | .....          | 94,331       | 0,811,811          | 5,683,559                   |
| 24 | 1,159,641     | 1,203,660     | 21,220       | 10,021       | 620,402       | 7,474                   | 493,710       | .....            | 16,804                             | .....          | 33,930       | 1,203,660          | 702,476                     |
| 25 | 3,950,180     | 3,356,570     | 119,832      | 218,444      | 333,338       | 61,982                  | 2,161,082     | 0,300            | 20,806                             | .....          | 430,886      | 3,640,116          | 1,416,152                   |
| 26 | 8,109,057     | 13,849,278    | 244,777      | 500,162      | 2,904,001     | 62,834                  | 9,008,476     | 123,895          | 24,187                             | 153,271        | 737,675      | 15,407,193         | 6,335,883                   |
| 27 | 2,383,665     | 5,041,769     | 157,758      | 179,625      | 1,137,458     | 27,232                  | 3,153,065     | 104,216          | 5,931                              | 19,513         | 256,971      | 5,439,053          | 2,258,756                   |
| 28 | 5,272,818     | 11,236,458    | 229,952      | 615,941      | 342,019       | 73,125                  | 9,118,464     | 96,478           | 21,867                             | 38,145         | 199,467      | 12,061,856         | 2,870,277                   |
| 29 | 1,390,692     | 1,427,370     | 42,610       | 102,020      | 296,036       | 6,407                   | 769,659       | 14,485           | 5,340                              | .....          | 709,886      | 1,565,189          | 789,183                     |
| 30 | 2,931,362     | 5,954,947     | 181,100      | 337,789      | 799,509       | 46,101                  | 3,888,272     | 79,768           | 12,430                             | .....          | 639,919      | 6,658,986          | 2,724,613                   |
| 31 | 1,929,447     | 2,738,801     | 73,592       | 28,312       | 558,116       | 21,539                  | 1,880,202     | 10,439           | 11,015                             | 2,450          | 144,238      | 3,079,368          | 1,177,627                   |
| 32 | 5,716,000     | 7,698,203     | 240,707      | 214,928      | 1,482,058     | 46,754                  | 4,548,386     | 115,512          | 27,517                             | 3,091          | 347,199      | 7,826,669          | 3,228,529                   |
| 33 | 943,381       | 569,151       | 20,068       | 13,084       | 177,320       | 12,725                  | 289,241       | 4,030            | 3,565                              | 30             | 49,982       | 600,395            | 307,429                     |
| 34 | 35,220        | 54,531        | 4,940        | 1,241        | 9,318         | 800                     | 31,554        | 555              | 227                                | 500            | 5,327        | 75,942             | 43,528                      |
| 35 | 71,836        | 98,328        | 0,672        | 4,948        | 7,036         | 429                     | 71,114        | 2,500            | 301                                | .....          | 5,328        | 115,798            | 44,255                      |
| 36 | 3,883,357     | 2,483,933     | 170,866      | 227,873      | 626,627       | 20,273                  | 1,075,617     | 30,202           | 12,125                             | .....          | 290,950      | 3,250,535          | 2,146,245                   |
| 37 | 59,793        | 100,302       | 5,779        | 1,604        | 56,132        | 8,433                   | 14,931        | 8,815            | 373                                | .....          | 4,235        | 126,623            | 103,259                     |
| 38 | 10,625        | 24,392        | 1,201        | .....        | 16,614        | 1,364                   | 3,240         | 1,873            | 47                                 | .....          | 53           | 30,600             | 25,996                      |
| 39 | 55,661        | 78,952        | 7,950        | 4,528        | 17,508        | 783                     | 32,603        | 3,590            | 211                                | 700            | 11,100       | 93,104             | 59,778                      |
| 40 | 17,005,740    | 41,525,668    | 369,155      | 273,474      | 1,040,420     | 395,519                 | 38,430,199    | 27,232           | 67,960                             | 8,631          | 913,990      | 44,508,106         | 5,682,478                   |
| 41 | 3,060,600     | 5,140,195     | 81,535       | 108,495      | 243,832       | 32,324                  | 4,222,120     | 44,021           | 18,857                             | .....          | 259,011      | 5,383,638          | 1,126,194                   |
| 42 | 20,870,221    | 17,556,820    | 919,464      | 754,220      | 4,859,777     | 347,780                 | 8,897,931     | 151,014          | 71,968                             | 166,939        | 1,477,121    | 19,975,149         | 10,819,432                  |
| 43 | 217,730       | 270,291       | 17,000       | 18,413       | 45,183        | 920                     | 146,798       | 20,340           | 614                                | .....          | 20,723       | 313,970            | 166,252                     |
| 44 | 399,352       | 699,581       | 17,095       | 47,197       | 106,379       | 2,051                   | 488,123       | 17,949           | 665                                | .....          | 19,594       | 830,736            | 340,550                     |
| 45 | 6,708,400     | 6,540,923     | 375,044      | 218,729      | 1,048,601     | 63,171                  | 3,263,398     | 75,885           | 37,848                             | .....          | 588,687      | 7,380,091          | 4,053,522                   |
| 46 | 640,320       | 612,894       | 38,710       | 38,484       | 144,103       | 6,889                   | 319,928       | 18,808           | 2,886                              | .....          | 43,530       | 641,562            | 314,745                     |
| 47 | 33,028,814    | 2,962,194     | 108,164      | 248,747      | 635,548       | 1,116,129               | 107,326       | 3,196            | 320,606                            | 50             | 413,410      | 4,637,544          | 3,414,080                   |
| 48 | 5,739,195     | 2,038,901     | 94,945       | 55,026       | 758,491       | 323,963                 | 622,783       | .....            | 13,981                             | .....          | 169,712      | 1,992,883          | 1,046,137                   |
| 49 | 63,435        | 114,614       | 12,980       | 4,306        | 37,410        | 1,537                   | 44,523        | 8,380            | 431                                | 100            | 4,847        | 164,878            | 108,818                     |
| 50 | 152,570       | 394,744       | 24,642       | 13,122       | 106,210       | 3,166                   | 214,918       | 11,892           | 507                                | .....          | 20,287       | 440,083            | 221,998                     |
| 51 | 29,042        | 58,353        | 2,500        | 1,820        | 14,740        | 1,544                   | 20,084        | 0,900            | 135                                | .....          | 10,630       | 76,556             | 54,926                      |
| 52 | 0,947,040     | 1,612,566     | 132,245      | 50,901       | 471,583       | 471,106                 | 196,106       | 70,800           | 33,317                             | 7              | 180,500      | 2,083,886          | 1,416,674                   |
| 53 | 5,200,135     | 5,032,405     | 86,545       | 124,217      | 1,320,285     | 274,892                 | 2,584,183     | 2,000            | 15,813                             | .....          | 624,571      | 5,012,827          | 2,163,842                   |
| 54 | 747,457       | 725,140       | 34,080       | 31,191       | 272,111       | 2,780                   | 320,514       | 23,962           | 1,042                              | .....          | 38,860       | 872,607            | 549,403                     |
| 55 | 817,708       | 241,197       | 19,667       | 5,385        | 67,733        | 19,957                  | 87,852        | 3,262            | 1,684                              | .....          | 35,954       | 323,980            | 216,471                     |
| 56 | 4,678,653     | 5,854,339     | 193,012      | 261,204      | 1,037,180     | 30,954                  | 3,763,615     | 104,500          | 19,044                             | 27,160         | 418,265      | 6,503,878          | 2,713,878                   |
| 57 | 1,478,051     | 1,838,546     | 36,050       | 6,437        | 145,548       | 11,848                  | 1,587,017     | 1,170            | 6,210                              | .....          | 44,266       | 2,034,970          | 436,114                     |
| 58 | 2,399,811     | 884,914       | 44,184       | 17,134       | 317,485       | 200,791                 | 254,134       | 1,400            | 2,894                              | 53             | 40,839       | 1,031,337          | 570,412                     |
| 59 | 345,827       | 545,704       | 10,730       | 6,720        | 14,049        | 6,803                   | 93,997        | 1,570            | 405,440                            | 205            | 6,100        | 612,981            | 312,131                     |
| 60 | 44,661,874    | 22,463,460    | 606,552      | 799,433      | 3,907,649     | 547,158                 | 7,020,598     | 11,262           | 4,469,706                          | .....          | 5,139,684    | 27,446,504         | 10,878,748                  |
| 61 | 18,929,837    | 19,563,048    | 689,064      | 416,899      | 5,897,120     | 109,852                 | 10,503,771    | 69,072           | 126,244                            | 558,654        | 1,192,752    | 23,200,925         | 12,647,273                  |
| 62 | 3,070,438     | 2,942,819     | 144,592      | 73,845       | 989,231       | 88,901                  | 1,357,741     | 32,269           | 13,780                             | 41,583         | 200,877      | 3,440,705          | 1,994,064                   |
| 63 | 570,518       | 809,611       | 36,103       | 23,549       | 180,688       | 8,038                   | 449,186       | 13,515           | 3,359                              | 400            | 88,776       | 958,979            | 501,755                     |
| 64 | 537,641       | 1,462,277     | 11,085       | 48,521       | 276,769       | 8,207                   | 877,094       | 40,335           | 2,945                              | .....          | 127,321      | 1,646,618          | 761,317                     |
| 65 | 119,812       | 214,590       | 16,940       | 7,870        | 41,273        | 2,064                   | 113,225       | 4,370            | 201                                | .....          | 27,857       | 232,033            | 116,144                     |
| 66 | 84,689        | 189,848       | 14,668       | 10,524       | 89,359        | 4,178                   | 46,838        | 8,595            | 494                                | 75             | 15,117       | 236,750            | 185,734                     |

\* Same number reported for one or more other months.

TABLE II.—DETAIL STATEMENT FOR

| INDUSTRY.  | Number of establishments. | PERSONS ENGAGED IN INDUSTRY. |                               |   |         |         |                 |                 |                |                 |        | WAGE EARNERS—NUMBER DEC. 15, OR NEAREST REPRESENTATIVE DAY. |       |           |     | Pri-<br>mary<br>horse-<br>power. |        |
|--|---------------------------|------------------------------|-------------------------------|---|---------|---------|-----------------|-----------------|----------------|-----------------|--------|---|-------|-----------|-----|----------------------------------|--------|
|  |                           | Total.                       | Proprietors and firm members. | Subsidiary officers, superintendents, and managers. | Clerks. |         | Wage earners.   |                 |                |                 | Total. | 16 and over.  |       | Under 16. |     |                                  |        |
|  |                           |                              |                               |   | Male.   | Female. | Average number. | Number.         |                | Male.           |        | Female.   | Male. | Female.   |     |                                  |        |
|  |                           |                              |                               |   |         |         |                 | Maximum month.  | Minimum month. |                 |        |   |       |           |     |                                  |        |
| 67 Musical instruments and materials, not specified.           | 4                         | 14                           | 3                             | 3   |         |         | 8               | My <sup>1</sup> | 8              | Ja <sup>1</sup> | 7      | 8   | 8     |           |     |                                  | 2      |
| 68 Optical goods.  | 5                         | 72                           |                               | 7   | 7       | 4       | 54              | Se              | 59             | Ja              | 50     | 52  | 47    | 3         | 2   |                                  | 29     |
| 69 Paint and varnish.  | 32                        | 1,034                        | 4                             | 98  | 202     | 45      | 685             | Oc              | 759            | Ja              | 492    | 647   | 599   | 41        | 5   | 2                                | 2,706  |
| 70 Paper goods, not elsewhere specified.                       | 11                        | 493                          | 5                             | 22  | 14      | 17      | 435             | De              | 402            | Je              | 403    | 462   | 170   | 252       | 1   | 39                               | 309    |
| 71 Patent medicines and compounds and druggists' preparations. | 185                       | 1,957                        | 150                           | 172   | 398     | 257     | 980             | Mh              | 1,081          | Jy              | 917    | 1,020   | 411   | 588       | 8   | 13                               | 98     |
| 72 Photographic apparatus and materials.                       | 4                         | 304                          |                               | 17  | 20      | 10      | 248             | No              | 256            | Fe              | 241    | 254   | 161   | 74        | 11  | 8                                | 759    |
| 73 Photo-engraving.  | 18                        | 269                          | 13                            | 24  | 34      | 11      | 187             | Se              | 202            | Jy              | 170    | 218   | 290   | 9         | 9   |                                  | 80     |
| 74 Pipes, tobacco.   | 7                         | 336                          | 5                             | 13  | 9       | 2       | 307             | Fe              | 335            | No              | 268    | 203   | 236   | 42        | 11  | 4                                | 243    |
| 75 Pottery, terra-cotta, and fire-clay products.               | 20                        | 3,437                        | 11                            | 74  | 181     | 33      | 3,138           | De              | 3,566          | Ja              | 2,653  | 3,573   | 3,561 | 7         | 5   |                                  | 7,818  |
| 76 Printing and publishing.                                    | 1,322                     | 15,792                       | 1,243                         | 854   | 2,076   | 829     | 10,790          | De              | 11,218         | Jy              | 10,503 | 11,265  | 8,056 | 2,931     | 200 | 78                               | 10,472 |
| 77 Pumps, not including steam pumps.                           | 5                         | 53                           | 4                             | 6   | 6       | 3       | 34              | Se <sup>1</sup> | 41             | Mh <sup>1</sup> | 29     | 39  | 37    | 2         |     |                                  | 91     |
| 78 Scales and balances.  | 3                         | 102                          | 2                             | 8   | 10      | 3       | 79              | No <sup>1</sup> | 104            | Je <sup>1</sup> | 69     | 104   | 104   |           |     |                                  | 110    |
| 79 Show cases.   | 8                         | 237                          | 3                             | 12  | 11      | 2       | 209             | Oc              | 225            | Ja              | 198    | 222   | 221   | 1         |     |                                  | 109    |
| 80 Signs and advertising novelties.                            | 14                        | 220                          | 12                            | 10  | 32      | 18      | 148             | Oc              | 175            | Mh              | 94     | 155   | 129   | 23        | 3   |                                  | 29     |
| 81 Slaughtering and meat packing.                              | 45                        | 5,520                        | 34                            | 95  | 647     | 79      | 4,674           | Fe              | 4,903          | My              | 4,367  | 4,822   | 4,658 | 158       | 6   |                                  | 11,755 |
| 82 Soap.   | 10                        | 833                          | 3                             | 20  | 231     | 30      | 554             | Ap              | 577            | Ja              | 527    | 564   | 426   | 123       | 1   | 14                               | 954    |
| 83 Stereotyping and electrotyping.                             | 7                         | 143                          | 5                             | 12  | 13      | 3       | 110             | No <sup>1</sup> | 114            | Jy <sup>1</sup> | 104    | 114   | 108   |           | 6   |                                  | 208    |
| 84 Stoves and furnaces, including gas and oil stoves.          | 20                        | 2,430                        | 4                             | 87  | 285     | 41      | 2,013           | No              | 2,267          | Ja              | 1,387  | 2,227   | 2,207 | 2         | 18  |                                  | 2,241  |
| 85 Surgical appliances and artificial limbs.                   | 15                        | 67                           | 12                            | 6   | 7       | 5       | 37              | Ap <sup>1</sup> | 38             | Ja <sup>1</sup> | 37     | 37  | 30    | 7         |     |                                  | 16     |
| 86 Tobacco manufactures.                                       | 477                       | 5,980                        | 511                           | 141   | 816     | 59      | 4,453           | Fe              | 4,650          | Ap              | 4,000  | 4,680   | 2,916 | 1,695     | 60  | 0                                | 2,034  |
| 87 Type founding and printing materials.                       | 7                         | 234                          | 3                             | 9   | 42      | 16      | 164             | Oc              | 188            | Se              | 150    | 181   | 124   | 36        | 12  | 0                                | 125    |
| 88 Wirework, including wire rope and cable.                    | 14                        | 865                          | 9                             | 23  | 109     | 14      | 710             | Au              | 761            | Ja              | 588    | 747   | 689   | 55        | 3   |                                  | 902    |
| 89 All other industries <sup>2</sup> .                         | 550                       | 17,987                       | 419                           | 654   | 1,151   | 293     | 15,470          |                 |                |                 |        |   |       |           |     |                                  | 38,871 |

<sup>1</sup> Same number reported for one or more other months.

<sup>2</sup> All other industries embrace—

|  |   |  |    |   |    |
|--|---|--|----|---|----|
| Artificial flowers and feathers and plumes.                            | 3 | Clocks and watches, including cases and materials. | 2  | Fuel, manufactured.   | 1  |
| Axle grease.   | 3 | Clothing, horse.                                   | 1  | Furs, dressed.  | 2  |
| Babbitt metal and solder.  | 5 | Cordage and twine and jute and linen goods.        | 4  | Galvanizing.  | 1  |
| Bags, other than paper.  | 6 | Cordials and sirups.                               | 5  | Glass, cutting, staining, and ornamenting.  | 18 |
| Bags, paper.   | 2 | Cork, cutting.                                     | 1  | Gloves and mittens, leather.  | 2  |
| Bicycles, motorcycles, and parts.                                      | 2 | Corsets.   | 2  | Glucose and starch.   | 1  |
| Billiard tables and materials.   | 3 | Cotton goods, including cotton small wares.        | 2  | Glue.   | 1  |
| Bluing.  | 4 | Dyeing and finishing textiles.                     | 1  | Grease and tallow.  | 8  |
| Boots and shoes, rubber.   | 1 | Engravers' materials.                              | 2  | Hair work.  | 5  |
| Butter, reworking.   | 1 | Engraving and diesinking.                          | 4  | Hats, straw.  | 2  |
| Calcium lights.  | 2 | Engraving, wood.                                   | 10 | Hosiery and knit goods.   | 2  |
| Candles.   | 1 | Explosives.  | 3  | House-furnishing goods, not elsewhere specified.  | 5  |
| Carrriages and sleds, children's.                                      | 1 | Fancy articles, not elsewhere specified.           | 2  | Ink, printing.  | 2  |
| Cars, steam-railroad, not including operations of railroad companies.  | 7 | Fertilizers.                                       | 5  | Ink, writing.   | 1  |
| Cars, street-railroad, not including operations of railroad companies. | 2 | Firearms and ammunition.                           | 1  | Instruments, professional and scientific.   | 4  |
| Cash registers and calculating machines.                               | 4 | Fire extinguishers, chemical.                      | 3  | Iron and steel, blast furnaces.   | 2  |
| Cement.  | 4 | Fireworks.   | 1  | Iron and steel, bolts, nuts, washers, and rivets, not made in steel works or rolling mills. | 1  |
| Charcoal.  | 1 | Flavoring extracts.                                | 12 | Iron and steel, doors and shutters.   | 1  |
|  |   | Foundry supplies.                                  | 1  | Iron and steel forgings.  | 1  |

MANUFACTURES—MISSOURI.

THE STATE, BY INDUSTRIES: 1909—Continued.

| Capital.      | EXPENSES.  |            |           |               |                         |            |                  |                                    |                |           | Value of products. | Value added by manufacture. |
|---------------|------------|------------|-----------|---------------|-------------------------|------------|------------------|------------------------------------|----------------|-----------|--------------------|-----------------------------|
|               | Total.     | Services.  |           |               | Materials.              |            | Miscellaneous.   |                                    |                |           |                    |                             |
|               |            | Officials. | Clerks    | Wage earners. | Fuel and rent of power. | Other.     | Rent of factory. | Taxes, including internal revenue. | Contract work. | Other.    |                    |                             |
| 67 \$26,880   | \$19,142   | \$4,311    |           | \$4,885       | \$219                   | \$7,901    | \$980            | \$49                               |                | \$797     | \$24,973           | \$16,853                    |
| 68 92,103     | 148,239    | 8,320      | \$7,633   | 30,193        | 1,730                   | 73,811     | 4,020            | 406                                |                | 22,126    | 170,591            | 95,050                      |
| 69 5,294,896  | 6,206,694  | 238,996    | 264,159   | 366,164       | 47,258                  | 4,651,002  | 32,505           | 25,762                             | \$860          | 579,988   | 6,827,747          | 2,129,487                   |
| 70 739,192    | 800,723    | 51,651     | 22,873    | 177,982       | 7,500                   | 439,030    | 12,483           | 2,850                              | 1,851          | 84,593    | 921,760            | 475,230                     |
| 71 5,125,636  | 5,891,917  | 437,416    | 561,118   | 415,439       | 24,581                  | 2,511,536  | 90,881           | 20,984                             | 49,525         | 1,780,437 | 7,639,159          | 5,103,042                   |
| 72 1,463,608  | 1,010,270  | 58,780     | 43,954    | 136,103       | 13,358                  | 570,920    | 600              | 26,706                             |                | 159,849   | 1,415,472          | 831,194                     |
| 73 161,408    | 388,099    | 34,557     | 27,757    | 164,527       | 6,779                   | 75,001     | 14,239           | 424                                | 7,573          | 57,242    | 450,409            | 368,629                     |
| 74 242,477    | 320,704    | 14,943     | 8,422     | 106,731       | 3,321                   | 166,041    |                  | 896                                |                | 20,350    | 395,606            | 226,244                     |
| 75 13,246,816 | 3,493,528  | 192,648    | 212,224   | 1,554,141     | 499,731                 | 576,438    | 9,650            | 40,016                             | 4,757          | 463,923   | 4,068,701          | 2,992,632                   |
| 76 21,998,017 | 25,140,164 | 1,730,506  | 2,525,240 | 6,609,759     | 294,498                 | 8,332,344  | 543,792          | 87,774                             | 810,272        | 4,290,159 | 29,651,153         | 21,024,401                  |
| 77 98,485     | 115,772    | 7,200      | 14,181    | 16,744        |                         | 904        | 65,496           | 1,842                              |                | 800       | 146,375            | 79,978                      |
| 78 145,601    | 177,666    | 13,600     | 7,877     | 43,506        |                         | 2,406      | 69,628           | 2,860                              |                | 460       | 201,311            | 129,277                     |
| 79 314,201    | 360,390    | 22,288     | 8,711     | 137,417       |                         | 4,962      | 165,374          | 10,656                             | 1,234          |           | 433,085            | 262,749                     |
| 80 349,975    | 525,470    | 15,399     | 33,442    | 126,163       |                         | 1,411      | 160,275          | 10,534                             | 605            | 14,114    | 582,896            | 421,210                     |
| 81 18,786,840 | 78,268,807 | 225,120    | 619,647   | 2,672,620     | 363,710                 | 71,834,554 | 18,953           | 35,161                             |                | 2,499,042 | 79,581,294         | 7,383,030                   |
| 82 2,658,565  | 4,063,899  | 60,583     | 171,954   | 271,640       | 38,111                  | 3,016,588  | 6,028            | 8,940                              | 90,000         | 400,055   | 4,719,352          | 1,664,653                   |
| 83 124,248    | 195,939    | 27,175     | 12,558    | 83,699        |                         | 6,424      | 49,750           | 6,357                              |                | 690       | 220,156            | 163,981                     |
| 84 8,294,020  | 5,696,347  | 264,966    | 331,660   | 1,426,432     | 43,546                  | 2,802,799  | 25,555           | 41,712                             |                | 750,677   | 6,712,698          | 3,866,353                   |
| 85 83,020     | 103,031    | 12,834     | 5,928     | 24,304        |                         | 703        | 21,482           | 7,760                              | 272            | 666       | 143,311            | 121,126                     |
| 86 17,341,649 | 29,124,106 | 438,737    | 932,924   | 2,235,083     | 69,098                  | 16,476,848 | 65,443           | 4,782,264                          | 97             | 4,123,642 | 30,050,638         | 14,404,722                  |
| 87 571,147    | 303,639    | 27,320     | 35,087    | 83,446        |                         | 5,195      | 87,690           | 11,710                             |                | 1,737     | 337,977            | 245,173                     |
| 88 2,259,532  | 2,745,331  | 104,318    | 146,111   | 378,955       | 21,517                  | 1,712,634  | 6,393            | 11,020                             |                | 364,397   | 3,395,279          | 1,662,128                   |
| 89 61,522,777 | 62,424,259 | 1,390,227  | 1,299,273 | 8,423,734     | 2,297,070               | 44,371,427 | 250,543          | 257,442                            | 350,600        | 3,867,934 | 67,053,680         | 29,478,183                  |

<sup>2</sup> All other industries embrace—Continued.

|   |     |  |   |   |    |
|---|-----|--|---|---|----|
| Jewelry and instrument cases.....   | 2   | Peanuts, grading, roasting, cleaning, and shell-<br>ing..... | 2 | Steam packing.....  | 2  |
| Labels and tags.....  | 7   | Petroleum, refining.....                                     | 1 | Tin foil.....   | 1  |
| Lard, refined, not made in slaughtering and<br>meat-packing establishments..... | 1   | Roofing materials.....                                       | 5 | Toys and games.....   | 5  |
| Lasts.....  | 1   | Safes and vaults.....  | 1 | Umbrellas and canes.....                                      | 4  |
| Lead, bar, pipe, and sheet.....   | 2   | Saws.....  | 2 | Upholstering materials.....                                   | 3  |
| Liquors, vinous.....  | 6   | Screws, machine.....   | 1 | Vault lights and ventilators.....                             | 1  |
| Looking-glass and picture frames.....   | 11  | Sewing machines, cases, and attachments.....                 | 2 | Vinegar and cider.....  | 24 |
| Malt.....   | 4   | Shipyards, including boat building.....                      | 1 | Washing machines and clothes wringers.....                    | 5  |
| Mineral and soda waters.....  | 176 | Silverware and plated ware.....                              | 1 | Wheelbarrows.....   | 1  |
| Mucilage and paste.....   | 7   | Smelting and refining, copper.....                           | 1 | Whips.....  | 1  |
| Musical instruments, pianos and organs, and<br>materials.....                   | 5   | Smelting and refining, lead.....                             | 5 | Window shades and fixtures.....                               | 5  |
| Oil, castor.....  | 1   | Smelting and refining, zinc.....                             | 2 | Wood distillation, not including turpentine and<br>rosin..... | 1  |
| Oil, cottonseed, and cake.....  | 4   | Smelting and refining, not from the ore.....                 | 1 | Wood preserving.....  | 3  |
| Oil, linseed.....   | 2   | Soda-water apparatus.....                                    | 2 | Wood, turned and curved.....                                  | 35 |
| Oil, not elsewhere specified.....   | 2   | Sporting and athletic goods.....                             | 6 | Wool, pulling.....  | 3  |
| Oleomargarine.....  | 1   | Springs, steel, car and carriage.....                        | 3 | Wool scouring.....  | 1  |
| Paper and wood pulp.....  | 1   | Stationery goods, not elsewhere specified.....               | 3 | Woolen, worsted, and felt goods, and wool hats.....           | 2  |
|   |     | Statuary and art goods.....                                  | 7 |   |    |



## MANUFACTURES : MONTANA.

## STATISTICS OF MANUFACTURES FOR THE STATE, CITIES, AND INDUSTRIES

Prepared under the supervision of W. M. STEUART, Chief Statistician for Manufactures

## INTRODUCTION.

This advance bulletin gives the statistics of manufactures for the state of Montana for the calendar year 1909 as shown by the Thirteenth Census. It will be reprinted without change as a part of the state Compendium of the Census for Montana and in the final reports of the Thirteenth Census.

The text summarizes the general results of the census inquiry, presenting a series of special tables in which the main facts printed in the general tables are given in convenient form for the state as a whole and for important industries. It also presents tables in which the statistics for the industries of the state as a whole and for a few important industries are classified by character of ownership, size of establishments, number of wage earners, and prevailing hours of labor, information which could not be presented in general tables for each industry without disclosing the facts for individual establishments.

At the end of the bulletin are two general tables.

Table I gives for 1909, 1904, and 1899 the number of establishments and of persons engaged in the industries, primary power, capital, salaries and wages, cost of materials, value of products, and value added by manufacture reported for all industries combined and for certain important industries for the state. It also gives the same items for all industries combined for every city, except Great Falls, having in 1910 a population of over 10,000.

Table II gives statistics in detail for 1909 for the state and for a larger number of industries.

**Scope of census: Factory industries.**—Census statistics of manufactures are compiled primarily for the purpose of showing the absolute and relative magnitude of the different branches of industry covered and their growth or decline. Incidentally, the effort is made to present data throwing light upon character of organization, location of establishments, size of establishments, labor force, and similar subjects. When use is made of the data for these purposes it is imperative that due attention should be given to the limitations of the figures. Particularly is this true when the attempt is made to derive from them figures purporting to show average wages, cost of production, or profits. These limitations will be fully discussed in the general report on manufactures for the United States as a whole. It is impossible to reproduce such discussion in the bulletins relative to the individual states.

The census of 1909, like that of 1904, was confined to manufacturing establishments conducted under the factory system, as distinguished from the neighborhood, hand, and building industries. Where statistics for 1899 are given they have been reduced

to a comparable basis by eliminating the latter classes of industries. The census does not include establishments which were idle during the entire year or had a value of products of less than \$500, or the manufacturing done in educational, eleemosynary, and penal institutions, or in governmental establishments, except those of the Federal Government.

**Period covered.**—The returns cover the calendar year 1909, or the business year which corresponds most nearly to that calendar year. The statistics cover a year's operations, except for establishments which began or discontinued business during the year.

**The establishment.**—The term "establishment" comprises the factories, mills, or plants which are under a common ownership or control, and for which one set of books of account is kept.

If, however, the plants constituting an establishment as thus defined were not all located within the same city or state, separate reports were secured in order that the separate totals might be included in the statistics for each city or state. In some instances separate reports were secured for different industries carried on in the same establishment.

**Classification by industries.**—The establishments were assigned to the several classes of industries according to their products of chief value. The products reported for a given industry may thus, on the one hand, include minor products very different from those covered by the class designation, and, on the other hand, may not include the total product covered by this designation, because some part of this product may be made in establishments in which it is not the product of chief value.

**Selected industries.**—The general tables at the end of this bulletin give the principal facts separately for the industries of the state. A selection has been made of the leading industries of the state for more detailed consideration. Sometimes an industry of greater importance than some of those selected is omitted because it comprises so few establishments that these detailed presentations would reveal the operations of individual concerns.

**Comparisons with previous censuses.**—Owing to the changes in industrial conditions it is not always possible to classify establishments by industries in such a way as to permit accurate comparison with preceding censuses. Table I, giving comparable figures for 1909, 1904, and 1899, therefore, does not embrace all the industries shown for 1909 in Table II.

**Influence of increased prices.**—In considering changes in cost of materials, value of products, and value added by manufacture, account should be taken of the general increase in the prices of commodities during recent years. To the extent to which this factor has been influential the figures can not be taken as an exact measure of increase in the volume of business.

**Persons engaged in industry.**—At the censuses of 1909, 1904, and 1899, the following general classes of persons engaged in manufacturing industries have been distinguished: (1) Proprietors and firm members, (2) salaried officers of corporations, (3) superintendents and managers, (4) clerks, and (5) wage earners. In the censuses of 1904 and 1899 these five classes were shown according to the three main groups: (1) Proprietors and firm members, (2) salaried officials, clerks, etc., and (3) wage earners. The second group included the three classes of salaried officers of corporations, superintendents and

managers, and clerks. In the present census an entirely different grouping is employed: That into (1) proprietors and officials, (2) clerks, and (3) wage earners. The first group includes proprietors and firm members, salaried officers of corporations, and superintendents and managers.

At this census the number of persons engaged in the industries, segregated by sex, and, in the case of wage earners, also by age (whether under 16 or 16 and over), was reported for December 15, or the nearest representative day. The 15th of December was selected as representing for most industries normal conditions of employment, but where conditions were exceptional, and particularly in the case of certain seasonal industries, such as canning, the December date could not be accepted as typical and an earlier date had to be chosen.

In the case of employees other than wage earners the number thus reported on December 15 or other representative day has been treated as equivalent to the average for the year, since the number of employees of this class does not vary much from month to month in a given industry. In the case of wage earners the average is obtained in the manner explained in the next paragraph.

**Wage earners.**—In addition to the report by sex and age of the number of wage earners on December 15 or other representative day, a report was obtained of the number employed on the 15th of each month, without distinction of sex or age. From these figures the average number of wage earners for the year has been calculated by dividing the sum of the numbers reported each month by 12. The average thus obtained represents the number of wage earners that would be required to perform the work done if all were constantly employed during the entire year. Accordingly, the importance of any industry as an employer of labor is believed to be more accurately measured by this average than by the number employed at any one time or on a given day.

The number of wage earners reported for the representative day, though given for each separate industry, is not totaled for all industries combined, because in view of the variations of date such a total is believed not to be significant. It would involve more or less duplication of persons working in different industries at different times, would not represent the total number employed in all industries at any one time, and would give an undue weight to seasonal industries, as compared with industries in continual operation.

In particular, totals by sex and age for the wage earners reported for the representative day would be misleading because of the undue weight given to seasonal industries, in some of which, such as canning and preserving, the distribution of the wage earners by sex and age is materially different from that in most industries of more regular operation. In order to determine as nearly as possible the sex and age distribution of the average number of wage earners in the state as a whole, the following procedure has been adopted:

The percentage distribution by sex and age of the wage earners in each industry, for December 15 or the nearest representative day, has been calculated from the actual numbers reported for that date. This percentage has been applied to the average number of wage earners for the year in that industry, to determine the average number of men, women, and children employed. These calculated averages for the several industries have been added up to give the average distribution for the state as a whole.

In 1899 and 1904 the schedule called for the average number of wage earners of each sex 16 years and over, and the total number under 16 years of age, for each month, and these monthly statements were combined in an annual average. Comparatively few manufacturing concerns, however, keep their books in such way as to show readily the number of men, women, and children (under 16) employed each month. These monthly returns by sex and age were, in fact, largely estimates. It was believed that a more accurate and reliable sex and age distribution could be secured by taking as a basis of estimate the actual numbers employed on a single day.

**Prevailing hours of labor.**—The census made no attempt to ascertain the number of employees working a given number of hours per week. The inquiry called merely for the prevailing practice followed in each establishment. Occasional variations in hours in an establishment from one period to another are disregarded, and no attention is given to the fact that a limited number of employees may have hours differing from those of the majority. In the tables all the wage earners of each establishment are counted in the class within which the establishment itself falls. In most establishments, however, all or practically all the employees work the same number of hours, so that these figures give a substantially correct picture of the hours of labor in manufacturing industries.

**Capital.**—For reasons stated in prior census reports, the statistics of capital secured by the census canvass are so defective as to be without value, except as indicating very general conditions. The instructions on the schedule for securing capital were as follows:

The answer should show the total amount of capital, both owned and borrowed, on the last day of the business year reported. All the items of fixed and live capital may be taken at the amounts carried on the books. If land or buildings are rented, that fact should be stated and no value given. If a part of the land or buildings is owned, the remainder being rented, that fact should be so stated and only the value of the owned property given. Do not include securities and loans representing investments in other enterprises.

**Materials.**—Cost of materials refers to the materials used during the year, which may be more or less than the materials purchased during the year. The term materials includes fuel, rent of power and heat, mill supplies, and containers, as well as materials forming a constituent part of the product. Fuel includes all fuel used, whether for heat, light, or power, or for the process of manufacture.

**Expenses.**—Under "Expenses" are included all items of expense incident to the year's business, except interest, whether on bonds or other forms of indebtedness, dividends on stock, and allowances for depreciation.

**Value of products.**—The value of products for any industry includes the total value of all products manufactured in establishments whose products of chief value fall under the industry designation. The amounts given represent the selling value at the factory of all products manufactured during the year, which may differ from the value of the products sold. Amounts received for work on materials furnished by others are included.

**Value added by manufacture.**—The value of products is not a satisfactory measure of either the absolute or the relative importance of a given industry, because only a part of this value is actually created by the manufacturing process carried on in the industry itself. Another part of it, and often by far the larger part, represents the value of the materials used, which have been produced by agriculture or mining or by other industrial establishments. For many purposes, therefore, the best measure of the importance of different classes of industry is the value created as the result of the manufacturing operations carried on within the industry. This value is obtained by deducting the cost of the materials consumed from the value of the product. The figure thus obtained is termed in the census reports "value added by manufacture."

There is a further statistical advantage which "value added" has over gross value of products. In combining the value of products for all industries the value of products produced by one establishment and used as materials in another is duplicated, and the total, therefore, gives a greatly exaggerated idea of the wealth created. No such duplication takes place in the total "value added by manufacture."

**Cost of manufacture and profits.**—Census data do not show the entire cost of manufacture, and consequently can not be used to show profits. No account has been taken of interest and depreciation. Even if the amount of profit could be determined by deducting the expenses from the value of the products the rate of profit on the investment could not properly be calculated, because of the very defective character of the returns regarding capital.

**Primary power.**—The figures given for this item show the total of the primary power used by the establishments. They do not cover the power developed by motors operated by such power, the inclusion of which would evidently result in duplication.

**Location of establishments.**—The Census Bureau has classified establishments by their location in cities or classes of cities. In interpreting these figures due consideration should be given to the fact that often establishments are located just outside the boundaries of cities, and are necessarily so classified, though locally they are looked upon as constituting a part of the manufacturing interests of the cities.

**Laundries.**—The census of 1909 was the first to include statistics of laundries. The reports are confined to establishments using mechanical power. The data are presented separately and are not included in the general total for manufacturing industries, in order to avoid interference with comparisons with prior censuses.

**Custom grist and saw mills.**—In order to make the statistics for 1909 comparable with those for 1904 the data for these mills have been excluded from all the tables presenting general statistics, and are given in a separate table at the end of this report.

**INDUSTRIES IN GENERAL.**

**General character of the state.**—Montana, with a land area of 146,201 square miles, ranks third in size among the states of the Union. Its population in 1910 was 376,053, as compared with 243,329 in 1900 and 142,924 in 1890. It ranked fortieth among the 49 states and territories of continental United States as regards population in 1910 and forty-third in 1900. Thirty-five and five-tenths per cent of the entire population of the state resides in incorporated cities and towns having populations of 2,500 inhabitants or over, as against 34.7 per cent in 1900.

The state has six cities each having a population of over 10,000: Butte, with a population of 39,165; Great Falls, with 13,948; Missoula, with 12,869; Helena, with 12,515; Anaconda, with 10,134; and Billings, with 10,031. The density of population, which is only 2.6 persons per square mile, shows the state to be but sparsely settled. The corresponding figure for 1900 was 1.7 persons.

Eastern Montana is a high plateau devoted mainly to stock raising, is very sparsely settled, with no large cities and with very limited railway facilities. The

western part of the state is mountainous, more largely a mining and manufacturing community, with several cities of commercial importance, and has better transportation facilities than the eastern section of the state. There are no navigable rivers of great importance in the state, but several mountain streams are important because of the development of their water power and their use in irrigation.

**Importance and growth of manufactures.**—Although Montana is not relatively important as a manufacturing community, at the last two censuses the manufactures of the state have shown, on the whole, considerable increase. The industries of the state are those to which its natural resources give rise, the principal ones being mining, agriculture, and stock raising. Its principal manufacturing industries are those supplementary to its mining interests.

The following table gives the most important figures relative to all classes of manufactures combined for the state as returned at the censuses of 1909, 1904, and 1899, together with the percentages of increase from census to census:

|  | NUMBER OR AMOUNT. |              |                  | PER CENT OF INCREASE. <sup>1</sup> |                  |
|--|-------------------|--------------|------------------|------------------------------------|------------------|
|  | 1900              | 1904         | 1899             | 1904-1900                          | 1899-1904        |
| Number of establishments.....  | 677               | 382          | 395              | 77.2                               | -3.3             |
| Persons engaged in manufactures.....                                       | 13,694            | 10,196       | ( <sup>2</sup> ) | 34.3                               | ( <sup>2</sup> ) |
| Proprietors and firm members.....  | 659               | 334          | ( <sup>2</sup> ) | 97.3                               | ( <sup>2</sup> ) |
| Salaried employees.....  | 1,380             | 905          | 508              | 52.5                               | 78.1             |
| Wage earners (average number).....   | 11,655            | 8,957        | 9,854            | 30.1                               | -9.1             |
| Primary horsepower.....  | 90,402            | 46,736       | 43,679           | 93.4                               | 7.0              |
| Capital.....   | \$44,588,000      | \$52,590,000 | \$38,225,000     | -15.2                              | 37.6             |
| Expenses.....  | 66,830,000        | 55,140,000   | 39,817,000       | 21.2                               | 38.5             |
| Services.....  | 12,955,000        | 10,158,000   | 8,163,000        | 27.5                               | 24.4             |
| Salaries.....  | 2,054,000         | 1,506,000    | 780,000          | 36.4                               | 91.6             |
| Wages.....   | 10,901,000        | 8,652,000    | 7,377,000        | 26.0                               | 17.3             |
| Materials.....   | 49,180,000        | 40,930,000   | 30,068,000       | 20.2                               | 36.1             |
| Miscellaneous.....   | 4,695,000         | 4,052,000    | 1,580,000        | 15.8                               | 155.5            |
| Value of products.....   | 73,272,000        | 66,415,000   | 52,745,000       | 10.3                               | 25.9             |
| Value added by manufacture (value of products less cost of materials)..... | 24,092,000        | 25,485,000   | 22,677,000       | -5.5                               | 12.4             |

<sup>1</sup> A minus sign (-) denotes decrease.

<sup>2</sup> Figures not available.

In 1909 the state of Montana had 677 manufacturing establishments operating under the factory system, which gave employment to an average of 13,694 persons during the year and paid out \$12,955,000 in salaries and wages. Of the persons employed, 11,655 were wage earners. These establish-

ments turned out products to the value of \$73,272,000, to produce which materials costing \$49,180,000 were consumed. The value added by manufacture was thus \$24,092,000, which figure, as explained in the Introduction, best represents the net wealth created by manufacturing operations during the year.

## STATISTICS OF MANUFACTURES—MONTANA.

In general, this table brings out the fact that the manufacturing industries of Montana as a whole showed considerable growth during both the five year periods 1899-1904 and 1904-1909. During the later period the number of establishments increased 77.2 per cent and the average number of wage earners 30.1 per cent, but while the value of products increased 10.3 per cent the value added by manufacture decreased 5.5 per cent. The decrease in value added by manufacture is largely accounted for by conditions in

the copper smelting and refining industry. In this industry the establishments are generally operated as departments of the mining companies which produce the ore, and hence the cost of materials charged against them by the mining companies is often a matter of bookkeeping and has varied greatly in its relation to the value of products at the last three censuses.

The relative importance and growth of the leading manufacturing industries of the state are shown in the following table:

| INDUSTRY.   | Number of establishments. | WAGE EARNERS.   |                       | VALUE OF PRODUCTS. |                       | VALUE ADDED BY MANUFACTURE. |                       | PER CENT OF INCREASE. <sup>1</sup> |           |                             |           |
|---|---------------------------|-----------------|-----------------------|--------------------|-----------------------|-----------------------------|-----------------------|------------------------------------|-----------|-----------------------------|-----------|
|   |                           | Average number. | Percent distribution. | Amount.            | Percent distribution. | Amount.                     | Percent distribution. | Value of products.                 |           | Value added by manufacture. |           |
|   |                           |                 |                       |                    |                       |                             |                       | 1904-1909                          | 1899-1904 | 1904-1909                   | 1899-1904 |
|   |                           |                 |                       |                    |                       |                             |                       |                                    |           |                             |           |
| All industries.....   | 677                       | 11,655          | 100.0                 | \$73,272,000       | 100.0                 | \$24,092,000                | 100.0                 | 10.3                               | 25.9      | -5.5                        | 12.4      |
| Lumber and timber products.....   | 155                       | 3,106           | 26.6                  | 6,334,000          | 8.6                   | 4,469,000                   | 18.5                  | 102.9                              | 2.5       | 67.6                        | 31.4      |
| Cars and general shop construction and repairs by steam-railroad companies..... | 12                        | 1,913           | 16.4                  | 2,811,000          | 3.8                   | 1,725,000                   | 7.2                   | 78.8                               | 108.5     | 91.2                        | 99.1      |
| Liquors, malt.....  | 21                        | 246             | 2.1                   | 2,440,000          | 3.3                   | 1,838,000                   | 7.6                   | 40.9                               | 35.7      | 47.6                        | 38.3      |
| Flour-mill and gristmill products.....  | 12                        | 105             | 0.9                   | 2,175,000          | 3.0                   | 482,000                     | 2.0                   | 8.6                                | 113.8     | 17.3                        | 152.1     |
| Printing and publishing.....  | 135                       | 691             | 5.9                   | 2,111,000          | 2.9                   | 1,708,000                   | 7.1                   | 42.0                               | 51.6      | 44.7                        | 49.9      |
| Slaughtering and meat packing.....  | 9                         | 105             | 0.9                   | 2,054,000          | 2.8                   | 273,000                     | 1.1                   |                                    |           |                             |           |
| Bread and other bakery products.....  | 71                        | 214             | 1.8                   | 1,096,000          | 1.5                   | 478,000                     | 2.0                   | 48.1                               | 77.9      | 23.5                        | 80.8      |
| Foundry and machine-shop products.....  | 14                        | 316             | 2.7                   | 850,000            | 1.3                   | 605,000                     | 2.5                   | 13.1                               | -27.2     | 18.9                        | -33.8     |
| Brick and tile.....   | 21                        | 189             | 1.6                   | 371,000            | 0.5                   | 288,000                     | 1.2                   | 107.3                              | 33.6      | 104.3                       | 35.6      |
| Tobacco manufactures.....   | 53                        | 91              | 0.8                   | 320,000            | 0.4                   | 188,000                     | 0.8                   | 18.1                               | 55.7      | 13.3                        | 59.6      |
| Marble and stone work.....  | 21                        | 78              | 0.7                   | 230,000            | 0.3                   | 173,000                     | 0.7                   |                                    |           |                             |           |
| Leather goods.....  | 16                        | 36              | 0.3                   | 192,000            | 0.3                   | 108,000                     | 0.4                   |                                    |           |                             |           |
| Copper, tin, and sheet-iron products.....                                       | 9                         | 31              | 0.3                   | 137,000            | 0.2                   | 72,000                      | 0.3                   | 191.5                              |           | 166.7                       |           |
| All other industries.....   | 128                       | 4,534           | 38.9                  | 52,015,000         | 71.0                  | 11,685,000                  | 48.5                  |                                    |           |                             |           |

<sup>1</sup> Per cent of increase is based on figures in Table I, and a minus sign (-) denotes decrease.

The most important industries listed in this table, in which they are arranged in the order of the value of products, call for brief consideration. It should be stated in this connection that statistics for copper smelting and refining, by far the most important manufacturing industry in the state, can not be shown, because to do so would tend to disclose the operations of individual establishments. The industries for which figures are shown in this table, with possibly one exception, have apparently been established to meet the local demand for their products.

*Lumber and timber products.*—This is the most important manufacturing industry for which figures are shown. In 1909 it gave employment to an average of 3,106 wage earners, or 26.6 per cent of the total number for all industries, and its products amounted to \$6,334,000, forming 8.6 per cent of the total. The statistics showing number of wage earners, amount paid in wages, and value of products all indicate a considerable growth of the industry. The classification includes the operation of timber plants, saw mills, and planing mills, most of which are in the wooded rural regions of the state.

*Cars and general shop construction and repairs by steam railroads.*—This industry embraces the work done in the car shops operated by steam-railroad companies and does not include minor repairs made at the roundhouses. The operations consist almost exclusively of repairs to rolling stock and equipment. In 1909 the industry gave employment to an average of 1,913 wage earners, or 16.4 per cent of the total for the state, and the value of its products, \$2,811,000, formed 3.8 per cent of the total for the state.

*Liquors, malt.*—This industry shows a steady growth in value of products and value added by manufacture for the last two census periods. The percentage of increase in value of products for the five-year period 1904-1909 was 40.9; that for the five-year period 1899-1904 was 35.7. The corresponding increases in value added by manufacture were 47.6 per cent and 38.3 per cent, respectively.

*Flour-mill and gristmill products.*—Between 1899 and 1904 this industry grew rapidly both in value of products and value added by manufacture; but the growth was largely arrested in the period 1904 to 1909, and the percentages of increase in value of prod-

ucts and value added by manufacture were small. Because of the comparatively simple processes involved and the extent to which these processes are carried on by machinery, the value added by manufacture is small compared with the gross value of products.

Measured by value added by manufacture these specified industries show certain changes in their relative rank when measured by value of products. Malt liquors becomes second in order of importance instead of steam-railroad repair shops, which in turn becomes third, and printing and publishing takes the place of the flour-mill and gristmill industry, which falls to sixth place.

A comparison of the rates of increase for the seven leading specified industries shows that steam-railroad repair shops increased at a greater rate from 1904 to 1909 in value added by manufacture than any other, namely, 91.2 per cent, while lumber and timber products showed the greatest increase for the same period in value of products, namely, 102.9 per cent. Brick and tile, and copper, tin, and sheet-iron products, industries of minor importance, also showed marked increases both in gross value of products and in value added by manufacture. Each of the 13 industries for which the figures are given showed increases in value of products and in value added by manufacture from 1899 to 1904 and from 1904 to 1909, with the exception of foundry and machine-shop products, which industry showed decreases in both items for the former period.

In addition to the 13 industries presented separately there were 13 industries which had a value of product in 1909 in excess of \$100,000. They are included with all other industries, because in some instances if they were shown separately the operations of individual establishments would be disclosed, in others, the returns do not properly present the true condition of the industry, for the reason that it is more or less interwoven with one or more industries of similar character, while for others comparable statistics for the different census years can not be presented without disclosing the operations of individual establishments or on account of changes in classification. These industries are: Artificial stone; beet sugar; butter, cheese, and condensed milk; coffee and spice, roasting and grinding; coke; confectionery; gas, illuminating and heating; malt; mineral and soda waters; pottery, terra-cotta, and fire-clay products; smelting and refining, copper; smelting and refining, lead; and soap. Statistics for 1909 for 3 of these industries—artificial stone; butter, cheese, and condensed milk; and gas, are presented in Table II.

Persons engaged in manufacturing industries.—The following table shows, for 1909, the distribution of the number of persons engaged in manufactures, the average number of wage earners being distributed by sex

and age. It should be borne in mind, however, that the sex and age classification of the average number of wage earners in this and other tables is an estimate obtained by the method described in the Introduction.

| CLASS.                                 | PERSONS ENGAGED IN MANUFACTURES. |        |         |
|--|----------------------------------|--------|---------|
|  | Total.                           | Male.  | Female. |
| All classes.....                       | 13,694                           | 13,387 | 307     |
| Proprietors and officials.....         | 1,143                            | 1,126  | 17      |
| Proprietors and firm members.....      | 659                              | 645    | 14      |
| Salaried officers of corporations..... | 89                               | 88     | 1       |
| Superintendents and managers.....      | 395                              | 393    | 2       |
| Clerks.....                            | 896                              | 796    | 100     |
| Wage earners (average number).....     | 11,655                           | 11,465 | 190     |
| 16 years of age and over.....          | 11,625                           | 11,436 | 189     |
| Under 16 years of age.....             | 30                               | 20     | 1       |

The average number of persons engaged in manufactures during 1909 was 13,694, of whom 11,655 were wage earners. Of the remainder, 1,143 were proprietors and officials and 896 were clerks. Corresponding figures for individual industries will be found in Table II.

The following table shows, for 1909, the percentages of proprietors and officials, clerks, and wage earners, respectively, among the total number of persons employed in manufactures. It covers all industries combined and 7 important industries individually.

| INDUSTRY.   | PERSONS ENGAGED IN MANUFACTURES. |                            |         |                               |
|---|----------------------------------|----------------------------|---------|-------------------------------|
|   | Total number.                    | Per cent of total.         |         |                               |
|   |                                  | Proprietors and officials. | Clerks. | Wage earners (average number) |
| All industries.....   | 13,694                           | 8.3                        | 6.5     | 85.1                          |
| Bread and other bakery products.....  | 324                              | 25.0                       | 8.3     | 66.0                          |
| Cars and general shop construction and repairs by steam-railroad companies..... | 2,084                            | 8.0                        | 5.2     | 61.8                          |
| Flour-mill and gristmill products.....  | 152                              | 12.5                       | 18.4    | 69.1                          |
| Foundry and machine-shop products.....  | 372                              | 8.1                        | 7.0     | 84.9                          |
| Liquors, malt.....  | 349                              | 17.2                       | 12.8    | 70.5                          |
| Lumber and timber products.....   | 3,432                            | 7.4                        | 2.7     | 60.0                          |
| Printing and publishing.....  | 1,046                            | 16.1                       | 17.0    | 66.1                          |
| All other industries.....   | 5,916                            | 7.9                        | 6.5     | 85.6                          |

Of the total number of persons engaged in all manufacturing industries, 8.3 per cent were proprietors and officials, 6.5 per cent clerks, and 85.1 per cent wage earners. In the bakery industry the majority of the establishments are small and the work is to a large extent done by the proprietors or their immediate representatives, so that the proportion of persons engaged in the industry falling in the class of proprietors and officials is very much higher than for most other industries or for all industries combined. Similar conditions prevailed to some extent in the manufacture of malt liquors, in printing and publishing,

and in the manufacture of flour-mill and gristmill products, in which industries the percentages of proprietors and officials were 17.2, 16.1, and 12.5, respectively. The railroad repair-shop industry shows the smallest percentage of proprietors and officials, this being due partly to the fact that the establishments in this industry were under corporate ownership, and so reported no proprietors; and partly to the fact that the officials of the railroad companies are not as a rule assigned to this particular branch of the work.

The following table shows for 1909, in percentages, for all industries combined, the distribution of the average number of wage earners, by age periods and for those 16 years of age and over by sex, calculated in the manner described in the Introduction. It also shows, for some of the important industries separately, a similar distribution of the wage earners as reported for December 15 or the nearest representative day. As a means of judging the importance of the several industries the average total number employed for the year is also given in each case.

| INDUSTRY.   | WAGE EARNERS.                |                           |         |                        |
|---|------------------------------|---------------------------|---------|------------------------|
|   | Average number. <sup>1</sup> | Per cent of total.        |         |                        |
|   |                              | 16 years of age and over. |         | Under 16 years of age. |
|   |                              | Male.                     | Female. |                        |
| All industries.....   | 11,655                       | 98.1                      | 1.6     | 0.3                    |
| Bread and other bakery products.....  | 214                          | 72.0                      | 28.0    | .....                  |
| Cars and general shop construction and repairs by steam-railroad companies..... | 1,913                        | 99.8                      | .....   | 0.2                    |
| Flour-mill and gristmill products.....  | 105                          | 98.0                      | .....   | .....                  |
| Foundry and machine-shop products.....  | 316                          | 100.0                     | .....   | .....                  |
| Liquors, malt.....  | 246                          | 100.0                     | .....   | .....                  |
| Lumber and timber products.....   | 3,106                        | 99.6                      | 0.2     | 0.2                    |
| Printing and publishing.....  | 691                          | 88.9                      | 0.6     | 1.5                    |
| All other industries.....   | 5,004                        | 98.7                      | 1.1     | 0.2                    |

<sup>1</sup> For method of estimating the distribution, by sex and age periods, of the average number in all industries combined, see Introduction.

For all industries combined, 98.1 per cent of the average number of wage earners were males 16 years of age and over; 1.6 per cent females 16 years of age and over; and but three-tenths of 1 per cent persons under the age of 16. The largest proportion of women, 28 per cent, was employed in bakeries; while the largest percentage of children, 1.5 per cent, was employed in the printing and publishing industry.

In order to compare the distribution of persons engaged in manufactures in 1909 with that shown at the census of 1904, it is necessary to use the classification employed at the earlier census. (See Introduction.) The following table makes this comparison according to occupational status.

| CLASS.                             | PERSONS ENGAGED IN MANUFACTURES. |                        |         |                        | Per cent of increase, 1904-1909. |
|------------------------------------|----------------------------------|------------------------|---------|------------------------|----------------------------------|
|                                    | 1909                             |                        | 1904    |                        |                                  |
|                                    | Number.                          | Per cent distribution. | Number. | Per cent distribution. |                                  |
| Total.....                         | 13,694                           | 100.0                  | 10,196  | 100.0                  | 34.3                             |
| Proprietors and firm members.....  | 659                              | 4.8                    | 334     | 3.3                    | 97.3                             |
| Salaried employees.....            | 1,380                            | 10.1                   | 905     | 8.9                    | 52.5                             |
| Wage earners (average number)..... | 11,655                           | 85.1                   | 8,957   | 87.8                   | 30.1                             |

Comparable figures are not obtainable for 1899. The table shows increases in the percentages of distribution of proprietors and firm members and salaried employees, and a decrease in the proportion of wage earners. The increased percentage of proprietors is due to the increase in the number of small establishments under individual and firm ownership.

The following table shows the average number of wage earners, distributed according to age periods, and in the case of those 16 years of age and over according to sex, for 1909, 1904, and 1899. The averages for 1909 are estimated on the basis of the actual number reported for a single representative day. (See Introduction.)

| CLASS.                     | AVERAGE NUMBER OF WAGE EARNERS. |                       |         |                       |         |                       |
|----------------------------|---------------------------------|-----------------------|---------|-----------------------|---------|-----------------------|
|                            | 1909                            |                       | 1904    |                       | 1899    |                       |
|                            | Number.                         | Percent distribution. | Number. | Percent distribution. | Number. | Percent distribution. |
| Total.....                 | 11,655                          | 100.0                 | 8,957   | 100.0                 | 9,854   | 100.0                 |
| 16 years of age and over:  |                                 |                       |         |                       |         |                       |
| Male.....                  | 11,436                          | 98.1                  | 8,755   | 97.7                  | 9,062   | 98.1                  |
| Female.....                | 189                             | 1.6                   | 143     | 1.6                   | 86      | 0.9                   |
| Under 16 years of age..... | 30                              | 0.3                   | 59      | 0.7                   | 100     | 1.1                   |

This table indicates that for all industries combined there has been a decrease during the 10 years in the employment of children under 16 years of age. There has not been much change in the proportion of male and female wage earners; the proportion of women increased slightly from 1899 to 1904, but remained unchanged during the latter five-year period. In 1909, as in 1899, males 16 years of age and over formed 98.1 per cent of all wage earners, as compared with 97.7 in 1904.

Wage earners employed by months.—The following table gives the number of wage earners employed on the 15th of each month during the year 1909, for all industries combined, for the lumber and timber industry, and for all other industries combined; it gives also the percentage which the number reported for each month is of the greatest number reported for any one month. In Table II, page 14, is shown, for practically all of the important industries in the state, the largest number and also the smallest number of wage earners



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reported for any month. The figures are for the 15th day, or the nearest representative day, of the month. The wage earners for the lumber industry are divided

in the table in such a manner as to show separately the number engaged in the mills and in the logging operations.

| MONTH.         | NUMBER OF WAGE EARNERS. |                      |                             |                      |           |                      |                        |                      |                       |                      |
|----------------|-------------------------|----------------------|-----------------------------|----------------------|-----------|----------------------|------------------------|----------------------|-----------------------|----------------------|
|                | All industries.         |                      | Lumber and timber products. |                      |           |                      |                        |                      | All other industries. |                      |
|                | Number.                 | Per cent of maximum. | Total.                      |                      | In mills. |                      | In logging operations. |                      | Number.               | Per cent of maximum. |
|                |                         |                      | Number.                     | Per cent of maximum. | Number.   | Per cent of maximum. | Number.                | Per cent of maximum. |                       |                      |
| January.....   | 10,873                  | 82.8                 | 2,004                       | 77.0                 | 900       | 41.4                 | 2,004                  | 99.7                 | 7,960                 | 85.0                 |
| February.....  | 10,772                  | 82.1                 | 2,839                       | 75.2                 | 1,005     | 46.2                 | 1,834                  | 91.2                 | 7,933                 | 84.6                 |
| March.....     | 10,900                  | 83.0                 | 2,723                       | 72.2                 | 1,260     | 58.0                 | 1,463                  | 72.7                 | 8,177                 | 87.2                 |
| April.....     | 10,874                  | 82.8                 | 2,673                       | 70.8                 | 1,941     | 89.3                 | 732                    | 36.4                 | 8,201                 | 87.5                 |
| May.....       | 11,292                  | 85.0                 | 2,989                       | 79.2                 | 2,173     | 100.0                | 816                    | 40.6                 | 8,303                 | 88.6                 |
| June.....      | 11,195                  | 85.3                 | 2,895                       | 76.5                 | 2,015     | 92.7                 | 870                    | 43.3                 | 8,310                 | 88.7                 |
| July.....      | 11,650                  | 88.0                 | 2,701                       | 74.0                 | 1,924     | 91.3                 | 807                    | 40.1                 | 8,759                 | 93.5                 |
| August.....    | 11,841                  | 90.2                 | 3,188                       | 84.5                 | 2,039     | 93.8                 | 1,149                  | 57.1                 | 8,653                 | 92.3                 |
| September..... | 12,435                  | 94.7                 | 3,309                       | 90.1                 | 2,036     | 93.7                 | 1,363                  | 67.8                 | 9,036                 | 96.4                 |
| October.....   | 13,127                  | 100.0                | 3,755                       | 99.5                 | 2,070     | 95.3                 | 1,685                  | 83.8                 | 9,372                 | 100.0                |
| November.....  | 12,996                  | 99.0                 | 3,773                       | 100.0                | 1,812     | 83.4                 | 1,961                  | 97.5                 | 9,223                 | 98.4                 |
| December.....  | 12,003                  | 91.4                 | 3,343                       | 88.7                 | 1,337     | 61.5                 | 2,011                  | 100.0                | 8,655                 | 92.3                 |

The lumber and timber industry is to a considerable extent a seasonal industry, especially when separated into logging and milling operations. This industry reports the second largest average number of wage earners of any industry in the state, and its totals, therefore, affect considerably the totals for all industries combined. From 2,673 wage earners in April, the month of least activity, the average number increased to 3,773 in November, the month in which the greatest number was employed. The manufacture of brick and tile and beet sugar are other seasonal industries of the state, which, however, did not employ sufficient numbers of wage earners to influence greatly the

movement of the total employment for all industries. For all industries combined, employment was fairly regular, although there was a general increase from April to October.

Prevailing hours of labor.—In the following table wage earners have been classified according to hours of labor prevailing in the establishments in which they are employed. In making this classification the average number of wage earners employed during the year is used, and the number employed in each establishment is classified as a total, according to the hours prevailing in that establishment, even though a few employees work a greater or less number of hours.

| INDUSTRY.   | AVERAGE NUMBER OF WAGE EARNERS IN ESTABLISHMENTS GROUPED ACCORDING TO PREVAILING HOURS OF WORK PER WEEK. |               |                    |       |                    |       |                    |     |          |
|---|--|---------------|--------------------|-------|--------------------|-------|--------------------|-----|----------|
|   | Total.   | 48 and under. | Between 48 and 54. | 54.   | Between 54 and 60. | 60.   | Between 60 and 72. | 72. | Over 72. |
| All industries.....   | 11,655   | 1,607         | 154                | 3,285 | 4,195              | 1,966 | 422                | 12  | 14       |
| Bread and other bakery products.....  | 214  | 44            |                    | 39    | 11                 | 98    | 5                  | 8   | 9        |
| Brick and tile.....   | 189  | 131           |                    | 33    | 4                  | 21    |                    |     |          |
| Cars and general shop construction and repairs by steam-railroad companies..... | 1,913  |               | 148                | 1,333 | 105                | 74    | 253                |     |          |
| Flour-mill and gristmill products.....  | 105  | 59            |                    | 36    |                    | 10    |                    |     |          |
| Foundry and machine-shop products.....  | 316  | 275           |                    | 37    | 4                  |       |                    |     |          |
| Liquors, malt.....  | 246  | 199           |                    | 3     | 41                 | 2     | 1                  |     |          |
| Lumber and timber products.....   | 3,106  | 38            |                    | 1,551 | 9                  | 1,367 | 141                |     |          |
| Marble and stone work.....  | 78   | 77            |                    |       |                    | 1     |                    |     |          |
| Printing and publishing.....  | 691  | 339           | 5                  | 177   | 164                | 6     |                    |     |          |
| Slaughtering and meat packing.....  | 105  | 23            |                    |       |                    | 82    |                    |     |          |
| Tobacco manufactures.....   | 91   | 90            |                    |       |                    | 1     |                    |     |          |
| All other industries.....   | 4,601  | 332           | 1                  | 76    | 3,857              | 304   | 22                 | 4   | 5        |

For the great majority of wage earners employed in the manufacturing industries of Montana the hours of labor range from 54 to 60 a week, inclusive, or from

9 to 10 hours a day; 15.1 per cent of the total being employed where less than 9 hours a day prevail and only 3.8 per cent where more than 10 hours a day prevail.



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Location of establishments.<sup>1</sup>—A tabular statement separating manufactures in the larger cities from those of outside districts can not be shown because comparable statistics are available for Butte and Helena only, and to show the statistics for Great Falls for 1909 would disclose the operations of individual establishments. General statistics of cities, except those for Great Falls, are shown in Table I.

In 1909 only 9.2 per cent of the total value of products for the state and only 15.7 per cent of the average number of wage earners were reported from the five cities having over 10,000 inhabitants, for which totals are shown. During the 10-year period, however, the manufactures of these cities gained on those of the rural districts in every respect.

Great Falls, with its large copper smelters, is the only one of the six cities in which is located a distinctive industry of importance. The industries of most prominence in the other cities are bread and other bakery products, malt liquors, printing and publishing, and slaughtering and meat packing. The statistics of prior censuses show that the rate of growth of manufactures in Butte, as measured by the percentage of increase in value of products, was greater in the five-year period, 1904-1909, than in the earlier period, 1899-1904, while in Helena the greater growth was in the earlier years.

Character of ownership.—The table that follows has for its purpose the presentation of conditions in respect to the character of ownership or legal organization of manufacturing enterprises. For all industries combined comparative figures are given covering the censuses of 1909 and 1904. Comparative data for 1899 are not available. Figures for 1909 only are presented for several important industries individually. In order to avoid disclosing the operations of individual concerns it is necessary to omit several important industries from this and the table following.

The most important distinction shown is that between corporate and all other forms of ownership. In 1909, 30 per cent of the total number of manufacturing establishments were under corporate ownership. In 1904 the corresponding figure was 30.9 per cent. As measured by value of products and value added by manufacture, corporations show decreases of 2 per cent and 5.6 per cent, respectively, for the five-year period, 1904 to 1909.

<sup>1</sup> See Introduction.

| INDUSTRY AND CHARACTER OF OWNERSHIP.              | Number of establishments. | Average number of wage earners. | Value of products. | Value added by manufacture. |
|---|---------------------------|---------------------------------|--------------------|-----------------------------|
| <b>ALL INDUSTRIES:</b>                            |                           |                                 |                    |                             |
| 1909.....   | 677                       | 11,655                          | \$73,271,793       | \$24,091,554                |
| 1904.....   | 382                       | 8,957                           | 66,415,452         | 25,485,392                  |
| Individual:                                       |                           |                                 |                    |                             |
| 1909.....   | 362                       | 1,108                           | 3,265,067          | 2,106,309                   |
| 1904.....   | 204                       | 710                             | 1,892,491          | 1,137,764                   |
| Firm:   |                           |                                 |                    |                             |
| 1909.....   | 112                       | 404                             | 1,424,052          | 904,781                     |
| 1904.....   | 57                        | 370                             | 1,150,688          | 639,133                     |
| Corporation:                                      |                           |                                 |                    |                             |
| 1909.....   | 203                       | 10,041                          | 68,458,197         | 21,659,121                  |
| 1904.....   | 118                       | 7,877                           | 63,369,703         | 23,705,925                  |
| Other:  |                           |                                 |                    |                             |
| 1909.....   | 10                        | 12                              | 124,477            | 21,343                      |
| 1904.....   | 3                         | .....                           | 2,570              | 2,570                       |
| Per cent of total:                                |                           |                                 |                    |                             |
| 1909.....   | 100.0                     | 100.0                           | 100.0              | 100.0                       |
| 1904.....   | 100.0                     | 100.0                           | 100.0              | 100.0                       |
| Individual:                                       |                           |                                 |                    |                             |
| 1909.....   | 52.0                      | 9.5                             | 4.5                | 8.7                         |
| 1904.....   | 53.4                      | 7.9                             | 2.8                | 4.5                         |
| Firm:   |                           |                                 |                    |                             |
| 1909.....   | 16.5                      | 4.2                             | 1.9                | 3.8                         |
| 1904.....   | 14.9                      | 4.1                             | 1.7                | 2.5                         |
| Corporation:                                      |                           |                                 |                    |                             |
| 1909.....   | 30.0                      | 86.2                            | 93.4               | 87.1                        |
| 1904.....   | 30.9                      | 87.9                            | 95.4               | 93.0                        |
| Other:  |                           |                                 |                    |                             |
| 1909.....   | 1.5                       | 0.1                             | 0.2                | 0.1                         |
| 1904.....   | 0.8                       | .....                           | (1)                | (1)                         |
| <b>Bread and other bakery products, 1909.....</b> | <b>71</b>                 | <b>214</b>                      | <b>\$1,095,838</b> | <b>\$478,328</b>            |
| Individual.....                                   | 54                        | 99                              | 538,085            | 263,796                     |
| Firm.....   | 13                        | 17                              | 128,181            | 58,608                      |
| Corporation.....                                  | 4                         | 98                              | 428,072            | 155,924                     |
| Per cent of total.....                            | 100.0                     | 100.0                           | 100.0              | 100.0                       |
| Individual.....                                   | 76.1                      | 46.3                            | 49.2               | 55.1                        |
| Firm.....   | 18.3                      | 7.9                             | 11.7               | 12.3                        |
| Corporation.....                                  | 5.6                       | 45.8                            | 39.1               | 32.6                        |
| <b>Liquors, malt, 1909.....</b>                   | <b>21</b>                 | <b>246</b>                      | <b>\$2,439,832</b> | <b>\$1,837,472</b>          |
| Individual.....                                   | 5                         | 19                              | 116,076            | 84,850                      |
| Corporation.....                                  | 16                        | 227                             | 2,323,756          | 1,752,622                   |
| Per cent of total.....                            | 100.0                     | 100.0                           | 100.0              | 100.0                       |
| Individual.....                                   | 23.8                      | 7.7                             | 4.8                | 4.6                         |
| Corporation.....                                  | 76.2                      | 92.3                            | 95.2               | 95.4                        |
| <b>Lumber and timber products, 1909.....</b>      | <b>155</b>                | <b>3,106</b>                    | <b>\$6,333,778</b> | <b>\$4,466,893</b>          |
| Individual.....                                   | 85                        | 449                             | 703,138            | 589,597                     |
| Firm.....   | 35                        | 324                             | 626,625            | 497,550                     |
| Corporation.....                                  | 35                        | 2,333                           | 4,914,015          | 3,381,346                   |
| Per cent of total.....                            | 100.0                     | 100.0                           | 100.0              | 100.0                       |
| Individual.....                                   | 54.8                      | 14.5                            | 12.5               | 13.2                        |
| Firm.....   | 22.6                      | 10.4                            | 9.9                | 11.1                        |
| Corporation.....                                  | 22.6                      | 75.1                            | 77.6               | 75.7                        |
| <b>Printing and publishing, 1909.....</b>         | <b>135</b>                | <b>691</b>                      | <b>\$2,111,229</b> | <b>\$1,708,569</b>          |
| Individual.....                                   | 78                        | 191                             | 537,693            | 435,750                     |
| Firm.....   | 16                        | 32                              | 104,087            | 85,907                      |
| Corporation.....                                  | 41                        | 468                             | 1,469,449          | 1,186,912                   |
| Per cent of total.....                            | 100.0                     | 100.0                           | 100.0              | 100.0                       |
| Individual.....                                   | 57.8                      | 27.6                            | 25.5               | 25.5                        |
| Firm.....   | 11.8                      | 4.6                             | 4.9                | 5.0                         |
| Corporation.....                                  | 30.4                      | 67.7                            | 69.6               | 69.5                        |

<sup>1</sup> Less than one-tenth of 1 per cent.

<sup>2</sup> Includes the group "Firm" to avoid disclosure of individual operations.

<sup>3</sup> Includes the group "Other" to avoid disclosure of individual operations.

Size of establishment.—The tendency for manufacturing to become concentrated in large establishments, or the reverse, is a matter of interest from the standpoint of industrial organization. In order to throw some light upon it, the following table groups the establishments according to the value of their products. The table also shows the average size of establishments for all industries combined and for im-

portant industries separately as measured by number of wage earners, value of products, and value added by manufacture. The totals for all industries are shown for the last two censuses, while for certain important industries figures are given for 1909 only.

| INDUSTRY AND VALUE OF PRODUCTS.                        | Number of establishments. | Average number of wage earners. | Value of products. | Value added by manufacture. |
|--|---------------------------|---------------------------------|--------------------|-----------------------------|
| <b>ALL INDUSTRIES:</b>                                 |                           |                                 |                    |                             |
| 1909.....  | 677                       | 11,655                          | \$73,271,793       | \$24,091,554                |
| 1904.....  | 392                       | 8,957                           | 66,415,452         | 25,485,392                  |
| <b>Less than \$5,000:</b>                              |                           |                                 |                    |                             |
| 1909.....  | 261                       | 227                             | 649,143            | 457,008                     |
| 1904.....  | 124                       | 100                             | 325,145            | 228,101                     |
| <b>\$5,000 and less than \$20,000:</b>                 |                           |                                 |                    |                             |
| 1909.....  | 230                       | 754                             | 2,437,212          | 1,535,283                   |
| 1904.....  | 152                       | 550                             | 1,571,629          | 1,030,951                   |
| <b>\$20,000 and less than \$100,000:</b>               |                           |                                 |                    |                             |
| 1909.....  | 118                       | 1,708                           | 5,092,318          | 3,108,691                   |
| 1904.....  | 66                        | 1,354                           | 3,246,220          | 2,066,633                   |
| <b>\$100,000 and less than \$1,000,000:</b>            |                           |                                 |                    |                             |
| 1909.....  | 56                        | 4,836                           | 15,221,904         | 8,024,045                   |
| 1904.....  | 34                        | 3,090                           | 8,726,954          | 5,089,845                   |
| <b>\$1,000,000 and over:</b>                           |                           |                                 |                    |                             |
| 1909.....  | 0                         | 4,130                           | 49,871,216         | 10,965,027                  |
| 1904.....  | 0                         | 3,845                           | 52,545,498         | 17,093,862                  |
| <b>Per cent of total:</b>                              |                           |                                 |                    |                             |
| 1909.....  | 100.0                     | 100.0                           | 100.0              | 100.0                       |
| 1904.....  | 100.0                     | 100.0                           | 100.0              | 100.0                       |
| <b>Less than \$5,000:</b>                              |                           |                                 |                    |                             |
| 1909.....  | 38.6                      | 1.9                             | 0.9                | 1.9                         |
| 1904.....  | 32.5                      | 1.2                             | 0.5                | 0.9                         |
| <b>\$5,000 and less than \$20,000:</b>                 |                           |                                 |                    |                             |
| 1909.....  | 34.9                      | 6.5                             | 3.3                | 6.4                         |
| 1904.....  | 39.8                      | 6.2                             | 2.4                | 4.1                         |
| <b>\$20,000 and less than \$100,000:</b>               |                           |                                 |                    |                             |
| 1909.....  | 17.4                      | 14.7                            | 6.9                | 12.9                        |
| 1904.....  | 17.3                      | 15.1                            | 4.9                | 8.1                         |
| <b>\$100,000 and less than \$1,000,000:</b>            |                           |                                 |                    |                             |
| 1909.....  | 8.3                       | 41.5                            | 20.8               | 33.3                        |
| 1904.....  | 8.0                       | 34.6                            | 13.1               | 20.0                        |
| <b>\$1,000,000 and over:</b>                           |                           |                                 |                    |                             |
| 1909.....  | 0.0                       | 35.4                            | 68.1               | 45.5                        |
| 1904.....  | 1.6                       | 42.0                            | 79.1               | 67.0                        |
| <b>Average per establishment:</b>                      |                           |                                 |                    |                             |
| 1909.....  | 17                        | 17                              | \$108,230          | \$35,586                    |
| 1904.....  | 23                        | 23                              | 173,862            | 66,710                      |
| <b>Bread and other bakery products, 1909.....</b>      | <b>71</b>                 | <b>214</b>                      | <b>\$1,095,838</b> | <b>\$478,328</b>            |
| Less than \$5,000.....                                 | 21                        | 4                               | 48,689             | 24,017                      |
| \$5,000 and less than \$20,000.....                    | 40                        | 80                              | 430,862            | 197,949                     |
| \$20,000 and less than \$100,000.....                  | 10                        | 130                             | 616,287            | 256,360                     |
| <b>Per cent of total.....</b>                          | <b>100.0</b>              | <b>100.0</b>                    | <b>100.0</b>       | <b>100.0</b>                |
| Less than \$5,000.....                                 | 29.6                      | 1.9                             | 4.4                | 5.0                         |
| \$5,000 and less than \$20,000.....                    | 56.3                      | 37.4                            | 39.3               | 41.4                        |
| \$20,000 and less than \$100,000.....                  | 14.1                      | 60.7                            | 56.2               | 53.6                        |
| <b>Average per establishment.....</b>                  | <b>3</b>                  | <b>3</b>                        | <b>\$15,434</b>    | <b>\$6,737</b>              |
| <b>Liquors, malt, 1909.....</b>                        | <b>21</b>                 | <b>246</b>                      | <b>\$3,439,832</b> | <b>\$1,837,472</b>          |
| \$5,000 and less than \$20,000 <sup>2</sup> .....      | 6                         | 13                              | 61,985             | 45,058                      |
| \$20,000 and less than \$100,000.....                  | 0                         | 52                              | 410,314            | 305,025                     |
| \$100,000 and less than \$1,000,000.....               | 0                         | 181                             | 1,967,532          | 1,485,889                   |
| <b>Per cent of total.....</b>                          | <b>100.0</b>              | <b>100.0</b>                    | <b>100.0</b>       | <b>100.0</b>                |
| \$5,000 and less than \$20,000.....                    | 28.6                      | 5.3                             | 2.5                | 2.5                         |
| \$20,000 and less than \$100,000.....                  | 28.0                      | 21.1                            | 16.8               | 16.0                        |
| \$100,000 and less than \$1,000,000.....               | 42.9                      | 73.6                            | 80.6               | 80.0                        |
| <b>Average per establishment.....</b>                  | <b>12</b>                 | <b>12</b>                       | <b>\$110,182</b>   | <b>\$87,499</b>             |
| <b>Lumber and timber products, 1909.....</b>           | <b>155</b>                | <b>3,106</b>                    | <b>\$6,333,778</b> | <b>\$4,468,893</b>          |
| Less than \$5,000.....                                 | 65                        | 89                              | 144,414            | 111,005                     |
| \$5,000 and less than \$20,000.....                    | 46                        | 231                             | 470,598            | 320,737                     |
| \$20,000 and less than \$100,000.....                  | 32                        | 682                             | 1,245,400          | 908,078                     |
| \$100,000 and less than \$1,000,000 <sup>3</sup> ..... | 12                        | 2,104                           | 4,470,366          | 3,129,073                   |
| <b>Per cent of total.....</b>                          | <b>100.0</b>              | <b>100.0</b>                    | <b>100.0</b>       | <b>100.0</b>                |
| Less than \$5,000.....                                 | 41.9                      | 2.9                             | 2.3                | 2.5                         |
| \$5,000 and less than \$20,000.....                    | 29.7                      | 7.4                             | 7.4                | 7.2                         |
| \$20,000 and less than \$100,000.....                  | 20.6                      | 22.0                            | 19.7               | 20.3                        |
| \$100,000 and less than \$1,000,000.....               | 7.7                       | 67.7                            | 70.6               | 70.0                        |
| <b>Average per establishment.....</b>                  | <b>20</b>                 | <b>20</b>                       | <b>\$40,863</b>    | <b>\$28,832</b>             |
| <b>Printing and publishing, 1909.....</b>              | <b>135</b>                | <b>691</b>                      | <b>\$2,111,229</b> | <b>\$1,708,569</b>          |
| Less than \$5,000.....                                 | 71                        | 68                              | 203,431            | 164,437                     |
| \$5,000 and less than \$20,000.....                    | 45                        | 149                             | 142,484            | 348,045                     |
| \$20,000 and less than \$100,000.....                  | 15                        | 242                             | 740,338            | 618,436                     |
| \$100,000 and less than \$1,000,000.....               | 4                         | 232                             | 724,976            | 582,651                     |
| <b>Per cent of total.....</b>                          | <b>100.0</b>              | <b>100.0</b>                    | <b>100.0</b>       | <b>100.0</b>                |
| Less than \$5,000.....                                 | 52.6                      | 9.8                             | 9.6                | 9.6                         |
| \$5,000 and less than \$20,000.....                    | 33.3                      | 21.6                            | 21.0               | 20.4                        |
| \$20,000 and less than \$100,000.....                  | 11.1                      | 35.0                            | 35.1               | 35.9                        |
| \$100,000 and less than \$1,000,000.....               | 8.0                       | 33.6                            | 34.3               | 34.1                        |
| <b>Average per establishment.....</b>                  | <b>5</b>                  | <b>5</b>                        | <b>\$15,639</b>    | <b>\$12,656</b>             |

<sup>1</sup> Includes the group "\$100,000 and less than \$1,000,000."  
<sup>2</sup> Includes the group "Less than \$5,000."  
<sup>3</sup> Includes the group "\$1,000,000 and over."

Of the 677 establishments reported in 1909, only six, or nine-tenths of 1 per cent, each had a value of products exceeding \$1,000,000. These establishments, however, employed an average of 4,130 wage earners, or 35.4 per cent of the total number in all establishments, and reported 68.1 per cent of the total value of products and 45.5 per cent of the total value added by manufacture.

The very small establishments—that is, those having a value of products of less than \$5,000—although constituting 38.6 per cent of the total number of establishments, produced only nine-tenths of 1 per cent of the total value of products. Most of the manufacturing was carried on in establishments which reported a product valued at not less than \$100,000.

During the five years the average value of products per establishment decreased from \$173,862 to \$108,230, the value added by manufacture from \$66,716 to \$35,586, and the average number of wage earners from 23 to 17. These decreases are undoubtedly caused to a great extent by the large increase in the number of establishments employing but few wage earners and having small value of products. The table shows further that the baking and printing and publishing industries in Montana are conducted chiefly in the smaller establishments, while the lumber and timber industry is conducted mainly in larger establishments.

In some respects, and especially from the standpoint of conditions under which persons engaged in manufactures work, the best classification of establishments to bring out the feature of size is a classification according to the number of wage earners employed. The next table shows, for 1909, such a classification for all industries combined and for seven important industries individually, and gives not only the number of establishments falling in each group but also the average number of wage earners employed.

The per cent distribution of the number of establishments is not shown in this table. Of the 677 establishments reported for all industries, 13.1 per cent employed no wage earners; 61.7 per cent, 1 to 5; 14.6 per cent, 6 to 20; and 5.3 per cent, 21 to 50. The most numerous single group consists of the 418 establishments employing from 1 to 5 wage earners; the next being the group of 99 establishments employing from 6 to 20 wage earners. There were 10 establishments that employed over 250 wage earners, 3 of which employed over 500 each.

Of the total number of wage earners, 50.5 per cent were in establishments employing over 250 wage earners. The single group having the largest number of employees was the group comprising the establishments employing from 251 to 500 wage earners. This group employed 2,363 wage earners, or 20.3 per cent of the total. Most of the railroad repair shops are comparatively large establishments.

## STATISTICS OF MANUFACTURES—MONTANA.

| INDUSTRY.   | Total. | ESTABLISHMENTS EMPLOYING— |                      |                       |                        |                         |                          |                          |                            |                          |
|---|--------|---------------------------|----------------------|-----------------------|------------------------|-------------------------|--------------------------|--------------------------|----------------------------|--------------------------|
|   |        | No wage earners.          | 1 to 5 wage earners. | 6 to 20 wage earners. | 21 to 50 wage earners. | 51 to 100 wage earners. | 101 to 250 wage earners. | 251 to 500 wage earners. | 501 to 1,000 wage earners. | Over 1,000 wage earners. |
| NUMBER OF ESTABLISHMENTS.   |        |                           |                      |                       |                        |                         |                          |                          |                            |                          |
| All industries.....   | 677    | 89                        | 418                  | 99                    | 36                     | 15                      | 10                       | 7                        | 2                          | 1                        |
| Bread and other bakery products.....  | 71     | 18                        | 48                   | 4                     | 3                      | 1                       | 1                        | 3                        |                            |                          |
| Cars and general shop construction and repairs by steam-railroad companies..... | 12     |                           |                      |                       | 1                      | 4                       | 4                        |                          |                            |                          |
| Flour-mill and gristmill products.....  | 12     |                           | 7                    |                       | 2                      |                         |                          |                          |                            |                          |
| Foundry and machine-shop products.....  | 14     |                           | 7                    | 3                     | 3                      |                         | 1                        |                          |                            |                          |
| Liquors, malt.....  | 21     |                           | 8                    | 10                    | 3                      |                         |                          |                          |                            |                          |
| Lumber and timber products.....   | 21     |                           | 8                    | 10                    | 3                      |                         |                          |                          |                            |                          |
| Printing and publishing.....  | 155    | 5                         | 91                   | 35                    | 12                     | 5                       | 4                        | 2                        | 1                          |                          |
| All other industries.....   | 135    | 24                        | 92                   | 11                    | 5                      | 3                       |                          |                          |                            |                          |
|   | 257    | 42                        | 165                  | 33                    | 10                     | 2                       | 1                        | 2                        | 1                          | 1                        |
| AVERAGE NUMBER OF WAGE EARNERS.   |        |                           |                      |                       |                        |                         |                          |                          |                            |                          |
| All industries.....   | 11,655 |                           | 899                  | 1,100                 | 1,104                  | 1,182                   | 1,493                    | 2,363                    | 1,514                      | 2,001                    |
| Bread and other bakery products.....  | 214    |                           | 102                  | 36                    |                        | 70                      |                          |                          |                            |                          |
| Cars and general shop construction and repairs by steam-railroad companies..... | 1,013  |                           |                      |                       | 20                     | 301                     | 529                      | 1,063                    |                            |                          |
| Flour-mill and gristmill products.....  | 105    |                           | 16                   | 41                    | 48                     |                         |                          |                          |                            |                          |
| Foundry and machine-shop products.....  | 316    |                           | 22                   | 37                    | 99                     |                         | 158                      |                          |                            |                          |
| Liquors, malt.....  | 246    |                           | 21                   | 151                   | 74                     |                         |                          |                          |                            |                          |
| Lumber and timber products.....   | 3,109  |                           | 190                  | 376                   | 376                    | 470                     | 608                      | 527                      | 550                        |                          |
| Printing and publishing.....  | 691    |                           | 207                  | 101                   | 178                    | 205                     |                          |                          |                            |                          |
| All other industries.....   | 5,064  |                           | 341                  | 358                   | 309                    | 121                     | 197                      | 773                      | 904                        | 2,001                    |
| PER CENT OF AVERAGE NUMBER OF WAGE EARNERS.                                     |        |                           |                      |                       |                        |                         |                          |                          |                            |                          |
| All industries.....   | 100.0  |                           | 7.7                  | 9.4                   | 9.5                    | 10.1                    | 12.8                     | 20.3                     | 13.0                       | 17.2                     |
| Bread and other bakery products.....  | 100.0  |                           | 47.7                 | 16.8                  |                        | 35.5                    |                          |                          |                            |                          |
| Cars and general shop construction and repairs by steam-railroad companies..... | 100.0  |                           |                      |                       | 1.0                    | 15.7                    | 27.7                     | 55.6                     |                            |                          |
| Flour-mill and gristmill products.....  | 100.0  |                           | 15.2                 | 39.0                  | 45.7                   |                         |                          |                          |                            |                          |
| Foundry and machine-shop products.....  | 100.0  |                           | 7.0                  | 11.7                  | 31.3                   |                         | 50.0                     |                          |                            |                          |
| Liquors, malt.....  | 100.0  |                           | 8.5                  | 61.4                  | 30.1                   |                         |                          |                          |                            |                          |
| Lumber and timber products.....   | 100.0  |                           | 6.1                  | 12.1                  | 12.1                   | 15.4                    | 19.6                     | 17.0                     | 17.7                       |                          |
| Printing and publishing.....  | 100.0  |                           | 30.0                 | 14.6                  | 25.3                   | 29.7                    |                          |                          |                            |                          |
| All other industries.....   | 100.0  |                           | 6.7                  | 7.1                   | 6.1                    | 2.4                     | 3.0                      | 15.3                     | 10.0                       | 39.5                     |

**Expenses.**—As stated in the Introduction, the census does not purport to furnish figures that can be used for determining the cost of manufacture and profits. Facts of interest can, however, be brought out concerning the relative importance of the different classes of expenses which make up the total.

The following table shows in percentages, for 1909, the distribution of expenses among the classes indicated for all industries combined and for certain important industries separately. The figures on which the percentages are based appear in Table II.

| INDUSTRY.   | PER CENT OF TOTAL EXPENSES REPORTED. |        |            |                         |
|---|--------------------------------------|--------|------------|-------------------------|
|   | Salaries.                            | Wages. | Materials. | Miscellaneous expenses. |
| All industries.....   | 3.1                                  | 16.3   | 73.6       | 7.0                     |
| Bread and other bakery products.....  | 3.0                                  | 18.3   | 68.5       | 10.3                    |
| Cars and general shop construction and repairs by steam-railroad companies..... | 5.9                                  | 54.7   | 38.6       | 0.8                     |
| Flour-mill and gristmill products.....  | 2.7                                  | 5.3    | 84.9       | 7.1                     |
| Foundry and machine-shop products.....  | 7.6                                  | 41.9   | 45.1       | 5.4                     |
| Liquors, malt.....  | 12.0                                 | 19.2   | 32.3       | 36.4                    |
| Lumber and timber products.....   | 5.0                                  | 40.9   | 34.9       | 19.2                    |
| Printing and publishing.....  | 10.3                                 | 39.1   | 23.0       | 21.1                    |
| All other industries.....   | 1.9                                  | 10.7   | 82.9       | 4.5                     |

This table shows that, for all industries combined, 73.6 per cent of the total expense was incurred for materials, 19.4 per cent for services, that is, salaries and wages, and but 7 per cent for other purposes. As would be expected, these proportions vary greatly in the different industries. The large percentage shown for

miscellaneous expenses for malt liquors is explained by the fact that this item includes internal-revenue taxes.

**Engines and power.**—The following table shows, for all industries combined, the number of engines or other motors, according to their character, employed in generating power (including electric motors operated by purchased current), and their total horsepower at the censuses of 1909, 1904, and 1899. It also shows separately the number and horsepower of electric motors, including those operated by current generated in the manufacturing establishments.

As shown in the table, the amount of primary power used increased from 43,679 horsepower in 1899 to 90,402 in 1909. The greatest increase, both absolute and relative, was in electric power rented, of which 26,879 horsepower was reported in 1909, an increase of 1,259 horsepower over 1899. Steam was still the dominant power in 1909, although the proportion which this formed of the total decreased from 73.3 per cent in 1899 to 54.9 per cent in 1909. The use of electric motors for the purpose of applying the power generated within the establishments showed a considerable increase from 1899 to 1904, but a large decrease from 1904 to 1909, the horsepower of such motors increasing from 1,988 in 1899 to 4,081 in 1904 and decreasing to 797 in 1909. The cause of the decrease lies in the fact that some of the large manufacturing establishments, particularly those engaged in the smelting and refining of copper, which formerly operated electric motors by power generated within their own establishments, used rented power in 1909, as is indi-

cated by the extraordinary growth in the amount of rented electric power. In 1909 water power formed 15.1 per cent of the total of the primary power shown.

| POWER.   | NUMBER OF ENGINES OR MOTORS. |                  |                   | HORSEPOWER. |        |                   | PER CENT DISTRIBUTION OF HORSEPOWER. |                  |                  |
|--|------------------------------|------------------|-------------------|-------------|--------|-------------------|--------------------------------------|------------------|------------------|
|  | 1909                         | 1904             | 1899 <sup>1</sup> | 1909        | 1904   | 1899 <sup>1</sup> | 1909                                 | 1904             | 1899             |
| Primary power, total.....                      | 1,291                        | 277              | 480               | 90,402      | 46,736 | 43,679            | 100.0                                | 100.0            | 100.0            |
| Owned.....                                     | 503                          | 277              | 430               | 63,523      | 42,830 | 42,420            | 70.3                                 | 91.6             | 97.1             |
| Steam.....                                     | 412                          | 203              | 421               | 49,654      | 32,359 | 32,008            | 54.0                                 | 69.2             | 73.3             |
| Gas.....                                       | 54                           | 19               | 19                | 223         | 74     | 85                | 0.2                                  | 0.2              | 0.2              |
| Water wheels.....                              | 26                           | 38               | 40                | 13,583      | 10,254 | 9,717             | 15.0                                 | 21.9             | 22.2             |
| Water motors.....                              | 11                           | 17               | ( <sup>2</sup> )  | 63          | 61     | ( <sup>2</sup> )  | 0.1                                  | 0.1              | ( <sup>2</sup> ) |
| Other.....                                     |                              |                  |                   |             | 85     | 610               |                                      | 0.2              | 1.4              |
| Rented.....                                    | 788                          | ( <sup>2</sup> ) | ( <sup>2</sup> )  | 26,879      | 3,906  | 1,259             | 29.7                                 | 8.3              | 2.9              |
| Electric.....                                  | 788                          | ( <sup>2</sup> ) | ( <sup>2</sup> )  | 26,504      | 3,898  | 1,190             | 29.3                                 | 8.3              | 2.7              |
| Other.....                                     |                              |                  |                   | 375         | 8      | 63                | 0.4                                  | ( <sup>2</sup> ) | 0.1              |
| Electric motors.....                           | 834                          | 100              | 78                | 27,301      | 7,970  | 3,184             | 100.0                                | 100.0            | 100.0            |
| Run by current generated by establishment..... | 46                           | 100              | 78                | 797         | 4,081  | 1,988             | 2.9                                  | 51.1             | 62.4             |
| Run by rented power.....                       | 788                          | ( <sup>2</sup> ) | ( <sup>2</sup> )  | 26,504      | 3,898  | 1,190             | 97.1                                 | 48.9             | 37.0             |

<sup>1</sup> Includes the neighborhood industries and hand trades omitted in 1904 and 1909.  
<sup>2</sup> Not reported. <sup>3</sup> Less than one-tenth of 1 per cent.

Fuel.—Closely related to the question of kind of power employed is that of the fuel used in generating this power, or otherwise as material in the manufacturing processes.

The following table shows the quantity of each kind of fuel used in 1909, by totals, for all industries and for certain selected industries:

| INDUSTRY.   | Anthracite coal (tons). | Bituminous coal (tons). | Coke (tons). | Wood (cords). | Oil, including gasoline (barrels). | Gas (1,000 feet). |
|---|-------------------------|-------------------------|--------------|---------------|------------------------------------|-------------------|
| All industries <sup>1</sup> .....   | 435                     | 624,624                 | 265,279      | 14,509        | 2,976                              | 2,807             |
| Bread and other bakery products.....  | 217                     | 1,604                   | 271          | 1,409         | 40                                 | 188               |
| Cars and general shop construction and repairs by steam-railroad companies..... |                         | 51,584                  | 145          |               | 334                                |                   |
| Flour-mill and gristmill products.....  |                         | 2,217                   |              | 1,240         |                                    |                   |
| Foundry and machine-shop products.....  | 6                       | 3,412                   | 1,705        | 232           | 12                                 |                   |
| Liquors, malt.....  |                         | 18,970                  | 217          | 1,405         | 7                                  |                   |
| Lumber and timber products.....   |                         | 1,817                   |              | 390           | 6                                  |                   |
| Printing and publishing.....  | 195                     | 640                     |              | 254           | 294                                | 1,677             |
| All other industries.....   | 17                      | 544,374                 | 262,941      | 9,669         | 2,313                              | 942               |

<sup>1</sup> In addition there were 403 tons of other varieties of fuel reported.

SUPPLEMENTARY DATA REGARDING IMPORTANT INDUSTRIES.

(With statistics for laundries and custom saw and grist mills.)

For certain industries the Census Bureau collects, by means of special schedules, details regarding the quantity and value of materials and products which do not appear on the general schedule. Certain data of this character for three important industries in Montana are here presented.

Lumber and timber products.—Measured by value of products, the lumber and timber industry is second in importance among the industries of the state.

The kind and quantity of several of the chief products of the sawmill branch of the industry for 1909 and 1899 are given below.

| PRODUCT.          |               | QUANTITY. |                   |
|-------------------|---------------|-----------|-------------------|
|                   |               | 1909      | 1899 <sup>1</sup> |
| Rough lumber..... | M feet, b. m. | 308,582   | 255,685           |
| Lath.....         | thousands..   | 35,430    | 14,231            |
| Shingles.....     | thousands..   | 525       | 6,880             |

<sup>1</sup> Does not include reports for establishments with a product less than \$500.

From 1899 to 1909 the output of rough lumber increased in quantity 20.7 per cent, and that of lath 149 per cent, while that of shingles showed a decrease of 92.4 per cent. Of the 1909 cut of 308,582,000 feet, board measure, all was softwood except 510,000 feet of cottonwood. Most of the timber milled was western pine and larch; in the production of the latter Montana is the leading state. There were eight mills in the state in 1909 which produced from 5,000,000 to

15,000,000 feet each, and three which milled over 15,000,000 feet. In that year 39 mills were reported idle.

Slaughtering and meat packing.—This classification includes wholesale slaughtering and meat packing establishments, and those engaged in the manufacturing of sausage only. To avoid disclosure of individual operations, statistics for 1904 are not shown. The following table gives the kinds, quantities, and values of products for 1909 and 1899:

| PRODUCT.                          | 1909        | 1899 <sup>1</sup> |
|-----------------------------------|-------------|-------------------|
| Total value.....                  | \$2,053,609 | \$852,347         |
| Beef, fresh:                      |             |                   |
| Pounds.....                       | 12,253,541  | 6,804,346         |
| Value.....                        | \$1,043,864 | \$573,708         |
| Veal, fresh:                      |             |                   |
| Pounds.....                       | 1,815,825   | 614,475           |
| Value.....                        | \$175,256   | \$66,186          |
| Mutton, fresh:                    |             |                   |
| Pounds.....                       | 2,365,440   | 970,061           |
| Value.....                        | \$240,720   | \$83,506          |
| Pork, fresh:                      |             |                   |
| Pounds.....                       | 2,171,894   | 1,035,139         |
| Value.....                        | \$246,118   | \$78,412          |
| Sausage, fresh or cured:          |             |                   |
| Value.....                        | \$36,909    | \$3,000           |
| Lard:                             |             |                   |
| Pounds.....                       | 145,319     | 50,000            |
| Value.....                        | \$21,122    | \$3,000           |
| Tallow, oleo stock, and stearine: |             |                   |
| Pounds.....                       | 874,310     | ( <sup>2</sup> )  |
| Value.....                        | \$38,773    | ( <sup>2</sup> )  |
| Hides:                            |             |                   |
| Number.....                       | 31,022      | 14,389            |
| Pounds.....                       | 1,505,935   | 671,700           |
| Value.....                        | \$149,772   | \$60,008          |
| Pelts:                            |             |                   |
| Number.....                       | 48,615      | ( <sup>2</sup> )  |
| Value.....                        | \$48,603    | ( <sup>2</sup> )  |
| All other products.....           | \$52,352    | \$59,438          |

<sup>1</sup> Figures do not agree with those published in 1899, because it was necessary to revise the totals in order to omit retail establishments.  
<sup>2</sup> Figures not available.

STATISTICS OF MANUFACTURES—MONTANA.

From 1899 to 1904 there was a decrease in total value of products so that the percentage of increase during the last five years was greater than 140.9 per cent, as shown for the decade. Practically all of the products were sold as fresh meat, with but a very small proportion of the meat or by-products undergoing further preparation. The quantities of pork, mutton, and veal more than doubled, while beef increased 80.1 per cent during the 10 years.

**Printing and publishing.**—As shown by the following table, this industry has steadily increased in the number of publications and aggregate circulation per issue from 1904 to 1909 and from 1899 to 1904:

| PERIOD OF ISSUE.       | NUMBER OF PUBLICATIONS. |      |      | AGGREGATE CIRCULATION PER ISSUE. |         |                  |
|------------------------|-------------------------|------|------|----------------------------------|---------|------------------|
|                        | 1909                    | 1904 | 1899 | 1909                             | 1904    | 1899             |
| Total.....             | 139                     | 101  | 95   | 246,798                          | 197,643 | 127,148          |
| Daily.....             | 17                      | 12   | 11   | 70,203                           | 58,669  | 42,164           |
| Sunday.....            | 7                       | 5    | 6    | 48,088                           | 34,111  | ( <sup>1</sup> ) |
| Semiweekly.....        | 8                       | 7    | 4    | 13,180                           | 11,200  | 9,350            |
| Weekly.....            | 101                     | 69   | 70   | 92,027                           | 75,493  | 62,109           |
| Monthly.....           | 5                       | 5    | 3    | 13,800                           | 7,700   | 6,495            |
| All other classes..... | 1                       | 3    | 1    | 9,500                            | 10,500  | 7,000            |

<sup>1</sup> Included in circulation for daily.

**Laundries.**—Statistics for steam laundries are not included in the general tables or in the totals for manufacturing industries. In 1909 there were 26 such establishments in the state of Montana. The following statement summarizes the statistics:

|                                      |           |
|--------------------------------------|-----------|
| Number of establishments.....        | 26        |
| Persons engaged in the industry..... | 723       |
| Proprietors and firm members.....    | 24        |
| Salaried employees.....              | 47        |
| Wage earners (average number).....   | 652       |
| Primary horsepower.....              | 851       |
| Capital.....                         | \$677,089 |
| Expenses.....                        | 764,904   |
| Services.....                        | 522,008   |
| Materials.....                       | 154,428   |
| Miscellaneous.....                   | 83,468    |
| Amount received for work done.....   | 935,260   |

Eleven of the 26 establishments were under corporate ownership, 8 under individual ownership, and 7 under firm ownership. One establishment had receipts for the year's business amounting to between \$100,000 and \$1,000,000, 18 had receipts of between \$20,000 and \$100,000, and 7 receipts of less than \$20,000 each.

The number of wage earners employed each month and the per cent which this number represented of the greatest number employed in any month were as follows:

| MONTH.        | WAGE EARNERS. |                      | MONTH.         | WAGE EARNERS. |                      |
|---------------|---------------|----------------------|----------------|---------------|----------------------|
|               | Number.       | Per cent of maximum. |                | Number.       | Per cent of maximum. |
| January.....  | 606           | 85.4                 | July.....      | 607           | 85.2                 |
| February..... | 597           | 84.1                 | August.....    | 710           | 100.0                |
| March.....    | 610           | 85.9                 | September..... | 608           | 85.3                 |
| April.....    | 631           | 88.9                 | October.....   | 607           | 85.9                 |
| May.....      | 629           | 88.6                 | November.....  | 651           | 92.1                 |
| June.....     | 663           | 93.4                 | December.....  | 660           | 93.0                 |

The different kinds of primary power, the number of engines, and the amount of horsepower used in 1909 are shown in the following tabular statement:

| KIND.                     | Number of engines or motors. | Horsepower. |
|---------------------------|------------------------------|-------------|
| Primary power, total..... |                              | 851         |
| Owned—Steam.....          | 19                           | 659         |
| Rented—Electric.....      | 51                           | 212         |

The kind and amount of fuel used are shown in the following statement:

| KIND.                | Unit.           | Quantity. |
|----------------------|-----------------|-----------|
| Anthracite coal..... | Tons.....       | 826       |
| Bituminous coal..... | Tons.....       | 9,979     |
| Wood.....            | Cords.....      | 1,390     |
| Oil.....             | Barrels.....    | 46        |
| Gas.....             | 1,000 feet..... | 2,665     |

**Custom saw and grist mills.**—Statistics for custom saw and grist mills are not included in the general tables or in the totals for manufacturing industries, but are presented in the following summary:

|                                    | Custom sawmills. | Custom gristmills. |
|------------------------------------|------------------|--------------------|
| Number of establishments.....      | 14               | 2                  |
| Persons engaged in industry.....   | 43               | 4                  |
| Proprietors and firm members.....  | 10               | 3                  |
| Wage earners (average number)..... | 24               | 1                  |
| Primary horsepower.....            | 534              | 42                 |
| Capital.....                       | \$32,600         | \$11,400           |
| Expenses.....                      | 13,350           | 13,840             |
| Services.....                      | 8,741            | 395                |
| Materials.....                     | 670              | 113,150            |
| Miscellaneous.....                 | 3,945            | 55                 |
| Value of products.....             | 24,249           | 114,175            |

<sup>1</sup> Includes estimate of all grain ground.

STATISTICS OF MANUFACTURES—MONTANA.

TABLE I.—COMPARATIVE SUMMARY FOR 1909, 1904, AND 1899.

THE STATE—ALL INDUSTRIES COMBINED AND SELECTED INDUSTRIES.

| INDUSTRY.   | Census. | Number of establishments. | PERSONS ENGAGED IN INDUSTRY. |                               |                     |                                | Primary horse-power. | Capital. | Salaries. | Wages.   | Cost of materials. | Value of products. | Value added by manufacture. |
|---|---------|---------------------------|------------------------------|-------------------------------|---------------------|--------------------------------|----------------------|----------|-----------|----------|--------------------|--------------------|-----------------------------|
|   |         |                           | Total.                       | Proprietors and firm members. | Salaried employees. | Wage earners (average number). |                      |          |           |          |                    |                    |                             |
| Expressed in thousands.   |         |                           |                              |                               |                     |                                |                      |          |           |          |                    |                    |                             |
| STATE—All industries.....   | 1909    | 677                       | 13,694                       | 659                           | 1,380               | 11,655                         | 90,402               | \$44,588 | \$2,054   | \$10,901 | \$49,180           | \$73,278           | \$24,092                    |
|   | 1904    | 382                       | 10,198                       | 384                           | 905                 | 8,957                          | 46,736               | 52,590   | 1,506     | 8,652    | 40,930             | 66,415             | 25,486                      |
|   | 1899    | 396                       |                              |                               | 508                 | 9,854                          | 43,679               | 38,225   | 788       | 7,377    | 30,068             | 52,745             | 22,677                      |
| Bread and other bakery products.....  | 1909    | 71                        | 324                          | 80                            | 30                  | 214                            | 109                  | 1,145    | 27        | 165      | 618                | 1,000              | 478                         |
|   | 1904    | 45                        | 234                          | 51                            | 22                  | 161                            | 84                   | 466      | 24        | 102      | 353                | 740                | 387                         |
|   | 1899    | 27                        | 150                          | 31                            | 23                  | 96                             |                      | 201      | 15        | 56       | 202                | 410                | 214                         |
| Brick and tile.....   | 1909    | 21                        | 230                          | 24                            | 17                  | 180                            | 1,135                | 519      | 24        | 106      | 83                 | 371                | 288                         |
|   | 1904    | 14                        | 118                          | 13                            | 8                   | 97                             | 580                  | 240      | 13        | 77       | 38                 | 179                | 141                         |
|   | 1899    | 23                        | 160                          | 27                            | 9                   | 124                            | 248                  | 107      | 4         | 60       | 30                 | 134                | 104                         |
| Cars and general shop construction and repairs by steam-railroad companies. | 1909    | 12                        | 2,084                        |                               | 171                 | 1,913                          | 2,670                | 2,912    | 165       | 1,538    | 1,080              | 2,811              | 1,725                       |
|   | 1904    | 10                        | 1,115                        |                               | 76                  | 1,039                          | 1,061                | 1,055    | 98        | 709      | 670                | 1,572              | 902                         |
|   | 1899    | 7                         | 670                          |                               | 49                  | 621                            | 396                  | 525      | 50        | 308      | 301                | 754                | 453                         |
| Copper, tin, and sheet-iron products.....                                   | 1909    | 9                         | 48                           | 11                            | 6                   | 31                             | 5                    | 64       | 0         | 35       | 65                 | 137                | 72                          |
|   | 1904    | 3                         | 14                           | 2                             | 1                   | 11                             |                      | 11       | (1)       | 13       | 20                 | 47                 | 27                          |
|   | 1899    | (2)                       |                              |                               |                     |                                |                      |          |           |          |                    |                    |                             |
| Flour-mill and gristmill products.....                                      | 1909    | 12                        | 152                          | 2                             | 45                  | 105                            | 2,313                | 2,559    | 53        | 105      | 1,003              | 2,175              | 482                         |
|   | 1904    | 12                        | 109                          | 0                             | 36                  | 87                             | 1,455                | 991      | 47        | 57       | 1,592              | 2,008              | 411                         |
|   | 1899    | 13                        |                              |                               | 25                  | 61                             |                      | 686      | 20        | 50       | 774                | 987                | 163                         |
| Foundry and machine-shop products.....                                      | 1909    | 14                        | 372                          | 12                            | 44                  | 310                            | 741                  | 994      | 65        | 354      | 381                | 986                | 605                         |
|   | 1904    | 10                        | 402                          | 11                            | 30                  | 352                            | 841                  | 800      | 57        | 329      | 363                | 872                | 509                         |
|   | 1899    | 10                        | 582                          | 7                             | 25                  | 550                            |                      | 906      | 42        | 510      | 420                | 1,108              | 760                         |
| Leather goods.....  | 1909    | 16                        | 63                           | 16                            | 11                  | 36                             | 10                   | 220      | 0         | 39       | 84                 | 102                | 108                         |
|   | 1904    | 8                         | 34                           | 6                             |                     | 28                             | 2                    | 73       |           | 27       | 50                 | 113                | 57                          |
|   | 1899    | (2)                       |                              |                               |                     |                                |                      |          |           |          |                    |                    |                             |
| Liquors, malt.....  | 1909    | 21                        | 349                          | 9                             | 94                  | 246                            | 2,472                | 3,040    | 223       | 359      | 602                | 2,440              | 1,838                       |
|   | 1904    | 23                        | 322                          | 13                            | 59                  | 250                            | 1,714                | 2,175    | 133       | 285      | 487                | 1,732              | 1,245                       |
|   | 1899    | 21                        | 249                          | 22                            | 34                  | 193                            | 1,038                | 1,204    | 68        | 109      | 376                | 1,270              | 900                         |
| Lumber and timber products.....   | 1909    | 155                       | 3,452                        | 170                           | 176                 | 3,106                          | 14,337               | 8,544    | 265       | 2,185    | 1,865              | 6,334              | 4,469                       |
|   | 1904    | 47                        | 2,408                        | 45                            | 145                 | 2,218                          | 7,612                | 4,846    | 198       | 1,512    | 454                | 3,121              | 2,607                       |
|   | 1899    | 91                        |                              |                               | 62                  | 2,367                          |                      | 2,377    | 72        | 1,214    | 1,014              | 3,044              | 2,030                       |
| Marble and stone work.....  | 1909    | 21                        | 110                          | 20                            | 12                  | 78                             | 123                  | 240      | 18        | 102      | 57                 | 230                | 173                         |
|   | 1904    | 6                         | 24                           | 8                             |                     | 16                             | 18                   | 24       |           | 14       | 10                 | 51                 | 35                          |
|   | 1899    | (2)                       |                              |                               |                     |                                |                      |          |           |          |                    |                    |                             |
| Printing and publishing.....  | 1909    | 135                       | 1,046                        | 110                           | 245                 | 691                            | 679                  | 1,051    | 204       | 685      | 408                | 2,111              | 1,708                       |
|   | 1904    | 42                        | 691                          | 81                            | 129                 | 481                            | 462                  | 1,024    | 192       | 542      | 307                | 1,487              | 1,180                       |
|   | 1899    | 89                        | 659                          | 80                            | 94                  | 485                            |                      | 771      | 130       | 334      | 194                | 981                | 787                         |
| Slaughtering and meat packing.....  | 1909    | 9                         | 162                          | 3                             | 54                  | 105                            | 316                  | 483      | 65        | 92       | 1,781              | 2,054              | 273                         |
|   | 1904    | (2)                       |                              |                               |                     |                                |                      |          |           |          |                    |                    |                             |
|   | 1899    | 3                         |                              |                               | 6                   | 34                             | 55                   | 108      | 12        | 31       | 740                | 852                | 106                         |
| Tobacco manufactures.....   | 1909    | 53                        | 202                          | 110                           | 1                   | 61                             |                      | 121      |           | 85       | 132                | 320                | 188                         |
|   | 1904    | 44                        | 142                          | 46                            | 1                   | 95                             |                      | 71       | 1         | 66       | 105                | 271                | 166                         |
|   | 1899    | 30                        | 105                          | 33                            |                     | 72                             |                      | 69       |           | 48       | 70                 | 174                | 104                         |
| All other industries.....   | 1909    | 128                       | 5,100                        | 92                            | 474                 | 4,534                          | 65,492               | 22,000   | 840       | 4,991    | 40,330             | 52,015             | 11,685                      |
|   | 1904    | 68                        | 4,583                        | 52                            | 389                 | 4,142                          | 32,298               | 40,924   | 743       | 4,832    | 36,469             | 54,227             | 17,768                      |
|   | 1899    | 81                        |                              |                               | 181                 | 5,261                          |                      | 31,091   | 358       | 4,488    | 25,932             | 42,979             | 17,047                      |

CITIES OF 10,000 TO 50,000 INHABITANTS—ALL INDUSTRIES COMBINED.

|               |      |     |     |    |     |     |       |       |      |       |       |       |       |
|---------------|------|-----|-----|----|-----|-----|-------|-------|------|-------|-------|-------|-------|
| Anaconda..... | 1909 | 13  | 151 | 10 | 44  | 97  | 258   | \$489 | \$77 | \$134 | \$157 | \$591 | \$434 |
|               | 1904 | (6) |     |    |     |     |       |       |      |       |       |       |       |
|               | 1899 | (5) |     |    |     |     |       |       |      |       |       |       |       |
| Billings..... | 1909 | 37  | 294 | 32 | 36  | 226 | 661   | 951   | 52   | 229   | 765   | 1,243 | 478   |
|               | 1904 | (6) |     |    |     |     |       |       |      |       |       |       |       |
|               | 1899 | (5) |     |    |     |     |       |       |      |       |       |       |       |
| Butte.....    | 1909 | 66  | 867 | 58 | 147 | 662 | 1,217 | 1,899 | 200  | 640   | 920   | 2,404 | 1,544 |
|               | 1904 | 54  | 614 | 47 | 89  | 478 |       | 1,267 | 150  | 509   | 568   | 1,700 | 1,192 |
|               | 1899 | 56  |     |    | 58  | 411 |       | 1,130 | 66   | 306   | 777   | 1,516 | 739   |
| Helena.....   | 1909 | 44  | 550 | 33 | 97  | 420 | 788   | 1,681 | 121  | 362   | 493   | 1,303 | 810   |
|               | 1904 | 34  | 440 | 29 | 62  | 349 |       | 1,112 | 86   | 260   | 428   | 1,163 | 735   |
|               | 1899 | 27  |     |    | 50  | 264 |       | 817   | 62   | 172   | 336   | 770   | 440   |
| Missoula..... | 1909 | 26  | 529 | 20 | 81  | 423 | 594   | 913   | 81   | 403   | 402   | 1,171 | 769   |
|               | 1904 | (6) |     |    |     |     |       |       |      |       |       |       |       |
|               | 1899 | (6) |     |    |     |     |       |       |      |       |       |       |       |

<sup>1</sup> Less than \$500.

<sup>2</sup> Figures can not be shown without disclosing individual operations.

<sup>3</sup> Does not include statistics for one establishment, to avoid disclosure of individual operations.

<sup>4</sup> Does not include statistics for two establishments, to avoid disclosure of individual operations.

<sup>5</sup> Population less than 10,000 in 1900.

STATISTICS OF MANUFACTURES—MONTANA.

TABLE II.—DETAIL STATEMENT FOR

| INDUSTRY.  | Num-ber<br>of<br>estab-lish-ments. | PERSONS ENGAGED IN INDUSTRY. |   |   |         |              |                         |                    |                    |        |        | WAGE EARNERS—NUMBER DEC. 15, OR NEAREST REPRESENTATIVE DAY. |              |           |              |         | Pri-<br>mary<br>horse-<br>power. |
|--|------------------------------------|------------------------------|---|---|---------|--------------|-------------------------|--------------------|--------------------|--------|--------|---|--------------|-----------|--------------|---------|----------------------------------|
|  |                                    | Total.                       | Pro-<br>pri-<br>etors<br>and<br>firm<br>mem-<br>bers. | Sala-<br>ried<br>officers,<br>super-<br>intend-<br>ents,<br>and<br>man-<br>agers. | Clerks. |              | Average<br>num-<br>ber. | Wage earners.      |                    |        | Total. | 16 and over.  |              | Under 16. |              |         |                                  |
|  |                                    |                              |   |   | Male.   | Fe-<br>male. |                         | Maximum<br>month.  | Minimum<br>month.  | Total. |        | Male.   | Fe-<br>male. | Male.     | Fe-<br>male. |         |                                  |
|  |                                    |                              |   |   |         |              |                         |                    |                    |        |        |   |              |           |              | Number. |                                  |
| 1 All industries.....  | 677                                | 13,694                       | 659   | 484   | 796     | 100          | 11,655                  | Oc 13,127          | Fe 10,772          | (1)    | (1)    | (1)   | (1)          | (1)       | 90,402       |         |                                  |
| 2 Artificial stone.....  | 16                                 | 113                          | 23  | 2   | 3       | 1            | 84                      | Oc 126             | Ja <sup>2</sup> 28 | 70     | 69     | 1   |              |           | 85           |         |                                  |
| 3 Bread and other bakery products.....   | 71                                 | 324                          | 80  | 3   | 14      | 13           | 214                     | De 228             | Fe 201             | 233    | 168    | 65  |              |           | 109          |         |                                  |
| 4 Brick and tile.....  | 21                                 | 230                          | 24  | 12  | 5       |              | 139                     | Jy 388             | Fe 10              | 266    | 205    | 1   |              |           | 1,133        |         |                                  |
| 5 Butter, cheese, and condensed milk.....                                      | 20                                 | 43                           | 4   | 6   | 3       | 1            | 29                      | Je <sup>2</sup> 30 | Ja <sup>2</sup> 27 | 32     | 27     | 5   |              |           | 235          |         |                                  |
| 6 Carriages and wagons and materials.....                                      | 4                                  | 34                           | 2   | 2   | 2       |              | 23                      | Je 34              | Fe 23              | 24     | 24     |   |              |           | 19           |         |                                  |
| 7 Cars and general shop construction and repairs by steam-railroad companies.  | 12                                 | 2,084                        |   | 63  | 104     | 4            | 1,913                   | No 2,303           | Ap 1,597           | 2,204  | 2,259  |   | 5            |           | 2,679        |         |                                  |
| 8 Cars and general shop construction and repairs by street-railroad companies. | 4                                  | 24                           |   | 3   |         |              | 21                      | De 24              | Ja 19              | 24     | 24     |   |              |           | 79           |         |                                  |
| 9 Copper, tin, and sheet-iron products.....                                    | 9                                  | 48                           | 11  | 5   |         | 1            | 31                      | Oc 40              | Ja 20              | 36     | 36     |   |              |           | 5            |         |                                  |
| 10 Flour-mill and gristmill products.....                                      | 12                                 | 162                          | 2   | 17  | 20      | 8            | 105                     | De 120             | Jy 95              | 122    | 121    | 1   |              |           | 2,313        |         |                                  |
| 11 Foundry and machine-shop products.....                                      | 14                                 | 372                          | 12  | 18  | 24      | 2            | 316                     | Oc 336             | Jy 278             | 329    | 329    |   |              |           | 741          |         |                                  |
| 12 Gas, illuminating and heating.....  | 5                                  | 63                           |   | 8   | 5       | 2            | 48                      | Jy 62              | Fe 36              | 50     | 50     |   |              |           | 125          |         |                                  |
| 13 Leather goods.....  | 16                                 | 63                           | 16  | 6   | 5       |              | 36                      | Je <sup>2</sup> 40 | Ja <sup>2</sup> 32 | 34     | 34     |   |              |           | 15           |         |                                  |
| 14 Liquors, malt.....  | 21                                 | 349                          | 9   | 51  | 42      | 1            | 246                     | Jy 263             | Fe 230             | 236    | 236    |   |              |           | 2,472        |         |                                  |
| 15 Lumber and timber products.....   | 155                                | 3,452                        | 170   | 84  | 88      | 4            | 3,106                   | No 3,773           | Ap 2,673           | 4,473  | 4,457  | 7   | 9            |           | 14,337       |         |                                  |
| 16 Marble and stone work.....  | 21                                 | 110                          | 20  | 5   | 6       | 1            | 78                      | Je 103             | Ja 26              | 109    | 109    |   |              |           | 123          |         |                                  |
| 17 Patent medicines and compounds, and druggists' preparations.                | 5                                  | 14                           | 1   | 3   | 3       | 1            | 6                       | De 8               | Je <sup>2</sup> 6  | 8      | 6      | 1   | 1            |           | 3            |         |                                  |
| 18 Printing and publishing.....  | 135                                | 1,046                        | 110   | 58  | 160     | 27           | 691                     | De 718             | Ja 667             | 717    | 637    | 68  | 11           | 1         | 659          |         |                                  |
| 19 Slaughtering and meat packing.....  | 9                                  | 162                          | 3   | 13  | 37      | 4            | 105                     | No 113             | Mh 97              | 104    | 106    | 4   |              |           | 316          |         |                                  |
| 20 Tobacco manufactures.....   | 53                                 | 202                          | 110   | 1   |         |              | 91                      | Ja <sup>2</sup> 95 | Ap <sup>2</sup> 88 | 100    | 90     | 3   | 7            |           | 61,934       |         |                                  |
| 21 All other industries <sup>3</sup> .....                                     | 74                                 | 4,809                        | 62  | 124   | 275     | 30           | 4,318                   |                    |                    |        |        |   |              |           |              |         |                                  |

<sup>1</sup> No figures given for reasons explained in the Introduction, page 2. See also discussion of wage earners on page 6.  
<sup>2</sup> Same number reported for one or more other months.  
<sup>3</sup> All other industries embrace—

|   |    |  |   |   |    |
|---|----|--|---|---|----|
| Awnings, tents, and sails.....                        | 2  | Food preparations.....                               | 4 | Mineral and soda waters.....                      | 22 |
| Beet sugar.....                                       | 1  | Fur goods.....                                       | 1 | Pottery, terra-cotta, and fire-clay products..... | 1  |
| Brooms.....   | 2  | Hand stamps, and stencils and brands.....            | 1 | Signs and advertising novelties.....              | 1  |
| Carpets, rag.....                                     | 1  | Hats and caps, other than felt, straw, and wool..... | 1 | Smelting and refining, copper.....                | 4  |
| Chemicals.....  | 1  | Jewelry.....   | 1 | Smelting and refining, lead.....                  | 1  |
| Coffee and spice, roasting and grinding.....          | 2  | Lime.....  | 5 | Soap.....   | 1  |
| Coffins, burial cases, and undertakers' goods.....    | 1  | Liquors, distilled.....                              | 1 | Umbrellas and canes.....                          | 1  |
| Coke.....   | 1  | Malt.....  | 1 | Wall plaster.....                                 | 2  |
| Confectionery.....                                    | 10 | Mattresses and spring beds.....                      | 2 | Wirework, including wire rope and cable.....      | 2  |
| Dairymen's, poultryers', and apiarists' supplies..... | 1  |  |   |   |    |



# STATISTICS OF MANUFACTURES—MONTANA.

15

THE STATE, BY INDUSTRIES: 1909.

|    | Capital.     | EXPENSES.    |             |           |               |                         |              |                  |                                    |                | Value of products. | Value added by manufacture. |              |
|----|--------------|--------------|-------------|-----------|---------------|-------------------------|--------------|------------------|------------------------------------|----------------|--------------------|-----------------------------|--------------|
|    |              | Total.       | Services.   |           |               | Materials.              |              | Miscellaneous.   |                                    |                |                    |                             |              |
|    |              |              | Officials.  | Clerks.   | Wage earners. | Fuel and rent of power. | Other.       | Rent of factory. | Taxes, including internal revenue. | Contract work. |                    |                             | Other.       |
| 1  | \$44,588,368 | \$66,820,595 | \$1,092,444 | \$961,578 | \$10,901,452  | \$3,712,840             | \$45,467,300 | \$1,672,057      | \$635,087                          | \$322,110      | \$2,064,628        | \$73,271,793                | \$24,091,554 |
| 2  | 131,855      | 193,784      | 2,550       | 2,475     | 71,265        | 740                     | 111,581      | 120              | 480                                | .....          | 4,573              | 223,500                     | 111,179      |
| 3  | 1,144,050    | 901,708      | 6,785       | 20,051    | 164,924       | 21,682                  | 595,828      | 20,372           | 3,908                              | .....          | 68,218             | 1,005,838                   | 478,328      |
| 4  | 518,544      | 298,313      | 18,508      | 5,000     | 165,728       | 62,491                  | 20,905       | 600              | 2,054                              | .....          | 23,027             | 370,574                     | 287,178      |
| 5  | 178,650      | 401,057      | 6,600       | 2,712     | 23,798        | 3,565                   | 350,608      | 3,990            | 804                                | .....          | 9,820              | 418,920                     | 64,747       |
| 6  | 67,653       | 68,932       | 2,400       | 2,200     | 31,514        | 1,483                   | 27,604       | 960              | 1,053                              | .....          | 1,818              | 78,669                      | 49,682       |
| 7  | 2,912,134    | 2,810,494    | 88,462      | 76,548    | 1,538,121     | 120,392                 | 965,220      | .....            | 11,127                             | .....          | 10,615             | 2,810,521                   | 1,724,000    |
| 8  | 95,585       | 148,807      | 3,020       | .....     | 20,905        | 1,724                   | 11,774       | .....            | 350                                | .....          | 2,004              | 48,807                      | 35,300       |
| 9  | 63,534       | 114,982      | 5,635       | 200       | 35,375        | 501                     | 64,811       | 2,428            | 2,312                              | .....          | 3,680              | 136,995                     | 71,503       |
| 10 | 2,558,734    | 1,993,682    | 26,650      | 20,608    | 105,410       | 25,850                  | 1,667,490    | .....            | 14,272                             | .....          | 127,402            | 2,175,236                   | 481,896      |
| 11 | 993,757      | 840,147      | 20,683      | 34,852    | 354,364       | 30,853                  | 344,643      | 1,584            | 5,335                              | .....          | 38,933             | 985,036                     | 604,640      |
| 12 | 1,041,030    | 153,086      | 7,825       | 5,465     | 41,183        | 60,317                  | 16,425       | .....            | 5,474                              | 1,107          | 15,200             | 189,912                     | 113,170      |
| 13 | 210,784      | 140,220      | 6,800       | 2,600     | 30,076        | 965                     | 83,117       | 8,009            | 1,358                              | .....          | 3,305              | 192,016                     | 107,934      |
| 14 | 3,040,400    | 1,863,068    | 174,918     | 48,265    | 358,508       | 84,080                  | 518,280      | .....            | 200,602                            | .....          | 388,415            | 2,439,832                   | 1,837,472    |
| 15 | 8,543,743    | 5,342,540    | 160,942     | 104,326   | 2,185,300     | 14,776                  | 1,850,109    | 3,104            | 78,584                             | 280,666        | 600,742            | 6,833,778                   | 4,468,893    |
| 16 | 245,555      | 102,795      | 9,000       | 8,775     | 101,763       | 4,050                   | 52,467       | 890              | 1,088                              | .....          | 14,166             | 229,809                     | 172,686      |
| 17 | 33,308       | 37,576       | 2,940       | 5,723     | 4,503         | 251                     | 14,028       | 1,020            | 208                                | 600            | 7,403              | 46,508                      | 31,410       |
| 18 | 1,650,672    | 1,751,203    | 123,010     | 170,690   | 684,914       | 29,568                  | 373,092      | 44,880           | 12,120                             | 29,730         | 283,190            | 2,111,229                   | 1,708,509    |
| 19 | 482,055      | 2,012,975    | 25,640      | 39,591    | 91,658        | 13,785                  | 1,767,250    | 19,010           | 3,965                              | .....          | 62,676             | 2,053,600                   | 272,574      |
| 20 | 121,196      | 252,081      | 360         | .....     | 85,328        | 900                     | 130,691      | 7,085            | 16,638                             | .....          | 11,079             | 320,301                     | 188,710      |
| 21 | 20,514,814   | 47,390,176   | 390,056     | 405,407   | 4,788,815     | 3,228,171               | 36,500,767   | 1,557,006        | 188,325                            | 1,007          | 338,962            | 51,009,613                  | 11,280,675   |

O

## MANUFACTURES : NEBRASKA

## STATISTICS OF MANUFACTURES FOR THE STATE, CITIES, AND INDUSTRIES

Prepared under the supervision of W. M. STEUART, Chief Statistician for Manufactures

## INTRODUCTION.

This advance bulletin gives the statistics of manufactures for the state of Nebraska for the calendar year 1909 as shown by the Thirteenth Census. It will be reprinted without change as a part of the state Compendium of the Census for Nebraska, and in the final reports of the Thirteenth Census.

The text summarizes the general results of the census inquiry, presenting a series of special tables in which the main facts printed in the general tables are given in convenient form for the state as a whole and for important industries. It also presents tables in which the statistics for the industries of the state as a whole and for a few important industries are classified by character of ownership, size of establishments, number of wage earners, and prevailing hours of labor, information which could not be presented in general tables for each industry without disclosing the facts for individual establishments.

At the end of the bulletin are two general tables.

Table I gives for 1909, 1904, and 1899 the number of establishments and of persons engaged in the industries, primary power, capital, salaries and wages, cost of materials, value of products, and value added by manufacture reported for all industries combined and for certain important industries (1) for the state as a whole and (2) for the city of Omaha. It also gives the same items for all industries combined for every city having in 1910 a population of over 10,000 but less than 50,000.

Table II gives statistics in detail for 1909 for the state and for a larger number of industries.

**Scope of census: Factory industries.**—Census statistics of manufactures are compiled primarily for the purpose of showing the absolute and relative magnitude of the different branches of industry covered and their growth or decline. Incidentally, the effort is made to present data throwing light upon character of organization, location of establishments, size of establishments, labor force, and similar subjects. When use is made of the data for these purposes it is imperative that due attention should be given to the limitations of the figures. Particularly is this true when the attempt is made to derive from them figures purporting to show average wages, cost of production, or profits. These limitations will be fully discussed in the general report on manufactures for the United States as a whole. It is impossible to reproduce such discussion in the bulletins relative to the individual states.

The census of 1909, like that of 1904, was confined to manufacturing establishments conducted under the factory system, as distinguished from the neighborhood, hand, and building industries. Where statistics for 1899 are given they have been reduced to a comparable basis by eliminating the latter classes of industries.

The census does not include establishments which were idle during the entire year, or had a value of products of less than \$500, or the manufacturing done in educational, eleemosynary, and penal institutions, or in governmental establishments, except those of the Federal Government.

**Period covered.**—The returns cover the calendar year 1909, or the business year which corresponds most nearly to that calendar year. The statistics cover a year's operations, except for establishments which began or discontinued business during the year.

**The establishment.**—The term "establishment" comprises the factories, mills, or plants which are under a common ownership or control, and for which one set of books of account is kept.

If, however, the plants constituting an establishment as thus defined were not all located within the same city or state, separate reports were secured in order that the separate totals might be included in the statistics for each city or state. In some instances separate reports were secured for different industries carried on in the same establishment.

**Classification by industries.**—The establishments were assigned to the several classes of industries according to their products of chief value. The products reported for a given industry may thus, on the one hand, include minor products very different from those covered by the class designation, and, on the other hand, may not include the total product covered by this designation, because some part of this product may be made in establishments in which it is not the product of chief value.

**Selected industries.**—The general tables at the end of this bulletin give the principal facts separately for the industries of the state. A selection has been made of the leading industries of the state for more detailed consideration. Sometimes an industry of greater importance than some of those selected is omitted because it comprises so few establishments that these detailed presentations would reveal the operations of individual concerns.

**Comparisons with previous censuses.**—Owing to the changes in industrial conditions it is not always possible to classify establishments by industries in such a way as to permit accurate comparison with preceding censuses. Table I, giving comparable figures for 1909, 1904, and 1899, therefore, does not embrace all the industries shown for 1909 in Table II.

**Influence of increased prices.**—In considering changes in cost of materials, value of products, and value added by manufacture, account should be taken of the general increase in the prices of commodities during recent years. To the extent to which this factor has been influential the figures can not be taken as an exact measure of increase in the volume of business.

**Persons engaged in industry.**—At the censuses of 1909, 1904, and 1899, the following general classes of persons engaged in manufacturing industries have been distinguished: (1) Proprietors and firm members, (2) salaried officers of corporations, (3) superintendents and managers, (4) clerks, and (5) wage earners. In the censuses of 1904 and 1899 these five classes were shown according to the three main groups: (1) Proprietors and firm members, (2) salaried officials, clerks, etc., and (3) wage earners. The second group included the three classes of salaried officers of corporations, superintendents and managers, and clerks. In the present census an entirely different grouping is employed: That into (1) proprietors and officials, (2)

clerks, and (3) wage earners. The first group includes proprietors and firm members, salaried officers of corporations, and superintendents and managers.

At this census the number of persons engaged in the industries, segregated by sex, and, in the case of wage earners, also by age (whether under 16 or 16 and over), was reported for December 15, or the nearest representative day. The 15th of December was selected as representing for most industries normal conditions of employment, but where conditions were exceptional, and particularly in the case of certain seasonal industries, such as canning, the December date could not be accepted as typical and an earlier date had to be chosen.

In the case of employees other than wage earners the number thus reported on December 15 or other representative day has been treated as equivalent to the average for the year, since the number of employees of this class does not vary much from month to month in a given industry. In the case of wage earners the average is obtained in the manner explained in the next paragraph.

**Wage earners.**—In addition to the report by sex and age of the number of wage earners on December 15 or other representative day, a report was obtained of the number employed on the 15th of each month, without distinction of sex or age. From these figures the average number of wage earners for the year has been calculated by dividing the sum of the numbers reported each month by 12. The average thus obtained represents the number of wage earners that would be required to perform the work done if all were constantly employed during the entire year. Accordingly, the importance of any industry as an employer of labor is believed to be more accurately measured by this average than by the number employed at any one time or on a given day.

The number of wage earners reported for the representative day, though given for each separate industry, is not totaled for all industries combined, because in view of the variations of date such a total is believed not to be significant. It would involve more or less duplication of persons working in different industries at different times, would not represent the total number employed in all industries at any one time, and would give an undue weight to seasonal industries as compared with industries in continual operation.

In particular, totals by sex and age for the wage earners reported for the representative day would be misleading because of the undue weight given to seasonal industries, in some of which, such as canning and preserving, the distribution of the wage earners by sex and age is materially different from that in most industries of more regular operation. In order to determine as nearly as possible the sex and age distribution of the average number of wage earners in the state as a whole, the following procedure has been adopted:

The percentage distribution by sex and age of the wage earners in each industry, for December 15 or the nearest representative day, has been calculated from the actual numbers reported for that date. This percentage has been applied to the average number of wage earners for the year in that industry, to determine the average number of men, women, and children employed. These calculated averages for the several industries have been added up to give the average distribution for the state as a whole.

In 1899 and 1904 the schedule called for the average number of wage earners of each sex 16 years and over, and the total number under 16 years of age, for each month, and these monthly statements were combined in an annual average. Comparatively few manufacturing concerns, however, keep their books in such way as to show readily the number of men, women, and children (under 16) employed each month. These monthly returns by sex and age were, in fact, largely estimates. It was believed that a more accurate and reliable sex and age distribution could be secured by taking as a basis of estimate the actual numbers employed on a single day.

**Prevailing hours of labor.**—The census made no attempt to ascertain the number of employees working a given number of hours per week. The inquiry called merely for the prevailing practice followed in each establishment. Occasional variations in hours in an establishment from one period to another are disregarded, and no attention is given to the fact that a limited number of employees

may have hours differing from those of the majority. In the tables all the wage earners of each establishment are counted in the class within which the establishment itself falls. In most establishments, however, all or practically all the employees work the same number of hours, so that these figures give a substantially correct picture of the hours of labor in manufacturing industries.

**Capital.**—For reasons stated in prior census reports, the statistics of capital secured by the census canvass are so defective as to be without value, except as indicating very general conditions. The instructions on the schedule for securing capital were as follows:

The answer should show the total amount of capital, both owned and borrowed, on the last day of the business year reported. All the items of fixed and live capital may be taken at the amounts carried on the books. If land or buildings are rented, that fact should be stated and no value given. If a part of the land or buildings is owned, the remainder being rented, that fact should be so stated and only the value of the owned property given. Do not include securities and loans representing investments in other enterprises.

**Materials.**—Cost of materials refers to the materials used during the year, which may be more or less than the materials purchased during the year. The term materials includes fuel, rent of power and heat, mill supplies, and containers, as well as materials forming a constituent part of the product. Fuel includes all fuel used, whether for heat, light, or power, or for the process of manufacture.

**Expenses.**—Under "Expenses" are included all items of expense incident to the year's business, except interest, whether on bonds or other forms of indebtedness, dividends on stock, and allowances for depreciation.

**Value of products.**—The value of products for any industry includes the total value of all products manufactured in establishments whose products of chief value fall under the industry designation. The amounts given represent the selling value at the factory of all products manufactured during the year, which may differ from the value of the products sold. Amounts received for work on materials furnished by others are included.

**Value added by manufacture.**—The value of products is not a satisfactory measure of either the absolute or the relative importance of a given industry, because only a part of this value is actually created by the manufacturing process carried on in the industry itself. Another part of it, and often by far the larger part, represents the value of the materials used, which have been produced by agriculture or mining or by other industrial establishments. For many purposes, therefore, the best measure of the importance of different classes of industry is the value created as the result of the manufacturing operations carried on within the industry. This value is obtained by deducting the cost of the materials consumed from the value of the product. The figure thus obtained is termed in the census reports "value added by manufacture."

There is a further statistical advantage which "value added" has over gross value of products. In combining the value of products for all industries the value of products produced by one establishment and used as materials in another is duplicated, and the total, therefore, gives a greatly exaggerated idea of the wealth created. No such duplication takes place in the total "value added by manufacture."

**Cost of manufacture and profits.**—Census data do not show the entire cost of manufacture, and consequently can not be used to show profits. No account has been taken of interest and depreciation. Even if the amount of profit could be determined by deducting the expenses from the value of the products the rate of profit on the investment could not properly be calculated, because of the very defective character of the returns regarding capital.

**Primary power.**—The figures given for this item show the total of the primary power used by the establishments. They do not cover the power developed by motors operated by such power, the inclusion of which would evidently result in duplication.

**Location of establishments.**—The Census Bureau has classified establishments by their location in cities or classes of cities. In interpreting these figures due consideration should be given to the fact that often establishments are located just outside the boundaries

of cities, and are necessarily so classified, though locally they are looked upon as constituting a part of the manufacturing interests of the cities.

**Laundries.**—The census of 1909 was the first to include statistics of laundries. The reports are confined to establishments using mechanical power. The data are presented separately and are no

included in the general total for manufacturing industries, in order to avoid interference with comparisons with prior censuses.

**Custom gristmills.**—In order to make the statistics for 1909 comparable with those for 1904 the data for these mills have been excluded from all the tables presenting general statistics, and are given in a separate table at the end of this report.

**INDUSTRIES IN GENERAL.**

**General character of the state.**—Nebraska, with a gross area of 77,520 square miles, of which 712 represent water surface, had a population in 1910 of 1,192,214, as compared with 1,066,300 in 1900 and 1,062,656 in 1890. It ranked twenty-ninth among the 49 states and territories of continental United States as regards population in 1910 and twenty-seventh in 1900. Twenty-six and one-tenth per cent of the entire population of the state resides in incorporated places having a population of 2,500 inhabitants or over, as against 23.7 per cent in 1900. The state has four cities having a population of over 10,000: Omaha, Lincoln, South Omaha, and Grand Island. The density of population for the entire state was 15.5 persons per square mile, the corresponding figure for 1900 being 13.9. The several trunk lines of railways with their numerous feeders form a network covering the entire state, and furnish good facilities for transportation and direct connection with outside markets.

**Importance and growth of manufactures.**—Nebraska is not preeminently a manufacturing state, but its manufacturing interests have been rapidly developing

during the last 50 years. In fact, the increase has been greater in proportion than the corresponding growth of population in the state for the same period. During 1859 an average of only 336 wage earners, representing 1.2 per cent of the total population, were employed in manufactures, while in 1909 an average of 24,336 wage earners, or 2 per cent of the total population, were so engaged. During this period of 50 years the gross value of products per capita of the total population of the state increased from \$21 in 1859 to \$167 in 1909. In 1859 Nebraska produced less than one-tenth of 1 per cent of the total value of products of manufacturing industries in the United States and in 1909 nearly 1 per cent. In the former year it ranked thirty-ninth among the states of the Union in respect to value of manufactures and in 1909 twenty-fifth.

The following table gives the most important figures relative to all classes of manufactures combined for the state as returned at the censuses of 1909, 1904, and 1899, together with the percentages of increase from census to census:

|  | NUMBER OR AMOUNT. |              |                  | PER CENT OF INCREASE. <sup>1</sup> |                  |
|--|-------------------|--------------|------------------|------------------------------------|------------------|
|  | 1909              | 1904         | 1899             | 1904-1909                          | 1899-1904        |
| Number of establishments.....  | 2,500             | 1,819        | 1,695            | 37.4                               | 7.3              |
| Persons engaged in manufactures.....                                       | 31,966            | 25,356       | ( <sup>2</sup> ) | 26.1                               | ( <sup>2</sup> ) |
| Proprietors and firm members.....  | 2,522             | 1,904        | ( <sup>2</sup> ) | 32.5                               | ( <sup>2</sup> ) |
| Salaried employees.....  | 5,108             | 3,192        | 2,296            | 60.0                               | 39.0             |
| Wage earners (average number).....   | 24,336            | 20,260       | 18,669           | 20.1                               | 8.5              |
| Primary horsepower.....  | 64,466            | 46,372       | 41,825           | 39.0                               | 10.9             |
| Capital.....   | \$99,901,000      | \$80,235,000 | \$65,906,000     | 24.5                               | 21.7             |
| Expenses.....  | 183,587,000       | 146,639,000  | 113,043,000      | 25.2                               | 20.7             |
| Services.....  | 19,439,000        | 14,097,000   | 10,949,000       | 37.9                               | 28.8             |
| Salaries.....  | 5,491,000         | 3,075,000    | 2,107,000        | 78.6                               | 45.9             |
| Wages.....   | 13,948,000        | 11,022,000   | 8,842,000        | 26.5                               | 24.7             |
| Materials.....   | 151,081,000       | 124,052,000  | 95,925,000       | 21.8                               | 29.3             |
| Miscellaneous.....   | 13,067,000        | 8,490,000    | 6,169,000        | 53.9                               | 37.6             |
| Value of products.....   | 199,019,000       | 154,918,000  | 130,302,000      | 28.5                               | 18.9             |
| Value added by manufacture (value of products less cost of materials)..... | 47,938,000        | 30,866,000   | 34,377,000       | 55.3                               | -10.2            |

<sup>1</sup> A minus sign (—) denotes decrease.

<sup>2</sup> Figures not available.

In 1909 the state of Nebraska had 2,500 manufacturing establishments operating under the factory system, which gave employment to an average of 31,966 persons during the year and paid out \$19,439,000 in salaries and wages. Of the persons employed, 24,336 were wage earners. These establishments turned out products to the value of \$199,019,000, to produce which materials costing \$151,081,000 were consumed. The value added by manufacture was thus \$47,938,000, which figure, as explained in the Introduction, best represents

the net wealth created by manufacturing operations during the year.

In general, this table brings out the fact that the manufacturing industries of Nebraska as a whole showed a considerable increase during the five-year period 1904-1909. From 1899 to 1904 the number of establishments increased 7.3 per cent, the average number of wage earners 8.5 per cent, and the value of products 18.9 per cent, while the value added by manufacture decreased 10.2 per cent. During the more recent period the number of establishments

## STATISTICS OF MANUFACTURES—NEBRASKA.

increased 37.4 per cent, the average number of wage earners 20.1 per cent, and the value of products 28.5 per cent, while the value added by manufacture increased 55.3 per cent. The decrease of 10.2 per cent in the value added by manufacture from 1899 to 1904 is due largely to the figures reported for the lead smelting and refining industry. This industry is included with "all other industries" because its statistics can not be given without disclosing individual operations. The manufacturing operations in this industry frequently are so closely related to those of mining that it is not always practicable to separate mining and manufacturing expenses. As a result, the cost of materials used by smelters which

are operated by mining companies may represent the actual cost of mining, or its market value at the smelters as though purchased from other producers, or an arbitrary cost placed upon it by the book-keeping methods of the companies. As pointed out in the Introduction, it would be improper to infer that manufactures increased in volume to the full extent indicated by these figures regarding values, since the increase shown is certainly due, in part, to the increase that has taken place in the price of commodities.

The relative importance and growth of the leading manufacturing industries of the state are shown in the following table:

| INDUSTRY.   | Number of establishments. | WAGE EARNERS.   |                        | VALUE OF PRODUCTS.   |                        | VALUE ADDED BY MANUFACTURE. |                        | PER CENT OF INCREASE. <sup>1</sup> |             |                             |              |
|---|---------------------------|-----------------|------------------------|----------------------|------------------------|-----------------------------|------------------------|------------------------------------|-------------|-----------------------------|--------------|
|   |                           | Average number. | Per cent distribution. | Amount.              | Per cent distribution. | Amount.                     | Per cent distribution. | Value of products.                 |             | Value added by manufacture. |              |
|   |                           |                 |                        |                      |                        |                             |                        | 1904-1909                          | 1899-1904   | 1904-1909                   | 1899-1904    |
| <b>All industries.....</b>  | <b>2,500</b>              | <b>24,336</b>   | <b>100.0</b>           | <b>\$199,019,000</b> | <b>100.0</b>           | <b>\$47,998,000</b>         | <b>100.0</b>           | <b>28.5</b>                        | <b>18.9</b> | <b>55.3</b>                 | <b>-10.2</b> |
| Slaughtering and meat packing.....  | 18                        | 6,015           | 24.7                   | 92,305,000           | 46.4                   | 13,947,000                  | 29.1                   | 33.1                               | -2.7        | 73.2                        | -2.2         |
| Flour-mill and gristmill products.....  | 249                       | 839             | 3.4                    | 17,836,000           | 9.0                    | 2,619,000                   | 5.5                    | 46.3                               | 56.4        | 28.6                        | 24.1         |
| Butter, cheese, and condensed milk.....   | 37                        | 383             | 1.6                    | 7,881,000            | 3.9                    | 1,246,000                   | 2.6                    | 130.9                              | 47.6        | 90.5                        | 63.5         |
| Printing and publishing.....  | 674                       | 2,329           | 9.6                    | 6,667,000            | 3.3                    | 4,950,000                   | 10.3                   | 33.6                               | 44.5        | 34.1                        | 48.2         |
| Cars and general shop construction and repairs by steam-railroad companies..... | 13                        | 3,685           | 15.1                   | 4,642,000            | 2.3                    | 2,918,000                   | 6.1                    | 5.6                                | 67.5        | 17.8                        | 54.5         |
| Liquors, malt.....  | 14                        | 424             | 1.7                    | 3,335,000            | 1.7                    | 2,710,000                   | 5.7                    | 100.4                              | 16.0        | 124.9                       | 7.4          |
| Bread and other bakery products.....  | 279                       | 646             | 2.7                    | 3,014,000            | 1.5                    | 1,342,000                   | 2.8                    | 123.1                              | 27.2        | 112.7                       | 13.3         |
| Foundry and machine-shop products.....  | 73                        | 1,020           | 4.2                    | 2,630,000            | 1.5                    | 1,414,000                   | 2.9                    |                                    |             |                             |              |
| Lumber and timber products.....   | 48                        | 543             | 2.2                    | 2,021,000            | 1.0                    | 795,000                     | 1.7                    |                                    |             |                             |              |
| Leather goods.....  | 30                        | 266             | 1.1                    | 1,683,000            | 0.8                    | 605,000                     | 1.3                    | 61.0                               | 7.5         | 35.3                        | 10.9         |
| Clothing, men's, including shirts.....  | 12                        | 887             | 3.6                    | 1,545,000            | 0.8                    | 578,000                     | 1.2                    | 45.1                               |             | 70.5                        |              |
| Gas, illuminating and heating.....  | 48                        | 400             | 1.6                    | 1,415,000            | 0.7                    | 970,000                     | 2.0                    | 55.2                               | 73.7        | 44.3                        | 71.9         |
| Paint and varnish.....  | 4                         | 112             | 0.5                    | 1,254,000            | 0.6                    | 405,000                     | 0.8                    | 201.4                              | -68.6       | 268.2                       | -63.8        |
| Artificial stone.....   | 286                       | 553             | 2.3                    | 1,226,000            | 0.6                    | 712,000                     | 1.5                    | 717.3                              |             | 747.6                       |              |
| Confectionery.....  | 18                        | 383             | 1.6                    | 1,176,000            | 0.6                    | 471,000                     | 1.0                    | 117.0                              | 118.5       | 38.1                        | 267.2        |
| Brick and tile.....   | 78                        | 831             | 3.4                    | 1,161,000            | 0.6                    | 883,000                     | 1.8                    | 2.6                                | 34.8        | 3.3                         | 34.2         |
| Tobacco manufactures.....   | 151                       | 537             | 2.2                    | 1,072,000            | 0.5                    | 603,000                     | 1.3                    | 10.1                               | 28.2        | 7.3                         | 35.1         |
| Dairymen's, poultryers', and apiarists' supplies.....                           | 16                        | 290             | 0.9                    | 941,000              | 0.5                    | 482,000                     | 1.0                    | 281.0                              |             | 217.1                       |              |
| Marble and stone work.....  | 38                        | 187             | 0.8                    | 721,000              | 0.4                    | 390,000                     | 0.8                    | 97.0                               | 422.9       | 73.3                        | 368.8        |
| Patent medicines and compounds and druggists' preparations.....                 | 30                        | 86              | 0.4                    | 609,000              | 0.3                    | 424,000                     | 0.9                    | 51.7                               |             | 70.3                        |              |
| Carriages and wagons and materials.....   | 22                        | 200             | 0.8                    | 577,000              | 0.3                    | 325,000                     | 0.7                    | 81.4                               | 28.7        | 71.6                        | 21.6         |
| Copper, tin, and sheet-iron products.....                                       | 37                        | 180             | 0.7                    | 562,000              | 0.3                    | 273,000                     | 0.6                    |                                    |             |                             |              |
| Cooperage and wooden goods, not elsewhere specified.....                        | 4                         | 95              | 0.4                    | 496,000              | 0.2                    | 154,000                     | 0.3                    | 84.4                               | -36.9       | 90.3                        | -36.7        |
| Canning and preserving.....   | 12                        | 215             | 0.9                    | 481,000              | 0.2                    | 212,000                     | 0.4                    |                                    |             |                             |              |
| Mattresses and spring beds.....   | 6                         | 113             | 0.5                    | 355,000              | 0.2                    | 138,000                     | 0.3                    | 255.0                              | -35.9       | 176.0                       | -13.8        |
| All other industries.....   | 294                       | 3,177           | 13.1                   | 43,354,000           | 21.8                   | 8,365,000                   | 17.4                   |                                    |             |                             |              |

<sup>1</sup> Per cent of increase is based on figures in Table I, and a minus sign (-) denotes decrease.

It should be borne in mind, in considering this table, that the value of products in some of the industries involves a certain amount of duplication due to the use of the product of one establishment in the industry as material for another establishment.

The most important industries listed in this table, where they are arranged in the order of the value of products, call for brief consideration.

*Slaughtering and meat packing.*—The development of this industry in Nebraska is due partly to the natural advantages afforded by the state for feeding cattle and partly to its central location in the corn and cattle-raising sections of the country. Not only is a large amount of live stock bred in Nebraska, but large numbers of animals are also brought from other states to the feeding grounds in Nebraska to be fattened for market. The center of the slaughtering and meat-packing indus-

try is South Omaha, where it was firmly established in the early eighties, when the plant of the Union Stock Yards Company was erected. The importance of this industry is best indicated by the fact that in 1909 it gave employment to 24.7 per cent of the total number of wage earners engaged in all manufacturing industries in the state and contributed 46.4 per cent of the aggregate value of products. In 1909 but three states—Illinois, Kansas, and New York—produced a greater value in slaughtering and meat-packing products.

*Flour-mill and gristmill products.*—In a state which is so largely agricultural and whose principal crops are cereals it is natural that this industry should take high rank. The 249 establishments engaged in this industry are widely distributed through the state and, while the majority of them are small and located in

rural districts, there are a number of considerable size. This industry, the second in importance in the state, increased in value of products \$10,042,000, or 128.8 per cent, during the past decade. Its growth has been rapid and steady, the percentage of increase for the period 1904-1909 being a very little less than for the earlier period 1899-1904. The remarkable development of this industry may be fully realized from the statistics for 1859, which showed but 17 establishments, with a total value of products of \$110,000. Statistics for mills which do only custom work are not included in the general tables or in the totals for manufacturing industries. Separate statistics for such mills are given on page 16.

*Butter, cheese, and condensed milk.*—The establishments reported for this industry are engaged primarily in the manufacture of butter, the amount of cheese manufactured being small and no condensed-milk products were made in 1909. This industry, while showing a decrease in number of establishments, has made rapid growth in the volume of its operations. In 1909 its products aggregated \$7,681,000 in value, an increase of 130.9 per cent over that of 1904.

*Printing and publishing.*—The statistics showing number of wage earners, value of products, and value added by manufacture all indicate a considerable growth of this industry. The establishments classified under this head include those publishing newspapers, books, and periodicals, job-printing offices, establishments engaged in bookbinding and blank-book making, and lithographing and engraving establishments.

*Cars and general shop construction and repairs by steam-railroad companies.*—This industry represents the work done in the car shops by steam-railroad companies and is exclusive of minor repairs in roundhouses. The operations consist almost exclusively of repairs to rolling stock and equipment. Although the number of establishments reported decreased from 30 in 1904 to 13 in 1909, due to the elimination of a number of roundhouses that were included in the prior census, the value of the work performed increased slightly. Employment was given to an average of 3,685 wage earners, and products were reported amounting to \$4,642,000.

Measured by value added by manufacture the relative rank of these leading industries is somewhat changed from their order when measured by value of products, printing and publishing, railroad repair shops, and malt liquors becoming second, third, and fourth in order, respectively, while flour-mill and gristmill products and butter and cheese products become fifth and eighth, respectively. In the flour-mill and gristmill and the butter and cheese industries, owing to the comparatively simple processes involved and the extent to which these processes are carried on by machinery, the value added by manufacture is not commensurate with the gross value of products.

This table shows also the percentages of increase for these leading industries in respect to value of products and value added by manufacture where the statistics are comparable. The manufacture of artificial stone, which was first commenced in Nebraska on a commercial basis less than a decade ago, has shown a rapid development. Its value of products increased from \$150,000 in 1904 to \$1,226,000 in 1909, or more than sevenfold. The dairymen's, poulterers', and apiarists' supplies, mattress and spring-bed, and paint and varnish industries also showed remarkable increases both in gross value of products and in value added by manufacture. In fact, all of the industries showed a decided increase from 1904 to 1909 in these respects. The increases from 1899 to 1904 were usually smaller, and in several instances decreases were shown.

In addition to the 25 industries separately presented, there are 9 other industries, some of which are among the most important in the state, and each of which had a value of products in 1909 in excess of \$500,000. They are included in the group of "All other industries," because in some instances if they were shown separately the operations of individual establishments would be disclosed; in others because the returns do not properly present the true condition of the industry owing to its being interwoven with one or more other industries of similar character; and for others the comparable statistics for the different census years can not be presented either because the data for prior censuses are not available or on account of changes in classification. These industries are: Bags, other than paper; brooms; cars, steam-railroad, not including operations of railroad companies; coffee and spice, roasting and grinding; food preparations; liquors, distilled; smelting and refining, copper; smelting and refining, lead; and soap. Figures for the broom industry for 1909 will be found in Table II.

*Persons engaged in manufacturing industries.*—The following table shows, for 1909, the distribution of the number of persons engaged in manufactures, the average number of wage earners being distributed by sex and age. It should be borne in mind, however, that the sex and age classification of the average number of wage earners in this and other tables is an estimate obtained by the method described in the Introduction.

| CLASS.                                 | PERSONS ENGAGED IN MANUFACTURES. |        |         |
|--|----------------------------------|--------|---------|
|  | Total.                           | Male.  | Female. |
| All classes.....                       | 31,966                           | 27,557 | 4,409   |
| Proprietors and officials.....         | 3,686                            | 3,572  | 114     |
| Proprietors and firm members.....      | 2,522                            | 2,425  | 97      |
| Salaried officers of corporations..... | 342                              | 334    | 8       |
| Superintendents and managers.....      | 822                              | 813    | 9       |
| Clerks.....                            | 3,944                            | 3,044  | 900     |
| Wage earners (average number).....     | 24,336                           | 20,941 | 3,395   |
| 16 years of age and over.....          | 24,119                           | 20,763 | 3,356   |
| Under 16 years of age.....             | 217                              | 178    | 39      |



## STATISTICS OF MANUFACTURES—NEBRASKA.

The average number of persons engaged in manufactures during 1909 was 31,966, of whom 24,336 were wage earners. Of the remainder, 3,686 were proprietors and officials and 3,944 were clerks. Corresponding figures for individual industries will be found in Table II.

The following table shows, for 1909, the percentage of proprietors and officials, clerks, and wage earners, respectively, among the total number of persons employed in manufactures. It covers all industries combined and 11 important industries individually.

| INDUSTRY.   | PERSONS ENGAGED IN MANUFACTURES. |                            |             |                                |
|---|----------------------------------|----------------------------|-------------|--------------------------------|
|   | Total number.                    | Per cent of total.         |             |                                |
|   |                                  | Proprietors and officials. | Clerks.     | Wage earners (average number). |
| <b>All industries.....</b>  | <b>31,966</b>                    | <b>11.5</b>                | <b>12.3</b> | <b>76.1</b>                    |
| Bread and other bakery products.....  | 1,166                            | 29.5                       | 14.5        | 55.9                           |
| Butter, cheese, and condensed milk.....   | 602                              | 14.8                       | 21.6        | 63.6                           |
| Cars and general shop construction and repairs by steam-railroad companies..... | 4,021                            | 3.5                        | 4.9         | 91.6                           |
| Clothing, men's, including shirts.....  | 963                              | 2.6                        | 5.3         | 92.1                           |
| Flour-mill and gristmill products.....  | 1,455                            | 23.4                       | 14.0        | 57.7                           |
| Foundry and machine-shop products.....  | 1,340                            | 9.0                        | 15.2        | 75.8                           |
| Leather goods.....  | 365                              | 13.2                       | 14.0        | 72.9                           |
| Liquors, malt.....  | 547                              | 8.8                        | 13.7        | 77.5                           |
| Lumber and timber products.....   | 707                              | 9.9                        | 13.3        | 76.8                           |
| Printing and publishing.....  | 3,884                            | 21.8                       | 18.2        | 60.0                           |
| Slaughtering and meat packing.....  | 7,221                            | 0.7                        | 16.0        | 83.3                           |
| All other industries.....   | 9,700                            | 15.4                       | 9.4         | 75.2                           |

Of the total number of persons engaged in all manufacturing industries, 11.5 per cent were proprietors and officials, 12.3 per cent clerks, and 76.1 per cent wage earners. The highest percentage of proprietors and officials shown for any individual industry, 29.5, is for the bakeries. In this industry, and also in the flour-mill and gristmill, and the printing and publishing industries, the majority of the establishments are small, and the work is to a large extent done by the proprietors or their immediate representatives, so that the proportion of persons engaged in these industries falling in the class of proprietors and officials is very much higher than for most other industries or for all industries combined. The smallest proportion for this class is shown for the slaughtering and meat-packing industry, due to the large average number of wage earners to an individual establishment in this industry.

The table following shows, in percentages, for all industries combined, the distribution of the average number of wage earners, by age periods and for those 16 years of age and over by sex, calculated in the manner described in the Introduction. It also shows, for some of the important industries separately, a similar distribution of wage earners as reported for December 15, or the nearest representative day. As a means of judging the importance of the several industries, the average total number employed for the year is also given in each case.

For all industries combined, 85.3 per cent of the average number of wage earners were males 16 years of age and over; 13.8 per cent, females 16 years of age and over; and only nine-tenths of 1 per cent, persons

under the age of 16. The larger part of the total number of female wage earners is made up of those employed in the manufacture of men's clothing, and in the bakery and the printing and publishing industries. In the men's clothing industry over nine-tenths of the employees are women 16 years of age and over, and in the bakery and the printing and publishing industries the proportion is about one-fourth.

| INDUSTRY.   | WAGE EARNERS.                |                           |             |                        |
|---|------------------------------|---------------------------|-------------|------------------------|
|   | Average number. <sup>1</sup> | Per cent of total.        |             |                        |
|   |                              | 16 years of age and over. |             | Under 16 years of age. |
|   |                              | Male.                     | Female.     |                        |
| <b>All industries.....</b>  | <b>24,336</b>                | <b>85.3</b>               | <b>13.8</b> | <b>0.9</b>             |
| Bread and other bakery products.....  | 646                          | 72.6                      | 26.0        | 1.4                    |
| Butter, cheese, and condensed milk.....   | 383                          | 88.8                      | 10.7        | 0.5                    |
| Cars and general shop construction and repairs by steam-railroad companies..... | 3,685                        | 100.0                     | .....       | .....                  |
| Clothing, men's, including shirts.....  | 887                          | 8.0                       | 91.7        | 0.3                    |
| Flour-mill and gristmill products.....  | 839                          | 92.7                      | 7.0         | 0.2                    |
| Foundry and machine-shop products.....  | 1,020                        | 98.0                      | 1.3         | 0.7                    |
| Leather goods.....  | 266                          | 100.0                     | .....       | .....                  |
| Liquors, malt.....  | 424                          | 100.0                     | .....       | .....                  |
| Lumber and timber products.....   | 543                          | 98.5                      | .....       | 1.5                    |
| Printing and publishing.....  | 2,329                        | 73.0                      | 23.8        | 2.3                    |
| Slaughtering and meat packing.....  | 6,015                        | 92.6                      | 6.3         | 1.1                    |
| All other industries.....   | 7,299                        | 80.9                      | 18.2        | 0.9                    |

<sup>1</sup> For method of estimating the distribution, by sex and age periods, of the average number in all industries combined, see Introduction.

In order to compare the distribution of persons engaged in manufactures in 1909 with that shown at the census of 1904 it is necessary to use the classification employed at the earlier census. (See Introduction.) The following table makes this comparison according to occupational status:

| CLASS.                             | PERSONS ENGAGED IN MANUFACTURES. |                       |               |                       | Per cent of increase, 1904-1909. |
|------------------------------------|----------------------------------|-----------------------|---------------|-----------------------|----------------------------------|
|                                    | 1909                             |                       | 1904          |                       |                                  |
|                                    | Number.                          | Percent distribution. | Number.       | Percent distribution. |                                  |
| <b>Total.....</b>                  | <b>31,966</b>                    | <b>100.0</b>          | <b>25,356</b> | <b>100.0</b>          | <b>86.1</b>                      |
| Proprietors and firm members.....  | 2,522                            | 7.9                   | 1,004         | 7.5                   | 32.5                             |
| Salaried employees.....            | 5,108                            | 16.0                  | 3,192         | 12.6                  | 60.0                             |
| Wage earners (average number)..... | 24,336                           | 76.1                  | 20,260        | 79.9                  | 20.1                             |

Comparable figures are not obtainable for 1899. The table shows a greater percentage of increase in the salaried employees than in the other two classes.

The table following shows the average number of wage earners, distributed according to age periods, and in the case of those 16 years of age and over according to sex, for 1909, 1904, and 1899. The averages for 1909 are estimated on the basis of the actual number reported for a single representative day. (See Introduction.)

This table indicates that for all industries combined there has been no great change in the proportion of male and female wage earners. In 1909 males 16 years of age and over formed 85.3 per cent of all wage earners, as compared with 85.5 per cent in 1904 and 86.9 per cent in 1899. The proportion of children



employed decreased from 3.9 per cent in 1899 to nine-tenths of 1 per cent in 1909.

| CLASS.                     | AVERAGE NUMBER OF WAGE EARNERS. |                       |         |                       |         |                       |
|----------------------------|---------------------------------|-----------------------|---------|-----------------------|---------|-----------------------|
|                            | 1909                            |                       | 1904    |                       | 1899    |                       |
|                            | Number.                         | Percent distribution. | Number. | Percent distribution. | Number. | Percent distribution. |
| Total.....                 | 24,336                          | 100.0                 | 20,260  | 100.0                 | 18,660  | 100.0                 |
| 16 years of age and over.. | 24,119                          | 99.1                  | 19,803  | 98.0                  | 17,030  | 96.1                  |
| Male.....                  | 20,763                          | 85.3                  | 17,321  | 85.5                  | 16,227  | 86.9                  |
| Female.....                | 3,356                           | 13.8                  | 2,542   | 12.5                  | 1,709   | 9.2                   |
| Under 16 years of age....  | 217                             | 0.9                   | 307     | 2.0                   | 733     | 3.9                   |

Wage earners employed by months.—The following table gives the number of wage earners employed on the 15th of each month during the year 1909 for all industries combined, for four selected industries, and for all other industries combined; it also gives the percentage which the number reported for each month is of the greatest number reported for any month. In Table II, page 20, is shown, for practically all of the important industries of the state, the largest number and also the smallest number of wage earners reported for any month. The figures are for the 15th day, or the nearest representative day of the month.

| MONTH.         | NUMBER OF WAGE EARNERS. |                      |                   |                      |                 |                      |                         |                      |                                |                      |                       |                      |
|----------------|-------------------------|----------------------|-------------------|----------------------|-----------------|----------------------|-------------------------|----------------------|--------------------------------|----------------------|-----------------------|----------------------|
|                | All industries.         |                      | Artificial stone. |                      | Brick and tile. |                      | Canning and preserving. |                      | Slaughtering and meat packing. |                      | All other industries. |                      |
|                | Number.                 | Per cent of maximum. | Number.           | Per cent of maximum. | Number.         | Per cent of maximum. | Number.                 | Per cent of maximum. | Number.                        | Per cent of maximum. | Number.               | Per cent of maximum. |
| January.....   | 22,138                  | 85.3                 | 111               | 13.1                 | 220             | 17.4                 | 44                      | 4.8                  | 5,930                          | 87.4                 | 15,827                | 90.0                 |
| February.....  | 23,203                  | 89.7                 | 136               | 16.0                 | 245             | 19.4                 | 48                      | 5.3                  | 6,794                          | 100.0                | 16,040                | 91.2                 |
| March.....     | 22,091                  | 88.6                 | 302               | 42.6                 | 507             | 40.1                 | 50                      | 6.2                  | 5,785                          | 85.2                 | 16,283                | 92.6                 |
| April.....     | 23,744                  | 91.5                 | 670               | 79.0                 | 924             | 73.2                 | 50                      | 6.2                  | 5,043                          | 83.1                 | 16,442                | 93.5                 |
| May.....       | 24,277                  | 93.6                 | 825               | 97.1                 | 1,187           | 94.0                 | 57                      | 6.3                  | 5,740                          | 84.5                 | 16,468                | 93.7                 |
| June.....      | 24,748                  | 95.4                 | 850               | 100.0                | 1,232           | 97.5                 | 68                      | 7.5                  | 6,051                          | 89.1                 | 16,547                | 94.1                 |
| July.....      | 24,732                  | 95.4                 | 832               | 99.1                 | 1,388           | 94.1                 | 110                     | 13.1                 | 5,855                          | 86.2                 | 16,738                | 95.2                 |
| August.....    | 25,628                  | 98.8                 | 841               | 98.0                 | 1,263           | 100.0                | 909                     | 100.0                | 5,709                          | 84.9                 | 16,840                | 95.8                 |
| September..... | 25,945                  | 100.0                | 801               | 94.2                 | 1,186           | 93.9                 | 788                     | 89.7                 | 5,978                          | 88.0                 | 17,102                | 97.8                 |
| October.....   | 25,373                  | 97.8                 | 635               | 74.7                 | 602             | 78.5                 | 218                     | 24.0                 | 6,146                          | 90.5                 | 17,382                | 98.0                 |
| November.....  | 24,020                  | 90.1                 | 397               | 46.7                 | 648             | 51.3                 | 147                     | 16.2                 | 6,157                          | 90.6                 | 17,580                | 100.0                |
| December.....  | 24,251                  | 93.5                 | 162               | 19.1                 | 384             | 30.4                 | 74                      | 8.1                  | 6,314                          | 92.9                 | 17,317                | 98.5                 |

The variation from month to month in the number of wage earners employed in all industries combined was slight. The highest number, 25,945, was reported for September and the lowest, 22,138, for January. Of the four industries presented separately, three show considerable variation from month to month in the number of wage earners; however, the total number employed in these three industries is not large. The principal industry of the state is slaughtering and meat packing; the maximum number of employees in this industry, 6,794, was in February and the minimum, 5,643, in April. The artificial-stone industry shows a decided concentration of employment in the summer months; the same is true, in a somewhat less degree, of the brick and tile industry. The great bulk of the work in the canning and preserving industry is done in August and September, when the fruits and vegetables ripen. Exclusive of the four industries separately mentioned the industries of the state, as a whole, report a steady increase in the number of wage earners from 15,827 in January to 17,580 in November.

Prevailing hours of labor.—In the table following wage earners have been classified according to hours of labor prevailing in the establishments in which they are employed. In making this classification the

average number of wage earners employed during the year is used and the number employed in each establishment is classified as a total according to the hours prevailing in that establishment, even though some few employees work a greater or less number of hours.

It is evident from these figures that for the great majority of wage earners employed in the manufacturing industries of Nebraska the prevailing hours of labor range from 54 to 60 a week, or from 9 to 10 hours a day, only 11.8 per cent of the total being employed in establishments working less than 9 hours a day, and only 10.3 per cent being employed in establishments working more than 10 hours a day.

It will be noted that the artificial-stone, brick and tile, foundry and machine-shop, and slaughtering and meat-packing industries are principally on a 10-hour-per-day basis (60 hours per week), while the railroad repair shops and the men's clothing industries are mainly on a 9-hour basis. The prevailing hours in the flour-mill and gristmill industry are somewhat longer than in the other important specified industries, ranging from 60 to 72 hours, inclusive, per week for nearly all establishments, while in the manufacture of gas most of the wage earners work more than 72 hours per week.

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| INDUSTRY.   | AVERAGE NUMBER OF WAGE EARNERS IN ESTABLISHMENTS GROUPED ACCORDING TO PREVAILING HOURS OF WORK PER WEEK. |               |                    |              |                    |              |                    |            |            |
|---|--|---------------|--------------------|--------------|--------------------|--------------|--------------------|------------|------------|
|   | Total.   | 48 and under. | Between 48 and 54. | 54.          | Between 54 and 60. | 60.          | Between 60 and 72. | 72.        | Over 72.   |
| <b>All industries.....</b>  | <b>24,336</b>  | <b>1,991</b>  | <b>892</b>         | <b>6,076</b> | <b>3,876</b>       | <b>8,991</b> | <b>1,916</b>       | <b>184</b> | <b>410</b> |
| Artificial stone.....   | 553  | 8             | 4                  | 35           | 83                 | 423          |                    |            |            |
| Bread and other bakery products.....  | 646  | 41            | 8                  | 240          | 1                  | 290          | 37                 | 21         | 5          |
| Brick and tile.....   | 831  | 70            | 28                 | 17           | 16                 | 672          | 28                 |            |            |
| Butter, cheese, and condensed milk.....   | 383  | 5             |                    | 13           |                    | 274          | 87                 | 4          |            |
| Canning and preserving.....   | 215  | 4             | 2                  |              | 10                 | 190          |                    |            |            |
| Carriages and wagons and materials.....   | 200  | 1             |                    | 15           | 110                | 74           |                    |            |            |
| Cars and general shop construction and repairs by steam-railroad companies..... | 3,685  |               |                    | 1,985        | 637                | 115          | 948                |            |            |
| Clothing, men's, including shirts.....  | 887  | 8             | 302                | 511          | 66                 |              |                    |            |            |
| Confectionery.....  | 383  | 2             |                    | 159          |                    | 222          |                    |            |            |
| Cooperage and wooden goods, not elsewhere specified.....                        | 95   |               |                    |              |                    | 95           |                    |            |            |
| Copper, tin, and sheet-iron products.....                                       | 180  | 67            | 7                  | 30           | 36                 | 40           |                    |            |            |
| Dairymen's, poulterers', and apalarists' supplies.....                          | 230  |               | 32                 | 17           |                    | 181          |                    |            |            |
| Flour-mill and gristmill products.....  | 839  | 11            | 14                 | 6            | 6                  | 447          | 236                | 116        | 3          |
| Foundry and machine-shop products.....  | 1,020  | 9             | 74                 | 116          | 130                | 690          |                    | 1          |            |
| Gas, illuminating and heating.....  | 400  | 11            | 1                  |              |                    | 8            | 33                 |            | 347        |
| Leather goods.....  | 266  | 1             | 8                  | 9            | 101                | 37           | 20                 |            |            |
| Liquors, malt.....  | 424  | 305           |                    | 60           |                    | 21           | 17                 | 21         |            |
| Lumber and timber products.....   | 543  | 3             |                    | 148          | 201                | 131          |                    |            |            |
| Marble and stone work.....  | 187  | 22            | 66                 | 57           | 1                  | 41           |                    |            |            |
| Mattresses and spring beds.....   | 113  |               |                    | 86           | 10                 | 17           |                    |            |            |
| Paint and varnish.....  | 112  | 3             |                    | 61           | 46                 | 2            |                    |            |            |
| Patent medicines and compounds and druggists' preparations.....                 | 86   | 10            | 23                 | 22           | 16                 | 15           |                    |            |            |
| Printing and publishing.....  | 2,329  | 971           | 178                | 792          | 118                | 258          | 1                  | 11         |            |
| Slaughtering and meat packing.....  | 6,015  |               |                    | 734          | 1,484              | 3,786        | 2                  | 9          |            |
| Tobacco manufactures.....   | 537  | 323           |                    | 108          | 30                 | 76           |                    |            |            |
| All other industries.....   | 3,177  | 116           | 145                | 855          | 615                | 886          | 507                | 1          | 54         |

Location of establishments.—The next table shows the extent to which manufactures of Nebraska are centralized in cities of 10,000 population or over. (See Introduction.) The statistics for 1904 are omitted from this table because there was no census of population for that year, and it was impossible to determine the cities that came within the group having over 10,000 inhabitants.

the totals for the cities and for those of the districts outside, the latter reported a slightly greater relative increase in value of products and value added by manufacture than did the cities.

The increase in the population of Grand Island has affected slightly the grouping in the table. Prior to 1910 this city had less than 10,000 inhabitants, and so was included in the outside districts.

The population for 1910 and 1900 of the four cities which had 10,000 inhabitants or over in 1910 is given in the following statement:

| ITEM.                           | Year. | Total.        | LOCATION OF ESTABLISHMENTS.                   |                    | PER CENT OF TOTAL.                            |                    |
|---------------------------------|-------|---------------|---|--------------------|---|--------------------|
|                                 |       |               | In cities with population of 10,000 and over. | Outside districts. | In cities with population of 10,000 and over. | Outside districts. |
| Population....                  | 1910  | 1,102,214     | 204,654                                       | 987,560            | 17.2  | 82.8               |
|                                 | 1900  | 1,066,300     | 108,725                                       | 957,575            | 15.8  | 84.2               |
| Number of establishments.       | 1909  | 2,500         | 714   | 1,786              | 28.6  | 71.4               |
|                                 | 1899  | 1,695         | 429   | 1,266              | 25.3  | 74.7               |
| Average number of wage earners. | 1909  | 24,336        | 17,085  | 7,251              | 70.2  | 29.8               |
|                                 | 1899  | 18,609        | 12,707  | 5,902              | 68.1  | 31.9               |
| Value of products.              | 1909  | \$199,018,579 | \$162,137,305                                 | \$36,881,184       | 81.5  | 18.5               |
|                                 | 1899  | 130,302,463   | 110,346,027                                   | 19,956,826         | 84.7  | 15.3               |
| Value added by manufacture.     | 1909  | 47,937,608    | 30,174,579                                    | 11,769,029         | 75.5  | 24.5               |
|                                 | 1899  | 34,377,275    | 27,804,848                                    | 6,572,427          | 80.9  | 19.1               |

| CITY.             | POPULATION. |         |
|-------------------|-------------|---------|
|                   | 1910        | 1900    |
| Omaha.....        | 124,096     | 102,559 |
| Lincoln.....      | 43,073      | 40,169  |
| South Omaha.....  | 20,250      | 20,001  |
| Grand Island..... | 10,320      | 17,554  |

<sup>1</sup> Population less than 10,000 in 1900; therefore, in the preceding table the statistics for Grand Island for 1899 are included with those for the districts outside of cities.

The four cities grouped in this table contain 17.2 per cent of the population of the state, and 28.6 per cent of the total number of manufacturing establishments. These establishments, however, gave employment in 1909 to 70.2 per cent of the total number of wage earners, and reported 81.5 per cent of the total value of products and 75.5 per cent of the total value added by manufactures reported for all establishments in the state. The figures indicate that while little relative change took place during the 10 years between

The relative importance in manufactures of each of the four cities having a population of 10,000 or over in 1910 is shown in the following table, in which the value of products and the average number of wage earners are shown separately for 1909, 1904, and 1899:

| CITY.            | AVERAGE NUMBER OF WAGE EARNERS. |                  |                  | VALUE OF PRODUCTS. |                  |                  |
|------------------|---------------------------------|------------------|------------------|--------------------|------------------|------------------|
|                  | 1909                            | 1904             | 1899             | 1909               | 1904             | 1899             |
| South Omaha....  | 6,306                           | 5,662            | 6,327            | \$92,435,712       | \$67,415,177     | \$69,598,829     |
| Omaha.....       | 8,023                           | 5,822            | 5,276            | 60,854,550         | 54,063,704       | 38,074,243       |
| Lincoln.....     | 2,140                           | 1,617            | 1,104            | 7,010,135          | 5,222,020        | 2,763,484        |
| Grand Island.... | 616                             | ( <sup>1</sup> ) | ( <sup>1</sup> ) | 1,836,008          | ( <sup>1</sup> ) | ( <sup>1</sup> ) |

<sup>1</sup> Population less than 10,000 in 1900.

Although ranking third in population in 1910, South Omaha was the leading manufacturing city of the state when measured by value of products. The value of its products, which were almost entirely those of the slaughtering and meat-packing industry, formed 46.4 per cent of the total for the state in 1909. During this year the city produced 96.9 per cent of the total value of products of the above-mentioned industry for the state. While a slight decrease appears in the total value of products for the city from 1899 to 1904, due to the temporary idleness of a large slaughtering and meat-packing establishment, a decided growth is shown for the more recent census period.

Omaha is the only city having a population of 50,000 and over and for which separate comparative statistics are given for individual industries. (See Table I.) Although the smelting and refining of lead is by far the most important industry in Omaha, the figures for the industry can not be given because to do so would disclose individual operations. In addition to the 11 industries separately presented in Table I, there are 11 other industries, some of which were among the most important in the city and none of which had a value of product of less than \$300,000 in 1909. They are included in the group of "All other industries" for reasons similar to those given for not showing comparative figures for all industries for the state. The 11 industries not shown in this table are: Bags, other than paper; boots and shoes, including cut stock and findings; cars and general shop construction and repairs by steam-railroad companies; the construction of steam-railroad cars, other than by railroad companies; coffee and spice, roasting and grinding; flour-mill and gristmill products; food preparations; gas, illuminating and heating; liquors, distilled; smelting and refining, copper; and smelting and refining, lead.

Omaha and South Omaha, by location practically one city, constitute the real center of the manufacturing activity of the state. While the two cities have but 12.6 per cent of the population of the state, they employ 58.9 per cent of the average number of wage earners and produce 77 per cent of the total value of products.

Lincoln and Grand Island ranked third and fourth, respectively, among the cities in the value of products. The principal industries of Lincoln are butter and cheese and printing and publishing, although a considerable variety of other industries of lesser importance were reported. Comparative figures for Grand Island are not available. In 1909 the principal industries reported for this city were the steam-railroad car shops and the flour mills and gristmills.

Character of ownership.—The table that follows has for its purpose the presentation of conditions in respect to the character of ownership or legal organization of manufacturing enterprises. For all industries combined comparative figures are given covering the cen-

suses of 1909 and 1904. Comparative data for 1899 are not available. Figures for 1909 only are presented for several important industries individually. In order to avoid disclosing the operations of individual concerns, it is necessary to omit several important industries from this and the following table.

| INDUSTRY AND CHARACTER OF OWNERSHIP.                 | Number of establishments. | Average number of wage earners. | Value of products.  | Value added by manufacture. |
|--|---------------------------|---------------------------------|---------------------|-----------------------------|
| <b>ALL INDUSTRIES:</b>                               |                           |                                 |                     |                             |
| 1909.....  | 2,600                     | 24,338                          | \$199,018,579       | \$47,937,608                |
| 1904.....  | 1,819                     | 20,260                          | 154,918,220         | 30,866,592                  |
| Individual:  |                           |                                 |                     |                             |
| 1909.....  | 1,511                     | 3,208                           | 13,707,422          | 5,038,527                   |
| 1904.....  | 1,074                     | 2,727                           | 9,050,096           | 3,929,820                   |
| Firm:  |                           |                                 |                     |                             |
| 1909.....  | 451                       | 1,436                           | 8,974,303           | 2,820,270                   |
| 1904.....  | 367                       | 1,070                           | 7,113,867           | 2,448,020                   |
| Corporation:   |                           |                                 |                     |                             |
| 1909.....  | 487                       | 10,405                          | 175,621,402         | 38,977,121                  |
| 1904.....  | 359                       | 15,844                          | 138,023,975         | 24,456,721                  |
| Other:   |                           |                                 |                     |                             |
| 1909.....  | 51                        | 107                             | 655,452             | 201,000                     |
| 1904.....  | 19                        | 19                              | 129,682             | 31,422                      |
| Per cent of total:                                   |                           |                                 |                     |                             |
| 1909.....  | 100.0                     | 100.0                           | 100.0               | 100.0                       |
| 1904.....  | 100.0                     | 100.0                           | 100.0               | 100.0                       |
| Individual:  |                           |                                 |                     |                             |
| 1909.....  | 60.4                      | 13.0                            | 6.9                 | 12.4                        |
| 1904.....  | 59.0                      | 13.5                            | 3.8                 | 12.7                        |
| Firm:  |                           |                                 |                     |                             |
| 1909.....  | 18.0                      | 5.9                             | 4.5                 | 5.9                         |
| 1904.....  | 20.2                      | 8.2                             | 4.6                 | 7.9                         |
| Corporation:   |                           |                                 |                     |                             |
| 1909.....  | 19.5                      | 80.1                            | 88.2                | 81.3                        |
| 1904.....  | 19.7                      | 78.2                            | 89.5                | 79.2                        |
| Other:   |                           |                                 |                     |                             |
| 1909.....  | 2.0                       | 0.4                             | 0.3                 | 0.4                         |
| 1904.....  | 1.0                       | 0.1                             | 0.1                 | 0.1                         |
| <b>Bread and other bakery products, 1909.....</b>    | <b>279</b>                | <b>646</b>                      | <b>\$9,014,091</b>  | <b>\$1,242,240</b>          |
| Individual.....                                      | 221                       | 325                             | 1,649,292           | 688,845                     |
| Firm.....  | 49                        | 117                             | 514,120             | 219,414                     |
| Corporation.....                                     | 9                         | 204                             | 950,709             | 493,981                     |
| Per cent of total.....                               | 100.0                     | 100.0                           | 100.0               | 100.0                       |
| Individual.....                                      | 79.2                      | 50.3                            | 51.4                | 51.3                        |
| Firm.....  | 17.6                      | 18.1                            | 17.1                | 16.3                        |
| Corporation.....                                     | 3.2                       | 31.6                            | 31.5                | 32.3                        |
| <b>Butter, cheese, and condensed milk, 1909.....</b> | <b>37</b>                 | <b>383</b>                      | <b>\$7,681,272</b>  | <b>\$1,246,526</b>          |
| Individual.....                                      | 12                        | 61                              | 652,278             | 95,826                      |
| Corporation.....                                     | 11                        | 293                             | 6,559,186           | 1,085,323                   |
| Other.....   | 14                        | 39                              | 469,808             | 65,377                      |
| Per cent of total.....                               | 100.0                     | 100.0                           | 100.0               | 100.0                       |
| Individual.....                                      | 32.4                      | 13.3                            | 8.5                 | 7.7                         |
| Corporation.....                                     | 29.7                      | 76.5                            | 85.4                | 87.1                        |
| Other.....   | 37.8                      | 10.2                            | 6.1                 | 5.2                         |
| <b>Flour-mill and gristmill products, 1909.....</b>  | <b>249</b>                | <b>839</b>                      | <b>\$17,835,596</b> | <b>\$2,618,328</b>          |
| Individual.....                                      | 115                       | 199                             | 3,844,517           | 628,531                     |
| Firm.....  | 75                        | 176                             | 4,078,782           | 724,531                     |
| Corporation.....                                     | 59                        | 464                             | 9,012,297           | 1,265,266                   |
| Per cent of total.....                               | 100.0                     | 100.0                           | 100.0               | 100.0                       |
| Individual.....                                      | 46.2                      | 23.7                            | 21.6                | 24.0                        |
| Firm.....  | 30.1                      | 21.0                            | 27.9                | 27.7                        |
| Corporation.....                                     | 23.7                      | 55.3                            | 50.5                | 48.3                        |
| <b>Foundry and machine-shop products, 1909.....</b>  | <b>73</b>                 | <b>1,020</b>                    | <b>\$2,929,583</b>  | <b>\$1,413,577</b>          |
| Individual.....                                      | 30                        | 130                             | 543,870             | 271,175                     |
| Firm.....  | 13                        | 60                              | 130,623             | 75,659                      |
| Corporation.....                                     | 30                        | 840                             | 2,255,090           | 1,066,743                   |
| Per cent of total.....                               | 100.0                     | 100.0                           | 100.0               | 100.0                       |
| Individual.....                                      | 41.1                      | 12.7                            | 18.6                | 19.2                        |
| Firm.....  | 17.8                      | 4.9                             | 4.5                 | 5.4                         |
| Corporation.....                                     | 41.1                      | 82.4                            | 77.0                | 75.5                        |
| <b>Leather goods, 1909.....</b>                      | <b>30</b>                 | <b>286</b>                      | <b>\$1,582,866</b>  | <b>\$805,024</b>            |
| Individual.....                                      | 17                        | 23                              | 98,107              | 44,898                      |
| Firm.....  | 6                         | 100                             | 714,802             | 319,723                     |
| Corporation.....                                     | 7                         | 143                             | 769,957             | 240,403                     |
| Per cent of total.....                               | 100.0                     | 100.0                           | 100.0               | 100.0                       |
| Individual.....                                      | 56.7                      | 8.6                             | 6.2                 | 7.4                         |
| Firm.....  | 20.0                      | 37.6                            | 45.2                | 52.8                        |
| Corporation.....                                     | 23.3                      | 53.8                            | 48.6                | 39.7                        |

<sup>1</sup> Includes the group "Other," to avoid disclosure of individual operations.  
<sup>2</sup> Includes the group "Firm," to avoid disclosure of individual operations.

STATISTICS OF MANUFACTURES—NEBRASKA.

| INDUSTRY AND CHARACTER OF OWNERSHIP <i>continued.</i> | Number of establishments. | Average number of wage earners. | Value of products. | Value added by manufacture. |
|---|---------------------------|---------------------------------|--------------------|-----------------------------|
| <b>Lumber and timber products, 1909.</b>              |                           |                                 |                    |                             |
| Individual.....                                       | 48                        | 543                             | \$2,021,366        | \$795,425                   |
| Firm.....   | 24                        | 96                              | 221,323            | 132,018                     |
| Corporation.....                                      | 9                         | 31                              | 75,737             | 44,687                      |
| .....   | 15                        | 416                             | 1,724,306          | 617,820                     |
| Per cent of total.....                                | 100.0                     | 100.0                           | 100.0              | 100.0                       |
| Individual.....                                       | 50.0                      | 17.7                            | 10.9               | 16.7                        |
| Firm.....   | 18.7                      | 5.7                             | 3.7                | 5.6                         |
| Corporation.....                                      | 31.2                      | 76.6                            | 85.3               | 77.7                        |
| <b>Printing and publishing, 1909.</b>                 |                           |                                 |                    |                             |
| Individual.....                                       | 674                       | 2,329                           | \$6,667,290        | \$4,955,946                 |
| Firm.....   | 491                       | 783                             | 1,909,499          | 1,472,044                   |
| Corporation.....                                      | 86                        | 220                             | 515,816            | 375,873                     |
| Other.....  | 74                        | 1,276                           | 4,112,919          | 2,992,549                   |
| .....   | 23                        | 50                              | 138,056            | 115,480                     |
| Per cent of total.....                                | 100.0                     | 100.0                           | 100.0              | 100.0                       |
| Individual.....                                       | 72.8                      | 33.6                            | 28.5               | 29.7                        |
| Firm.....   | 12.8                      | 9.4                             | 7.7                | 7.6                         |
| Corporation.....                                      | 11.0                      | 54.8                            | 61.7               | 60.4                        |
| Other.....  | 3.4                       | 2.1                             | 2.1                | 2.3                         |
| <b>Slaughtering and meat packing, 1909.</b>           |                           |                                 |                    |                             |
| Individual.....                                       | 18                        | 6,015                           | \$92,305,484       | \$13,947,606                |
| Firm.....   | 7                         | 19                              | 353,003            | 46,018                      |
| Corporation.....                                      | 6                         | 19                              | 297,364            | 53,020                      |
| .....   | 5                         | 5,977                           | 91,655,117         | 13,827,968                  |
| Per cent of total.....                                | 100.0                     | 100.0                           | 100.0              | 100.0                       |
| Individual.....                                       | 38.0                      | 0.3                             | 0.4                | 0.5                         |
| Firm.....   | 33.3                      | 0.3                             | 0.3                | 0.4                         |
| Corporation.....                                      | 27.8                      | 99.4                            | 99.3               | 99.1                        |

The most important distinction shown is that between corporate and all other forms of ownership. For all industries combined, 19.5 per cent of the total number of establishments were in 1909 under corporate ownership as against 80.5 per cent under all of the remaining forms. The corresponding figures for 1904 were 19.7 per cent and 80.3 per cent, respectively. In general, the larger establishments in all the industries reported were operated by corporations. At both census years, corporations controlled about four-fifths of the manufacturing activities of the state, as measured by average number of wage earners, value of products, or value added by manufacture.

The form of ownership prevailing in the different industries varied considerably. In all but two of the industries shown separately the most common form of ownership was the individual. The largest percentage of corporations is found in the foundry and machine-shop and in the lumber industries. In the butter and cheese industry the most common form of ownership was the cooperative, classed under "other" forms of ownership in the table. These are establishments largely operated by farmers, who organize for the purpose of securing a steady and better market for their milk and cream.

**Size of establishment.**—The tendency for manufacturing to become concentrated in large establishments, or the reverse, is a matter of interest from the standpoint of industrial organization. In order to throw some light upon it, the next table groups the establishments according to the value of their products. The table also shows the average size of establishments

for all industries combined and for important industries separately as measured by number of wage earners, value of products, and value added by manufacture. The totals for all industries are shown for the last two censuses, while for certain important industries figures are given for 1909 only.

| INDUSTRY AND VALUE OF PRODUCTS.                  | Number of establishments. | Average number of wage earners. | Value of products. | Value added by manufacture. |
|--|---------------------------|---------------------------------|--------------------|-----------------------------|
| <b>ALL INDUSTRIES:</b>                           |                           |                                 |                    |                             |
| 1909.....  | 2,500                     | 24,386                          | \$199,018,579      | \$47,937,608                |
| 1904.....  | 1,819                     | 20,260                          | 154,918,220        | 50,866,592                  |
| <b>Less than \$5,000:</b>                        |                           |                                 |                    |                             |
| 1909.....  | 1,266                     | 1,089                           | 2,951,130          | 1,907,985                   |
| 1904.....  | 938                       | 1,034                           | 2,659,696          | 1,439,489                   |
| <b>\$5,000 and less than \$20,000:</b>           |                           |                                 |                    |                             |
| 1909.....  | 685                       | 2,477                           | 6,778,610          | 3,844,695                   |
| 1904.....  | 451                       | 1,980                           | 4,628,580          | 2,529,248                   |
| <b>\$20,000 and less than \$100,000:</b>         |                           |                                 |                    |                             |
| 1909.....  | 399                       | 4,220                           | 17,100,526         | 6,781,959                   |
| 1904.....  | 320                       | 3,727                           | 13,315,999         | 5,393,991                   |
| <b>\$100,000 and less than \$1,000,000:</b>      |                           |                                 |                    |                             |
| 1909.....  | 133                       | 7,862                           | 35,055,151         | 13,363,538                  |
| 1904.....  | 101                       | 6,359                           | 24,909,507         | 9,169,414                   |
| <b>\$1,000,000 and over:</b>                     |                           |                                 |                    |                             |
| 1909.....  | 17                        | 8,088                           | 137,133,162        | 22,639,481                  |
| 1904.....  | 9                         | 7,160                           | 110,013,438        | 12,334,859                  |
| <b>Per cent of total:</b>                        |                           |                                 |                    |                             |
| 1909.....  | 100.0                     | 100.0                           | 100.0              | 100.0                       |
| 1904.....  | 100.0                     | 100.0                           | 100.0              | 100.0                       |
| <b>Less than \$5,000:</b>                        |                           |                                 |                    |                             |
| 1909.....  | 50.6                      | 4.5                             | 1.5                | 4.0                         |
| 1904.....  | 51.6                      | 5.1                             | 1.3                | 4.7                         |
| <b>\$5,000 and less than \$20,000:</b>           |                           |                                 |                    |                             |
| 1909.....  | 27.4                      | 10.2                            | 3.4                | 8.0                         |
| 1904.....  | 24.8                      | 9.8                             | 3.0                | 8.2                         |
| <b>\$20,000 and less than \$100,000:</b>         |                           |                                 |                    |                             |
| 1909.....  | 16.0                      | 17.3                            | 8.6                | 14.1                        |
| 1904.....  | 17.6                      | 18.4                            | 8.6                | 17.5                        |
| <b>\$100,000 and less than \$1,000,000:</b>      |                           |                                 |                    |                             |
| 1909.....  | 5.3                       | 32.3                            | 17.0               | 27.9                        |
| 1904.....  | 5.6                       | 31.4                            | 10.1               | 29.7                        |
| <b>\$1,000,000 and over:</b>                     |                           |                                 |                    |                             |
| 1909.....  | 0.7                       | 35.7                            | 68.0               | 46.0                        |
| 1904.....  | 0.5                       | 35.3                            | 71.0               | 49.0                        |
| <b>Average per establishment:</b>                |                           |                                 |                    |                             |
| 1909.....  | .....                     | 10                              | \$79,607           | \$19,175                    |
| 1904.....  | .....                     | 11                              | 85,167             | 16,999                      |
| <b>Bread and other bakery products, 1909.</b>    |                           |                                 |                    |                             |
| Less than \$5,000.....                           | 279                       | 646                             | \$3,014,091        | \$1,342,240                 |
| \$5,000 and less than \$20,000.....              | 132                       | 74                              | 384,092            | 174,949                     |
| \$20,000 and less than \$100,000.....            | 120                       | 247                             | 1,080,504          | 482,961                     |
| \$100,000 and less than \$1,000,000.....         | 27                        | 325                             | 1,569,435          | 684,328                     |
| Per cent of total.....                           | 100.0                     | 100.0                           | 100.0              | 100.0                       |
| Less than \$5,000.....                           | 47.3                      | 11.5                            | 12.7               | 13.0                        |
| \$5,000 and less than \$20,000.....              | 43.0                      | 38.2                            | 36.0               | 36.0                        |
| \$20,000 and less than \$100,000.....            | 9.7                       | 50.3                            | 52.1               | 51.0                        |
| Average per establishment.....                   | .....                     | 2                               | \$10,803           | \$4,541                     |
| <b>Butter, cheese, and condensed milk, 1909.</b> |                           |                                 |                    |                             |
| Less than \$5,000.....                           | 37                        | 383                             | \$7,681,272        | \$1,246,526                 |
| \$5,000 and less than \$20,000.....              | 3                         | 1                               | 10,028             | 1,898                       |
| \$20,000 and less than \$100,000.....            | 8                         | 12                              | 102,371            | 16,549                      |
| \$100,000 and less than \$1,000,000.....         | 15                        | 42                              | 658,787            | 99,414                      |
| \$1,000,000 and over.....                        | 8                         | 143                             | 2,628,082          | 304,471                     |
| .....  | 3                         | 185                             | 4,282,004          | 737,284                     |
| Per cent of total.....                           | 100.0                     | 100.0                           | 100.0              | 100.0                       |
| Less than \$5,000.....                           | 8.1                       | 0.3                             | 0.1                | 0.1                         |
| \$5,000 and less than \$20,000.....              | 21.6                      | 3.1                             | 1.3                | 1.3                         |
| \$20,000 and less than \$100,000.....            | 40.5                      | 11.0                            | 8.6                | 7.7                         |
| \$100,000 and less than \$1,000,000.....         | 21.6                      | 37.3                            | 34.2               | 31.6                        |
| \$1,000,000 and over.....                        | 8.1                       | 48.3                            | 55.7               | 59.2                        |
| Average per establishment.....                   | .....                     | 10                              | \$297,602          | \$33,699                    |
| <b>Flour-mill and gristmill products, 1909.</b>  |                           |                                 |                    |                             |
| Less than \$5,000.....                           | 249                       | 839                             | \$17,835,596       | \$2,618,928                 |
| \$5,000 and less than \$20,000.....              | 31                        | 2                               | 72,789             | 15,189                      |
| \$20,000 and less than \$100,000.....            | 47                        | 35                              | 509,447            | 117,569                     |
| \$100,000 and less than \$1,000,000.....         | 129                       | 302                             | 5,576,850          | 970,123                     |
| \$1,000,000 and less than \$1,000,000.....       | 42                        | 500                             | 11,626,510         | 1,515,215                   |
| Per cent of total.....                           | 100.0                     | 100.0                           | 100.0              | 100.0                       |
| Less than \$5,000.....                           | 12.4                      | 0.2                             | 0.4                | 0.4                         |
| \$5,000 and less than \$20,000.....              | 18.9                      | 4.2                             | 3.1                | 4.3                         |
| \$20,000 and less than \$100,000.....            | 51.8                      | 36.0                            | 31.3               | 35.1                        |
| \$100,000 and less than \$1,000,000.....         | 16.9                      | 59.6                            | 65.2               | 55.3                        |
| Average per establishment.....                   | .....                     | 3                               | \$71,029           | \$10,913                    |

<sup>1</sup> Includes the group "\$100,000 and less than \$1,000,000."  
<sup>2</sup> Includes the group "\$1,000,000 and over."

| INDUSTRY AND VALUE OF PRODUCTS— <i>continued.</i>   | Number of establishments. | Average number of wage earners. | Value of products.  | Value added by manufacture. |
|---|---------------------------|---------------------------------|---------------------|-----------------------------|
| <b>Foundry and machine-shop products, 1909.....</b> | <b>73</b>                 | <b>1,020</b>                    | <b>\$2,929,583</b>  | <b>\$1,413,577</b>          |
| Less than \$5,000.....                              | 24                        | 24                              | 64,372              | 37,050                      |
| \$5,000 and less than \$20,000.....                 | 28                        | 134                             | 297,960             | 190,055                     |
| \$20,000 and less than \$100,000.....               | 16                        | 271                             | 762,829             | 365,564                     |
| \$100,000 and less than \$1,000,000.....            | 5                         | 591                             | 1,804,422           | 820,908                     |
| Per cent of total.....                              | 100.0                     | 100.0                           | 100.0               | 100.0                       |
| Less than \$5,000.....                              | 32.9                      | 2.4                             | 2.2                 | 2.6                         |
| \$5,000 and less than \$20,000.....                 | 38.4                      | 13.1                            | 10.2                | 13.4                        |
| \$20,000 and less than \$100,000.....               | 21.9                      | 26.6                            | 26.0                | 25.9                        |
| \$100,000 and less than \$1,000,000.....            | 6.8                       | 57.9                            | 61.6                | 58.1                        |
| Average per establishment.....                      |                           | 14                              | \$40, 131           | \$19, 364                   |
| <b>Leather goods, 1909.....</b>                     | <b>30</b>                 | <b>266</b>                      | <b>\$1,582,866</b>  | <b>\$905,024</b>            |
| Less than \$5,000.....                              | 11                        | 11                              | 33,320              | 17,526                      |
| \$5,000 and less than \$20,000.....                 | 9                         | 25                              | 97,418              | 48,315                      |
| \$20,000 and less than \$100,000.....               | 4                         | 32                              | 170,316             | 61,910                      |
| \$100,000 and less than \$1,000,000.....            | 6                         | 198                             | 1,201,812           | 477,273                     |
| Per cent of total.....                              | 100.0                     | 100.0                           | 100.0               | 100.0                       |
| Less than \$5,000.....                              | 36.7                      | 4.1                             | 2.1                 | 2.9                         |
| \$5,000 and less than \$20,000.....                 | 30.0                      | 9.4                             | 6.2                 | 8.0                         |
| \$20,000 and less than \$100,000.....               | 13.3                      | 12.0                            | 10.1                | 10.2                        |
| \$100,000 and less than \$1,000,000.....            | 20.0                      | 74.4                            | 81.6                | 78.9                        |
| Average per establishment.....                      |                           | 9                               | \$52, 702           | \$20, 167                   |
| <b>Lumber and timber products, 1909.....</b>        | <b>48</b>                 | <b>543</b>                      | <b>\$2,021,366</b>  | <b>\$795,425</b>            |
| Less than \$5,000.....                              | 18                        | 15                              | 46,893              | 29,515                      |
| \$5,000 and less than \$20,000.....                 | 14                        | 62                              | 140,276             | 87,130                      |
| \$20,000 and less than \$100,000.....               | 11                        | 184                             | 435,089             | 212,517                     |
| \$100,000 and less than \$1,000,000.....            | 5                         | 282                             | 1,398,268           | 466,203                     |
| Per cent of total.....                              | 100.0                     | 100.0                           | 100.0               | 100.0                       |
| Less than \$5,000.....                              | 37.5                      | 2.8                             | 2.3                 | 3.7                         |
| \$5,000 and less than \$20,000.....                 | 29.2                      | 11.4                            | 6.9                 | 11.0                        |
| \$20,000 and less than \$100,000.....               | 22.9                      | 33.9                            | 21.6                | 26.7                        |
| \$100,000 and less than \$1,000,000.....            | 10.4                      | 51.9                            | 69.2                | 58.6                        |
| Average per establishment.....                      |                           | 11                              | \$42, 112           | \$16, 571                   |
| <b>Printing and publishing, 1909.....</b>           | <b>674</b>                | <b>2,329</b>                    | <b>\$6,667,290</b>  | <b>\$4,955,946</b>          |
| Less than \$5,000.....                              | 489                       | 488                             | 1,135,248           | 901,897                     |
| \$5,000 and less than \$20,000.....                 | 140                       | 549                             | 1,210,342           | 966,460                     |
| \$20,000 and less than \$100,000.....               | 33                        | 562                             | 1,373,699           | 949,210                     |
| \$100,000 and less than \$1,000,000.....            | 12                        | 730                             | 2,948,001           | 2,148,380                   |
| Per cent of total.....                              | 100.0                     | 100.0                           | 100.0               | 100.0                       |
| Less than \$5,000.....                              | 72.6                      | 21.0                            | 17.0                | 18.2                        |
| \$5,000 and less than \$20,000.....                 | 20.8                      | 23.6                            | 18.2                | 19.3                        |
| \$20,000 and less than \$100,000.....               | 4.9                       | 24.1                            | 20.6                | 10.2                        |
| \$100,000 and less than \$1,000,000.....            | 1.8                       | 31.3                            | 44.2                | 43.3                        |
| Average per establishment.....                      |                           | 3                               | \$9, 892            | \$7, 363                    |
| <b>Slaughtering and meat packing, 1909.....</b>     | <b>18</b>                 | <b>6,015</b>                    | <b>\$92,305,484</b> | <b>\$18,947,606</b>         |
| Less than \$5,000.....                              | 4                         | 8                               | 39,725              | 13,123                      |
| \$5,000 and less than \$20,000.....                 | 8                         | 23                              | 450,051             | 91,354                      |
| \$20,000 and less than \$100,000.....               | 6                         | 5,084                           | 91,815,108          | 13,843,129                  |
| \$1,000,000 and over <sup>2</sup> .....             |                           |                                 |                     |                             |
| Per cent of total.....                              | 100.0                     | 100.0                           | 100.0               | 100.0                       |
| \$5,000 and less than \$20,000.....                 | 22.2                      | 0.1                             | ( <sup>3</sup> )    | 0.1                         |
| \$20,000 and less than \$100,000.....               | 44.4                      | 0.4                             | 0.5                 | 0.7                         |
| \$1,000,000 and over.....                           | 33.3                      | 99.5                            | 99.5                | 99.2                        |
| Average per establishment.....                      |                           | 334                             | \$5, 128, 082       | \$774, 807                  |

<sup>1</sup> Includes the group "Less than \$5,000."  
<sup>2</sup> Includes the group "\$100,000 but less than \$1,000,000."  
<sup>3</sup> Less than one-tenth of 1 per cent.

This table shows that in 1909 of the 2,500 establishments only 17, or seven-tenths of 1 per cent, had a value of product exceeding \$1,000,000. These establishments, however, employed an average of 8,688 wage earners, or 35.7 per cent of the total number in all establishments, and reported 68.9 per cent of the total value of products and 46 per cent of the total value added by manufacture.

On the other hand, small establishments—that is, those having a value of product of less than \$5,000—constituted a considerable proportion (50.6 per cent) of the total number of establishments, but the value

of their product amounted to only 1.5 per cent of the total. The great bulk of the manufacturing was carried on in establishments having a product valued at not less than \$100,000 each.

During the five years from 1904 to 1909 no clear tendencies can be seen as to changes in the relative importance of the classes. During this period the average number of wage earners per establishment decreased from 11 in 1904 to 10 in 1909, and the average value of products per establishment from \$85,167 to \$79,607. On the other hand, the average value added by manufacture per establishment increased from \$16,969 in 1904 to \$19,175 in 1909. The table shows further that in all the industries shown separately, with the exception of the bakeries and the printing and publishing establishments, the bulk of the value of product is contributed by the establishments having a value of products in excess of \$100,000.

In some respects, and especially from the standpoint of conditions under which persons engaged in manufactures work, the best classification of establishments to bring out the feature of size is a classification according to the number of wage earners employed. The next table shows, for 1909, such a classification for all industries combined and for 11 important industries individually, and gives not only the number of establishments falling in each group but also the average number of wage earners employed.

The per cent distribution of the number of establishments is not shown in this table; of the 2,500 establishments reported for all industries, 19.2 per cent employed no wage earners; 62.6 per cent, 1 to 5; 12.2 per cent, 6 to 20; and 3.3 per cent, 21 to 50. The most numerous single group consists of the 1,566 establishments employing from 1 to 5 wage earners, and the next of the 479 establishments employing no wage earners. There were 15 establishments that employed over 250 wage earners and 4 that employed over 1,000:

Of the total number of wage earners, 43.4 per cent were in establishments employing over 250 wage earners. The single group having the largest number of employees was the group employing over 1,000 wage earners. This group, composed in most part of slaughtering and meat-packing establishments, employed 6,451 wage earners, or 26.5 per cent of the total. The individual industries listed in this table, but not in the preceding one, namely, railroad repair shops, men's clothing, and malt liquor, are industries in which comparatively large establishments do most of the business, as appears from the classification according to the number of wage earners.

STATISTICS OF MANUFACTURES—NEBRASKA.

| INDUSTRY.   | ESTABLISHMENTS EMPLOYING-- |                  |                      |                       |                        |                         |                          |                          |                            |                          |
|---|----------------------------|------------------|----------------------|-----------------------|------------------------|-------------------------|--------------------------|--------------------------|----------------------------|--------------------------|
|   | Total.                     | No wage earners. | 1 to 5 wage earners. | 6 to 20 wage earners. | 21 to 50 wage earners. | 51 to 100 wage earners. | 101 to 250 wage earners. | 251 to 500 wage earners. | 501 to 1,000 wage earners. | Over 1,000 wage earners. |
|   | NUMBER OF ESTABLISHMENTS.  |                  |                      |                       |                        |                         |                          |                          |                            |                          |
| All industries.....   | 2,500                      | 479              | 1,566                | 305                   | 83                     | 38                      | 14                       | 9                        | 2                          | 4                        |
| Bread and other bakery products.....  | 279                        | 71               | 191                  | 15                    | 1                      | 1                       | 1                        |                          |                            |                          |
| Butter, cheese, and condensed milk.....   | 37                         | 2                | 23                   | 7                     | 2                      | 3                       |                          |                          |                            |                          |
| Cars and general shop construction and repairs by steam-railroad companies..... | 13                         |                  |                      |                       | 2                      | 3                       | 2                        | 4                        | 1                          | 1                        |
| Clothing, men's, including shirts.....  | 12                         |                  | 2                    | 4                     | 1                      | 2                       | 2                        | 1                        |                            |                          |
| Flour-mill and gristmill products.....  | 249                        | 52               | 160                  | 35                    |                        | 1                       | 1                        |                          |                            |                          |
| Foundry and machine-shop products.....  | 73                         | 8                | 35                   | 22                    | 6                      |                         | 1                        | 1                        |                            |                          |
| Leather goods.....  | 30                         | 3                | 16                   | 6                     | 5                      |                         |                          |                          |                            |                          |
| Liquors, malt.....  | 14                         | 1                | 2                    | 5                     | 1                      |                         | 5                        |                          |                            |                          |
| Lumber and timber products.....   | 48                         | 7                | 22                   | 13                    | 3                      |                         |                          |                          |                            |                          |
| Printing and publishing.....  | 674                        | 189              | 415                  | 51                    | 13                     |                         | 1                        |                          |                            |                          |
| Slaughtering and meat packing.....  | 18                         | 1                | 10                   | 2                     |                        |                         | 1                        |                          | 1                          | 3                        |
| All other industries.....   | 1,053                      | 145              | 690                  | 145                   | 49                     | 16                      | 5                        | 3                        |                            |                          |
| AVERAGE NUMBER OF WAGE EARNERS.   |                            |                  |                      |                       |                        |                         |                          |                          |                            |                          |
| All industries.....   | 24,936                     |                  | 3,048                | 3,252                 | 2,759                  | 2,599                   | 2,113                    | 2,876                    | 1,243                      | 6,451                    |
| Bread and other bakery products.....  | 646                        |                  | 351                  | 133                   | 22                     |                         | 140                      |                          |                            |                          |
| Butter, cheese, and condensed milk.....   | 383                        |                  | 44                   | 81                    | 69                     | 189                     |                          |                          |                            |                          |
| Cars and general shop construction and repairs by steam-railroad companies..... | 3,085                      |                  |                      |                       | 65                     | 245                     | 242                      | 1,236                    | 509                        | 1,388                    |
| Clothing, men's, including shirts.....  | 887                        |                  | 6                    | 46                    | 31                     | 138                     | 321                      | 345                      |                            |                          |
| Flour-mill and gristmill products.....  | 839                        |                  | 342                  | 307                   |                        | 60                      | 130                      |                          |                            |                          |
| Foundry and machine-shop products.....  | 1,020                      |                  | 77                   | 241                   | 202                    |                         | 166                      | 334                      |                            |                          |
| Leather goods.....  | 266                        |                  | 28                   | 60                    | 178                    |                         |                          |                          |                            |                          |
| Liquors, malt.....  | 424                        |                  | 9                    | 61                    | 24                     | 330                     |                          |                          |                            |                          |
| Lumber and timber products.....   | 543                        |                  | 52                   | 171                   | 106                    | 214                     |                          |                          |                            |                          |
| Printing and publishing.....  | 2,329                      |                  | 867                  | 546                   | 428                    | 355                     | 193                      |                          |                            |                          |
| Slaughtering and meat packing.....  | 6,015                      |                  | 25                   | 13                    |                        |                         | 180                      |                          | 734                        | 3,063                    |
| All other industries.....   | 7,239                      |                  | 1,302                | 1,593                 | 1,634                  | 1,068                   | 741                      | 661                      |                            |                          |
| PER CENT OF AVERAGE NUMBER OF WAGE EARNERS.                                     |                            |                  |                      |                       |                        |                         |                          |                          |                            |                          |
| All industries.....   | 100.0                      |                  | 12.5                 | 13.4                  | 11.3                   | 10.7                    | 8.7                      | 11.8                     | 6.1                        | 26.5                     |
| Bread and other bakery products.....  | 100.0                      |                  | 54.3                 | 20.0                  | 3.4                    |                         | 21.7                     |                          |                            |                          |
| Butter, cheese, and condensed milk.....   | 100.0                      |                  | 11.5                 | 21.1                  | 18.0                   | 49.3                    |                          |                          |                            |                          |
| Cars and general shop construction and repairs by steam-railroad companies..... | 100.0                      |                  |                      |                       | 1.8                    | 6.6                     | 6.6                      | 31.5                     | 13.8                       | 37.7                     |
| Clothing, men's, including shirts.....  | 100.0                      |                  | 0.7                  | 5.2                   | 3.5                    | 15.6                    | 36.2                     | 38.9                     |                            |                          |
| Flour-mill and gristmill products.....  | 100.0                      |                  | 40.8                 | 36.6                  |                        | 7.2                     | 15.5                     |                          |                            |                          |
| Foundry and machine-shop products.....  | 100.0                      |                  | 7.5                  | 23.6                  | 19.8                   |                         | 16.3                     | 32.7                     |                            |                          |
| Leather goods.....  | 100.0                      |                  | 10.5                 | 22.6                  | 66.9                   |                         |                          |                          |                            |                          |
| Liquors, malt.....  | 100.0                      |                  | 2.1                  | 14.4                  | 5.7                    | 77.8                    |                          |                          |                            |                          |
| Lumber and timber products.....   | 100.0                      |                  | 9.6                  | 31.5                  | 19.5                   | 39.4                    |                          |                          |                            |                          |
| Printing and publishing.....  | 100.0                      |                  | 34.7                 | 23.4                  | 18.4                   | 15.2                    | 8.3                      |                          |                            |                          |
| Slaughtering and meat packing.....  | 100.0                      |                  | 0.4                  | 0.2                   |                        |                         | 3.0                      |                          | 12.2                       | 84.2                     |
| All other industries.....   | 100.0                      |                  | 17.8                 | 21.8                  | 22.4                   | 14.6                    | 10.2                     | 13.2                     |                            |                          |

**Expenses.**—As stated in the Introduction, the census does not purport to furnish figures that can be used for determining the cost of manufacture and profits. Facts of interest can, however, be brought out concerning the relative importance of the different classes of expenses which make up the total.

The table following shows in percentages the distribution of expenses among the classes indicated for all industries combined and for certain important industries separately. The figures on which the percentages are based appear in Table II.

This table shows that, for all industries combined, 82.3 per cent of the total expenses was incurred for materials, 10.6 per cent for services—that is, salaries and wages—and but 7.1 per cent for other purposes. As would be expected, these proportions vary greatly in the different industries. The large percentage shown for miscellaneous expenses for the malt-liquor industry is due to the inclusion of internal revenue taxes.

| INDUSTRY.   | PER CENT OF TOTAL EXPENSES REPORTED. |        |            |                         |
|---|--------------------------------------|--------|------------|-------------------------|
|   | Salaries.                            | Wages. | Materials. | Miscellaneous expenses. |
| All industries.....   | 8.0                                  | 7.6    | 82.3       | 7.1                     |
| Bread and other bakery products.....  | 4.8                                  | 15.7   | 70.4       | 9.1                     |
| Butter, cheese, and condensed milk.....   | 2.7                                  | 3.5    | 88.5       | 6.3                     |
| Cars and general shop construction and repairs by steam-railroad companies..... | 7.0                                  | 48.9   | 37.2       | 6.9                     |
| Clothing, men's, including shirts.....  | 4.9                                  | 20.2   | 67.0       | 6.9                     |
| Flour-mill and gristmill products.....  | 1.9                                  | 3.1    | 91.7       | 3.2                     |
| Foundry and machine-shop products.....  | 9.7                                  | 22.2   | 56.7       | 11.4                    |
| Leather goods.....  | 5.3                                  | 14.3   | 71.2       | 9.1                     |
| Liquors, malt.....  | 9.9                                  | 11.2   | 24.0       | 54.9                    |
| Lumber and timber products.....   | 5.8                                  | 19.1   | 47.4       | 7.3                     |
| Printing and publishing.....  | 15.6                                 | 27.1   | 33.2       | 24.2                    |
| Slaughtering and meat packing.....  | 1.0                                  | 3.0    | 98.0       | 4.5                     |
| All other industries.....   | 3.1                                  | 8.0    | 86.4       | 8.6                     |

**Engines and power.**—The table following shows, for all industries combined, the number of engines or other motors, according to their character, employed in generating power (including electric motors operated by purchased current), and their total horsepower at the censuses of 1909, 1904, and 1899. It

also shows separately the number and horsepower of electric motors, including those operated by current generated in the manufacturing establishments.

| POWER.   | NUMBER OF ENGINES OR MOTORS. |                  |                   | HORSEPOWER. |        |                   | PER CENT DISTRIBUTION OF HORSEPOWER. |       |                  |
|--|------------------------------|------------------|-------------------|-------------|--------|-------------------|--------------------------------------|-------|------------------|
|  | 1909                         | 1904             | 1899 <sup>1</sup> | 1909        | 1904   | 1899 <sup>1</sup> | 1909                                 | 1904  | 1899             |
| Primary power, total.....                      | 2,694                        | 1,010            | 1,337             | 64,466      | 46,372 | 41,825            | 100.0                                | 100.0 | 100.0            |
| Owned.....                                     | 1,366                        | 1,010            | 1,337             | 56,726      | 43,881 | 40,608            | 88.0                                 | 94.0  | 97.1             |
| Steam.....                                     | 537                          | 516              | 813               | 44,806      | 34,012 | 31,048            | 69.5                                 | 73.3  | 74.2             |
| Gas.....                                       | 686                          | 334              | 358               | 4,408       | 2,085  | 1,919             | 6.8                                  | 4.4   | 4.6              |
| Water wheels.....                              | 135                          | 150              | 166               | 7,301       | 7,130  | 7,513             | 11.4                                 | 15.4  | 18.0             |
| Water motors.....                              | 8                            | 4                | ( <sup>2</sup> )  | 75          | 91     | ( <sup>2</sup> )  | 0.1                                  | 0.2   | ( <sup>2</sup> ) |
| Other.....                                     |                              |                  |                   | 76          | 613    | 128               | 0.1                                  | 1.3   | 0.3              |
| Rented.....                                    | 1,328                        | ( <sup>2</sup> ) | ( <sup>2</sup> )  | 7,740       | 2,491  | 1,217             | 12.0                                 | 5.4   | 2.9              |
| Electric.....                                  | 1,328                        | ( <sup>2</sup> ) | ( <sup>2</sup> )  | 7,530       | 2,364  | 866               | 11.7                                 | 5.1   | 2.1              |
| Other.....                                     |                              |                  |                   | 210         | 127    | 351               | 0.3                                  | 0.3   | 0.8              |
| Electric motors.....                           | 1,040                        | 300              | 90                | 15,042      | 8,126  | 2,398             | 100.0                                | 100.0 | 100.0            |
| Run by current generated by establishment..... | 612                          | 300              | 90                | 8,412       | 5,762  | 1,532             | 52.8                                 | 70.9  | 63.9             |
| Run by rented power.....                       | 1,328                        | ( <sup>2</sup> ) | ( <sup>2</sup> )  | 7,530       | 2,364  | 866               | 47.2                                 | 29.1  | 36.1             |

<sup>1</sup> Includes the neighborhood industries and hand trades, omitted in 1904 and 1909.  
<sup>2</sup> Not reported.

The table indicates that the absolute increase in primary power was chiefly in power generated by steam, although power generated by gas engines and rented electric power showed much greater percentages of increase. Water power remained about the same at the three censuses. A more general use of gas engines is shown, the number of such engines reported being 686 in 1909, as against 334 in 1904. The figures also show that the practice of renting power is on the

increase, 12 per cent of the total power being rented in 1909, as against but 5.4 per cent in 1904 and 2.9 per cent in 1899. The use of electric motors for the purpose of applying the power generated within the establishments is also shown to be rapidly becoming more common, the horsepower of such motors increasing from 1,532 in 1899 to 5,762 in 1904 and 8,412 in 1909.

Fuel.—Closely related to the question of kind of power employed is that of the fuel used in generating this power, or otherwise as material in the manufacturing processes. The following table shows the quantity of each kind of fuel used in 1909, by totals for all industries and for certain selected industries:

| INDUSTRY.   | Anthracite coal (tons). | Bituminous coal (tons). | Coke (tons). | Wood (cords). | Oil, including gasoline (barrels). | Gas (1,000 feet). |
|---|-------------------------|-------------------------|--------------|---------------|------------------------------------|-------------------|
| All industries <sup>1</sup> .....   | 2,829                   | 871,666                 | 33,574       | 9,513         | 134,771                            | 18,429            |
| Bread and other bakery products.....  | 573                     | 3,844                   | 1,193        | 4,057         | 104                                | 3,150             |
| Brick and tile.....   |                         | 56,009                  | 2,027        | 1,825         | 2,155                              |                   |
| Butter, cheese, and condensed milk.....   |                         | 8,685                   | 39           |               | 10,712                             |                   |
| Cars and general shop construction and repairs by steam-railroad companies..... | 27                      | 303,945                 | 151          | 3,123         | 4,066                              | 191               |
| Clothing, men's, including shirts.....  | 8                       | 808                     |              |               | 8                                  |                   |
| Flour-mill and gristmill products.....  | 741                     | 61,036                  |              | 94            | 2,010                              |                   |
| Foundry and machine-shop products.....  | 7                       | 4,700                   | 2,216        | 186           | 857                                | 1,005             |
| Gas, illuminating and heating.....  | 369                     | 12,159                  | 18,053       |               | 78,904                             | 1,774             |
| Leather goods.....  | 38                      | 623                     |              | 7             | 44                                 | 166               |
| Liquors, malt.....  | 112                     | 21,934                  | 20           | 93            | 12,134                             |                   |
| Lumber and timber products.....   |                         | 2,124                   |              |               | 384                                |                   |
| Printing and publishing.....  | 324                     | 6,351                   | 114          | 10            | 1,198                              | 5,535             |
| Slaughtering and meat packing.....  |                         | 242,154                 |              | 7             | 1,386                              | 126               |
| All other industries.....   | 630                     | 87,294                  | 9,761        | 111           | 11,149                             | 6,542             |

<sup>1</sup> In addition there were 169 tons of other varieties of fuel reported.



SUPPLEMENTARY DATA REGARDING IMPORTANT INDUSTRIES.

(With statistics for laundries and custom gristmills.)

For certain industries the Census Bureau collects, by means of special schedules, details regarding the quantity and cost of materials and the quantity and value of products which do not appear on the general schedule. Certain data of this character for four important industries in Nebraska are here presented.

**Slaughtering and meat packing.**—This classification includes wholesale slaughtering and meat-packing establishments and those engaged in the manufacture of sausage only. The following tabular statement gives the kind, quantity, and cost of materials used and the quantity and value of the various products at the censuses of 1909, 1904, and 1899:

| MATERIAL OR PRODUCT.  | 1900                | 1904                | 1899 <sup>1</sup>   |
|---|---------------------|---------------------|---------------------|
| <b>Material used, total cost</b> .....                            | <b>\$78,857,878</b> | <b>\$61,277,610</b> | <b>\$63,048,186</b> |
| Beeves slaughtered:   |                     |                     |                     |
| Number.....   | 651,258             | 627,129             | 531,032             |
| Cost.....   | \$82,000,207        | \$25,103,912        | \$24,533,887        |
| Calves slaughtered:   |                     |                     |                     |
| Number.....   | 58,158              | 9,707               | 8,454               |
| Cost.....   | \$637,158           | \$75,635            | \$121,878           |
| Sheep slaughtered:  |                     |                     |                     |
| Number.....   | 1,127,062           | 949,310             | 723,520             |
| Cost.....   | \$5,420,148         | \$3,482,582         | \$3,076,071         |
| Hogs slaughtered:   |                     |                     |                     |
| Number.....   | 2,103,602           | 2,358,325           | 2,733,304           |
| Cost.....   | \$32,535,715        | \$27,050,297        | \$27,846,114        |
| Fuel and rent of power, cost.....                                 | 562,777             | 466,404             | 355,209             |
| All other materials, cost.....                                    | 7,123,873           | 4,489,720           | 7,114,427           |
| <b>Product, total value</b> .....                                 | <b>\$92,905,484</b> | <b>\$69,328,920</b> | <b>\$71,280,366</b> |
| Beef, fresh:  |                     |                     |                     |
| Pounds.....   | 354,358,419         | 337,481,262         | 307,786,549         |
| Value.....  | \$26,914,613        | \$20,022,154        | \$22,627,020        |
| Beef, salted or cured:  |                     |                     |                     |
| Pounds.....   | 6,750,949           | 15,006,931          | 11,945,633          |
| Value.....  | \$629,441           | \$583,349           | \$773,966           |
| Veal, fresh:  |                     |                     |                     |
| Pounds.....   | 7,609,474           | 1,162,620           | 1,832,589           |
| Value.....  | \$664,563           | \$71,843            | \$145,809           |
| Mutton, fresh:  |                     |                     |                     |
| Pounds.....   | 45,101,857          | 42,556,050          | 32,991,157          |
| Value.....  | \$4,076,961         | \$2,746,883         | \$2,698,184         |
| Pork, fresh:  |                     |                     |                     |
| Pounds.....   | 98,834,601          | 83,484,004          | 84,632,180          |
| Value.....  | \$8,624,622         | \$5,836,392         | \$5,618,922         |
| Pork, salted or cured:  |                     |                     |                     |
| Pounds.....   | 184,213,423         | 250,832,315         | 346,490,410         |
| Value.....  | \$20,252,074        | \$20,045,428        | \$24,174,049        |
| Sausage, fresh or cured, value.....                               | \$2,108,874         | \$1,223,537         | \$1,483,558         |
| All other fresh meat:   |                     |                     |                     |
| Pounds.....   | 5,319,504           | 8,198,486           | ( <sup>2</sup> )    |
| Value.....  | \$343,573           | \$561,107           | ( <sup>2</sup> )    |
| Lard:   |                     |                     |                     |
| Pounds.....   | 89,851,980          | 84,703,231          | 94,801,004          |
| Value.....  | \$9,163,052         | \$5,851,401         | \$5,875,550         |
| Tallow, oleo stock, and stearine:                                 |                     |                     |                     |
| Pounds.....   | 20,525,345          | ( <sup>2</sup> )    | ( <sup>2</sup> )    |
| Value.....  | \$1,757,624         | ( <sup>2</sup> )    | ( <sup>2</sup> )    |
| Fertilizers and fertilizer materials:                             |                     |                     |                     |
| Tons.....   | 24,469              | 23,310              | 15,414              |
| Value.....  | \$579,591           | \$617,019           | \$251,253           |
| Hides:  |                     |                     |                     |
| Number.....   | 687,031             | 686,065             | 528,256             |
| Pounds.....   | 39,975,521          | 39,860,510          | 31,446,074          |
| Value.....  | \$5,430,014         | \$3,726,906         | \$2,927,334         |
| Pelts:  |                     |                     |                     |
| Number.....   | 1,127,947           | 956,686             | ( <sup>2</sup> )    |
| Value.....  | \$1,410,685         | \$1,003,744         | ( <sup>2</sup> )    |
| All other products, including custom or contract work, value..... | \$10,340,297        | \$6,389,097         | \$4,704,716         |

<sup>1</sup> Does not include statistics for two establishments, to avoid disclosure of individual operations.  
<sup>2</sup> Figures not available.

There were 24,129, or 3.8 per cent, more beeves slaughtered in 1909 than in 1904; 178,652, or 18.8 per

cent, more sheep; and 48,451, or 499.1 per cent, more calves; but a decrease of 254,723, or 10.8 per cent, took place in the number of hogs. In the product the number of pounds of beef, fresh and cured, increased 8,621,175 from 1904 to 1909, that of mutton 2,545,807, and of veal 6,446,854, while the amount of pork decreased 51,268,295 pounds. The total value of products increased \$22,976,564 during the same period. The percentage of increase in value is somewhat greater than that in the quantity of meat produced, due to the higher prices of meats that prevailed in 1909.

**Flour-mill and gristmill products.**—This is one of the important industries of Nebraska, and shows a rapid development for the last 10 years.

The following tabular statement gives the quantity and value of products for 1909, 1904, and 1899:

| PRODUCT.                       | 1900                | 1904                | 1899               |
|--------------------------------|---------------------|---------------------|--------------------|
| <b>Total value</b> .....       | <b>\$17,835,596</b> | <b>\$12,190,308</b> | <b>\$7,764,130</b> |
| Wheat flour:                   |                     |                     |                    |
| White—                         |                     |                     |                    |
| Barrels.....                   | 2,252,828           | 1,730,468           | 1,660,399          |
| Value.....                     | \$11,379,692        | \$7,897,128         | \$5,150,839        |
| Graham—                        |                     |                     |                    |
| Barrels.....                   | 14,722              | 9,530               | ( <sup>1</sup> )   |
| Value.....                     | \$71,057            | \$42,607            | ( <sup>1</sup> )   |
| Corn meal and corn flour:      |                     |                     |                    |
| Barrels.....                   | 425,413             | 542,090             | 310,292            |
| Value.....                     | \$1,222,670         | \$1,133,437         | \$440,192          |
| Rye flour:                     |                     |                     |                    |
| Barrels.....                   | 26,475              | 61,059              | 49,792             |
| Value.....                     | \$120,425           | \$108,749           | \$127,634          |
| Buckwheat flour:               |                     |                     |                    |
| Pounds.....                    | 281,389             | 224,660             | 258,290            |
| Value.....                     | \$10,842            | \$7,276             | \$7,415            |
| Hominy:                        |                     |                     |                    |
| Pounds.....                    | 8,279,732           | 8,528,940           | 5,249,041          |
| Value.....                     | \$94,709            | \$93,824            | \$40,561           |
| Grits:                         |                     |                     |                    |
| Pounds.....                    | 26,399,992          | ( <sup>2</sup> )    | ( <sup>2</sup> )   |
| Value.....                     | \$406,648           | ( <sup>2</sup> )    | ( <sup>2</sup> )   |
| Feed:                          |                     |                     |                    |
| Tons.....                      | 97,159              | 82,388              | 85,450             |
| Value.....                     | \$2,353,608         | \$1,299,677         | \$1,067,221        |
| Offal:                         |                     |                     |                    |
| Tons.....                      | 91,903              | 86,723              | 68,637             |
| Value.....                     | \$1,798,390         | \$1,200,205         | \$708,621          |
| All other products, value..... | \$377,085           | \$317,100           | \$251,647          |

<sup>1</sup> Figures not available.

<sup>2</sup> Combined with hominy.

There was an increase of 522,360, or 30.2 per cent, in the number of barrels of white wheat flour from 1904 to 1909, and an increase of \$3,482,534, or 44.1 per cent, in its value. The value of corn meal and corn flour increased 7.9 per cent, but the quantity decreased 21.5 per cent. Rye flour was the only product showing decreases in both quantity and value.

Of the total value of products reported in 1909, the value of the white wheat flour, amounting to \$11,379,662, formed 63.8 per cent, and the value of offal, the principal part of which is the by-product of the manufacture of wheat flour, was 10.1 per cent. The value,

of feed amounted to \$2,353,508, or 13.2 per cent, and of corn meal and corn flour \$1,222,670, or 6.9 per cent, of the total value of products for the industry in the state.

**Butter, cheese, and condensed milk.**—This industry, although showing a decrease in the number of establishments for the last 10 years, shows a large increase in the value of products. The decrease in number of establishments is due to a change in the manner of conducting the industry. In 1899 there were a great number of small local creameries, which to a great extent have been abandoned and in their stead large central plants established in the larger cities. For instance, in 1899 Omaha had but two small establishments, while in 1909 the city had four large establishments with products valued at \$3,785,873, or 49.3 per cent of the total value of products for the industry in the entire state.

The following table gives the quantity and value of products of the butter and cheese industry for 1909, 1904, and 1899:

| PRODUCT.                       | 1909               | 1904               | 1899               |
|--------------------------------|--------------------|--------------------|--------------------|
| <b>Total value.....</b>        | <b>\$7,681,872</b> | <b>\$3,326,110</b> | <b>\$2,253,893</b> |
| <b>Butter:</b>                 |                    |                    |                    |
| Packed solid—                  |                    |                    |                    |
| Pounds.....                    | 13,652,328         | 10,573,016         | 10,077,362         |
| Value.....                     | \$3,654,578        | \$2,074,694        | \$1,864,748        |
| Prints or rolls—               |                    |                    |                    |
| Pounds.....                    | 10,320,834         | 5,462,452          | 1,648,818          |
| Value.....                     | \$2,015,506        | \$1,080,606        | \$310,852          |
| <b>Cream sold:</b>             |                    |                    |                    |
| Pounds.....                    | 281,811            | 1,077,068          | 407,264            |
| Value.....                     | \$27,149           | \$80,497           | \$30,133           |
| <b>Cheese:</b>                 |                    |                    |                    |
| Full cream—                    |                    |                    |                    |
| Pounds.....                    | 77,122             | 158,470            | 204,300            |
| Value.....                     | \$10,407           | \$17,166           | \$20,430           |
| All other products, value..... | \$1,073,632        | \$64,147           | \$18,730           |

A slight decrease since 1899 is reported in the number of pounds of milk used, but a large increase in the amount of cream, which is due to the fact that a larger part of the cream is now being separated on the farms prior to sending it to the factories. In 1909 only 14 factories were reported as operating cream separators against 65 in 1904 and 325 in 1899.

In 1899 only 14.1 per cent of the butter produced was put up in prints and rolls, while in 1909, 43.1 per cent was put up in this way. During the past few years the production of cheese has decreased until in 1909 reports were received from but three cheese factories in the state, which reported only \$10,407 as the value of cheese manufactured.

The large increase in the value of "all other products" from 1904 to 1909 is due to the fact that in the latter year a number of the establishments carried on a combined manufacturing and mercantile business,

the two being so closely connected that it was not practical to separate the manufacturing from the mercantile expenses. There is also a large amount of reworked butter included in this item.

**Printing and publishing.**—While the printing and publishing industry of Nebraska showed a marked growth when measured by value of products, there was a slight decrease in the total number of publications as shown in the following tabular statement, which gives also the circulation per issue of the different classes of publications, as reported at the censuses of 1909, 1904, and 1899:

| PERIOD OF ISSUE.              | NUMBER OF PUBLICATIONS. |            |            | AGGREGATE CIRCULATION PER ISSUE. |                  |                  |
|-------------------------------|-------------------------|------------|------------|----------------------------------|------------------|------------------|
|                               | 1909                    | 1904       | 1899       | 1909                             | 1904             | 1899             |
| <b>Total.....</b>             | <b>623</b>              | <b>636</b> | <b>547</b> | <b>2,303,151</b>                 | <b>1,874,362</b> | <b>1,095,538</b> |
| Daily.....                    | 34                      | 31         | 32         | 202,109                          | 185,835          | 122,414          |
| Sunday.....                   | 8                       | 8          | 0          | 129,050                          | 99,779           | (1)              |
| Weekly.....                   | 521                     | 535        | 454        | 1,074,554                        | 861,840          | 660,349          |
| Semiweekly and triweekly..... | 16                      | 18         | 17         | 31,085                           | 24,730           | 54,208           |
| Monthly.....                  | 35                      | 39         | 28         | 684,513                          | 300,444          | 255,935          |
| All other classes.....        | 9                       | 5          | 7          | 121,840                          | 302,734          | 12,632           |

<sup>1</sup> Included in circulation for daily.

With the exception of the daily, Sunday, and all other publications, the several kinds of publications show decreases in number since 1904. On the other hand, a marked increase is shown in the circulation per issue for each class, with the exception of those included in "all other classes." The aggregate circulation per issue for all newspapers and periodicals published was 2,303,151 as against 1,874,362 in 1904, an increase of 428,789, or 22.9 per cent. The circulation of the daily publications increased 76,274, or 41 per cent; that of the Sunday publications, 29,271, or 29.3 per cent; of the weeklies, 212,714, or 24.7 per cent; of the semiweeklies and triweeklies, 6,355, or 25.7 per cent; and of the monthlies, 285,069, or 71.4 per cent.

The 34 daily and 8 Sunday papers were all printed in English, but a great variety of languages is found in the other publications. Of the weeklies, 487 were published in English, 16 in German, 10 Bohemian, 2 Swedish, 3 Danish, 1 Polish, 1 English and German, and 1 Danish and Norwegian. Of the semiweeklies and triweeklies, 15 were in English and 1 Danish; of the monthlies, 31 were in English, 2 Swedish, 1 Danish, and 1 Indian. Of the other publications, there were 5 in English, 3 German, and 1 Bohemian, making a total of 580 in English, 19 German, 11 Bohemian, 5 Danish, 4 Swedish, 1 Indian, 1 Polish, 1 English and German, and 1 Danish and Norwegian.

**Laundries.**—Statistics for steam laundries are not included in the general tables or in the totals for manu-

## STATISTICS OF MANUFACTURES—NEBRASKA.

facturing industries. There were 76 such establishments in the state of Nebraska, 17 of which were in Omaha and 7 in Lincoln. The following statement summarizes the statistics:

|                                      |           |
|--------------------------------------|-----------|
| Number of establishments.....        | 76        |
| Persons engaged in the industry..... | 1,314     |
| Proprietors and firm members.....    | 84        |
| Salaried employees.....              | 120       |
| Wage earners (average number).....   | 1,110     |
| Primary horsepower.....              | 1,510     |
| Capital.....                         | \$871,600 |
| Expenses.....                        | 946,140   |
| Services.....                        | 554,245   |
| Materials.....                       | 255,620   |
| Miscellaneous.....                   | 136,275   |
| Amount received for work done.....   | 1,197,374 |

The most common form of organization was the individual, with 43 establishments. The firm and the corporate forms of ownership were represented by 19 and 14 establishments, respectively. Thirty-one establishments had receipts for the year's business of less than \$5,000; 24, \$5,000 but less than \$20,000; 21, \$20,000 but less than \$100,000.

The number of wage earners employed each month and the per cent which this number represented of the greatest number employed in any month were as follows:

| MONTH.        | WAGE EARNERS. |                      | MONTH.         | WAGE EARNERS. |                      |
|---------------|---------------|----------------------|----------------|---------------|----------------------|
|               | Number.       | Per cent of maximum. |                | Number.       | Per cent of maximum. |
| January.....  | 1,041         | 89.1                 | July.....      | 1,143         | 97.9                 |
| February..... | 1,050         | 89.9                 | August.....    | 1,108         | 100.0                |
| March.....    | 1,061         | 90.8                 | September..... | 1,162         | 99.5                 |
| April.....    | 1,074         | 92.0                 | October.....   | 1,148         | 98.3                 |
| May.....      | 1,080         | 92.5                 | November.....  | 1,135         | 97.2                 |
| June.....     | 1,114         | 95.4                 | December.....  | 1,140         | 97.6                 |

The different kinds of primary power, the number of engines, and the amount of horsepower used in 1909 are shown in the following tabular statement:

| KIND.                             | Number of engines or motors. | Horse-power. |
|-----------------------------------|------------------------------|--------------|
| <b>Primary power, total</b> ..... |                              | <b>1,510</b> |
| Owned.....                        | 70                           | 1,354        |
| Steam.....                        | 57                           | 1,282        |
| Gas.....                          | 13                           | 72           |
| Rented—Electric.....              | 42                           | 156          |

The kind and amount of fuel used are shown in the following statement:

| KIND.                | Unit.           | Quantity. |
|----------------------|-----------------|-----------|
| Bituminous coal..... | Tons.....       | 17,554    |
| Coke.....            | Tons.....       | 28        |
| Oil.....             | Barrels.....    | 649       |
| Gas.....             | 1,000 feet..... | 6,006     |

**Custom gristmills.**—Statistics for custom gristmills are not included in the general tables or in the totals for manufacturing industries, but are presented in the following summary:

|                                    |           |
|------------------------------------|-----------|
| Number of establishments.....      | 32        |
| Persons engaged in industry.....   | 107       |
| Proprietors and firm members.....  | 97        |
| Wage earners (average number)..... | 10        |
| Primary horsepower.....            | 714       |
| Capital.....                       | \$134,223 |
| Expenses.....                      | 151,327   |
| Services.....                      | 5,130     |
| Materials.....                     | 142,731   |
| Miscellaneous.....                 | 3,466     |
| Value of products.....             | 174,291   |

<sup>1</sup> Includes estimate of all grain ground.

STATISTICS OF MANUFACTURES—NEBRASKA.

TABLE I.—COMPARATIVE SUMMARY FOR 1909, 1904, AND 1899.  
THE STATE—ALL INDUSTRIES COMBINED AND SELECTED INDUSTRIES.

| INDUSTRY.  | Cen-<br>sus.         | Number of<br>estab-<br>lish-<br>ments. | PERSONS ENGAGED IN<br>INDUSTRY. |   |                                       |  | Pri-<br>mary<br>horse-<br>power. | Capital.                     | Sala-<br>ries.            | Wages.                      | Cost of<br>mate-<br>rials.     | Value<br>of<br>prod-<br>ucts.   | Value<br>added<br>by<br>manu-<br>fac-<br>ture. |
|--|----------------------|--|---------------------------------|---|---------------------------------------|--|----------------------------------|------------------------------|---------------------------|-----------------------------|--------------------------------|---------------------------------|--|
|  |                      |  | Total.                          | Pro-<br>pri-<br>etors<br>and<br>firm<br>mem-<br>bers. | Sala-<br>ried<br>em-<br>plov-<br>ees. | Wage<br>earn-<br>ers<br>(aver-<br>age<br>num-<br>ber). |                                  |                              |                           |                             |                                |                                 |  |
| Expressed in thousands.  |                      |  |                                 |   |                                       |  |                                  |                              |                           |                             |                                |                                 |  |
| <b>STATE—All Industries</b> .....  | 1909<br>1904<br>1899 | 2,500<br>1,819<br>1,695                | 31,066<br>25,356                | 2,522<br>1,904  | 5,108<br>3,192<br>2,296               | 24,336<br>20,260<br>18,969                             | 64,466<br>46,372<br>41,825       | \$99,001<br>80,235<br>65,000 | \$5,491<br>3,075<br>2,107 | \$13,048<br>11,022<br>8,842 | \$151,081<br>124,052<br>95,025 | \$199,019<br>154,918<br>130,302 | \$47,938<br>30,866<br>34,377                   |
| Artificial stone.....  | 1909<br>1904         | 286<br>26                              | 934<br>126                      | 346<br>34   | 35<br>0                               | 553<br>83  | 503<br>25                        | 825<br>77                    | 29<br>0                   | 337<br>45                   | 514<br>66                      | 1,226<br>150                    | 712<br>84                                      |
| Bread and other bakery products.....   | 1909<br>1904<br>1899 | 279<br>133<br>91                       | 1,155<br>507<br>478             | 327<br>100<br>102                                     | 182<br>24<br>44                       | 646<br>383<br>332                                      | 342<br>183                       | 1,092<br>654<br>551          | 115<br>22<br>31           | 373<br>188<br>139           | 1,072<br>720<br>505            | 3,014<br>1,351<br>1,062         | 1,342<br>631<br>557                            |
| Brick and tile.....  | 1909<br>1904<br>1899 | 78<br>99<br>106                        | 978<br>1,084<br>1,029           | 80<br>129<br>134                                      | 67<br>50<br>40                        | 831<br>905<br>855                                      | 4,033<br>3,510<br>2,254          | 2,649<br>1,569<br>1,270      | 67<br>41<br>26            | 405<br>471<br>328           | 278<br>471<br>203              | 1,161<br>1,132<br>840           | 883<br>855<br>637                              |
| Butter, cheese, and condensed milk.....  | 1909<br>1904<br>1899 | 37<br>40<br>93                         | 602<br>390<br>446               | 14<br>24<br>47  | 205<br>113<br>66                      | 383<br>253<br>333                                      | 1,032<br>861<br>2,263            | 2,975<br>1,801<br>952        | 196<br>102<br>41          | 256<br>137<br>147           | 6,435<br>2,672<br>1,854        | 7,081<br>3,326<br>2,254         | 1,246<br>654<br>400                            |
| Canning and preserving.....  | 1909<br>1904<br>1899 | 12<br>18<br>5                          | 250<br>317<br>176               | 7<br>5<br>6   | 28<br>20<br>9                         | 215<br>292<br>161                                      | 560<br>378<br>127                | 511<br>357<br>124            | 29<br>11<br>6             | 63<br>62<br>22              | 260<br>309<br>131              | 481<br>559<br>211               | 212<br>250<br>80                               |
| Carriages and wagons and materials.....  | 1909<br>1904<br>1899 | 22<br>20<br>29                         | 247<br>184<br>197               | 23<br>27<br>62  | 24<br>11<br>11                        | 200<br>150<br>124                                      | 224<br>101                       | 459<br>212<br>134            | 20<br>9<br>9              | 131<br>87<br>67             | 251<br>128<br>90               | 577<br>318<br>247               | 326<br>100<br>157                              |
| Cars and general shop construction and repairs<br>by steam-railroad companies. | 1909<br>1904<br>1899 | 13<br>39<br>23                         | 4,021<br>3,026<br>2,572         | .....   | 336<br>381<br>114                     | 3,685<br>3,245<br>2,468                                | 6,616<br>4,210<br>2,937          | 6,311<br>5,975<br>3,635      | 326<br>189<br>100         | 2,271<br>2,169<br>1,421     | 1,724<br>1,017<br>1,010        | 4,642<br>4,305<br>2,624         | 2,918<br>2,478<br>1,614                        |
| Clothing, men's, including shirts.....   | 1909<br>1904<br>1899 | 12<br>9<br>(*)                         | 963<br>719                      | 6<br>5  | 70<br>22                              | 887<br>692   | 323<br>178                       | 858<br>413                   | 70<br>22                  | 288<br>216                  | 607<br>726                     | 1,545<br>1,065                  | 578<br>339                                     |
| Confectionery.....   | 1909<br>1904<br>1899 | 18<br>10<br>5                          | 523<br>314                      | 13<br>6   | 127<br>54<br>44                       | 383<br>254<br>126                                      | 241<br>68                        | 545<br>263<br>112            | 121<br>49<br>17           | 127<br>87<br>32             | 706<br>201<br>137              | 1,176<br>542<br>248             | 471<br>341<br>111                              |
| Cooperage and wooden goods, not elsewhere<br>specified.                        | 1909<br>1904<br>1899 | 4<br>7<br>8                            | 108<br>110                      | 1<br>7  | 12<br>10<br>7                         | 95<br>102<br>145                                       | 204<br>233                       | 179<br>138<br>127            | 18<br>11<br>8             | 66<br>49<br>72              | 342<br>188<br>298              | 496<br>269<br>426               | 154<br>81<br>128                               |
| Copper, tin, and sheet-iron products.....                                      | 1909<br>1904<br>1899 | 37<br>10<br>5                          | 245<br>65                       | 44<br>14  | 21<br>1<br>6                          | 180<br>50<br>32  | 100<br>8                         | 323<br>48<br>27              | 16<br>(*)<br>3            | 121<br>33<br>17             | 289<br>56<br>35                | 562<br>128<br>69                | 273<br>72<br>34                                |
| Dairymen's, poulterers', and apiarists' supplies..                             | 1909<br>1904         | 16<br>8                                | 316<br>136                      | 18<br>6   | 68<br>23                              | 230<br>107   | 345<br>94                        | 350<br>168                   | 54<br>13                  | 135<br>57                   | 459<br>95                      | 941<br>247                      | 482<br>152                                     |
| Flour-mill and gristmill products.....   | 1909<br>1904<br>1899 | 249<br>234<br>236                      | 1,455<br>1,324                  | 293<br>294  | 323<br>167<br>137                     | 839<br>863<br>682                                      | 10,907<br>17,961                 | 9,472<br>6,497<br>4,049      | 323<br>153<br>102         | 519<br>468<br>355           | 15,217<br>10,153<br>6,153      | 17,836<br>12,190<br>7,794       | 2,619<br>2,037<br>1,641                        |
| Foundry and machine-shop products.....   | 1909<br>1904<br>1899 | 73<br>46<br>48                         | 1,346<br>626<br>500             | 60<br>43<br>53  | 206<br>65<br>37                       | 1,020<br>518<br>410                                    | 1,399<br>715                     | 2,808<br>920<br>611          | 259<br>60<br>100          | 595<br>287<br>432           | 1,516<br>428<br>432            | 2,939<br>1,092<br>831           | 1,414<br>664<br>399                            |
| Gas, illuminating and heating.....   | 1909<br>1904<br>1899 | 48<br>25<br>9                          | 542<br>386<br>329               | 25<br>14  | 117<br>70<br>30                       | 400<br>302<br>290                                      | 1,015<br>1,461<br>1,003          | 10,047<br>6,979<br>6,956     | 124<br>59<br>37           | 209<br>142<br>80            | 445<br>240<br>134              | 1,415<br>912<br>525             | 970<br>672<br>301                              |
| Leather goods.....   | 1909<br>1904<br>1899 | 30<br>22<br>12                         | 365<br>304                      | 31<br>28  | 68<br>89<br>64                        | 266<br>247<br>325                                      | 148<br>142                       | 988<br>906<br>570            | 73<br>78<br>55            | 197<br>146<br>167           | 978<br>536<br>511              | 1,583<br>983<br>914             | 605<br>447<br>403                              |
| Liquors, malt.....   | 1909<br>1904<br>1899 | 14<br>16<br>19                         | 547<br>338                      | 5<br>7  | 118<br>66<br>45                       | 424<br>265<br>200                                      | 2,938<br>1,826<br>904            | 3,090<br>2,558<br>2,679      | 257<br>135<br>94          | 290<br>186<br>131           | 625<br>459<br>312              | 3,335<br>1,664<br>1,434         | 2,710<br>1,205<br>1,122                        |
| Lumber and timber products.....  | 1909<br>1904<br>1899 | 48<br>127<br>35                        | 707<br>416                      | 43<br>27  | 121<br>33<br>34                       | 543<br>366<br>377                                      | 1,343<br>1,119                   | 1,155<br>379<br>420          | 106<br>37<br>30           | 356<br>234<br>161           | 1,226<br>264<br>629            | 2,021<br>645<br>1,092           | 795<br>381<br>373                              |
| Marble and stone work.....   | 1909<br>1904<br>1899 | 38<br>15<br>6                          | 202<br>150                      | 47<br>20  | 28<br>9<br>2                          | 187<br>121<br>39                                       | 315<br>43                        | 473<br>195<br>50             | 28<br>9<br>1              | 150<br>92<br>24             | 331<br>141<br>22               | 721<br>366<br>70                | 390<br>225<br>48                               |
| Mattresses and spring beds.....  | 1909<br>1904<br>1899 | 6<br>5<br>3                            | 131<br>40                       | 3<br>5  | 15<br>8<br>6                          | 113<br>36<br>73  | 96<br>31                         | 185<br>123<br>84             | 17<br>8<br>6              | 58<br>16<br>21              | 217<br>50<br>98                | 355<br>100<br>156               | 138<br>50<br>58                                |
| Paint and varnish.....   | 1909<br>1904<br>1899 | 4<br>3<br>3                            | 150<br>61                       | .....<br>1  | 38<br>20<br>41                        | 112<br>40<br>93  | 425<br>170                       | 734<br>227<br>882            | 65<br>34<br>58            | 93<br>19<br>53              | 849<br>237<br>537              | 1,254<br>347<br>838             | 405<br>110<br>304                              |
| Patent medicines and compounds and druggists'<br>preparations.                 | 1909<br>1904<br>1899 | 39<br>19<br>16                         | 239<br>140                      | 30<br>17  | 123<br>59<br>30                       | 86<br>64<br>33   | 244<br>134                       | 528<br>220<br>72             | 109<br>42<br>16           | 41<br>29<br>16              | 245<br>192<br>61               | 669<br>441<br>177               | 424<br>249<br>116                              |

\* Does not include statistics for two establishments, to avoid disclosure of individual operations.  
 † Figures can not be shown without disclosing individual operations.  
 ‡ Less than \$500.  
 § Does not include statistics for one establishment, to avoid disclosure of individual operations.

STATISTICS OF MANUFACTURES—NEBRASKA.

TABLE I.—COMPARATIVE SUMMARY FOR 1909, 1904, AND 1899—Continued.  
THE STATE—ALL INDUSTRIES COMBINED AND SELECTED INDUSTRIES—Continued.

| INDUSTRY.                          | Cen-<br>sus.         | Num-<br>ber of<br>estab-<br>lish-<br>ments. | PERSONS ENGAGED IN<br>INDUSTRY. |   |                                       |  |                          | Pri-<br>mary<br>horse-<br>power. | Capital.            | Sala-<br>ries.          | Wages.                     | Cost of<br>mate-<br>rials. | Value<br>of<br>prod-<br>ucts. | Value<br>added<br>by<br>manu-<br>facture. |  |  |  |  |  |
|------------------------------------|----------------------|---|---------------------------------|---|---------------------------------------|--|--------------------------|----------------------------------|---------------------|-------------------------|----------------------------|----------------------------|-------------------------------|---|--|--|--|--|--|
|                                    |                      |   | Total.                          | Pro-<br>pri-<br>etors<br>and<br>firm<br>mem-<br>bers. | Sala-<br>ried<br>em-<br>ploe-<br>ees. | Wage<br>earn-<br>ers<br>(aver-<br>age<br>num-<br>ber). | Expressed in thousands.  |                                  |                     |                         |                            |                            |                               |   |  |  |  |  |  |
|                                    |                      |   |                                 |   |                                       |  |                          |                                  |                     |                         |                            |                            |                               |   |  |  |  |  |  |
| Printing and publishing.....       | 1909<br>1904<br>1899 | 674<br>681<br>567                           | 3,884<br>3,326                  | 674<br>073  | 881<br>580<br>361                     | 2,329<br>2,073<br>1,890                                | 2,552<br>1,087           | \$4,079<br>3,616<br>2,898        | \$796<br>682<br>308 | \$1,897<br>1,093<br>886 | \$1,711<br>1,204<br>900    | \$6,667<br>4,091<br>3,454  | \$4,066<br>3,607<br>2,494     |   |  |  |  |  |  |
| Slaughtering and meat packing..... | 1909<br>1904<br>1899 | 18<br>9<br>112                              | 7,221<br>6,462<br>6,818         | 20<br>3<br>7  | 1,186<br>869<br>721                   | 6,015<br>5,590<br>6,090                                | 11,873<br>6,328<br>7,192 | 19,414<br>20,606<br>16,525       | 1,420<br>936<br>084 | 3,372<br>3,159<br>2,991 | 78,358<br>61,278<br>63,048 | 92,305<br>69,329<br>71,280 | 13,947<br>8,651<br>8,232      |   |  |  |  |  |  |
| Tobacco manufactures.....          | 1909<br>1904<br>1899 | 151<br>157<br>141                           | 740<br>708<br>566               | 172<br>170<br>158                                     | 31<br>16<br>9                         | 537<br>510<br>399                                      | 1                        | 520<br>370<br>265                | 30<br>15<br>7       | 270<br>238<br>171       | 460<br>338<br>280          | 1,072<br>900<br>702        | 603<br>562<br>416             |   |  |  |  |  |  |
| All other industries.....          | 1909<br>1904<br>1899 | 294<br>205<br>233                           | 4,085<br>3,355                  | 240<br>179  | 618<br>423<br>439                     | 3,177<br>2,753<br>3,202                                | 7,618<br>4,916           | 27,522<br>24,907<br>22,907       | 823<br>443<br>420   | 1,793<br>1,372<br>1,351 | 34,980<br>41,087<br>18,432 | 43,351<br>47,476<br>33,144 | 8,305<br>6,359<br>14,602      |   |  |  |  |  |  |

CITIES OF 50,000 INHABITANTS OR MORE—ALL INDUSTRIES COMBINED AND SELECTED INDUSTRIES.

|   |                      |                             |                       |                |                     |                         |        |                              |                         |                           |                              |                              |                              |
|---|----------------------|-----------------------------|-----------------------|----------------|---------------------|-------------------------|--------|------------------------------|-------------------------|---------------------------|------------------------------|------------------------------|------------------------------|
| OMAHA—All industries.....               | 1909<br>1904<br>1899 | 432<br>318<br>307           | 10,185<br>7,064       | 329<br>276     | 1,838<br>966<br>791 | 8,023<br>5,822<br>5,276 | 16,037 | \$45,461<br>34,568<br>32,966 | \$2,071<br>1,080<br>766 | \$4,837<br>3,204<br>2,603 | \$43,415<br>42,893<br>19,928 | \$80,856<br>54,004<br>36,074 | \$17,440<br>11,111<br>18,146 |
| Bread and other bakery products.....    | 1909<br>1904<br>1899 | 65<br>20<br>43              | 490<br>245<br>276     | 68<br>32<br>45 | 118<br>21<br>34     | 304<br>192<br>197       | 181    | 538<br>380<br>348            | 86<br>22<br>22          | 168<br>91<br>88           | 828<br>325<br>330            | 1,515<br>657<br>480          | 687<br>332<br>350            |
| Brick and tile.....                     | 1909<br>1904<br>1899 | 6<br>5<br>9                 | 233<br>162<br>107     | 1<br>3<br>8    | 17<br>6<br>12       | 215<br>153<br>177       | 720    | 567<br>124<br>110            | 23<br>8<br>7            | 124<br>87<br>64           | 86<br>62<br>35               | 326<br>188<br>150            | 210<br>126<br>115            |
| Butter, cheese, and condensed milk..... | 1909<br>1904<br>1899 | 4<br>4<br>( <sup>2</sup> )  | 241<br>106            |                | 89<br>35            | 152<br>71               | 320    | 1,321<br>182                 | 111<br>43               | 128<br>46                 | 3,104<br>1,095               | 3,786<br>1,229               | 682<br>224                   |
| Carriages and wagons and materials..... | 1909<br>1904<br>1899 | 7<br>18<br>13               | 191<br>120            | 7<br>11        | 22<br>9             | 162<br>100<br>87        | 172    | 281<br>132<br>60             | 18<br>6<br>8            | 103<br>62<br>50           | 195<br>82<br>60              | 458<br>206<br>178            | 263<br>124<br>118            |
| Clothing, men's, including shirts.....  | 1909<br>1904<br>1899 | 7<br>13<br>( <sup>2</sup> ) | 656<br>539            | 4<br>2         | 44<br>9             | 608<br>528              | 248    | 565<br>297                   | 39<br>12                | 200<br>166                | 698<br>608                   | 1,076<br>848                 | 378<br>240                   |
| Confectionery.....                      | 1909<br>1904<br>1899 | 5<br>4<br>( <sup>2</sup> )  | 356<br>233            | 1<br>1         | 88<br>50            | 267<br>182              | 181    | 308<br>211                   | 83<br>44                | 85<br>60                  | 413<br>135                   | 719<br>381                   | 306<br>246                   |
| Foundry and machine-shop products.....  | 1909<br>1904<br>1899 | 23<br>18<br>110             | 457<br>384<br>275     | 12<br>14<br>0  | 81<br>42<br>21      | 364<br>328<br>245       | 610    | 982<br>510<br>303            | 00<br>48<br>20          | 216<br>184<br>113         | 635<br>253<br>240            | 1,133<br>673<br>444          | 498<br>420<br>294            |
| Leather goods.....                      | 1909<br>1904<br>1899 | 8<br>18<br>13               | 136<br>128            | 12<br>14       | 30<br>20<br>37      | 94<br>94<br>130         | 31     | 320<br>226<br>217            | 33<br>19<br>30          | 73<br>56<br>78            | 427<br>145<br>292            | 719<br>282<br>524            | 292<br>137<br>232            |
| Liquors, malt.....                      | 1909<br>1904<br>1899 | 5<br>5<br>6                 | 313<br>214<br>150     | 1<br>1<br>2    | 66<br>42<br>30      | 246<br>171<br>118       | 1,780  | 2,788<br>1,879<br>1,737      | 191<br>108<br>80        | 106<br>126<br>82          | 396<br>320<br>217            | 2,272<br>1,741<br>1,030      | 1,876<br>821<br>843          |
| Lumber and timber products.....         | 1909<br>1904<br>1899 | 15<br>15<br>26              | 353<br>223<br>194     | 11<br>1<br>4   | 84<br>21<br>18      | 258<br>201<br>172       | 585    | 507<br>306<br>250            | 63<br>23<br>16          | 183<br>137<br>77          | 908<br>149<br>392            | 1,346<br>354<br>590          | 438<br>205<br>207            |
| Printing and publishing.....            | 1909<br>1904<br>1899 | 89<br>80<br>175             | 1,292<br>1,089<br>940 | 61<br>65<br>62 | 441<br>320<br>236   | 790<br>704<br>639       | 954    | 1,633<br>1,360<br>1,141      | 427<br>342<br>220       | 557<br>482<br>410         | 791<br>556<br>404            | 3,001<br>2,183<br>1,588      | 2,210<br>1,627<br>1,181      |
| All other industries.....               | 1909<br>1904<br>1899 | 108<br>149<br>142           | 5,467<br>3,621        | 151<br>132     | 753<br>391<br>391   | 4,563<br>3,098<br>3,502 | 10,276 | 35,661<br>29,025<br>28,781   | 907<br>405<br>363       | 2,802<br>1,707<br>1,641   | 34,034<br>30,253<br>17,958   | 44,504<br>45,862<br>32,884   | 9,570<br>6,669<br>14,036     |

CITIES OF 10,000 TO 50,000 INHABITANTS—ALL INDUSTRIES COMBINED.

|                   |                      |  |                |            |                     |                         |        |                            |                     |                         |                            |                            |                          |
|-------------------|----------------------|--|----------------|------------|---------------------|-------------------------|--------|----------------------------|---------------------|-------------------------|----------------------------|----------------------------|--------------------------|
| Grand Island..... | 1909<br>1904<br>1899 | 44<br>( <sup>1</sup> )<br>( <sup>1</sup> ) | 749            | 41         | 92                  | 616                     | 950    | \$1,697                    | \$97                | \$380                   | \$1,011                    | \$1,637                    | \$826                    |
| Lincoln.....      | 1909<br>1904<br>1899 | 167<br>128<br>81                           | 2,836<br>2,119 | 134<br>121 | 562<br>381<br>176   | 2,140<br>1,617<br>1,104 | 2,206  | 7,107<br>4,421<br>2,249    | 534<br>373<br>165   | 1,056<br>853<br>481     | 3,864<br>2,691<br>1,596    | 7,010<br>5,223<br>2,763    | 3,146<br>2,532<br>1,167  |
| South Omaha.....  | 1909<br>1904<br>1899 | 71<br>41<br>41                             | 7,659<br>6,571 | 63<br>34   | 1,290<br>875<br>769 | 6,306<br>5,062<br>6,327 | 11,859 | 19,877<br>20,564<br>16,382 | 1,559<br>950<br>736 | 3,544<br>3,210<br>3,115 | 77,673<br>69,193<br>61,018 | 92,436<br>67,415<br>69,509 | 14,703<br>8,222<br>8,491 |

<sup>1</sup> Does not include statistics for two establishments, to avoid disclosure of individual operations.  
<sup>2</sup> Does not include statistics for one establishment, to avoid disclosure of individual operations.  
<sup>3</sup> Figures can not be shown without disclosing individual operations.  
<sup>4</sup> Population less than 10,000 in 1900.

TABLE II. DETAIL STATEMENT FOR

| INDUSTRY.  | Number of establishments. | PERSONS ENGAGED IN INDUSTRY. |                               |   |         |         |                 |                |                |        |              | WAGE EARNERS—NUMBER DEC. 15, OR NEAREST REPRESENTATIVE DAY. |           |         |        |  | Primary horsepower. |
|--|---------------------------|------------------------------|-------------------------------|---|---------|---------|-----------------|----------------|----------------|--------|--------------|---|-----------|---------|--------|--|---------------------|
|  |                           | Total.                       | Proprietors and firm members. | Salaried officers, superintendents, and managers. | Clerks. |         | Average number. | Wage earners.  |                | Total. | 16 and over. |   | Under 16. |         |        |  |                     |
|  |                           |                              |                               |   | Male.   | Female. |                 | Number.        |                |        | Male.        | Female.   | Male.     | Female. |        |  |                     |
|  |                           |                              |                               |   |         |         |                 | Maximum month. | Minimum month. |        |              |   |           |         |        |  |                     |
| 1 All industries.....  | 2,500                     | 31,966                       | 2,522                         | 1,164   | 3,044   | 800     | 24,336          | Se 25,945      | Ja 22,138      | (1)    | (1)          | (1)   | (1)       | (1)     | 64,466 |  |                     |
| 2 Agricultural implements.....   | 11                        | 91                           | 0                             | 12  | 9       | 1       | 63              | Jy 89          | Ja 40          | 92     | 92           |   |           |         | 180    |  |                     |
| 3 Artificial stone.....  | 286                       | 934                          | 346                           | 27  | 7       | 1       | 553             | Je 850         | Ja 111         | 805    | 803          |   | 2         |         | 564    |  |                     |
| 4 Automobiles, including bodies and parts.....                                     | 6                         | 25                           | 3                             | 3   | 1       |         | 18              | My 25          | De 13          | 17     | 16           |   |           |         | 41     |  |                     |
| 5 Bread and other bakery products.....   | 279                       | 1,155                        | 327                           | 14  | 92      | 76      | 646             | De 700         | Ja 584         | 709    | 515          | 184   | 8         | 2       | 342    |  |                     |
| 6 Brick and tile.....  | 78                        | 978                          | 80                            | 43  | 23      | 1       | 331             | Au 1,203       | Ja 220         | 1,060  | 1,047        |   | 13        |         | 4,933  |  |                     |
| 7 Brooms.....  | 15                        | 119                          | 12                            | 13  | 14      | 3       | 77              | De 88          | Ja 66          | 89     | 72           | 6   | 11        |         | 79     |  |                     |
| 8 Butter, cheese, and condensed milk.....  | 37                        | 602                          | 14                            | 75  | 63      | 67      | 383             | Jy 545         | Ja 253         | 508    | 449          | 54  | 3         |         | 1,032  |  |                     |
| 9 Canning and preserving.....  | 12                        | 250                          | 7                             | 18  | 10      |         | 215             | Au 909         | Ja 44          | 940    | 551          | 297   | 40        | 43      | 569    |  |                     |
| 10 Carpets, rag.....   | 8                         | 24                           | 9                             |   |         |         | 15              | Je 23          | Ja 8           | 11     | 10           |   |           |         | 13     |  |                     |
| 11 Carriages and wagons and materials.....   | 22                        | 247                          | 23                            | 6   | 11      | 7       | 200             | Ap 221         | Ja 178         | 187    | 186          | 1   |           |         | 224    |  |                     |
| 12 Cars and general shop construction and repairs by steam-railroad companies..... | 13                        | 4,021                        |                               | 140   | 190     | 6       | 3,085           | De 3,942       | Jy 3,471       | 3,942  | 3,942        |   |           |         | 6,616  |  |                     |
| 13 Clothing, men's, including shirts.....  | 12                        | 963                          | 6                             | 19  | 39      | 12      | 887             | Fe 982         | Se 799         | 925    | 74           | 848   |           | 3       | 323    |  |                     |
| 14 Clothing, women's.....  | 6                         | 91                           | 6                             | 5   | 2       | 1       | 77              | Oc 94          | Fe 61          | 71     | 21           | 50  |           |         | 14     |  |                     |
| 15 Confectionery.....  | 18                        | 523                          | 13                            | 16  | 88      | 23      | 383             | No 462         | Ja 291         | 453    | 157          | 293   | 1         | 2       | 241    |  |                     |
| 16 Cooperage and wooden goods, not elsewhere specified.....                        | 4                         | 108                          | 1                             | 9   | 3       |         | 95              | Au 110         | Ap 86          | 93     | 93           |   |           |         | 204    |  |                     |
| 17 Copper, tin, and sheet-iron products.....                                       | 37                        | 245                          | 44                            | 3   | 12      | 6       | 180             | Je 201         | Ja 143         | 170    | 170          |   |           |         | 160    |  |                     |
| 18 Cutlery and tools, not elsewhere specified.....                                 | 3                         | 12                           | 2                             | 2   | 1       | 1       | 7               | Au 10          | Ja 5           | 6      | 6            |   |           |         | 30     |  |                     |
| 19 Dairy-men's, poulterers', and apiarists' supplies.....                          | 16                        | 316                          | 18                            | 9   | 24      | 35      | 230             | Mh 343         | Jy 110         | 309    | 255          | 64  |           |         | 345    |  |                     |
| 20 Flour-mill and gristmill products.....  | 249                       | 1,455                        | 293                           | 120   | 166     | 37      | 839             | De 956         | Jy 701         | 985    | 913          | 69  | 3         |         | 19,967 |  |                     |
| 21 Foundry and machine-shop products.....  | 73                        | 1,846                        | 60                            | 61  | 156     | 49      | 1,020           | Se 1,100       | Ja 864         | 1,033  | 1,013        | 13  | 6         | 1       | 1,394  |  |                     |
| 22 Fur goods.....  | 6                         | 55                           | 6                             | 1   | 2       | 5       | 41              | No 68          | Mh 27          | 64     | 24           | 40  |           |         | 17     |  |                     |
| 23 Furnishing goods, men's.....  | 6                         | 76                           | 7                             | 7   | 2       | 1       | 59              | Je 69          | De 44          | 60     | 6            | 61  |           |         | 30     |  |                     |
| 24 Furniture and refrigerators.....  | 10                        | 111                          | 6                             | 5   | 4       | 7       | 89              | Mh 97          | Je 81          | 104    | 101          | 2   | 1         |         | 124    |  |                     |
| 25 Gas and electric fixtures and lamps and reflectors.....                         | 4                         | 11                           | 7                             |   |         | 1       | 3               | No 5           | Ja 2           | 5      | 5            |   |           |         | 19     |  |                     |
| 26 Gas, illuminating and heating.....  | 48                        | 542                          | 25                            | 35  | 73      | 9       | 400             | Oc 451         | Ja 340         | 439    | 430          |   |           |         | 1,015  |  |                     |
| 27 Hand stamps and stencils and brands.....  | 3                         | 21                           | 3                             | 2   | 1       | 2       | 13              | Jy 15          | Ja 12          | 12     | 12           |   |           |         | 10     |  |                     |
| 28 Ice, manufactured.....  | 7                         | 62                           | 2                             | 11  | 18      | 1       | 30              | Jy 42          | Ja 12          | 34     | 34           |   |           |         | 1,163  |  |                     |
| 29 Jewelry.....  | 5                         | 32                           | 6                             |   |         | 3       | 23              | Oc 25          | Je 21          | 24     | 23           |   |           |         | 10     |  |                     |
| 30 Leather goods.....  | 30                        | 365                          | 31                            | 17  | 44      | 7       | 266             | My 271         | Ja 262         | 267    | 267          |   |           |         | 148    |  |                     |
| 31 Liquors, malt.....  | 14                        | 547                          | 5                             | 43  | 68      | 7       | 424             | Au 522         | Ja 305         | 394    | 394          |   |           |         | 2,938  |  |                     |
| 32 Lumber and timber products.....   | 48                        | 707                          | 43                            | 27  | 82      | 12      | 543             | Au 600         | Fe 480         | 576    | 568          |   | 8         |         | 1,343  |  |                     |
| 33 Marble and stone work.....  | 38                        | 262                          | 47                            | 5   | 21      | 2       | 187             | Au 202         | De 166         | 179    | 178          |   |           |         | 315    |  |                     |
| 34 Mattresses and spring beds.....   | 6                         | 131                          | 3                             | 4   | 7       | 4       | 113             | No 121         | Je 108         | 112    | 98           | 14  |           |         | 96     |  |                     |
| 35 Optical goods.....  | 5                         | 63                           | 2                             | 7   | 14      | 6       | 34              | Oc 39          | Fe 32          | 38     | 27           | 6   | 6         |         | 9      |  |                     |
| 36 Paint and varnish.....  | 4                         | 150                          |                               | 6   | 27      | 5       | 112             | Ap 122         | Oc 103         | 118    | 108          | 10  |           |         | 423    |  |                     |
| 37 Patent medicines and compounds and druggists' preparations.....                 | 39                        | 239                          | 30                            | 27  | 68      | 28      | 86              | Oc 93          | Ja 83          | 94     | 69           | 25  |           |         | 244    |  |                     |
| 38 Photo-engraving.....  | 3                         | 49                           | 1                             | 5   | 1       | 3       | 39              | Au 41          | De 38          | 38     | 35           | 1   | 2         |         | 21     |  |                     |
| 39 Printing and publishing.....  | 674                       | 3,884                        | 674                           | 173   | 453     | 255     | 2,329           | No 2,446       | Ja 2,270       | 2,448  | 1,800        | 583   | 53        | 3       | 2,552  |  |                     |
| 40 Signs and advertising novelties.....  | 7                         | 75                           | 5                             | 3   | 3       | 4       | 60              | Oc 78          | Ja 25          | 66     | 44           | 22  |           |         | 21     |  |                     |
| 41 Slaughtering and meat packing.....  | 18                        | 7,221                        | 20                            | 32  | 1,014   | 140     | 6,015           | Fe 6,794       | Ap 5,643       | 6,316  | 5,851        | 398   | 50        | 17      | 11,874 |  |                     |
| 42 Tobacco manufactures.....   | 151                       | 740                          | 172                           | 10  | 19      | 2       | 537             | No 577         | Jy 515         | 595    | 401          | 187   | 7         |         | 1      |  |                     |
| 43 All other industries.....   | 189                       | 3,118                        | 157                           | 149   | 213     | 70      | 2,520           |                |                |        |              |   |           |         | 5,867  |  |                     |

1 No figures given for reasons explained in the Introduction, page 2. See also discussion of wage earners on page 7.  
 2 Same number reported for one or more other months.  
 3 All other industries embrace—

|  |   |  |    |  |   |
|--|---|--|----|--|---|
| Awnings, tents, and sails.....   | 5 | Flavoring extracts.....                                | 3  | Paper goods, not elsewhere specified.....              | 1 |
| Bags, other than paper.....  | 1 | Flax and hemp, dressed.....                            | 1  | Pottery, terra-cotta, and fire-clay products.....      | 1 |
| Baking powders and yeast.....  | 2 | Food preparations.....                                 | 18 | Roofing materials.....                                 | 1 |
| Baskets, and rattan and willow ware.....   | 1 | Furs, dressed.....                                     | 2  | Show cases.....  | 1 |
| Beet sugar.....  | 1 | Glass, cutting, staining, and ornamenting.....         | 2  | Silverware and plated ware.....                        | 1 |
| Boots and shoes, including cut stock and findings.....                           | 3 | Gloves and mittens, leather.....                       | 1  | Smelting and refining, copper.....                     | 1 |
| Boxes, cigar.....  | 1 | Glucose and starch.....                                | 1  | Smelting and refining, lead.....                       | 1 |
| Boxes, fancy and paper.....  | 2 | Grease and tallow.....                                 | 3  | Smelting and refining, not from the ore.....           | 2 |
| Brass and bronze products.....   | 1 | Hair work.....   | 3  | Soap.....  | 1 |
| Butter, reworking.....   | 1 | Hats and caps, other than felt, straw, and wool.....   | 1  | Steam packing.....                                     | 1 |
| Cars and general shop construction and repairs by street-railroad companies..... | 2 | Hats, fur felt.....                                    | 1  | Stereotyping and electrotyping.....                    | 2 |
| Cars, steam-railroad, not including operations of railroad companies.....        | 2 | Hosiery and knit goods.....                            | 1  | Stoves and furnaces, including gas and oil stoves..... | 1 |
| Chemicals.....   | 2 | House-furnishing goods, not elsewhere specified.....   | 2  | Surgical appliances and artificial limbs.....          | 1 |
| Coffee and spice, roasting and grinding.....                                     | 5 | Labels and tags.....                                   | 2  | Typefoundry and printing materials.....                | 2 |
| Coffins, burial cases, and undertakers' goods.....                               | 2 | Lead, bar, pipe, and sheet.....                        | 1  | Umbrellas and canes.....                               | 1 |
| Dentists' materials.....   | 1 | Liquors, distilled.....                                | 2  | Upholstering materials.....                            | 1 |
| Electrical machinery, apparatus, and supplies.....                               | 2 | Malt.....  | 2  | Vinegar and elder.....                                 | 1 |
| Electroplating.....  | 2 | Mineral and soda waters.....                           | 59 | Washing machines and clothes wringers.....             | 1 |
| Engraving and diesinking.....  | 1 | Mirrors.....   | 1  | Whips.....   | 1 |
| Fire extinguishers, chemical.....  | 1 | Models and patterns, not including paper patterns..... | 2  | Windmills.....   | 1 |
|  |   | Mucilage and paste.....                                | 1  | Window shades and fixtures.....                        | 1 |
|  |   |  |    | Wirework, including wire rope and cable.....           | 9 |

STATISTICS OF MANUFACTURES—NEBRASKA.

THE STATE, BY INDUSTRIES: 1909.

|    | EXPENSES.    |               |             |             |               |                         |               |                  |                                    |                |             | Value of products. | Value added by manufacture. |
|----|--------------|---------------|-------------|-------------|---------------|-------------------------|---------------|------------------|------------------------------------|----------------|-------------|--------------------|-----------------------------|
|    | Capital.     | Total.        | Services.   |             |               | Materials.              |               |                  | Miscellaneous.                     |                |             |                    |                             |
|    |              |               | Officials.  | Clerks.     | Wage earners. | Fuel and rent of power. | Other.        | Rent of factory. | Taxes, including internal revenue. | Contract work. | Other.      |                    |                             |
| 1  | \$99,001,089 | \$183,586,432 | \$2,018,296 | \$3,472,578 | \$13,947,845  | \$2,292,070             | \$148,788,301 | \$573,713        | \$2,879,976                        | \$411,727      | \$9,201,326 | \$100,018,579      | \$47,937,608                |
| 2  | 204,708      | 155,704       | 12,300      | 9,021       | 32,845        | 3,153                   | 80,320        | 738              | 811                                | .....          | 15,910      | 152,343            | 68,870                      |
| 3  | 825,056      | 928,740       | 23,665      | 5,208       | 337,376       | 7,069                   | 500,247       | 5,482            | 3,974                              | 3,002          | 35,457      | 1,226,078          | 712,162                     |
| 4  | 114,575      | 49,934        | 3,600       | 480         | 14,545        | 610                     | 27,037        | 1,188            | 376                                | .....          | 1,498       | 57,423             | 20,176                      |
| 5  | 1,092,493    | 2,374,311     | 18,736      | 95,844      | 372,830       | 81,544                  | 1,590,307     | 04,715           | 6,800                              | 65             | 143,455     | 3,014,091          | 1,342,240                   |
| 6  | 2,649,362    | 928,468       | 40,100      | 17,428      | 465,477       | 210,429                 | 67,585        | 1,030            | 7,903                              | 408            | 109,048     | 1,161,106          | 883,092                     |
| 7  | 354,352      | 432,715       | 21,036      | 22,060      | 20,892        | 1,841                   | 268,044       | 1,538            | 1,005                              | 51,178         | 85,431      | 252,410            | 252,025                     |
| 8  | 2,975,211    | 7,273,042     | 96,466      | 90,304      | 255,689       | 60,537                  | 6,374,209     | 6,845            | 9,131                              | 139,591        | 235,170     | 7,681,272          | 1,246,526                   |
| 9  | 511,440      | 427,490       | 15,302      | 14,070      | 62,669        | 6,411                   | 262,870       | 358              | 2,598                              | .....          | 63,242      | 480,500            | 211,219                     |
| 10 | 9,608        | 10,436        | .....       | .....       | 5,800         | 437                     | 2,453         | 546              | 68                                 | .....          | 1,136       | 15,853             | 12,063                      |
| 11 | 459,187      | 427,495       | 6,819       | 13,660      | 130,589       | 6,345                   | 244,825       | 4,322            | 2,253                              | 300            | 18,382      | 576,018            | 325,748                     |
| 12 | 6,310,671    | 4,641,740     | 178,484     | 147,076     | 2,271,203     | 136,213                 | 1,580,263     | .....            | 30,985                             | .....          | 280,426     | 4,641,740          | 2,017,264                   |
| 13 | 857,799      | 1,423,735     | 22,830      | 47,181      | 288,290       | 8,694                   | 958,175       | 18,686           | 3,677                              | 60             | 76,432      | 1,545,315          | 578,446                     |
| 14 | 88,703       | 140,325       | 6,000       | 3,726       | 34,297        | 1,283                   | 91,357        | 2,550            | 143                                | .....          | 6,058       | 159,632            | 60,092                      |
| 15 | 544,529      | 1,077,110     | 27,390      | 93,400      | 127,021       | 13,168                  | 691,846       | 18,147           | 3,654                              | .....          | 102,394     | 1,176,033          | 471,025                     |
| 16 | 179,460      | 438,261       | 16,714      | 2,760       | 66,488        | 4,465                   | 337,208       | 905              | 680                                | 2,800          | 7,232       | 406,162            | 154,480                     |
| 17 | 322,660      | 469,840       | 4,248       | 11,736      | 121,178       | 4,787                   | 284,596       | 8,121            | 1,345                              | 400            | 33,420      | 562,045            | 272,062                     |
| 18 | 16,417       | 22,025        | 2,600       | 6,579       | 4,164         | 1,011                   | 8,482         | 2,100            | 114                                | .....          | 2,015       | 29,089             | 17,496                      |
| 19 | 349,786      | 835,880       | 14,168      | 39,477      | 135,414       | 7,952                   | 452,072       | 696              | 2,077                              | .....          | 184,924     | 940,769            | 481,635                     |
| 20 | 0,472,217    | 16,588,110    | 158,375     | 164,608     | 518,937       | 221,892                 | 14,995,376    | 8,100            | 41,701                             | 13,897         | 455,033     | 17,835,596         | 2,618,328                   |
| 21 | 2,808,256    | 2,075,537     | 75,997      | 182,882     | 594,574       | 46,949                  | 1,460,057     | 14,770           | 12,411                             | 3,020          | 275,877     | 2,920,583          | 1,413,577                   |
| 22 | 60,449       | 132,774       | 2,300       | 5,092       | 19,185        | 1,059                   | 91,120        | 7,814            | 357                                | 600            | 4,347       | 172,660            | 80,481                      |
| 23 | 106,867      | 117,807       | 5,460       | 2,920       | 18,643        | 1,440                   | 78,949        | 1,230            | 394                                | 2,578          | 6,253       | 155,705            | 75,316                      |
| 24 | 146,683      | 165,392       | 4,890       | 0,961       | 49,411        | 2,735                   | 70,799        | 3,587            | 250                                | 1,625          | 16,125      | 182,730            | 100,106                     |
| 25 | 9,972        | 6,316         | .....       | 102         | 1,716         | 318                     | 2,410         | 900              | 37                                 | .....          | 674         | 8,072              | 5,335                       |
| 26 | 10,047,410   | 968,462       | 66,904      | 57,058      | 209,003       | 317,484                 | 127,330       | 525              | 109,102                            | 1,005          | 79,982      | 1,415,002          | 970,179                     |
| 27 | 31,314       | 28,186        | 2,400       | 1,665       | 7,468         | 518                     | 10,361        | 1,360            | 293                                | .....          | 4,141       | 35,196             | 24,317                      |
| 28 | 413,648      | 102,250       | 8,695       | 20,658      | 21,066        | 26,455                  | 13,552        | 40               | 1,145                              | .....          | 10,739      | 124,887            | 84,880                      |
| 29 | 20,555       | 48,824        | .....       | 1,236       | 18,485        | 901                     | 25,736        | 1,548            | 63                                 | .....          | 1,105       | 61,661             | 35,264                      |
| 30 | 988,043      | 1,372,792     | 24,460      | 48,510      | 196,796       | 7,494                   | 970,378       | 14,236           | 5,448                              | 200            | 195,300     | 1,682,866          | 695,024                     |
| 31 | 3,908,896    | 2,601,204     | 165,960     | 90,588      | 290,078       | 75,990                  | 540,400       | 180              | 458,193                            | 15,273         | 955,572     | 3,334,617          | 2,709,257                   |
| 32 | 1,154,858    | 1,810,981     | 45,400      | 60,159      | 356,330       | 15,518                  | 1,210,423     | 3,782            | 7,005                              | 200            | 120,405     | 2,021,366          | 795,425                     |
| 33 | 473,391      | 586,086       | 6,400       | 21,300      | 149,565       | 6,732                   | 323,852       | 4,180            | 2,848                              | 550            | 71,250      | 721,074            | 390,400                     |
| 34 | 184,759      | 315,932       | 7,200       | 9,847       | 57,937        | 3,058                   | 213,446       | 4,428            | 1,009                              | 1,601          | 17,706      | 355,110            | 138,015                     |
| 35 | 65,952       | 126,570       | 14,200      | 7,837       | 19,708        | 1,954                   | 66,280        | 6,600            | 339                                | .....          | 10,498      | 146,478            | 70,144                      |
| 36 | 784,041      | 1,131,760     | 14,900      | 50,206      | 68,331        | 9,431                   | 830,726       | 600              | 3,269                              | .....          | 145,306     | 1,254,475          | 465,318                     |
| 37 | 528,164      | 560,364       | 39,001      | 68,711      | 40,013        | 3,765                   | 240,996       | 12,792           | 1,906                              | 2,260          | 140,130     | 669,380            | 424,029                     |
| 38 | 29,902       | 69,020        | 7,540       | 3,179       | 35,478        | 725                     | 7,464         | 2,400            | 139                                | 0,550          | 3,442       | 77,486             | 69,294                      |
| 39 | 4,978,018    | 5,151,107     | 300,866     | 495,092     | 1,397,460     | 84,150                  | 1,627,194     | 120,010          | 27,600                             | 143,280        | 945,540     | 6,667,290          | 4,955,046                   |
| 40 | 62,242       | 138,541       | 4,620       | 3,703       | 37,628        | 667                     | 45,659        | 3,473            | 351                                | 1,000          | 41,380      | 151,918            | 105,592                     |
| 41 | 19,413,614   | 87,072,883    | 174,533     | 1,245,471   | 3,372,439     | 562,777                 | 77,795,101    | 128,877          | 74,850                             | 1,300          | 3,717,526   | 92,305,484         | 13,047,606                  |
| 42 | 520,187      | 914,535       | 11,040      | 18,900      | 299,608       | 4,763                   | 464,310       | 17,896           | 90,897                             | 184            | 36,958      | 1,072,026          | 602,044                     |
| 43 | 25,685,698   | 38,776,264    | 357,747     | 281,083     | 1,441,775     | 342,453                 | 33,702,260    | 60,272           | 1,062,958                          | 18,200         | 613,517     | 41,300,233         | 7,255,521                   |



## MANUFACTURES : NEVADA

## STATISTICS OF MANUFACTURES FOR THE STATE, CITIES, AND INDUSTRIES

Prepared under the supervision of W. M. STEUART, Chief Statistician for Manufactures

## INTRODUCTION.

This advance bulletin gives the statistics of manufactures for the state of Nevada for the calendar year 1909 as shown by the Thirteenth Census. It will be reprinted without change as a part of the state Compendium of the Census for Nevada, and in the final reports of the Thirteenth Census.

The text summarizes the general results of the census inquiry, presenting a series of special tables in which the main facts printed in the general tables are given in convenient form for the state as a whole and for important industries. It also presents tables in which the statistics for the industries of the state as a whole and for a few important industries are classified by character of ownership, size of establishments, number of wage earners, and prevailing hours of labor, information which could not be presented in general tables for each industry without disclosing the facts for individual establishments.

At the end of the bulletin are two general tables.

Table I gives the number of establishments and of persons engaged in the industries, primary power, capital, salaries and wages, cost of materials, value of products, and value added by manufacture, for all industries combined and for certain important industries in 1909, 1904, and 1899. This table also shows separately for 1909 the totals for all industries combined for the city of Reno.

Table II gives statistics in greater detail for 1909 for the state and for a larger number of industries.

**Scope of census: Factory industries.**—Census statistics of manufactures are compiled primarily for the purpose of showing the absolute and relative magnitude of the different branches of industry covered and their growth or decline. Incidentally, the effort is made to present data throwing light upon character of organization, location of establishments, size of establishments, labor force, and similar subjects. When use is made of the data for these purposes it is imperative that due attention should be given to the limitations of the figures. Particularly is this true when the attempt is made to derive from them figures purporting to show average wages, cost of production, or profits. These limitations will be fully discussed in the general report on manufactures for the United States as a whole. It is impossible to reproduce such discussion in the bulletins relative to the individual states.

The census of 1909, like that of 1904, was confined to manufacturing establishments conducted under the factory system, as distinguished from the neighborhood, hand, and building industries. Where statistics for 1899 are given they have been reduced to a comparable basis by eliminating the latter classes of industries.

The census does not include establishments which were idle during the entire year, or had a value of products of less than \$500, or the manufacturing done in educational, eleemosynary, and penal institutions, or in governmental establishments, except those of the Federal Government.

**Period covered.**—The returns cover the calendar year 1909, or the business year which corresponds most nearly to that calendar year. The statistics cover a year's operations, except for establishments which began or discontinued business during the year.

**The establishment.**—The term "establishment" comprises the factories, mills, or plants which are under a common ownership or control, and for which one set of books of account is kept.

If, however, the plants constituting an establishment as thus defined were not all located within the same city or state, separate reports were secured in order that the separate totals might be included in the statistics for each city or state. In some instances separate reports were secured for different industries carried on in the same establishment.

**Classification by industries.**—The establishments were assigned to the several classes of industries according to their products of chief value. The products reported for a given industry may thus, on the one hand, include minor products very different from those covered by the class designation, and, on the other hand, may not include the total product covered by this designation, because some part of this product may be made in establishments in which it is not the product of chief value.

**Selected industries.**—The general tables at the end of this bulletin give the principal facts separately for the industries of the state. A selection has been made of the leading industries of the state for more detailed consideration. Sometimes an industry of greater importance than some of those selected is omitted because it comprises so few establishments that these detailed presentations would reveal the operations of individual concerns.

**Comparisons with previous censuses.**—Owing to the changes in industrial conditions it is not always possible to classify establishments by industries in such a way as to permit accurate comparison with preceding censuses. Table I, giving comparable figures for 1909, 1904, and 1899, therefore, does not embrace all the industries shown for 1909 in Table II.

**Influence of increased prices.**—In considering changes in cost of materials, value of products, and value added by manufacture, account should be taken of the general increase in the prices of commodities during recent years. To the extent to which this factor has been influential the figures can not be taken as an exact measure of increase in the volume of business.

**Persons engaged in industry.**—At the censuses of 1909, 1904, and 1899, the following general classes of persons engaged in manufacturing industries have been distinguished: (1) Proprietors and firm members, (2) salaried officers of corporations, (3) superintendents and managers, (4) clerks, and (5) wage earners. In the censuses of 1904 and 1899 these five classes were shown according to the three main groups: (1) Proprietors and firm members, (2) salaried officials, clerks, etc., and (3) wage earners. The second group included the three classes of salaried officers of corporations, superintendents and

managers, and clerks. In the present census an entirely different grouping is employed: that into (1) proprietors and officials, (2) clerks, and (3) wage earners. The first group includes proprietors and firm members, salaried officers of corporations, and superintendents and managers.

At this census the number of persons engaged in the industries, segregated by sex, and, in the case of wage earners, also by age (whether under 16 or 16 and over), was reported for December 15, or the nearest representative day. The 15th of December was selected as representing for most industries normal conditions of employment, but where conditions were exceptional, and particularly in the case of certain seasonal industries, such as canning, the December date could not be accepted as typical and an earlier date had to be chosen.

In the case of employees other than wage earners the number thus reported on December 15 or other representative day has been treated as equivalent to the average for the year, since the number of employees of this class does not vary much from month to month in a given industry. In the case of wage earners the average is obtained in the manner explained in the next paragraph.

**Wage earners.**—In addition to the report by sex and age of the number of wage earners on December 15 or other representative day, a report was obtained of the number employed on the 15th of each month, without distinction of sex or age. From these figures the average number of wage earners for the year has been calculated by dividing the sum of the numbers reported each month by 12. The average thus obtained represents the number of wage earners that would be required to perform the work done if all were constantly employed during the entire year. Accordingly, the importance of any industry as an employer of labor is believed to be more accurately measured by this average than by the number employed at any one time or on a given day.

The distribution of this average number by sex and age has been estimated or computed for each industry on the basis of the proportions shown in the age and sex distribution reported for the wage earners employed in that industry on December 15 or the nearest representative day. It is believed that the distribution thus obtained can be accepted as typical and as sufficiently accurate for statistical purposes.

The number of wage earners reported for the representative day, though given for each separate industry, is not totaled for all industries combined, because in view of the variations of date such a total is believed not to be significant. It would involve more or less duplication of persons working in different industries at different times, would not represent the total number employed in all industries at any one time, and would give an undue weight to seasonal industries as compared with industries in continual operation.

In 1899 and 1904 the schedule called for the average number of wage earners 16 years and over, classified by sex, with the number of both sexes under 16 years of age, for each month, and these monthly statements were combined in an annual average. The change in the method of the enumeration was made to secure more precise information, but it may in some instances affect comparisons between the present and earlier censuses.

**Prevailing hours of labor.**—The census made no attempt to ascertain the number of employees working a given number of hours per week. The inquiry called merely for the prevailing practice followed in each establishment. Occasional variations in hours in an establishment from one period to another are disregarded, and no attention is given to the fact that a limited number of employees may have hours different from those of the majority. In the tables all the wage earners of each establishment are counted in the class within which the establishment itself falls. In most establishments, however, all or practically all the employees work the same number of hours, so that these figures give a substantially correct picture of the hours of labor in manufacturing industries.

**Capital.**—For reasons stated in prior census reports, the statistics of capital secured by the census canvass are so defective as to be without value, except as indicating very general conditions. The instructions on the schedule for securing capital were as follows:

The answer should show the total amount of capital, both owned and borrowed, on the last day of the business year reported. All the items of fixed and live capital may be taken at the amounts carried on the books. If land or buildings are rented, that fact should be stated and no value given. If a part of the land or buildings is owned, the remainder being rented, that fact should be so stated and only the value of the owned property given. Do not include securities and loans representing investments in other enterprises.

**Materials.**—Cost of materials refers to the materials used during the year, which may be more or less than the materials purchased during the year. The term materials includes fuel, rent of power and heat, mill supplies, and containers, as well as materials forming a constituent part of the product. Fuel includes all fuel used, whether for heat, light, or power, or for the process of manufacture.

**Expenses.**—Under "Expenses" are included all items of expense incident to the year's business, except interest, whether on bonds or other forms of indebtedness, dividends on stock, and allowances for depreciation.

**Value of products.**—The value of products for any industry includes the total value of all products manufactured in establishments whose products of chief value fall under the industry designation. The amounts given represent the selling value at the factory of all products manufactured during the year, which may differ from the value of the products sold. Amounts received for work on materials furnished by others are included.

**Value added by manufacture.**—The value of products is not a satisfactory measure of either the absolute or the relative importance of a given industry, because only a part of this value is actually created by the manufacturing process carried on in the industry itself. Another part of it, and often by far the larger part, represents the value of the materials used, which have been produced by agriculture or mining or by other industrial establishments. For many purposes, therefore, the best measure of the importance of different classes of industry is the value created as the result of the manufacturing operations carried on within the industry. This value is obtained by deducting the cost of the materials consumed from the value of the product. The figure thus obtained is termed in the census reports "value added by manufacture."

There is a further statistical advantage which "value added" has over gross value of products. In combining the value of products for all industries the value of products produced by one establishment and used as materials in another is duplicated, and the total, therefore, gives a greatly exaggerated idea of the wealth created. No such duplication takes place in the total "value added by manufacture."

**Cost of manufacture and profits.**—Census data do not show the entire cost of manufacture, and consequently can not be used to show profits. No account has been taken of interest and depreciation. Even if the amount of profit could be determined by deducting the expenses from the value of the products the rate of profit on the investment could not properly be calculated because of the very defective character of the returns regarding capital.

**Primary power.**—The figures given for this item show the total of the primary power used by the establishments. They do not cover the power developed by motors operated by such power, the inclusion of which would evidently result in duplication.

**Location of establishments.**—The Census Bureau has classified establishments by their location in cities or classes of cities. In interpreting these figures due consideration should be given to the fact that often establishments are located just outside the boundaries of cities, and are necessarily so classified, though locally they are looked upon as constituting a part of the manufacturing interests of the cities.

**Laundries.**—The census of 1909 was the first to include statistics of laundries. The reports are confined to establishments using mechanical power. The data are presented separately and are not included in the general total for manufacturing industries, in order to avoid interference with comparisons with prior censuses.

INDUSTRIES IN GENERAL.

General character of the state.—Nevada has an area of 109,740 square miles. The population in 1910 was 81,875, as against 42,335 in 1900 and 47,355 in 1890. It ranked forty-ninth among the states and territories as regards population in 1910 and fiftieth in 1900. In its early days as a territory thousands of people were attracted to Nevada by the fabulous richness of the Comstock lode. This lode, perhaps the most remarkable deposit of the precious metals discovered in historical times, has produced hundreds of millions of dollars in gold and silver, and is still producing. The subsequent discovery of rich gold and silver mines at Tonopah and Goldfield has served to

place Nevada among the great mining states of the country.

The state has but one city having a population of over 10,000, Reno, with a population of 10,867.

Importance and growth of manufactures.—Though Nevada is not important as a manufacturing community, the manufactures of the state have shown at the last two censuses a marked increase in value.

The following table gives the more important figures relative to all classes of manufactures combined for the state as returned at the censuses of 1909, 1904, and 1899, together with percentages of increase from census to census.

|  | NUMBER OR AMOUNT. |             |             | PER CENT OF INCREASE. |           |
|--|-------------------|-------------|-------------|-----------------------|-----------|
|  | 1909              | 1904        | 1899        | 1904-1909             | 1899-1904 |
| Number of establishments.....  | 177               | 115         | 99          | 53.9                  | 16.2      |
| Persons engaged in manufactures.....                                       | 2,650             | 1,016       | (1)         | 160.8                 | (1)       |
| Proprietors and firm members.....  | 137               | 108         | (1)         | 26.9                  | (1)       |
| Salaried employees.....  | 256               | 106         | 37          | 141.5                 | 186.5     |
| Wage earners (average number).....   | 2,257             | 802         | 504         | 181.4                 | 59.1      |
| Primary horsepower.....  | 7,765             | 2,834       | 1,561       | 174.0                 | 81.6      |
| Capital.....   | \$9,807,000       | \$2,892,000 | \$1,251,000 | 239.1                 | 131.2     |
| Expenses.....  | 11,082,000        | 2,632,000   | 1,099,000   | 321.0                 | 139.5     |
| Services.....  | 2,360,000         | 819,000     | 388,000     | 188.2                 | 111.1     |
| Salaries.....  | 378,000           | 126,000     | 35,000      | 200.0                 | 260.0     |
| Wages.....   | 1,982,000         | 693,000     | 353,000     | 186.0                 | 96.3      |
| Materials.....   | 8,366,000         | 1,628,000   | 662,000     | 413.9                 | 145.9     |
| Miscellaneous.....   | 356,000           | 185,000     | 49,000      | 92.4                  | 277.6     |
| Value of products.....   | 11,887,000        | 3,096,000   | 1,261,000   | 283.9                 | 145.5     |
| Value added by manufacture (value of products less cost of materials)..... | 3,521,000         | 1,468,000   | 599,000     | 139.8                 | 145.1     |

<sup>1</sup> Comparable figures not available for 1899.

In 1909 the state of Nevada had 177 manufacturing establishments operating under the factory system, which gave employment to an average of 2,650 persons during the year and paid \$2,360,000 in salaries and wages. Of the persons employed, 2,257 were wage earners. These establishments turned out products to the value of \$11,887,000, to produce which materials costing \$8,366,000 were consumed. The value added by manufacture was thus \$3,521,000, which figure best represents the net wealth created by manufacturing operations during the year.

In general, this table brings out the fact that the manufacturing industries of Nevada as a whole showed considerable development during the five-year period 1899-1904, and a very much greater development during the more recent period 1904-1909. During the latter period the number of establishments increased 53.9 per cent and the average number of wage earners 181.4 per cent, while the value of products increased 283.9 per cent and the value added by

manufacture 139.8 per cent. As pointed out in the introduction, it would be improper to infer that manufactures increased in volume during the period 1904-1909 to the extent indicated by these figures regarding values, since the increase shown is certainly due, in part, to the increase that has taken place in the price of commodities.

It is a matter of interest to note that the percentages of increase shown for wages, value of products, average number of wage earners, and other items are much larger than for the number of establishments reported. The large percentage of increase in the cost of materials was due to the amount reported by an establishment engaged in the smelting and refining of copper, which has commenced operations since 1904. The large percentages of increase shown for other items are also to a considerable extent due to the amounts reported by this establishment.

The relative importance and growth of the leading manufacturing industries of the state for which figures can be given are shown in the table following.

## STATISTICS OF MANUFACTURES—NEVADA.

| INDUSTRY.   | Number of establishments. | WAGE EARNERS.   |                        | VALUE OF PRODUCTS.  |                        | VALUE ADDED BY MANUFACTURE. |                        | PER CENT OF INCREASE. <sup>1</sup> |              |                             |              |
|---|---------------------------|-----------------|------------------------|---------------------|------------------------|-----------------------------|------------------------|------------------------------------|--------------|-----------------------------|--------------|
|   |                           | Average number. | Per cent distribution. | Amount.             | Per cent distribution. | Amount.                     | Per cent distribution. | Value of products.                 |              | Value added by manufacture. |              |
|   |                           |                 |                        |                     |                        |                             |                        | 1904-1909                          | 1899-1904    | 1904-1909                   | 1899-1904    |
| <b>All industries</b> .....   | <b>177</b>                | <b>2,257</b>    | <b>100.0</b>           | <b>\$11,887,000</b> | <b>100.0</b>           | <b>\$3,521,000</b>          | <b>100.0</b>           | <b>283.9</b>                       | <b>145.5</b> | <b>139.3</b>                | <b>145.1</b> |
| Cars and general shop construction and repairs by steam-railroad companies..... | 9                         | 818             | 36.2                   | 1,033,000           | 8.7                    | 606,000                     | 19.8                   | 94.2                               | 79.7         | 124.5                       | 67.4         |
| Flour-mill and gristmill products.....  | 8                         | 24              | 1.1                    | 598,000             | 5.0                    | 102,000                     | 2.9                    | 14.8                               | 264.3        | 14.6                        | 206.9        |
| Printing and publishing.....  | 54                        | 180             | 8.0                    | 519,000             | 4.4                    | 407,000                     | 11.6                   | 105.1                              | 127.9        | 84.5                        | 136.1        |
| Lumber and timber products.....   | 9                         | 186             | 8.2                    | 503,000             | 4.2                    | 215,000                     | 6.1                    | 24.7                               | 214.3        | 220.7                       | 310.0        |
| Bread and other bakery products.....  | 29                        | 47              | 2.1                    | 356,000             | 3.0                    | 142,000                     | 4.0                    | 180.3                              | 693.8        | 125.4                       | 890.0        |
| Butter, cheese, and condensed milk.....   | 9                         | 16              | 0.7                    | 326,000             | 2.7                    | 37,000                      | 1.0                    | 65.5                               | 33.1         | 2.8                         | 71.4         |
| All other industries.....   | 59                        | 986             | 43.7                   | 8,552,000           | 71.9                   | 1,922,000                   | 54.6                   | 311.7                              | 147.5        | 301.5                       | 141.0        |

<sup>1</sup> Per cent of increase is based on figures in Table I.<sup>2</sup> Decrease.

The most important industries listed in this table, where they are arranged in the order of the value of products, call for brief consideration.

*Cars and general shop construction and repairs by steam-railroad companies.*—This industry, which ranks first in importance among the manufacturing industries for which statistics are shown separately, gave employment to 818 wage earners and reported products amounting to \$1,033,000.

*Flour-mill and gristmill products.*—The statistics showing number of wage earners, amount paid in wages, and value of products indicate a considerable growth in this industry.

*Printing and publishing.*—This industry shows marked growth both in number of wage earners, amount paid in wages, and value of products.

*Lumber and timber products.*—For this industry, which ranks fourth in value of products and third in value added by manufacture among the industries for which statistics are given separately, increases are shown in the number of establishments, number of wage earners, and wages paid. There was a decrease from 1904 to 1909 in capital and value of products, though there had been an increase in both items from 1899 to 1904.

Measured by value added by manufacture, these industries held generally the same relative rank as when measured by value of products, though "Flour-mill and gristmill products" becomes fifth instead of second in order.

This table shows also the percentages of increase for these leading industries in respect to value of products and value added by manufacture. The "Bread and other bakery products" industry showed a greater rate of increase in value added by manufacture both from 1899 to 1904 and from 1904 to 1909 than any other of the specified industries, namely, 800 per cent and 125.4 per cent, respectively. The industry "Cars and general shop construction and repairs by steam-railroad

companies" showed a remarkable increase from 1904 to 1909 both in gross value of products and in value added by manufacture. There are some striking differences among the several industries specified as regards the relative increase from 1899 to 1904 and from 1904 to 1909, respectively. All but one of the specified industries showed an increase from 1904 to 1909 both in value of products and in value added by manufacture, while all but one showed a much larger increase in the value added by manufacture from 1899 to 1904 than from 1904 to 1909.

The phenomenal increase in value of products and in value added by manufacture from 1904 to 1909 for "All other industries" is due to the fact that details for two industries, namely, "Slaughtering and meat packing" and "Smelting and refining, copper" can not be shown without disclosing the operations of individual establishments. The latter, the largest industry in the state, was established between 1904 and 1909.

Persons engaged in manufacturing industries.—The following table shows the distribution of the average number of persons engaged in manufactures, the average number of wage earners being distributed by sex and age in the manner already explained. (See "Introduction.")

| CLASS.                                 | PERSONS ENGAGED IN MANUFACTURES. |              |           |
|--|----------------------------------|--------------|-----------|
|  | Total.                           | Male.        | Female.   |
| <b>All classes</b> .....               | <b>2,650</b>                     | <b>2,536</b> | <b>54</b> |
| Proprietors and officials.....         | 233                              | 225          | 8         |
| Proprietors and firm members.....      | 137                              | 131          | 6         |
| Salaried officers of corporations..... | 32                               | 30           | 2         |
| Superintendents and managers.....      | 64                               | 64           | 0         |
| Clerks.....                            | 160                              | 130          | 30        |
| Wage earners (average number).....     | 2,257                            | 2,231        | 26        |
| 16 years of age and over.....          | 2,248                            | 2,222        | 26        |
| Under 16 years of age.....             | 9                                | 9            | 0         |

This table shows that there were 2,650 persons returned as the average number engaged in manufactures during 1909, of whom 2,257 were wage earners. Of the remaining number, the proprietors and officials formed about three-fifths and the clerks about two-fifths. Corresponding figures for individual industries will be found in Table II.

The following table shows the percentage of proprietors and officials, clerks, and wage earners, respectively, in the total number of persons employed in manufactures. It covers all industries combined and six important industries.

| INDUSTRY.   | PERSONS ENGAGED IN MANUFACTURES. |                            |         |                                |
|---|----------------------------------|----------------------------|---------|--------------------------------|
|   | Total number.                    | Per cent of total.         |         |                                |
|   |                                  | Proprietors and officials. | Clerks. | Wage earners (average number). |
| All industries.....   | 2,650                            | 8.8                        | 6.0     | 85.2                           |
| Bread and other bakery products.....  | 86                               | 39.5                       | 5.8     | 54.7                           |
| Butter, cheese, and condensed milk.....   | 25                               | 28.0                       | 8.0     | 64.0                           |
| Cars and general shop construction and repairs by steam-railroad companies..... | 857                              | 1.5                        | 3.0     | 95.4                           |
| Flour-mill and gristmill products.....  | 39                               | 28.2                       | 10.3    | 61.5                           |
| Lumber and timber products.....   | 224                              | 7.1                        | 9.8     | 83.0                           |
| Printing and publishing.....  | 276                              | 24.6                       | 10.1    | 65.2                           |
| All other industries.....   | 1,143                            | 7.3                        | 6.4     | 86.3                           |

Of the total number of persons engaged in all manufacturing industries, 8.8 per cent were proprietors and officials, 6 per cent clerks, and 85.2 per cent wage earners. In the bread and other bakery products industry the majority of the establishments are small and the work is to a large extent done by the proprietors or their representatives. Therefore the proportion of persons engaged in the industry falling in the class of proprietors and officials is very much higher than for other industries. Similar conditions prevail to some extent in the manufacture of flour-mill and gristmill products and in the printing and publishing industry, where the proprietors and officials form 28.2 and 24.6 per cent, respectively, of the total persons engaged. The smallest proportion for this class is shown for "Cars and general shop construction and repairs by steam-railroad companies," and is due to the fact that these establishments are operated by corporations, for which no proprietors are reported and whose general officials are not, as a rule, assigned to the supervision of this particular branch of work.

The table following shows, for all industries combined and for some of the important industries separately, the average number of wage earners, their distribution by age periods, and, for those 16 years of age and over, by sex.

Clerks are not shown in this table; of the 160 clerks, 130, or 81.2 per cent were male and 30, or 18.8 per cent female. Of the wage earners, 98.8 per cent were male and 1.2 per cent female; 99.6 per cent were 16 years or over and but 0.4 per cent under 16 years.

It may be noted that the largest number of women were employed in the bread and other bakery products, and the butter, cheese, and condensed milk industries.

Of the total number of wage earners in these two industries, 10.6 and 12.5 per cent, respectively, were women.

| INDUSTRY.   | WAGE EARNERS(AVERAGE NUMBER). |                           |       |                        |
|---|-------------------------------|---------------------------|-------|------------------------|
|   | Total.                        | Per cent of total.        |       | Under 16 years of age. |
|   |                               | 16 years of age and over. | Male. |                        |
| All industries.....   | 2,257                         | 98.4                      | 1.2   | 0.4                    |
| Bread and other bakery products.....  | 47                            | 89.4                      | 10.6  | .....                  |
| Butter, cheese, and condensed milk.....   | 16                            | 87.5                      | 12.5  | .....                  |
| Cars and general shop construction and repairs by steam-railroad companies..... | 818                           | 99.8                      | ..... | 0.2                    |
| Flour-mill and gristmill products.....  | 24                            | 100.0                     | ..... | .....                  |
| Lumber and timber products.....   | 186                           | 100.0                     | ..... | .....                  |
| Printing and publishing.....  | 180                           | 88.3                      | 8.3   | 3.3                    |
| All other industries.....   | 986                           | 99.5                      | 0.4   | 0.1                    |

In order to compare the distribution of persons engaged in manufactures in 1909 with that shown at the census of 1904, it is necessary to use the classification employed at the earlier census. (See "Introduction.") The following table makes this comparison according to occupational status:

| CLASS.                            | PERSONS ENGAGED IN MANUFACTURES. |                        |         |                        |                                  |
|-----------------------------------|----------------------------------|------------------------|---------|------------------------|----------------------------------|
|                                   | 1909                             |                        | 1904    |                        | Per cent of increase, 1904-1909. |
|                                   | Number.                          | Per cent distribution. | Number. | Per cent distribution. |                                  |
| Total.....                        | 2,650                            | 100.0                  | 1,016   | 100.0                  | 160.8                            |
| Proprietors and firm members..... | 137                              | 5.2                    | 108     | 10.6                   | 26.9                             |
| Salaried employees.....           | 250                              | 9.7                    | 106     | 10.4                   | 141.5                            |
| Wage earners (average number).... | 2,257                            | 85.2                   | 802     | 78.9                   | 181.4                            |

Comparable figures are not obtainable for 1899. The table shows a greater percentage of increase in the wage earners than in the other two classes.

The following table shows the average number of wage earners, distributed according to age periods, and in the case of those 16 years of age and over according to sex, for 1909, 1904, and 1899:

| CLASS.                     | AVERAGE NUMBER OF WAGE EARNERS. |                        |         |                        |         |                        |
|----------------------------|---------------------------------|------------------------|---------|------------------------|---------|------------------------|
|                            | 1909                            |                        | 1904    |                        | 1899    |                        |
|                            | Number.                         | Per cent distribution. | Number. | Per cent distribution. | Number. | Per cent distribution. |
| Total.....                 | 2,257                           | 100.0                  | 802     | 100.0                  | 504     | 100.0                  |
| 16 years of age and over.. | 2,248                           | 99.6                   | 708     | 99.5                   | 487     | 96.6                   |
| Male.....                  | 2,222                           | 98.4                   | 700     | 98.5                   | 481     | 95.4                   |
| Female.....                | 26                              | 1.2                    | 8       | 1.0                    | 6       | 1.2                    |
| Under 16 years of age....  | 9                               | 0.4                    | 4       | 0.5                    | 17      | 3.4                    |

This table indicates that for all industries combined there has been a decrease during the 10 years in the employment of children under 16 years of age. There has not been much change in the proportion of male and female wage earners. In 1909 males 16 years of age and over formed 98.4 per cent of all wage earners, as compared with 98.5 per cent in 1904 and 95.4 per cent in 1899.

Wage earners employed by months.—The following table gives the number of wage earners employed on the 15th of each month during the year 1909 for all industries combined; it also gives the percentage which the number employed each month forms of the greatest number employed in any one month.

| MONTH.        | WAGE EARNERS, ALL INDUSTRIES. |                      | MONTH.         | WAGE EARNERS, ALL INDUSTRIES. |                      |
|---------------|-------------------------------|----------------------|----------------|-------------------------------|----------------------|
|               | Number.                       | Per cent of maximum. |                | Number.                       | Per cent of maximum. |
| January.....  | 2,107                         | 87.9                 | July.....      | 2,340                         | 98.0                 |
| February..... | 2,116                         | 88.2                 | August.....    | 2,398                         | 100.0                |
| March.....    | 2,140                         | 89.2                 | September..... | 2,341                         | 97.6                 |
| April.....    | 2,190                         | 91.3                 | October.....   | 2,300                         | 99.7                 |
| May.....      | 2,244                         | 93.6                 | November.....  | 2,302                         | 96.0                 |
| June.....     | 2,266                         | 94.5                 | December.....  | 2,247                         | 93.7                 |

As there is no seasonal industry in the state, there was but little variation by months in the number of wage earners. The largest number of wage earners was employed in August and the smallest number in January. Between the percentages for these two months there was a difference of only 12.1.

Prevailing hours of labor.—Establishments have been classified also according to the prevailing number of hours of labor of the bulk of their employees; that is to say, the wage earners of each establishment are all classified according to the prevailing hours of labor in the establishment, even though some may have to work a different number of hours. The table that follows shows the result of this classification. It is based on the average number of wage earners employed during the year.

| INDUSTRY.  | AVERAGE NUMBER OF WAGE EARNERS IN ESTABLISHMENTS GROUPED ACCORDING TO PREVAILING HOURS OF WORK PER WEEK. |               |                    |       |                    |       |                    |       |          |
|--|--|---------------|--------------------|-------|--------------------|-------|--------------------|-------|----------|
|  | Total.   | 48 and under. | Between 48 and 54. | 54.   | Between 54 and 60. | 60.   | Between 60 and 72. | 72.   | Over 72. |
| All industries.....  | 2,257  | 365           | 38                 | 690   | 694                | 196   | 200                | 6     | .....    |
| Bread and other bakery products.....   | 47   | 7             | 5                  | 9     | 14                 | 4     | 7                  | 1     | .....    |
| Butter, cheese, and condensed milk.....                                      | 10   | 2             | .....              | ..... | 4                  | 2     | 8                  | ..... |          |
| Cars and general shop construction and repairs by steam-railroad companies.. | 818  | 44            | .....              | 614   | .....              | 42    | 118                | ..... |          |
| Flour-mill and gristmill products.....                                       | 24   | .....         | .....              | ..... | .....              | ..... | 13                 | 5     |          |
| Lumber and timber products.....  | 186  | 1             | .....              | 46    | .....              | 130   | .....              | ..... |          |
| Printing and publishing.....   | 180  | 143           | .....              | ..... | 35                 | 2     | .....              | ..... |          |
| All other industries.....  | 986  | 168           | 33                 | 21    | 641                | 7     | 114                | ..... |          |

It is evident from these figures that for the majority of the wage earners employed in the manufacturing industries of Nevada the prevailing number of hours of labor ranges from 54 to 60 hours a week, inclusive, or from 9 to 10 hours a day. Establishments working less than 9 hours per day employed 17.9 per cent, and those working more than 10 hours per day 12.1 per cent, of the total number. It will be noted that the industry designated "Cars and general shop construction and repairs by steam-railroad companies" is mainly on a 9-hour per day basis (54 hours per week). The printing and publishing industry is chiefly on a basis of 8 hours, or less.

Location of establishments.<sup>1</sup>—A separate presentation is made in the following table for the manufactures of Reno.

As statistics are shown only for cities having at least 10,000 inhabitants, there are no comparable figures for former censuses because the city did not reach the 10,000 mark until the census of 1910. The figures show that 22.6 per cent of the total number of establishments were located in Reno, that 15.7 per cent of the total value of products was reported from that city, and that 13.7 per cent of the total average number of wage earners were employed there. The value added

by manufacture was \$691,471, which represents 19.6 per cent or about one-fifth of the net wealth of the state created by manufacturing operations during the year.

| ITEM.                          | Year. | Total.       | LOCATION OF ESTABLISHMENTS. |                    | PER CENT OF TOTAL. |                    |
|--------------------------------|-------|--------------|-----------------------------|--------------------|--------------------|--------------------|
|                                |       |              | Reno.                       | Outside districts. | Reno.              | Outside districts. |
| Population.....                | 1910  | 81,875       | 10,867                      | 71,008             | 13.3               | 86.7               |
| Number of establishments..     | 1909  | 177          | 40                          | 137                | 22.6               | 77.4               |
| Average number of wage earners | 1909  | 2,257        | 310                         | 1,947              | 13.7               | 86.3               |
| Value of products.....         | 1909  | \$11,886,828 | \$1,862,285                 | \$10,024,543       | 15.7               | 84.3               |
| Value added by manufacture...  | 1909  | 3,520,880    | 691,471                     | 2,829,418          | 19.6               | 80.4               |

Character of ownership.—The table that follows has for its purpose the presentation of conditions in respect to the character of ownership, or legal organization, of manufacturing enterprises. For all industries combined comparative figures are given covering the censuses of 1909 and 1904. Comparative data for 1899 are not available. Figures for 1909 only are presented for several important industries. In order to avoid disclosing the operations of individual concerns it is necessary to omit several important industries from this and the table following:

<sup>1</sup> See "Introduction."



| INDUSTRY AND CHARACTER OF OWNERSHIP.                | Number of establishments. | Average number of wage earners. | Value of products. | Value added by manufacture. |
|---|---------------------------|---------------------------------|--------------------|-----------------------------|
| <b>ALL INDUSTRIES:</b>                              |                           |                                 |                    |                             |
| 1909.....   | 177                       | 2,257                           | \$11,886,828       | \$3,520,889                 |
| 1904.....   | 115                       | 802                             | 3,096,274          | 1,468,498                   |
| <b>Individual:</b>                                  |                           |                                 |                    |                             |
| 1909.....   | 83                        | 174                             | 892,482            | 390,367                     |
| 1904.....   | 52                        | 123                             | 503,796            | 311,470                     |
| <b>Firm:</b>  |                           |                                 |                    |                             |
| 1909.....   | 24                        | 40                              | 232,562            | 108,441                     |
| 1904.....   | 26                        | 62                              | 241,614            | 172,550                     |
| <b>Corporation:</b>                                 |                           |                                 |                    |                             |
| 1909.....   | 70                        | 2,043                           | 10,761,784         | 3,022,081                   |
| 1904.....   | 34                        | 604                             | 2,220,209          | 956,426                     |
| <b>Other:</b>                                       |                           |                                 |                    |                             |
| 1909.....   | ( <sup>2</sup> )          | ( <sup>2</sup> )                | ( <sup>2</sup> )   | ( <sup>2</sup> )            |
| 1904.....   | 3                         | 13                              | 70,655             | 28,052                      |
| <b>Per cent of total:</b>                           |                           |                                 |                    |                             |
| 1909.....   | 100.0                     | 100.0                           | 100.0              | 100.0                       |
| 1904.....   | 100.0                     | 100.0                           | 100.0              | 100.0                       |
| <b>Individual:</b>                                  |                           |                                 |                    |                             |
| 1909.....   | 46.9                      | 7.7                             | 7.5                | 11.1                        |
| 1904.....   | 45.2                      | 15.3                            | 18.2               | 21.2                        |
| <b>Firm:</b>  |                           |                                 |                    |                             |
| 1909.....   | 13.6                      | 1.8                             | 2.0                | 3.1                         |
| 1904.....   | 22.6                      | 7.7                             | 7.8                | 11.8                        |
| <b>Corporation:</b>                                 |                           |                                 |                    |                             |
| 1909.....   | 39.5                      | 90.5                            | 90.5               | 85.8                        |
| 1904.....   | 29.6                      | 75.3                            | 71.7               | 65.1                        |
| <b>Other:</b>                                       |                           |                                 |                    |                             |
| 1909.....   | 2.6                       | 1.0                             | 2.3                | 1.9                         |
| 1904.....   | 2.6                       | 1.0                             | 2.3                | 1.9                         |
| <b>Flour-mill and gristmill products, 1909.....</b> | <b>8</b>                  | <b>24</b>                       | <b>\$597,929</b>   | <b>\$102,206</b>            |
| Individual.....                                     | 5                         | 9                               | 213,374            | 31,431                      |
| Corporation <sup>3</sup> .....                      | 3                         | 15                              | 384,555            | 70,775                      |
| <b>Per cent of total.....</b>                       | <b>100.0</b>              | <b>100.0</b>                    | <b>100.0</b>       | <b>100.0</b>                |
| Individual.....                                     | 62.5                      | 37.5                            | 35.7               | 30.8                        |
| Corporation.....                                    | 37.5                      | 62.5                            | 64.3               | 69.2                        |
| <b>Lumber and timber products, 1909.....</b>        | <b>9</b>                  | <b>186</b>                      | <b>\$503,268</b>   | <b>\$214,946</b>            |
| Firm <sup>4</sup> .....                             | 3                         | 6                               | 10,240             | 10,240                      |
| Corporation.....                                    | 6                         | 180                             | 482,768            | 204,706                     |
| <b>Per cent of total.....</b>                       | <b>100.0</b>              | <b>100.0</b>                    | <b>100.0</b>       | <b>100.0</b>                |
| Firm.....   | 33.3                      | 3.2                             | 4.1                | 4.8                         |
| Corporation.....                                    | 66.7                      | 96.8                            | 95.9               | 95.2                        |
| <b>Printing and publishing, 1909.....</b>           | <b>54</b>                 | <b>180</b>                      | <b>\$519,243</b>   | <b>\$406,728</b>            |
| Individual.....                                     | 28                        | 81                              | 215,203            | 154,045                     |
| Firm.....   | 8                         | 11                              | 33,807             | 20,979                      |
| Corporation.....                                    | 18                        | 88                              | 269,173            | 225,704                     |
| <b>Per cent of total.....</b>                       | <b>100.0</b>              | <b>100.0</b>                    | <b>100.0</b>       | <b>100.0</b>                |
| Individual.....                                     | 51.9                      | 45.0                            | 41.6               | 37.9                        |
| Firm.....   | 14.8                      | 6.1                             | 6.5                | 6.6                         |
| Corporation.....                                    | 33.3                      | 48.9                            | 51.8               | 55.5                        |

<sup>1</sup> Includes the group "Other" to avoid disclosure of individual operations.  
<sup>2</sup> This group included with "Corporation."  
<sup>3</sup> Includes the group "Firm."  
<sup>4</sup> Includes the group "Individual."

The most important distinction shown is that between corporate and all other forms of ownership. For all industries combined, 39.5 per cent of the total number of establishments had in 1909 a corporate form of organization, as against 60.5 per cent for all other forms. The corresponding figures for 1904 were 29.6 per cent and 70.4 per cent, respectively. The increase in the corporate form of organization was due to the establishment of new industries, having that form of ownership, between 1904 and 1909. For all industries combined, as measured by value of products and value added by manufacture, the relative importance of corporations has increased to a large extent.

**Size of establishment.**—The tendency for manufacturing to become concentrated in large establishments, or the reverse, is a matter of interest from the standpoint of industrial organization. In order to throw some light upon it the following table groups the establishments according to the value of their prod-

ucts. The table also shows the average size of establishments for all industries combined and for important industries separately as measured by number of wage earners, value of products, and value added by manufacture. The totals for all industries are shown for the last two censuses, while for certain important industries figures are given for 1909 only.

| INDUSTRY AND VALUE OF PRODUCTS.                     | Number of establishments. | Average number of wage earners. | Value of products. | Value added by manufacture. |
|---|---------------------------|---------------------------------|--------------------|-----------------------------|
| <b>ALL INDUSTRIES:</b>                              |                           |                                 |                    |                             |
| 1909.....   | 177                       | 2,257                           | \$11,886,828       | \$3,520,889                 |
| 1904.....   | 115                       | 802                             | 3,096,274          | 1,468,498                   |
| <b>Less than \$5,000:</b>                           |                           |                                 |                    |                             |
| 1909.....   | 60                        | 49                              | 172,825            | 122,039                     |
| 1904.....   | 47                        | 66                              | 144,684            | 113,556                     |
| <b>\$5,000 and less than \$20,000:</b>              |                           |                                 |                    |                             |
| 1909.....   | 66                        | 168                             | 608,654            | 359,561                     |
| 1904.....   | 39                        | 105                             | 388,264            | 242,333                     |
| <b>\$20,000 and less than \$100,000:</b>            |                           |                                 |                    |                             |
| 1909.....   | 40                        | 605                             | 1,068,738          | 961,529                     |
| 1904.....   | 21                        | 235                             | 895,226            | 460,099                     |
| <b>\$100,000 and less than \$1,000,000:</b>         |                           |                                 |                    |                             |
| 1909.....   | 11                        | 1,435                           | 9,136,611          | 2,077,160                   |
| 1904.....   | 8                         | 396                             | 1,608,100          | 651,910                     |
| <b>Per cent of total:</b>                           |                           |                                 |                    |                             |
| 1909.....   | 100.0                     | 100.0                           | 100.0              | 100.0                       |
| 1904.....   | 100.0                     | 100.0                           | 100.0              | 100.0                       |
| <b>Less than \$5,000:</b>                           |                           |                                 |                    |                             |
| 1909.....   | 33.9                      | 2.2                             | 1.5                | 3.5                         |
| 1904.....   | 40.9                      | 8.2                             | 4.7                | 7.7                         |
| <b>\$5,000 and less than \$20,000:</b>              |                           |                                 |                    |                             |
| 1909.....   | 37.3                      | 7.4                             | 5.1                | 10.2                        |
| 1904.....   | 33.9                      | 13.1                            | 12.5               | 16.5                        |
| <b>\$20,000 and less than \$100,000:</b>            |                           |                                 |                    |                             |
| 1909.....   | 22.6                      | 26.8                            | 16.6               | 27.3                        |
| 1904.....   | 18.3                      | 29.3                            | 28.9               | 31.4                        |
| <b>\$100,000 and less than \$1,000,000:</b>         |                           |                                 |                    |                             |
| 1909.....   | 0.2                       | 63.6                            | 76.9               | 59.0                        |
| 1904.....   | 7.0                       | 49.4                            | 53.0               | 44.4                        |
| <b>Average per establishment:</b>                   |                           |                                 |                    |                             |
| 1909.....   | 13                        | 13                              | \$67,157           | \$10,892                    |
| 1904.....   | 7                         | 7                               | 26,924             | 12,770                      |
| <b>Flour-mill and gristmill products, 1909.....</b> | <b>8</b>                  | <b>24</b>                       | <b>\$597,929</b>   | <b>\$102,206</b>            |
| \$5,000 and less than \$20,000.....                 | 3                         | 4                               | 32,320             | 5,985                       |
| \$20,000 and less than \$100,000.....               | 5                         | 20                              | 565,609            | 96,221                      |
| <b>Per cent of total.....</b>                       | <b>100.0</b>              | <b>100.0</b>                    | <b>100.0</b>       | <b>100.0</b>                |
| \$5,000 and less than \$20,000.....                 | 37.5                      | 16.7                            | 5.4                | 5.9                         |
| \$20,000 and less than \$100,000.....               | 62.5                      | 83.3                            | 94.6               | 74.1                        |
| <b>Average per establishment.....</b>               | <b>13</b>                 | <b>13</b>                       | <b>\$74,741</b>    | <b>\$12,776</b>             |
| <b>Lumber and timber products, 1909.....</b>        | <b>9</b>                  | <b>186</b>                      | <b>\$503,268</b>   | <b>\$214,946</b>            |
| Less than \$5,000.....                              | 3                         | 6                               | 20,500             | 10,240                      |
| \$20,000 and less than \$100,000.....               | 6                         | 180                             | 482,768            | 204,706                     |
| <b>Per cent of total.....</b>                       | <b>100.0</b>              | <b>100.0</b>                    | <b>100.0</b>       | <b>100.0</b>                |
| Less than \$5,000.....                              | 33.3                      | 3.2                             | 4.1                | 4.8                         |
| \$20,000 and less than \$100,000.....               | 66.7                      | 96.8                            | 95.9               | 95.2                        |
| <b>Average per establishment.....</b>               | <b>21</b>                 | <b>21</b>                       | <b>\$55,919</b>    | <b>\$23,883</b>             |
| <b>Printing and publishing, 1909.....</b>           | <b>54</b>                 | <b>180</b>                      | <b>\$519,243</b>   | <b>\$406,728</b>            |
| Less than \$5,000.....                              | 29                        | 29                              | 84,784             | 70,047                      |
| \$5,000 and less than \$20,000.....                 | 18                        | 59                              | 145,581            | 115,830                     |
| \$20,000 and less than \$100,000.....               | 7                         | 92                              | 288,878            | 220,251                     |
| <b>Per cent of total.....</b>                       | <b>100.0</b>              | <b>100.0</b>                    | <b>100.0</b>       | <b>100.0</b>                |
| Less than \$5,000.....                              | 53.7                      | 16.1                            | 16.3               | 17.4                        |
| \$5,000 and less than \$20,000.....                 | 33.3                      | 32.8                            | 28.0               | 28.5                        |
| \$20,000 and less than \$100,000.....               | 13.0                      | 51.1                            | 55.6               | 54.2                        |
| <b>Average per establishment.....</b>               | <b>13</b>                 | <b>13</b>                       | <b>\$80,616</b>    | <b>\$7,532</b>              |

<sup>1</sup> Includes the group "\$1,000,000 and over."  
<sup>2</sup> Includes the group "\$100,000 and less than \$1,000,000."  
<sup>3</sup> Includes the group "\$5,000 and less than \$20,000."

This table shows that, in 1909, of the 177 establishments only 11, or 6.2 per cent, had a value of products exceeding \$100,000. These establishments, however, notwithstanding their small number, had a total average number of wage earners of 1,435, or 63.6 per cent of the total number in all establishments, and reported 76.9 per cent of the total value of products, and 59 per cent of the total value added by manufacture.



STATISTICS OF MANUFACTURES—NEVADA.

On the other hand, small establishments—that is, those having a value of product of less than \$5,000—constituted a considerable proportion (33.9 per cent) of the total number of establishments, but the value of their products amounted to only 1.5 per cent of the total. The great bulk of the manufacturing was carried on in establishments having a product valued at not less than \$100,000.

It will be seen that during the short period of five years from 1904 to 1909 extensive changes took place in the relative importance of the largest establishments as measured by value of products, value added by manufacture, and average number of wage earners, due to the fact that the largest industry in the state had been established between 1904 and 1909.

The fact that from 1904 to 1909 the average value of products per establishment increased from \$26,924 to \$67,157, and the value added by manufacture from \$12,770 to \$19,892, can scarcely be taken as an indication of a tendency toward concentration. The increased values shown as above stated are due to the establishment of a large copper smelter and also perhaps in some degree to the increase that has taken place in the prices of commodities.

The average number of wage earners per establishment increased from 7 to 13.

In some respects, and especially from the standpoint of conditions under which persons engaged in manufactures work, the best classification of establishments to bring out the feature of size is a classification according to the number of wage earners employed. The next table shows such a classification for all industries combined and for six important industries, and gives not only the number of establishments falling in each group but also the average number of wage earners employed.

Consolidating these classes to a certain extent it will be seen that 91.5 per cent of the establishments employed either no wage earners at all or less than 21 persons each. The most numerous single group consists of the 116 establishments employing less than 6 wage earners. The two groups consisting of the establishments employing from 6 to 20 wage earners each and no wage earners at all, respectively, are next in importance, with 23 establishments each.

Of the total number of wage earners, 47.8 per cent were in establishments employing over 250 wage earners. The single group having the largest number of employees was the group comprising the establishments employing from 501 to 1,000 wage earners. This group employed 637 wage earners, or 28.2 per cent of the total.

| INDUSTRY.   | Total. | ESTABLISHMENTS EMPLOYING— |                       |                       |                        |                         |                          |                          |                            |                          |
|---|--------|---------------------------|-----------------------|-----------------------|------------------------|-------------------------|--------------------------|--------------------------|----------------------------|--------------------------|
|   |        | No wage earners.          | Under 6 wage earners. | 6 to 20 wage earners. | 21 to 50 wage earners. | 51 to 100 wage earners. | 101 to 250 wage earners. | 251 to 500 wage earners. | 501 to 1,000 wage earners. | Over 1,000 wage earners. |
| NUMBER OF ESTABLISHMENTS.   |        |                           |                       |                       |                        |                         |                          |                          |                            |                          |
| All industries.....   | 177    | 23                        | 116                   | 23                    | 8                      | 5                       |                          | 1                        | 1                          |                          |
| Bread and other bakery products.....  | 29     | 8                         | 19                    | 2                     |                        |                         |                          |                          |                            |                          |
| Butter, cheese, and condensed milk.....   | 9      |                           | 9                     |                       |                        |                         |                          |                          |                            |                          |
| Cars and general shop construction and repairs by steam-railroad companies..... | 9      |                           |                       | 2                     |                        |                         |                          |                          |                            |                          |
| Flour-mill and gristmill products.....  | 8      |                           | 7                     | 1                     | 3                      | 3                       |                          | 1                        |                            |                          |
| Lumber and timber products.....   | 9      |                           | 3                     | 4                     | 1                      |                         |                          |                          |                            |                          |
| Printing and publishing.....  | 54     | 9                         | 37                    | 7                     | 1                      |                         |                          |                          |                            |                          |
| All other industries.....   | 50     | 6                         | 41                    | 7                     | 3                      | 1                       |                          |                          | 1                          |                          |
| AVERAGE NUMBER OF WAGE EARNERS.   |        |                           |                       |                       |                        |                         |                          |                          |                            |                          |
| All industries.....   | 2,257  |                           | 225                   | 295                   | 293                    | 394                     |                          | 443                      | 637                        |                          |
| Bread and other bakery products.....  | 47     |                           | 31                    | 16                    |                        |                         |                          |                          |                            |                          |
| Butter, cheese, and condensed milk.....   | 16     |                           | 16                    |                       |                        |                         |                          |                          |                            |                          |
| Cars and general shop construction and repairs by steam-railroad companies..... | 818    |                           |                       | 22                    |                        |                         |                          |                          |                            |                          |
| Flour-mill and gristmill products.....  | 24     |                           | 14                    | 10                    | 105                    | 248                     |                          | 443                      |                            |                          |
| Lumber and timber products.....   | 186    |                           | 6                     | 56                    | 35                     | 89                      |                          |                          |                            |                          |
| Printing and publishing.....  | 180    |                           | 78                    | 70                    | 32                     |                         |                          |                          |                            |                          |
| All other industries.....   | 986    |                           | 80                    | 91                    | 121                    | 57                      |                          |                          | 637                        |                          |
| PER CENT OF AVERAGE NUMBER OF WAGE EARNERS.                                     |        |                           |                       |                       |                        |                         |                          |                          |                            |                          |
| All industries.....   | 100    |                           | 10.0                  | 11.7                  | 13.0                   | 17.5                    |                          | 19.6                     | 28.2                       |                          |
| Bread and other bakery products.....  | 100    |                           | 66.0                  | 34.0                  |                        |                         |                          |                          |                            |                          |
| Butter, cheese, and condensed milk.....   | 100    |                           | 100.0                 |                       |                        |                         |                          |                          |                            |                          |
| Cars and general shop construction and repairs by steam-railroad companies..... | 100    |                           |                       | 2.7                   | 12.8                   | 30.3                    |                          | 54.2                     |                            |                          |
| Flour-mill and gristmill products.....  | 100    |                           | 58.3                  | 41.7                  |                        |                         |                          |                          |                            |                          |
| Lumber and timber products.....   | 100    |                           | 3.2                   | 30.1                  | 18.8                   | 47.8                    |                          |                          |                            |                          |
| Printing and publishing.....  | 100    |                           | 43.3                  | 38.0                  | 17.8                   |                         |                          |                          |                            |                          |
| All other industries.....   | 100    |                           | 8.1                   | 9.2                   | 12.8                   | 5.8                     |                          |                          | 64.6                       |                          |

**Expenses.**—As stated in the "Introduction" the census does not purport to furnish figures that can be used for determining the cost of manufacture and profits. Facts of interest can, however, be brought out concerning the relative importance of the different classes of expenses going to make up the total.

The following table shows in percentages the distribution of expenses among the classes indicated for all industries combined and for certain important industries separately. The figures on which the percentages are based appear in Table II.

| INDUSTRY.   | PER CENT OF TOTAL EXPENSES REPORTED. |        |            |                         |
|---|--------------------------------------|--------|------------|-------------------------|
|   | Salaries.                            | Wages. | Materials. | Miscellaneous expenses. |
| All industries.....   | 3.4                                  | 17.9   | 75.5       | 3.2                     |
| Bread and other bakery products.....  | 1.0                                  | 18.9   | 74.6       | 5.5                     |
| Butter, cheese, and condensed milk.....   | 1.6                                  | 4.6    | 91.7       | 2.1                     |
| Cars and general shop construction and repairs by steam-railroad companies..... | 5.9                                  | 50.3   | 32.7       | 2.2                     |
| Flour-mill and gristmill products.....  | 1.5                                  | 4.3    | 90.2       | 4.0                     |
| Lumber and timber products.....   | 9.2                                  | 28.0   | 56.5       | 6.2                     |
| Printing and publishing.....  | 16.8                                 | 45.2   | 26.3       | 11.7                    |
| All other industries.....   | 2.3                                  | 11.8   | 83.3       | 2.6                     |

This table shows that, for all industries combined, 75.5 per cent of the total expenses were incurred for materials, 21.3 per cent for services, i. e., salaries and wages, and but 3.2 per cent for other purposes. As would be expected, these proportions vary greatly in the different industries.

**Engines and power.**—The following table shows for all industries combined the number of engines or other motors, according to their character, employed in generating power (including electric motors operated by purchased current), and their total horsepower at the censuses of 1909, 1904, and 1899. It also shows separately the number and horsepower of electric motors, including those operated by current generated in the manufacturing establishments.

The table indicates that the increase in primary power was mainly in power generated by steam engines, while on the other hand water power showed a decided decrease. There appears to have been a more general use of gas engines, the number of such engines having increased steadily since 1899, although the horsepower per engine has increased but slightly. The figures also show that the practice of renting primary power is on the increase, 33.9 per cent of the total power being rented in 1909, as compared with 29.5 per cent in 1904 and only one-tenth of 1 per cent in 1899.

The practice of renting electric power in Nevada was first shown in a United States census of 1904 and the development of the use of this kind of power in manufactures is evidenced from the fact that, in 1909, of the total of all rented power, 87.7 per cent was electric, compared with 65.9 per cent in 1904. That the use of electric motors for the purpose of applying the power generated within the establishments is also being rapidly developed is evident from the fact that the horsepower of such motors was 4,134 in 1909, none being reported for 1904 and 1899.

| POWER.   | NUMBER OF ENGINES OR MOTORS. |       |                   | HORSEPOWER. |       |                   | PER CENT DISTRIBUTION OF HORSEPOWER. |       |                  |
|--|------------------------------|-------|-------------------|-------------|-------|-------------------|--------------------------------------|-------|------------------|
|  | 1909                         | 1904  | 1899 <sup>1</sup> | 1909        | 1904  | 1899 <sup>1</sup> | 1909                                 | 1904  | 1899             |
| Primary power, total.....                      | 268                          | 56    | 65                | 7,705       | 2,834 | 1,561             | 100.0                                | 100.0 | 100.0            |
| Owned.....                                     | 84                           | 50    | 65                | 5,133       | 1,990 | 1,560             | 66.1                                 | 70.5  | 100.0            |
| Steam.....                                     | 40                           | 27    | 35                | 4,533       | 1,092 | 628               | 58.4                                 | 38.5  | 40.2             |
| Gas and oil.....                               | 35                           | 23    | 9                 | 201         | 125   | 39                | 2.6                                  | 4.4   | 2.5              |
| Water wheels.....                              | 3                            | 5     | 21                | 397         | 742   | 893               | 5.1                                  | 26.2  | 57.2             |
| Water motors.....                              | 1                            | 1     | ( <sup>2</sup> )  | 2           | 40    | ( <sup>2</sup> )  | ( <sup>2</sup> )                     | 1.4   | ( <sup>2</sup> ) |
| Rented.....                                    | 184                          | ..... | .....             | 2,032       | 835   | 1                 | 33.9                                 | 29.5  | 0.1              |
| Electric.....                                  | 178                          | ..... | .....             | 2,307       | 550   | 1                 | 29.7                                 | 19.4  | 0.1              |
| Other.....                                     | 6                            | ..... | .....             | 325         | 285   | .....             | 4.2                                  | 10.1  | .....            |
| Electric motors.....                           | 344                          | ..... | .....             | 6,441       | 550   | 1                 | 100.0                                | 100.0 | 100.0            |
| Run by current generated by establishment..... | 166                          | ..... | .....             | 4,134       | ..... | .....             | 64.2                                 | ..... | .....            |
| Run by rented power.....                       | 178                          | ..... | .....             | 2,307       | 550   | 1                 | 35.8                                 | 100.0 | 100.0            |

<sup>1</sup> Includes the neighborhood industries and hand trades, omitted in 1904 and 1909.  
<sup>2</sup> Not reported.  
<sup>3</sup> Less than one-tenth of 1 per cent.

**Fuel.**—Closely related to the question of kind of power employed is that of the fuel used in generating this power, or otherwise as material in the manufacturing processes. The following table shows the quantity of each kind of fuel used in 1909:

| INDUSTRY.   | Anthracitic coal (tons). | Bituminous coal (tons). | Coke (tons). | Wood (cords). | Oil, including gasoline (barrels). | Gas (1,000 feet). | Other (tons). |
|---|--------------------------|-------------------------|--------------|---------------|------------------------------------|-------------------|---------------|
| All industries.....   | 115                      | 70,541                  | 326          | 2,992         | 53,449                             | 174               | 130           |
| Bread and other bakery products.....  | .....                    | 58                      | 6            | 928           | .....                              | 174               | .....         |
| Butter, cheese, and condensed milk.....   | .....                    | 118                     | .....        | 382           | .....                              | .....             | 130           |
| Cars and general shop construction and repairs by steam-railroad companies..... | 115                      | 3,116                   | 41           | 134           | 25,288                             | .....             | .....         |
| Printing and publishing.....  | .....                    | 211                     | .....        | 66            | 129                                | .....             | .....         |
| All other industries.....   | .....                    | 67,038                  | 270          | 1,482         | 28,032                             | .....             | .....         |

## SUPPLEMENTARY DATA REGARDING IMPORTANT INDUSTRIES.

(With statistics for laundries.)

For certain industries the Census Bureau collects, by means of special schedules, details regarding the quantity and value of materials and products which do not appear on the general schedule. Data for the quantity and value of products for two important industries in Nevada are here presented.

**Flour-mill and gristmill products.**—The following tabular statement gives the data for the quantity and value of products for the last two census years for flour-mill and gristmill products:

| PRODUCT.                  | QUANTITY. |        | VALUE.           |                  |
|---------------------------|-----------|--------|------------------|------------------|
|                           | 1909      | 1904   | 1909             | 1904             |
| <b>All products</b> ..... |           |        | <b>\$597,929</b> | <b>\$520,969</b> |
| Wheat flour:              |           |        |                  |                  |
| White..... barrels.....   | 61,380    | 47,186 | 357,200          | 255,598          |
| Graham..... barrels.....  | 558       | 270    | 3,340            | 1,380            |
| Feed..... tons.....       | 5,575     | 7,775  | 173,068          | 215,157          |
| Offal..... tons.....      | 2,631     | 2,393  | 63,721           | 48,659           |
| All other.....            |           |        |                  | 175              |

This table shows that there was an increase of 14,194 barrels, or 30.1 per cent, in the quantity of wheat flour produced in 1909, as compared with the quantity reported in 1904, and a decrease of 2,200 tons in the quantity of feed produced.

**Printing and publishing.**—This industry, which in value of products ranks third, embraces the printing and publishing of newspapers and periodicals and book and job printing. There were 54 establishments in 1909, an increase of 25, or 86.2 per cent, over the number reported in 1904. There was also an increase of 113, or 168.7 per cent, in the average number of wage earners, and \$129,195, or 202.3 per cent, in the amount of wages paid during the same period. The value of products for 1909 shows an increase of \$266,346, or 105.3 per cent, over the amount reported for 1904.

The following table shows the number and circulation of newspapers and periodicals for 1909, 1904, and 1899:

| PERIOD OF ISSUE.   | NUMBER OF PUBLICATIONS. |           |           | AGGREGATE CIRCULATION PER ISSUE. |               |               |
|--------------------|-------------------------|-----------|-----------|----------------------------------|---------------|---------------|
|                    | 1909                    | 1904      | 1899      | 1909                             | 1904          | 1899          |
| <b>Total</b> ..... | <b>59</b>               | <b>31</b> | <b>35</b> | <b>45,544</b>                    | <b>19,540</b> | <b>18,153</b> |
| Daily.....         | 15                      | 9         | 9         | 15,830                           | 6,930         | 5,226         |
| Sunday.....        | 2                       |           |           | 5,551                            |               |               |
| Weekly.....        | 40                      | 20        | 21        | 22,613                           | 11,435        | 10,517        |
| Triweekly.....     | 2                       |           | 1         | 1,550                            |               | 160           |
| Semiweekly.....    |                         | 2         | 3         |                                  | 1,175         | 1,750         |
| Monthly.....       |                         |           | 1         |                                  |               | 500           |

The number of newspapers and periodicals in the state increased from 35 in 1899 and 31 in 1904 to 59 in 1909. The 59 newspapers and periodicals reported

in 1909 included 15 daily papers, 2 Sunday papers, 40 weeklies, and 2 triweeklies.

The aggregate circulation per issue of all newspapers and periodicals in 1909 was 45,544, distributed as follows: Dailies, 15,830; Sunday papers, 5,551; weeklies, 22,613; and triweeklies, 1,550.

**Laundries.**—Statistics for steam laundries are not included in the general tables. In 1909 there were five such establishments in the state of Nevada, one of which was in Reno. The following statement summarizes the statistics:

|                                      |           |
|--------------------------------------|-----------|
| Number of establishments.....        | 5         |
| Persons engaged in the industry..... | 119       |
| Proprietors and firm members.....    | 2         |
| Salaried employees.....              | 12        |
| Wage earners (average number).....   | 105       |
| Total primary horsepower.....        | 149       |
| Capital.....                         | \$166,131 |
| Expenses.....                        | 150,181   |
| Services.....                        | 98,029    |
| Materials.....                       | 26,913    |
| Miscellaneous.....                   | 25,239    |
| Amount received for work done.....   | 165,037   |

The most common form of organization was the corporate, with four establishments, one establishment being under firm ownership. Three establishments reported receipts for the year's business of over \$20,000 but less than \$100,000.

The number of persons employed each month and the per cent which this number represented of the greatest number employed in any month were as follows:

| MONTH.        | PERSONS EMPLOYED. |                      | MONTH.         | PERSONS EMPLOYED. |                      |
|---------------|-------------------|----------------------|----------------|-------------------|----------------------|
|               | Number.           | Per cent of maximum. |                | Number.           | Per cent of maximum. |
| January.....  | 112               | 100.0                | July.....      | 111               | 99.1                 |
| February..... | 104               | 92.9                 | August.....    | 105               | 93.8                 |
| March.....    | 107               | 95.5                 | September..... | 103               | 92.0                 |
| April.....    | 101               | 90.2                 | October.....   | 101               | 90.2                 |
| May.....      | 105               | 93.8                 | November.....  | 100               | 89.3                 |
| June.....     | 111               | 99.1                 | December.....  | 104               | 92.9                 |

The primary power used was wholly steam, seven engines being reported with a total of 149 horsepower.

The kind and amount of fuel used are shown in the following statement:

| KIND.                | Unit.        | Quantity. |
|----------------------|--------------|-----------|
| Bituminous coal..... | Tons.....    | 520       |
| Wood.....            | Cords.....   | 830       |
| Oil.....             | Barrels..... | 1,244     |

STATISTICS OF MANUFACTURES—NEVADA.

TABLE 1.—COMPARATIVE SUMMARY FOR 1909, 1904, AND 1899.

THE STATE—SELECTED INDUSTRIES.

| INDUSTRY.   | Cen-<br>sus. | Num-<br>ber of<br>estab-<br>lish-<br>ments. | PERSONS ENGAGED IN<br>INDUSTRY. |   |                                       |  | Pri-<br>mary<br>horse-<br>power. | Cap-<br>tal.   | Sala-<br>ries. | Wages.         | Cost of<br>mate-<br>rials. | Value<br>of<br>prod-<br>ucts. | Value<br>added<br>by<br>manu-<br>fac-<br>ture. |                         |  |  |  |  |  |
|---|--------------|---|---------------------------------|---|---------------------------------------|--|----------------------------------|----------------|----------------|----------------|----------------------------|-------------------------------|--|-------------------------|--|--|--|--|--|
|   |              |   | Total.                          | Pro-<br>pri-<br>etors<br>and<br>firm<br>mem-<br>bers. | Sala-<br>ried<br>em-<br>plov-<br>ees. | Wage<br>earn-<br>ers<br>(aver-<br>age<br>num-<br>ber). |                                  |                |                |                |                            |                               |  | Expressed in thousands. |  |  |  |  |  |
|   |              |   |                                 |   |                                       |  |                                  |                |                |                |                            |                               |  |                         |  |  |  |  |  |
| <b>STATE—All industries.....</b>  | <b>1909</b>  | <b>177</b>                                  | <b>2,650</b>                    | <b>137</b>  | <b>258</b>                            | <b>2,257</b>   | <b>7,765</b>                     | <b>\$9,807</b> | <b>\$378</b>   | <b>\$1,982</b> | <b>\$8,366</b>             | <b>\$11,887</b>               | <b>\$3,521</b>                                 |                         |  |  |  |  |  |
|   | <b>1904</b>  | <b>115</b>                                  | <b>1,016</b>                    | <b>108</b>  | <b>108</b>                            | <b>802</b>   | <b>2,884</b>                     | <b>2,892</b>   | <b>126</b>     | <b>693</b>     | <b>1,628</b>               | <b>3,096</b>                  | <b>1,468</b>                                   |                         |  |  |  |  |  |
|   | <b>1899</b>  | <b>99</b>                                   | <b>(1)</b>                      | <b>(1)</b>  | <b>37</b>                             | <b>504</b>   | <b>1,561</b>                     | <b>1,251</b>   | <b>35</b>      | <b>353</b>     | <b>662</b>                 | <b>1,261</b>                  | <b>599</b>                                     |                         |  |  |  |  |  |
| Bread and other bakery products.....  | 1909         | 20  | 86                              | 34  | 5                                     | 47   | 6                                | 147            | 3              | 54             | 204                        | 356                           | 142  |                         |  |  |  |  |  |
|   | 1904         | 11  | 48                              | 14  | 3                                     | 31   | 1                                | 39             | 2              | 28             | 64                         | 127                           | 63   |                         |  |  |  |  |  |
|   | 1899         | 4   | 8                               | 5   |                                       | 3  | (1)                              | 4              |                | 2              | 9                          | 16                            | 7  |                         |  |  |  |  |  |
| Butter, cheese, and condensed milk.....   | 1909         | 9   | 25                              | 3   | 0                                     | 16   | 94                               | 102            | 5              | 15             | 289                        | 326                           | 37   |                         |  |  |  |  |  |
|   | 1904         | 4   | 11                              |   | 1                                     | 10   | 67                               | 57             | (2)            | 9              | 101                        | 197                           | 30   |                         |  |  |  |  |  |
|   | 1899         | 4   | 20                              |   | 9                                     | 11   | 45                               | 50             | 3              | 6              | 127                        | 148                           | 21   |                         |  |  |  |  |  |
| Cars and general shop construction and repairs by steam-<br>railroad companies..... | 1909         | 9   | 867                             |   | 39                                    | 818  | 1,611                            | 607            | 61             | 610            | 337                        | 1,033                         | 696  |                         |  |  |  |  |  |
|   | 1904         | 6   | 349                             |   | 25                                    | 315  | 212                              | 251            | 20             | 280            | 222                        | 532                           | 310  |                         |  |  |  |  |  |
|   | 1899         | 6   | 222                             |   | 8                                     | 214  | (1)                              | 405            | 10             | 168            | 111                        | 206                           | 185  |                         |  |  |  |  |  |
| Flour-mill and gristmill products.....  | 1909         | 8   | 30                              | 7   | 8                                     | 24   | 305                              | 592            | 8              | 24             | 406                        | 598                           | 102  |                         |  |  |  |  |  |
|   | 1904         | 9   | 31                              | 8   | 6                                     | 17   | 301                              | 411            | 8              | 16             | 432                        | 521                           | 80   |                         |  |  |  |  |  |
|   | 1899         | 9   | (1)                             | (1)   | 4                                     | 13   | (1)                              | 227            | 3              | 9              | 114                        | 143                           | 20   |                         |  |  |  |  |  |
| Lumber and timber products.....   | 1909         | 0   | 224                             | 5   | 33                                    | 186  | 563                              | 774            | 47             | 143            | 288                        | 503                           | 215  |                         |  |  |  |  |  |
|   | 1904         | 5   | 162                             |   | 15                                    | 147  | 1,110                            | 1,072          | 21             | 110            | 257                        | 528                           | 271  |                         |  |  |  |  |  |
|   | 1899         | 3   | (1)                             | (1)   | 3                                     | 57   | (1)                              | 91             | 3              | 27             | 102                        | 168                           | 66   |                         |  |  |  |  |  |
| Printing and publishing.....  | 1909         | 54  | 276                             | 48  | 48                                    | 180  | 214                              | 654            | 72             | 163            | 113                        | 519                           | 406  |                         |  |  |  |  |  |
|   | 1904         | * 20  | 121                             | 33  | 21                                    | 67   | 62                               | 168            | 22             | 64             | 33                         | 253                           | 220  |                         |  |  |  |  |  |
|   | 1899         | * 20  | 107                             | 30  | 3                                     | 68   | 62                               | 92             | 2              | 35             | 18                         | 111                           | 93   |                         |  |  |  |  |  |
| All other industries.....   | 1909         | 59  | 1,143                           | 40  | 117                                   | 686  | 4,882                            | 6,931          | 182            | 943            | 6,639                      | 8,552                         | 1,923  |                         |  |  |  |  |  |
|   | 1904         | 51  | 393                             | 53  | 35                                    | 215  | 1,021                            | 894            | 47             | 180            | 459                        | 938                           | 479  |                         |  |  |  |  |  |
|   | 1899         | 44  | (1)                             | (1)   | 10                                    | 138  | (1)                              | 382            | 14             | 106            | 181                        | 379                           | 198  |                         |  |  |  |  |  |

THE CITY OF RENO—ALL INDUSTRIES.

|   |             |           |            |           |           |            |              |                |              |              |                |                |              |
|---|-------------|-----------|------------|-----------|-----------|------------|--------------|----------------|--------------|--------------|----------------|----------------|--------------|
| <b>RENO (population, 1910, 10,867).....</b> | <b>1909</b> | <b>40</b> | <b>410</b> | <b>25</b> | <b>84</b> | <b>310</b> | <b>1,746</b> | <b>\$1,872</b> | <b>\$121</b> | <b>\$308</b> | <b>\$1,171</b> | <b>\$1,862</b> | <b>\$691</b> |
|---|-------------|-----------|------------|-----------|-----------|------------|--------------|----------------|--------------|--------------|----------------|----------------|--------------|

<sup>1</sup> Figures not available.

<sup>2</sup> Less than \$500.

<sup>3</sup> Does not include statistics for two establishments, to avoid disclosure of individual operations.

STATISTICS OF MANUFACTURES—NEVADA.

TABLE II.—DETAIL STATEMENT FOR

| INDUSTRY.   | Number of establishments. | PERSONS ENGAGED IN INDUSTRY—AVERAGE NUMBER. |                               |   |         |         |                            |              |         |           | WAGE EARNERS—NUMBER DEC. 15, OR NEAREST REPRESENTATIVE DAY. |              |         |           |         | Primary horse-power. |
|---|---------------------------|---|-------------------------------|---|---------|---------|----------------------------|--------------|---------|-----------|---|--------------|---------|-----------|---------|----------------------|
|   |                           | Total.                                      | Proprietors and firm members. | Salaried officers, superintendents, and managers. | Clerks. |         | Wage earners. <sup>1</sup> |              |         |           | Total.  | 16 and over. |         | Under 16. |         |                      |
|   |                           |   |                               |   | Male.   | Female. | Total.                     | 16 and over. |         | Under 16. |   | Male.        | Female. | Male.     | Female. |                      |
|   |                           |   |                               |   |         |         |                            | Male.        | Female. |           |   |              |         |           |         |                      |
| 1 All industries.....   | 177                       | 2,660                                       | 137                           | 96  | 130     | 30      | 2,257                      | 2,222        | 26      | 9         | .....   | .....        | .....   | .....     | .....   | 7,765                |
| 2 Bread and other bakery products.....  | 29                        | 86  | 34                            | .....   | 1       | 4       | 47                         | 42           | 5       | .....     | 52  | 47           | 5       | .....     | .....   | 6                    |
| 3 Brick and tile.....   | 4                         | 18  | 4                             | 1   | 1       | .....   | 12                         | 11           | .....   | 1         | 22  | 20           | .....   | .....     | .....   | 115                  |
| 4 Butter, cheese, and condensed milk.....   | 9                         | 25  | 3                             | 4   | 1       | 1       | 16                         | 14           | 2       | .....     | 16  | 14           | 2       | .....     | .....   | 91                   |
| 5 Cars and general shop construction and repairs by steam-railroad companies..... | 9                         | 857   | .....                         | 13  | 25      | 1       | 818                        | 816          | .....   | 2         | 820   | 818          | .....   | .....     | .....   | 1,611                |
| 6 Copper, tin, and sheet-iron products.....                                       | 4                         | 11  | 2                             | .....   | 1       | .....   | 8                          | 8            | .....   | .....     | 8   | 8            | .....   | .....     | .....   | .....                |
| 7 Flour-mill and gristmill products.....  | 8                         | 39  | 7                             | 4   | 3       | 1       | 24                         | 24           | .....   | .....     | 27  | 27           | .....   | .....     | .....   | 395                  |
| 8 Foundry and machine-shop products.....  | 3                         | 51  | 2                             | 1   | 4       | .....   | 44                         | 44           | .....   | .....     | 50  | 50           | .....   | .....     | .....   | 138                  |
| 9 Gas, illuminating and heating.....  | 3                         | 13  | .....                         | 3   | 3       | 1       | 6                          | 6            | .....   | .....     | 6   | 6            | .....   | .....     | .....   | 83                   |
| 10 Ice, manufactured.....   | 3                         | 22  | 6                             | 2   | .....   | .....   | 14                         | 14           | .....   | .....     | 13  | 13           | .....   | .....     | .....   | 237                  |
| 11 Liquors, malt.....   | 3                         | 29  | .....                         | 6   | 3       | .....   | 20                         | 20           | .....   | .....     | 24  | 24           | .....   | .....     | .....   | 351                  |
| 12 Lumber and timber products.....  | 9                         | 224   | 5                             | 11  | 19      | 3       | 186                        | 186          | .....   | .....     | 241   | 241          | .....   | .....     | .....   | 563                  |
| 13 Printing and publishing.....   | 54                        | 276   | 48                            | 20  | 16      | 12      | 180                        | 159          | 15      | 6         | 175   | 154          | 15      | 6         | .....   | 214                  |
| 14 Salt.....  | 4                         | 17  | 2                             | 2   | .....   | .....   | 13                         | 12           | 1       | .....     | 11  | 10           | 1       | .....     | .....   | 82                   |
| 15 Tobacco manufactures.....  | 8                         | 23  | 10                            | .....   | .....   | .....   | 13                         | 11           | 2       | .....     | 23  | 19           | 4       | .....     | .....   | .....                |
| 16 Wall plaster.....  | 4                         | 139   | .....                         | 11  | 8       | 1       | 119                        | 119          | .....   | .....     | 126   | 126          | .....   | .....     | .....   | 776                  |
| 17 All other industries <sup>2</sup> .....  | 23                        | 820   | 14                            | 18  | 45      | 6       | 737                        | 736          | 1       | .....     | .....   | .....        | .....   | .....     | .....   | 3,160                |

<sup>1</sup> Distribution by sex and age periods based on number reported Dec. 15, or nearest representative day.

<sup>2</sup> All other industries embrace—

|   |   |                                    |   |  |   |
|---|---|------------------------------------|---|--|---|
| Cars, and general shop construction and repairs by street-railroad companies..... | 1 | Mattresses and spring beds.....    | 1 | Smelting and refining, copper.....           | 1 |
| Leather goods.....  | 2 | Mineral and soda waters.....       | 9 | Soap.....                                    | 1 |
| Lime.....   | 1 | Paint and varnish.....             | 1 | Wirework, including wire rope and cable..... | 1 |
| Marble and stone work.....  | 2 | Photo-engraving.....               | 1 |  |   |
|   |   | Slaughtering and meat packing..... | 2 |  |   |

STATISTICS OF MANUFACTURES—NEVADA.

THE STATE, BY INDUSTRIES: 1909.

|    | Capital.    | EXPENSES.    |            |           |               |                         |             |                  |                                    |                |           | Value of products. | Value added by manufacture. |
|----|-------------|--------------|------------|-----------|---------------|-------------------------|-------------|------------------|------------------------------------|----------------|-----------|--------------------|-----------------------------|
|    |             | Total.       | Services.  |           |               | Materials.              |             | Miscellaneous.   |                                    |                |           |                    |                             |
|    |             |              | Officials. | Clerks.   | Wage earners. | Fuel and rent of power. | Other.      | Rent of factory. | Taxes, including internal revenue. | Contract work. | Other.    |                    |                             |
| 1  | \$9,800,597 | \$11,081,802 | \$185,117  | \$192,924 | \$1,981,762   | \$568,628               | \$7,797,311 | \$41,152         | \$70,211                           | \$7,490        | \$237,207 | \$11,886,828       | \$3,520,889                 |
| 2  | 146,071     | 280,253      | .....      | 2,722     | 54,208        | 10,071                  | 203,564     | 5,536            | 1,765                              | .....          | 8,387     | 355,747            | 142,112                     |
| 3  | 105,142     | 25,565       | 1,800      | 163       | 11,784        | 7,521                   | 331         | .....            | 208                                | .....          | 3,748     | 31,090             | 24,128                      |
| 4  | 101,011     | 315,085      | 4,740      | 360       | 14,600        | 4,537                   | 284,330     | 560              | 404                                | .....          | 5,408     | 325,755            | 30,882                      |
| 5  | 607,432     | 1,029,942    | 23,507     | 37,257    | 610,258       | 37,789                  | 298,927     | .....            | 0,762                              | .....          | 15,442    | 1,032,707          | 695,991                     |
| 6  | 16,500      | 19,878       | .....      | 462       | 10,050        | 368                     | 8,158       | .....            | 205                                | 75             | 560       | 25,045             | 16,519                      |
| 7  | 592,438     | 549,333      | 4,960      | 3,210     | 23,614        | 2,714                   | 493,000     | 300              | 2,377                              | .....          | 19,049    | 597,029            | 102,206                     |
| 8  | 182,631     | 112,781      | 2,400      | 3,949     | 48,801        | 7,291                   | 39,730      | 720              | 666                                | .....          | 9,014     | 114,770            | 67,839                      |
| 9  | 235,659     | 53,976       | 3,300      | 1,740     | 8,060         | 35,067                  | 1,277       | .....            | 1,711                              | .....          | 2,821     | 67,263             | 30,919                      |
| 10 | 299,199     | 33,719       | 2,400      | .....     | 12,436        | 10,019                  | 2,122       | .....            | 1,569                              | .....          | 5,233     | 39,117             | 24,976                      |
| 11 | 270,544     | 118,521      | 14,825     | 3,205     | 23,319        | 9,099                   | 38,064      | .....            | 21,681                             | .....          | 7,338     | 141,039            | 93,876                      |
| 12 | 774,015     | 510,002      | 24,850     | 22,329    | 142,917       | 5,698                   | 282,624     | 000              | 3,761                              | .....          | 26,923    | 503,268            | 214,946                     |
| 13 | 653,877     | 427,391      | 37,284     | 34,705    | 193,073       | 15,076                  | 97,439      | 14,277           | 4,259                              | 2,461          | 28,817    | 519,243            | 406,723                     |
| 14 | 38,174      | 16,280       | 2,220      | .....     | 7,644         | 542                     | 5,351       | .....            | 282                                | .....          | 250       | 23,870             | 17,986                      |
| 15 | 12,442      | 28,777       | .....      | .....     | 9,927         | 17                      | 14,504      | 1,519            | 2,230                              | .....          | 580       | 37,048             | 22,527                      |
| 16 | 521,389     | 266,863      | 22,800     | 8,750     | 79,723        | 41,255                  | 81,037      | .....            | 2,421                              | .....          | 30,817    | 293,847            | 171,555                     |
| 17 | 5,248,273   | 7,287,497    | 40,631     | 73,082    | 731,348       | 381,654                 | 5,945,938   | 17,350           | 19,480                             | 4,954          | 72,760    | 7,777,291          | 1,449,699                   |



## MANUFACTURES : NEW HAMPSHIRE

## STATISTICS OF MANUFACTURES FOR THE STATE, CITIES, AND INDUSTRIES

Prepared under the supervision of W. M. STEUART, Chief Statistician for Manufactures

## INTRODUCTION.

This advance bulletin gives the statistics of manufactures for the state of New Hampshire for the calendar year 1909 as shown by the Thirteenth Census. It will be reprinted without change as a part of the state Compendium of the Census for New Hampshire, and in the final reports of the Thirteenth Census.

The text summarizes the general results of the census inquiry, presenting a series of special tables in which the main facts printed in the general tables are given in convenient form for the state as a whole and for important industries. It also presents tables in which the statistics for the industries of the state as a whole and for a few important industries are classified by character of ownership, size of establishments, number of wage earners, and prevailing hours of labor, information which could not be presented in general tables for each industry without disclosing the facts for individual establishments.

At the end of the bulletin are two general tables.

Table I gives for 1909, 1904, and 1899 the number of establishments and of persons engaged in the industries, primary power, capital, salaries and wages, cost of materials, value of products, and value added by manufacture reported for all industries combined and for certain important industries (1) for the state as a whole and (2) for the city of Manchester. It also gives the same items for all industries combined for every city having in 1910 a population of over 10,000 but less than 50,000.

Table II gives statistics in detail for 1909 for the state and for a larger number of industries.

**Scope of census: Factory industries.**—Census statistics of manufactures are compiled primarily for the purpose of showing the absolute and relative magnitude of the different branches of industry covered and their growth or decline. Incidentally, the effort is made to present data throwing light upon character of organization, location of establishments, size of establishments, labor force, and similar subjects. When use is made of the data for these purposes, it is imperative that due attention should be given to the limitations of the figures. Particularly is this true when the attempt is made to derive from them figures purporting to show average wages, cost of production, or profits. These limitations will be fully discussed in the general report on manufactures for the United States as a whole. It is impossible to reproduce such discussion in the bulletins relative to the individual states.

The census of 1909, like that of 1904, was confined to manufacturing establishments conducted under the factory system, as distinguished from the neighborhood, hand, and building industries.

Where statistics for 1899 are given they have been reduced to a comparable basis by eliminating the latter classes of industries. The census does not include establishments which were idle during the entire year, or had a value of products of less than \$500, or the manufacturing done in educational, eleemosynary, and penal institutions, or in governmental establishments, except those of the Federal Government.

**Period covered.**—The returns cover the calendar year 1909, or the business year which corresponds most nearly to that calendar year. The statistics cover a year's operations, except for establishments which began or discontinued business during the year.

**The establishment.**—The term "establishment" comprises the factories, mills, or plants which are under a common ownership or control, and for which one set of books of account is kept.

If, however, the plants constituting an establishment as thus defined were not all located within the same city or state, separate reports were secured in order that the separate totals might be included in the statistics for each city or state. In some instances separate reports were secured for different industries carried on in the same establishment.

**Classification by industries.**—The establishments were assigned to the several classes of industries according to their products of chief value. The products reported for a given industry may thus, on the one hand, include minor products very different from those covered by the class designation, and, on the other hand, may not include the total product covered by this designation, because some part of this product may be made in establishments in which it is not the product of chief value.

**Selected industries.**—The general tables at the end of this bulletin give the principal facts separately for the industries of the state. A selection has been made of the leading industries of the state for more detailed consideration. Sometimes an industry of greater importance than some of those selected is omitted because it comprises so few establishments that these detailed presentations would reveal the operations of individual concerns.

**Comparisons with previous censuses.**—Owing to the changes in industrial conditions it is not always possible to classify establishments by industries in such a way as to permit accurate comparison with preceding censuses. Table I, giving comparable figures for 1909, 1904, and 1899, therefore, does not embrace all the industries shown for 1909 in Table II.

**Influence of increased prices.**—In considering changes in cost of materials, value of products, and value added by manufacture, account should be taken of the general increase in the prices of commodities during recent years. To the extent to which this factor has been influential the figures can not be taken as an exact measure of increase in the volume of business.

**Persons engaged in industry.**—At the censuses of 1909, 1904, and 1899 the following general classes of persons engaged in manufacturing industries have been distinguished: (1) Proprietors and firm members, (2) salaried officers of corporations, (3) superintendents and managers, (4) clerks, and (5) wage earners. In the censuses of 1904 and 1899 these five classes were shown according to the three main groups: (1) Proprietors and firm members, (2) salaried officials, clerks, etc., and (3) wage earners. The second group included the



three classes of salaried officers of corporations, superintendents and managers, and clerks. In the present census an entirely different grouping is employed: that into (1) proprietors and officials, (2) clerks, and (3) wage earners. The first group includes proprietors and firm members, salaried officers of corporations, and superintendents and managers.

At this census the number of persons engaged in the industries, segregated by sex, and, in the case of wage earners, also by age (whether under 16 or 16 and over), was reported for December 15, or the nearest representative day. The 15th of December was selected as representing for most industries normal conditions of employment, but where conditions were exceptional, and particularly in the case of certain seasonal industries, such as canning, the December date could not be accepted as typical and an earlier date had to be chosen.

In the case of employees other than wage earners the number thus reported on December 15 or other representative day has been treated as equivalent to the average for the year, since the number of employees of this class does not vary much from month to month in a given industry. In the case of wage earners the average is obtained in the manner explained in the next paragraph.

**Wage earners.**—In addition to the report by sex and age of the number of wage earners on December 15, or other representative day, a report was obtained of the number employed on the 15th of each month, without distinction of sex or age. From these figures the average number of wage earners for the year has been calculated by dividing the sum of the numbers reported each month by 12. The average thus obtained represents the number of wage earners that would be required to perform the work done if all were constantly employed during the entire year. Accordingly, the importance of any industry as an employer of labor is believed to be more accurately measured by this average than by the number employed at any one time or on a given day.

The number of wage earners reported for the representative day, though given for each separate industry, is not totaled for all industries combined, because in view of the variations of date such a total is believed not to be significant. It would involve more or less duplication of persons working in different industries at different times, would not represent the total number employed in all industries at any one time, and would give an undue weight to seasonal industries as compared with industries in continual operation.

In particular, totals by sex and age for the wage earners reported for the representative day would be misleading because of the undue weight given to seasonal industries, in some of which, such as canning and preserving, the distribution of the wage earners by sex and age is materially different from that in most industries of more regular operation. In order to determine as nearly as possible the sex and age distribution of the average number of wage earners in the state as a whole, the following procedure has been adopted:

The percentage distribution by sex and age of the wage earners in each industry, for December 15, or the nearest representative day, has been calculated from the actual numbers reported for that date. This percentage has been applied to the average number of wage earners for the year in that industry, to determine the average number of men, women, and children employed. These calculated averages for the several industries have been added up to give the average distribution for the state as a whole.

In 1899 and 1904 the schedule called for the average number of wage earners of each sex 16 years and over, and the total number under 16 years of age, for each month, and these monthly statements were combined in an annual average. Comparatively few manufacturing concerns, however, keep their books in such way as to show readily the number of men, women, and children (under 16) employed each month. These monthly returns by sex and age were, in fact, largely estimates. It was believed that a more accu-

rate and reliable sex and age distribution could be secured by taking as a basis of estimate the actual numbers employed on a single day.

**Prevailing hours of labor.**—The census made no attempt to ascertain the number of employees working a given number of hours per week. The inquiry called merely for the prevailing practice followed in each establishment. Occasional variations in hours in an establishment from one period to another are disregarded, and no attention is given to the fact that a limited number of employees may have hours differing from those of the majority. In the table all the wage earners of each establishment are counted in the class within which the establishment itself falls. In most establishments, however, all or practically all the employees work the same number of hours, so that these figures give a substantially correct picture of the hours of labor in manufacturing industries.

**Capital.**—For reasons stated in prior census reports, the statistics of capital secured by the census canvass are so defective as to be without value, except as indicating very general conditions. The instructions on the schedule for securing capital were as follows:

The answer should show the total amount of capital, both owned and borrowed, on the last day of the business year reported. All the items of fixed and live capital may be taken at the amounts carried on the books. If land or buildings are rented, that fact should be stated and no value given. If a part of the land or buildings is owned, the remainder being rented, that fact should be so stated and only the value of the owned property given. Do not include securities and loans representing investments in other enterprises.

**Materials.**—Cost of materials refers to the materials used during the year, which may be more or less than the materials purchased during the year. The term materials includes fuel, rent of power and heat, mill supplies, and containers, as well as materials forming a constituent part of the product. Fuel includes all fuel used, whether for heat, light, or power, or for the process of manufacture.

**Expenses.**—Under "Expenses" are included all items of expense incident to the year's business, except interest, whether on bonds or other forms of indebtedness, dividends on stock, and allowances for depreciation.

**Value of products.**—The value of products for any industry includes the total value of all products manufactured in establishments whose products of chief value fall under the industry designation. The amounts given represent the selling value at the factory of all products manufactured during the year, which may differ from the value of the products sold. Amounts received for work on materials furnished by others are included.

**Value added by manufacture.**—The value of products is not a satisfactory measure of either the absolute or the relative importance of a given industry, because only a part of this value is actually created by the manufacturing process carried on in the industry itself. Another part of it, and often by far the larger part, represents the value of the materials used, which have been produced by agriculture or mining or by other industrial establishments. For many purposes, therefore, the best measure of the importance of different classes of industry is the value created as the result of the manufacturing operations carried on within the industry. This value is obtained by deducting the cost of the materials consumed from the value of the product. The figure thus obtained is termed in the census reports "value added by manufacture."

There is a further statistical advantage which "value added" has over gross value of products. In combining the value of products for all industries the value of products produced by one establishment and used as materials in another is duplicated, and the total, therefore, gives a greatly exaggerated idea of the wealth created. No such duplication takes place in the total "value added by manufacture."

**Cost of manufacture and profits.**—Census data do not show the entire cost of manufacture, and consequently can not be used to show profits. No account has been taken of interest and depreciation. Even if the amount of profit could be determined by deducting the expenses from the value of the products the rate of

profit on the investment could not properly be calculated, because of the very defective character of the returns regarding capital.

**Primary power.**—The figures given for this item show the total of the primary power used by the establishments. They do not cover the power developed by motors operated by such power, the inclusion of which would evidently result in duplication.

**Location of establishments.**—The Census Bureau has classified establishments by their location in cities or classes of cities. In interpreting these figures due consideration should be given to the fact that often establishments are located just outside the boundaries of cities, and are necessarily so classified, though locally they

are looked upon as constituting a part of the manufacturing interests of the cities.

**Laundries.**—The census of 1909 was the first to include statistics of laundries. The reports are confined to establishments using mechanical power. The data are presented separately and are not included in the general total for manufacturing industries, in order to avoid interference with comparisons with prior censuses.

**Custom grist and saw mills.**—In order to make the statistics for 1909 comparable with those for 1904 the data for these mills have been excluded from all the tables presenting general statistics, and are given in a separate table at the end of this report.

**INDUSTRIES IN GENERAL.**

**General character of the state.**—New Hampshire has a land area of 9,031 square miles. The state had a population in 1910 of 430,572; in 1900 its population was 411,588, and in 1890, 376,530. The density of population for the entire state was, in 1910, 47.7 per square mile, the corresponding figure for 1900 being 45.6. It ranked thirty-ninth among the 49 states and territories of continental United States as regards population in 1910 and thirty-seventh in 1900. In 1899 it ranked twenty-third in respect to value of manufactures, and in 1909, twenty-eighth.

Manchester, with a population of 70,063, is the only city in the state having a population of over 50,000. There are, however, seven other cities having a population of over 10,000. These eight cities, Berlin, Concord, Dover, Keene, Laconia, Manchester, Nashua, and Portsmouth, contain 40.4 per cent of the total population of the state and are credited with 56.5 per cent of the total value of its manufactures.

The greater number of the manufacturing establishments are located in the southern part of the

state. This section possesses marked advantages for manufacturing, among which are an abundance of water power afforded by the Merrimac River, close proximity to the markets and business centers of New England, and excellent transportation facilities.

**Importance and growth of manufactures.**—In 1849 the total value of the manufactures of the state, including the products of the neighborhood and hand industries, amounted to only \$23,165,000, while in 1909, exclusive of the value of the products of the neighborhood and hand industries, it reached \$164,581,000, representing an increase of over sixfold in 60 years. This increase is the more remarkable considering that during the same period the population of the state increased only 35.4 per cent.

The following table gives the most important figures relative to all classes of manufactures combined as returned at the censuses of 1909, 1904, and 1899, together with the percentages of increase from census to census:

|  | NUMBER OR AMOUNT. |               |                  | PER CENT OF INCREASE. <sup>1</sup> |                  |
|--|-------------------|---------------|------------------|------------------------------------|------------------|
|  | 1909              | 1904          | 1899             | 1904-1909                          | 1899-1904        |
| Number of establishments.....  | 1,961             | 1,618         | 1,771            | 21.2                               | -8.6             |
| Persons engaged in manufactures.....                                       | 84,191            | 69,758        | ( <sup>2</sup> ) | 20.7                               | ( <sup>2</sup> ) |
| Proprietors and firm members.....  | 2,014             | 1,726         | ( <sup>2</sup> ) | 16.7                               | ( <sup>2</sup> ) |
| Salaried employees.....  | 3,519             | 2,666         | 2,068            | 32.0                               | 28.9             |
| Wage earners (average number).....   | 78,658            | 65,366        | 67,646           | 20.3                               | -3.4             |
| Primary horsepower.....  | 293,991           | 218,344       | 200,975          | 34.6                               | 8.6              |
| Capital.....   | \$139,990,000     | \$109,495,000 | \$92,146,000     | 27.8                               | 18.8             |
| Expenses.....  | 149,215,000       | 112,888,000   | 94,365,000       | 32.2                               | 19.6             |
| Services.....  | 40,391,000        | 30,665,000    | 28,050,000       | 31.7                               | 9.3              |
| Salaries.....  | 4,191,000         | 2,972,000     | 2,200,000        | 41.0                               | 35.1             |
| Wages.....   | 36,200,000        | 27,693,000    | 25,850,000       | 30.7                               | 7.1              |
| Materials.....   | 98,157,000        | 73,216,000    | 60,163,000       | 34.1                               | 21.7             |
| Miscellaneous.....   | 10,667,000        | 9,007,000     | 6,152,000        | 18.4                               | 46.4             |
| Value of products.....   | 164,581,000       | 123,611,000   | 107,591,000      | 33.1                               | 14.9             |
| Value added by manufacture (value of products less cost of materials)..... | 66,424,000        | 50,395,000    | 47,428,000       | 31.8                               | 6.3              |

<sup>1</sup> A minus sign (-) denotes decrease.

<sup>2</sup> Figures not available.

In 1909 the state of New Hampshire had 1,961 manufacturing establishments operating under the factory system, which gave employment to an average of 84,191 persons during the year and paid out \$40,391,000 in salaries and wages. Of the persons employed, 78,658 were wage earners. These establishments turned out products to the value of \$164,581,000, to produce which materials costing

\$98,157,000 were consumed. The value added by manufacture was thus \$66,424,000, which figure, as explained in the Introduction, best represents the net wealth created by manufacturing operations during the year.

In general, this table brings out the fact that the manufacturing industries of New Hampshire showed a decrease during the five-year period 1899-1904 in

## STATISTICS OF MANUFACTURES—NEW HAMPSHIRE.

the number of establishments and average number of wage earners, but an increase in the amount paid in wages, the value of products, and every other item. On the other hand, for the more recent period 1904-1909, a very considerable increase is shown in every item. During the 10-year period 1899-1909 there was a net increase of 10.7 per cent in the number of establishments and 16.3 per cent in the average number of wage earners, while the value of products increased 53 per cent and the value added by manufacture 40.1 per cent. As pointed out in the Introduction, it would be improper to infer that manufactures increased

in volume to the full extent indicated by these figures regarding values, since the increase shown is certainly due, in part, to the increase that has taken place in the price of commodities.

It is a matter of interest to note that the percentages of increase shown for wages, value of products, and value added by manufacture are much larger than those for the number of establishments and average number of wage earners.

The relative importance and growth of the leading manufacturing industries of the state are shown in the following table:

| INDUSTRY.   | Number of establishments. | WAGE EARNERS.   |                       | VALUE OF PRODUCTS.   |                       | VALUE ADDED BY MANUFACTURE. |                       | PER CENT OF INCREASE. <sup>1</sup> |             |                             |            |
|---|---------------------------|-----------------|-----------------------|----------------------|-----------------------|-----------------------------|-----------------------|------------------------------------|-------------|-----------------------------|------------|
|   |                           | Average number. | Percent distribution. | Amount.              | Percent distribution. | Amount.                     | Percent distribution. | Value of products.                 |             | Value added by manufacture. |            |
|   |                           |                 |                       |                      |                       |                             |                       | 1904-1909                          | 1899-1904   | 1904-1909                   | 1899-1904  |
| <b>All industries</b> .....                                     | <b>1,961</b>              | <b>78,658</b>   | <b>100.0</b>          | <b>\$164,581,000</b> | <b>100.0</b>          | <b>\$66,424,000</b>         | <b>100.0</b>          | <b>33.1</b>                        | <b>14.9</b> | <b>31.3</b>                 | <b>6.3</b> |
| Boots and shoes, including cut stock and findings.....          | 68                        | 14,211          | 18.1                  | 39,440,000           | 24.0                  | 11,225,000                  | 16.9                  | 72.7                               | -3.9        | 58.4                        | 0.5        |
| Cotton goods, including cotton small wares.....                 | 21                        | 22,290          | 28.3                  | 33,602,000           | 20.4                  | 14,478,000                  | 21.8                  | 13.7                               | 23.4        | 31.1                        | 0.1        |
| Woolen, worsted, and felt goods, and wool hats.....             | 39                        | 9,486           | 12.1                  | 16,731,000           | 10.2                  | 6,636,000                   | 8.5                   | 17.1                               | .....       | 17.3                        | .....      |
| Lumber and timber products.....                                 | 589                       | 8,464           | 10.8                  | 15,284,000           | 9.3                   | 8,021,000                   | 12.1                  | 32.1                               | -0.2        | 27.9                        | -6.9       |
| Paper and wood pulp.....  | 34                        | 3,413           | 4.3                   | 13,994,000           | 8.5                   | 4,741,000                   | 7.1                   | 56.7                               | 23.3        | 31.6                        | 9.1        |
| Foundry and machine-shop products.....                          | 81                        | 2,396           | 3.0                   | 4,947,000            | 3.0                   | 3,248,000                   | 4.9                   | 52.5                               | -6.5        | 56.8                        | 0.7        |
| Hosiery and knit goods.....                                     | 21                        | 3,129           | 4.0                   | 4,764,000            | 2.9                   | 2,128,000                   | 3.2                   | 19.9                               | .....       | 21.9                        | .....      |
| Flour-mill and gristmill products.....                          | 105                       | 116             | 0.2                   | 3,187,000            | 1.9                   | 378,000                     | 0.6                   | 25.4                               | 15.3        | 94.8                        | -28.9      |
| Marble and stone work.....                                      | 99                        | 1,527           | 1.9                   | 1,818,000            | 1.1                   | 1,520,000                   | 2.3                   | 50.9                               | 11.6        | 64.5                        | 16.7       |
| Bread and other bakery products.....                            | 157                       | 454             | 0.6                   | 1,683,000            | 1.0                   | 628,000                     | 0.9                   | 56.6                               | 23.9        | 48.5                        | 10.2       |
| Liquors, malt.....  | 4                         | 272             | 0.3                   | 1,644,000            | 1.0                   | 1,099,000                   | 1.7                   | -27.1                              | 15.3        | -30.5                       | 16.6       |
| Furniture and refrigerators.....                                | 26                        | 823             | 1.0                   | 1,544,000            | 0.9                   | 848,000                     | 1.3                   | .....                              | .....       | .....                       | .....      |
| Tobacco manufactures.....                                       | 51                        | 571             | 0.7                   | 1,250,000            | 0.8                   | 574,000                     | 0.9                   | 110.3                              | 3.6         | 85.8                        | 12.8       |
| Printing and publishing.....                                    | 143                       | 677             | 0.9                   | 1,131,000            | 0.7                   | 872,000                     | 1.3                   | 16.7                               | 6.2         | 16.0                        | 8.0        |
| Copperage and wooden goods, not elsewhere specified.....        | 30                        | 713             | 0.9                   | 948,000              | 0.6                   | 499,000                     | 0.8                   | -4.0                               | 19.8        | -10.0                       | 17.4       |
| Butter, cheese, and condensed milk.....                         | 29                        | 50              | 0.1                   | 807,000              | 0.5                   | 98,000                      | 0.1                   | .....                              | .....       | .....                       | .....      |
| Clothing, men's, including shirts.....                          | 12                        | 471             | 0.6                   | 785,000              | 0.5                   | 323,000                     | 0.5                   | 79.2                               | 4.8         | 85.6                        | 5.5        |
| Carrriages and wagons and materials.....                        | 44                        | 420             | 0.5                   | 784,000              | 0.4                   | 388,000                     | 0.6                   | -6.4                               | -13.5       | -21.3                       | -11.5      |
| Leather goods.....  | 9                         | 300             | 0.4                   | 641,000              | 0.4                   | 351,000                     | 0.5                   | -1.8                               | .....       | 7.7                         | .....      |
| Gas, illuminating and heating.....                              | 14                        | 247             | 0.3                   | 581,000              | 0.4                   | 401,000                     | 0.6                   | 19.5                               | 36.5        | 26.1                        | 17.8       |
| Brick and tile.....   | 29                        | 395             | 0.5                   | 533,000              | 0.3                   | 377,000                     | 0.6                   | 0.8                                | -1.7        | -0.3                        | -3.3       |
| Clothing, women's.....  | 8                         | 241             | 0.3                   | 396,000              | 0.2                   | 141,000                     | 0.2                   | -34.2                              | 15.8        | -29.5                       | 2.6        |
| Electrical machinery, apparatus, and supplies.....              | 6                         | 193             | 0.2                   | 388,000              | 0.2                   | 233,000                     | 0.3                   | 158.7                              | -17.6       | 275.8                       | -33.0      |
| Cutlery and tools, not elsewhere specified.....                 | 12                        | 268             | 0.3                   | 328,000              | 0.2                   | 220,000                     | 0.3                   | -31.5                              | 10.9        | -25.4                       | 2.7        |
| Needles, pins, and hooks and eyes.....                          | 7                         | 438             | 0.6                   | 275,000              | 0.2                   | 237,000                     | 0.4                   | 32.2                               | -20.6       | 29.5                        | -21.8      |
| Boxes, fancy and paper.....                                     | 12                        | 168             | 0.2                   | 273,000              | 0.2                   | 135,000                     | 0.2                   | 11.9                               | -6.9        | 7.1                         | 1.6        |
| Patent medicines and compounds and druggists' preparations..... | 22                        | 29              | ( <sup>2</sup> )      | 224,000              | 0.1                   | 145,000                     | 0.2                   | .....                              | .....       | .....                       | .....      |
| Slaughtering and meat packing.....                              | 8                         | 24              | ( <sup>2</sup> )      | 199,000              | 0.1                   | 34,000                      | 0.1                   | 423.7                              | .....       | 183.3                       | .....      |
| Brass and bronze products.....                                  | 5                         | 56              | 0.1                   | 102,000              | 0.1                   | 57,000                      | 0.1                   | -36.6                              | 103.8       | -37.4                       | 85.7       |
| All other industries.....                                       | 276                       | 6,816           | 8.7                   | 16,348,000           | 9.9                   | 7,380,000                   | 11.1                  | .....                              | .....       | .....                       | .....      |

<sup>1</sup> Per cent of increase is based on figures in Table I, and a minus sign (-) denotes decrease.

<sup>2</sup> Less than one-tenth of 1 per cent.

It should be borne in mind, in considering this table, that the value of products in some of the industries involves a certain amount of duplication due to the use of the product of one establishment in the industry as material for another establishment.

The most important industries listed in this table, in which they are arranged in the order of the value of products, call for brief consideration.

*Boots and shoes, including cut stock and findings.*—The statistics for this industry indicate not only that it has recovered from its temporary depression in 1904 and again assumed first rank in value of products among the industries of the state, but that it has experienced an exceptionally large growth.

*Textiles.*—The combined value of the textile manufactures of the state, including cotton goods, woolen and worsted goods, and hosiery and knit goods,

amounted to \$55,097,000, or 33.5 per cent of the total value of the manufactures of the state. There was one establishment reported for the silk industry, engaged in throwing raw silk into organzine and tram, but the statistics are omitted since they can not be shown without disclosing the operations of individual establishments. The manufacture of cotton goods was by far the most important branch of the textile industries, and was second in importance among the individual industries of the state.

Comparative figures for the period 1899-1904 are not available for the woolen and worsted goods industry, as the figures for two large mills that were classified as worsted mills in 1899 can not be included without disclosing individual operations. This industry shows an increase in the value of products for the period 1904-1909, notwithstanding the fact that

fewer establishments were reported in 1909 than in 1904. This increase is due not only to the greater production, but also to the general rise of prices and the better grade of goods turned out.

The manufacture of hosiery and knit goods also forms an important branch of the textile industry of New Hampshire. As was the case with cotton manufactures, this industry shows a lower rate of increase in value of products during the period 1904-1909 than during the period 1899-1904.

*Lumber and timber products.*—This industry, which is among the oldest manufacturing industries of the state, continues to be an important one and shows a marked growth from 1904 to 1909. It not only embraces establishments engaged in logging, but also saw-mills and planing mills and establishments engaged in the manufacture of wooden packing boxes. The principal species of native wood used are spruce and white pine. In the production of spruce the state ranks second only to Maine among the states of the Union. While the original forests of white pine in New Hampshire are practically exhausted and the mills are now using the second growth, the state ranked fifth among the 28 states producing this wood in 1909.

*Paper and wood pulp.*—The establishments which produce pulp as a final product, as well as those which manufacture paper or pulp and paper, are included under this classification. This industry has grown steadily in the state with the more extensive use of wood pulp and wood fiber as materials in the manufacture of paper, the total value of products in 1909 being \$13,994,000, as compared with \$1,282,000 in 1889. The abundance of spruce, a variety of wood especially suitable for wood pulp, and the large amount of water power available in the state have contributed to this rapid development.

Measured by value added by manufacture, the rank of the leading industries is somewhat changed. Cotton goods becomes first in rank instead of boots and shoes, and lumber and timber products displaces woolen and worsted goods from the third place.

This table also shows the percentages of increase in value added by manufacture as well as in value of products for these leading industries where these statistics are comparable. The electrical machinery, apparatus, and supplies industry showed a greater rate of increase from 1904 to 1909 in value added by manufacture than any other of the specified industries, namely, 275.8 per cent. The slaughtering and meat-packing, tobacco manufactures, men's clothing, and the boot and shoe industries also showed remarkable increases both in gross value of products and in value added by manufacture.

There are some striking differences among the several specified industries in the rates of increase in value of products shown for the two periods, 1899 to 1904 and 1904 to 1909, respectively. Only one of the industries showing decreases from 1899 to 1904 showed a decrease also from 1904 to 1909, while of the eight industries

showing decreases from 1899 to 1904 five showed marked increases during the later period. Six industries showing increases during the earlier intercensal period show decreases from 1904 to 1909.

In addition to the industries presented separately in the preceding table there are 20 important industries each of which had a value of products in 1909 in excess of \$160,000. They are included under the head of "All other industries" in some cases, because if they were shown separately, the operations of individual establishments would be disclosed; in others, the returns do not properly present the true condition of the industry, as it is more or less interwoven with one or more other industries of similar character; and for others comparable statistics for the different census years can not be presented either because the data for prior censuses are not available or on account of changes in classification. These industries represent the manufacture of leather belting and hose; of buttons; the repair shops of steam railroads; the construction of steam-railroad cars, other than by railroad companies; the dyeing and finishing of textiles; the manufacture of fancy articles, not elsewhere specified; and of leather gloves and mittens; the rendering of grease and tallow; the manufacture of hones and whetstones; the tanning, currying, and finishing of leather; the construction of locomotives, other than by railroad companies; the manufacture of mineral and soda waters; of musical instruments; paper goods, not elsewhere specified; the silverware and plated-ware industry; the manufacture of sporting and athletic goods; the steam-packing industry; the manufacture of stoves and furnaces; of upholstering materials; and the turning and carving of wood.

*Persons engaged in manufacturing industries.*—The following table shows for 1909 the distribution of the number of persons engaged in manufactures, the average number of wage earners being distributed by sex and age. It should be borne in mind, however, that the sex and age classification of the average number of wage earners in this and other tables is an estimate obtained by the method described in the Introduction.

| CLASS.                                 | PERSONS ENGAGED IN MANUFACTURES. |        |         |
|--|----------------------------------|--------|---------|
|  | Total.                           | Male.  | Female. |
| All classes.....                       | 84,191                           | 58,924 | 25,267  |
| Proprietors and officials.....         | 3,270                            | 3,181  | 98      |
| Proprietors and firm members.....      | 2,014                            | 1,631  | 83      |
| Salaried officers of corporations..... | 371                              | 368    | 3       |
| Superintendents and managers.....      | 894                              | 882    | 12      |
| Clerks.....                            | 2,254                            | 1,441  | 813     |
| Wage earners (average number).....     | 78,658                           | 54,302 | 24,356  |
| 16 years of age and over.....          | 77,462                           | 53,574 | 23,888  |
| Under 16 years of age.....             | 1,196                            | 728    | 468     |

The average number of persons engaged in manufactures during 1909 was 84,191, of whom 78,658

were wage earners, about three-fifths of the remainder being proprietors and officials, and the rest clerks. Corresponding figures for individual industries will be found in Table II.

The following table shows for 1909 the percentage of proprietors and officials, clerks, and wage earners, respectively, among the total number of persons employed in manufactures. It covers all industries combined and 15 important industries individually.

| INDUSTRY.  | PERSONS ENGAGED IN MANUFACTURES. |                            |            |                                |
|--|----------------------------------|----------------------------|------------|--------------------------------|
|  | Total number.                    | Per cent of total.         |            |                                |
|  |                                  | Proprietors and officials. | Clerks.    | Wage earners (average number). |
| <b>All industries</b> .....                              | <b>84,191</b>                    | <b>3.9</b>                 | <b>2.7</b> | <b>93.4</b>                    |
| Boots and shoes, including cut stock and findings.....   | 15,113                           | 2.1                        | 3.0        | 94.0                           |
| Bread and other bakery products.....                     | 662                              | 27.8                       | 3.6        | 68.6                           |
| Cooperage and wooden goods, not elsewhere specified..... | 773                              | 6.5                        | 1.3        | 92.2                           |
| Cotton goods, including cotton small wares.....          | 22,504                           | 0.3                        | 0.7        | 99.0                           |
| Flour-mill and gristmill products.....                   | 288                              | 64.2                       | 5.6        | 40.3                           |
| Foundry and machine-shop products.....                   | 2,792                            | 0.1                        | 8.1        | 85.8                           |
| Furniture and refrigerators.....                         | 935                              | 5.7                        | 0.3        | 88.0                           |
| Hosiery and knit goods.....                              | 3,223                            | 2.0                        | 1.0        | 97.1                           |
| Liquors, malt.....                                       | 321                              | 4.0                        | 11.2       | 84.7                           |
| Lumber and timber products.....                          | 9,449                            | 8.8                        | 1.6        | 89.6                           |
| Marble and stone work.....                               | 1,718                            | 0.9                        | 1.2        | 88.9                           |
| Paper and wood pulp.....                                 | 3,668                            | 2.8                        | 4.2        | 93.0                           |
| Printing and publishing.....                             | 984                              | 18.3                       | 12.9       | 68.8                           |
| Tobacco manufactures.....                                | 640                              | 10.8                       | .....      | 80.2                           |
| Woolen, worsted, and felt goods, and wool hats.....      | 9,791                            | 1.3                        | 0.9        | 97.8                           |
| All other industries.....                                | 11,420                           | 6.5                        | 4.0        | 88.6                           |

Of the total number of persons engaged in all manufacturing industries, 3.9 per cent were proprietors and officials, 2.7 per cent clerks, and 93.4 per cent wage earners. In the flour-mill and gristmill industry the proportion of persons falling in the class of proprietors and officials is high owing to the fact that a majority of the establishments are small and the work is largely done by the proprietors or their immediate representatives. Similar conditions prevail to a lesser extent in the bakery and in the printing and publishing industries.

The following table shows, in percentages, for all industries combined, the distribution of the average number of wage earners, by age periods and sex, calculated in the manner described in the Introduction. It also shows, for some of the important industries separately, the percentage distribution by age periods and sex, of the wage earners as reported for December 15, 1909, or the nearest representative day. As a means of judging the importance of the several industries the average total number employed for the year is also given in each case.

For all industries combined, 68.1 per cent of the average number of wage earners were males 16 years of age and over; 30.4 per cent females 16 years of age and over; and 1.5 per cent persons under the age of 16. The larger part of the total number of female wage earners is made up of those employed in the textile and boot and shoe industries. In the cotton-goods industry nearly half of the employees are

women over 16 years of age; in the hosiery and knit-goods industry, two-thirds; and in the woolen and worsted industry, over two-fifths. In the boot and shoe industry nearly one-third of the employees are women over 16 years of age.

The textile and boot and shoe industries combined also include the larger part of the total number of wage earners under 16 years of age. There are, however, three other industries listed in the table in which the proportion of persons under 16 years to the total number employed is larger than in any branch of textiles or of the boot and shoe industries, namely, bakeries with 4 per cent, and the cooperage and furniture industries with 2.8 per cent each.

| INDUSTRY.  | WAGE EARNERS.                |                           |             |                        |
|--|------------------------------|---------------------------|-------------|------------------------|
|  | Average number. <sup>1</sup> | Per cent of total.        |             |                        |
|  |                              | 16 years of age and over. |             | Under 16 years of age. |
|  |                              | Male.                     | Female.     |                        |
| <b>All industries</b> .....                              | <b>78,658</b>                | <b>68.1</b>               | <b>30.4</b> | <b>1.5</b>             |
| Boots and shoes, including cut stock and findings.....   | 14,211                       | 66.3                      | 31.3        | 2.3                    |
| Bread and other bakery products.....                     | 454                          | 78.4                      | 17.6        | 4.2                    |
| Cooperage and wooden goods, not elsewhere specified..... | 713                          | 93.3                      | 3.0         | 2.8                    |
| Cotton goods, including cotton small wares.....          | 22,290                       | 49.7                      | 48.3        | 2.0                    |
| Flour-mill and gristmill products.....                   | 116                          | 100.0                     | .....       | .....                  |
| Foundry and machine-shop products.....                   | 2,396                        | 95.3                      | 4.3         | 0.2                    |
| Furniture and refrigerators.....                         | 823                          | 94.7                      | 2.0         | 2.8                    |
| Hosiery and knit goods.....                              | 3,129                        | 31.3                      | 66.7        | 1.2                    |
| Liquors, malt.....                                       | 272                          | 100.0                     | .....       | .....                  |
| Lumber and timber products.....                          | 8,464                        | 98.3                      | 1.2         | 0.5                    |
| Marble and stone work.....                               | 1,527                        | 89.9                      | .....       | 0.9                    |
| Paper and wood pulp.....                                 | 3,413                        | 96.2                      | 3.8         | .....                  |
| Printing and publishing.....                             | 677                          | 68.4                      | 29.5        | 1.2                    |
| Tobacco manufactures.....                                | 571                          | 72.9                      | 26.3        | 0.9                    |
| Woolen, worsted, and felt goods, and wool hats.....      | 9,486                        | 54.3                      | 42.2        | 1.8                    |
| All other industries.....                                | 10,116                       | 81.9                      | 17.4        | 0.2                    |

<sup>1</sup> For method of estimating the distribution, by sex and age periods, of the average number in all industries combined, see Introduction.

In order to compare the distribution of the persons engaged in manufactures in 1909 with that shown at the census of 1904 it is necessary to use the classification employed at the earlier census. (See Introduction.) The following table makes this comparison according to occupational status:

| CLASS.                             | PERSONS ENGAGED IN MANUFACTURES. |                        |               |                        | Per cent of increase, 1904-1909. |
|------------------------------------|----------------------------------|------------------------|---------------|------------------------|----------------------------------|
|                                    | 1909                             |                        | 1904          |                        |                                  |
|                                    | Number.                          | Per cent distribution. | Number.       | Per cent distribution. |                                  |
| <b>Total</b> .....                 | <b>84,191</b>                    | <b>100.0</b>           | <b>69,758</b> | <b>100.0</b>           | <b>20.7</b>                      |
| Proprietors and firm members.....  | 2,014                            | 2.4                    | 1,726         | 2.5                    | 0.2                              |
| Salaries employees.....            | 3,519                            | 4.2                    | 2,666         | 3.8                    | 32.5                             |
| Wage earners (average number)..... | 78,658                           | 93.4                   | 65,366        | 93.7                   | 20.0                             |

Comparable figures are not obtainable for 1899. The table shows a greater percentage of increase in the salaried employees than in the other two classes.

The next table shows the average number of wage earners distributed according to age periods, and in the case of those 16 years of age and over according to sex, for 1909, 1904, and 1899. The averages for

1909 are estimated on the basis of the actual number reported for a single representative day. (See Introduction.)

| CLASS.                     | AVERAGE NUMBER OF WAGE EARNERS. |                        |               |                        |               |                        |
|----------------------------|---------------------------------|------------------------|---------------|------------------------|---------------|------------------------|
|                            | 1909                            |                        | 1904          |                        | 1899          |                        |
|                            | Number.                         | Per cent distribution. | Number.       | Per cent distribution. | Number.       | Per cent distribution. |
| <b>Total</b> .....         | <b>78,658</b>                   | <b>100.0</b>           | <b>65,366</b> | <b>100.0</b>           | <b>67,646</b> | <b>100.0</b>           |
| 16 years of age and over.. | 77,462                          | 98.5                   | 64,399        | 98.5                   | 66,007        | 97.6                   |
| Male.....                  | 53,574                          | 68.1                   | 44,483        | 68.1                   | 45,413        | 67.1                   |
| Female.....                | 23,888                          | 30.4                   | 19,916        | 30.5                   | 20,594        | 30.4                   |
| Under 16 years of age....  | 1,196                           | 1.5                    | 967           | 1.5                    | 1,639         | 2.4                    |

This table indicates that for all industries combined there was a decrease during the five-year period 1899-1904 in the employment of children under 16 years of age. During the more recent period 1904-1909

there was an increase in the number of children employed, although the proportion which they represent of the total has remained the same. There has not been much change in the proportions of male and female wage earners. In 1909 and 1904 males 16 years of age and over formed 68.1 per cent of all wage earners, as compared with 67.1 per cent in 1899.

**Wage earners employed by months.**—The following table gives the number of wage earners employed on the 15th of each month during the year 1909, for all industries combined, for the lumber industry, and for all other industries combined; it gives also the percentage which the number reported for each month is of the greatest number reported for any month. In Table II, page 20, is shown for practically all of the important industries in the state the largest number and also the smallest number of wage earners reported for any month. The figures are for the 15th day, or the nearest representative day, of the month.

| MONTH.         | NUMBER OF WAGE EARNERS. |                      |                             |                      |           |                      |                        |                      |                       |                      |
|----------------|-------------------------|----------------------|-----------------------------|----------------------|-----------|----------------------|------------------------|----------------------|-----------------------|----------------------|
|                | All industries.         |                      | Lumber and timber products. |                      |           |                      |                        |                      | All other industries. |                      |
|                | Number.                 | Per cent of maximum. | Total.                      |                      | In mills. |                      | In logging operations. |                      | Number.               | Per cent of maximum. |
|                |                         |                      | Number.                     | Per cent of maximum. | Number.   | Per cent of maximum. | Number.                | Per cent of maximum. |                       |                      |
| January.....   | 78,438                  | 96.0                 | 10,428                      | 97.0                 | 5,603     | 91.2                 | 4,825                  | 98.8                 | 68,010                | 94.7                 |
| February.....  | 79,097                  | 97.7                 | 10,651                      | 100.0                | 5,765     | 93.8                 | 4,886                  | 100.0                | 68,446                | 95.3                 |
| March.....     | 79,510                  | 98.2                 | 10,570                      | 99.2                 | 6,119     | 96.6                 | 4,451                  | 91.1                 | 68,949                | 96.0                 |
| April.....     | 77,697                  | 96.0                 | 7,972                       | 74.8                 | 6,145     | 100.0                | 1,827                  | 37.4                 | 69,725                | 97.1                 |
| May.....       | 78,132                  | 96.5                 | 7,694                       | 72.2                 | 6,081     | 90.0                 | 1,613                  | 33.0                 | 70,438                | 98.1                 |
| June.....      | 78,021                  | 96.4                 | 7,113                       | 66.8                 | 5,887     | 90.0                 | 1,226                  | 31.2                 | 70,008                | 98.7                 |
| July.....      | 76,324                  | 94.3                 | 6,213                       | 58.3                 | 5,053     | 82.2                 | 1,160                  | 23.7                 | 70,111                | 97.6                 |
| August.....    | 76,975                  | 95.1                 | 6,164                       | 57.9                 | 4,800     | 70.1                 | 1,364                  | 26.7                 | 70,811                | 98.6                 |
| September..... | 77,850                  | 96.2                 | 7,161                       | 67.2                 | 5,350     | 87.1                 | 1,811                  | 37.1                 | 70,680                | 98.4                 |
| October.....   | 80,108                  | 96.0                 | 8,280                       | 77.7                 | 5,609     | 91.3                 | 2,671                  | 54.7                 | 71,828                | 100.0                |
| November.....  | 80,797                  | 99.8                 | 8,074                       | 84.2                 | 5,690     | 92.6                 | 3,284                  | 67.2                 | 71,823                | 99.9                 |
| December.....  | 80,936                  | 100.0                | 10,340                      | 97.1                 | 6,076     | 98.9                 | 4,270                  | 87.4                 | 70,590                | 98.3                 |

The lumber industry, which is a seasonal industry giving employment to a much larger number of persons from December to March than during the other months of the year, influences considerably the total for all industries combined. The number of wage earners employed in the industry varied during the different months from 10,651 in February to 6,164 in August. Employment for those engaged in the mills is, however, much steadier than for those engaged in logging operations, or the total would be affected to a much greater extent. In the logging operations only 23.7 per cent of the greatest number of wage earners employed during any one month were employed in July, while the number employed in the mills in the same month represented 82.2 per cent of the maximum for this branch of the industry. The totals for all other industries are a fair index of the conditions of employment in the manufactures of the state, January being the month of least activity, and October and November those of greatest activity. In the two most important industries of the state, the textile and the boot and shoe industries, employment is fairly steady throughout the year.

**Prevailing hours of labor.**—In the next table wage earners have been classified according to the hours of labor prevailing in the establishments in which they are employed. In making this classification the average number of wage earners employed during the year is used, and the number employed in each establishment is classified as a total, according to the hours prevailing in that establishment, even though some few employees work a greater or less number of hours. In the case of the lumber industry, in particular, this average is considerably less than the number employed in the busy season.

It is evident from the figures that for the great majority of the wage earners employed in the manufacturing industries of New Hampshire the prevailing hours of labor range from 54 to 60 per week, or from 9 to 10 hours a day, only 7 per cent of the total being employed in establishments operating less than 9 hours a day, and only 1.5 per cent being employed in establishments operating more than 10 hours a day. Of those employed in establishments where from 54 to 60 hours per week prevail, 48.5 per cent were in establishments engaged in the manufacture of textiles. Prac-



tically all of the establishments in these industries operated "between 54 and 60 hours a week." There is a provision in the labor laws of the state limiting the hours of labor for women and children to 58 hours per week.

It will be noted that the prevailing hours are shortest in the establishments engaged in marble and stone work, the majority of the wage earners in such estab-

lishments working 48 hours or less a week. In the paper and wood-pulp industry there is a wide variation in the number of hours of labor. While 37.6 per cent of the wage earners worked 48 hours or less a week, 15.4 per cent worked more than 60 hours per week. Of the total number of wage earners employed in establishments where the prevailing hours were more than 60 a week, over two-fifths are found in this industry.

| INDUSTRY.  | AVERAGE NUMBER OF WAGE EARNERS IN ESTABLISHMENTS GROUPED ACCORDING TO PREVAILING HOURS OF WORK PER WEEK. |               |                    |       |                    |        |                    |     |          |
|--|--|---------------|--------------------|-------|--------------------|--------|--------------------|-----|----------|
|  | Total.   | 48 and under. | Between 48 and 54. | 54.   | Between 54 and 60. | 60.    | Between 60 and 72. | 72. | Over 72. |
| All industries.....                                      | 78,658   | 3,516         | 1,991              | 3,936 | 57,935             | 10,087 | 847                | 276 | 79       |
| Boots and shoes, including out stock and findings.....   | 14,211   |               | 12                 | 130   | 12,459             | 1,604  |                    |     |          |
| Boxes, fancy and paper.....                              | 168  | 4             |                    | 19    | 145                |        |                    |     |          |
| Brass and bronze products.....                           | 56   |               | 3                  |       | 19                 | 34     |                    |     |          |
| Bread and other bakery products.....                     | 454  | 25            | 5                  | 99    | 31                 | 259    | 22                 | 8   | 5        |
| Brick and tile.....                                      | 395  |               |                    |       | 108                | 194    | 93                 |     |          |
| Butter, cheese, and condensed milk.....                  | 50   | 3             | 4                  | 8     | 8                  | 1      | 26                 |     |          |
| Carriages and wagons and materials.....                  | 420  |               | 127                | 70    | 120                | 103    |                    |     |          |
| Clothing, men's, including shirts.....                   | 471  | 251           | 34                 | 69    | 106                | 11     |                    |     |          |
| Clothing, women's.....                                   | 241  |               |                    | 12    | 229                |        |                    |     |          |
| Cooperage and wooden goods, not elsewhere specified..... | 713  |               |                    | 1     | 342                | 370    |                    |     |          |
| Cotton goods, including cotton small wares.....          | 22,290   |               |                    |       | 22,290             |        |                    |     |          |
| Cutlery and tools, not elsewhere specified.....          | 268  | 2             |                    | 182   | 82                 | 2      |                    |     |          |
| Electrical machinery, apparatus, and supplies.....       | 193  |               |                    |       | 133                | 60     |                    |     |          |
| Flour-mill and gristmill products.....                   | 116  | 11            | 1                  |       | 5                  | 98     | 1                  |     |          |
| Foundry and machine-shop products.....                   | 2,396  | 27            | 21                 | 905   | 984                | 399    |                    |     |          |
| Furniture and refrigerators.....                         | 823  |               |                    |       | 428                | 395    |                    |     |          |
| Gas, illuminating and heating.....                       | 247  | 6             |                    |       | 16                 | 20     | 160                |     |          |
| Hosiery and knit goods.....                              | 3,129  |               |                    | 6     | 3,123              |        |                    |     |          |
| Leather goods.....                                       | 300  |               |                    | 67    | 55                 | 178    |                    |     |          |
| Liquors, malt.....                                       | 272  |               |                    | 272   |                    |        |                    |     |          |
| Lumber and timber products.....                          | 8,464  | 45            | 44                 | 926   | 3,058              | 4,114  | 271                | 6   |          |
| Marble and stone work.....                               | 1,527  | 1,474         |                    | 46    | 4                  | 3      |                    |     |          |
| Needles, pins, and hooks and eyes.....                   | 438  |               |                    |       | 438                |        |                    |     |          |
| Paper and wood pulp.....                                 | 3,413  | 1,282         | 508                |       | 446                | 651    | 244                | 262 |          |
| Printing and publishing.....                             | 677  | 180           | 76                 | 132   | 205                | 84     |                    |     |          |
| Tobacco manufactures.....                                | 571  | 115           |                    | 453   |                    | 3      |                    |     |          |
| Woolen, worsted, and felt goods, and wool hats.....      | 9,486  |               |                    |       | 8,889              | 597    |                    |     |          |
| All other industries.....                                | 6,869  | 91            | 1,156              | 473   | 4,212              | 907    | 30                 |     |          |

Location of establishments.—The next table shows to what extent manufacturing in the state is centralized in cities having a population of 10,000 and over. (See Introduction.) The statistics for 1904 are omitted from this table, because there was no census of population for that year, and it was impossible to determine the cities that come within the group having over 10,000 inhabitants.

| ITEM.                               | Year. | Total.        | LOCATION OF ESTABLISHMENTS.                   |                    | PER CENT OF TOTAL.                            |                    |
|-------------------------------------|-------|---------------|---|--------------------|---|--------------------|
|                                     |       |               | In cities with population of 10,000 and over. | Outside districts. | In cities with population of 10,000 and over. | Outside districts. |
| Population.....                     | 1910  | 430,572       | 174,112                                       | 256,460            | 40.4  | 59.6               |
|                                     | 1900  | 411,588       | 124,361                                       | 287,227            | 30.2  | 69.8               |
| Number of establishments.....       | 1909  | 1,961         | 604   | 1,357              | 30.8  | 69.2               |
|                                     | 1899  | 1,771         | 402   | 1,369              | 22.7  | 77.3               |
| Average number of wage earners..... | 1909  | 78,658        | 44,467  | 34,191             | 56.5  | 43.5               |
|                                     | 1899  | 67,646        | 30,191  | 37,455             | 44.6  | 55.4               |
| Value of products.....              | 1909  | \$164,681,019 | \$93,054,154                                  | \$71,526,865       | 56.5  | 43.5               |
|                                     | 1899  | 107,990,303   | 48,336,336                                    | 59,653,967         | 44.9  | 55.1               |
| Value added by manufacture.....     | 1909  | 66,424,003    | 36,531,230                                    | 29,892,773         | 55.0  | 45.0               |
|                                     | 1899  | 47,427,423    | 21,171,813                                    | 26,255,610         | 44.6  | 55.4               |

While it may be noted that by far the greater number of the manufacturing establishments of the state are outside of the cities of over 10,000 inhabitants, the average size of the establishments located in cities having a population of 10,000 and over was larger. Furthermore, 56.5 per cent of the total value of products was reported from these cities in 1909 and the same proportion of the average number of wage earners were employed there.

The figures indicate that considerable change took place in the relative importance of the two groups during the period from 1899 to 1909, as there was a marked increase in 1909 in the proportion for cities having a population of 10,000 inhabitants and over and a corresponding decrease in the proportion for the districts outside. This is due in part to the fact that three cities, Berlin, Keene, and Laconia, which had less than 10,000 inhabitants in 1900 passed into the class of cities of 10,000 and over in 1910.

The relative importance of each of the eight cities having a population of 10,000 or over in 1910 is shown in the table following, in which the value of products and average number of wage earners are shown separately for 1909, 1904, and 1899.



| CITY.                      | AVERAGE NUMBER OF WAGE EARNERS. |        |        | VALUE OF PRODUCTS. |              |              |
|----------------------------|---------------------------------|--------|--------|--------------------|--------------|--------------|
|                            | 1909                            | 1904   | 1899   | 1909               | 1904         | 1899         |
| Manchester.....            | 24,735                          | 17,579 | 17,862 | \$46,811,910       | \$30,606,926 | \$24,628,345 |
| Nashua.....                | 7,312                           | 6,150  | 5,777  | 17,326,134         | 12,858,382   | 10,006,064   |
| Concord <sup>1</sup> ..... | 2,603                           | 2,054  | 2,432  | 6,476,477          | 5,373,624    | 4,219,522    |
| Dover.....                 | 3,030                           | 2,850  | 2,797  | 6,370,110          | 6,042,001    | 5,440,353    |
| Berlin.....                | 1,790                           | (?)    | (?)    | 5,890,595          | (?)          | (?)          |
| Laconia.....               | 2,146                           | (?)    | (?)    | 3,818,440          | (?)          | (?)          |
| Keene.....                 | 1,709                           | (?)    | (?)    | 3,483,291          | (?)          | (?)          |
| Portsmouth.....            | 992                             | 638    | 1,323  | 2,871,188          | 2,602,056    | 3,061,052    |

<sup>1</sup> Figures do not agree with those published in 1904, because it was necessary to revise the totals in order to include data only for those establishments located within the corporate limits of the city.

<sup>2</sup> Population less than 10,000 in 1900.

Every city shows an increase in value of products from 1904 to 1909, and all but Portsmouth an increase from 1899 to 1904. The large decrease in Portsmouth during the earlier five-year period was due primarily to a reduction in the output of the boot and shoe industry.

Manchester is the only city having a population of 50,000 and over and the only one, therefore, for which separate statistics are given for individual industries. (See Table I). In 1909, 28.4 per cent of the total value of products of the state was reported from this one city and 31.4 per cent of the average number of wage earners were employed there. It ranked first among the cities of the state in the production of boots and shoes, the value of the boots and shoes manufactured in Manchester representing 44.7 per cent of the total value of products for this industry in the state as a whole. Cotton manufacturing was the next most important industry in the city, but statistics for its two large cotton mills can not be shown without disclosing individual operations. A large increase in the value of products is shown for the industries of the city as a whole for each of the two intercensal periods. The average number of wage earners employed remained practically stationary from 1899 to 1904, but increased decidedly from 1904 to 1909.

Nashua ranked second as a manufacturing city in 1909. The number of wage earners and the value of products increased 18.7 per cent and 34.7 per cent, respectively, from 1904 to 1909, as compared with increases of 6.6 per cent and 27.4 per cent, respectively, from 1899 to 1904. Its products of chief importance also were boots and shoes and cotton goods, although the total value reported for these products was in no way comparable with the corresponding figures for Manchester. The foundries and machine shops of Nashua were also important.

Concord held third place among the municipalities of the state in 1909, having displaced Dover from this position since 1904. The most important manufacturing industries of Concord are the making of leather belting and hose, car repair shops, and marble and stone works; those of Dover are the manufacture of cotton goods, the tanning and currying of leather, and the dyeing and finishing of textiles. Just outside of

Concord, but not included in the data for the city, is one of the largest flour and grist mills in the state.

The cities of Berlin, Laconia, Keene, and Portsmouth rank in value of products in the order named. No comparison of value of products or average number of wage earners can be made for Berlin, Laconia, or Keene, as these cities had a population of less than 10,000 in 1900, and separate statistics are not available. Portsmouth showed an increase in value of products and average number of wage earners from 1904 to 1909 but a decrease for the earlier period 1899-1904. Outside of the manufacture of paper and wood pulp and the lumber industry there are no manufactures of importance in Berlin. For Keene a large variety of small industries are reported with products whose value varies from less than \$5,000 to over \$300,000, but the city has no really important industries. On the other hand, Laconia and Portsmouth, like Berlin, each owes its industrial importance to one or two industries, Laconia to the manufacture of hosiery and knit goods and to its railroad-repair shop, and Portsmouth to its large breweries and one boot and shoe factory. Mention may be made also of the Kittery Navy Yard, opposite Portsmouth, which is not included in the census of manufactures, but which gave employment to 895 wage earners and reported work done to the amount of \$1,153,181. (See Introduction.)

**Character of ownership.**—The table that follows has for its purpose the presentation of conditions in respect to the character of ownership, or legal organization, of manufacturing enterprises. For all industries combined comparative figures are given covering the censuses of 1909 and 1904. Comparative data for 1899 are not available. Figures for 1909 only are presented for several important industries individually. In order to avoid disclosing the operations of individual concerns it is necessary to omit several important industries from this and the table following.

| INDUSTRY AND CHARACTER OF OWNERSHIP. | Number of establishments. | Average number of wage earners. | Value of products. | Value added by manufacture. |
|--------------------------------------|---------------------------|---------------------------------|--------------------|-----------------------------|
| <b>ALL INDUSTRIES:</b>               |                           |                                 |                    |                             |
| 1909.....                            | 1,961                     | 78,658                          | \$164,581,019      | \$66,424,003                |
| 1904.....                            | 1,618                     | 65,368                          | 123,610,904        | 50,894,517                  |
| Individual:                          |                           |                                 |                    |                             |
| 1909.....                            | 1,122                     | 8,225                           | 16,987,245         | 7,963,658                   |
| 1904.....                            | 804                       | 7,593                           | 13,882,206         | 6,780,898                   |
| Firm:                                |                           |                                 |                    |                             |
| 1909.....                            | 396                       | 8,763                           | 20,666,702         | 8,257,561                   |
| 1904.....                            | 370                       | 10,036                          | 21,226,160         | 8,195,100                   |
| Corporation:                         |                           |                                 |                    |                             |
| 1909.....                            | 424                       | 61,653                          | 126,642,602        | 50,148,332                  |
| 1904.....                            | 338                       | 47,712                          | 88,150,003         | 35,365,499                  |
| Other:                               |                           |                                 |                    |                             |
| 1909.....                            | 19                        | 17                              | 234,470            | 54,452                      |
| 1904.....                            | 16                        | 25                              | 343,445            | 53,011                      |
| Per cent of total:                   |                           |                                 |                    |                             |
| 1909.....                            | 100.0                     | 100.0                           | 100.0              | 100.0                       |
| 1904.....                            | 100.0                     | 100.0                           | 100.0              | 100.0                       |
| Individual:                          |                           |                                 |                    |                             |
| 1909.....                            | 57.2                      | 10.5                            | 10.3               | 12.0                        |
| 1904.....                            | 55.3                      | 11.6                            | 11.2               | 13.5                        |
| Firm:                                |                           |                                 |                    |                             |
| 1909.....                            | 20.2                      | 11.1                            | 12.6               | 12.4                        |
| 1904.....                            | 22.9                      | 15.4                            | 17.2               | 16.3                        |
| Corporation:                         |                           |                                 |                    |                             |
| 1909.....                            | 21.6                      | 78.4                            | 76.9               | 75.5                        |
| 1904.....                            | 20.9                      | 73.0                            | 71.3               | 70.2                        |
| Other:                               |                           |                                 |                    |                             |
| 1909.....                            | 1.0                       | (?)                             | 0.2                | 0.1                         |
| 1904.....                            | 1.0                       | (?)                             | 0.3                | 0.1                         |

<sup>1</sup> Less than one-tenth of 1 per cent.

## STATISTICS OF MANUFACTURES—NEW HAMPSHIRE.

| INDUSTRY AND CHARACTER OF OWNERSHIP— <i>continued</i> .         | Number of establishments. | Average number of wage earners. | Value of products.       | Value added by manufacture. |
|---|---------------------------|---------------------------------|--------------------------|-----------------------------|
| <b>Boots and shoes, including out stock and findings, 1909.</b> |                           |                                 |                          |                             |
| Individual.....   | 68                        | 14,211                          | \$39,489,544             | \$11,224,404                |
| Firm.....   | 21                        | 1,247                           | 2,119,765                | 789,491                     |
| Firm.....   | 17                        | 3,500                           | 8,821,701 <sup>1</sup>   | 3,048,829                   |
| Corporation.....  | 30                        | 9,464                           | 28,667,078 <sup>1</sup>  | 7,386,084                   |
| Per cent of total.....  | 100.0                     | 100.0                           | 100.0                    | 100.0                       |
| Individual.....   | 30.9                      | 8.8                             | 5.4                      | 7.0                         |
| Firm.....   | 25.0                      | 24.6                            | 22.4                     | 27.2                        |
| Corporation.....  | 44.1                      | 66.6                            | 72.3                     | 65.8                        |
| <b>Bread and other bakery products, 1909.</b>                   |                           |                                 |                          |                             |
| Individual.....   | 157                       | 454                             | \$1,683,232              | \$628,409                   |
| Firm.....   | 120                       | 205                             | 1,085,244                | 415,380                     |
| Firm.....   | 25                        | 146                             | 551,648                  | 198,080                     |
| Corporation.....  | 3                         | 13                              | 46,340                   | 14,999                      |
| Per cent of total.....  | 100.0                     | 100.0                           | 100.0                    | 100.0                       |
| Individual.....   | 82.2                      | 65.0                            | 64.5                     | 66.1                        |
| Firm.....   | 15.9                      | 32.2                            | 32.8                     | 31.5                        |
| Corporation.....  | 1.9                       | 2.9                             | 2.8                      | 2.4                         |
| <b>Flour-mill and gristmill products, 1909.</b>                 |                           |                                 |                          |                             |
| Individual.....   | 105                       | 116                             | \$3,137,344 <sup>1</sup> | \$378,097                   |
| Individual.....   | 67                        | 65                              | 1,167,599 <sup>1</sup>   | 153,389                     |
| Firm.....   | 34                        | 47                              | 1,922,640                | 215,369                     |
| Corporation.....  | 4                         | 4                               | 97,155                   | 11,909                      |
| Per cent of total.....  | 100.0                     | 100.0                           | 100.0                    | 100.0                       |
| Individual.....   | 63.8                      | 56.0                            | 36.0                     | 40.5                        |
| Firm.....   | 32.4                      | 40.5                            | 60.3                     | 50.3                        |
| Corporation.....  | 3.8                       | 3.4                             | 3.0                      | 3.1                         |
| <b>Foundry and machine-shop products, 1909.</b>                 |                           |                                 |                          |                             |
| Individual.....   | 81                        | 2,396                           | \$4,946,894              | \$3,248,037                 |
| Individual.....   | 33                        | 283                             | 515,184                  | 312,181                     |
| Firm.....   | 15                        | 184                             | 551,676                  | 242,483                     |
| Corporation.....  | 33                        | 1,929                           | 3,880,034                | 2,693,373                   |
| Per cent of total.....  | 100.0                     | 100.0                           | 100.0                    | 100.0                       |
| Individual.....   | 40.7                      | 11.8                            | 10.4                     | 9.6                         |
| Firm.....   | 18.5                      | 7.7                             | 11.2                     | 7.5                         |
| Corporation.....  | 40.7                      | 80.5                            | 78.4                     | 82.9                        |
| <b>Hosiery and knit goods, 1909.</b>                            |                           |                                 |                          |                             |
| Individual.....   | 21                        | 3,129                           | \$4,764,119              | \$2,128,446                 |
| Individual.....   | 3                         | 12                              | 26,460                   | 13,373                      |
| Firm.....   | 4                         | 601                             | 1,143,838                | 581,630                     |
| Corporation.....  | 14                        | 2,426                           | 3,593,821                | 1,533,443                   |
| Per cent of total.....  | 100.0                     | 100.0                           | 100.0                    | 100.0                       |
| Individual.....   | 14.3                      | 0.4                             | 0.0                      | 0.6                         |
| Firm.....   | 19.0                      | 22.1                            | 24.0                     | 27.3                        |
| Corporation.....  | 66.7                      | 77.5                            | 75.4                     | 72.0                        |
| <b>Lumber and timber products, 1909.</b>                        |                           |                                 |                          |                             |
| Individual.....   | 589                       | 8,464                           | \$15,284,357             | \$8,021,070                 |
| Individual.....   | 381                       | 2,832                           | 4,740,950                | 2,709,358                   |
| Firm.....   | 142                       | 1,852                           | 3,306,956                | 1,804,868                   |
| Corporation.....  | 66                        | 3,780                           | 7,236,451                | 3,506,844                   |
| Per cent of total.....  | 100.0                     | 100.0                           | 100.0                    | 100.0                       |
| Individual.....   | 64.7                      | 33.5                            | 31.0                     | 33.8                        |
| Firm.....   | 24.1                      | 21.9                            | 21.6                     | 22.5                        |
| Corporation.....  | 11.2                      | 44.7                            | 47.3                     | 43.7                        |
| <b>Marble and stone work, 1909.</b>                             |                           |                                 |                          |                             |
| Individual.....   | 99                        | 1,527                           | \$1,818,262              | \$1,520,275                 |
| Individual.....   | 54                        | 517                             | 702,624                  | 575,699                     |
| Firm.....   | 34                        | 284                             | 422,937                  | 329,926                     |
| Corporation.....  | 11                        | 726                             | 692,701                  | 614,650                     |
| Per cent of total.....  | 100.0                     | 100.0                           | 100.0                    | 100.0                       |
| Individual.....   | 54.5                      | 33.9                            | 38.6                     | 37.9                        |
| Firm.....   | 34.3                      | 18.6                            | 23.3                     | 21.7                        |
| Corporation.....  | 11.1                      | 47.5                            | 38.1                     | 40.4                        |
| <b>Paper and wood pulp, 1909.</b>                               |                           |                                 |                          |                             |
| Individual.....   | 34                        | 3,413                           | \$13,994,251             | \$4,740,882                 |
| Individual.....   | 6                         | 62                              | 408,620                  | 173,086                     |
| Corporation.....  | 23                        | 3,321                           | 13,585,631               | 4,567,796                   |
| Per cent of total.....  | 100.0                     | 100.0                           | 100.0                    | 100.0                       |
| Individual.....   | 17.6                      | 2.7                             | 2.9                      | 3.7                         |
| Corporation.....  | 82.4                      | 97.3                            | 97.1                     | 96.3                        |
| <b>Woolen, worsted, and felt goods, and wool hats, 1909.</b>    |                           |                                 |                          |                             |
| Individual.....   | 39                        | 9,486                           | \$16,730,652             | \$5,635,582                 |
| Individual.....   | 8                         | 1,470                           | 919,166 <sup>1</sup>     | 304,469                     |
| Firm.....   | 6                         | 381                             | 780,874 <sup>1</sup>     | 340,152                     |
| Corporation.....  | 25                        | 8,635                           | 15,024,612               | 4,990,961                   |
| Per cent of total.....  | 100.0                     | 100.0                           | 100.0                    | 100.0                       |
| Individual.....   | 20.5                      | 5.0                             | 5.5                      | 15.4                        |
| Firm.....   | 15.4                      | 4.0                             | 4.7                      | 6.0                         |
| Corporation.....  | 64.1                      | 91.0                            | 89.8                     | 88.6                        |

<sup>1</sup> Includes the group "Other," to avoid disclosure of individual operations.

<sup>2</sup> Includes the group "Individual," to avoid the disclosure of individual operations.

The most important distinction shown is that between corporate and all other forms of ownership. For all industries combined, 21.6 per cent of the total number of establishments were in 1909 under corporate ownership, as against 78.4 per cent under all other forms. The corresponding figures for 1904 were 20.9 per cent and 79.2 per cent, respectively. Thus the change in character of ownership during the period was slight. In the more important industries, with the exception of the lumber industry, establishments under corporate ownership are predominant as measured by value of products and value added by manufacture. This is especially true of the paper and wood-pulp industry, in which 97.1 per cent of the value of products and 96.3 per cent of the value added by manufacture were reported by establishments of this class. In the lumber industry, on the other hand, only 47.3 per cent of the value of products and 43.7 per cent of the value added by manufacture were reported by establishments under corporate ownership.

**Size of establishment.**—The tendency for manufacturing to become concentrated in large establishments, or the reverse, is a matter of interest from the standpoint of industrial organization. In order to throw some light upon it the table that follows groups the establishments according to the value of their products. The table also shows the average size of establishments for all industries combined and for important industries separately as measured by number of wage earners, value of products, and value added by manufacture. The totals for all industries are shown for the last two censuses, while for certain important industries figures are given for 1909 only.

This table shows that, in 1909, of the 1,961 manufacturing establishments in the state, only 34, or 1.7 per cent, had a value of products exceeding \$1,000,000. These establishments, however, employed an average of 37,525 wage earners, or 47.7 per cent of the total number in all establishments, and reported 49.1 per cent of the total value of products, and 41.8 per cent of the total value added by manufacture.

On the other hand, the very small establishments—that is, those having a value of products of less than \$5,000—constituted a considerable proportion (33.8 per cent) of the total number of establishments, but the value of their products amounted to only 1 per cent of the total. The great bulk of the manufacturing was reported by establishments having products valued at not less than \$100,000 in value.

During the five years from 1904 to 1909 there was a marked increase in the relative importance of the largest establishments as measured by average number of wage earners, value of products, and value added by manufacture.

| INDUSTRY AND VALUE OF PRODUCTS.                                 | Number of establishments. | Average number of wage earners. | Value of products.       | Value added by manufacture. |
|---|---------------------------|---------------------------------|--------------------------|-----------------------------|
| <b>ALL INDUSTRIES:</b>  |                           |                                 |                          |                             |
| 1909.....   | 1,961                     | 78,658                          | \$164,581,019            | \$66,424,003                |
| 1904.....   | 1,618                     | 65,866                          | 123,610,904              | 50,394,517                  |
| Less than \$5,000:  |                           |                                 |                          |                             |
| 1909.....   | 663                       | 963                             | 1,603,993                | 1,034,742                   |
| 1904.....   | 500                       | 801                             | 1,269,094                | 1,704,073                   |
| \$5,000 and less than \$20,000:                                 |                           |                                 |                          |                             |
| 1909.....   | 648                       | 3,695                           | 6,733,411                | 3,810,066                   |
| 1904.....   | 536                       | 3,517                           | 5,681,962                | 3,107,408                   |
| \$20,000 and less than \$100,000:                               |                           |                                 |                          |                             |
| 1909.....   | 432                       | 9,606                           | 18,059,662               | 9,594,982                   |
| 1904.....   | 388                       | 9,141                           | 16,183,793               | 8,808,274                   |
| \$100,000 and less than \$1,000,000:                            |                           |                                 |                          |                             |
| 1909.....   | 184                       | 26,809                          | 57,399,937               | 24,282,557                  |
| 1904.....   | 174                       | 20,222                          | 55,101,461               | 21,863,313                  |
| \$1,000,000 and over:   |                           |                                 |                          |                             |
| 1909.....   | 34                        | 37,525                          | 80,784,016               | 27,791,050                  |
| 1904.....   | 20                        | 22,685                          | 45,360,594               | 15,731,449                  |
| Per cent of total:  |                           |                                 |                          |                             |
| 1909.....   | 100.0                     | 100.0                           | 100.0                    | 100.0                       |
| 1904.....   | 100.0                     | 100.0                           | 100.0                    | 100.0                       |
| Less than \$5,000:  |                           |                                 |                          |                             |
| 1909.....   | 33.8                      | 1.2                             | 1.0                      | 1.6                         |
| 1904.....   | 30.9                      | 1.2                             | 1.0                      | 1.0                         |
| \$5,000 and less than \$20,000:                                 |                           |                                 |                          |                             |
| 1909.....   | 33.0                      | 4.7                             | 4.1                      | 5.7                         |
| 1904.....   | 33.1                      | 5.4                             | 4.6                      | 6.3                         |
| \$20,000 and less than \$100,000:                               |                           |                                 |                          |                             |
| 1909.....   | 22.0                      | 12.3                            | 11.0                     | 14.3                        |
| 1904.....   | 24.0                      | 14.0                            | 13.1                     | 17.5                        |
| \$100,000 and less than \$1,000,000:                            |                           |                                 |                          |                             |
| 1909.....   | 9.4                       | 34.1                            | 34.9                     | 36.6                        |
| 1904.....   | 10.8                      | 44.7                            | 44.6                     | 43.4                        |
| \$1,000,000 and over:   |                           |                                 |                          |                             |
| 1909.....   | 1.7                       | 47.7                            | 49.1                     | 41.8                        |
| 1904.....   | 1.2                       | 34.7                            | 30.7                     | 31.2                        |
| Average per establishment:                                      |                           |                                 |                          |                             |
| 1909.....   | 40                        | \$83,027                        | \$33,873                 |                             |
| 1904.....   | 40                        | 70,397                          | \$15,146                 |                             |
| <b>Boots and shoes, including out stock and findings, 1909.</b> | 68                        | 14,211                          | \$39,439,544             | \$11,224,404                |
| \$5,000 and less than \$20,000 <sup>1</sup> .....               | 6                         | 56                              | 50,185                   | 28,690                      |
| \$20,000 and less than \$100,000.....                           | 16                        | 477                             | 649,770                  | 282,614                     |
| \$100,000 and less than \$1,000,000.....                        | 35                        | 6,233                           | 14,038,951               | 4,541,769                   |
| \$1,000,000 and over.....                                       | 11                        | 7,445                           | 24,691,038               | 6,371,332                   |
| Per cent of total.....  | 100.0                     | 100.0                           | 100.0                    | 100.0                       |
| \$5,000 and less than \$20,000.....                             | 8.8                       | 0.4                             | 0.2                      | 0.3                         |
| \$20,000 and less than \$100,000.....                           | 23.6                      | 3.4                             | 1.6                      | 2.5                         |
| \$100,000 and less than \$1,000,000.....                        | 51.5                      | 43.0                            | 35.6                     | 40.5                        |
| \$1,000,000 and over.....                                       | 16.2                      | 52.4                            | 62.6                     | 56.8                        |
| Average per establishment.....                                  | 209                       |                                 | \$579,993                | \$165,065                   |
| <b>Bread and other bakery products, 1909.</b>                   | 157                       | 454                             | \$1,683,232              | \$628,409                   |
| Less than \$5,000.....  | 55                        | 40                              | 107,431                  | 66,637                      |
| \$5,000 and less than \$20,000.....                             | 83                        | 233                             | 813,054                  | 322,825                     |
| \$20,000 and less than \$100,000 <sup>2</sup> .....             | 19                        | 181                             | 762,747                  | 238,947                     |
| Per cent of total.....  | 100.0                     | 100.0                           | 100.0                    | 100.0                       |
| Less than \$5,000.....  | 35.0                      | 8.8                             | 9.9                      | 10.6                        |
| \$5,000 and less than \$20,000.....                             | 52.9                      | 51.3                            | 48.3                     | 51.4                        |
| \$20,000 and less than \$100,000.....                           | 12.1                      | 39.9                            | 41.7                     | 38.0                        |
| Average per establishment.....                                  | 3                         |                                 | \$10,721                 | \$4,003                     |
| <b>Flour-mill and gristmill products, 1909.</b>                 | 105                       | 116                             | \$3,187,344              | \$378,667                   |
| Less than \$5,000.....  | 18                        | 7                               | 53,600                   | 8,358                       |
| \$5,000 and less than \$20,000.....                             | 47                        | 36                              | 553,678                  | 80,516                      |
| \$20,000 and less than \$100,000 <sup>3</sup> .....             | 40                        | 73                              | 2,580,166                | 289,793                     |
| Per cent of total.....  | 100.0                     | 100.0                           | 100.0                    | 100.0                       |
| Less than \$5,000.....  | 17.1                      | 6.0                             | 1.7                      | 2.2                         |
| \$5,000 and less than \$20,000.....                             | 44.8                      | 31.0                            | 17.4                     | 21.3                        |
| \$20,000 and less than \$100,000.....                           | 38.1                      | 62.9                            | 81.0                     | 76.5                        |
| Average per establishment.....                                  | 1                         |                                 | \$30,356                 | \$3,606                     |
| <b>Foundry and machine-shop products, 1909.</b>                 | 81                        | 2,396                           | \$4,946,894              | \$3,248,037                 |
| Less than \$5,000.....  | 18                        | 21                              | 51,724                   | 36,280                      |
| \$5,000 and less than \$20,000.....                             | 18                        | 93                              | 177,813                  | 117,349                     |
| \$20,000 and less than \$100,000.....                           | 36                        | 819                             | 1,616,422                | 974,803                     |
| \$100,000 and less than \$1,000,000 <sup>4</sup> .....          | 9                         | 1,463                           | 3,101,935                | 2,119,605                   |
| Per cent of total.....  | 100.0                     | 100.0                           | 100.0                    | 100.0                       |
| Less than \$5,000.....  | 22.2                      | 0.9                             | 1.0                      | 1.1                         |
| \$5,000 and less than \$20,000.....                             | 22.2                      | 3.9                             | 3.6                      | 3.6                         |
| \$20,000 and less than \$100,000.....                           | 44.4                      | 34.2                            | 32.7                     | 30.0                        |
| \$100,000 and less than \$1,000,000.....                        | 11.1                      | 61.1                            | 62.7                     | 65.3                        |
| Average per establishment.....                                  | 30                        |                                 | \$61,073                 | \$40,099                    |
| <b>Hosiery and knit goods, 1909.</b>                            | 21                        | 3,129                           | \$4,764,119 <sup>5</sup> | \$2,128,446                 |
| \$5,000 and less than \$20,000 <sup>1</sup> .....               | 5                         | 17                              | 33,095                   | 18,010                      |
| \$20,000 and less than \$100,000.....                           | 5                         | 451                             | 289,882                  | 204,496                     |
| \$100,000 and less than \$1,000,000 <sup>4</sup> .....          | 11                        | 2,661                           | 4,441,142                | 1,905,940                   |
| Per cent of total.....  | 100.0                     | 100.0                           | 100.0                    | 100.0                       |
| \$5,000 and less than \$20,000.....                             | 23.8                      | 0.5                             | 0.7                      | 0.8                         |
| \$20,000 and less than \$100,000.....                           | 23.8                      | 14.4                            | 6.1                      | 9.6                         |
| \$100,000 and less than \$1,000,000.....                        | 52.4                      | 85.0                            | 93.2                     | 89.5                        |
| Average per establishment.....                                  | 149                       |                                 | \$226,803                | \$101,355                   |

| INDUSTRY AND VALUE OF PRODUCTS.                              | Number of establishments. | Average number of wage earners. | Value of products. | Value added by manufacture. |
|--|---------------------------|---------------------------------|--------------------|-----------------------------|
| <b>Lumber and timber products, 1909.</b>                     | 589                       | 8,464                           | \$15,284,357       | \$8,021,070                 |
| Less than \$5,000.....                                       | 216                       | 448                             | 551,316            | 396,914                     |
| \$5,000 and less than \$20,000.....                          | 218                       | 1,555                           | 2,209,556          | 1,516,347                   |
| \$20,000 and less than \$100,000.....                        | 127                       | 2,742                           | 5,000,163          | 2,702,055                   |
| \$100,000 and less than \$1,000,000 <sup>4</sup> .....       | 28                        | 3,719                           | 7,523,322          | 3,404,854                   |
| Per cent of total.....                                       | 100.0                     | 100.0                           | 100.0              | 100.0                       |
| Less than \$5,000.....                                       | 36.7                      | 5.3                             | 3.6                | 4.9                         |
| \$5,000 and less than \$20,000.....                          | 37.0                      | 18.4                            | 14.5               | 18.0                        |
| \$20,000 and less than \$100,000.....                        | 21.6                      | 32.4                            | 32.7               | 33.7                        |
| \$100,000 and less than \$1,000,000.....                     | 4.8                       | 43.9                            | 49.2               | 42.4                        |
| Average per establishment.....                               | 14                        |                                 | \$25,050           | \$13,618                    |
| <b>Marble and stone work, 1909.</b>                          | 99                        | 1,527                           | \$1,818,262        | \$1,520,275                 |
| Less than \$5,000.....                                       | 35                        | 53                              | 97,203             | 73,430                      |
| \$5,000 and less than \$20,000.....                          | 44                        | 297                             | 401,100            | 347,409                     |
| \$20,000 and less than \$100,000.....                        | 17                        | 615                             | 742,393            | 625,363                     |
| \$100,000 and less than \$1,000,000.....                     | 3                         | 562                             | 517,566            | 474,013                     |
| Per cent of total.....                                       | 100.0                     | 100.0                           | 100.0              | 100.0                       |
| Less than \$5,000.....                                       | 35.4                      | 3.5                             | 5.3                | 4.8                         |
| \$5,000 and less than \$20,000.....                          | 44.4                      | 19.4                            | 25.4               | 22.9                        |
| \$20,000 and less than \$100,000.....                        | 17.2                      | 40.3                            | 40.8               | 41.1                        |
| \$100,000 and less than \$1,000,000.....                     | 3.0                       | 36.8                            | 28.5               | 31.2                        |
| Average per establishment.....                               | 15                        |                                 | \$18,366           | \$15,356                    |
| <b>Paper and wood pulp, 1909.</b>                            | 34                        | 3,413                           | \$13,994,251       | \$4,740,882                 |
| \$20,000 and less than \$100,000 <sup>5</sup> .....          | 16                        | 265                             | 920,501            | 437,069                     |
| \$100,000 and less than \$1,000,000.....                     | 13                        | 1,139                           | 4,037,940          | 1,472,355                   |
| \$1,000,000 and over.....                                    | 5                         | 2,009                           | 9,035,804          | 2,830,558                   |
| Per cent of total.....                                       | 100.0                     | 100.0                           | 100.0              | 100.0                       |
| \$20,000 and less than \$100,000.....                        | 47.1                      | 7.8                             | 6.6                | 9.2                         |
| \$100,000 and less than \$1,000,000.....                     | 38.2                      | 33.4                            | 28.9               | 31.1                        |
| \$1,000,000 and over.....                                    | 14.7                      | 58.9                            | 64.6               | 60.7                        |
| Average per establishment.....                               | 100                       |                                 | \$411,596          | \$139,438                   |
| <b>Woolen, worsted, and felt goods, and wool hats, 1909.</b> | 39                        | 9,486                           | \$16,730,652       | \$5,685,582                 |
| \$20,000 and less than \$100,000 <sup>6</sup> .....          | 10                        | 287                             | 402,440            | 170,242                     |
| \$100,000 and less than \$1,000,000 <sup>4</sup> .....       | 29                        | 9,199                           | 10,328,212         | 5,466,340                   |
| Per cent of total.....                                       | 100.0                     | 100.0                           | 100.0              | 100.0                       |
| \$20,000 and less than \$100,000.....                        | 25.6                      | 3.0                             | 2.4                | 3.2                         |
| \$100,000 and less than \$1,000,000.....                     | 74.4                      | 97.0                            | 97.6               | 96.8                        |
| Average per establishment.....                               | 243                       |                                 | \$428,991          | \$144,502                   |

<sup>1</sup> Includes the group "Less than \$5,000."  
<sup>2</sup> Includes the group "\$100,000 and less than \$1,000,000."  
<sup>3</sup> Includes the group "\$100,000 and less than \$1,000,000" and "\$1,000,000 and over."  
<sup>4</sup> Includes the group "\$1,000,000 and over."  
<sup>5</sup> Includes the group "\$5,000 and less than \$20,000."

The fact that the average value of products per establishment as shown in the table increased from \$76,397 to \$83,927, and the value added by manufacture from \$31,146 to \$33,873, can scarcely be taken as in itself indicating a tendency toward concentration. The increased values shown may be, and probably are, due in part to the increase that has taken place in the prices of commodities. The average number of wage earners per establishment did not increase. The table indicates further that when the size of establishments is measured by value of products the bakery, flour-mill and gristmill, lumber, and marble and stone industries are conducted chiefly in rather small establishments, while the boot and shoe, the foundry and machine-shop, the hosiery and knit-goods, the paper and wood-pulp, and the woolen and worsted industries are conducted mainly in larger establishments.

In some respects, and especially from the standpoint of conditions under which persons engaged in manufactures work, the best classification of establishments to bring out the feature of size is a classification according to the number of wage earners employed. The next table shows, for 1909, such a classifica-

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tion for all industries combined and for 15 important industries individually, and gives not only the number of establishments falling in each group but also the average number of wage earners employed.

The per cent distribution of the number of establishments is not shown in this table; of the 1,961 establishments reported for all industries, 7.5 per cent employed no wage earners; 50.2 per cent, 1 to 5; 22.2 per cent, 6 to 20; 8.6 per cent, 21 to 50; and 11.5 per cent 51 and over. The most numerous single group consists of the 985 establishments employing from 1 to 5 wage earners, and the next of the 435 establishments employing from 6 to 20 wage earners. There were 61 establishments that employed over 250 wage earners, and 8 that employed over 1,000.

Of the total number of wage earners, 76.4 per cent were in establishments employing over 100 wage earners each. The single group having the largest number of employees was the group comprising the establishments employing over 1,000 wage earners. This group employed 23,914 wage earners, or 30.4 per cent of the total. In the manufacture of boots and shoes, cotton goods, hosiery and knit goods, and woolen and worsted goods, as appears from the classification according to the number of wage earners, comparatively large establishments do the major part of the business. The most of the wage earners, however, in the bakery, flour-mill and gristmill, lumber, and printing and publishing industries are employed by smaller establishments.

| INDUSTRY.  | Total. | ESTABLISHMENTS EMPLOYING— |                      |                       |                        |                         |                          |                          |                            |                          |
|--|--------|---------------------------|----------------------|-----------------------|------------------------|-------------------------|--------------------------|--------------------------|----------------------------|--------------------------|
|  |        | No wage earners.          | 1 to 5 wage earners. | 6 to 20 wage earners. | 21 to 50 wage earners. | 51 to 100 wage earners. | 101 to 250 wage earners. | 251 to 500 wage earners. | 501 to 1,000 wage earners. | Over 1,000 wage earners. |
| NUMBER OF ESTABLISHMENTS.                                |        |                           |                      |                       |                        |                         |                          |                          |                            |                          |
| All industries.....                                      | 1,961  | 147                       | 985                  | 435                   | 108                    | 88                      | 77                       | 37                       | 10                         | 8                        |
| Boots and shoes, including cut stock and findings.....   | 68     | 15                        | 2                    | 8                     | 12                     | 13                      | 13                       | 12                       | 6                          | 2                        |
| Bread and other bakery products.....                     | 157    | 2                         | 10                   | 1                     | 3                      | 3                       | 2                        | 3                        | 4                          | 5                        |
| Cooperage and wooden goods, not elsewhere specified..... | 30     | 1                         | 1                    | 1                     | 2                      | 5                       | 3                        | 1                        | 1                          | 1                        |
| Cotton goods, including cotton small wares.....          | 21     | 7                         | 23                   | 23                    | 10                     | 4                       | 4                        | 1                        | 1                          | 1                        |
| Flour-mill and gristmill products.....                   | 105    | 21                        | 83                   | 1                     | 2                      | 5                       | 3                        | 4                        | 1                          | 1                        |
| Foundry and machine-shop products.....                   | 81     | 2                         | 3                    | 8                     | 0                      | 3                       | 1                        | 1                        | 1                          | 1                        |
| Furniture and refrigerators.....                         | 26     | 1                         | 2                    | 3                     | 0                      | 3                       | 7                        | 4                        | 1                          | 1                        |
| Hosiery and knit goods.....                              | 21     | 1                         | 3                    | 3                     | 3                      | 3                       | 1                        | 1                        | 1                          | 1                        |
| Liquors, malt.....                                       | 4      | 4                         | 311                  | 191                   | 55                     | 17                      | 8                        | 2                        | 1                          | 1                        |
| Lumber and timber products.....                          | 580    | 8                         | 40                   | 28                    | 7                      | 4                       | 2                        | 2                        | 1                          | 1                        |
| Marble and stone work.....                               | 99     | 34                        | 13                   | 13                    | 0                      | 2                       | 5                        | 4                        | 1                          | 1                        |
| Paper and wood pulp.....                                 | 34     | 20                        | 84                   | 24                    | 7                      | 2                       | 5                        | 4                        | 1                          | 1                        |
| Printing and publishing.....                             | 143    | 8                         | 35                   | 7                     | 4                      | 2                       | 2                        | 1                        | 1                          | 1                        |
| Tobacco manufactures.....                                | 51     | 2                         | 2                    | 2                     | 5                      | 10                      | 14                       | 6                        | 5                          | 1                        |
| Woolen, worsted, and felt goods, and wool hats.....      | 39     | 48                        | 255                  | 102                   | 39                     | 27                      | 15                       | 5                        | 2                          | 1                        |
| All other industries.....                                | 493    |                           |                      |                       |                        |                         |                          |                          |                            |                          |
| AVERAGE NUMBER OF WAGE EARNERS.                          |        |                           |                      |                       |                        |                         |                          |                          |                            |                          |
| All industries.....                                      | 78,658 | 2,127                     | 5,074                | 5,351                 | 5,975                  | 12,088                  | 12,538                   | 11,598                   | 28,014                     | 2,203                    |
| Boots and shoes, including cut stock and findings.....   | 14,211 | 9                         | 112                  | 398                   | 936                    | 2,367                   | 3,892                    | 4,294                    | 2,203                      |                          |
| Bread and other bakery products.....                     | 454    | 286                       | 134                  | 34                    |                        |                         |                          |                          |                            |                          |
| Cooperage and wooden goods, not elsewhere specified..... | 713    | 24                        | 134                  | 103                   | 229                    | 223                     |                          |                          |                            |                          |
| Cotton goods, including cotton small wares.....          | 22,290 | 1                         | 9                    | 55                    |                        | 702                     | 1,172                    | 3,550                    | 10,711                     |                          |
| Flour-mill and gristmill products.....                   | 116    | 104                       | 12                   |                       |                        |                         |                          |                          |                            |                          |
| Foundry and machine-shop products.....                   | 2,396  | 49                        | 271                  | 569                   | 248                    | 719                     |                          | 540                      |                            |                          |
| Furniture and refrigerators.....                         | 823    | 9                         | 118                  | 290                   | 207                    | 190                     |                          |                          |                            |                          |
| Hosiery and knit goods.....                              | 3,129  | 6                         | 32                   |                       | 207                    | 1,119                   | 1,224                    | 541                      |                            |                          |
| Liquors, malt.....                                       | 272    |                           |                      | 94                    |                        | 178                     |                          |                          |                            |                          |
| Lumber and timber products.....                          | 8,464  | 748                       | 2,194                | 1,070                 | 1,187                  | 1,238                   | 607                      | 700                      |                            |                          |
| Marble and stone work.....                               | 1,527  | 113                       | 319                  | 270                   | 263                    | 286                     | 276                      |                          |                            |                          |
| Paper and wood pulp.....                                 | 3,413  |                           | 177                  | 260                   | 117                    | 674                     | 1,498                    | 687                      |                            |                          |
| Printing and publishing.....                             | 677    | 189                       | 205                  | 94                    | 129                    |                         |                          |                          |                            |                          |
| Tobacco manufactures.....                                | 571    | 58                        | 23                   |                       |                        |                         | 440                      |                          |                            |                          |
| Woolen, worsted, and felt goods, and felt hats.....      | 9,486  |                           | 72                   | 207                   | 720                    | 1,927                   | 1,610                    |                          |                            | 5,000                    |
| All other industries.....                                | 10,116 | 581                       | 1,202                | 1,208                 | 1,732                  | 2,375                   | 1,754                    | 1,224                    |                            |                          |
| PER CENT OF AVERAGE NUMBER OF WAGE EARNERS.              |        |                           |                      |                       |                        |                         |                          |                          |                            |                          |
| All industries.....                                      | 100.0  | 2.7                       | 6.4                  | 6.8                   | 7.6                    | 15.4                    | 15.9                     | 14.7                     | 30.4                       |                          |
| Boots and shoes, including cut stock and findings.....   | 100.0  | 0.1                       | 0.8                  | 2.8                   | 6.6                    | 10.7                    | 27.4                     | 30.2                     | 15.5                       |                          |
| Bread and other bakery products.....                     | 100.0  | 63.0                      | 20.5                 | 7.5                   |                        |                         |                          |                          |                            |                          |
| Cooperage and wooden goods, not elsewhere specified..... | 100.0  | 3.4                       | 18.8                 | 14.4                  | 32.1                   | 31.3                    |                          |                          |                            |                          |
| Cotton goods, including cotton small wares.....          | 100.0  | (1)                       | (3)                  | 0.2                   |                        | 3.6                     | 5.3                      | 15.9                     | 75.0                       |                          |
| Flour-mill and gristmill products.....                   | 100.0  | 89.7                      | 10.3                 |                       |                        |                         |                          |                          |                            |                          |
| Foundry and machine-shop products.....                   | 100.0  | 2.0                       | 11.3                 | 23.7                  | 10.4                   | 30.0                    |                          | 22.5                     |                            |                          |
| Furniture and refrigerators.....                         | 100.0  | 1.1                       | 14.3                 | 36.3                  | 25.2                   | 23.1                    |                          |                          |                            |                          |
| Hosiery and knit goods.....                              | 100.0  | 0.2                       | 1.0                  |                       | 6.6                    | 35.8                    | 39.1                     | 17.3                     |                            |                          |
| Liquors, malt.....                                       | 100.0  |                           |                      | 34.6                  |                        | 65.4                    |                          |                          |                            |                          |
| Lumber and timber products.....                          | 100.0  | 8.8                       | 25.9                 | 19.7                  | 14.0                   | 14.6                    | 7.9                      | 0.0                      |                            |                          |
| Marble and stone work.....                               | 100.0  | 7.4                       | 20.9                 | 17.7                  | 17.2                   | 18.7                    | 18.1                     |                          |                            |                          |
| Paper and wood pulp.....                                 | 100.0  |                           | 5.2                  | 7.6                   | 3.4                    | 19.7                    | 43.9                     | 20.1                     |                            |                          |
| Printing and publishing.....                             | 100.0  | 27.9                      | 39.1                 | 13.9                  | 19.1                   |                         |                          |                          |                            |                          |
| Tobacco manufactures.....                                | 100.0  | 10.2                      | 12.8                 |                       |                        |                         | 77.1                     |                          |                            |                          |
| Woolen, worsted, and felt goods, and felt hats.....      | 100.0  |                           | 0.2                  | 2.2                   | 7.6                    | 20.8                    | 17.0                     |                          |                            | 52.7                     |
| All other industries.....                                | 100.0  | 5.2                       | 11.9                 | 12.8                  | 17.1                   | 23.5                    | 17.3                     | 12.1                     |                            |                          |

<sup>1</sup> Less than one-tenth of 1 per cent.

**Expenses.**—As stated in the Introduction, the census does not purport to furnish figures that can be used for determining the cost of manufacture and profits. Facts of interest can, however, be brought out concerning the relative importance of the different classes of expenses which make up the total.

The following table shows in percentages the distribution of expenses among the classes indicated for all industries combined and for certain important industries separately. The figures on which the percentages are based appear in Table II.

| INDUSTRY.  | PER CENT OF TOTAL EXPENSES REPORTED. |             |             |                         |
|--|--------------------------------------|-------------|-------------|-------------------------|
|  | Salaries.                            | Wages.      | Materials.  | Miscellaneous expenses. |
| <b>All industries.....</b>                               | <b>2.8</b>                           | <b>24.8</b> | <b>65.8</b> | <b>7.1</b>              |
| Boots and shoes, including outstook and findings.....    | 2.3                                  | 18.4        | 75.4        | 3.9                     |
| Bread and other bakery products.....                     | 1.2                                  | 17.0        | 74.0        | 0.0                     |
| Cooperage and wooden goods, not elsewhere specified..... | 2.4                                  | 37.0        | 51.4        | 9.3                     |
| Cotton goods, including cotton small wares.....          | 1.4                                  | 20.0        | 63.4        | 6.0                     |
| Flour-mill and gristmill products.....                   | 0.6                                  | 2.1         | 95.4        | 2.0                     |
| Foundry and machine-shop products.....                   | 8.8                                  | 34.1        | 41.0        | 15.5                    |
| Furniture and refrigerators.....                         | 5.4                                  | 28.3        | 50.7        | 15.5                    |
| Hosiery and knit goods.....                              | 2.3                                  | 27.5        | 63.4        | 0.8                     |
| Liquors, malt.....                                       | 5.7                                  | 14.0        | 30.2        | 41.1                    |
| Lumber and timber products.....                          | 2.5                                  | 29.4        | 54.4        | 13.7                    |
| Marble and stone work.....                               | 4.0                                  | 60.3        | 19.5        | 7.2                     |
| Paper and wood pulp.....                                 | 3.8                                  | 16.4        | 72.0        | 7.9                     |
| Printing and publishing.....                             | 13.4                                 | 41.0        | 20.8        | 15.7                    |
| Tobacco manufactures.....                                | 0.9                                  | 32.3        | 58.0        | 8.8                     |
| Woolen, worsted, and felt goods, and wool hats.....      | 1.8                                  | 22.9        | 69.0        | 5.8                     |
| All other industries.....                                | 4.9                                  | 26.1        | 61.4        | 7.0                     |

The above table shows that for all industries combined, 65.8 per cent of the total expense was incurred for materials, 27.1 per cent for services—that is, salaries and wages—and but 7.1 per cent for other purposes. As would be expected, these proportions vary greatly in the different industries.

**Engines and power.**—The table following shows, for all industries combined, the number of engines or other motors, according to their character, employed in generating power (including electric motors operated by purchased current), and their total horsepower at the censuses of 1909, 1904, and 1899. It also shows separately the number and horsepower of electric motors, including those operated by current generated in the manufacturing establishments.

The increase from 1904 to 1909 in owned primary power was mainly in power generated by steam engines and water wheels, the power generated by gas engines showing a decrease. The figures also show that the practice of renting power is on the increase, 8.7 per cent of the total power being rented in 1909, as against 6.3 per cent in 1904 and but 2.2 per cent in 1899. The use of electric motors for the pur-

pose of applying the power generated within the establishments is shown to be rapidly becoming more common, the horsepower of such motors increasing from 1,467 in 1899 to 7,288 in 1904 and 24,142 in 1909.

| POWER.   | NUMBER OF ENGINES OR MOTORS. |                  |                   | HORSEPOWER.    |                |                   | PER CENT DISTRIBUTION OF HORSEPOWER. |                  |                  |
|--|------------------------------|------------------|-------------------|----------------|----------------|-------------------|--------------------------------------|------------------|------------------|
|  | 1909                         | 1904             | 1899 <sup>1</sup> | 1909           | 1904           | 1899 <sup>1</sup> | 1909                                 | 1904             | 1899             |
| <b>Primary power, total.....</b>               | <b>3,415</b>                 | <b>2,137</b>     | <b>2,251</b>      | <b>203,001</b> | <b>218,344</b> | <b>200,975</b>    | <b>100.0</b>                         | <b>100.0</b>     | <b>100.0</b>     |
| Owned.....                                     | 2,399                        | 2,137            | 2,251             | 208,407        | 204,590        | 100,540           | 91.3                                 | 93.7             | 97.8             |
| Steam.....                                     | 1,191                        | 1,032            | 1,037             | 180,128        | 162,430        | 80,905            | 47.3                                 | 46.0             | 44.7             |
| Gas.....                                       | 108                          | 72               | 52                | 1,238          | 1,395          | 571               | 0.4                                  | 0.6              | 0.3              |
| Water wheels.....                              | 1,070                        | 1,000            | 1,162             | 127,490        | 100,188        | 105,711           | 43.4                                 | 45.9             | 52.6             |
| Water motors.....                              | 24                           | 27               | ( <sup>2</sup> )  | 521            | 86             | ( <sup>2</sup> )  | 0.2                                  | ( <sup>2</sup> ) | ( <sup>2</sup> ) |
| Other.....                                     |                              |                  |                   | 30             | 401            | 332               | ( <sup>2</sup> )                     | 0.2              | 0.2              |
| Rented.....                                    | 1,016                        | ( <sup>2</sup> ) | ( <sup>2</sup> )  | 25,584         | 13,745         | 4,426             | 8.7                                  | 6.3              | 2.2              |
| Electric.....                                  | 1,016                        | ( <sup>2</sup> ) | ( <sup>2</sup> )  | 21,209         | 5,013          | 2,004             | 7.2                                  | 2.3              | 1.0              |
| Other.....                                     |                              |                  |                   | 4,375          | 8,732          | 2,422             | 1.5                                  | 4.0              | 1.2              |
| Electric motors.....                           | 1,080                        | 101              | 65                | 45,351         | 12,301         | 3,471             | 100.0                                | 100.0            | 100.0            |
| Run by current generated by establishment..... | 670                          | 101              | 65                | 24,142         | 7,288          | 1,407             | 53.2                                 | 50.2             | 42.3             |
| Run by rented power.....                       | 1,010                        | ( <sup>2</sup> ) | ( <sup>2</sup> )  | 21,209         | 5,013          | 2,004             | 46.8                                 | 40.8             | 57.7             |

<sup>1</sup> Includes the neighborhood industries and hand trades, omitted in 1904 and 1909.  
<sup>2</sup> Not reported.

<sup>3</sup> Less than one-tenth of 1 per cent.

**Fuel.**—Closely related to the question of kind of power employed is that of the fuel used in generating this power, or otherwise as material in the manufacturing processes. The following table shows the quantity of each kind of fuel used in 1909, by totals for all industries and for certain selected industries:

| INDUSTRY.  | Anthracite coal (tons). | Bituminous coal (tons). | Coke (tons).  | Wood (cords).  | Oil, including gaso-lino (barrels). | Gas (1,000 feet). |
|--|-------------------------|-------------------------|---------------|----------------|-------------------------------------|-------------------|
| <b>All industries<sup>1</sup>.....</b>                   | <b>23,768</b>           | <b>605,450</b>          | <b>16,532</b> | <b>124,867</b> | <b>40,199</b>                       | <b>32,392</b>     |
| Boots and shoes, including outstook and findings.....    | 14                      | 23,592                  |               | 1,919          | 54                                  | 212               |
| Bread and other bakery products.....                     | 2,165                   | 82                      | 847           | 2,098          | 18                                  | 1,224             |
| Brick and tile.....                                      | 38                      | 1,501                   | 22            | 34,410         | 2                                   |                   |
| Cooperage and wooden goods, not elsewhere specified..... | 13                      | 72                      |               | 356            | 7                                   |                   |
| Cotton goods, including cotton small wares.....          | 50                      | 180,270                 | 7,395         | 120            | 1,700                               | 18,864            |
| Flour-mill and gristmill products.....                   | 63                      | 294                     |               | 552            | 561                                 |                   |
| Foundry and machine-shop products.....                   | 1,880                   | 5,189                   | 4,263         | 712            | 199                                 | 350               |
| Furniture and refrigerators.....                         | 8                       | 2,032                   |               | 425            | 25                                  | 5                 |
| Gas, illuminating and heating.....                       | 2,275                   | 20,090                  | 41            | 63             | 25,851                              |                   |
| Hosiery and knit goods.....                              | 623                     | 5,849                   |               | 401            | 87                                  | 24                |
| Liquors, malt.....                                       | 409                     | 13,440                  |               |                |                                     |                   |
| Lumber and timber products.....                          | 13                      | 358                     |               | 600            | 189                                 | 290               |
| Marble and stone work.....                               | 82                      | 11,684                  | 1             | 66             | 240                                 | 320               |
| Paper and wood pulp.....                                 | 8,133                   | 180,189                 |               | 73,547         | 42                                  |                   |
| Printing and publishing.....                             | 623                     | 214                     | 7             | 201            | 60                                  | 1,237             |
| Tobacco manufactures.....                                | 61                      | 1                       |               | 17             |                                     | 293               |
| Woolen, worsted, and felt goods, and wool hats.....      | 805                     | 61,820                  | 208           | 1,886          | 500                                 | 6,366             |
| All other industries.....                                | 9,513                   | 60,715                  | 3,748         | 6,534          | 10,655                              | 3,237             |

<sup>1</sup> In addition there were 1,533 tons of other varieties of fuel reported.

## STATISTICS OF MANUFACTURES—NEW HAMPSHIRE.

## SUPPLEMENTARY DATA REGARDING IMPORTANT INDUSTRIES.

(With statistics for laundries and custom saw and grist mills.)

For certain industries the Census Bureau collects, by means of special schedules, details regarding the quantity and value of materials and products and the number and classes of machines used in manufactures which do not appear on the general schedule. Certain data of this character for five important industries in New Hampshire are here presented.

Boots and shoes, including cut stock and findings.—This industry started in the southern part of New Hampshire early in the century. At first it was carried on largely in the homes of farmers or in small shops and consisted of piecework performed on stock cut in the factories located at Lynn and Haverhill, Mass., and put out in the adjoining towns of that state and of New Hampshire. With the application of machinery soon after the Civil War, the manufacture of boots and shoes as a factory industry developed rapidly in the state, and in 1899 New Hampshire held third place in this industry in the United States, in 1904 fifth place, and in 1909 fourth place.

From 1904 to 1909 the production of men's boots and shoes increased 3,863,851 pairs, or 49.3 per cent; that of boys' and youths' boots and shoes, 562,344 pairs, or 15.6 per cent; and that of misses' and chil-

dren's boots and shoes, 24,828 pairs, or five-tenths of 1 per cent. On the other hand, decreases are shown for women's boots and shoes of 171,570 pairs, or 3.6 per cent, and for women's, misses', and children's slippers of 744,164 pairs, or 72.5 per cent. The manufacture of men's, boys', and youths' slippers was discontinued during the five-year period 1904-1909.

The following table shows the number of pairs of the various kinds of footwear produced in this industry in 1909, 1904, and 1899:

| PRODUCT.                              | NUMBER OF PAIRS. |            |            |
|---------------------------------------|------------------|------------|------------|
|                                       | 1909             | 1904       | 1899       |
| Total.....                            | 25,534,114       | 22,110,427 | 21,172,691 |
| Boots and shoes, total.....           | 25,069,572       | 20,700,119 | 20,044,781 |
| Men's.....                            | 11,098,985       | 7,835,134  | 2,710,489  |
| Boys' and youths'.....                | 4,176,470        | 3,614,135  | 3,758,750  |
| Women's.....                          | 4,587,874        | 4,760,444  | 0,001,178  |
| Misses' and children's.....           | 4,606,234        | 4,581,408  | 4,505,367  |
| Slippers, total.....                  | 282,124          | 1,270,308  | 1,127,910  |
| Men's, boys', and youths'.....        | 244,020          | 244,020    | 400,466    |
| Women's, misses', and children's..... | 282,124          | 1,026,288  | 601,444    |
| All other, total.....                 | 182,418          | 50,000     | .....      |

The following table shows in greater detail the products of the boot and shoe industry for 1909:

| PRODUCT.                         | NUMBER OF PAIRS, BY METHOD OF MANUFACTURE. |                       |           |            |                |                             |
|----------------------------------|--|-----------------------|-----------|------------|----------------|-----------------------------|
|                                  | Total.                                     | Machine or hand welt. | Turned.   | McKay.     | Wooden pegged. | Wire sew or metal fastened. |
| Boots and shoes.....             | 25,069,572                                 | 6,296,732             | 1,010,933 | 15,560,403 | 166,041        | 2,034,863                   |
| Men's.....                       | 11,098,985                                 | 5,149,933             | 47,285    | 5,052,083  | 150,450        | 1,292,284                   |
| Boys' and youths'.....           | 4,176,470                                  | 674,201               | 0,000     | 3,202,013  | 7,994          | 282,581                     |
| Women's.....                     | 4,587,874                                  | 138,854               | 731,336   | 3,628,505  | 587            | 184,522                     |
| Misses' and children's.....      | 4,606,234                                  | 333,604               | 223,312   | 3,776,302  | 1,610          | 271,496                     |
| Slippers and infants' shoes..... | 464,542                                    | 177,020               | .....     | 386,622    | .....          | .....                       |

<sup>1</sup> Includes "turned" slippers to avoid disclosing operations of individual establishments.

Cotton goods.—Since the establishment of the first cotton mill of importance in New Hampshire in 1804, there has been a steady development of this industry, due largely to the abundant water power of the state.

The quantity and cost of the principal materials used in the manufacture of cotton goods, the quantity and value of the principal products, and the number of producing spindles and looms reported in 1909, 1904, and 1899 are given in the next table.

The quantity of domestic cotton used as material increased from 134,425,428 pounds in 1904 to 136,801,463 pounds in 1909, an increase of 2,376,035 pounds, or 1.8 per cent. The quantity of foreign cotton used is relatively insignificant, although it increased nearly fourfold in the five-year period, that is, from 384,150 pounds in 1904 to 1,731,164 pounds in 1909, an increase of 1,347,014 pounds. Although there was an increase in the total amount of cotton used, there was a decrease in the average price

paid per pound, the total cost of cotton consumed in 1909 being \$704,861 less than in 1904.

The manufacture of plain cloths for printing and converting, and of ticks, denims, and stripes has fallen off considerably since 1904, as was also the case between 1899 and 1904. Brown or bleached sheetings and shirtings and cotton towels and toweling increased slightly both in quantity and value, while twills and sateens show a considerable increase in both respects. Of the classes of goods shown separately in the table, napped fabrics were the most important at each of the three censuses as measured by value of product, their value representing 19.5 per cent of the total value of cotton goods manufactured in 1909. While the output of these fabrics was much greater than in 1899, there has been a slight decrease both in their quantity and value since 1904. By far the most important class of goods manufactured in the state, however, as regards both quantity and value is ginghams, statistics for which can not be shown



separately without disclosing individual operations. The partly manufactured articles represent a certain amount of duplication, because, although they are the products of one set of mills, they become the materials of other establishments.

| MATERIAL, PRODUCT, OR MACHINE.  | 1909                | 1904 <sup>1</sup>   | 1899                |
|---|---------------------|---------------------|---------------------|
| <b>Material used, total cost.....</b>   | <b>\$19,123,850</b> | <b>\$18,496,971</b> | <b>\$11,960,102</b> |
| <b>Cotton:</b>  |                     |                     |                     |
| Domestic—   |                     |                     |                     |
| Pounds.....   | 136,801,463         | 134,425,428         | 136,805,127         |
| Cost.....   | \$14,751,838        | \$15,638,023        | \$9,394,520         |
| Foreign—  |                     |                     |                     |
| Pounds.....   | 1,731,164           | 384,150             | 183,520             |
| Cost.....   | \$248,897           | \$67,573            | \$18,997            |
| Yarn purchased:   |                     |                     |                     |
| Pounds.....   | 1,884,910           | 1,158,983           | 821,587             |
| Cost.....   | \$389,000           | \$221,958           | \$124,337           |
| Cotton waste purchased:   |                     |                     |                     |
| Pounds.....   | 1,067,102           | 1,079,322           | 434,053             |
| Cost.....   | \$77,884            | \$156,560           | \$24,518            |
| Starch:   |                     |                     |                     |
| Pounds.....   | 7,293,256           | 3,374,958           | 4,719,505           |
| Cost.....   | \$295,768           | \$162,204           | \$144,940           |
| Chemicals and dyestuffs, cost.....  | 416,408             | 617,403             | 765,948             |
| Fuel and rent of power.....   | 712,663             | 655,200             | 426,762             |
| All other materials, cost.....  | 2,321,293           | 987,062             | 1,066,071           |
| <b>Product, total value.....</b>  | <b>\$33,601,830</b> | <b>\$29,540,770</b> | <b>\$22,098,249</b> |
| <b>Plain cloths for printing or converting:</b>                                 |                     |                     |                     |
| Square yards.....   | 32,381,275          | 76,052,718          | 83,298,801          |
| Value.....  | \$1,575,583         | \$3,547,092         | \$3,081,458         |
| <b>Brown or bleached sheetings and shirtings:</b>                               |                     |                     |                     |
| Square yards.....   | 20,818,014          | 29,075,111          | 64,053,520          |
| Value.....  | \$2,012,780         | \$1,608,657         | \$3,076,366         |
| <b>Twills and satens:</b>   |                     |                     |                     |
| Square yards.....   | 47,921,784          | 30,229,377          | 23,925,221          |
| Value.....  | \$4,372,001         | \$2,784,850         | \$1,381,430         |
| <b>Fancy woven fabrics:</b>   |                     |                     |                     |
| Square yards.....   | 3,008,344           | 9,510,533           | 2,019,785           |
| Value.....  | \$544,598           | \$1,100,471         | \$203,206           |
| <b>Ticks, doullms, and stripes:</b>   |                     |                     |                     |
| Square yards.....   | 21,324,050          | 22,706,522          | 32,201,176          |
| Value.....  | \$2,455,704         | \$2,816,510         | \$3,229,598         |
| <b>Napped fabrics:</b>  |                     |                     |                     |
| Square yards.....   | 71,473,313          | 37,606,990          | 69,253,909          |
| Value.....  | \$9,507,134         | \$7,907,370         | \$4,594,860         |
| <b>Cotton towels and toweling:</b>  |                     |                     |                     |
| Square yards.....   | 7,432,672           | 6,013,848           | .....               |
| Value.....  | \$678,230           | \$489,989           | .....               |
| <b>Yarns for sale:</b>  |                     |                     |                     |
| Pounds.....   | 1,030,524           | 3,859,034           | 6,018,200           |
| Value.....  | \$527,521           | \$831,328           | \$847,278           |
| <b>Cotton waste, not used for further manufacture:</b>                          |                     |                     |                     |
| Pounds.....   | 12,306,041          | 9,651,117           | 18,748,350          |
| Value.....  | \$263,250           | \$337,495           | \$305,035           |
| <b>All other products, value.....</b>   | <b>\$14,605,044</b> | <b>\$8,048,000</b>  | <b>\$6,331,919</b>  |
| <b>Machinery:</b>   |                     |                     |                     |
| Spindles (producing, not including doubling and twisting spindles), number..... | 1,318,932           | 1,301,281           | 1,243,555           |
| Looms, number.....  | 40,777              | 30,115              | 35,123              |

<sup>1</sup> Does not include statistics for one establishment, to avoid disclosure of individual operations.

**Lumber and timber products.**—The lumber industry showed a considerable growth in value of products from 1899 to 1909, but this was evidently due in part to the increase in the price of lumber. The following is a statement of the quantities of the three main classes of products of the sawmills as reported at the censuses of 1909 and 1899:

| PRODUCT.          |                       | QUANTITY. |                   |
|-------------------|-----------------------|-----------|-------------------|
|                   |                       | 1909      | 1899 <sup>1</sup> |
| Rough lumber..... | M feet, b. m. . . . . | 640,600   | 502,258           |
| Shingles.....     | thousands. . . . .    | 30,132    | 40,499            |
| Lath.....         | thousands. . . . .    | 26,873    | 74,221            |

<sup>1</sup> Does not include reports for establishments with a product less than \$500.

The production of rough lumber increased 15.5 per cent during the decade covered by the table, but that of shingles and of lath show marked decreases. In

recent years the annual output of lumber has been somewhat influenced by the increasing consumption of timber in the paper and wood-pulp industry.

**Paper and wood pulp.**—This industry is of considerable importance in the state, and New Hampshire ranks eighth among the states in the manufacture of paper and wood pulp. Spruce is used in the manufacture of wood pulp almost to the exclusion of every other kind of wood, except balsam fir. In 1909 a total of 349,997 cords of wood were used, of which domestic spruce formed 53.8 per cent, imported spruce 30.5 per cent, and balsam fir 14.6 per cent. The quantity and cost of the principal materials used in the manufacture of paper and wood pulp, the quantity and value of the principal products, and the kinds of machinery reported in 1909, 1904, and 1899 are shown in the following table:

| MATERIAL, PRODUCT, OR MACHINE.  | 1909                | 1904               | 1899               |
|---|---------------------|--------------------|--------------------|
| <b>Material used, total cost.....</b>   | <b>\$9,253,369</b>  | <b>\$5,327,734</b> | <b>\$3,053,334</b> |
| <b>Pulp wood, cost.....</b>   | <b>\$3,222,871</b>  | <b>\$2,011,363</b> | <b>\$1,167,000</b> |
| <b>Wood pulp, purchased:</b>  |                     |                    |                    |
| Tons.....   | 75,127              | 30,356             | 35,800             |
| Cost.....   | \$2,248,190         | \$747,200          | \$353,314          |
| Ground—   |                     |                    |                    |
| Tons.....   | 31,407              | 19,587             | 21,206             |
| Cost.....   | \$611,251           | \$343,482          | \$338,310          |
| Sulphite fiber—   |                     |                    |                    |
| Tons.....   | 30,500              | 7,437              | 12,123             |
| Cost.....   | \$1,452,253         | \$260,444          | \$418,080          |
| Other chemical fiber—   |                     |                    |                    |
| Tons.....   | 4,121               | 3,332              | 2,417              |
| Cost.....   | \$184,080           | \$143,274          | \$60,318           |
| <b>All other materials, cost.....</b>   | <b>\$3,782,308</b>  | <b>\$2,509,171</b> | <b>\$1,642,060</b> |
| <b>Product, total value.....</b>  | <b>\$13,094,251</b> | <b>\$8,930,291</b> | <b>\$7,244,733</b> |
| <b>News paper:</b>  |                     |                    |                    |
| Tons.....   | 110,038             | 80,522             | 67,878             |
| Value.....  | \$4,040,753         | \$3,170,191        | \$2,078,694        |
| <b>Book paper:</b>  |                     |                    |                    |
| Tons.....   | 14,259              | 12,039             | 11,070             |
| Value.....  | \$1,118,834         | \$814,079          | \$724,053          |
| <b>Wrapping paper:</b>  |                     |                    |                    |
| Tons.....   | 50,400              | 27,141             | 16,033             |
| Value.....  | \$2,788,798         | \$1,184,123        | \$784,422          |
| <b>Boards:</b>  |                     |                    |                    |
| Tons.....   | 12,187              | 8,298              | 5,618              |
| Value.....  | \$690,490           | \$360,277          | \$241,184          |
| <b>Tissues:</b>   |                     |                    |                    |
| Tons.....   | 8,737               | 2,698              | 3,073              |
| Value.....  | \$755,015           | \$202,695          | \$330,120          |
| <b>Wood pulp made for sale or for consumption in mills other than where produced:</b> |                     |                    |                    |
| Tons.....   | 98,021              | 92,459             | 88,295             |
| Value.....  | \$3,817,036         | \$3,031,345        | \$2,010,853        |
| <b>All other products, value.....</b>   | <b>\$207,716</b>    | <b>\$81,066</b>    | <b>\$160,497</b>   |
| <b>Wood pulp produced (including that used in mills where manufactured):</b>          |                     |                    |                    |
| Ground, tons.....   | 83,565              | 58,693             | 31,738             |
| Sulphite fiber, tons.....   | 133,687             | 115,195            | 87,852             |
| <b>Machinery:</b>   |                     |                    |                    |
| Paper machines—   |                     |                    |                    |
| Fourdrinier, number.....  | 29                  | 35                 | 31                 |
| Cylinder, number.....   | 29                  | 26                 | 10                 |
| Digesters, number.....  | 33                  | 23                 | 18                 |
| Grinders, number.....   | 100                 | 101                | 77                 |

The total cost of pulp wood, wood pulp, and other paper stock and materials used in 1909 amounted to \$9,253,369, which is a gain of 73.7 per cent, as compared with \$5,327,734 in 1904. The total cost of pulp wood consumed increased from \$2,011,363 in 1904 to \$3,222,871 in 1909, or 60.2 per cent. The increase in purchased wood pulp was relatively much greater, its total value being only \$747,200 in 1904, as compared with \$2,248,190 in 1909, an increase of 200.9 per cent. Of a total of 75,127 tons of purchased wood pulp, 52.7 per cent was reduced by the sulphite process, 41.8 per cent by the mechanical process, and the remainder by other chemical processes.



Newspaper exceeded all other products in quantity and value, representing 33.2 per cent of the total value of products of this industry. Next to news paper, wrapping paper was the most important product of the state's paper mills, substantial increases both in quantity and value being shown for both intercensal periods. In addition to the wood pulp which is made and consumed in the mills of the state an increasing amount is also manufactured for sale.

In this connection it is explained that for census purposes separate reports were secured for paper and pulp mills operated under the same ownership, but located at different points. In such instances pulp, though not actually sold, was considered by the census as sold by the pulp mill, and as purchased by the paper mill. The total amount of wood pulp produced, including that used in the mills where it was manufactured, increased from 173,888 tons in 1904 to 217,252 tons in 1909, or 24.9 per cent. Of the total wood pulp produced, 61.5 per cent was sulphite fiber.

**Woolen and worsted goods.**—The quantity and cost of the different materials used, and the quantity and value of the various classes of products, reported for this industry at the census of 1909 are given in the following table:

| MATERIAL OR PRODUCT.   | Value or amount.    |
|--|---------------------|
| <b>Material used, total cost</b> .....   | <b>\$11,095,070</b> |
| <b>Purchased:</b>  |                     |
| Foreign wool in condition purchased—   |                     |
| Pounds.....  | 10,706,575          |
| Cost.....  | \$3,027,868         |
| Domestic wool in condition purchased—  |                     |
| Pounds.....  | 12,027,487          |
| Cost.....  | \$3,383,025         |
| Equivalent of above foreign and domestic wool in<br>scoured condition, pounds..... | 13,708,500          |
| Raw cotton, domestic and foreign—  |                     |
| Pounds.....  | 489,543             |
| Cost.....  | \$78,358            |
| Tailors' clippings, rags, etc.—  |                     |
| Pounds.....  | 4,037,235           |
| Cost.....  | \$403,774           |
| Shoddy—  |                     |
| Pounds.....  | 2,423,570           |
| Cost.....  | \$272,794           |
| Waste and noils—   |                     |
| Pounds.....  | 1,977,694           |
| Cost.....  | \$537,262           |
| Woolen and worsted yarns—  |                     |
| Pounds.....  | 520,832             |
| Cost.....  | \$430,295           |
| Cotton yarns—  |                     |
| Pounds.....  | 1,133,680           |
| Cost.....  | \$277,696           |
| Chemicals and dyestuffs, cost.....   | \$430,271           |
| All other materials, cost.....   | \$1,653,127         |
| <b>Made for own use:</b>   |                     |
| Woolen and worsted yarns, pounds.....  | 14,885,515          |
| Merino yarns, pounds.....  | 2,752,311           |
| Shoddy, pounds.....  | 3,375,000           |
| <b>Product, total value</b> .....  | <b>\$16,730,652</b> |
| <b>All-wool woven goods—</b>   |                     |
| Woolen cassimeres, suitings, overcoatings, etc.—                                   |                     |
| Square yards.....  | 4,747,081           |
| Value.....   | \$2,725,568         |
| Woolen dress goods, opera flannels, etc.—  |                     |
| Square yards.....  | 3,708,287           |
| Value.....   | \$1,755,379         |
| All other all-wool goods, value.....   | \$7,310,368         |
| <b>Union or cotton-mixed woven goods:</b>  |                     |
| Suitings and overcoatings—   |                     |
| Square yards.....  | 2,555,603           |
| Value.....   | \$1,064,991         |
| Dress goods, and opera and similar flannels—                                       |                     |
| Square yards.....  | 1,418,125           |
| Value.....   | \$352,002           |
| All other union goods, value.....  | \$214,559           |

| MATERIAL OR PRODUCT.                                  | Value or amount. |
|---|------------------|
| <b>Product—Continued.</b>                             |                  |
| <b>Cotton-warp woven goods:</b>                       |                  |
| Wool-filling dress goods—                             |                  |
| Square yards.....                                     | 5,054,098        |
| Value.....  | \$1,051,717      |
| All other cotton-warp goods, value.....               | \$832,154        |
| <b>Partially manufactured products for sale:</b>      |                  |
| Worsted yarn, all wool—                               |                  |
| Pounds.....   | 981,254          |
| Value.....  | \$783,591        |
| Waste—  |                  |
| Pounds.....   | 207,745          |
| Value.....  | \$11,814         |
| All other partially manufactured products, value..... | 288,232          |
| All other products, value.....                        | 251,476          |
| Contract work, amount received.....                   | 48,531           |

It will be noted that of the total value of the products of this industry, \$11,791,315, or 70.5 per cent, represented the value of all-wool woven goods. The products included under the head of "all other all-wool goods" comprised principally worsted dress goods, cashmeres, serges, etc. The partly manufactured articles represent a certain amount of duplication, because, although they are products of one set of mills, they become the materials of other establishments.

The only data for which comparisons with prior censuses can be made are those in regard to some of the principal materials and machinery. The following tabular statement shows the quantity of the principal materials reported for 1909, 1904, and 1899:

| MATERIAL.                                       | QUANTITY CONSUMED (POUNDS). |                   |                   |
|---|-----------------------------|-------------------|-------------------|
|   | 1909                        | 1904              | 1899              |
| <b>Wool in condition purchased, total</b> ..... | <b>22,734,062</b>           | <b>18,008,958</b> | <b>16,218,609</b> |
| Foreign.....                                    | 10,706,575                  | 4,410,445         | 1,581,428         |
| Domestic.....                                   | 12,027,487                  | 13,598,513        | 14,637,181        |
| Raw cotton and cotton yarn, purchased.....      | 1,673,223                   | 3,635,302         | 6,799,375         |
| Shoddy purchased and made in mill.....          | 5,798,570                   | 11,688,125        | 6,433,071         |

There has been a steady increase in the total amount of wool consumed in the industry. It is interesting to note, however, that the increase is entirely in foreign wool, while the amount of domestic wool shows a small decrease at each census. The steady decrease in the use of raw cotton and cotton yarn and the large decrease from 1904 to 1909 in the use of shoddy are significant.

The following table shows the number of spindles, looms, woolen cards, and combing machines reported at the censuses of 1909, 1904, and 1899:

| MACHINE.                    | 1909    | 1904    | 1899    |
|-----------------------------|---------|---------|---------|
| Spindles <sup>1</sup> ..... | 193,704 | 234,974 | 145,272 |
| Looms.....                  | 4,230   | 4,397   | 5,312   |
| Woolen cards (sets).....    | 352     | 370     | 335     |
| Combing machines.....       | 52      | 24      | 24      |

<sup>1</sup> Includes both producing and doubling and twisting spindles.

Laundries.—Statistics for steam laundries are not included in the general tables or in the totals for manufacturing industries. In 1909 there were 61 such establishments in the state of New Hampshire. The following statement summarizes the statistics:

|                                    |           |
|------------------------------------|-----------|
| Number of establishments.....      | 61        |
| Persons engaged in industry.....   | 706       |
| Proprietors and firm members.....  | 82        |
| Salaried employees.....            | 16        |
| Wage earners (average number)..... | 608       |
| Primary horsepower.....            | 988       |
| Capital.....                       | \$303,013 |
| Expenses.....                      | 379,299   |
| Services.....                      | 233,086   |
| Materials.....                     | 80,027    |
| Miscellaneous.....                 | 66,186    |
| Amount received for work done..... | 518,600   |

Forty-three establishments were operated by individuals, and 18 by firms. Twenty establishments reported receipts for the year's business of less than \$5,000; 38, receipts of \$5,000 but less than \$20,000; and 3, receipts of \$20,000 but less than \$100,000.

The number of wage earners employed each month and the per cent which this number represented of the greatest number employed in any month were as follows:

| MONTH.        | WAGE EARNERS. |                      | MONTH.         | WAGE EARNERS. |                      |
|---------------|---------------|----------------------|----------------|---------------|----------------------|
|               | Number.       | Per cent of maximum. |                | Number.       | Per cent of maximum. |
| January.....  | 536           | 77.0                 | July.....      | 672           | 97.2                 |
| February..... | 542           | 78.4                 | August.....    | 691           | 100.0                |
| March.....    | 545           | 78.0                 | September..... | 671           | 97.1                 |
| April.....    | 500           | 81.0                 | October.....   | 620           | 89.7                 |
| May.....      | 615           | 89.0                 | November.....  | 601           | 87.0                 |
| June.....     | 652           | 94.4                 | December.....  | 598           | 86.5                 |

The different kinds of primary power, the number of engines, and the amount of horsepower used in

1909 are shown in the following tabular statement:

| KIND.                     | Number of engines or motors. | Horse-power. |
|---------------------------|------------------------------|--------------|
| Primary power, total..... |                              | 988          |
| Owned.....                | 50                           | 861          |
| Steam.....                | 47                           | 825          |
| Gas.....                  | 1                            | 7            |
| Water wheels.....         | 1                            | 25           |
| Water motors.....         | 1                            | 4            |
| Rented.....               | 19                           | 127          |
| Electric.....             | 19                           | 82           |
| Other.....                |                              | 45           |

The kind and amount of fuel used are shown in the following statement:

| KIND.                | Unit.           | Quantity. |
|----------------------|-----------------|-----------|
| Anthracite coal..... | Tons.....       | 470       |
| Bituminous coal..... | Tons.....       | 4,932     |
| Coke.....            | Tons.....       | 223       |
| Wood.....            | Cords.....      | 70        |
| Oil.....             | Barrels.....    | 21        |
| Gas.....             | 1,000 feet..... | 2,580     |

Custom saw and grist mills.—Statistics for custom saw and grist mills are not included in the general tables or in the totals for manufacturing industries, but are presented in the following summary:

|                                    | Custom sawmills. | Custom gristmills. |
|------------------------------------|------------------|--------------------|
| Number of establishments.....      | 42               | 25                 |
| Persons engaged in industry.....   | 04               | 38                 |
| Proprietors and firm members.....  | 46               | 33                 |
| Salaried employees.....            | 1                |                    |
| Wage earners (average number)..... | 47               | 5                  |
| Primary horsepower.....            | 1,970            | 743                |
| Capital.....                       | \$91,373         | \$87,176           |
| Expenses.....                      | 27,585           | 67,210             |
| Services.....                      | 21,970           | 1,819              |
| Materials.....                     | 666              | 1,63,972           |
| Miscellaneous.....                 | 4,653            | 1,428              |
| Value of products.....             | 49,201           | 1,77,443           |

<sup>1</sup> Includes estimate of all grain ground.

TABLE I.—COMPARATIVE SUMMARY FOR 1909, 1904, AND 1899.

THE STATE—ALL INDUSTRIES COMBINED AND SELECTED INDUSTRIES.

| INDUSTRY.   | Census. | Number of establishments. | PERSONS ENGAGED IN INDUSTRY. |                               |                     |                                | Primary horsepower. | Capital.  | Salaries. | Wages.   | Cost of materials. | Value of products. | Value added by manufacture. |
|---|---------|---------------------------|------------------------------|-------------------------------|---------------------|--------------------------------|---------------------|-----------|-----------|----------|--------------------|--------------------|-----------------------------|
|   |         |                           | Total.                       | Proprietors and firm members. | Salaried employees. | Wage earners (average number). |                     |           |           |          |                    |                    |                             |
| STATE—All industries.....                             | 1909    | 1,961                     | 84,191                       | 2,014                         | 3,519               | 78,658                         | 293,901             | \$130,990 | \$4,191   | \$36,200 | \$98,157           | \$164,581          | \$66,424                    |
|   | 1904    | 1,618                     | 69,758                       | 1,726                         | 2,666               | 65,366                         | 218,344             | 109,495   | 2,972     | 27,693   | 73,216             | 123,611            | 50,395                      |
|   | 1899    | 1,771                     |                              |                               | 2,068               | 67,046                         | 200,975             | 92,146    | 3,200     | 25,850   | 60,163             | 107,591            | 47,428                      |
| Boots and shoes, including cut stock and findings.... | 1909    | 68                        | 15,113                       | 61                            | 841                 | 14,211                         | 8,582               | 12,700    | 850       | 6,897    | 28,215             | 39,440             | 11,225                      |
|   | 1904    | 61                        | 11,329                       | 74                            | 511                 | 10,744                         | 5,284               | 8,274     | 464       | 4,494    | 15,747             | 22,834             | 7,087                       |
|   | 1899    | 84                        | 12,894                       | 106                           | 372                 | 12,416                         |                     | 8,330     | 366       | 5,106    | 16,713             | 23,766             | 7,053                       |
| Boxes, fancy and paper.....                           | 1909    | 12                        | 192                          | 15                            | 9                   | 168                            | 142                 | 123       | 9         | 65       | 138                | 273                | 135                         |
|   | 1904    | 12                        | 230                          | 18                            | 10                  | 202                            | 163                 | 125       | 7         | 69       | 118                | 244                | 126                         |
|   | 1899    | 16                        | 245                          | 20                            | 11                  | 214                            |                     | 151       | 6         | 71       | 138                | 262                | 124                         |
| Brass and bronze products.....                        | 1909    | 5                         | 63                           | 4                             | 3                   | 56                             | 123                 | 98        | 6         | 29       | 45                 | 102                | 57                          |
|   | 1904    | 7                         | 98                           | 6                             | 7                   | 85                             | 129                 | 113       | 9         | 48       | 70                 | 161                | 91                          |
|   | 1899    | 3                         |                              |                               | 5                   | 44                             |                     | 62        | 9         | 10       | 30                 | 79                 | 49                          |
| Bread and other bakery products.....                  | 1909    | 157                       | 662                          | 182                           | 26                  | 454                            | 185                 | 501       | 17        | 249      | 1,055              | 1,683              | 628                         |
|   | 1904    | 113                       | 514                          | 129                           | 28                  | 357                            | 70                  | 347       | 14        | 188      | 652                | 1,075              | 423                         |
|   | 1899    | 114                       |                              |                               | 32                  | 331                            |                     | 274       | 15        | 165      | 450                | 834                | 384                         |

Expressed in thousands.

## STATISTICS OF MANUFACTURES—NEW HAMPSHIRE.

TABLE I.—COMPARATIVE SUMMARY FOR 1909, 1904, AND 1899—Continued.

THE STATE—ALL INDUSTRIES COMBINED AND SELECTED INDUSTRIES—Continued.

| INDUSTRY.   | Cen-<br>sus. | Num-<br>ber of<br>estab-<br>lish-<br>ments. | PERSONS ENGAGED IN<br>INDUSTRY. |   |                                       |  | Pri-<br>mary<br>horse-<br>power. | Capital. | Salu-<br>ries. | Wages. | Cost of<br>mate-<br>rials. | Value of<br>prod-<br>ucts. | Value<br>added<br>by<br>mana-<br>fac-<br>ture. |
|---|--------------|---|---------------------------------|---|---------------------------------------|--|----------------------------------|----------|----------------|--------|----------------------------|----------------------------|--|
|   |              |   | Total.                          | Pro-<br>pri-<br>etors<br>and<br>firm<br>mem-<br>bers. | Salu-<br>ried<br>em-<br>ploe-<br>ees. | Wage<br>earn-<br>ers<br>(aver-<br>age<br>num-<br>ber). |                                  |          |                |        |                            |                            |  |
| Expressed in thousands.   |              |   |                                 |   |                                       |  |                                  |          |                |        |                            |                            |  |
| Brick and tile.....   | 1909         | 29  | 443                             | 24  | 24                                    | 395  | 727                              | \$586    | \$27           | \$199  | \$156                      | \$533                      | \$477  |
|   | 1904         | 36  | 578                             | 32  | 19                                    | 527  | 1,235                            | 933      | 19             | 229    | 151                        | 529                        | 378  |
|   | 1899         | 55  | 696                             | 71  | 34                                    | 591  | 1,068                            | 656      | 18             | 228    | 147                        | 538                        | 391  |
| Butter, cheese, and condensed milk.....                         | 1909         | 20  | 85                              | 13  | 22                                    | 50   | 492                              | 214      | 8              | 31     | 709                        | 807                        | 88   |
|   | 1904         | 1 34  | 103                             | 20  | 20                                    | 63   | 514                              | 163      | 6              | 36     | 730                        | 864                        | 131  |
|   | 1899         | 53  | 180                             | 27  | 34                                    | 119  | 711                              | 311      | 11             | 58     | 1,226                      | 1,468                      | 212  |
| Carriages and wagons and materials.....                         | 1909         | 44  | 493                             | 44  | 29                                    | 420  | 1,231                            | 1,067    | 31             | 240    | 346                        | 734                        | 388  |
|   | 1904         | 48  | 603                             | 53  | 29                                    | 521  | 1,253                            | 1,141    | 31             | 297    | 291                        | 784                        | 493  |
|   | 1899         | 59  | .....                           | .....   | 33                                    | 616  | .....                            | 1,261    | 31             | 320    | 340                        | 906                        | 557  |
| Clothing, men's, including shirts.....                          | 1909         | 12  | 540                             | 12  | 57                                    | 471  | 234                              | 458      | 47             | 161    | 462                        | 785                        | 324  |
|   | 1904         | 9   | 307                             | 12  | 37                                    | 258  | 97                               | 208      | 28             | 83     | 264                        | 438                        | 174  |
|   | 1899         | 9   | 283                             | 13  | 25                                    | 245  | 105                              | 250      | 21             | 60     | 253                        | 418                        | 165  |
| Clothing, women's.....  | 1909         | 8   | 273                             | 9   | 23                                    | 241  | 134                              | 365      | 26             | 75     | 255                        | 306                        | 141  |
|   | 1904         | 7   | 395                             | 3   | 13                                    | 370  | 145                              | 511      | 14             | 130    | 402                        | 602                        | 200  |
|   | 1899         | 5   | 457                             | .....   | 23                                    | 434  | 168                              | 147      | 26             | 134    | 325                        | 529                        | 195  |
| Cooperage and wooden goods, not elsewhere specified.....        | 1909         | 30  | 773                             | 37  | 23                                    | 713  | 3,180                            | 868      | 21             | 323    | 449                        | 918                        | 499  |
|   | 1904         | 27  | 770                             | 24  | 22                                    | 738  | 2,514                            | 804      | 17             | 338    | 393                        | 987                        | 594  |
|   | 1899         | 24  | .....                           | .....   | 20                                    | 773  | .....                            | 720      | 14             | 297    | 318                        | 824                        | 506  |
| Cotton goods, including cotton small wares.....                 | 1909         | 21  | 22,504                          | 3   | 211                                   | 22,290   | 83,966                           | 20,176   | 411            | 8,038  | 19,124                     | 33,602                     | 14,478   |
|   | 1904         | 25  | 20,044                          | 4   | 300                                   | 19,731   | 75,540                           | 31,176   | 516            | 7,373  | 18,497                     | 29,541                     | 11,044   |
|   | 1899         | 23  | 20,620                          | .....   | 175                                   | 20,454   | 68,473                           | 29,262   | 371            | 6,750  | 11,960                     | 22,998                     | 11,018   |
| Cutlery and tools, not elsewhere specified.....                 | 1909         | 12  | 316                             | 11  | 37                                    | 268  | 470                              | 483      | 37             | 146    | 99                         | 328                        | 229  |
|   | 1904         | 13  | 402                             | 19  | 27                                    | 416  | 782                              | 447      | 31             | 193    | 172                        | 470                        | 307  |
|   | 1899         | 9   | 402                             | 14  | 23                                    | 425  | .....                            | 404      | 28             | 195    | 133                        | 432                        | 290  |
| Electrical machinery, apparatus, and supplies.....              | 1909         | 6   | 218                             | 2   | 23                                    | 193  | 422                              | 378      | 24             | 87     | 155                        | 388                        | 233  |
|   | 1904         | 5   | 100                             | 3   | 14                                    | 83   | 172                              | 162      | 12             | 32     | 88                         | 159                        | 62   |
|   | 1899         | 5   | 108                             | 3   | 11                                    | 94   | 293                              | 183      | 7              | 33     | 82                         | 182                        | 100  |
| Flour-mill and gristmill products.....                          | 1909         | 105   | 288                             | 149   | 23                                    | 116  | 5,502                            | 1,320    | 17             | 62     | 2,809                      | 3,187                      | 378  |
|   | 1904         | 72  | 248                             | 109   | 11                                    | 128  | 4,523                            | 1,009    | 9              | 63     | 2,348                      | 2,542                      | 194  |
|   | 1899         | 80  | .....                           | 14  | 157                                   | .....  | .....                            | 868      | 10             | 73     | 1,932                      | 2,205                      | 273  |
| Foundry and machine-shop products.....                          | 1909         | 81  | 2,702                           | 66  | 330                                   | 2,366  | 3,782                            | 6,170    | 361            | 1,304  | 1,699                      | 4,947                      | 3,248  |
|   | 1904         | 77  | 2,302                           | 61  | 221                                   | 2,020  | 3,212                            | 4,267    | 235            | 1,085  | 1,172                      | 3,214                      | 2,022  |
|   | 1899         | 1 93  | 2,396                           | 80  | 148                                   | 2,162  | .....                            | 3,110    | 150            | 1,027  | 1,412                      | 3,470                      | 2,038  |
| Furniture and refrigerators.....                                | 1909         | 26  | 935                             | 25  | 87                                    | 823  | 2,695                            | 1,597    | 75             | 388    | 696                        | 1,544                      | 848  |
|   | 1904         | 1 27  | 633                             | 29  | 56                                    | 548  | 1,842                            | 924      | 53             | 246    | 333                        | 846                        | 513  |
|   | 1899         | 1 24  | 637                             | 22  | 45                                    | 570  | 1,483                            | 734      | 34             | 224    | 321                        | 734                        | 413  |
| Gas, illuminating and heating.....                              | 1909         | 14  | 301                             | 2   | 52                                    | 247  | 220                              | 2,215    | 46             | 106    | 180                        | 581                        | 401  |
|   | 1904         | 13  | 177                             | .....   | 35                                    | 142  | 265                              | 1,790    | 28             | 73     | 108                        | 486                        | 318  |
|   | 1899         | 13  | 150                             | .....   | 35                                    | 121  | .....                            | 1,519    | 25             | 60     | 86                         | 356                        | 270  |
| Hosiery and knit goods.....                                     | 1909         | 21  | 3,223                           | 25  | 69                                    | 3,129  | 2,315                            | 3,580    | 97             | 1,143  | 2,636                      | 4,764                      | 2,128  |
|   | 1904         | 1 21  | 2,869                           | 20  | 89                                    | 2,790  | 2,216                            | 2,750    | 62             | 943    | 2,229                      | 3,974                      | 1,745  |
|   | 1899         | 22  | 2,550                           | 10  | 51                                    | 2,492  | 2,313                            | 2,525    | 58             | 701    | 1,319                      | 2,593                      | 1,274  |
| Leather goods.....  | 1909         | 9   | 333                             | 3   | 30                                    | 300  | 781                              | 579      | 24             | 137    | 260                        | 641                        | 351  |
|   | 1904         | 2 8   | 345                             | 4   | 21                                    | 320  | 345                              | 552      | 23             | 108    | 327                        | 653                        | 326  |
|   | 1899         | 7   | .....                           | .....   | 2                                     | 116  | .....                            | 197      | 1              | 53     | 104                        | 198                        | 94   |
| Liquors, malt.....  | 1909         | 4   | 321                             | .....   | 49                                    | 272  | 1,183                            | 2,042    | 79             | 195    | 545                        | 1,644                      | 1,099  |
|   | 1904         | 5   | 344                             | .....   | 49                                    | 295  | 1,261                            | 2,247    | 83             | 209    | 673                        | 2,255                      | 1,582  |
|   | 1899         | 5   | 314                             | .....   | 34                                    | 280  | 1,336                            | 2,048    | 65             | 185    | 590                        | 1,956                      | 1,357  |
| Lumber and timber products.....                                 | 1909         | 589   | 9,449                           | 689   | 296                                   | 8,464  | 44,593                           | 13,866   | 333            | 3,924  | 7,263                      | 15,284                     | 8,021  |
|   | 1904         | 474   | 7,586                           | 604   | 193                                   | 6,789  | 30,231                           | 8,748    | 188            | 2,908  | 5,301                      | 11,573                     | 6,272  |
|   | 1899         | 485   | .....                           | 212   | 9,085                                 | .....  | .....                            | 8,819    | 153            | 3,309  | 4,858                      | 11,594                     | 6,736  |
| Marble and stone work.....                                      | 1909         | 99  | 1,718                           | 135   | 56                                    | 1,527  | 3,620                            | 1,721    | 62             | 1,062  | 298                        | 1,818                      | 1,529  |
|   | 1904         | 55  | 1,156                           | 73  | 35                                    | 1,048  | 1,822                            | 969      | 29             | 610    | 281                        | 1,205                      | 924  |
|   | 1899         | 48  | .....                           | 35  | 35                                    | 870  | .....                            | 728      | 31             | 508    | 288                        | 1,080                      | 792  |
| Needles, pins, and hooks and eyes.....                          | 1909         | 7   | 451                             | 1   | 12                                    | 438  | 217                              | 246      | 11             | 171    | 38                         | 275                        | 237  |
|   | 1904         | 6   | 365                             | 1   | 11                                    | 353  | 249                              | 228      | 12             | 127    | 25                         | 208                        | 183  |
|   | 1899         | 5   | 410                             | 2   | 9                                     | 408  | .....                            | 209      | 9              | 145    | 28                         | 262                        | 231  |
| Paper and wood pulp.....  | 1909         | 34  | 3,668                           | 13  | 242                                   | 3,413  | 79,912                           | 27,534   | 485            | 2,106  | 9,253                      | 13,994                     | 4,711  |
|   | 1904         | 25  | 2,674                           | 5   | 147                                   | 2,522  | 49,784                           | 14,041   | 209            | 1,315  | 5,328                      | 8,030                      | 3,062  |
|   | 1899         | 29  | 2,524                           | 20  | 113                                   | 2,391  | 48,590                           | 8,163    | 173            | 1,037  | 3,953                      | 7,245                      | 3,292  |
| Patent medicines and compounds and druggists' preparations..... | 1909         | 22  | 61                              | 17  | 15                                    | 29   | 118                              | 167      | 16             | 17     | 79                         | 224                        | 145  |
|   | 1904         | 1 13  | 47                              | 9   | 16                                    | 22   | 8                                | 152      | 24             | 8      | 36                         | 206                        | 170  |
|   | 1899         | 12  | .....                           | 12  | 12                                    | 53   | .....                            | 113      | 15             | 20     | 63                         | 245                        | 182  |
| Printing and publishing.....                                    | 1909         | 143   | 984                             | 138   | 169                                   | 677  | 1,895                            | 1,066    | 116            | 356    | 259                        | 1,131                      | 872  |
|   | 1904         | 126   | 863                             | 122   | 86                                    | 645  | 637                              | 1,076    | 86             | 333    | 217                        | 969                        | 752  |
|   | 1899         | 134   | 884                             | 140   | 68                                    | 670  | .....                            | 1,215    | 65             | 304    | 216                        | 912                        | 694  |
| Slaughter and meat packing.....                                 | 1909         | 8   | 37                              | 10  | 3                                     | 24   | 87                               | 62       | 2              | 14     | 165                        | 190                        | 34   |
|   | 1904         | 7   | 15                              | 7   | .....                                 | 8  | .....                            | 15       | .....          | 4      | 26                         | 38                         | 12   |
|   | 1899         | 1 6   | 20                              | 8   | .....                                 | 12   | .....                            | 9        | .....          | 6      | 28                         | 43                         | 15   |

1 Does not include statistics for one establishment, to avoid disclosure of individual operations.

2 Does not include statistics for two establishments, to avoid disclosure of individual operations.

# STATISTICS OF MANUFACTURES—NEW HAMPSHIRE.

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TABLE I.—COMPARATIVE SUMMARY FOR 1909, 1904, AND 1899—Continued.

THE STATE—ALL INDUSTRIES COMBINED AND SELECTED INDUSTRIES—Continued.

| INDUSTRY.   | Cen-<br>sus. | Number of<br>estab-<br>lish-<br>ments. | PERSONS ENGAGED IN<br>INDUSTRY. |   |                                       |  | Pri-<br>mary<br>horse-<br>power. | Capital. | Sala-<br>ries. | Wages. | Cost of<br>mate-<br>rials. | Value of<br>prod-<br>ucts. | Value<br>added<br>by<br>manu-<br>facture. |
|---|--------------|--|---------------------------------|---|---------------------------------------|--|----------------------------------|----------|----------------|--------|----------------------------|----------------------------|---|
|   |              |  | Total.                          | Pro-<br>pri-<br>etors<br>and<br>firm<br>mem-<br>bers. | Sala-<br>ried<br>em-<br>ploy-<br>ees. | Wage<br>earn-<br>ers<br>(aver-<br>age<br>num-<br>ber). |                                  |          |                |        |                            |                            |   |
| Expressed in thousands.                             |              |  |                                 |   |                                       |  |                                  |          |                |        |                            |                            |   |
| Tobacco manufactures.....                           | 1909         | 51                                     | 640                             | 63  | 6                                     | 571  | 5                                | \$274    | \$11           | \$376  | \$676                      | \$1,250                    | \$574                                     |
|   | 1904         | 45                                     | 308                             | 53  | 3                                     | 342  |                                  | 203      | 2              | 198    | 261                        | 570                        | 309                                       |
|   | 1899         | 42                                     | 336                             | 48  | 4                                     | 284  |                                  | 147      | 2              | 146    | 276                        | 550                        | 274                                       |
| Woolen, worsted, and felt goods, and wool hats..... | 1909         | 39                                     | 9,701                           | 31  | 104                                   | 9,486  | 30,485                           | 15,103   | 289            | 3,639  | 11,095                     | 16,731                     | 5,636                                     |
|   | 1904         | 44                                     | 6,820                           | 22  | 207                                   | 6,581  | 18,437                           | 14,411   | 257            | 2,755  | 9,479                      | 14,284                     | 4,805                                     |
|   | 1899         | 43                                     | 4,208                           | 37  | 129                                   | 4,042  | 10,100                           | 8,161    | 153            | 1,572  | 4,741                      | 7,024                      | 2,883                                     |
| All other industries.....                           | 1909         | 276                                    | 7,014                           | 240   | 558                                   | 6,816  | 16,723                           | 14,863   | 653            | 3,660  | 8,908                      | 10,348                     | 7,380                                     |
|   | 1904         | 203                                    | 7,354                           | 200   | 440                                   | 6,714  | 15,580                           | 11,049   | 474            | 3,078  | 7,437                      | 12,940                     | 5,503                                     |
|   | 1899         | 255                                    |                                 |   | 359                                   | 7,171  |                                  | 11,561   | 333            | 2,936  | 7,815                      | 13,297                     | 5,482                                     |

CITIES OF 50,000 INHABITANTS OR MORE—ALL INDUSTRIES COMBINED AND SELECTED INDUSTRIES.

|  |      |     |        |     |     |        |        |          |       |          |          |          |          |
|--|------|-----|--------|-----|-----|--------|--------|----------|-------|----------|----------|----------|----------|
| <b>MANCHESTER—All industries.....</b>                  | 1909 | 175 | 25,718 | 156 | 827 | 24,735 | 61,796 | \$26,221 | \$880 | \$10,444 | \$30,497 | \$46,812 | \$16,315 |
|  | 1904 | 155 | 18,327 | 142 | 606 | 17,579 |        | 25,248   | 681   | 7,323    | 18,707   | 30,697   | 11,980   |
|  | 1899 | 166 |        |     | 308 | 17,862 |        | 21,540   | 441   | 6,468    | 13,803   | 24,628   | 10,825   |
| Boots and shoes, including cut stock and findings..... | 1909 | 14  | 5,327  | 9   | 422 | 4,896  | 2,204  | 3,818    | 363   | 2,323    | 13,327   | 17,647   | 4,320    |
|  | 1904 | 20  | 2,958  | 7   | 215 | 2,736  |        | 1,098    | 160   | 1,221    | 4,602    | 6,508    | 1,876    |
|  | 1899 | 20  |        |     | 92  | 2,002  |        | 1,160    | 95    | 837      | 2,904    | 4,052    | 1,148    |
| Bread and other bakery products.....                   | 1909 | 36  | 171    | 44  | 2   | 125    | 31     | 80       | 1     | 65       | 256      | 410      | 154      |
|  | 1904 | 27  | 136    | 36  | 14  | 86     |        | 43       | 5     | 44       | 167      | 276      | 109      |
|  | 1899 | 29  |        |     | 2   | 74     |        | 28       | 1     | 35       | 119      | 193      | 74       |
| Carrriages and wagons and materials.....               | 1909 | 5   | 52     | 6   | 7   | 30     | 83     | 150      | 7     | 24       | 115      | 160      | 45       |
|  | 1904 | 7   | 100    | 8   | 6   | 86     |        | 220      | 7     | 53       | 50       | 136      | 86       |
|  | 1899 | 9   |        |     | 12  | 110    |        | 248      | 7     | 56       | 52       | 166      | 114      |
| Foundry and machine-shop products.....                 | 1909 | 8   | 123    | 5   | 21  | 97     | 69     | 170      | 17    | 54       | 125      | 240      | 115      |
|  | 1904 | 27  | 102    | 7   | 13  | 82     |        | 175      | 10    | 35       | 25       | 111      | 86       |
|  | 1899 | 29  |        |     | 17  | 422    |        | 557      | 23    | 202      | 242      | 511      | 260      |
| Lumber and timber products.....                        | 1909 | 11  | 394    | 8   | 20  | 366    | 1,430  | 507      | 20    | 108      | 755      | 1,082    | 327      |
|  | 1904 | 7   | 251    | 5   | 13  | 233    |        | 378      | 12    | 112      | 379      | 554      | 175      |
|  | 1899 | 10  |        |     | 6   | 233    |        | 341      | 4     | 105      | 179      | 379      | 200      |
| Printing and publishing.....                           | 1909 | 21  | 267    | 17  | 99  | 161    | 118    | 220      | 55    | 88       | 74       | 331      | 257      |
|  | 1904 | 20  | 183    | 15  | 28  | 140    |        | 242      | 34    | 88       | 57       | 297      | 210      |
|  | 1899 | 20  |        |     | 22  | 169    |        | 340      | 24    | 95       | 60       | 252      | 192      |
| Slaughtering and meat packing.....                     | 1909 | 3   | 20     | 3   | 1   | 16     | 55     | 27       | 1     | 9        | 100      | 123      | 23       |
|  | 1904 | 7   | 15     | 7   |     | 8      |        | 15       |       | 4        | 26       | 38       | 12       |
|  | 1899 | 4   |        |     |     | 11     |        | 6        |       | 5        | 26       | 37       | 11       |
| Tobacco manufactures.....                              | 1909 | 18  | 520    | 25  | 2   | 493    | 5      | 210      | 7     | 335      | 621      | 1,111    | 490      |
|  | 1904 | 18  | 284    | 22  | 1   | 201    |        | 155      | 1     | 159      | 200      | 428      | 228      |
|  | 1899 | 15  |        |     | 1   | 187    |        | 102      | 1     | 96       | 227      | 401      | 174      |
| All other industries.....                              | 1909 | 59  | 18,844 | 39  | 253 | 18,552 | 57,711 | 21,024   | 403   | 7,348    | 15,124   | 25,708   | 10,584   |
|  | 1904 | 54  | 14,298 | 35  | 316 | 13,947 |        | 22,322   | 452   | 5,607    | 13,111   | 22,319   | 9,208    |
|  | 1899 | 64  |        |     | 166 | 14,664 |        | 18,750   | 285   | 5,037    | 9,994    | 18,637   | 8,643    |

CITIES OF 10,000 TO 50,000 INHABITANTS—ALL INDUSTRIES COMBINED.

|                 |      |     |       |     |     |       |        |          |       |       |         |         |         |
|-----------------|------|-----|-------|-----|-----|-------|--------|----------|-------|-------|---------|---------|---------|
| Berlin.....     | 1909 | 20  | 1,906 | 18  | 98  | 1,790 | 25,537 | \$13,050 | \$160 | \$879 | \$3,654 | \$5,897 | \$2,243 |
|                 | 1904 |     |       |     |     |       |        |          |       |       |         |         |         |
|                 | 1899 |     |       |     |     |       |        |          |       |       |         |         |         |
| Concord.....    | 1909 | 111 | 3,059 | 110 | 256 | 2,603 | 6,381  | 5,574    | 204   | 1,641 | 3,546   | 6,470   | 2,030   |
|                 | 1904 | 80  | 2,949 | 79  | 210 | 2,654 |        | 5,701    | 238   | 1,436 | 2,831   | 5,374   | 2,543   |
|                 | 1899 | 86  |       |     | 140 | 2,432 |        | 4,254    | 135   | 1,300 | 2,088   | 4,211   | 2,123   |
| Dover.....      | 1909 | 51  | 3,227 | 49  | 148 | 3,030 | 10,305 | 6,368    | 183   | 1,486 | 3,236   | 6,370   | 3,134   |
|                 | 1904 | 42  | 3,034 | 43  | 132 | 2,859 |        | 7,789    | 182   | 1,227 | 3,809   | 6,043   | 2,174   |
|                 | 1899 | 40  |       |     | 99  | 2,797 |        | 6,408    | 139   | 1,220 | 3,273   | 5,440   | 2,167   |
| Keene.....      | 1909 | 64  | 1,993 | 47  | 177 | 1,769 | 5,158  | 2,959    | 105   | 973   | 1,837   | 3,483   | 1,646   |
|                 | 1904 |     |       |     |     |       |        |          |       |       |         |         |         |
|                 | 1899 |     |       |     |     |       |        |          |       |       |         |         |         |
| Laconia.....    | 1909 | 43  | 2,252 | 30  | 67  | 2,146 | 2,203  | 3,168    | 88    | 981   | 2,013   | 3,818   | 1,805   |
|                 | 1904 |     |       |     |     |       |        |          |       |       |         |         |         |
|                 | 1899 |     |       |     |     |       |        |          |       |       |         |         |         |
| Nashua.....     | 1909 | 104 | 7,757 | 92  | 353 | 7,313 | 17,567 | 12,854   | 441   | 3,112 | 10,379  | 17,320  | 6,947   |
|                 | 1904 | 78  | 6,462 | 68  | 235 | 6,159 |        | 9,405    | 266   | 2,508 | 8,483   | 12,858  | 4,375   |
|                 | 1899 | 72  |       |     | 179 | 5,777 |        | 9,287    | 189   | 2,327 | 6,126   | 10,096  | 3,970   |
| Portsmouth..... | 1909 | 36  | 1,097 | 28  | 77  | 992   | 1,840  | 3,137    | 108   | 500   | 1,361   | 2,871   | 1,510   |
|                 | 1904 | 27  | 730   | 24  | 68  | 638   |        | 2,631    | 96    | 348   | 888     | 2,602   | 1,714   |
|                 | 1899 | 38  |       |     | 94  | 1,323 |        | 3,012    | 112   | 657   | 1,875   | 3,961   | 2,086   |

<sup>1</sup> Does not include statistics for two establishments, to avoid disclosure of individual operations.

<sup>2</sup> Does not include statistics for one establishment, to avoid disclosure of individual operations.

<sup>3</sup> Population less than 10,000 in 1900.

<sup>4</sup> Figures do not agree with those published in 1904, because it was necessary to revise the totals in order to include data only for those establishments located within the corporate limits of the cities.

TABLE II.—DETAIL STATEMENT FOR

| INDUSTRY.  | Number of establishments. | PERSONS ENGAGED IN INDUSTRY. |                               |   |         |         |                 |                |                |        |              | WAGE EARNERS—NUMBER DEC. 15, OR NEAREST REPRESENTATIVE DAY. |           |         |        |  | Primary horse-power. |
|--|---------------------------|------------------------------|-------------------------------|---|---------|---------|-----------------|----------------|----------------|--------|--------------|---|-----------|---------|--------|--|----------------------|
|  |                           | Total.                       | Proprietors and firm members. | Salaried officers, superintendents, and managers. | Clerks. |         | Wage earners.   |                |                | Total. | 16 and over. |   | Under 16. |         |        |  |                      |
|  |                           |                              |                               |   | Male.   | Female. | Average number. | Number.        |                |        | Male.        | Female.   | Male.     | Female. |        |  |                      |
|  |                           |                              |                               |   |         |         |                 | Maximum month. | Minimum month. |        |              |   |           |         |        |  |                      |
| 1 All industries.....  | 1,901                     | 84,191                       | 3,014                         | 1,265   | 1,441   | 813     | 78,658          | De 80,936      | Jy 76,324      | (1)    | (1)          | (1)   | (1)       | 293,691 |        |  |                      |
| 2 Agricultural implements.....                                     | 5                         | 32                           | 6                             | 2   |         |         | 24              | Mh 35          | Jy 2           | 27     | 27           |   |           | 205     |        |  |                      |
| 3 Artificial stone.....  | 5                         | 11                           | 4                             |   |         |         | 7               | Jy 2 15        | Ja 2 2         | 14     | 14           |   |           | 5       |        |  |                      |
| 4 Blacking and cleansing and polishing preparations.....           | 6                         | 39                           | 5                             | 3   | 2       | 10      | 19              | Mh 20          | Au 18          | 20     | 16           | 4   |           | 60      |        |  |                      |
| 5 Boots and shoes, including out stock and findings.....           | 68                        | 15,113                       | 61                            | 251   | 271     | 319     | 14,211          | No 15,200      | My 13,744      | 15,369 | 10,105       | 4,807   | 220       | 147     | 8,532  |  |                      |
| 6 Boxes, fancy and paper.....                                      | 12                        | 192                          | 15                            | 6   | 2       | 1       | 168             | De 178         | Je 158         | 181    | 52           | 129   |           | 142     |        |  |                      |
| 7 Brass and bronze products.....                                   | 5                         | 63                           | 4                             | 3   |         |         | 56              | Je 63          | Ja 49          | 50     | 50           |   |           | 123     |        |  |                      |
| 8 Bread and other bakery products.....                             | 157                       | 662                          | 182                           | 2   | 17      | 7       | 454             | Jy 483         | Ap 431         | 473    | 371          | 83  | 0         | 10      | 185    |  |                      |
| 9 Brick and tile.....  | 29                        | 443                          | 24                            | 15  | 8       | 1       | 395             | My 706         | Mh 67          | 318    | 314          | 2   | 2         |         | 727    |  |                      |
| 10 Brooms.....   | 5                         | 17                           | 5                             |   |         |         | 12              | Ap 15          | Au 9           | 12     | 11           | 1   |           | 9       |        |  |                      |
| 11 Butter, cheese, and condensed milk.....                         | 29                        | 85                           | 13                            | 16  | 3       | 3       | 56              | Jy 57          | De 45          | 52     | 50           | 2   |           | 492     |        |  |                      |
| 12 Canning and preserving.....                                     | 6                         | 37                           | 7                             | 3   |         | 1       | 20              | Se 153         | Jy 1           | 148    | 92           | 56  |           | 60      |        |  |                      |
| 13 Carriages and wagons and materials.....                         | 44                        | 403                          | 44                            | 14  | 10      | 5       | 420             | Ap 437         | Au 400         | 437    | 435          | 2   |           | 1,231   |        |  |                      |
| 14 Clothing, men's, including shirts.....                          | 12                        | 540                          | 12                            | 0   | 39      | 9       | 471             | No 529         | Je 414         | 524    | 46           | 476   |           | 2       | 234    |  |                      |
| 15 Clothing, women's.....  | 8                         | 273                          | 0                             | 10  | 6       | 7       | 241             | Fe 371         | Au 203         | 269    | 33           | 234   | 1         | 1       | 134    |  |                      |
| 16 Confectionery.....  | 10                        | 41                           | 0                             | 1   |         | 2       | 20              | Ja 32          | Au 23          | 30     | 10           | 11  |           | 4       |        |  |                      |
| 17 Cooperage and wooden goods, not elsewhere specified.....        | 30                        | 773                          | 37                            | 13  | 4       | 6       | 713             | Ja 789         | Au 594         | 794    | 741          | 31  | 19        | 3       | 3,189  |  |                      |
| 18 Copper, tin, and sheet-iron products.....                       | 9                         | 44                           | 12                            | 3   | 1       | 2       | 26              | My 2 32        | Ja 15          | 25     | 25           |   |           | 48      |        |  |                      |
| 19 Cotton goods, including cotton small wares.....                 | 21                        | 22,504                       | 3                             | 60  | 112     | 39      | 22,290          | Oc 22,400      | De 21,941      | 22,016 | 10,635       | 10,643  | 265       | 173     | 83,906 |  |                      |
| 20 Cutlery and tools, not elsewhere specified.....                 | 12                        | 316                          | 11                            | 9   | 17      | 11      | 268             | De 318         | My 230         | 318    | 297          | 16  | 5         |         | 470    |  |                      |
| 21 Electrical machinery, apparatus, and supplies.....              | 6                         | 218                          | 2                             | 9   | 5       | 9       | 193             | My 211         | Ja 167         | 206    | 146          | 60  |           | 422     |        |  |                      |
| 22 Electroplating.....   | 3                         | 5                            | 1                             | 1   |         |         | 3               | De 4           | Je 3           | 4      | 4            |   |           | 13      |        |  |                      |
| 23 Flour-mill and gristmill products.....                          | 105                       | 288                          | 149                           | 7   | 13      | 3       | 116             | De 121         | Jy 112         | 129    | 129          |   |           | 5,592   |        |  |                      |
| 24 Foundry and machine-shop products.....                          | 81                        | 2,792                        | 66                            | 103   | 170     | 57      | 2,396           | De 2,680       | Ap 2,254       | 2,707  | 2,579        | 115   | 13        |         | 3,782  |  |                      |
| 25 Furniture and refrigerators.....                                | 26                        | 935                          | 26                            | 28  | 35      | 24      | 823             | No 898         | Jy 718         | 911    | 862          | 23  | 25        | 1       | 2,065  |  |                      |
| 26 Gas, illuminating and heating.....                              | 14                        | 301                          | 2                             | 20  | 25      | 7       | 247             | Jy 323         | Ja 191         | 305    | 305          |   |           | 230     |        |  |                      |
| 27 Hosiery and knit goods.....                                     | 21                        | 3,223                        | 25                            | 38  | 10      | 21      | 3,129           | No 3,246       | Au 3,011       | 3,302  | 1,034        | 2,204   | 27        | 37      | 2,315  |  |                      |
| 28 Leather goods.....  | 9                         | 333                          | 3                             | 16  | 7       | 7       | 300             | Oc 320         | Jy 269         | 301    | 273          | 28  |           | 781     |        |  |                      |
| 29 Liquors, malt.....  | 4                         | 321                          |                               | 13  | 28      | 8       | 272             | Je 292         | Ap 255         | 272    | 272          |   |           | 1,183   |        |  |                      |
| 30 Lumber and timber products.....                                 | 589                       | 9,449                        | 689                           | 142   | 105     | 49      | 8,464           | Fe 10,651      | Au 6,164       | 11,229 | 11,037       | 138   | 38        | 16      | 44,593 |  |                      |
| 31 Marble and stone work.....                                      | 99                        | 1,718                        | 135                           | 35  | 16      | 5       | 1,527           | My 1,782       | Ja 979         | 1,532  | 1,531        |   | 1         | 3,629   |        |  |                      |
| 32 Mattresses and spring beds.....                                 | 4                         | 25                           | 4                             | 2   |         |         | 19              | My 23          | Fe 13          | 17     | 13           | 4   |           | 101     |        |  |                      |
| 33 Needles, pins, and hooks and eyes.....                          | 7                         | 451                          | 1                             | 7   | 1       | 4       | 438             | De 474         | Ja 393         | 474    | 243          | 224   | 3         | 4       | 217    |  |                      |
| 34 Optical goods.....  | 3                         | 99                           | 3                             | 3   | 1       | 1       | 91              | Ja 100         | De 85          | 85     | 68           | 17  |           | 186     |        |  |                      |
| 35 Paper and wood pulp.....  | 34                        | 3,608                        | 13                            | 88  | 139     | 15      | 3,413           | Oc 3,618       | Au 3,255       | 3,423  | 3,292        | 131   |           |         | 79,912 |  |                      |
| 36 Patent medicines and compounds and druggists' preparations..... | 22                        | 61                           | 17                            | 5   | 8       | 2       | 29              | Ap 36          | No 24          | 36     | 25           | 10  |           | 1       | 118    |  |                      |
| 37 Printing and publishing.....                                    | 143                       | 984                          | 138                           | 42  | 87      | 40      | 677             | Fe 721         | Au 640         | 710    | 485          | 210   | 14        | 1       | 1,865  |  |                      |
| 38 Slaughtering and meat packing.....                              | 8                         | 37                           | 10                            |   | 3       |         | 24              | Ja 24          | Jy 24          | 24     | 24           |   |           | 87      |        |  |                      |
| 39 Shipbuilding, including boat building.....                      | 8                         | 18                           | 9                             |   |         |         | 9               | Jy 12          | Ja 6           | 9      | 9            |   |           | 41      |        |  |                      |
| 40 Surgical appliances and artificial limbs.....                   | 5                         | 50                           | 7                             |   |         |         | 43              | Fe 47          | Au 37          | 45     | 41           | 4   |           | 244     |        |  |                      |
| 41 Tobacco manufactures.....                                       | 51                        | 640                          | 63                            | 6   |         |         | 571             | Ja 584         | Je 547         | 594    | 433          | 156   | 5         | 6       | 30,485 |  |                      |
| 42 Woolen, worsted, and felt goods, and wool hats.....             | 39                        | 9,701                        | 21                            | 102   | 59      | 33      | 9,486           | Au 9,694       | Fe 9,237       | 9,752  | 5,488        | 4,112   | 73        | 79      | 30,485 |  |                      |
| 43 All other industries.....                                       | 207                       | 7,196                        | 168                           | 178   | 237     | 105     | 6,508           |                |                |        |              |   |           | 15,687  |        |  |                      |

1 No figures given for reasons explained in the Introduction, page 2. See also discussion of wage earners on page 7.  
 2 Same number reported for one or more other months.  
 3 Same number reported for entire year.  
 4 All other industries embrace—

|  |   |   |    |  |    |
|--|---|---|----|--|----|
| Awning, tents, and sails.....  | 7 | Flavoring extracts.....                             | 2  | Musical instruments, pianos and organs, and materials..... | 4  |
| Baskets, and rattan and willow ware.....   | 2 | Food preparations.....                              | 2  | Paper goods, not elsewhere specified.....                  | 3  |
| Belting and hose, leather.....   | 1 | Furnishing goods, men's.....                        | 1  | Photo-engraving.....                                       | 1  |
| Billiard tables and materials.....   | 1 | Gloves and mittens, leather.....                    | 3  | Pottery, terra-cotta, and fire-clay products.....          | 2  |
| Boxes, cigar.....  | 1 | Glue.....   | 1  | Rubber goods, not elsewhere specified.....                 | 1  |
| Bushes.....  | 2 | Grease and tallow.....                              | 4  | Saws.....  | 2  |
| Buttons.....   | 1 | Hairwork.....                                       | 1  | Show cases.....  | 1  |
| Carpets and rugs, other than rag.....  | 1 | Band stamps and stencils and brands.....            | 2  | Signs and advertising novelties.....                       | 1  |
| Carpets, rag.....  | 1 | Hats, fur felt.....                                 | 1  | Silk and silk goods, including throwsters.....             | 1  |
| Cars and general shop construction and repairs by steam-railroad companies.....  | 5 | Bones and whetstones.....                           | 2  | Silverware and plated ware.....                            | 2  |
| Cars and general shop construction and repairs by street-railroad companies..... | 2 | Housefurnishing goods, not elsewhere specified..... | 2  | Soap.....  | 3  |
| Cars, steam-railroad, not including operations of railroad companies.....        | 1 | Instruments, professional and scientific.....       | 2  | Sporting and athletic goods.....                           | 1  |
| Clocks.....  | 1 | Iron and steel forgings.....                        | 1  | Steam packing.....   | 1  |
| Coffins, burial cases, and undertakers' goods.....                               | 1 | Jewelry.....  | 1  | Stoves and furnaces, including gas and oil stoves.....     | 2  |
| Cordage and twine, and jute and linen goods.....                                 | 2 | Jewelry and instrument cases.....                   | 1  | Toys and games.....  | 9  |
| Corsets.....   | 1 | Kaolin and ground earths.....                       | 1  | Umbrellas and canes.....                                   | 1  |
| Dairy-men's, poultrymen's, and apiarists' supplies.....                          | 1 | Labels and tags.....                                | 1  | Upholstering materials.....                                | 11 |
| Dyeing and finishing textiles.....   | 2 | Lasts.....  | 1  | Vinegar and cider.....                                     | 2  |
| Engraving and diesinking.....  | 2 | Leather, tanned, curried, and finished.....         | 4  | Wheelbarrows.....  | 1  |
| Fancy articles, not elsewhere specified.....                                     | 5 | Locomotives, not made by railroad companies.....    | 1  | Wirework, including wire rope and cable.....               | 5  |
|  |   | Mineral and soda waters.....                        | 28 | Wood, turned and carved.....                               | 29 |
|  |   | Mucilage and paste.....                             | 1  |  |    |



## MANUFACTURES : NEW JERSEY

## STATISTICS OF MANUFACTURES FOR THE STATE, CITIES, AND INDUSTRIES

Prepared under the supervision of W. M. STEUART, Chief Statistician for Manufactures

## INTRODUCTION.

This advance bulletin gives the statistics of manufactures for the state of New Jersey for the calendar year 1909 as shown by the Thirteenth Census. It will be reprinted without change as a part of the Compendium of the Census for New Jersey, and in the final reports of the Thirteenth Census.

The text summarizes the general results of the census inquiry, presenting a series of special tables in which the main facts printed in the general tables are given in convenient form for the state as a whole and for important industries. It also presents tables in which the statistics for the industries of the state as a whole and for a few important industries are classified by character of ownership, size of establishments, number of wage earners, and prevailing hours of labor, information which could not be presented in general tables for each industry without disclosing the facts for individual establishments.

At the end of the bulletin are two general tables.

Table I gives for 1909, 1904, and 1899 the number of establishments and of persons engaged in the industries, primary power, capital, salaries and wages, cost of materials, value of products, and value added by manufacture reported for all industries combined and for certain important industries (1) for the state as a whole and (2) for the cities of Bayonne, Camden, Elizabeth, Hoboken, Jersey City, Newark, Passaic, Paterson, and Trenton. It also gives the same items for all industries combined for every city, town, and borough having in 1910 a population of over 10,000 but less than 50,000.

Table II gives statistics in detail for 1909 for the state and for a larger number of industries.

**Scope of census: Factory industries.**—Census statistics of manufactures are compiled primarily for the purpose of showing the absolute and relative magnitude of the different branches of industry covered and their growth or decline. Incidentally, the effort is made to present data throwing light upon character of organization, location of establishments, size of establishments, labor force, and similar subjects. When use is made of the data for these purposes, it is imperative that due attention should be given to the limitations of the figures. Particularly is this true when the attempt is made to derive from them figures purporting to show average wages, cost of production, or profits. These limitations will be fully discussed in the general report on manufactures for the United States as a whole. It is impossible to reproduce such discussion in the bulletins relative to the individual states.

The census of 1909, like that of 1904, was confined to manufacturing establishments conducted under the factory system, as distinguished from the neighborhood, hand, and building industries. Where statistics for 1899 are given they have been reduced to a comparable basis by eliminating the latter classes of industries. The census does not include establishments which were idle during the entire year, or had a value of products of less than \$500, or the manufacturing done in educational, eleemosynary, and penal institutions, or in governmental establishments, except those of the Federal Government.

**Period covered.**—The returns cover the calendar year 1909, or the business year which corresponds most nearly to that calendar year. The statistics cover a year's operations, except for establishments which began or discontinued business during the year.

**The establishment.**—The term "establishment" comprises the factories, mills, or plants which are under a common ownership or control, and for which one set of books of account is kept.

If, however, the plants constituting an establishment as thus defined were not all located within the same city or state, separate reports were secured in order that the separate totals might be included in the statistics for each city or state. In some instances separate reports were secured for different industries carried on in the same establishment.

**Classification by industries.**—The establishments were assigned to the several classes of industries according to their products of chief value. The products reported for a given industry may thus, on the one hand, include minor products very different from those covered by the class designation, and, on the other hand, may not include the total product covered by this designation, because some part of this product may be made in establishments in which it is not the product of chief value.

**Selected industries.**—The general tables at the end of this bulletin give the principal facts separately for the industries of the state. A selection has been made of the leading industries of the state for more detailed consideration. Sometimes an industry of greater importance than some of those selected is omitted because it comprises so few establishments that these detailed presentations would reveal the operations of individual concerns.

**Comparisons with previous censuses.**—Owing to the changes in industrial conditions it is not always possible to classify establishments by industries in such a way as to permit accurate comparison with preceding censuses. Table I, giving comparable figures for 1909, 1904, and 1899, therefore, does not embrace all the industries shown for 1909 in Table II.

**Influence of increased prices.**—In considering changes in cost of materials, value of products, and value added by manufacture, account should be taken of the general increase in the prices of commodities during recent years. To the extent to which this factor has been influential the figures can not be taken as an exact measure of increase in the volume of business.

**Persons engaged in industry.**—At the censuses of 1909, 1904, and 1899 the following general classes of persons engaged in manufacturing industries have been distinguished: (1) Proprietors and firm members, (2) salaried officers of corporations, (3) superintendents



and managers, (4) clerks, and (5) wage earners. In the censuses of 1904 and 1899 these five classes were shown according to the three main groups: (1) Proprietors and firm members, (2) salaried officials, clerks, etc., and (3) wage earners. The second group included the three classes of salaried officers of corporations, superintendents and managers, and clerks. In the present census an entirely different grouping is employed: That in to (1) proprietors and officials, (2) clerks, and (3) wage earners. The first group includes proprietors and firm members, salaried officers of corporations, and superintendents and managers.

At this census the number of persons engaged in the industries, segregated by sex, and, in the case of wage earners, also by age (whether under 16 or 16 and over), was reported for December 15, or the nearest representative day. The 15th of December was selected as representing for most industries normal conditions of employment, but where conditions were exceptional, and particularly in the case of certain seasonal industries, such as canning, the December date could not be accepted as typical, and an earlier date had to be chosen.

In the case of employees other than wage earners the number thus reported on December 15, or other representative day, has been treated as equivalent to the average for the year, since the number of employees of this class does not vary much from month to month in a given industry. In the case of wage earners the average is obtained in the manner explained in the next paragraph.

**Wage earners.**—In addition to the report by sex and age of the number of wage earners on December 15, or other representative day, a report was obtained of the number employed on the 15th of each month, without distinction of sex or age. From these figures the average number of wage earners for the year has been calculated by dividing the sum of the numbers reported each month by 12. The average thus obtained represents the number of wage earners that would be required to perform the work done if all were constantly employed during the entire year. Accordingly, the importance of any industry as an employer of labor is believed to be more accurately measured by this average than by the number employed at any one time or on a given day.

The number of wage earners reported for the representative day, though given for each separate industry, is not totaled for all industries combined, because in view of the variations of date such a total is believed not to be significant. It would involve more or less duplication of persons working in different industries at different times, would not represent the total number employed in all industries at any one time, and would give an undue weight to seasonal industries as compared with industries in continual operation.

In particular, totals by sex and age for the wage earners reported for the representative day would be misleading because of the undue weight given to seasonal industries, in some of which, such as canning and preserving, the distribution of the wage earners by sex and age is materially different from that in most industries of more regular operation. In order to determine as nearly as possible the sex and age distribution of the average number of wage earners in the state as a whole, the following procedure has been adopted:

The percentage distribution by sex and age of the wage earners in each industry, for December 15, or the nearest representative day, has been calculated from the actual numbers reported for that date. This percentage has been applied to the average number of wage earners for the year in that industry, to determine the average number of men, women, and children employed. These calculated averages for the several industries have been added up to give the average distribution for the state as a whole.

In 1899 and 1904 the schedule called for the average number of wage earners of each sex 16 years and over, and the total number under 16 years of age, for each month, and these monthly statements were combined in an annual average. Comparatively few manufacturing concerns, however, keep their books in such way as to show readily the number of men, women, and children (under 16) employed each month. These monthly returns by sex and age

were, in fact, largely estimates. It was believed that a more accurate and reliable sex and age distribution could be secured by taking as a basis of estimate the actual numbers employed on a single day.

**Prevailing hours of labor.**—The census made no attempt to ascertain the number of employees working a given number of hours per week. The inquiry called merely for the prevailing practice followed in each establishment. Occasional variations in hours in an establishment from one period to another are disregarded, and no attention is given to the fact that a limited number of employees may have hours differing from those of the majority. In the tables all the wage earners of each establishment are counted in the class within which the establishment itself falls. In most establishments, however, all or practically all the employees work the same number of hours, so that these figures give a substantially correct picture of the hours of labor in manufacturing industries.

**Capital.**—For reasons stated in prior census reports, the statistics of capital secured by the census canvass are so defective as to be without value, except as indicating very general conditions. The instructions on the schedule for securing capital were as follows:

The answer should show the total amount of capital, both owned and borrowed, on the last day of the business year reported. All the items of fixed and live capital may be taken at the amounts carried on the books. If land or buildings are rented, that fact should be stated and no value given. If a part of the land or buildings is owned, the remainder being rented, that fact should be so stated and only the value of the owned property given. Do not include securities and loans representing investments in other enterprises.

**Materials.**—Cost of materials refers to the materials used during the year, which may be more or less than the materials purchased during the year. The term materials includes fuel, rent of power and heat, mill supplies, and containers, as well as material forming a constituent part of the product. Fuel includes all fuel used, whether for heat, light, or power, or for the process of manufacture.

**Expenses.**—Under "Expenses" are included all items of expense incident to the year's business, except interest, whether on bonds or other forms of indebtedness, and allowances for depreciation.

**Value of products.**—The value of products for any industry includes the total value of all products manufactured in establishments whose products of chief value fall under the industry designation. The amounts given represent the selling value at the factory of all products manufactured during the year, which may differ from the value of the products sold. Amounts received for work on materials furnished by others are included.

**Value added by manufacture.**—The value of products is not a satisfactory measure of either the absolute or the relative importance of a given industry, because only a part of this value is actually created by the manufacturing process carried on in the industry itself. Another part of it, and often by far the larger part, represents the value of the materials used, which have been produced by agriculture or mining or by other industrial establishments. For many purposes, therefore, the best measure of the importance of different classes of industry is the value created as the result of the manufacturing operations carried on within the industry. This value is obtained by deducting the cost of the materials consumed from the value of the product. The figure thus obtained is termed in the census reports "value added by manufacture."

There is a further statistical advantage which "value added" has over gross value of products. In combining the value of products for all industries the value of products produced by one establishment and used as materials in another is duplicated, and the total, therefore, gives a greatly exaggerated idea of the wealth created. No such duplication takes place in the total "value added by manufacture."

**Cost of manufacture and profits.**—Census data do not show the entire cost of manufacture, and consequently can not be used to show profits. No account has been taken of interest and de-

preciation. Even if the amount of profit could be determined by deducting the expenses from the value of the products, the rate of profit on the investment could not properly be calculated, because of the very defective character of the returns regarding capital.

**Primary power.**—The figures given for this item show the total of the primary power used by the establishments. They do not cover the power developed by motors operated by such power, the inclusion of which would evidently result in duplication.

**Location of establishments.**—The Census Bureau has classified establishments by their location in cities or classes of cities. In interpreting these figures due consideration should be given to the fact that often establishments are located just outside the bound-

aries of cities, and are necessarily so classified, though locally they are looked upon as constituting a part of the manufacturing interests of the cities.

**Laundries.**—The census of 1909 was the first to include statistics of laundries. The reports are confined to establishments using mechanical power. The data are presented separately and are not included in the general total for manufacturing industries, in order to avoid interference with comparisons with prior censuses.

**Custom sawmills and gristmills.**—In order to make the statistics for 1909 comparable with those for 1904 the data for these mills have been excluded from all the tables presenting general statistics, and are given in a separate table at the end of this report.

### INDUSTRIES IN GENERAL.

**General character of the state.**—New Jersey, with a gross area of 8,224 square miles, of which 710 represent water surface, ranks forty-fifth in size among the 49 states and territories of continental United States. Its population in 1910 was 2,537,167, as compared with 1,883,669 in 1900 and 1,444,933 in 1890. It ranked eleventh among the states and territories as regards population in 1910 and sixteenth in 1900. New Jersey is the third most densely populated state in the Union, its density being 337.7 per square mile in 1910, the corresponding figure for 1900 being 250.7. Seventy-five and two-tenths per cent of the entire population of the state in 1910 resided in cities and other incorporated places having a population of 2,500 or over, as against 70.4 per cent in 1900.

In 1910 the state had 9 cities with a population of over 50,000: Newark, 347,469; Jersey City, 267,779; Paterson, 125,600; Trenton, 96,815; Camden, 94,538; Elizabeth, 73,409; Hoboken, 70,324; Bayonne, 55,545; and Passaic, 54,773. There were also 23 cities and other incorporated places with a population between 10,000 and 50,000. (See table on p. 12.) These 32 places contained 64.5 per cent of the total population of the state in 1910 and reported 74.3 per cent of the total value of its manufactured products. Only 10.7 per cent of the population resided in incorporated places having between 2,500 and 10,000 inhabitants.

The industrial prominence of New Jersey is due largely to its exceptionally favorable geographic position and to its splendid transportation facilities, since a large part of the materials used in the manufacturing industries of the state are produced beyond its borders and most of the manufactured products are shipped to outside markets. The proximity of the state to the anthracite coal fields of Pennsylvania, which supply a large portion of the fuel used in its manufacturing industries, and to the markets of New York City and Philadelphia, have been powerful factors in its industrial development. The manufacturing centers of the state are either located on New York Harbor or connected therewith by water or by rail. A total trackage of 2,256 miles<sup>1</sup> of steam railroads was operated within the state in 1909.

<sup>1</sup> Statistics of Railways in the United States, Interstate Commerce Commission, 1909.

**Importance and growth of manufactures.**—New Jersey is preeminently a manufacturing state. During 1849 an average of 37,830 wage earners, representing 7.7 per cent of the total population, were employed in manufactures, while in 1909 an average of 326,223, or 12.9 per cent of the total population, were so engaged. The total value of the manufactures of the state, including the products of the neighborhood and hand industries, amounted to only \$39,851,000 in 1849, while in 1909, exclusive of the value of the products of the neighborhood and hand industries, it reached \$1,145,529,000, or nearly twenty-nine times the value reported in 1849. The population of the state in 1910, however, was only a little more than five times its population in 1850. The gross value of products per capita of the total population of the state increased from \$81 in 1849 to \$451 in 1909. New Jersey reported 3.9 per cent of the total value of products of the manufacturing industries in the United States in 1849 and 5.5 per cent in 1909, holding sixth place among the states in gross value of manufactures at both censuses.

The table on the following page gives the most important figures relative to all classes of manufactures combined for 1909, 1904, and 1899, together with the percentages of increase from census to census.

In 1909 the state of New Jersey had 8,817 manufacturing establishments, which gave employment to an average of 371,265 persons during the year and paid out \$218,046,000 in salaries and wages. Of the persons employed, 326,223 were wage earners. These establishments turned out products to the value of \$1,145,529,000, to produce which materials costing \$720,033,000 were used. The value added by manufacture was thus \$425,496,000, which figure, as explained in the Introduction, best represents the net wealth created by manufacturing operations during the year.

In general, this table brings out the fact that the manufacturing industries of New Jersey had a greater development during the more recent five-year period, 1904-1909, than during the preceding five-year period, 1899-1904. During the more recent period the number of establishments increased 25.8 per cent and the average number of wage earners 22.5 per cent,

## MANUFACTURES—NEW JERSEY.

while the value of products increased 47.9 per cent and the value added by manufacture 40 per cent. As pointed out in the Introduction, it would be improper to infer that manufactures increased in volume to the

full extent indicated by these figures representing values, since the increase shown is certainly due in part to the increase that has taken place in the price of commodities.

|  | NUMBER OR AMOUNT. |                 |                 | PER CENT OF INCREASE. |           |
|--|-------------------|-----------------|-----------------|-----------------------|-----------|
|  | 1909              | 1904            | 1899            | 1904-1909             | 1899-1904 |
| Number of establishments.....  | 8, 817            | 7, 010          | 6, 415          | 25. 8                 | 9. 3      |
| Persons engaged in manufactures.....                                       | 371, 265          | 296, 262        | (1)             | 25. 3                 | -----     |
| Proprietors and firm members.....  | 8, 204            | 6, 730          | (1)             | 21. 9                 | -----     |
| Salaried employees.....  | 36, 838           | 23, 196         | 15, 361         | 58. 8                 | 51. 0     |
| Wage earners (average number).....   | 326, 223          | 266, 336        | 213, 975        | 22. 5                 | 24. 5     |
| Primary horsepower.....  | 612, 293          | 436, 274        | 322, 503        | 40. 3                 | 35. 3     |
| Capital.....   | \$977, 172, 000   | \$715, 060, 000 | \$477, 302, 000 | 36. 7                 | 49. 8     |
| Expenses.....  | 1, 032, 698, 000  | 694, 128, 000   | 487, 774, 000   | 48. 8                 | 42. 3     |
| Services.....  | 218, 046, 000     | 157, 126, 000   | 114, 223, 000   | 38. 8                 | 37. 6     |
| Salaries.....  | 48, 336, 000      | 28, 957, 000    | 19, 058, 000    | 66. 9                 | 51. 9     |
| Wages.....   | 169, 710, 000     | 128, 169, 000   | 95, 165, 000    | 32. 4                 | 34. 7     |
| Materials.....   | 720, 033, 000     | 470, 449, 000   | 334, 726, 000   | 53. 1                 | 40. 5     |
| Miscellaneous.....   | 94, 619, 000      | 66, 553, 000    | 38, 825, 000    | 42. 2                 | 71. 4     |
| Value of products.....   | 1, 145, 529, 000  | 774, 369, 000   | 553, 006, 000   | 47. 9                 | 40. 0     |
| Value added by manufacture (value of products less cost of materials)..... | 425, 496, 000     | 303, 920, 000   | 218, 280, 000   | 40. 0                 | 39. 2     |

<sup>1</sup> Figures not available.

The relative importance and growth of the leading manufacturing industries of the state are shown in the table on page 5.

It should be borne in mind, in considering this table, that the value of products in some of the industries involves a certain amount of duplication due to the use of the product of one establishment in the industry as material for another establishment.

The table specifies 79 industries which in 1909 had products in excess of \$500,000 in value. Of the industries listed in the table, there are 3 whose products exceeded \$50,000,000 in value; 5 with products between \$25,000,000 and \$50,000,000; and 16 with products between \$10,000,000 and \$25,000,000; making an aggregate of 24 industries with products in excess of \$10,000,000. Mention is also made of 19 other industries with products between \$5,000,000 and \$10,000,000; 28 with products between \$1,000,000 and \$5,000,000; and 8 with products of less than \$1,000,000.

In addition to the industries presented separately in the table, there are 38 other important industries in the state which had products in 1909 exceeding \$1,000,000 in value, distributed as follows: 30 with \$1,000,000 but less than \$5,000,000; 3 with \$5,000,000 but less than \$10,000,000; and 5 with \$10,000,000 and over. These industries are included under the head of "All other industries" in the table, in some cases because the operations of individual establishments would be disclosed if they were shown separately; in others, because the returns do not properly present the true condition of the industry, for the reason that it is more or less interwoven with one or more other industries; and in still others because comparative sta-

istics can not be presented for 1904 and 1899 on account of changes in classification.<sup>1</sup> Of the industries which are not presented separately, those which are of special importance are petroleum refining and the refining of cane sugar. The statistics for 1909, however, for 6 of these industries, namely, the manufacture of automobiles, including bodies and parts, blacking and cleansing and polishing preparations, chocolate and cocoa products, men's furnishing goods, signs and advertising novelties, and sulphuric, nitric, and mixed acids are presented separately in Table II, page 38.

There are, as already noted, a very large number of industries which are of considerable importance. Furthermore, it will be seen from Table II that there is a wide diversity in the manufacturing activities of the state. The leading products of the state are refined copper, silk goods, woolen goods, and foundry and machine-shop products. If the several textile industries are combined and considered as a unit they constitute the leading industry of the state. The principal details concerning some of the more important industries are specially considered on pages 6 to 8.

<sup>1</sup> These industries are:

|  |  |
|--|--|
| Automobiles, including bodies and parts.           | Lard, refined, not made in slaughtering and meat-packing establishments. |
| Babbitt metal and solder.                          | Mineral and soda waters.   |
| Bags, other than paper.                            | Moving pictures.   |
| Blacking and cleansing and polishing preparations. | Oil, cottonseed, and cake.   |
| Boots and shoes, rubber.                           | Paving materials.  |
| Chocolate and cocoa products.                      | Pencils, lead.   |
| Coffee and spice, roasting and grinding.           | Petroleum, refining.   |
| Coke.  | Phonographs and graphophones.  |
| Dyestuffs and extracts.                            | Pipes, tobacco.  |
| Drug grinding.                                     | Roofing materials.   |
| Explosives.  | Sewing machines, cases, and attachments.                                 |
| Firearms and ammunition.                           | Signs and advertising novelties.   |
| Filles.  | Smelting and refining, lead.   |
| Food preparations.                                 | Sugar refining, not including beet sugar.                                |
| Furnishing goods, men's.                           | Sulphuric, nitric, and mixed acids.                                      |
| Glucose and starch.                                | Upholstering materials.  |
| Grease and tallow.                                 | Window shades and fixtures.  |
| Hat and cap materials.                             | Wirework, including wire rope and cable.                                 |
| Iron and steel, blast furnaces.                    |  |
| Iron and steel pipe, wrought.                      |  |

MANUFACTURES—NEW JERSEY.

| INDUSTRY.  | Number of establishments. | WAGE EARNERS.   |                        | VALUE OF PRODUCTS. |                        | VALUE ADDED BY MANUFACTURER. |                        | PER CENT OF INCREASE. <sup>1</sup> |           |                             |           |
|--|---------------------------|-----------------|------------------------|--------------------|------------------------|------------------------------|------------------------|------------------------------------|-----------|-----------------------------|-----------|
|  |                           | Average number. | Per cent distribution. | Amount.            | Per cent distribution. | Amount.                      | Per cent distribution. | Value of products.                 |           | Value added by manufacture. |           |
|  |                           |                 |                        |                    |                        |                              |                        | 1904-1909                          | 1899-1904 | 1904-1909                   | 1899-1904 |
| <b>All industries</b> .....  | 8,817                     | 326,223         | 100.0                  | \$1,145,529,000    | 100.0                  | \$425,496,000                | 100.0                  | 47.9                               | 40.0      | 40.0                        | 39.2      |
| Smelting and refining, copper.....   | 4                         | 2,322           | 0.7                    | 125,651,000        | 11.0                   | 6,715,000                    | 1.6                    | 100.1                              | 63.7      | 68.5                        | -31.5     |
| Silk and silk goods, including throwsters.....                                   | 348                       | 30,285          | 9.3                    | 65,430,000         | 5.7                    | 32,135,000                   | 7.6                    | 52.6                               | 7.2       | 56.7                        | 11.9      |
| Foundry and machine-shop products.....   | 591                       | 27,815          | 8.5                    | 65,398,000         | 5.7                    | 35,458,000                   | 8.3                    | 29.4                               | 36.5      | 19.2                        | 48.8      |
| Slaughtering and meat packing.....   | 84                        | 1,817           | 0.6                    | 37,583,000         | 3.3                    | 3,843,000                    | 0.9                    | 111.7                              | 24.9      | 128.3                       | 34.6      |
| Woolen, worsted, and felt goods, and wool hats.....                              | 33                        | 12,652          | 3.9                    | 33,939,000         | 3.0                    | 12,906,000                   | 3.0                    | 107.0                              | 33.6      | 123.8                       | 24.2      |
| Wire.....  | 7                         | 5,046           | 1.7                    | 28,858,000         | 2.5                    | 6,530,000                    | 1.5                    | .....                              | .....     | .....                       | .....     |
| Leather, tanned, curried, and finished.....                                      | 86                        | 5,560           | 1.7                    | 28,431,000         | 2.5                    | 8,233,000                    | 1.9                    | 32.3                               | 56.4      | 32.3                        | 47.7      |
| Electrical machinery, apparatus, and supplies.....                               | 69                        | 11,099          | 3.4                    | 24,305,000         | 2.6                    | 13,939,000                   | 3.3                    | 105.5                              | 83.2      | 101.1                       | 73.5      |
| Tobacco manufactures.....  | 462                       | 9,466           | 2.9                    | 24,177,000         | 2.1                    | 13,481,000                   | 3.1                    | 120.0                              | 5.3       | 86.4                        | 2.7       |
| Chemicals.....   | 50                        | 5,046           | 1.5                    | 22,824,000         | 2.0                    | 10,567,000                   | 2.5                    | 75.2                               | 6.7       | 65.3                        | 22.7      |
| Liquors, malt.....   | 33                        | 2,425           | 0.7                    | 20,184,000         | 1.8                    | 15,303,000                   | 3.6                    | 15.7                               | 21.3      | 12.6                        | 17.1      |
| Bread and other bakery products.....   | 1,217                     | 4,936           | 1.5                    | 20,086,000         | 1.7                    | 7,804,000                    | 1.9                    | 48.8                               | 65.0      | 48.9                        | 46.3      |
| Rubber goods, not elsewhere specified.....                                       | 36                        | 4,255           | 1.3                    | 19,643,000         | 1.7                    | 6,511,000                    | 1.5                    | 304.1                              | -42.8     | 246.9                       | -32.0     |
| Dyeing and finishing textiles.....   | 67                        | 10,129          | 3.1                    | 15,796,000         | 1.4                    | 9,463,000                    | 2.2                    | 31.9                               | 14.2      | 36.3                        | 15.9      |
| Cotton goods, including cotton small wares.....                                  | 26                        | 6,638           | 2.0                    | 13,729,000         | 1.2                    | 5,164,000                    | 1.2                    | 60.0                               | 23.8      | 50.3                        | -8.9      |
| Soap.....  | 21                        | 1,599           | 0.5                    | 13,674,000         | 1.2                    | 6,500,000                    | 1.5                    | 240.3                              | .....     | 233.7                       | .....     |
| Lumber and timber products.....  | 416                       | 4,857           | 1.5                    | 13,511,000         | 1.2                    | 5,504,000                    | 1.3                    | 68.9                               | 14.3      | 56.9                        | 5.9       |
| Jewelry.....   | 150                       | 4,008           | 1.2                    | 13,272,000         | 1.1                    | 6,978,000                    | 1.6                    | 42.6                               | 26.1      | 49.8                        | 31.2      |
| Pottery, terra-cotta, and fire-clay products.....                                | 88                        | 9,815           | 3.0                    | 13,139,000         | 1.1                    | 9,588,000                    | 2.3                    | 12.1                               | 31.0      | 9.4                         | 33.6      |
| Paint and varnish.....   | 63                        | 1,493           | 0.5                    | 12,767,000         | 1.1                    | 4,541,000                    | 1.1                    | 83.2                               | 12.1      | 53.7                        | 23.7      |
| Printing and publishing.....   | 684                       | 5,451           | 1.7                    | 12,333,000         | 1.1                    | 8,801,000                    | 2.1                    | 43.0                               | 41.3      | 30.7                        | 43.1      |
| Iron and steel, steel works and rolling mills.....                               | 16                        | 4,671           | 1.4                    | 12,014,000         | 1.0                    | 5,379,000                    | 1.3                    | .....                              | .....     | .....                       | .....     |
| Copper, tin, and sheet-iron products.....  | 175                       | 5,002           | 1.5                    | 11,114,000         | 1.0                    | 4,942,000                    | 1.2                    | 77.3                               | 132.0     | 46.7                        | 127.3     |
| Oilcloth and linoleum.....   | 10                        | 2,123           | 0.7                    | 10,143,000         | 0.9                    | 3,505,000                    | 0.8                    | 86.3                               | 91.4      | 97.1                        | 60.2      |
| Clothing, men's, including shirts.....   | 150                       | 6,994           | 2.1                    | 9,865,000          | 0.9                    | 4,789,000                    | 1.1                    | 32.8                               | 29.1      | 19.4                        | 21.7      |
| Gas, illuminating and heating.....   | 47                        | 1,917           | 0.6                    | 9,837,000          | 0.9                    | 6,982,000                    | 1.0                    | 54.4                               | 69.1      | 44.0                        | 62.6      |
| Cars and general shop construction and repairs by street-railroad companies..... | 23                        | 6,094           | 2.0                    | 9,819,000          | 0.9                    | 5,185,000                    | 1.2                    | 42.3                               | 37.0      | 41.5                        | 34.2      |
| Rubbing and hose, woven and rubber.....  | 12                        | 2,295           | 0.7                    | 9,793,000          | 0.8                    | 3,822,000                    | 0.9                    | -11.5                              | 295.3     | -10.3                       | 358.1     |
| Smelting and refining, not from the ore.....                                     | 14                        | 1,057           | 0.3                    | 6,598,000          | 0.8                    | 2,371,000                    | 0.6                    | .....                              | .....     | .....                       | .....     |
| Shipbuilding, including boat building.....                                       | 97                        | 4,830           | 1.5                    | 8,841,000          | 0.8                    | 4,592,000                    | 1.1                    | 14.3                               | 69.8      | 7.5                         | 39.4      |
| Hats, fur-felt.....  | 58                        | 4,657           | 1.4                    | 8,825,000          | 0.8                    | 4,713,000                    | 1.1                    | -7.5                               | 32.3      | -11.3                       | 48.7      |
| Boots and shoes, including cut stock and findings.....                           | 53                        | 4,232           | 1.3                    | 8,042,000          | 0.7                    | 3,315,000                    | 0.8                    | 6.0                                | 0.9       | -2.2                        | 10.7      |
| Oil, not elsewhere specified.....  | 23                        | 419             | 0.1                    | 7,851,000          | 0.7                    | 1,655,000                    | 0.4                    | 106.4                              | 62.4      | 128.3                       | 47.7      |
| Fertilizers.....   | 22                        | 1,208           | 0.4                    | 7,672,000          | 0.7                    | 1,987,000                    | 0.5                    | 35.7                               | 31.7      | 15.3                        | 50.6      |
| Paper and wood pulp.....   | 37                        | 2,223           | 0.7                    | 7,654,000          | 0.7                    | 2,786,000                    | 0.7                    | 49.8                               | 57.8      | 37.8                        | 36.6      |
| Glass.....   | 23                        | 5,051           | 1.7                    | 6,961,000          | 0.6                    | 4,962,000                    | 1.2                    | 7.9                                | 26.6      | 8.0                         | 27.4      |
| Millinery and lace goods.....  | 179                       | 4,120           | 1.3                    | 6,895,000          | 0.6                    | 3,710,000                    | 0.9                    | .....                              | .....     | .....                       | .....     |
| Clothing, women's.....   | 99                        | 4,216           | 1.3                    | 5,927,000          | 0.5                    | 3,972,000                    | 0.7                    | 40.5                               | 64.7      | 50.2                        | 45.6      |
| Gas and electric fixtures and lamps and reflectors.....                          | 28                        | 1,884           | 0.6                    | 5,771,000          | 0.5                    | 2,421,000                    | 0.6                    | 64.5                               | 36.6      | 63.4                        | -8.5      |
| Flour-mill and gristmill products.....   | 238                       | 453             | 0.1                    | 5,638,000          | 0.5                    | 977,000                      | 0.2                    | 1.3                                | 2.7       | 3.2                         | 7.6       |
| Cordage and twine and jute and linen goods.....                                  | 12                        | 3,025           | 0.9                    | 5,527,000          | 0.5                    | 1,631,000                    | 0.4                    | 64.0                               | 14.0      | 24.4                        | 9.6       |
| Patent medicines and compounds and druggists' preparations.....                  | 111                       | 1,005           | 0.3                    | 5,410,000          | 0.5                    | 3,321,000                    | 0.8                    | 45.8                               | 135.7     | 38.7                        | 132.5     |
| Brass and bronze products.....   | 66                        | 1,265           | 0.4                    | 5,131,000          | 0.4                    | 1,776,000                    | 0.4                    | 36.7                               | 13.1      | 26.9                        | 65.1      |
| Gold and silver, reducing and refining, not from the ore.....                    | 8                         | 112             | ( <sup>2</sup> )       | 4,436,000          | 0.4                    | 525,000                      | 0.1                    | -16.0                              | 134.5     | 17.4                        | 179.4     |
| Confectionery.....   | 71                        | 1,263           | 0.4                    | 4,116,000          | 0.4                    | 1,683,000                    | 0.4                    | 101.5                              | 475.5     | 59.5                        | 517.0     |
| Brick and tile.....  | 76                        | 3,405           | 1.0                    | 4,073,000          | 0.4                    | 3,229,000                    | 0.8                    | 122.6                              | -0.9      | 116.3                       | -2.2      |
| Leather goods.....   | 99                        | 1,813           | 0.6                    | 4,005,000          | 0.3                    | 1,865,000                    | 0.4                    | -4.9                               | 20.7      | -10.0                       | 19.3      |
| Marble and stone work.....   | 131                       | 1,470           | 0.5                    | 3,601,000          | 0.3                    | 2,729,000                    | 0.6                    | 59.9                               | 9.8       | 60.2                        | 16.9      |
| Clocks and watches, including cases and materials.....                           | 9                         | 2,129           | 0.7                    | 3,848,000          | 0.3                    | 2,119,000                    | 0.5                    | -0.6                               | 102.2     | -7.4                        | 129.0     |
| Hosiery and knit goods.....  | 37                        | 2,506           | 0.8                    | 3,810,000          | 0.3                    | 1,984,000                    | 0.5                    | 49.5                               | 43.0      | 70.0                        | 51.4      |
| Cement.....  | 3                         | 1,445           | 0.4                    | 3,725,000          | 0.3                    | 1,672,000                    | 0.4                    | 27.4                               | .....     | 57.4                        | .....     |
| Canning and preserving.....  | 84                        | 1,818           | 0.6                    | 3,604,000          | 0.3                    | 1,456,000                    | 0.3                    | 36.1                               | -23.5     | 46.8                        | -20.6     |
| Furniture and refrigerators.....   | 49                        | 1,755           | 0.5                    | 3,614,000          | 0.3                    | 1,917,000                    | 0.4                    | 132.1                              | 60.6      | 100.3                       | 67.9      |
| Cerrets.....   | 11                        | 1,845           | 0.6                    | 3,336,000          | 0.3                    | 2,031,000                    | 0.5                    | 59.4                               | 60.5      | 43.9                        | 94.6      |
| Carriages and wagons and materials.....  | 256                       | 1,601           | 0.5                    | 3,250,000          | 0.3                    | 1,970,000                    | 0.5                    | -6.1                               | -11.6     | -6.7                        | -8.4      |
| Copperage and wooden goods, not elsewhere specified.....                         | 43                        | 1,046           | 0.3                    | 3,230,000          | 0.3                    | 902,000                      | 0.2                    | 303.2                              | 13.3      | 141.2                       | 4.5       |
| Silverware and plated ware.....  | 26                        | 1,296           | 0.4                    | 3,035,000          | 0.3                    | 1,902,000                    | 0.4                    | -2.2                               | 44.7      | -3.3                        | 52.4      |
| Surgical appliances and artificial limbs.....                                    | 11                        | 1,412           | 0.4                    | 2,991,000          | 0.3                    | 1,742,000                    | 0.4                    | 41.0                               | 75.7      | 73.5                        | 59.9      |
| Wall paper.....  | 8                         | 782             | 0.2                    | 2,872,000          | 0.2                    | 1,372,000                    | 0.3                    | 37.2                               | 38.9      | 29.2                        | 110.7     |
| Buttons.....   | 64                        | 2,261           | 0.7                    | 2,750,000          | 0.2                    | 1,567,000                    | 0.4                    | 72.7                               | 55.2      | 63.6                        | 52.8      |
| Cutlery and tools, not elsewhere specified.....                                  | 70                        | 2,208           | 0.7                    | 2,735,000          | 0.2                    | 1,886,000                    | 0.4                    | 15.4                               | 2.8       | 24.9                        | 2.6       |
| Boxes, fancy and paper.....  | 46                        | 2,142           | 0.7                    | 2,675,000          | 0.2                    | 1,489,000                    | 0.4                    | 103.0                              | 46.9      | 94.6                        | 53.3      |
| Paper goods, not elsewhere specified.....  | 19                        | 563             | 0.2                    | 2,640,000          | 0.2                    | 943,000                      | 0.2                    | 115.5                              | 4.9       | 179.0                       | -20.1     |
| Musical instruments, pianos and organs and materials.....                        | 18                        | 1,363           | 0.4                    | 2,259,000          | 0.2                    | 1,153,000                    | 0.3                    | 59.9                               | 10.9      | 40.6                        | 6.6       |
| Carpets and rugs, other than rag.....  | 9                         | 884             | 0.3                    | 1,945,000          | 0.2                    | 1,047,000                    | 0.2                    | 11.2                               | 14.8      | 36.0                        | 17.6      |
| Brooms and brushes.....  | 33                        | 915             | 0.3                    | 1,905,000          | 0.2                    | 954,000                      | 0.2                    | 172.5                              | -13.0     | 144.0                       | -3.2      |
| Fancy articles, not elsewhere specified.....                                     | 31                        | 1,112           | 0.3                    | 1,841,000          | 0.2                    | 1,013,000                    | 0.2                    | -16.5                              | -7.8      | -24.5                       | 5.9       |
| Stoves and furnaces, including gas and oil stoves.....                           | 8                         | 696             | 0.2                    | 1,688,000          | 0.1                    | 1,114,000                    | 0.3                    | 11.2                               | .....     | 3.3                         | .....     |
| Ice, manufactured.....   | 59                        | 456             | 0.1                    | 1,497,000          | 0.1                    | 1,111,000                    | 0.3                    | 131.0                              | 65.3      | 133.4                       | 67.6      |
| Mattresses and spring beds.....  | 23                        | 496             | 0.2                    | 1,323,000          | 0.1                    | 515,000                      | 0.1                    | 81.7                               | 67.4      | 82.0                        | 53.0      |
| Cars and general shop construction and repairs by street-railroad companies..... | 15                        | 826             | 0.3                    | 1,158,000          | 0.1                    | 544,000                      | 0.1                    | 55.0                               | 96.1      | 96.4                        | 43.5      |
| Dairymen's, poulterers', and apiarists' supplies.....                            | 7                         | 296             | 0.1                    | 954,000            | 0.1                    | 724,000                      | 0.2                    | 984.1                              | .....     | 440.4                       | .....     |
| Artificial stone.....  | 97                        | 488             | 0.1                    | 850,000            | 0.1                    | 565,000                      | 0.1                    | 813.8                              | .....     | 796.8                       | .....     |
| Cork, cutting.....   | 10                        | 418             | 0.1                    | 791,000            | 0.1                    | 381,000                      | 0.1                    | 108.2                              | 62.4      | 101.6                       | 107.7     |
| Agricultural implements.....   | 10                        | 224             | 0.1                    | 755,000            | 0.1                    | 428,000                      | 0.1                    | 92.6                               | 56.8      | 56.2                        | 104.5     |
| Typewriters and supplies.....  | 8                         | 272             | 0.1                    | 740,000            | 0.1                    | 462,000                      | 0.1                    | 134.9                              | -57.7     | 143.2                       | -63.0     |
| Musical instruments and materials, not specified.....                            | 7                         | 365             | 0.1                    | 635,000            | 0.1                    | 427,000                      | 0.1                    | -23.4                              | -1.9      | -21.7                       | 5.8       |
| Wall plaster.....  | 5                         | 178             | 0.1                    | 613,000            | 0.1                    | 281,000                      | 0.1                    | 200.5                              | .....     | 195.8                       | .....     |
| Coffins, burial cases, and undertakers' goods.....                               | 7                         | 212             | 0.1                    | 521,000            | ( <sup>2</sup> )       | 256,000                      | 0.1                    | 15.0                               | 15.0      | 12.8                        | 2.3       |
| All other industries.....  | 1,321                     | 47,187          | 14.4                   | 250,551,000        | 21.8                   | 71,714,000                   | 16.9                   | .....                              | .....     | .....                       | .....     |

<sup>1</sup> Percentages are based on figures in Table T; a minus sign (-) denotes decrease. Where the percentages are omitted, comparable figures can not be given.  
<sup>2</sup> Less than one-tenth of 1 per cent.

*Textiles.*—The textile industries of New Jersey comprise the manufacture of silk and silk goods, including the operations of throwsters; woolen, worsted, and felt goods, and wool hats; cotton goods, including cotton small wares; fur-felt hats; cordage and twine and jute and linen goods; hosiery and knit goods; carpets and rugs, other than rag; and shoddy. The statistics for the manufacture of shoddy can not be shown without disclosing the operations of individual establishments. Combined, the other seven industries gave employment in 1909 to an average of 60,647 wage earners and the value of their products amounted to \$133,205,000. These figures represent an increase over 1904 of 9,670, or 19 per cent, in the average number of wage earners and \$48,160,000, or 56.6 per cent, in value of products. From 1899 to 1904 the gain in number of wage earners was 4,177, or 8.9 per cent, and that in value of products \$12,405,000, or 17.1 per cent. In 1909, 18.6 per cent of the total number of wage earners employed in the manufacturing industries of the state and 11.6 per cent of the total value of manufactured products were reported for these industries. The corresponding figures for 1904 were 19.1 per cent and 11 per cent, respectively.

*Dyeing and finishing textiles.*—Closely allied to the textile industry is the dyeing and finishing of textiles. The classification covers the independent establishments bleaching, dyeing, and mercerizing raw fibers, yarns, and woven cloth, as well as the printing of cotton piece goods. A considerable number of the cotton, silk, and woolen mills carry on one or more of these subordinate processes with the primary manufacturing in the same establishment, therefore the statistics for the independent establishments engaged in dyeing and finishing do not represent the full extent of the industry. In 1909 reports for some of the dyeing and finishing establishments in the state included the cost of the materials upon which the work was performed and its value as finished. In such cases the cost and value of these goods were deducted, in order to place all of the reports on a uniform basis and to make the statistics comparable with those for prior censuses, when the value of products represented only the value added to the materials by the processes. From 1904 to 1909 the average number of wage earners in the industry increased 2,532, or 33.3 per cent, and the value of products \$3,816,000, or 31.9 per cent. In 1904 New Jersey was the first state in the Union in this industry, with products valued at \$11,980,000, but although the value of products had increased to \$15,796,000 in 1909, it then held second place.

*Smelting and refining, copper.*—This industry is chiefly confined in New Jersey to the refining of crude copper. The value of all ore smelted and crude copper refined is included in the cost of materials, and the total value of all products is reported, regardless of whether the materials belonged to the plant reporting or were worked on a toll basis. Measured by value of products, the industry was by far the most impor-

tant in the state in 1909, the value of the output (\$125,651,000) representing 11 per cent of the total value of all manufactured products. From 1904 to 1909 the value of products increased \$62,855,000, or 100.1 per cent, and from 1899 to 1904 the increase was \$24,431,000, or 63.7 per cent. New Jersey ranked first among the states in this industry in 1909, 1904, and 1899.

*Foundry and machine-shop products.*—This classification includes foundries and machine shops and all allied industries except those which manufacture a distinctive product which is covered by some other classification, such as cash registers and calculating machines, sewing machines, and electrical machinery. The establishments engaged in the manufacture of gas meters, hardware, plumbers' supplies, steam fittings, structural ironwork, and cast-iron pipe, nearly all of which were reported under separate classifications at previous censuses, are all included under this general heading. The industry showed a relatively greater increase in value of products from 1899 to 1904 than from 1904 to 1909, the percentages being 36.5 and 29.4, respectively.

*Slaughtering and meat packing.*—Under this heading are included the wholesale slaughtering and meat-packing establishments and those engaged in the manufacture of sausage only. From 1899 to 1904 the average number of wage earners increased but 154, or 26.1 per cent, and the value of products \$3,539,000, or 21.9 per cent, but the development of the industry was so rapid during the later five-year period, 1904–1909, that the average number of wage earners increased 1,072, or 143.9 per cent, and the value of products \$19,829,000, or 111.7 per cent. The industry is confined largely to the northern part of the state, 59.4 per cent of the total value of products being reported from Jersey City alone.

*Wire.*—This classification includes establishments primarily engaged in drawing wire from purchased wire rods. It does not include the wire product of the wire departments of steel works and rolling mills. The industry shows a remarkable growth for each of the five-year periods.

*Leather, tanned, curried, and finished.*—This industry includes not only establishments which are engaged primarily in the manufacture of leather, but also those which treat hides or skins for others. The cost of materials and the value of products, however, do not include the value of the hides or skins treated under contract. In 1849 New Jersey was the seventh state of the Union with respect to value of products, reporting 143 establishments, which employed an average of 618 wage earners and turned out products valued at \$1,389,582. In 1909 the state held fourth position, in which year, although only 86 establishments were engaged in the industry, the number of wage earners was nearly nine times as great and the value of products more than twenty times as great as in 1849.

*Electrical machinery, apparatus, and supplies.*—The rapid extension of the uses of electricity in science and industry has created an increasing demand for

appliances with which to utilize such energy. Therefore it was to be expected that the industry would show remarkable development during the decade. Measured by value of products, New Jersey held third place among the states in this industry in 1909, with products valued at \$28,365,000, an increase over 1904 of \$14,562,000, or 105.5 per cent, and for the 10-year period 1899 to 1909 an increase of \$20,832,000, or 276.5 per cent.

*Chemicals.*—This classification includes the manufacture of acids (except sulphuric, nitric, and mixed acids), sodas, alums, coal-tar products, cyanides, bleaching materials, plastics (celluloid, etc.), compressed or liquefied gases, alkaloids, etc., when they are made as a chief product by the establishment reporting. Chemicals manufactured as by-products in establishments classified under a different head are not included. In 1909 the industry gave employment to 5,046 wage earners, an increase of 1,449, or 40.3 per cent, over the number reported for 1904, and during the same period the value of products increased \$9,800,000, or 75.2 per cent. New Jersey held second rank in this industry in the United States both in 1904 and in 1909.

*Manufactures from precious metals.*—The manufacture of jewelry is closely allied to the production of silverware and plated ware and the reducing and refining of gold and silver from clippings, sweepings, and scrap. In 1909 these three industries combined employed an average of 5,416 wage earners, and turned out products valued at \$20,743,000. The most important branch of the industry is the manufacture of jewelry, which gave employment to an average of 4,008 wage earners in 1909 and reported products to the value of \$13,272,000. Measured by value of products, New Jersey ranked fourth among the states in the jewelry industry in 1909.

*Rubber goods, not elsewhere specified.*—This classification includes the manufacture of rubber clothing, automobile, carriage, and bicycle tires, mechanical rubber goods, etc. It does not include the manufacture of rubber boots and shoes, rubber belting and hose, or suspenders, garters, and elastic woven goods. Although there was a decline in value of products from 1899 to 1904 of \$3,622,000, or 42.8 per cent, there was an increase of \$11,085,000, or 131.1 per cent, for the 10-year period from 1899 to 1909. New Jersey held second place among the states in this industry in 1909.

*Soap.*—The manufacture of soap is an important industry, in which the state held fourth place among the states in 1909, advancing from fifth place in 1904. In 1909 this industry gave employment to an average of 1,599 wage earners and reported products to the value of \$13,674,000, these figures representing increases over the corresponding figures for 1904 of 158.3 per cent and 240.3 per cent, respectively.

*Pottery, terra-cotta, and fire-clay products.*—The name of New Jersey is intimately associated with this industry, and the state held second rank among the states in the industry at the censuses of 1909, 1904, and

1899. From 1904 to 1909 the average number of wage earners increased 3.5 per cent and the value of products 12.1 per cent; the corresponding increases from 1899 to 1904 being 16.9 per cent and 31 per cent, respectively.

*Paint and varnish.*—Of the 63 establishments included under this classification in 1909, 37 were engaged primarily in the manufacture of paint, with products valued at \$7,486,000, representing 58.6 per cent of the total for the industry as a whole. From 1904 to 1909 there was an increase in the average number of wage earners of 533, or 55.5 per cent, and in the value of products of \$5,800,000, or 83.2 per cent. Measured by value of products, New Jersey was one of the leading states in the manufacture of paint and varnish at each of the last three censuses, reporting 10.2 per cent of the total value of such products for the United States in 1909, 7.7 per cent in 1904, and 8.9 per cent in 1899.

*Oilcloth and linoleum.*—New Jersey leads all other states in the production of oilcloth and linoleum, with 43.5 per cent of the value of such products in 1909 and 36.8 per cent in 1904. The value of products reported for the industry in the state, as presented in Table I, shows an increase of \$4,699,000, or 86.3 per cent, from 1904 to 1909. A comparison of the statistics for 1909 and 1899 shows that during the decade the average number of wage earners increased 1,260, or 146 per cent; the value of products, \$7,298,000, or 256.5 per cent; and the value added by manufacture, \$2,395,000, or 215.8 per cent.

It will be seen from the table on page 5 that some of the industries that stand very high in gross value of products hold a comparatively low rank in the average number of wage earners employed and in value added by manufacture. Where this is the case it indicates that the cost of materials represents a large proportion of the total value of products, and that therefore the value added by manufacture, of which wages constitute usually the largest item, is not commensurate with the total value of products. Thus the smelting and refining of copper, which ranks first in gross value of products, and the slaughtering and meat-packing industry, which ranks fourth in that respect, hold thirtieth and forty-fourth places, respectively, with regard to number of wage earners, and fifteenth and twenty-ninth places, respectively, when ranked by value added by manufacture. Similar conditions exist in the wire industry, the manufacture of paint and varnish, and a considerable number of less important industries.

On the other hand, the foundry and machine-shop industry, which ranks third in value of products, ranks first in value added by manufacture and second in number of wage earners; the manufacture of silk goods ranks second both in value of products and in value added by manufacture, and first in number of wage earners; the woolen-goods industry ranks fifth in value of products, sixth in value added by manu-



facture, and third in number of wage earners; while the manufacture of electrical machinery, apparatus, and supplies, and tobacco manufactures both rank higher in value added by manufacture and in number of wage earners than in value of products.

This table shows the percentages of increase or decrease for each industry in value of products and value added by manufacture where comparable statistics are presented in Table I, page 28. Most industries show an increase in both items for each five-year period. Exceptionally large percentages of increase in value of products from 1904 to 1909 are shown for the manufacture of dairymen's, poulterers', and apiarists' supplies and artificial stone, and from 1899 to 1904 for confectionery. Of the other industries showing large increases during one or both five-year periods, the more important are the smelting and refining of copper; slaughtering and meat packing; the manufacture of woolen, worsted, and felt goods, and wool hats; electrical machinery, apparatus, and supplies; tobacco manufactures; rubber goods; soap; and copper, tin, and sheet-iron products.

Important exceptions to the general increase in the various industries are the manufacture of carriages and wagons and materials, which decreased both in value of products and in value added by manufacture for each five-year period, and the manufacture of fancy articles and of musical instruments and materials not specified, each of which shows a decrease in value of products for both periods and a decrease in value added by manufacture for the period 1904-1909. Five other industries show decreases from 1904 to 1909 in both value of products and value added by manufacture, one a decrease in value of products only, and one a decrease in value added by manufacture only, while for the period 1899-1904 five other industries show decreases in both items, two decreases in value of products only, and four show decreases in value added by manufacture only. The apparent decrease in value of products reported for the more recent period for the steel works and rolling mills, as shown in Table I, page 28, was due largely to a change in the classification. At the census of 1904 the reports for establishments which combined the manufacture of iron and steel and of wire included both branches of the industry, the returns being classified as "Iron and steel, steel works and rolling mills." At the census of 1909 separate reports were made by some of these companies for their wire mills, and such reports were classified as "Wire." This has resulted in a decrease in the amounts reported for steel works and rolling mills at the census of 1909, as compared with 1904, and an increase in the totals for wire. If the two industries, however, are combined for both censuses, the increase in the value of products becomes 31.1 per cent.

**Persons engaged in manufacturing industries.**—The following table shows for 1909 the distribution of the number of persons engaged in manufactures, the aver-

age number of wage earners being distributed by sex and age. It should be borne in mind, however, that the sex and age classification of the average number of wage earners in this and other tables is an estimate obtained by the method described in the Introduction.

| CLASS.                                 | PERSONS ENGAGED IN MANUFACTURES. |                |               |
|--|----------------------------------|----------------|---------------|
|  | Total.                           | Male.          | Female.       |
| <b>All classes</b> .....               | <b>371,265</b>                   | <b>278,968</b> | <b>92,297</b> |
| Proprietors and officials.....         | 17,581                           | 17,043         | 538           |
| Proprietors and firm members.....      | 8,204                            | 7,924          | 280           |
| Salaried officers of corporations..... | 4,147                            | 4,050          | 97            |
| Superintendents and managers.....      | 5,230                            | 5,063          | 167           |
| Clerks.....                            | 27,461                           | 21,652         | 5,809         |
| Wage earners (average number).....     | 326,223                          | 240,273        | 85,950        |
| 16 years of age and over.....          | 318,685                          | 236,499        | 82,186        |
| Under 16 years of age.....             | 7,538                            | 3,774          | 3,774         |

The average number of persons engaged in manufactures during 1909 was 371,265, of whom 326,223 were wage earners. Of the remainder, 17,581 were proprietors and officials and 27,461 were clerks. Corresponding figures for individual industries will be found in Table II, page 38.

The following table shows for 1909 the percentage of proprietors and officials, clerks, and wage earners, respectively, among the total number of persons employed in manufactures. It covers all industries combined and 35 important industries individually:

| INDUSTRY.   | PERSONS ENGAGED IN MANUFACTURES. |                            |            |                                |
|---|----------------------------------|----------------------------|------------|--------------------------------|
|   | Total number.                    | Per cent of total.         |            |                                |
|   |                                  | Proprietors and officials. | Clerks.    | Wage earners (average number). |
| <b>All industries</b> .....   | <b>371,265</b>                   | <b>4.7</b>                 | <b>7.4</b> | <b>87.9</b>                    |
| Belting and hose, woven and rubber.....   | 2,583                            | 2.1                        | 9.0        | 88.8                           |
| Boots and shoes, including cut stock and findings.....                          | 4,602                            | 3.4                        | 4.6        | 92.0                           |
| Bread and other bakery products.....  | 6,966                            | 22.7                       | 6.4        | 70.9                           |
| Cars and general shop construction and repairs by steam-railroad companies..... | 7,639                            | 6.9                        | 6.7        | 86.5                           |
| Chemicals.....  | 5,937                            | 3.7                        | 11.4       | 85.0                           |
| Clothing, men's, including shirts.....  | 7,680                            | 3.9                        | 5.1        | 91.1                           |
| Copper, tin, and sheet-iron products.....                                       | 5,575                            | 5.7                        | 4.6        | 89.7                           |
| Cotton goods, including cotton small wares.....                                 | 6,894                            | 1.4                        | 2.3        | 96.3                           |
| Dyeing and finishing textiles.....  | 10,722                           | 1.8                        | 3.7        | 94.5                           |
| Electrical machinery, apparatus, and supplies.....                              | 13,024                           | 2.5                        | 12.3       | 85.2                           |
| Fertilizers.....  | 1,384                            | 4.1                        | 8.6        | 87.3                           |
| Foundry and machine-shop products.....  | 32,076                           | 4.3                        | 9.0        | 86.7                           |
| Gas, illuminating and heating.....  | 2,804                            | 5.0                        | 20.7       | 68.4                           |
| Hats, fur-felt.....   | 5,104                            | 4.1                        | 4.0        | 91.2                           |
| Iron and steel, steel works and rolling mills.....                              | 5,228                            | 2.0                        | 8.7        | 89.3                           |
| Jewelry.....  | 4,945                            | 7.8                        | 11.1       | 81.1                           |
| Leather, tanned, curried, and finished.....                                     | 6,040                            | 3.9                        | 4.1        | 92.1                           |
| Liquors, malt.....  | 2,634                            | 5.1                        | 14.2       | 80.7                           |
| Lumber and timber products.....   | 5,745                            | 11.0                       | 4.5        | 84.5                           |
| Oil, not elsewhere specified.....   | 765                              | 8.6                        | 30.6       | 61.8                           |
| Oilcloth and linoleum.....  | 2,204                            | 1.7                        | 4.5        | 93.8                           |
| Paint and varnish.....  | 2,143                            | 7.9                        | 22.4       | 69.7                           |
| Paper and wood pulp.....  | 2,446                            | 3.8                        | 5.3        | 90.9                           |
| Pottery, terra-cotta, and fire-clay products.....                               | 10,542                           | 2.7                        | 4.2        | 93.1                           |
| Printing and publishing.....  | 7,364                            | 12.0                       | 13.1       | 74.0                           |
| Rubber goods, not elsewhere specified.....                                      | 4,860                            | 2.5                        | 9.9        | 87.6                           |
| Shipbuilding, including boat building.....                                      | 5,533                            | 5.2                        | 6.8        | 88.0                           |
| Silk and silk goods, including throwsters.....                                  | 32,365                           | 2.5                        | 3.9        | 93.6                           |
| Slaughtering and meat packing.....  | 2,420                            | 7.2                        | 17.7       | 75.1                           |
| Smelting and refining, copper.....  | 2,564                            | 2.3                        | 7.1        | 90.6                           |
| Smelting and refining, not from the ore.....                                    | 1,194                            | 2.3                        | 6.1        | 88.5                           |
| Soap.....   | 2,301                            | 2.0                        | 27.6       | 69.5                           |
| Tobacco manufactures.....   | 10,610                           | 6.6                        | 4.2        | 89.2                           |
| Wire.....   | 6,255                            | 0.8                        | 9.0        | 90.3                           |
| Woolen, worsted, and felt goods, and wool hats.....                             | 13,119                           | 0.9                        | 2.6        | 96.4                           |
| All other industries.....   | 126,939                          | 5.1                        | 7.5        | 87.4                           |



Of the total number of persons engaged in all manufacturing industries, 4.7 per cent were proprietors and officials, 7.4 per cent clerks, and 87.9 per cent wage earners. The highest percentage of proprietors and officials is shown for the bakeries. In this industry and in the lumber and the printing and publishing industries the majority of the establishments are small and the work is done to a large extent by the proprietors or their immediate representatives so that the proportion of persons engaged in these industries falling into the class of proprietors and officials is much higher than for most other industries or for all industries combined. The highest proportion of wage earners is reported for the woolen and worsted goods industry, and the lowest for establishments engaged in the manufacture of oils, "not elsewhere specified," which industry shows the largest percentage of clerks.

The following table shows, for 1909, in percentages, for all industries combined, the distribution of the average number of wage earners by age periods, and for those 16 years of age and over by sex, calculated in the manner described in the Introduction. It also shows, for some of the important industries separately, a similar distribution of wage earners as reported for December 15, or the nearest representative day. As a means of judging the importance of the several industries the average number employed for the year is also given in each case.

| INDUSTRY.   | WAGE EARNERS.                |                           |                        |                  |
|---|------------------------------|---------------------------|------------------------|------------------|
|   | Average number. <sup>1</sup> | Per cent of total.        |                        |                  |
|   |                              | 16 years of age and over. | Under 16 years of age. |                  |
|   |                              | Male.                     | Female.                |                  |
| <b>All industries</b> .....   | 326,223                      | 72.5                      | 25.2                   | 2.3              |
| Belting and hose, woven and rubber.....   | 2,205                        | 86.1                      | 13.5                   | 0.4              |
| Boots and shoes, including cut stock and findings.....                          | 4,232                        | 60.8                      | 36.3                   | 2.9              |
| Bread and other bakery products.....  | 4,936                        | 93.7                      | 4.9                    | 1.4              |
| Cars and general shop construction and repairs by steam-railroad companies..... | 6,604                        | 99.1                      | 0.8                    | ( <sup>2</sup> ) |
| Chemicals.....  | 5,046                        | 90.3                      | 8.7                    | 1.0              |
| Clothing, men's, including shirts.....  | 6,994                        | 31.5                      | 66.3                   | 2.1              |
| Copper, tin, and sheet-iron products.....                                       | 5,002                        | 80.0                      | 15.1                   | 4.9              |
| Cotton goods, including cotton small wares.....                                 | 6,638                        | 38.1                      | 52.9                   | 8.9              |
| Dyeing and finishing textiles.....  | 10,129                       | 85.6                      | 13.4                   | 1.1              |
| Electrical machinery, apparatus, and supplies.....                              | 11,090                       | 59.9                      | 39.3                   | 0.7              |
| Fertilizers.....  | 1,208                        | 98.5                      | 1.2                    | 0.2              |
| Foundry and machine-shop products.....  | 27,815                       | 96.5                      | 2.8                    | 0.7              |
| Gas, illuminating and heating.....  | 1,917                        | 99.9                      | 0.1                    |                  |
| Hats, fur-felt.....   | 4,657                        | 77.6                      | 20.7                   | 1.7              |
| Iron and steel, steel works and rolling mills.....                              | 4,671                        | 99.4                      | 0.5                    | 0.1              |
| Jewelry.....  | 4,008                        | 72.4                      | 23.4                   | 4.1              |
| Leather, tanned, curried, and finished.....                                     | 5,560                        | 97.3                      | 1.0                    | 1.7              |
| Liquors, malt.....  | 2,125                        | 99.4                      | ( <sup>2</sup> )       | 0.5              |
| Lumber and timber products.....   | 4,857                        | 98.2                      | 1.2                    | 0.6              |
| Oil, not elsewhere specified.....   | 410                          | 91.9                      | 7.9                    | 0.2              |
| Offcloth and linoleum.....  | 2,123                        | 97.9                      | 0.7                    | 1.4              |
| Paint and varnish.....  | 1,493                        | 92.2                      | 7.6                    | 0.1              |
| Paper and wood pulp.....  | 2,223                        | 91.5                      | 7.2                    | 1.3              |
| Pottery, terra-cotta, and fire-clay products.....                               | 9,815                        | 87.7                      | 11.3                   | 1.0              |
| Printing and publishing.....  | 5,451                        | 81.5                      | 16.5                   | 2.0              |
| Rubber goods, not elsewhere specified.....                                      | 4,255                        | 85.9                      | 12.4                   | 1.7              |
| Shipbuilding, including boat building.....                                      | 4,869                        | 100.0                     | ( <sup>2</sup> )       |                  |
| Silk and silk goods, including throwsters.....                                  | 30,285                       | 43.5                      | 52.9                   | 3.6              |
| Slaughtering and meat packing.....  | 1,817                        | 95.7                      | 4.2                    | 0.1              |
| Smelting and refining, copper.....  | 2,322                        | 100.0                     |                        |                  |
| Smelting and refining, not from the ore.....                                    | 1,057                        | 100.0                     |                        |                  |
| Soap.....   | 1,599                        | 66.4                      | 31.1                   | 2.4              |
| Tobacco manufactures.....   | 9,466                        | 24.7                      | 70.2                   | 5.0              |
| Wire.....   | 5,646                        | 91.8                      | 7.7                    | 0.5              |
| Woolen, worsted, and felt goods, and wool hats.....                             | 12,652                       | 44.5                      | 50.9                   | 4.5              |
| All other industries.....   | 110,038                      | 69.6                      | 27.8                   | 2.0              |

<sup>1</sup> For method of estimating the distribution, by sex and age periods, of the average number in all industries combined, see Introduction.  
<sup>2</sup> Less than one-tenth of 1 per cent.

In all industries combined, 72.5 per cent of the average number of wage earners were males 16 years of age and over; 25.2 per cent females 16 years of age and over; and 2.3 per cent children under the age of 16. Of the total number of women employed as wage earners, 31.6 per cent were in the cotton-goods, silk-goods, and woolen and worsted goods industries, over one-half of the employees in each of these industries being women 16 years of age and over. The manufacture of boots and shoes, men's clothing, electrical machinery, and tobacco products each shows a large proportion of female wage earners, 36.3 per cent, 66.3 per cent, 39.3 per cent, and 70.2 per cent, respectively.

The three textile industries above mentioned together employed 30 per cent of the total number of wage earners under 16 years of age. The proportions of such wage earners engaged in each industry were as follows: Cotton goods, 8.9 per cent; silk goods, 3.6 per cent; and woolen and worsted goods, 4.5 per cent.

In order to compare the distribution of persons engaged in manufactures in 1909 with that shown at the census of 1904, it is necessary to use the classification employed at the earlier census. (See Introduction.) The following table makes this comparison according to occupational status:

| CLASS.                             | PERSONS ENGAGED IN MANUFACTURES. |                       |         |                       | Per cent of increase, 1904-1909. |
|------------------------------------|----------------------------------|-----------------------|---------|-----------------------|----------------------------------|
|                                    | 1909                             |                       | 1904    |                       |                                  |
|                                    | Number.                          | Percent distribution. | Number. | Percent distribution. |                                  |
| <b>Total</b> .....                 | 371,265                          | 100.0                 | 296,262 | 100.0                 | 25.3                             |
| Proprietors and firm members.....  | 8,204                            | 2.2                   | 6,730   | 2.3                   | 21.9                             |
| Salaried employees.....            | 36,838                           | 9.9                   | 23,196  | 7.8                   | 58.8                             |
| Wage earners (average number)..... | 326,223                          | 87.9                  | 266,336 | 89.9                  | 22.5                             |

Comparable figures are not obtainable for 1899. The table shows that the greatest percentage of increase was in the salaried employees.

The following table shows the average number of wage earners distributed according to age periods, and in the case of those 16 years of age and over according to sex, for 1909, 1904, and 1899. The averages for 1909 are estimated on the basis of the actual number of wage earners reported for a single representative day. (See Introduction.)

| CLASS.                        | AVERAGE NUMBER OF WAGE EARNERS. |                       |         |                       |         |                       |
|-------------------------------|---------------------------------|-----------------------|---------|-----------------------|---------|-----------------------|
|                               | 1909                            |                       | 1904    |                       | 1899    |                       |
|                               | Number.                         | Percent distribution. | Number. | Percent distribution. | Number. | Percent distribution. |
| <b>Total</b> .....            | 326,223                         | 100.0                 | 266,336 | 100.0                 | 213,975 | 100.0                 |
| 16 years of age and over..... | 318,685                         | 97.7                  | 258,334 | 97.0                  | 206,143 | 96.3                  |
| Male.....                     | 236,490                         | 72.5                  | 195,447 | 73.4                  | 156,787 | 73.3                  |
| Female.....                   | 82,186                          | 25.2                  | 62,887  | 23.6                  | 49,356  | 23.1                  |
| Under 16 years of age.....    | 7,538                           | 2.3                   | 8,002   | 3.0                   | 7,832   | 3.7                   |

This table indicates that for all industries combined the proportion of children under 16 years of age was smaller in 1909 than in 1899. Although there was not

much change in the proportions of male and female wage earners 16 years of age and over, the proportion of females was greater in 1909 than in 1899, while on the other hand, that of males was smaller in 1909.

**Wage earners employed, by months.**—The following table gives the number of wage earners employed on the 15th of each month during the year 1909 for all industries combined, for the canning and preserving industry, and for all other industries combined; it gives also the percentage which the number reported for each month is of the greatest number reported for any month. In Table II, page 38, are shown, for a majority of the important industries in the state, the largest number and the smallest number of wage earners reported for any month. The figures are for the 15th day, or the nearest representative day, of the month.

| MONTH.         | NUMBER OF WAGE EARNERS. |                     |                         |                     |                       |                     |
|----------------|-------------------------|---------------------|-------------------------|---------------------|-----------------------|---------------------|
|                | All industries.         |                     | Canning and preserving. |                     | All other industries. |                     |
|                | Number.                 | Percent of maximum. | Number.                 | Percent of maximum. | Number.               | Percent of maximum. |
| January.....   | 313,158                 | 91.2                | 273                     | 4.5                 | 312,885               | 91.4                |
| February.....  | 313,216                 | 91.2                | 317                     | 5.3                 | 312,899               | 91.4                |
| March.....     | 318,401                 | 92.7                | 290                     | 4.8                 | 318,111               | 92.6                |
| April.....     | 321,883                 | 93.7                | 396                     | 6.6                 | 321,487               | 93.6                |
| May.....       | 321,376                 | 93.7                | 760                     | 12.6                | 321,116               | 93.8                |
| June.....      | 321,069                 | 93.8                | 1,062                   | 27.6                | 320,307               | 93.5                |
| July.....      | 318,216                 | 92.7                | 1,483                   | 24.6                | 316,733               | 92.5                |
| August.....    | 323,506                 | 94.2                | 3,344                   | 55.5                | 320,162               | 93.5                |
| September..... | 334,710                 | 97.5                | 6,021                   | 100.0               | 328,689               | 96.0                |
| October.....   | 341,569                 | 99.5                | 4,768                   | 79.2                | 336,801               | 98.3                |
| November.....  | 342,786                 | 99.8                | 1,566                   | 26.0                | 341,220               | 99.6                |
| December.....  | 343,380                 | 100.0               | 937                     | 15.0                | 342,452               | 100.0               |

Canning and preserving, which is a seasonal industry, gave employment to a large number of persons in the months of August, September, and October, and to a relatively small number through the winter and spring months. From 273 wage earners in January, the number employed increased to 6,021 in September. The

number reported for January, the month of minimum activity, was only 4.5 per cent of the number reported for September, the month of maximum activity. In the glass industry the greatest number of wage earners, 7,286, was reported for the month of April, and the least number, 1,151, for the month of August. This variation is accounted for by the fact that the manufacture of glass is practically suspended during the months of July and August. So few wage earners are employed in these two industries, however, as compared with the total number employed in all industries, that they have only a slight effect on the fluctuation of employment from month to month in all industries combined.

**Prevailing hours of labor.**—In the next table wage earners have been classified according to the prevailing hours of labor in the establishment in which they are employed. In making this classification the average number of wage earners employed during the year is used, and the number employed in each establishment is classified as a total according to the hours prevailing in that establishment, even though a few employees work a greater or less number of hours.

It is evident from this table that for the great majority of wage earners employed in the manufacturing industries of New Jersey the usual hours of labor range from 54 to 60 per week, 12.8 per cent of the total being employed in establishments where the prevailing hours are less than 54 a week and only 4.8 per cent in establishments where they are more than 60 a week.

In the malt liquor, marble and stone work, and printing and publishing industries 48 hours or less per week prevail for a majority of the wage earners. In nearly all of the larger industries the prevailing hours are from 54 to 60 per week. Practically all of the wage earners in the gas industry, however, are in plants where the hours of employment are 60 a week or more.

| INDUSTRY.  | AVERAGE NUMBER OF WAGE EARNERS IN ESTABLISHMENTS GROUPED ACCORDING TO PREVAILING HOURS OF WORK PER WEEK. |                |                    |                |                    |                |                    |               |               |
|--|--|----------------|--------------------|----------------|--------------------|----------------|--------------------|---------------|---------------|
|  | Total.   | 48 and under.  | Between 48 and 54. | 54.            | Between 54 and 60. | 60.            | Between 60 and 72. | 72.           | Over 72.      |
| <b>All industries.....</b>   | <b>326, 223</b>  | <b>16, 180</b> | <b>25, 713</b>     | <b>45, 861</b> | <b>173, 239</b>    | <b>49, 716</b> | <b>7, 611</b>      | <b>2, 461</b> | <b>5, 433</b> |
| Agricultural implements.....   | 224  |                |                    | 9              | 5                  | 210            |                    |               |               |
| Artificial stone.....  | 488  | 65             | 65                 | 140            | 111                | 95             |                    | 6             |               |
| Belting and hose, woven and rubber.....  | 2, 295   | 4              |                    |                | 1, 711             | 580            |                    |               |               |
| Boots and shoes, including out stock and findings.....                           | 4, 232   | 14             | 12                 | 71             | 3, 080             | 455            |                    |               |               |
| Boxes, fancy and paper.....  | 2, 142   | 62             | 162                | 851            | 1, 007             | 60             |                    |               |               |
| Brass and bronze products.....   | 1, 265   | 12             | 93                 | 284            | 640                | 205            |                    | 31            |               |
| Bread and other bakery products.....   | 4, 036   | 256            | 30                 | 670            | 306                | 2, 022         | 548                | 173           | 22            |
| Brick and tile.....  | 3, 405   | 160            | 137                | 564            | 270                | 2, 274         |                    |               |               |
| Brooms and brushes.....  | 915  | 10             | 147                | 48             | 706                | 4              |                    |               |               |
| Buttons.....   | 2, 261   | 31             |                    | 160            | 1, 874             | 196            |                    |               |               |
| Canning and preserving.....  | 1, 818   | 149            | 82                 | 97             | 485                | 988            | 10                 | 7             |               |
| Carpets and rugs, other than rag.....  | 884  | 36             | 3                  |                | 845                |                |                    |               |               |
| Carriages and wagons and materials.....  | 1, 601   | 51             | 116                | 407            | 669                | 339            | 18                 | 1             |               |
| Cars and general shop construction and repairs by steam-railroad companies.....  | 6, 604   | 1, 002         | 1, 337             | 1, 490         | 1, 032             | 598            | 990                |               | 165           |
| Cars and general shop construction and repairs by street-railroad companies..... | 826  |                |                    | 2              | 585                | 132            | 92                 | 5             | 10            |
| Cement.....  | 1, 445   |                |                    |                |                    | 1, 119         |                    |               | 326           |
| Chemicals.....   | 5, 046   | 6              | 20                 | 60             | 2, 804             | 902            | 198                | 74            | 802           |
| Clocks and watches, including cases and materials.....                           | 2, 120   |                | 372                |                | 1, 622             | 135            |                    |               |               |
| Clothing, men's, including shirts.....   | 6, 094   | 661            | 951                | 447            | 4, 574             | 361            |                    |               |               |
| Clothing, women's.....   | 4, 216   | 43             | 1, 305             | 1, 197         | 1, 511             | 160            |                    |               |               |
| Coffins, burial cases, and undertakers' goods.....                               | 212  | 1              | 1                  | 12             |                    | 168            |                    |               |               |
| Confectionery.....   | 1, 263   | 26             | 240                | 160            | 652                | 174            |                    | 2             |               |
| Cooperage and wooden goods, not elsewhere specified.....                         | 1, 046   | 39             | 337                | 433            | 54                 | 183            |                    |               |               |
| Copper, tin, and sheet-iron products.....  | 5, 002   | 899            | 58                 | 551            | 3, 295             | 199            |                    |               |               |
| Cordage and twine and jute and linen goods.....                                  | 3, 025   | 1              |                    | 301            | 2, 671             | 52             |                    |               |               |
| Cork, cutting.....   | 418  | 44             |                    | 63             | 306                | 5              |                    |               |               |
| Corsets.....   | 1, 845   |                | 178                |                | 1, 122             | 308            |                    |               |               |
| Cotton goods, including cotton small wares.....                                  | 6, 638   |                | 3                  |                | 5, 537             | 1, 098         |                    |               |               |
| Cutlery and tools, not elsewhere specified.....                                  | 2, 208   | 97             | 125                | 117            | 1, 814             | 55             |                    |               |               |
| Dairymen's, poultryers', and apiarists' supplies.....                            | 296  |                |                    |                | 270                | 20             |                    |               |               |
| Dyeing and finishing textiles.....   | 10, 129  | 4              | 33                 | 60             | 6, 194             | 2, 968         | 870                |               |               |
| Electrical machinery, apparatus, and supplies.....                               | 11, 099  | 147            | 107                | 4, 100         | 6, 561             | 104            |                    | 20            |               |
| Fancy articles, not elsewhere specified.....                                     | 1, 112   | 3              | 20                 | 17             | 1, 063             |                |                    |               |               |
| Fertilizers.....   | 1, 208   | 9              |                    | 11             | 51                 | 1, 137         |                    |               |               |
| Flour-mill and gristmill products.....   | 453  | 40             | 7                  | 9              | 34                 | 275            | 31                 | 41            | 16            |
| Foundry and machine-shop products.....   | 27, 815  | 326            | 1, 893             | 11, 753        | 9, 507             | 4, 343         | 3                  |               |               |
| Furniture and refrigerators.....   | 1, 755   | 214            | 115                | 56             | 1, 210             | 160            |                    |               |               |
| Gas and electric fixtures and lamps and reflectors.....                          | 1, 884   | 33             | 118                | 310            | 1, 380             | 4              | 30                 |               |               |
| Gas, illuminating and heating.....   | 1, 017   | 9              |                    | 15             | 47                 | 247            | 4                  | 1, 505        |               |
| Glass.....   | 5, 051   | 1, 097         | 2, 451             | 420            | 1, 773             |                |                    |               |               |
| Gold and silver, reducing and refining, not from the ore.....                    | 112  |                |                    | 6              | 75                 | 27             | 4                  |               |               |
| Hats, fur-felt.....  | 4, 057   | 619            | 3, 295             | 108            | 306                | 269            |                    |               |               |
| Hosiery and knit goods.....  | 2, 566   | 24             | 100                | 107            | 2, 140             | 126            |                    |               |               |
| Ice, manufactured.....   | 456  |                |                    | 10             | 81                 | 70             | 70                 | 70            | 146           |
| Iron and steel, steels works and rolling mills.....                              | 4, 071   |                | 225                | 1, 007         | 2, 134             | 224            | 1, 081             |               |               |
| Jewelry.....   | 4, 008   | 157            | 464                | 1, 052         | 1, 582             | 153            |                    |               |               |
| Leather goods.....   | 1, 813   | 188            | 83                 | 44             | 1, 303             | 195            |                    |               |               |
| Leather, tanned, curried, and finished.....                                      | 5, 560   | 180            | 245                | 115            | 4, 578             | 442            |                    |               |               |
| Liquors, malt.....   | 2, 125   | 1, 286         |                    | 768            |                    | 71             |                    |               |               |
| Lumber and timber products.....  | 4, 857   | 728            | 908                | 1, 371         | 1, 095             | 750            | 5                  |               |               |
| Marble and stone work.....   | 1, 479   | 1, 068         | 41                 | 145            | 163                | 62             |                    |               |               |
| Mattresses and spring beds.....  | 490  | 49             |                    | 7              | 420                | 20             |                    |               |               |
| Milinery and lace goods.....   | 4, 120   | 114            | 65                 | 523            | 2, 904             | 483            | 31                 |               |               |
| Musical instruments and materials, not specified.....                            | 385  | 2              |                    | 72             | 311                |                |                    |               |               |
| Musical instruments, pianos and organs and materials.....                        | 1, 393   | 64             | 5                  | 978            | 345                | 1              |                    |               |               |
| Oil, not elsewhere specified.....  | 410  | 1              | 45                 | 84             | 44                 | 245            |                    |               |               |
| Oilcloth and linoleum.....   | 2, 123   |                |                    | 103            | 1, 377             | 643            |                    |               |               |
| Paint and varnish.....   | 1, 493   | 93             | 480                | 28             | 282                | 304            | 17                 | 229           |               |
| Paper and wood pulp.....   | 2, 223   | 12             |                    |                | 304                | 194            | 720                | 843           | 54            |
| Paper goods, not elsewhere specified.....  | 563  | 6              | 3                  | 115            | 110                | 184            | 145                |               |               |
| Patent medicines and compounds and druggists' preparations.....                  | 1, 005   | 80             | 86                 | 378            | 353                | 78             |                    |               |               |
| Pottery, terra-cotta, and fire-clay products.....                                | 9, 815   | 652            | 1, 968             | 1, 448         | 3, 028             | 2, 719         |                    |               |               |
| Printing and publishing.....   | 5, 451   | 3, 251         | 1, 141             | 640            | 315                | 79             | 25                 |               |               |
| Rubber goods, not elsewhere specified.....                                       | 4, 255   |                | 15                 | 10             | 2, 571             | 1, 659         |                    |               |               |
| Shipbuilding, including boat building.....                                       | 4, 869   | 150            | 101                | 1, 278         | 340                | 2, 910         |                    |               |               |
| Silk and silk goods, including throwsters.....                                   | 30, 285  | 42             | 477                | 190            | 28, 986            | 128            |                    |               | 462           |
| Silverware and plated ware.....  | 1, 290   |                | 593                | 13             | 687                | 3              |                    |               |               |
| Slaughtering and meat packing.....   | 1, 817   | 116            | 261                | 44             | 136                | 1, 090         | 10                 | 142           | 12            |
| Smelting and refining, copper.....   | 2, 322   |                |                    |                |                    | 1, 238         |                    |               |               |
| Smelting and refining, not from the ore.....                                     | 1, 057   | 2              | 3                  |                | 180                | 292            | 1, 084             |               | 590           |
| Soap.....  | 1, 599   | 3              | 1, 101             | 202            | 188                | 105            |                    |               |               |
| Stoves and furnaces, including gas and oil stoves.....                           | 696  | 4              | 35                 | 152            | 46                 | 459            |                    |               |               |
| Surgical appliances and artificial limbs.....                                    | 1, 412   | 13             |                    | 35             | 1, 363             | 1              |                    |               |               |
| Tobacco manufactures.....  | 6, 466   | 712            | 205                | 486            | 6, 562             | 1, 499         | 2                  |               |               |
| Typewriters and supplies.....  | 272  | 57             | 10                 | 44             | 161                |                |                    |               |               |
| Wall paper.....  | 782  |                |                    |                | 248                | 534            |                    |               |               |
| Wall plaster.....  | 178  |                |                    | 7              | 44                 | 127            |                    |               |               |
| Wire.....  | 5, 646   |                |                    |                | 5, 559             | 87             |                    |               |               |
| Woolen, worsted, and felt goods, and wool hats.....                              | 12, 652  |                | 163                | 8              | 11, 747            | 744            |                    |               |               |
| All other industries.....  | 47, 187  | 1, 055         | 2, 980             | 8, 450         | 23, 054            | 8, 286         | 1, 850             | 813           | 1, 103        |

MANUFACTURES—NEW JERSEY.

Location of establishments.—The next table shows the extent to which the manufactures of New Jersey are centralized in cities and other incorporated places of 10,000 population or over. (See Introduction.)

The comparison is confined here, as in other states, to the years 1899 and 1909, in the absence of a Federal census of population by which the grouping of cities in 1904 could be determined for all the states.

| ITEM.                           | Year. | Aggregate.      | CITIES, TOWNS, OR BOROUGHS HAVING A POPULATION OF 10,000 AND OVER. |                   |                   |                   |                   |                   |                   |                   | DISTRICTS OUTSIDE OF CITIES, TOWNS, OR BOROUGHS HAVING A POPULATION OF 10,000 AND OVER. |                   |
|---------------------------------|-------|-----------------|--|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|---|-------------------|
|                                 |       |                 | Total.   |                   | 10,000 to 25,000  |                   | 25,000 to 100,000 |                   | 100,000 and over. |                   | Number or amount.   | Percent of total. |
|                                 |       |                 | Number or amount.  | Percent of total. | Number or amount. | Percent of total. | Number or amount. | Percent of total. | Number or amount. | Percent of total. |   |                   |
| Population.....                 | 1910  | 2,537,167       | 1,635,863  | 64.5              | 271,036           | 10.7              | 623,079           | 24.6              | 740,848           | 29.2              | 901,304   | 35.5              |
|                                 | 1900  | 1,883,669       | 1,125,018  | 59.7              | 218,271           | 11.6              | 349,073           | 18.5              | 557,074           | 29.6              | 758,651   | 40.3              |
| Number of establishments.....   | 1909  | 8,817           | 5,939  | 67.4              | 818               | 9.3               | 1,816             | 20.6              | 3,305             | 37.5              | 2,878   | 32.6              |
|                                 | 1899  | 6,415           | 4,253  | 66.3              | 585               | 9.1               | 1,072             | 16.7              | 2,596             | 40.5              | 2,162   | 33.7              |
| Average number of wage earners. | 1909  | 326,223         | 248,765  | 76.3              | 37,697            | 11.6              | 93,655            | 28.7              | 117,413           | 36.0              | 77,458  | 23.7              |
|                                 | 1899  | 213,975         | 166,842  | 75.2              | 24,567            | 11.5              | 47,464            | 22.2              | 88,811            | 41.5              | 53,133  | 24.8              |
| Value of products.....          | 1909  | \$1,145,529,076 | \$851,498,583  | 74.3              | \$93,720,092      | 8.2               | \$356,907,642     | 31.2              | \$400,870,840     | 35.0              | \$294,030,493   | 25.7              |
|                                 | 1899  | 553,005,684     | 419,801,662  | 75.9              | 53,854,751        | 9.7               | 131,787,132       | 23.8              | 234,159,779       | 42.3              | 133,204,022   | 24.1              |
| Value added by manufacture...   | 1909  | 425,495,677     | 325,438,367  | 76.5              | 43,817,178        | 10.3              | 119,674,513       | 28.1              | 162,146,616       | 38.1              | 99,857,370  | 23.5              |
|                                 | 1899  | 218,279,590     | 166,024,700  | 76.1              | 22,025,292        | 10.4              | 45,331,841        | 20.8              | 98,067,573        | 44.0              | 52,254,884  | 23.9              |

In 1909, 74.3 per cent of the total value of products was reported from cities and other incorporated places having over 10,000 inhabitants, and 76.3 per cent of the average number of wage earners were employed in such places. The figures indicate that the manufacturing industries in incorporated places with more than 10,000 inhabitants contributed slightly larger percentages of the total number of establishments, average number of wage earners, and value added by manufacture, and a somewhat smaller percentage of the value of products in 1909 than in 1899.

The increase in the population of certain places has affected the grouping in the table. East Orange, Orange, Perth Amboy, and West Hoboken, which for 1909 fall into the group comprising places having between 25,000 and 100,000 inhabitants, had less than 25,000 inhabitants in 1900, and for 1899, therefore, are included with the cities and towns having between 10,000 and 25,000 inhabitants. Eight of the places falling in 1909 into the group comprising incorporated places of between 10,000 and 25,000 inhabitants—Asbury Park, Bloomfield, Garfield, Hackensack, Irvington, Long Branch, West New York, and West Orange—had less than 10,000 inhabitants in 1900, so that for 1899 their statistics are included with those for districts outside of cities. The fact that in 1909 the combined value of products reported by the manufacturing industries of the eight places just mentioned was \$31,524,468, or 2.8 per cent of the total for the state, makes the increase in the proportion of the total value of products reported by the industries outside of incorporated places of over 10,000 inhabitants more worthy of note.

The group comprising the incorporated places of between 10,000 and 25,000 inhabitants contributed a

smaller proportion of the total value of products in 1909 than in 1899, and the group made up of the places having between 25,000 and 100,000 inhabitants a considerably larger proportion, while for Newark, Jersey City, and Paterson, the three cities having more than 100,000 inhabitants, a decided loss is shown in the percentage which their combined value of products forms of the total. Of the total value of products reported for the state in 1909, 8.2 per cent was reported from the 6 cities, 11 towns, and 1 borough having between 10,000 and 25,000 inhabitants, 31.2 per cent from the 10 cities and 1 town having between 25,000 and 100,000 inhabitants, and 35 per cent from the 3 cities having 100,000 inhabitants and over.

The population for 1910 and 1900 of the 32 incorporated places which had 10,000 inhabitants or over in 1910 is given in the following statement:

| CITY, TOWN, OR BOROUGH. | 1910    | 1900    | CITY, TOWN, OR BOROUGH. | 1910   | 1900   |
|-------------------------|---------|---------|-------------------------|--------|--------|
| Newark.....             | 347,469 | 246,070 | Union.....              | 21,023 | 15,187 |
| Jersey City.....        | 267,779 | 206,433 | Plainfield.....         | 20,550 | 15,369 |
| Paterson.....           | 125,600 | 105,171 | Kearny.....             | 18,650 | 10,896 |
| Trenton.....            | 96,815  | 73,307  | Bloomfield.....         | 15,070 | 9,698  |
| Camden.....             | 94,538  | 75,935  | Harrison.....           | 14,498 | 10,596 |
| Elizabeth.....          | 73,409  | 52,130  | Bridgeton.....          | 14,269 | 13,913 |
| Hoboken.....            | 70,324  | 59,364  | Hackensack.....         | 14,050 | 9,443  |
| Bayonne.....            | 55,545  | 32,722  | Phillipsburg.....       | 13,903 | 10,652 |
| Passaic.....            | 54,773  | 27,777  | West New York.....      | 13,560 | 5,267  |
| Atlantic City.....      | 46,150  | 27,838  | Long Branch.....        | 13,298 | 8,872  |
| West Hoboken.....       | 35,403  | 23,094  | Morristown.....         | 12,507 | 11,267 |
| East Orange.....        | 34,371  | 21,506  | Millville.....          | 12,451 | 10,583 |
| Perth Amboy.....        | 32,121  | 17,609  | Irvington.....          | 11,877 | 5,255  |
| Orange.....             | 29,630  | 24,141  | West Orange.....        | 10,980 | 6,889  |
| New Brunswick.....      | 23,388  | 20,006  | Garfield.....           | 10,213 | 3,504  |
| Montclair.....          | 21,550  | 13,962  | Asbury Park.....        | 10,150 | 4,148  |

The relative industrial importance of each of the 32 incorporated places having a population of 10,000 or over in 1910 is shown in the next table, in which the value of products and average number of wage earners are shown separately for 1909, 1904, and 1899.

| CITY, TOWN, OR BOROUGH.    | AVERAGE NUMBER OF WAGE EARNERS. |        |        | VALUE OF PRODUCTS. |               |               |
|----------------------------|---------------------------------|--------|--------|--------------------|---------------|---------------|
|                            | 1909                            | 1904   | 1899   | 1909               | 1904          | 1899          |
| Newark.....                | 59,955                          | 50,007 | 42,878 | \$202,511,520      | \$150,055,227 | \$112,728,015 |
| Jersey City.....           | 25,454                          | 20,353 | 17,391 | 128,774,078        | 75,740,934    | 72,929,000    |
| Bayonne.....               | 7,519                           | 7,057  | 4,670  | 73,610,900         | 60,633,761    | 38,001,420    |
| Perth Amboy.....           | 5,866                           | 3,950  | 2,005  | 73,092,703         | 34,800,402    | 14,001,072    |
| Paterson.....              | 32,004                          | 28,509 | 28,542 | 69,584,351         | 54,673,083    | 48,502,044    |
| Camden.....                | 16,827                          | 12,061 | 7,742  | 49,137,874         | 33,587,273    | 17,069,954    |
| Trenton <sup>1</sup> ..... | 18,543                          | 14,130 | 13,138 | 49,008,715         | 32,359,945    | 28,458,008    |
| Passaic.....               | 15,086                          | 11,000 | 6,399  | 41,720,257         | 22,782,725    | 12,801,806    |
| Elizabeth.....             | 12,737                          | 12,335 | 9,498  | 20,147,334         | 20,300,801    | 22,801,375    |
| Hoboken.....               | 8,109                           | 7,227  | 5,712  | 20,413,015         | 14,077,305    | 10,483,079    |
| Harrison.....              | 6,500                           | 4,040  | 2,859  | 13,142,377         | 8,408,624     | 6,086,477     |
| New Brunswick.....         | 5,264                           | 4,500  | 3,836  | 10,004,802         | 8,016,983     | 5,791,321     |
| West New York.....         | 1,508                           | (2)    | (2)    | 9,273,717          | (2)           | (2)           |
| Orange.....                | 4,383                           | 2,450  | 1,640  | 9,175,910          | 6,150,635     | 2,995,688     |
| Phillipsburg.....          | 3,432                           | 3,148  | 2,216  | 9,150,227          | 6,684,173     | 4,584,880     |
| Garfield.....              | 2,530                           | (2)    | (2)    | 8,893,710          | (2)           | (2)           |
| Keany.....                 | 2,820                           | 1,303  | 986    | 8,306,276          | 4,427,004     | 1,607,002     |
| Union.....                 | 2,894                           | 1,856  | 1,376  | 7,941,047          | 3,512,451     | 3,403,136     |
| Bloomfield.....            | 2,957                           | 1,893  | 1,612  | 5,894,710          | 4,645,483     | 3,370,924     |
| West Hoboken.....          | 2,782                           | 3,592  | 2,733  | 5,577,439          | 5,047,207     | 4,769,436     |
| Milville.....              | 2,761                           | 2,767  | 2,239  | 4,181,824          | 3,719,447     | 2,513,433     |
| Bridgeton.....             | 2,387                           | 2,276  | 2,182  | 4,070,508          | 2,903,410     | 2,258,772     |
| East Orange.....           | 1,386                           | 854    | 600    | 3,724,879          | 2,326,552     | 2,080,010     |
| Plainfield.....            | 1,758                           | 1,986  | 1,384  | 3,648,745          | 3,572,134     | 2,437,434     |
| Irvington.....             | 540                             | (2)    | (2)    | 3,017,824          | (2)           | (2)           |
| Athlantic City.....        | 726                             | 381    | 305    | 2,259,616          | 974,835       | 608,422       |
| Haekensack.....            | 738                             | 812    | 487    | 1,977,966          | 1,488,358     | 782,232       |
| Long Branch.....           | 415                             | 294    | 96     | 1,116,663          | 577,208       | 280,500       |
| Montclair.....             | 252                             | 151    | 169    | 1,025,585          | 621,145       | 663,592       |
| West Orange.....           | 476                             | (2)    | (2)    | 747,684            | (2)           | (2)           |
| Morrisstown.....           | 201                             | 307    | 252    | 724,233            | 704,412       | 595,562       |
| Asbury Park.....           | 264                             | (2)    | (2)    | 602,194            | (2)           | (2)           |

<sup>1</sup> Figures do not agree with those published in 1904, because it was necessary to revise the totals in order to include data only for those establishments located within the corporate limits of the city.

<sup>2</sup> Figures not available.

With the exception of Elizabeth and West Hoboken, each place for which comparative statistics are presented shows an increase in value of products from 1904 to 1909, and all but Montclair show an increase from 1899 to 1904.

Newark, the largest and most important city in the state, shows an increase from 1904 to 1909 of \$52,456,000, or 35 per cent, in value of products and 9,258, or 18.3 per cent, in the average number of wage earners. In value of manufactured products, it stood eleventh among the cities of the United States in 1909 and tenth in 1904 and 1899. Eighteen and four-tenths per cent of the wage earners employed in manufactures in the state in 1909 and 17.7 per cent of the value of the manufactured products were reported from Newark. The leading industry of the city in 1909 was the smelting and refining of copper, but statistics for this industry can not be shown separately without disclosing the operations of individual establishments. Next in order of importance as measured by value of products were leather (tanned, curried, and finished), foundry and machine-shop products, jewelry, and malt liquors, the combined products of which represented 29.6 per cent of the total value of all products for the city in 1909. Other important industries were the manufacture of paint and varnish; electrical machinery and apparatus; chemicals; bread and other bakery products; printing and publishing; fur-felt hats; slaughtering and meat packing; and copper, tin, and sheet-iron products.

The total value of products reported for Jersey City increased \$53,034,000, or 70 per cent, from 1904 to 1909, and the average number of wage earners in-

creased 5,101, or 25.1 per cent. Among the leading industries, measured by value of products, was the slaughtering and meat-packing industry, with products valued at \$22,314,000, which represented 59.4 per cent of the total value of products for this industry in the state. Other important industries were tobacco manufactures, foundries and machine shops, the manufacture of gas, and steam-railroad repair shops. Three of the most important industries in the city in 1909 were the manufacture of soap, the refining of sugar, and the refining of petroleum, but their statistics can not be shown separately without disclosing the operations of individual establishments.

Bayonne shows an increase in value of manufactured products amounting to \$13,007,000, or 21.5 per cent, from 1904 to 1909, and an increase in average number of wage earners of 462, or 6.5 per cent. The leading industries were petroleum refining, smelting and refining from clippings, sweepings, and scrap, foundries and machine shops, and the manufacture of electrical machinery and apparatus. The foundry and machine-shop industry, however, is the only one of these for which statistics can be shown separately in Table I without disclosing the operations of individual establishments. Twenty-one industries were reported in 1909 which did not appear at the census of 1904, the most important of which were the manufacture of copper, tin, and sheet-iron products, cooperage and wooden goods, silk and silk goods, and soap.

Perth Amboy was the fourth city in the state in 1909 in value of manufactured products, having advanced from fifth position since 1904 and displaced Paterson. Since the city had less than 50,000 inhabitants in 1910, its statistics are presented by totals only in Table I. From 1904 to 1909 the total value of products increased \$38,292,000, or 110 per cent, and the average number of wage earners 1,916, or 48.5 per cent. These large gains were due in a great measure to the appearance of several important industries in 1909 which were not reported at the census of 1904, such as the manufacture of ammunition, of paving materials, and of electrical machinery and apparatus, and to the increase in the value of products of the copper smelting and refining industry, which is by far the most important industry of the city.

The fifth city in importance, measured by value of products, was Paterson. From 1904 to 1909 the total value of the manufactured products of this city increased \$14,911,000, or 27.3 per cent, and the average number of wage earners 3,495, or 12.3 per cent. The leading industry was the manufacture of silk and silk goods, in the production of which this city outranked all others in the United States in 1909, 1904, and 1899. In 1909 this industry gave employment in Paterson to 18,828 wage earners, or 58.8 per cent of the total number for all industries, and reported products to the value of \$40,358,000, or 58 per cent of

the total value of products for the city. Other important industries were the dyeing and finishing of textiles, foundries and machine shops, the making of men's clothing, and slaughtering and meat packing.

From 1904 to 1909 the total value of manufactured products in Camden increased \$15,551,000, or 46.3 per cent, and the average number of wage earners 3,866, or 30.5 per cent. Measured by value of products, the most important industry was the tanning, currying, and finishing of leather, with products valued at \$5,920,000, which gave employment to an average of 1,111 wage earners. The shipbuilding industry was next in importance, with a value of products amounting to \$5,626,000, and an average of 3,324 wage earners. Other important industries were the manufacture of phonographs and graphophones, foundry and machine-shop products, and woolen and worsted goods.

The total value of products reported for Trenton increased \$16,649,000, or 51.4 per cent, and the average number of wage earners 4,413, or 31.2 per cent, during the five-year period 1904-1909. Trenton owes much of its industrial prominence to the manufacture of pottery, terra-cotta, and fire-clay products, which industry in 1909 reported products to the value of \$6,996,000, and gave employment to an average of 5,030 wage earners, these figures representing 14.3 per cent and 27.1 per cent, respectively, of the totals for all industries in the city, and 53.2 per cent and 51.2 per cent, respectively, of the totals for this industry in the state. Other important industries were the manufacture of wire, rubber goods, foundry and machine-shop products, and rubber belting and hose.

In Passaic the value of products increased \$18,947,000, or 83.2 per cent, and the average number of wage earners 4,086, or 37.1 per cent, between 1904 and 1909. Two of the most important industries in the city were the manufacture of cotton goods and of woolen and worsted goods, the combined value of their products amounting to \$20,536,000 and the average number of wage earners employed to 8,191, representing 49.2 per cent and 54.3 per cent, respectively, of the corresponding totals for all industries in the city.

The value of products for Elizabeth showed a slight decrease between 1904 and 1909, due principally to a falling off in foundry and machine-shop products, and in oils, "not elsewhere specified," and to the fact that a large establishment engaged in the refining of copper in 1904 was reported as idle in 1909. The most important industry in the city in 1909 was the manufacture of sewing machines. The statistics for this industry can not be shown separately without disclosing the operations of individual establishments, but in 1909 the industry gave employment to more

than one-half of the average number of wage earners reported for all manufacturing industries in the city. Other important industries were the manufacture of wire and of electrical machinery and apparatus, and steam-railroad repair shops.

While there was a decrease of 35, or 12.5 per cent, in the number of establishments in Hoboken between 1904 and 1909, the value of products increased \$6,336,000, or 45 per cent, and the average number of wage earners 873, or 12.1 per cent. The foundries and machine shops, which gave employment in 1909 to 855 wage earners and reported products to the value of \$1,808,000, formed the most important industry in the city. Next in importance were the bakeries and the furniturefactories. The tanning and finishing of leather, shipbuilding, and the manufacture of moving picture apparatus and of lead pencils were other important industries, but their statistics can not be shown without disclosing the operations of individual establishments.

The other incorporated places having over 10,000 population in the order of their importance as measured by value of products in 1909, and the principal industries of each, were as follows: Harrison, foundries and machine shops, steel works and rolling mills, and electrical machinery and apparatus; New Brunswick, surgical appliances and tobacco manufactures; West New York, lard refining, cottonseed oil and cake, and silk goods; Orange, phonographs and graphophones and fur-felt hats; Phillipsburg, foundries and machine shops and silk goods; Garfield, worsted goods and paper and wood pulp; Kearny, slaughtering and meat packing and oilcloth and linoleum; Union, silk goods and malt liquors; Bloomfield, electrical machinery and apparatus; West Hoboken, silk goods; Millville and Bridgeton, glass; East Orange, electrical machinery and apparatus; Plainfield, foundry and machine-shop products; Irvington, reducing and refining gold and silver, not from the ore; Atlantic City, bakeries; Hackensack, silk goods; Long Branch, men's clothing; Montclair, paper goods; West Orange, electrical machinery and apparatus; Morristown, bakeries; and Asbury Park, planing-mill products.

**Character of ownership.**—The table on the opposite page has for its purpose the presentation of conditions in respect to the character of ownership, or legal organization, of manufacturing enterprises. For all industries combined comparative figures are given covering the censuses of 1909 and 1904. Comparative data for 1899 are not available. Figures for 1909 only are presented for several important industries individually. In order to avoid disclosing the operations of individual concerns it is necessary to omit several important industries from this table and the one following.



| INDUSTRY AND CHARACTER OF OWNERSHIP.                            | Number of establishments. | Average number of wage earners. | Value of products. | Value added by manufacture. | INDUSTRY AND CHARACTER OF OWNERSHIP.                        | Number of establishments. | Average number of wage earners. | Value of products. | Value added by manufacture. |
|---|---------------------------|---------------------------------|--------------------|-----------------------------|---|---------------------------|---------------------------------|--------------------|-----------------------------|
| <b>ALL INDUSTRIES:</b>  |                           |                                 |                    |                             | <b>Hats, fur-felt, 1909.</b>                                |                           |                                 |                    |                             |
| 1909.....   | 8,817                     | 326,223                         | \$1,145,520,076    | \$425,495,877               | Individual.....   | 58                        | 4,657                           | \$8,825,217        | \$4,713,649                 |
| 1904.....   | 7,010                     | 260,336                         | 774,369,026        | 303,910,840                 | Firm.....   | 22                        | 719                             | 1,210,551          | 655,535                     |
| Individual:   |                           |                                 |                    |                             | Corporation.....  | 14                        | 1,308                           | 2,801,464          | 1,541,420                   |
| 1909.....   | 4,888                     | 33,306                          | \$3,854,860        | 39,100,399                  | Per cent of total.....                                      | 100.0                     | 100.0                           | 100.0              | 100.0                       |
| 1904.....   | 3,944                     | 30,994                          | 67,280,922         | 31,264,522                  | Individual.....   | 37.9                      | 15.4                            | 13.7               | 13.9                        |
| Firm:   |                           |                                 |                    |                             | Firm.....   | 24.1                      | 28.1                            | 31.7               | 32.7                        |
| 1909.....   | 1,348                     | 35,441                          | \$9,158,998        | 37,760,699                  | Corporation.....  | 37.9                      | 56.5                            | 54.5               | 51.4                        |
| 1904.....   | 1,220                     | 40,235                          | 80,702,612         | 38,338,818                  | <b>Jewelry, 1909.</b>                                       |                           |                                 |                    |                             |
| Corporation:  |                           |                                 |                    |                             | Individual.....   | 150                       | 4,008                           | \$13,272,004       | \$6,977,606                 |
| 1909.....   | 2,560                     | 257,252                         | \$71,904,531       | 348,188,874                 | Firm.....   | 35                        | 506                             | 868,630            | 436,895                     |
| 1904.....   | 1,834                     | 195,058                         | 617,236,276        | 234,260,884                 | Firm.....   | 51                        | 1,702                           | 5,662,469          | 3,027,044                   |
| Other:  |                           |                                 |                    |                             | Corporation.....  | 64                        | 1,800                           | 6,740,965          | 3,513,667                   |
| 1909.....   | 21                        | 224                             | 610,387            | 370,705                     | Per cent of total.....                                      | 100.0                     | 100.0                           | 100.0              | 100.0                       |
| 1904.....   | 12                        | 49                              | 89,215             | 50,625                      | Individual.....   | 23.3                      | 12.6                            | 6.5                | 6.3                         |
| Per cent of total:  |                           |                                 |                    |                             | Firm.....   | 36.0                      | 42.5                            | 42.7               | 43.4                        |
| 1909.....   | 100.0                     | 100.0                           | 100.0              | 100.0                       | Corporation.....  | 40.7                      | 44.9                            | 50.8               | 50.4                        |
| 1904.....   | 100.0                     | 100.0                           | 100.0              | 100.0                       | <b>Leather, tanned, curried, and finished, 1909.</b>        |                           |                                 |                    |                             |
| Individual:   |                           |                                 |                    |                             | Individual.....   | 80                        | 5,560                           | \$28,430,955       | \$8,232,485                 |
| 1909.....   | 55.4                      | 10.2                            | 7.3                | 9.2                         | Firm.....   | 18                        | 264                             | 1,612,248          | 497,259                     |
| 1904.....   | 56.3                      | 11.6                            | 8.7                | 10.3                        | Firm.....   | 23                        | 1,512                           | 7,807,583          | 2,127,855                   |
| Firm:   |                           |                                 |                    |                             | Corporation.....  | 45                        | 3,984                           | 19,011,119         | 5,607,371                   |
| 1909.....   | 15.3                      | 10.9                            | 7.8                | 8.9                         | Per cent of total.....                                      | 100.0                     | 100.0                           | 100.0              | 100.0                       |
| 1904.....   | 17.4                      | 15.1                            | 11.6               | 12.0                        | Individual.....   | 20.9                      | 4.7                             | 5.7                | 6.0                         |
| Corporation:  |                           |                                 |                    |                             | Firm.....   | 26.7                      | 23.0                            | 27.5               | 25.8                        |
| 1909.....   | 29.0                      | 78.9                            | 84.8               | 81.8                        | Corporation.....  | 52.3                      | 71.7                            | 66.9               | 68.1                        |
| 1904.....   | 26.2                      | 73.2                            | 79.7               | 77.1                        | <b>Lumber and timber products, 1909.</b>                    |                           |                                 |                    |                             |
| Other:  |                           |                                 |                    |                             | Individual.....   | 416                       | 4,857                           | \$13,511,162       | \$5,501,207                 |
| 1909.....   | 0.2                       | 0.1                             | 0.1                | 0.1                         | Firm.....   | 261                       | 1,543                           | 3,326,384          | 1,761,683                   |
| 1904.....   | 0.2                       | ( <sup>1</sup> )                | ( <sup>1</sup> )   | ( <sup>1</sup> )            | Firm.....   | 78                        | 721                             | 1,822,214          | 892,308                     |
| <b>Boots and shoes, including out stock and findings, 1909.</b> |                           |                                 |                    |                             | Corporation.....  | 77                        | 2,593                           | 8,362,564          | 2,847,216                   |
| Individual.....   | 53                        | 4,232                           | \$8,041,623        | \$3,314,498                 | Per cent of total.....                                      | 100.0                     | 100.0                           | 100.0              | 100.0                       |
| Individual.....   | 21                        | 352                             | 846,281            | 262,084                     | Individual.....   | 62.7                      | 31.8                            | 24.6               | 32.0                        |
| Firm.....   | 11                        | 940                             | 1,706,805          | 750,971                     | Firm.....   | 18.7                      | 14.8                            | 13.5               | 16.2                        |
| Corporation.....  | 21                        | 2,940                           | 5,488,477          | 2,801,443                   | Corporation.....  | 18.5                      | 53.4                            | 61.9               | 51.8                        |
| Per cent of total:  |                           |                                 |                    |                             | <b>Paint and varnish, 1909.</b>                             |                           |                                 |                    |                             |
| 1909.....   | 100.0                     | 100.0                           | 100.0              | 100.0                       | Individual.....   | 63                        | 1,493                           | \$12,766,929       | \$4,540,956                 |
| 1904.....   | 39.6                      | 8.3                             | 10.5               | 7.9                         | Firm.....   | 12                        | 90                              | 654,802            | 254,106                     |
| Firm:   |                           |                                 |                    |                             | Firm.....   | 7                         | 314                             | 2,101,679          | 740,206                     |
| 1909.....   | 20.8                      | 22.2                            | 21.2               | 22.7                        | Corporation.....  | 44                        | 1,119                           | 10,010,988         | 3,537,644                   |
| 1904.....   | 39.6                      | 69.5                            | 68.2               | 69.4                        | Per cent of total.....                                      | 100.0                     | 100.0                           | 100.0              | 100.0                       |
| <b>Bread and other bakery products, 1909.</b>                   |                           |                                 |                    |                             | Individual.....   | 19.0                      | 4.0                             | 5.1                | 5.6                         |
| Individual.....   | 1,217                     | 4,936                           | \$20,085,629       | \$7,890,424                 | Firm.....   | 11.1                      | 21.0                            | 16.5               | 16.5                        |
| Individual.....   | 1,114                     | 3,621                           | 14,778,642         | 5,700,060                   | Corporation.....  | 69.8                      | 74.9                            | 78.4               | 77.9                        |
| Firm.....   | 75                        | 347                             | 1,387,842          | 563,878                     | <b>Printing and publishing, 1909.</b>                       |                           |                                 |                    |                             |
| Corporation.....  | 28                        | 968                             | 3,919,145          | 1,560,486                   | Individual.....   | 684                       | 5,451                           | \$12,332,700       | \$8,860,549                 |
| Per cent of total:  |                           |                                 |                    |                             | Individual.....   | 442                       | 1,345                           | 2,679,391          | 1,946,114                   |
| 1909.....   | 100.0                     | 100.0                           | 100.0              | 100.0                       | Firm.....   | 91                        | 486                             | 982,232            | 720,267                     |
| 1904.....   | 91.5                      | 73.4                            | 73.6               | 73.0                        | Corporation.....  | 137                       | 3,425                           | 8,149,083          | 5,850,225                   |
| Firm:   |                           |                                 |                    |                             | Other.....  | 14                        | 194                             | 521,994            | 343,943                     |
| 1909.....   | 6.2                       | 7.0                             | 6.9                | 7.1                         | Per cent of total.....                                      | 100.0                     | 100.0                           | 100.0              | 100.0                       |
| 1904.....   | 2.3                       | 10.6                            | 19.5               | 19.9                        | Individual.....   | 94.6                      | 24.7                            | 21.7               | 22.0                        |
| <b>Clothing, men's, including shirts, 1909.</b>                 |                           |                                 |                    |                             | Firm.....   | 13.3                      | 8.9                             | 8.0                | 8.1                         |
| Individual.....   | 150                       | 6,994                           | \$9,864,646        | \$4,788,273                 | Corporation.....  | 20.0                      | 62.8                            | 60.1               | 60.0                        |
| Individual.....   | 89                        | 2,301                           | 2,561,457          | 1,431,301                   | Other.....  | 2.0                       | 3.6                             | 4.2                | 3.9                         |
| Firm.....   | 44                        | 2,682                           | 3,820,288          | 1,780,499                   | <b>Silk and silk goods, including throwsters, 1909.</b>     |                           |                                 |                    |                             |
| Corporation.....  | 17                        | 2,011                           | 3,476,901          | 1,567,473                   | Individual.....   | 348                       | 30,285                          | \$65,429,550       | \$32,164,373                |
| Per cent of total:  |                           |                                 |                    |                             | Individual.....   | 86                        | 3,005                           | 8,395,443          | 4,138,341                   |
| 1909.....   | 100.0                     | 100.0                           | 100.0              | 100.0                       | Firm.....   | 99                        | 8,880                           | 18,365,422         | 8,927,330                   |
| 1904.....   | 59.3                      | 32.0                            | 26.0               | 29.9                        | Corporation.....  | 163                       | 17,710                          | 38,648,685         | 19,078,702                  |
| Firm:   |                           |                                 |                    |                             | Per cent of total.....                                      | 100.0                     | 100.0                           | 100.0              | 100.0                       |
| 1909.....   | 29.3                      | 38.3                            | 38.8               | 37.4                        | Individual.....   | 24.7                      | 12.2                            | 12.8               | 12.9                        |
| 1904.....   | 11.3                      | 28.8                            | 35.2               | 32.7                        | Firm.....   | 28.4                      | 29.3                            | 28.1               | 27.8                        |
| <b>Cotton goods, including cotton small wares, 1909.</b>        |                           |                                 |                    |                             | Corporation.....  | 46.8                      | 58.5                            | 59.1               | 59.3                        |
| Individual.....   | 26                        | 6,638                           | \$13,728,874       | \$5,164,141                 | <b>Slaughtering and meat packing, 1909.</b>                 |                           |                                 |                    |                             |
| Individual.....   | 5                         | 78                              | 117,072            | 62,023                      | Individual.....   | 84                        | 1,817                           | \$37,583,395       | \$3,843,811                 |
| Firm.....   | 4                         | 288                             | 403,415            | 128,410                     | Individual.....   | 41                        | 183                             | 5,236,637          | 439,734                     |
| Corporation.....  | 17                        | 6,272                           | 13,208,387         | 4,973,702                   | Firm.....   | 20                        | 252                             | 6,500,346          | 527,949                     |
| Per cent of total:  |                           |                                 |                    |                             | Corporation.....  | 23                        | 1,382                           | 25,846,412         | 2,876,128                   |
| 1909.....   | 100.0                     | 100.0                           | 100.0              | 100.0                       | Per cent of total.....                                      | 100.0                     | 100.0                           | 100.0              | 100.0                       |
| 1904.....   | 19.2                      | 1.2                             | 0.0                | 1.2                         | Individual.....   | 48.8                      | 10.1                            | 13.9               | 11.4                        |
| Firm:   |                           |                                 |                    |                             | Firm.....   | 23.8                      | 13.9                            | 17.3               | 13.7                        |
| 1909.....   | 15.4                      | 4.3                             | 2.0                | 2.5                         | Corporation.....  | 27.4                      | 76.1                            | 68.8               | 74.8                        |
| 1904.....   | 65.4                      | 94.5                            | 98.2               | 96.3                        | <b>Tobacco manufactures, 1909.</b>                          |                           |                                 |                    |                             |
| <b>Dyeing and finishing textiles, 1909.</b>                     |                           |                                 |                    |                             | Individual.....   | 462                       | 9,466                           | \$24,177,343       | \$13,381,069                |
| Individual.....   | 67                        | 10,129                          | \$15,795,788       | \$9,443,092                 | Individual.....   | 407                       | 1,649                           | 3,103,360          | 2,030,988                   |
| Individual.....   | 19                        | 296                             | 388,837            | 300,440                     | Firm.....   | 36                        | 227                             | 549,835            | 302,591                     |
| Firm.....   | 0                         | 466                             | 702,380            | 373,391                     | Corporation.....  | 19                        | 7,690                           | 20,524,148         | 11,038,490                  |
| Corporation.....  | 42                        | 9,367                           | 14,704,571         | 8,769,262                   | Per cent of total.....                                      | 100.0                     | 100.0                           | 100.0              | 100.0                       |
| Per cent of total:  |                           |                                 |                    |                             | Individual.....   | 88.1                      | 16.4                            | 12.8               | 15.2                        |
| 1909.....   | 100.0                     | 100.0                           | 100.0              | 100.0                       | Firm.....   | 7.8                       | 2.4                             | 2.3                | 2.3                         |
| 1904.....   | 28.4                      | 2.9                             | 2.5                | 3.2                         | Corporation.....  | 4.1                       | 81.2                            | 84.9               | 82.5                        |
| Firm:   |                           |                                 |                    |                             | <b>Woolen, worsted, and felt goods, and woolhats, 1909.</b> |                           |                                 |                    |                             |
| 1909.....   | 9.0                       | 4.6                             | 4.4                | 4.0                         | Individual.....   | 33                        | 12,652                          | \$33,938,637       | \$12,905,758                |
| 1904.....   | 62.7                      | 62.5                            | 93.1               | 62.9                        | Individual.....   | 6                         | 50                              | 144,354            | 43,636                      |
| <b>Electrical machinery, apparatus, and supplies, 1909.</b>     |                           |                                 |                    |                             | Firm.....   | 7                         | 2,184                           | 6,220,059          | 1,615,370                   |
| Individual.....   | 69                        | 11,099                          | \$28,365,377       | \$13,939,852                | Corporation.....  | 20                        | 10,418                          | 27,574,224         | 11,246,752                  |
| Individual.....   | 10                        | 70                              | 113,430            | 60,038                      | Per cent of total.....                                      | 100.0                     | 100.0                           | 100.0              | 100.0                       |
| Firm.....   | 5                         | 55                              | 391,821            | 233,038                     | Individual.....   | 18.2                      | 0.4                             | 0.4                | 0.3                         |
| Corporation.....  | 54                        | 10,968                          | 27,860,126         | 13,646,776                  | Firm.....   | 21.2                      | 17.3                            | 18.3               | 12.5                        |
| Per cent of total:  |                           |                                 |                    |                             | Corporation.....  | 60.6                      | 82.3                            | 81.2               | 87.1                        |
| 1909.....   | 100.0                     | 100.0                           | 100.0              | 100.0                       | <b>Foundry and machine-shop products, 1909.</b>             |                           |                                 |                    |                             |
| 1904.....   | 14.5                      | 0.7                             | 0.4                | 0.4                         | Individual.....   | 591                       | 27,815                          | \$65,398,437       | \$35,458,387                |
| Firm:   |                           |                                 |                    |                             | Individual.....   | 225                       | 2,760                           | 5,245,947          | 3,161,474                   |
| 1909.....   | 7.2                       | 0.5                             | 1.4                | 1.7                         | Firm.....   | 93                        | 1,065                           | 3,100,807          | 1,602,715                   |
| 1904.....   | 78.3                      | 98.8                            | 98.2               | 97.0                        | Corporation.....  | 273                       | 23,994                          | 57,051,833         | 30,694,198                  |
| <b>Foundry and machine-shop products, 1909.</b>                 |                           |                                 |                    |                             | Per cent of total:  |                           |                                 |                    |                             |
| Individual.....   | 591                       | 27,815                          | \$65,398,437       | \$35,458,387                | 1909.....   | 100.0                     | 100.0                           | 100.0              | 100.0                       |
| Individual.....   | 225                       | 2,760                           | 5,245,947          | 3,161,474                   | 1904.....   | 38.1                      | 9.9                             | 8.0                | 8.9                         |
| Firm.....   | 93                        | 1,065                           | 3,100,807          | 1,602,715                   | Firm.....   | 15.7                      | 6.0                             | 4.7                | 4.8                         |
| Corporation.....  | 273                       | 23,994                          | 57,051,833         | 30,694,198                  | Corporation.....  | 46.2                      | 84.1                            | 87.2               | 86.3                        |
| Per cent of total:  |                           |                                 |                    |                             |   |                           |                                 |                    |                             |
| 1909.....   | 100.0                     | 100.0                           | 100.0              | 100.0                       |   |                           |                                 |                    |                             |
| 1904.....   | 38.1                      | 9.9                             | 8.0                | 8.9                         |   |                           |                                 |                    |                             |
| Firm:   |                           |                                 |                    |                             |   |                           |                                 |                    |                             |
| 1909.....   | 15.7                      | 6.0                             | 4.7                | 4.8                         |   |                           |                                 |                    |                             |
| 1904.....   | 46.2                      | 84.1                            | 87.2               | 86.3                        |   |                           |                                 |                    |                             |

<sup>1</sup> Less than one-tenth of 1 per cent.

<sup>2</sup> Includes the group "Other," to avoid the disclosure of individual operations.



The most important distinction shown is that between corporate and all other forms of ownership. For all industries combined, 29 per cent of the total number of establishments were under corporate ownership in 1909, as against 71 per cent under all other forms. The corresponding figures for 1904 were 26.2 per cent and 73.8 per cent, respectively. Of the total value of products in 1909, the establishments operated by corporations reported 84.8 per cent, as against 15.2 per cent for those under all other forms of ownership, while in 1904 the corresponding figures were 79.7 per cent and 20.3 per cent, respectively. Similar conditions prevail to a greater or less extent in most of the industries presented separately, except that for men's clothing the greatest proportion, 38.8 per cent, of value

of products is shown for firm ownership, while the bakeries show 73.6 per cent for individual ownership.

**Size of establishment.**—The tendency for manufacturing to become concentrated in large establishments, or the reverse, is a matter of interest from the standpoint of industrial organization. In order to throw some light upon it the following table groups the establishments according to the value of their products. The table also shows the average size of establishments for all industries combined and for important industries separately, as measured by number of wage earners, value of products, and value added by manufacture. The totals for all industries are shown for the last two censuses, while for the industries presented separately figures are given for 1909 only.

| INDUSTRY AND VALUE OF PRODUCTS.                                | Number of establishments. | Average number of wage earners. | Value of products. | Value added by manufacture. | INDUSTRY AND VALUE OF PRODUCTS.                            | Number of establishments. | Average number of wage earners. | Value of products. | Value added by manufacture. |
|--|---------------------------|---------------------------------|--------------------|-----------------------------|--|---------------------------|---------------------------------|--------------------|-----------------------------|
| <b>ALL INDUSTRIES:</b>   |                           |                                 |                    |                             |  |                           |                                 |                    |                             |
| 1909   | 8,817                     | 326,223                         | \$1,146,529,076    | \$425,495,677               | <b>Clothing, men's, including shirts, 1909</b>             | 150                       | 6,994                           | \$9,864,646        | \$4,788,273                 |
| 1904   | 7,010                     | 266,336                         | 774,369,928        | 303,919,849                 | Less than \$5,000  | 30                        | 138                             | 83,421             | 77,826                      |
| Less than \$5,000:   |                           |                                 |                    |                             | \$5,000 and less than \$20,000                             | 48                        | 811                             | 516,854            | 452,197                     |
| 1909   | 2,288                     | 3,004                           | 5,815,878          | 3,771,287                   | \$20,000 and less than \$100,000                           | 51                        | 3,201                           | 2,900,784          | 1,802,489                   |
| 1904   | 1,900                     | 2,707                           | 4,861,044          | 3,150,687                   | \$100,000 and less than \$1,000,000 <sup>1</sup>           | 21                        | 2,844                           | 6,363,587          | 2,455,761                   |
| \$5,000 and less than \$20,000:                                |                           |                                 |                    |                             | Per cent of total  | 100.0                     | 100.0                           | 100.0              | 100.0                       |
| 1909   | 3,081                     | 16,218                          | 32,470,593         | 18,157,917                  | Less than \$5,000  | 20.0                      | 2.0                             | 0.8                | 1.6                         |
| 1904   | 2,424                     | 13,028                          | 24,808,803         | 13,067,375                  | \$5,000 and less than \$20,000                             | 32.0                      | 11.6                            | 5.2                | 9.4                         |
| \$20,000 and less than \$100,000:                              |                           |                                 |                    |                             | \$20,000 and less than \$100,000                           | 34.0                      | 45.8                            | 20.4               | 37.6                        |
| 1909   | 2,053                     | 43,046                          | 90,682,537         | 46,875,049                  | \$100,000 and less than \$1,000,000 <sup>1</sup>           | 14.0                      | 40.7                            | 64.5               | 51.3                        |
| 1904   | 1,610                     | 39,147                          | 72,862,014         | 38,002,710                  | Average per establishment                                  | 47                        |                                 | \$65,764           | \$31,922                    |
| \$100,000 and less than \$1,000,000:                           |                           |                                 |                    |                             | <b>Cotton goods, including cotton small wares, 1909</b>    | 26                        | 6,638                           | \$13,728,874       | \$5,164,341                 |
| 1909   | 1,201                     | 137,123                         | 300,705,326        | 168,792,863                 | \$5,000 and less than \$20,000 <sup>2</sup>                | 8                         | 54                              | 84,880             | 43,454                      |
| 1904   | 955                       | 128,483                         | 280,892,957        | 138,230,831                 | \$20,000 and less than \$100,000                           | 4                         | 126                             | 255,100            | 133,683                     |
| \$1,000,000 and over:  |                           |                                 |                    |                             | \$100,000 and less than \$1,000,000                        | 11                        | 2,461                           | 5,307,487          | 2,170,895                   |
| 1909   | 104                       | 120,142                         | 640,848,742        | 187,808,501                 | \$1,000,000 and over                                       | 3                         | 3,097                           | 7,991,407          | 2,815,659                   |
| 1904   | 121                       | 82,011                          | 384,853,547        | 109,979,246                 | Per cent of total  | 100.0                     | 100.0                           | 100.0              | 100.0                       |
| Per cent of total:   |                           |                                 |                    |                             | \$5,000 and less than \$20,000 <sup>2</sup>                | 30.8                      | 0.8                             | 0.6                | 0.8                         |
| 1909   | 100.0                     | 100.0                           | 100.0              | 100.0                       | \$20,000 and less than \$100,000                           | 15.4                      | 1.9                             | 1.9                | 2.6                         |
| 1904   | 100.0                     | 100.0                           | 100.0              | 100.0                       | \$100,000 and less than \$1,000,000                        | 42.3                      | 37.1                            | 30.3               | 42.0                        |
| Less than \$5,000:   |                           |                                 |                    |                             | \$1,000,000 and over                                       | 11.5                      | 60.2                            | 58.2               | 51.5                        |
| 1909   | 25.9                      | 0.9                             | 0.5                | 0.9                         | Average per establishment                                  | 265                       |                                 | \$528,034          | \$198,421                   |
| 1904   | 27.1                      | 1.0                             | 0.6                | 1.0                         | <b>Dyeing and finishing textiles, 1909</b>                 | 67                        | 10,129                          | \$15,705,788       | \$9,443,092                 |
| \$5,000 and less than \$20,000:                                |                           |                                 |                    |                             | Less than \$5,000  | 8                         | 18                              | 23,737             | 17,004                      |
| 1909   | 34.0                      | 5.0                             | 2.8                | 4.3                         | \$5,000 and less than \$20,000                             | 13                        | 132                             | 173,127            | 125,715                     |
| 1904   | 34.6                      | 5.2                             | 3.2                | 4.6                         | \$20,000 and less than \$100,000                           | 21                        | 646                             | 914,561            | 509,897                     |
| \$20,000 and less than \$100,000:                              |                           |                                 |                    |                             | \$100,000 and less than \$1,000,000                        | 20                        | 3,838                           | 6,184,231          | 3,787,077                   |
| 1909   | 23.3                      | 13.4                            | 7.0                | 11.0                        | \$1,000,000 and over                                       | 5                         | 5,495                           | 8,500,129          | 4,941,509                   |
| 1904   | 23.0                      | 14.7                            | 6.4                | 12.7                        | Per cent of total  | 100.0                     | 100.0                           | 100.0              | 100.0                       |
| \$100,000 and less than \$1,000,000:                           |                           |                                 |                    |                             | Less than \$5,000  | 11.9                      | 0.2                             | 0.2                | 0.2                         |
| 1909   | 13.6                      | 42.0                            | 32.0               | 39.7                        | \$5,000 and less than \$20,000                             | 19.4                      | 1.3                             | 1.1                | 1.3                         |
| 1904   | 13.6                      | 48.2                            | 37.0               | 45.5                        | \$20,000 and less than \$100,000                           | 31.3                      | 6.4                             | 5.8                | 6.0                         |
| \$1,000,000 and over:  |                           |                                 |                    |                             | \$100,000 and less than \$1,000,000                        | 29.9                      | 37.9                            | 39.2               | 40.1                        |
| 1909   | 2.2                       | 38.7                            | 56.7               | 44.2                        | \$1,000,000 and over                                       | 7.5                       | 54.2                            | 53.8               | 52.3                        |
| 1904   | 1.7                       | 30.8                            | 40.7               | 36.2                        | Average per establishment                                  | 151                       |                                 | \$235,758          | \$140,942                   |
| Average per establishment:                                     |                           |                                 |                    |                             | <b>Electrical machinery, apparatus, and supplies, 1909</b> | 69                        | 11,099                          | \$28,365,377       | \$13,939,652                |
| 1909   | 37                        |                                 | \$120,923          | \$48,259                    | Less than \$5,000  | 6                         | 28                              | 18,961             | 6,977                       |
| 1904   | 38                        |                                 | 110,466            | 43,355                      | \$5,000 and less than \$20,000                             | 13                        | 70                              | 161,357            | 80,821                      |
| <b>Boots and shoes, including cut stock and findings, 1909</b> | 53                        | 4,232                           | \$8,041,623        | \$3,314,498                 | \$20,000 and less than \$100,000                           | 23                        | 480                             | 1,166,688          | 690,455                     |
| Less than \$5,000  | 9                         | 13                              | 21,664             | 12,090                      | \$100,000 and less than \$1,000,000                        | 19                        | 3,107                           | 8,369,203          | 4,428,746                   |
| \$5,000 and less than \$20,000                                 | 7                         | 87                              | 84,194             | 45,116                      | \$1,000,000 and over                                       | 8                         | 7,315                           | 18,640,168         | 8,756,853                   |
| \$20,000 and less than \$100,000                               | 17                        | 446                             | 888,628            | 371,892                     | Per cent of total  | 100.0                     | 100.0                           | 100.0              | 100.0                       |
| \$100,000 and less than \$1,000,000 <sup>1</sup>               | 20                        | 3,086                           | 7,046,937          | 2,885,400                   | Less than \$5,000  | 8.7                       | 0.3                             | 0.1                | (3)                         |
| Per cent of total  | 100.0                     | 100.0                           | 100.0              | 100.0                       | \$5,000 and less than \$20,000                             | 18.8                      | 0.7                             | 0.6                | 0.6                         |
| Less than \$5,000  | 17.0                      | 0.3                             | 0.3                | 0.4                         | \$20,000 and less than \$100,000                           | 33.3                      | 4.3                             | 4.1                | 4.8                         |
| \$5,000 and less than \$20,000                                 | 13.2                      | 2.1                             | 1.4                | 1.4                         | \$100,000 and less than \$1,000,000                        | 27.5                      | 28.8                            | 29.5               | 31.8                        |
| \$20,000 and less than \$100,000                               | 32.1                      | 10.5                            | 11.0               | 11.2                        | \$1,000,000 and over                                       | 11.6                      | 65.9                            | 65.7               | 62.8                        |
| \$100,000 and less than \$1,000,000 <sup>1</sup>               | 37.7                      | 87.1                            | 87.6               | 87.1                        | Average per establishment                                  | 161                       |                                 | \$411,092          | \$202,027                   |
| Average per establishment                                      | 80                        |                                 | \$151,729          | \$62,538                    | <b>Foundry and machine-shop products, 1909</b>             | 591                       | 27,815                          | \$65,398,437       | \$35,458,387                |
| <b>Bread and other bakery products, 1909</b>                   | 1,217                     | 4,936                           | \$20,085,629       | \$7,890,424                 | Less than \$5,000  | 100                       | 148                             | 268,563            | 181,208                     |
| Less than \$5,000  | 217                       | 178                             | 739,690            | 313,192                     | \$5,000 and less than \$20,000                             | 184                       | 1,071                           | 1,921,962          | 1,246,009                   |
| \$5,000 and less than \$20,000                                 | 771                       | 1,990                           | 8,212,281          | 3,264,185                   | \$20,000 and less than \$100,000                           | 176                       | 3,861                           | 7,532,400          | 4,540,858                   |
| \$20,000 and less than \$100,000                               | 210                       | 1,700                           | 6,888,039          | 2,632,768                   | \$100,000 and less than \$1,000,000                        | 119                       | 14,904                          | 32,049,781         | 17,370,507                  |
| \$100,000 and less than \$1,000,000                            | 10                        | 1,068                           | 4,245,719          | 1,680,279                   | \$1,000,000 and over                                       | 12                        | 8,431                           | 23,625,731         | 12,110,805                  |
| Per cent of total  | 100.0                     | 100.0                           | 100.0              | 100.0                       |  |                           |                                 |                    |                             |
| Less than \$5,000  | 17.8                      | 3.6                             | 3.7                | 4.0                         |  |                           |                                 |                    |                             |
| \$5,000 and less than \$20,000                                 | 63.4                      | 40.3                            | 40.9               | 41.4                        |  |                           |                                 |                    |                             |
| \$20,000 and less than \$100,000                               | 17.3                      | 34.4                            | 34.3               | 33.4                        |  |                           |                                 |                    |                             |
| \$100,000 and less than \$1,000,000                            | 1.6                       | 21.6                            | 21.1               | 21.3                        |  |                           |                                 |                    |                             |
| Average per establishment                                      | 4                         |                                 | \$16,564           | \$6,484                     |  |                           |                                 |                    |                             |

<sup>1</sup> Includes the group "\$1,000,000 and over."

<sup>2</sup> Includes the group "Less than \$5,000."

<sup>3</sup> Less than one-tenth of 1 per cent.

MANUFACTURES—NEW JERSEY.

| INDUSTRY AND VALUE OF PRODUCTS.                          | Number of establishments. | Average number of wage earners. | Value of products. | Value added by manufacture. | INDUSTRY AND VALUE OF PRODUCTS.  | Number of establishments. | Average number of wage earners. | Value of products. | Value added by manufacture. |
|--|---------------------------|---------------------------------|--------------------|-----------------------------|--|---------------------------|---------------------------------|--------------------|-----------------------------|
| <b>Foundry and machine-shop products, 1909—Contd.</b>    |                           |                                 |                    |                             | <b>Printing and publishing, 1909.</b>  |                           |                                 |                    |                             |
| Per cent of total.....                                   | 100.0                     | 100.0                           | 100.0              | 100.0                       | Less than \$5,000.....   | 684                       | 5,451                           | \$12,332,700       | \$8,860,540                 |
| Less than \$5,000.....                                   | 16.0                      | 0.5                             | 0.4                | 0.5                         | \$5,000 and less than \$20,000.....  | 410                       | 410                             | 830,671            | 633,735                     |
| \$5,000 and less than \$20,000.....                      | 31.1                      | 3.9                             | 2.9                | 3.5                         | \$20,000 and less than \$100,000.....  | 260                       | 1,205                           | 2,528,288          | 1,900,158                   |
| \$20,000 and less than \$100,000.....                    | 20.8                      | 13.9                            | 11.5               | 12.8                        | \$100,000 and less than \$1,000,000 <sup>1</sup> .....   | 62                        | 1,264                           | 2,610,239          | 1,820,084                   |
| \$100,000 and less than \$1,000,000.....                 | 20.1                      | 51.4                            | 49.0               | 46.0                        | Average per establishment.....   | 20                        | 2,482                           | 6,363,502          | 4,506,572                   |
| \$1,000,000 and over.....                                | 2.0                       | 36.3                            | 36.1               | 34.2                        | Per cent of total.....   | 100.0                     | 100.0                           | 100.0              | 100.0                       |
| Average per establishment.....                           |                           | 47                              | \$110,657          | \$59,907                    | Less than \$5,000.....   | 50.0                      | 7.5                             | 6.7                | 7.2                         |
| <b>Hats, fur-felt, 1909.</b>                             |                           |                                 |                    |                             | <b>Silk and silk goods, including throwstors, 1909.</b>  |                           |                                 |                    |                             |
| Less than \$5,000.....                                   | 58                        | 4,657                           | \$8,825,217        | \$4,713,640                 | Less than \$5,000.....   | 348                       | 30,285                          | \$65,429,550       | \$32,164,373                |
| \$5,000 and less than \$20,000.....                      | 3                         | 4                               | 12,150             | 7,072                       | \$5,000 and less than \$20,000.....  | 20                        | 62                              | 45,184             | 37,223                      |
| \$20,000 and less than \$100,000.....                    | 11                        | 53                              | 113,020            | 52,011                      | \$20,000 and less than \$100,000.....  | 74                        | 1,035                           | 838,834            | 582,000                     |
| \$100,000 and less than \$1,000,000 <sup>1</sup> .....   | 19                        | 793                             | 906,907            | 572,346                     | \$100,000 and less than \$1,000,000.....   | 111                       | 3,925                           | 5,511,023          | 2,998,470                   |
| Per cent of total.....                                   | 100.0                     | 100.0                           | 100.0              | 100.0                       | \$1,000,000 and over.....  | 131                       | 17,585                          | 39,541,130         | 19,072,218                  |
| Less than \$5,000.....                                   | 5.2                       | 0.1                             | 0.1                | 0.2                         | Average per establishment.....   | 12                        | 7,678                           | 19,493,379         | 8,873,502                   |
| \$5,000 and less than \$20,000.....                      | 19.0                      | 1.1                             | 1.3                | 1.1                         | Per cent of total.....   | 100.0                     | 100.0                           | 100.0              | 100.0                       |
| \$20,000 and less than \$100,000.....                    | 32.8                      | 17.0                            | 10.3               | 12.1                        | Less than \$5,000.....   | 5.7                       | 0.2                             | 0.1                | 0.1                         |
| \$100,000 and less than \$1,000,000 <sup>1</sup> .....   | 43.1                      | 81.7                            | 88.3               | 86.6                        | \$5,000 and less than \$20,000.....  | 21.3                      | 3.4                             | 1.3                | 1.8                         |
| Average per establishment.....                           |                           | 80                              | \$152,159          | \$81,270                    | \$20,000 and less than \$100,000.....  | 31.0                      | 13.0                            | 8.4                | 0.3                         |
| <b>Jewelry, 1909.</b>                                    |                           |                                 |                    |                             | <b>Slaughtering and meat packing, 1909.</b>  |                           |                                 |                    |                             |
| Less than \$5,000.....                                   | 150                       | 4,008                           | \$13,272,004       | \$6,977,606                 | \$5,000 and less than \$20,000 <sup>2</sup> .....  | 84                        | 1,817                           | \$37,583,395       | \$3,843,811                 |
| \$5,000 and less than \$20,000.....                      | 12                        | 18                              | 33,273             | 26,032                      | \$20,000 and less than \$100,000.....  | 13                        | 43                              | 153,543            | 47,740                      |
| \$20,000 and less than \$100,000.....                    | 27                        | 154                             | 320,723            | 185,078                     | \$100,000 and less than \$1,000,000.....   | 30                        | 111                             | 1,321,204          | 268,117                     |
| \$100,000 and less than \$1,000,000.....                 | 75                        | 1,382                           | 3,561,201          | 1,049,511                   | \$1,000,000 and over.....  | 30                        | 423                             | 9,703,445          | 1,024,243                   |
| Per cent of total.....                                   | 100.0                     | 100.0                           | 100.0              | 100.0                       | Average per establishment.....   | 11                        | 1,240                           | 26,405,143         | 2,503,702                   |
| Less than \$5,000.....                                   | 8.0                       | 0.4                             | 0.2                | 0.4                         | Per cent of total.....   | 100.0                     | 100.0                           | 100.0              | 100.0                       |
| \$5,000 and less than \$20,000.....                      | 18.0                      | 3.8                             | 2.4                | 2.7                         | \$5,000 and less than \$20,000 <sup>2</sup> .....  | 15.5                      | 2.4                             | 0.4                | 1.2                         |
| \$20,000 and less than \$100,000.....                    | 50.0                      | 34.5                            | 26.8               | 27.9                        | \$20,000 and less than \$100,000.....  | 35.7                      | 6.1                             | 3.5                | 7.0                         |
| \$100,000 and less than \$1,000,000.....                 | 24.0                      | 61.2                            | 70.5               | 69.0                        | \$100,000 and less than \$1,000,000.....   | 35.7                      | 23.3                            | 25.8               | 26.6                        |
| Average per establishment.....                           |                           | 27                              | \$88,480           | \$40,517                    | \$1,000,000 and over.....  | 13.1                      | 68.2                            | 70.3               | 65.1                        |
| <b>Leather, tanned, curried, and finished, 1909.</b>     |                           |                                 |                    |                             | <b>Tobacco manufactures, 1909.</b>   |                           |                                 |                    |                             |
| \$5,000 and less than \$20,000 <sup>2</sup> .....        | 86                        | 5,560                           | \$28,430,955       | \$8,232,485                 | Less than \$5,000.....   | 402                       | 9,466                           | \$24,177,343       | \$13,381,089                |
| \$20,000 and less than \$100,000.....                    | 8                         | 24                              | 64,547             | 28,706                      | \$5,000 and less than \$20,000.....  | 300                       | 262                             | 687,856            | 460,692                     |
| \$100,000 and less than \$1,000,000.....                 | 24                        | 457                             | 1,345,864          | 513,518                     | \$20,000 and less than \$100,000.....  | 60                        | 274                             | 538,786            | 345,485                     |
| \$1,000,000 and over.....                                | 48                        | 3,302                           | 18,210,831         | 4,963,454                   | \$100,000 and less than \$1,000,000.....   | 27                        | 540                             | 1,065,047          | 632,603                     |
| Per cent of total.....                                   | 100.0                     | 100.0                           | 100.0              | 100.0                       | \$1,000,000 and less than \$1,000,000.....   | 8                         | 1,521                           | 2,157,927          | 1,244,882                   |
| Less than \$5,000.....                                   | 9.3                       | 0.4                             | 0.2                | 0.3                         | \$1,000,000 and over.....  | 7                         | 6,809                           | 19,727,127         | 10,697,407                  |
| \$5,000 and less than \$20,000.....                      | 27.9                      | 8.2                             | 4.7                | 6.2                         | Per cent of total.....   | 100.0                     | 100.0                           | 100.0              | 100.0                       |
| \$20,000 and less than \$100,000.....                    | 55.8                      | 61.0                            | 64.1               | 60.3                        | Less than \$5,000.....   | 77.9                      | 2.8                             | 2.8                | 3.4                         |
| \$1,000,000 and over.....                                | 7.0                       | 30.3                            | 31.0               | 33.1                        | \$5,000 and less than \$20,000.....  | 13.0                      | 2.0                             | 2.2                | 2.6                         |
| Average per establishment.....                           |                           | 65                              | \$330,593          | \$95,727                    | \$20,000 and less than \$100,000.....  | 5.8                       | 5.7                             | 4.4                | 4.7                         |
| <b>Lumber and timber products, 1909.</b>                 |                           |                                 |                    |                             | <b>Woolen, worsted, and felt goods, and wool hats, 1909.</b>   |                           |                                 |                    |                             |
| Less than \$5,000.....                                   | 416                       | 4,857                           | \$13,511,162       | \$5,501,207                 | \$5,000 and less than \$20,000 <sup>2</sup> .....  | 33                        | 12,652                          | \$33,938,637       | \$12,905,758                |
| \$5,000 and less than \$20,000.....                      | 142                       | 282                             | 341,361            | 230,120                     | \$20,000 and less than \$100,000.....  | 4                         | 26                              | 44,709             | 19,052                      |
| \$20,000 and less than \$100,000.....                    | 149                       | 1,043                           | 1,602,408          | 1,055,028                   | \$100,000 and less than \$1,000,000.....   | 8                         | 238                             | 436,250            | 157,179                     |
| \$100,000 and less than \$1,000,000.....                 | 89                        | 1,356                           | 3,935,018          | 1,855,797                   | \$1,000,000 and less than \$1,000,000.....   | 12                        | 2,087                           | 5,271,604          | 1,637,183                   |
| \$1,000,000 and less than \$1,000,000 <sup>1</sup> ..... | 36                        | 2,176                           | 7,631,415          | 2,374,262                   | \$1,000,000 and over.....  | 9                         | 10,311                          | 28,185,984         | 11,091,744                  |
| Per cent of total.....                                   | 100.0                     | 100.0                           | 100.0              | 100.0                       | Per cent of total.....   | 100.0                     | 100.0                           | 100.0              | 100.0                       |
| Less than \$5,000.....                                   | 34.1                      | 5.8                             | 2.5                | 4.3                         | \$5,000 and less than \$20,000 <sup>2</sup> .....  | 12.1                      | 0.1                             | 0.1                | 0.2                         |
| \$5,000 and less than \$20,000.....                      | 35.8                      | 21.5                            | 11.9               | 18.8                        | \$20,000 and less than \$100,000.....  | 24.2                      | 1.9                             | 1.3                | 1.2                         |
| \$20,000 and less than \$100,000.....                    | 21.4                      | 27.0                            | 29.1               | 33.7                        | \$100,000 and less than \$1,000,000.....   | 36.4                      | 16.5                            | 15.5               | 12.7                        |
| \$100,000 and less than \$1,000,000.....                 | 8.7                       | 44.8                            | 60.5               | 43.2                        | \$1,000,000 and over.....  | 27.3                      | 81.5                            | 83.0               | 85.9                        |
| Average per establishment.....                           |                           | 12                              | \$32,479           | \$13,224                    | Average per establishment.....   |                           | 383                             | \$1,028,444        | \$391,084                   |
| <b>Paint and varnish, 1909.</b>                          |                           |                                 |                    |                             | <b>Per cent of total.....</b>  |                           |                                 |                    |                             |
| Less than \$5,000.....                                   | 63                        | 1,493                           | \$12,766,920       | \$4,540,956                 | Less than \$5,000.....   | 100.0                     | 100.0                           | 100.0              | 100.0                       |
| \$5,000 and less than \$20,000.....                      | 9                         | 5                               | 24,490             | 11,885                      | \$5,000 and less than \$20,000.....  | 14.3                      | 0.3                             | 0.2                | 0.3                         |
| \$20,000 and less than \$100,000.....                    | 8                         | 13                              | 86,497             | 43,101                      | \$20,000 and less than \$100,000.....  | 12.7                      | 0.9                             | 0.7                | 0.9                         |
| \$100,000 and less than \$1,000,000.....                 | 22                        | 149                             | 1,137,802          | 517,506                     | \$20,000 and less than \$100,000.....  | 34.9                      | 10.0                            | 8.9                | 11.4                        |
| \$1,000,000 and over.....                                | 21                        | 737                             | 7,846,252          | 2,610,562                   | \$100,000 and less than \$1,000,000.....   | 38.3                      | 49.4                            | 61.5               | 57.6                        |
| Average per establishment.....                           | 3                         | 589                             | 3,671,888          | 1,351,002                   | \$1,000,000 and over.....  | 4.8                       | 39.4                            | 28.8               | 29.8                        |
| Per cent of total.....                                   | 100.0                     | 100.0                           | 100.0              | 100.0                       | Average per establishment.....   |                           | 24                              | \$202,650          | \$72,079                    |
| Less than \$5,000.....                                   | 14.3                      | 0.3                             | 0.2                | 0.3                         | <sup>1</sup> Includes the group "\$1,000,000 and over."  |                           |                                 |                    |                             |
| \$5,000 and less than \$20,000.....                      | 12.7                      | 0.9                             | 0.7                | 0.9                         | <sup>2</sup> Includes the group "Less than \$5,000."   |                           |                                 |                    |                             |
| \$20,000 and less than \$100,000.....                    | 34.9                      | 10.0                            | 8.9                | 11.4                        | This table shows that in 1909 of the 8,817 manufacturing establishments in the state only 194, or 2.2 per cent, had a value of products exceeding \$1,000,000. These establishments, however, employed an average of 126,142 wage earners, or 38.7 per cent of the total number for all establishments, and reported 56.7 per cent of the total value of products and 44.2 per cent of the total value added by manufacture. |                           |                                 |                    |                             |
| \$100,000 and less than \$1,000,000.....                 | 38.3                      | 49.4                            | 61.5               | 57.6                        | per cent) of the total number of establishments, but the value of their products amounted to only five-tenths of 1 per cent of the total. The great bulk of the manufacturing was done in establishments having products valued at not less than \$100,000.  |                           |                                 |                    |                             |
| \$1,000,000 and over.....                                | 4.8                       | 39.4                            | 28.8               | 29.8                        | During the five years from 1904 to 1909 there was a marked increase in the proportion of the total value of products reported by the largest establishments—those reporting products to the value of \$1,000,000 and over—and a decrease in the proportions reported by each of the four remaining classes.  |                           |                                 |                    |                             |
| Average per establishment.....                           |                           | 24                              | \$202,650          | \$72,079                    |  |                           |                                 |                    |                             |

<sup>1</sup> Includes the group "\$1,000,000 and over."

<sup>2</sup> Includes the group "Less than \$5,000."

This table shows that in 1909 of the 8,817 manufacturing establishments in the state only 194, or 2.2 per cent, had a value of products exceeding \$1,000,000. These establishments, however, employed an average of 126,142 wage earners, or 38.7 per cent of the total number for all establishments, and reported 56.7 per cent of the total value of products and 44.2 per cent of the total value added by manufacture.

On the other hand, the very small establishments—that is, those having a value of products of less than \$5,000—constituted a considerable proportion (25.9

per cent) of the total number of establishments, but the value of their products amounted to only five-tenths of 1 per cent of the total. The great bulk of the manufacturing was done in establishments having products valued at not less than \$100,000.

During the five years from 1904 to 1909 there was a marked increase in the proportion of the total value of products reported by the largest establishments—those reporting products to the value of \$1,000,000 and over—and a decrease in the proportions reported by each of the four remaining classes.

The fact that between 1904 and 1909 the average value of products per establishment increased from \$110,466 to \$129,923, and the average value added by manufacture from \$43,355 to \$48,259, can not be taken as in itself indicating a tendency toward concentration. The increased values shown may be, and probably are, due in part to the increase that has taken place in the price of commodities. The average number of wage earners per establishment decreased from 38 to 37.

In some respects, and especially from the standpoint of conditions under which persons engaged in manufactures work, the best classification of establishments to bring out the feature of size is a classification according to the number of wage earners employed. The next table shows, for 1909, such a classification for all industries combined and for 35 important industries individually, and gives not only the number of establishments in each group, but also the average number of wage earners employed.

| INDUSTRY.   | ESTABLISHMENTS EMPLOYING— |                  |                      |                       |                        |                         |                          |                          |                            |                          |
|---|---------------------------|------------------|----------------------|-----------------------|------------------------|-------------------------|--------------------------|--------------------------|----------------------------|--------------------------|
|   | Total.                    | No wage earners. | 1 to 5 wage earners. | 6 to 20 wage earners. | 21 to 50 wage earners. | 51 to 100 wage earners. | 101 to 250 wage earners. | 251 to 500 wage earners. | 501 to 1,000 wage earners. | Over 1,000 wage earners. |
|   | NUMBER OF ESTABLISHMENTS. |                  |                      |                       |                        |                         |                          |                          |                            |                          |
| <b>All Industries</b> .....   | 8,817                     | 712              | 4,078                | 2,010                 | 841                    | 513                     | 387                      | 170                      | 75                         | 31                       |
| Belt and hose, woven and rubber.....  | 12                        |                  | 1                    | 1                     | 1                      | 3                       | 3                        | 2                        |                            |                          |
| Boots and shoes, including cut stock and findings.....                          | 53                        | 4                | 7                    | 13                    | 9                      | 8                       | 7                        | 4                        | 1                          |                          |
| Bread and other bakery products.....  | 1,217                     | 77               | 961                  | 154                   | 19                     | 3                       | 3                        |                          |                            |                          |
| Cars and general shop construction and repairs by steam-railroad companies..... | 23                        |                  |                      | 1                     | 3                      | 8                       | 2                        | 4                        | 4                          | 1                        |
| Chemicals.....  | 50                        | 1                | 11                   | 9                     | 13                     | 8                       | 2                        | 3                        | 2                          | 1                        |
| Clothing, men's, including shirts.....  | 150                       | 3                | 22                   | 49                    | 30                     | 19                      | 14                       | 3                        | 1                          |                          |
| Copper, tin, and sheet-iron products.....                                       | 175                       | 7                | 88                   | 47                    | 14                     | 8                       | 6                        | 4                        | 1                          |                          |
| Cotton goods, including cotton small wares.....                                 | 26                        |                  | 3                    | 7                     | 2                      | 3                       | 4                        | 4                        | 2                          | 1                        |
| Dyeing and finishing textiles.....  | 67                        |                  | 12                   | 15                    | 12                     | 11                      | 7                        | 2                        | 5                          | 3                        |
| Electrical machinery, apparatus, and supplies.....                              | 60                        |                  | 11                   | 23                    | 14                     | 3                       | 7                        | 6                        | 2                          | 3                        |
| Fertilizers.....  | 22                        |                  | 9                    | 6                     | 2                      |                         | 3                        | 2                        |                            |                          |
| Foundry and machine-shop products.....  | 591                       | 20               | 200                  | 108                   | 77                     | 55                      | 50                       | 12                       | 8                          | 1                        |
| Gas, illuminating and heating.....  | 47                        |                  | 23                   | 17                    | 2                      |                         | 3                        | 1                        | 1                          |                          |
| Hats, fur-felt.....   | 58                        | 1                | 11                   | 8                     | 12                     |                         | 11                       | 4                        | 1                          |                          |
| Iron and steel, steel works and rolling mills.....                              | 16                        |                  |                      | 1                     |                        | 4                       | 5                        | 3                        | 2                          | 1                        |
| Jewelry.....  | 150                       | 3                | 29                   | 65                    | 34                     | 11                      | 7                        | 1                        | 2                          |                          |
| Leather, tanned, curried, and finished.....                                     | 86                        | 1                | 8                    | 24                    | 27                     | 6                       | 15                       | 6                        |                            |                          |
| Liquors, malt.....  | 33                        |                  | 3                    | 7                     | 9                      | 3                       | 3                        |                          |                            |                          |
| Lumber and timber products.....   | 416                       | 10               | 215                  | 142                   | 34                     | 12                      | 1                        | 2                        |                            |                          |
| Oil, not elsewhere specified.....   | 23                        |                  | 8                    | 9                     | 4                      | 2                       |                          |                          |                            |                          |
| Oilcloth and linoleum.....  | 10                        |                  |                      | 2                     | 2                      | 2                       | 3                        | 2                        | 1                          |                          |
| Paint and varnish.....  | 63                        | 3                | 29                   | 14                    | 9                      | 4                       | 4                        |                          |                            |                          |
| Paper and wood pulp.....  | 37                        |                  | 1                    | 7                     | 11                     | 11                      | 6                        | 1                        |                            |                          |
| Pottery, terra-cotta, and fire-clay products.....                               | 88                        | 1                | 9                    | 14                    | 18                     | 13                      | 23                       | 8                        | 2                          |                          |
| Printing and publishing.....  | 684                       | 150              | 366                  | 125                   | 25                     | 9                       | 7                        | 2                        |                            |                          |
| Rubber goods, not elsewhere specified.....                                      | 36                        |                  | 2                    | 4                     | 7                      | 4                       | 6                        | 10                       | 3                          |                          |
| Shipbuilding, including boat building.....                                      | 97                        | 8                | 57                   | 13                    | 6                      | 8                       | 3                        | 1                        |                            | 1                        |
| Silk and silk goods, including throwsters.....                                  | 348                       |                  | 29                   | 102                   | 74                     | 63                      | 54                       | 19                       | 4                          | 3                        |
| Slaughtering and meat packing.....  | 84                        | 1                | 43                   | 28                    | 3                      | 6                       | 2                        | 1                        |                            |                          |
| Smelting and refining, copper.....  | 4                         |                  |                      |                       |                        |                         |                          |                          |                            | 4                        |
| Smelting and refining, not from the ore.....                                    | 14                        | 1                | 8                    | 1                     |                        | 1                       | 2                        |                          | 1                          |                          |
| Soap.....   | 21                        | 3                | 6                    | 4                     | 2                      | 3                       | 2                        |                          | 1                          |                          |
| Tobacco manufactures.....   | 462                       | 180              | 222                  | 35                    | 13                     | 2                       |                          | 4                        | 3                          |                          |
| Wire.....   | 7                         |                  |                      | 1                     |                        | 2                       |                          | 3                        |                            | 1                        |
| Woolen, worsted, and felt goods, and wool hats.....                             | 33                        |                  | 3                    | 4                     | 7                      |                         | 7                        | 6                        | 4                          | 2                        |
| All other industries.....   | 3,545                     | 286              | 1,679                | 880                   | 340                    | 200                     | 111                      | 59                       | 21                         | 10                       |
| AVERAGE NUMBER OF WAGE EARNERS.   |                           |                  |                      |                       |                        |                         |                          |                          |                            |                          |
| <b>All Industries</b> .....   | 326,223                   |                  | 10,005               | 22,539                | 27,554                 | 36,848                  | 60,448                   | 59,516                   | 52,497                     | 56,816                   |
| Belt and hose, woven and rubber.....  | 2,205                     |                  | 4                    | 12                    | 41                     | 106                     | 516                      | 824                      | 702                        |                          |
| Boots and shoes, including cut stock and findings.....                          | 4,232                     |                  | 14                   | 146                   | 206                    | 592                     | 1,215                    | 1,420                    | 540                        |                          |
| Bread and other bakery products.....  | 4,936                     |                  | 2,282                | 1,400                 | 640                    | 225                     | 389                      |                          |                            |                          |
| Cars and general shop construction and repairs by steam-railroad companies..... | 6,604                     |                  |                      | 7                     | 82                     | 609                     | 231                      | 1,363                    | 3,072                      | 1,240                    |
| Chemicals.....  | 5,046                     |                  | 38                   | 138                   | 445                    | 645                     | 333                      | 977                      | 1,296                      | 1,174                    |
| Clothing, men's, including shirts.....  | 6,904                     |                  | 68                   | 550                   | 1,263                  | 1,344                   | 2,059                    | 822                      | 878                        |                          |
| Copper, tin, and sheet-iron products.....                                       | 5,062                     |                  | 256                  | 478                   | 385                    | 629                     | 966                      | 1,383                    | 905                        |                          |
| Cotton goods, including cotton small wares.....                                 | 6,638                     |                  | 10                   | 81                    | 89                     | 249                     | 692                      | 1,520                    | 1,501                      | 2,496                    |
| Dyeing and finishing textiles.....  | 10,120                    |                  | 34                   | 170                   | 369                    | 661                     | 1,008                    | 614                      | 3,042                      | 4,111                    |
| Electrical machinery, apparatus, and supplies.....                              | 11,009                    |                  | 34                   | 293                   | 479                    | 226                     | 1,213                    | 2,161                    | 1,297                      | 5,396                    |
| Fertilizers.....  | 1,268                     |                  | 19                   | 65                    | 66                     |                         | 452                      | 606                      |                            |                          |
| Foundry and machine-shop products.....  | 27,315                    |                  | 560                  | 1,915                 | 2,385                  | 3,927                   | 7,524                    | 3,962                    | 5,021                      | 1,621                    |
| Gas, illuminating and heating.....  | 1,917                     |                  | 69                   | 175                   | 81                     |                         | 492                      | 484                      | 616                        |                          |
| Hats, fur-felt.....   | 4,657                     |                  | 37                   | 88                    | 436                    |                         | 1,549                    | 1,226                    | 575                        |                          |
| Iron and steel, steel works and rolling mills.....                              | 4,671                     |                  | 6                    |                       |                        |                         | 845                      | 1,027                    | 1,456                      | 1,081                    |
| Jewelry.....  | 4,008                     |                  | 84                   | 796                   | 1,123                  | 721                     | 1,025                    | 269                      |                            |                          |
| Leather, tanned, curried, and finished.....                                     | 5,560                     |                  | 24                   | 385                   | 916                    | 415                     | 2,375                    | 1,465                    |                            |                          |
| Liquors, malt.....  | 2,125                     |                  | 11                   | 94                    | 321                    | 570                     | 471                      | 668                      |                            |                          |
| Lumber and timber products.....   | 4,857                     |                  | 570                  | 1,587                 | 1,115                  | 840                     | 217                      | 528                      |                            |                          |
| Oil, not elsewhere specified.....   | 419                       |                  | 21                   | 124                   | 145                    | 129                     |                          |                          |                            |                          |
| Oilcloth and linoleum.....  | 2,123                     |                  |                      | 67                    | 144                    |                         | 390                      | 850                      | 672                        |                          |
| Paint and varnish.....  | 1,493                     |                  | 64                   | 149                   | 327                    | 258                     | 695                      |                          |                            |                          |
| Paper and wood pulp.....  | 2,223                     |                  | 5                    | 92                    | 382                    | 600                     | 748                      | 306                      |                            |                          |
| Pottery, terra-cotta, and fire-clay products.....                               | 9,815                     |                  | 18                   | 168                   | 601                    | 967                     | 3,869                    | 2,820                    | 1,372                      |                          |
| Printing and publishing.....  | 5,451                     |                  | 966                  | 1,193                 | 795                    | 607                     | 1,219                    | 671                      |                            |                          |
| Rubber goods, not elsewhere specified.....                                      | 4,265                     |                  | 19                   | 90                    | 103                    | 347                     | 1,608                    |                          | 2,080                      |                          |
| Shipbuilding, including boat building.....                                      | 4,809                     |                  | 116                  | 124                   | 206                    | 588                     | 523                      | 453                      |                            | 2,859                    |
| Silk and silk goods, including throwsters.....                                  | 30,285                    |                  | 73                   | 1,290                 | 2,540                  | 4,586                   | 8,590                    | 6,860                    | 2,592                      | 3,754                    |
| Slaughtering and meat packing.....  | 1,817                     |                  | 119                  | 322                   | 106                    | 436                     | 442                      | 302                      |                            |                          |
| Smelting and refining, copper.....  | 2,322                     |                  |                      |                       |                        |                         |                          |                          |                            | 2,322                    |
| Smelting and refining, not from the ore.....                                    | 1,057                     |                  | 13                   | 16                    |                        | 89                      | 358                      |                          | 581                        |                          |
| Soap.....   | 1,599                     |                  | 11                   | 47                    | 87                     | 195                     | 290                      |                          | 960                        |                          |
| Tobacco manufactures.....   | 9,406                     |                  | 390                  | 368                   | 379                    | 188                     |                          | 1,715                    | 2,578                      | 3,878                    |
| Wire.....   | 5,640                     |                  |                      | 14                    |                        | 168                     |                          | 1,088                    |                            | 4,386                    |
| Woolen, worsted, and felt goods, and wool hats.....                             | 12,652                    |                  | 7                    | 44                    | 274                    |                         | 1,049                    | 2,305                    | 3,074                      | 5,899                    |
| All other industries.....   | 110,938                   |                  | 4,069                | 10,162                | 11,010                 | 14,594                  | 17,007                   | 20,717                   | 14,468                     | 18,921                   |

| INDUSTRY.   | Total. | ESTABLISHMENTS EMPLOYING—                   |                      |                       |                        |                         |                          |                          |                            |                          |
|---|--------|---|----------------------|-----------------------|------------------------|-------------------------|--------------------------|--------------------------|----------------------------|--------------------------|
|   |        | No wage earners.                            | 1 to 5 wage earners. | 6 to 20 wage earners. | 21 to 50 wage earners. | 51 to 100 wage earners. | 101 to 250 wage earners. | 251 to 500 wage earners. | 501 to 1,000 wage earners. | Over 1,000 wage earners. |
|   |        | PER CENT OF AVERAGE NUMBER OF WAGE EARNERS. |                      |                       |                        |                         |                          |                          |                            |                          |
| All industries.....   | 100.0  | 3.1   | 6.0                  | 8.4                   | 11.3                   | 18.5                    | 18.2                     | 16.1                     | 17.4                       |                          |
| Belting and hose, woven and rubber.....   | 100.0  | 0.2   | 0.5                  | 1.8                   | 8.5                    | 22.5                    | 35.9                     | 30.0                     | .....                      |                          |
| Boots and shoes, including cut stock and findings.....                          | 100.0  | 0.3   | 3.4                  | 7.0                   | 14.0                   | 28.7                    | 33.6                     | 13.0                     | .....                      |                          |
| Bread and other bakery products.....  | 100.0  | 46.2  | 28.4                 | 13.0                  | 4.6                    | 7.9                     | .....                    | .....                    | .....                      |                          |
| Cars and general shop construction and repairs by steam-railroad companies..... | 100.0  | .....                                       | 0.1                  | 1.2                   | 9.2                    | 3.5                     | 20.6                     | 44.5                     | 18.8                       |                          |
| Chemicals.....  | 100.0  | 0.8   | 2.7                  | 8.8                   | 12.8                   | 6.6                     | 19.4                     | 25.7                     | 23.3                       |                          |
| Clothing, men's, including shirts.....  | 100.0  | 1.0   | 7.9                  | 18.1                  | 10.2                   | 29.4                    | 11.9                     | 12.6                     | .....                      |                          |
| Copper, tin, and sheet-iron products.....                                       | 100.0  | 5.1   | 9.6                  | 7.7                   | 12.6                   | 19.3                    | 27.6                     | 18.1                     | .....                      |                          |
| Cotton goods, including cotton small wares.....                                 | 100.0  | 0.2   | 1.2                  | 1.3                   | 3.8                    | 10.4                    | 22.9                     | 22.6                     | 37.6                       |                          |
| Dyeing and finishing textiles.....  | 100.0  | 0.3   | 1.7                  | 3.6                   | 6.8                    | 10.8                    | 6.1                      | 30.0                     | 40.6                       |                          |
| Electrical machinery, apparatus, and supplies.....                              | 100.0  | 0.3   | 2.6                  | 4.3                   | 2.0                    | 10.9                    | 19.5                     | 11.7                     | 48.6                       |                          |
| Fertilizers.....  | 100.0  | 1.6   | 5.4                  | 5.5                   | .....                  | 37.4                    | 50.2                     | .....                    | .....                      |                          |
| Foundry and machine-shop products.....  | 100.0  | 2.0   | 6.0                  | 8.6                   | 14.1                   | 27.0                    | 14.2                     | 21.3                     | 5.8                        |                          |
| Gas, illuminating and heating.....  | 100.0  | 3.6   | 0.1                  | 4.2                   | .....                  | 25.7                    | 25.2                     | 32.1                     | .....                      |                          |
| Hats, fur-felt.....   | 100.0  | 0.8   | 1.9                  | 0.4                   | 16.0                   | 33.3                    | 26.3                     | 12.3                     | .....                      |                          |
| Iron and steel, steel works and rolling mills.....                              | 100.0  | .....                                       | 0.1                  | .....                 | 5.0                    | 18.1                    | 22.0                     | 30.7                     | 23.1                       |                          |
| Jewelry.....  | 100.0  | 2.1   | 19.0                 | 28.0                  | 18.0                   | 25.6                    | 4.5                      | .....                    | .....                      |                          |
| Leather, tanned, curried, and finished.....                                     | 100.0  | 0.4   | 6.0                  | 16.5                  | 7.5                    | 42.7                    | 24.9                     | .....                    | .....                      |                          |
| Liquors, malt.....  | 100.0  | 0.5   | 4.4                  | 15.1                  | 26.8                   | 22.2                    | 31.0                     | .....                    | .....                      |                          |
| Lumber and timber products.....   | 100.0  | 11.7  | 32.7                 | 23.0                  | 17.3                   | 4.5                     | 10.0                     | .....                    | .....                      |                          |
| Oil, not elsewhere specified.....   | 100.0  | 5.0   | 29.6                 | 34.6                  | 30.8                   | .....                   | .....                    | .....                    | .....                      |                          |
| Oilcloth and linoleum.....  | 100.0  | .....                                       | .....                | 3.2                   | 6.8                    | 18.4                    | 40.0                     | 31.7                     | .....                      |                          |
| Paint and varnish.....  | 100.0  | 4.3   | 10.0                 | 21.0                  | 17.3                   | 46.5                    | .....                    | .....                    | .....                      |                          |
| Paper and wood pulp.....  | 100.0  | 0.2   | 4.1                  | 17.2                  | 31.0                   | 33.6                    | 13.8                     | .....                    | .....                      |                          |
| Pottery, terra-cotta, and fire-clay products.....                               | 100.0  | 0.2   | 1.7                  | 6.1                   | 9.0                    | 39.4                    | 28.7                     | 14.0                     | .....                      |                          |
| Printing and publishing.....  | 100.0  | 17.7  | 21.0                 | 14.6                  | 11.1                   | 22.4                    | 12.3                     | .....                    | .....                      |                          |
| Rubber goods, not elsewhere specified.....                                      | 100.0  | 0.4   | 2.1                  | 2.4                   | 8.2                    | 37.7                    | .....                    | 49.1                     | .....                      |                          |
| Shipbuilding, including boat building.....                                      | 100.0  | 2.4   | 2.5                  | 4.2                   | 12.1                   | 10.7                    | 9.3                      | .....                    | 58.7                       |                          |
| Silk and silk goods, including throwsters.....                                  | 100.0  | 0.2   | 4.3                  | 8.4                   | 15.1                   | 28.4                    | 22.7                     | 8.6                      | 12.4                       |                          |
| Slaughtering and meat packing.....  | 100.0  | 6.5   | 17.7                 | 5.8                   | 24.0                   | 24.3                    | 21.6                     | .....                    | .....                      |                          |
| Smelting and refining, copper.....  | 100.0  | .....                                       | .....                | .....                 | .....                  | .....                   | .....                    | 100.0                    | .....                      |                          |
| Smelting and refining, not from the ore.....                                    | 100.0  | 1.2   | 1.5                  | .....                 | 8.4                    | 33.0                    | .....                    | 55.0                     | .....                      |                          |
| Soap.....   | 100.0  | 0.7   | 2.0                  | 5.4                   | 12.2                   | 18.1                    | .....                    | 60.6                     | .....                      |                          |
| Tobacco manufactures.....   | 100.0  | 4.1   | 3.0                  | 4.0                   | 1.7                    | .....                   | 18.1                     | 27.2                     | 41.0                       |                          |
| Wire.....   | 100.0  | .....                                       | 0.2                  | .....                 | 2.8                    | .....                   | 19.3                     | .....                    | 77.7                       |                          |
| Woolen, worsted, and felt goods, and wool hats.....                             | 100.0  | 0.1   | 0.3                  | 2.2                   | .....                  | 8.3                     | 18.2                     | 24.3                     | 46.6                       |                          |
| All other industries.....   | 100.0  | 3.7   | 9.2                  | 9.9                   | 13.2                   | 15.3                    | 18.7                     | 13.0                     | 17.1                       |                          |

Of the 8,817 establishments reported for all industries, 8.1 per cent employed no wage earners; 46.3 per cent, from 1 to 5; 22.8 per cent, from 6 to 20; 9.5 per cent, from 21 to 50; and 13.3 per cent, 51 or more. The largest single group consists of the 4,078 establishments employing from 1 to 5 wage earners each, and the next of the 2,010 establishments employing from 6 to 20 wage earners. There were 276 establishments that employed over 250 wage earners, including 31 that employed over 1,000.

Of the total number of wage earners, 51.7 per cent were in establishments employing over 250 wage earners. The single group having the largest number of wage earners was that comprising the establishments employing from 101 to 250 each. These establishments employed 60,448 wage earners, or 18.5 per cent of the total. Most of the industries listed in this table but not in the preceding one are industries in which comparatively large establishments do most of the business, as appears from the classification according to the number of wage earners.

**Expenses.**—As stated in the Introduction, the census does not purport to furnish figures that can be used for determining the cost of manufacture and profits. Facts of interest can, however, be brought out concerning the relative importance of the different classes of expenses which make up the total.

The following table shows for 1909, in percentages, the distribution of expenses among the classes indi-

cated for all industries combined and for certain important industries separately. The figures on which the percentages are based appear in Table II, page 38.

| INDUSTRY.   | PER CENT OF TOTAL EXPENSES REPORTED. |        |            |                         |
|---|--------------------------------------|--------|------------|-------------------------|
|   | Salaries.                            | Wages. | Materials. | Miscellaneous expenses. |
| All industries.....   | 4.7                                  | 16.4   | 68.7       | 9.2                     |
| Belting and hose, woven and rubber.....   | 6.0                                  | 13.3   | 68.9       | 11.9                    |
| Boots and shoes, including cut stock and findings.....                          | 6.0                                  | 25.6   | 63.0       | 5.4                     |
| Bread and other bakery products.....  | 2.4                                  | 10.5   | 71.8       | 6.4                     |
| Cars and general shop construction and repairs by steam-railroad companies..... | 6.2                                  | 42.5   | 47.2       | 4.0                     |
| Chemicals.....  | 8.4                                  | 15.3   | 64.9       | 11.3                    |
| Clothing, men's, including shirts.....  | 4.7                                  | 31.7   | 54.7       | 8.9                     |
| Copper, tin, and sheet-iron products.....                                       | 5.7                                  | 27.5   | 61.1       | 5.6                     |
| Cotton goods, including cotton small wares.....                                 | 3.2                                  | 20.8   | 69.2       | 6.8                     |
| Dyeing and finishing textiles.....  | 7.6                                  | 37.1   | 47.0       | 8.3                     |
| Electrical machinery, apparatus, and supplies.....                              | 8.7                                  | 22.0   | 56.5       | 12.8                    |
| Fertilizers.....  | 3.7                                  | 7.8    | 81.5       | 7.1                     |
| Foundry and machine-shop products.....  | 9.0                                  | 28.9   | 51.1       | 11.0                    |
| Gas, illuminating and heating.....  | 6.9                                  | 9.4    | 31.4       | 62.3                    |
| Hats, fur-felt.....   | 5.8                                  | 36.3   | 50.2       | 7.6                     |
| Iron and steel, steel works and rolling mills.....                              | 6.2                                  | 25.0   | 60.1       | 8.2                     |
| Jewelry.....  | 11.3                                 | 22.7   | 56.4       | 9.6                     |
| Leather, tanned, curried, and finished.....                                     | 3.0                                  | 13.6   | 79.3       | 4.1                     |
| Liquors, malt.....  | 7.4                                  | 11.3   | 30.0       | 51.3                    |
| Lumber and timber products.....   | 4.0                                  | 22.5   | 68.6       | 4.8                     |
| Oil, not elsewhere specified.....   | 6.4                                  | 3.4    | 83.3       | 7.0                     |
| Oilcloth and linoleum.....  | 2.2                                  | 13.4   | 75.1       | 6.3                     |
| Paint and varnish.....  | 9.9                                  | 7.6    | 74.2       | 8.3                     |
| Paper and wood pulp.....  | 6.5                                  | 16.8   | 67.9       | 8.8                     |
| Pottery, terra-cotta, and fire-clay products.....                               | 9.1                                  | 49.9   | 31.3       | 9.7                     |
| Printing and publishing.....  | 13.4                                 | 37.1   | 35.5       | 14.0                    |
| Rubber goods, not elsewhere specified.....                                      | 4.5                                  | 13.4   | 75.7       | 6.4                     |
| Shipbuilding, including boat building.....                                      | 7.0                                  | 38.3   | 49.4       | 5.3                     |
| Silk and silk goods, including throwsters.....                                  | 3.9                                  | 23.4   | 55.8       | 16.9                    |
| Slaughtering and meat packing.....  | 1.7                                  | 3.5    | 92.2       | 2.5                     |
| Smelting and refining, copper.....  | 0.3                                  | 1.1    | 98.0       | 0.6                     |
| Smelting and refining, not from the ore.....                                    | 2.2                                  | 7.2    | 85.6       | 5.0                     |
| Soap.....   | 7.5                                  | 6.7    | 60.1       | 25.7                    |
| Tobacco manufactures.....   | 4.0                                  | 15.1   | 51.7       | 29.3                    |
| Wire.....   | 2.3                                  | 10.1   | 81.5       | 6.1                     |
| Woolen, worsted, and felt goods, and wool hats.....                             | 3.1                                  | 17.7   | 74.0       | 4.3                     |
| All other industries.....   | 4.7                                  | 16.1   | 71.2       | 8.0                     |

The table shows that, for all industries combined, 69.7 per cent of the total expenses were incurred for materials, 21.1 per cent for services—that is, salaries and wages—and 9.2 per cent for other purposes. As would be expected, these proportions vary greatly in the different industries.

**Engines and power.**—The following table shows, for all industries combined, the number of engines or other motors, according to their character, employed in generating power (including electric motors operated by purchased current), and their total horsepower at the censuses of 1909, 1904, and 1899. It also shows separately the number and horsepower of electric motors, including those operated by current generated in the manufacturing establishments.

| POWER.   | NUMBER OF ENGINES OR MOTORS. |                  |                   | HORSEPOWER.    |                |                   | PER CENT DISTRIBUTION OF HORSEPOWER. |                  |                  |
|--|------------------------------|------------------|-------------------|----------------|----------------|-------------------|--------------------------------------|------------------|------------------|
|  | 1909                         | 1904             | 1899 <sup>1</sup> | 1909           | 1904           | 1899 <sup>1</sup> | 1909                                 | 1904             | 1899             |
| <b>Primary power, total</b> .....              | <b>13,044</b>                | <b>6,090</b>     | <b>5,738</b>      | <b>612,293</b> | <b>436,274</b> | <b>322,508</b>    | <b>100.0</b>                         | <b>100.0</b>     | <b>100.0</b>     |
| Owned.....                                     | 8,039                        | 6,090            | 5,738             | 570,391        | 417,362        | 312,401           | 93.2                                 | 95.7             | 96.9             |
| Steam.....                                     | 6,378                        | 4,876            | 4,794             | 529,668        | 386,770        | 281,306           | 86.5                                 | 88.7             | 87.2             |
| Gas.....                                       | 1,116                        | 677              | 420               | 20,867         | 9,070          | 3,284             | 3.4                                  | 2.1              | 1.0              |
| Water wheels.....                              | 496                          | 504              | 521               | 18,558         | 18,072         | 20,161            | 3.0                                  | 4.1              | 6.3              |
| Water motors.....                              | 40                           | 33               | ( <sup>2</sup> )  | 1,118          | 125            | ( <sup>2</sup> )  | 0.2                                  | ( <sup>2</sup> ) | ( <sup>2</sup> ) |
| Other.....                                     |                              |                  |                   | 180            | 3,325          | 7,650             | ( <sup>2</sup> )                     | 0.8              | 2.4              |
| Rented.....                                    | 5,005                        | ( <sup>2</sup> ) | ( <sup>2</sup> )  | 41,902         | 18,912         | 10,102            | 6.8                                  | 4.3              | 3.1              |
| Electric.....                                  | 5,005                        | ( <sup>2</sup> ) | ( <sup>2</sup> )  | 33,157         | 10,603         | 4,126             | 5.4                                  | 2.4              | 1.3              |
| Other.....                                     |                              |                  |                   | 8,745          | 8,309          | 5,976             | 1.4                                  | 1.9              | 1.9              |
| <b>Electric motors</b> .....                   | <b>17,145</b>                | <b>4,673</b>     | <b>804</b>        | <b>182,475</b> | <b>69,301</b>  | <b>15,857</b>     | <b>100.0</b>                         | <b>100.0</b>     | <b>100.0</b>     |
| Run by current generated by establishment..... | 12,140                       | 4,673            | 804               | 149,318        | 58,698         | 11,731            | 81.8                                 | 84.7             | 74.0             |
| Run by rented power.....                       | 5,005                        | ( <sup>2</sup> ) | ( <sup>2</sup> )  | 33,157         | 10,603         | 4,126             | 18.2                                 | 15.3             | 26.0             |

<sup>1</sup> Includes the neighborhood industries and hand trades, omitted in 1904 and 1909.  
<sup>2</sup> Not reported.

Of the increase of 289,790 horsepower in the total primary power from 1899 to 1909, 248,362 horsepower was in that generated by steam engines. The proportion of steam power in the total primary power, however, increased from 87.2 per cent in 1899 to 88.7 per cent in 1904 but decreased to 86.5 per cent in 1909. The more general use of gas engines is shown, there being 1,116 such engines, with an indicated capacity of 20,867 horsepower, reported in 1909, as against 677 engines, with 9,070 horsepower, in 1904 and 420 engines, with 3,284 horsepower, in 1899. The figures also show that the practice of renting electric power is on the increase, 5.4 per cent of the total power being of this character in 1909, as compared with 2.4 per cent

in 1904 and 1.3 per cent in 1899. Water power and the owned power classed as "Other" show decreases for the decade.

The use of electric motors for the purpose of applying the power generated within the establishment is also shown to be rapidly increasing, the horsepower of such motors having increased from 11,731 in 1899 to 58,698 in 1904 and 149,318 in 1909.

**Fuel.**—Closely related to the question of kind of power employed is that of the fuel consumed in generating this power or otherwise utilized as material in the manufacturing processes.

The following table shows the quantity of each kind of fuel used in 1909 for all industries combined and for certain selected industries separately:

| INDUSTRY.   | Anthracite coal (tons). | Bituminous coal (tons). | Coke (tons).   | Wood (cords)  | Oil, including gasoline (barrels) | Gas (1,000 feet). |
|---|-------------------------|-------------------------|----------------|---------------|-----------------------------------|-------------------|
| <b>All industries</b> .....   | <b>3,725,740</b>        | <b>3,763,581</b>        | <b>739,083</b> | <b>43,571</b> | <b>1,189,592</b>                  | <b>842,742</b>    |
| Belt and hose, woven and rubber.....  | 37,383                  | 13,790                  |                |               |                                   | 7                 |
| Boots and shoes, including out stock and findings.....                          | 4,020                   | 2,011                   | 10             |               | 192                               | 1,314             |
| Bread and other bakery products.....  | 47,551                  | 4,398                   | 5,760          | 2,008         | 83                                | 18,676            |
| Cars and general shop construction and repairs by steam-railroad companies..... | 62,135                  | 50,510                  |                | 4             | 923                               |                   |
| Chemicals.....  | 215,245                 | 76,734                  | 1,863          | 50            | 3,930                             | 1,850             |
| Clothing, men's, including shirts.....  | 5,254                   | 193                     |                | 8             | 239                               | 110,111           |
| Copper, tin, and sheet-iron products.....                                       | 9,177                   | 8,247                   | 399            | 20            | 1,583                             | 13,533            |
| Cotton goods, including cotton small wares.....                                 | 48,596                  | 20,905                  |                |               | 1                                 | 1,365             |
| Dyeing and finishing textiles.....  | 304,610                 | 109,535                 | 190            |               | 1,040                             | 30,122            |
| Electrical machinery, apparatus, and supplies.....                              | 26,033                  | 45,919                  | 599            | 30            | 3,248                             | 74,505            |
| Fertilizers.....  | 11,479                  | 30,304                  |                | 10            | 50                                | 7                 |
| Foundry and machine-shop products.....  | 117,348                 | 161,050                 | 92,806         | 4,169         | 20,165                            | 38,928            |
| Gas, illuminating and heating.....  | 72,990                  | 179,915                 | 3,428          | 4             | 628,280                           |                   |
| Hats, fur-felt.....   | 29,097                  | 8,902                   |                | 15            | 1                                 | 16,356            |
| Iron and steel, steel works and rolling mills.....                              | 31,671                  | 252,611                 | 8,964          | 877           | 32,086                            | 3,347             |
| Jewelry.....  | 2,879                   | 639                     | 31             | 8             | 305                               | 13,726            |
| Leather, tanned, curried, and finished.....                                     | 14,599                  | 77,345                  | 192            | 5             | 125                               | 698               |
| Liquors, malt.....  | 97,275                  | 19,051                  |                | 10            | 253                               | 276               |
| Lumber and timber products.....   | 10,770                  | 6,127                   | 42             | 132           | 604                               | 8,655             |
| Oil, not elsewhere specified.....   | 9,792                   | 6,328                   | 45             | 5,015         | 16                                | 60                |
| Olecloth and linoleum.....  | 17,439                  | 65,395                  | 1,557          |               |                                   |                   |
| Paint and varnish.....  | 17,903                  | 42,871                  | 1,581          | 3             | 13                                | 1,051             |
| Paper and wood pulp.....  | 167,040                 | 79,431                  |                |               | 52                                |                   |
| Pottery, terra-cotta, and fire-clay products.....                               | 80,785                  | 201,857                 | 1,142          | 1,238         | 703                               | 126               |
| Printing and publishing.....  | 8,518                   | 5,024                   | 62             | 25            | 276                               | 19,200            |
| Rubber goods, not elsewhere specified.....                                      | 20,120                  | 69,485                  | 25             |               | 0                                 |                   |
| Shipbuilding, including boat building.....                                      | 3,520                   | 33,460                  | 1,543          | 83            | 380                               | 506               |
| Silk and silk goods, including throwsters.....                                  | 74,090                  | 10,817                  |                | 8             | 278                               | 5,640             |
| Slaughtering and meat packing.....  | 54,468                  | 2,365                   |                | 1,031         | 284                               | 4,006             |
| Smelting and refining, copper.....  | 223,608                 | 92,829                  | 36,626         |               | 25,225                            | 1,173             |
| Smelting and refining, not from the ore.....                                    | 6,068                   | 68,810                  | 21,169         | 885           | 53,112                            | 238               |
| Soup.....   | 27,240                  | 21,625                  | 81             |               | 1                                 | 360               |
| Tobacco manufactures.....   | 20,296                  | 1,529                   |                | 85            | 77                                | 8,101             |
| Wire.....   | 13,628                  | 113,117                 | 2,614          |               | 42,930                            |                   |
| Woolen, worsted, and felt goods, and wool hats.....                             | 126,841                 | 26,430                  |                |               | 1,358                             |                   |
| All other industries.....   | 1,705,700               | 1,747,453               | 558,395        | 27,798        | 371,016                           | 459,198           |

NOTE.—In addition, there were 9,515 tons of other varieties of fuel reported.

### SUPPLEMENTARY DATA REGARDING IMPORTANT INDUSTRIES.

(With statistics for laundries and custom sawmills and gristmills.)

For certain industries the Census Bureau collects, by means of special schedules, details regarding the quantity and cost of materials and the quantity and value of products, number and classes of machines used,

and other information for securing which no provision is made on the general schedule. Certain data of this character for a number of important industries in New Jersey are here presented.

**Textiles.**—The relative importance of seven of the eight principal textile industries in New Jersey, measured by value of products, is shown in the following table, which presents the total amount reported for each at the last three censuses:

| INDUSTRY.   | VALUE OF PRODUCTS. |              |              |
|---|--------------------|--------------|--------------|
|   | 1909               | 1904         | 1899         |
| <b>Total</b> .....                                  | \$133,205,000      | \$85,045,000 | \$72,640,000 |
| Silk and silk goods, including throwsters.....      | 65,430,000         | 42,863,000   | 39,067,000   |
| Woolen, worsted, and felt goods, and wool hats..... | 33,039,000         | 16,394,000   | 12,270,000   |
| Cotton goods, including cotton small wares.....     | 13,729,000         | 8,579,000    | 6,931,000    |
| Hats, fur-felt.....                                 | 8,825,000          | 9,540,000    | 7,211,000    |
| Cordage and twine and jute and linen goods.....     | 5,527,000          | 3,371,000    | 2,956,000    |
| Hosiery and knit goods.....                         | 3,810,000          | 2,549,000    | 1,782,000    |
| Carpets and rugs, other than rag.....               | 1,945,000          | 1,740,000    | 1,523,000    |

The progress of the textile industries in New Jersey during the past decade is indicated by the following table, which shows the number of spindles, looms, and other equipment reported for four leading industries of this group in 1909, 1904 and 1899:

| MACHINE.                 | Cen-<br>sus. | Total.  | Cotton<br>goods,<br>including<br>cotton<br>small<br>wares. | Woolen,<br>worsted,<br>and felt<br>goods,<br>and wool<br>hats. | Silk and<br>silk<br>goods,<br>including<br>throw-<br>sters. | Hosiery<br>and knit<br>goods. |
|--------------------------|--------------|---------|--|--|---|-------------------------------|
| Producing spindles.....  | 1909         | 910,724 | 420,784  | 230,714  | 240,644   | 9,582                         |
|                          | 1904         | 864,984 | 436,764  | 181,293  | 237,435   | 9,462                         |
|                          | 1899         | 868,812 | 431,730  | 147,084  | 281,590   | 8,408                         |
| Looms.....               | 1909         | 37,287  | 3,381  | 4,091  | 28,915  | .....                         |
|                          | 1904         | 29,984  | 2,250  | 3,799  | 23,935  | .....                         |
|                          | 1899         | 25,487  | 2,276  | 2,639  | 20,572  | .....                         |
| Knitting machines.....   | 1909         | 1,492   | .....  | .....  | .....   | 1,492                         |
|                          | 1904         | 1,345   | .....  | .....  | .....   | 1,345                         |
|                          | 1899         | 1,335   | .....  | .....  | .....   | 1,335                         |
| Woolen cards (sets)..... | 1909         | 163     | .....  | 131  | .....   | 32                            |
|                          | 1904         | 205     | .....  | 179  | .....   | 26                            |
|                          | 1899         | 223     | .....  | 197  | .....   | 26                            |
| Wool-combing machines    | 1909         | 265     | .....  | 265  | .....   | .....                         |
|                          | 1904         | 160     | .....  | 166  | .....   | .....                         |
|                          | 1899         | 125     | .....  | 125  | .....   | .....                         |

The total number of producing spindles increased from 864,984 in 1904 to 910,724 in 1909, or 5.3 per cent, the largest increase being in the woolen and worsted goods industry. The total number of looms increased from 29,984 in 1904 to 37,287 in 1909, or 24.4 per cent, the largest relative gain being in the cotton-goods industry, although both the silk and the woolen industries show substantial increases. The number of sets of woolen cards decreased, while the number of combing machines increased, these changes resulting from a decline in the woolen branch and a rapid growth in the worsted branch of the woolen and worsted goods industry.

**Silk and silk goods, including throwsters.**—The next table gives in detail the quantity and cost of the principal materials used and the quantity and value of the principal products manufactured in the silk-goods industry in 1909, 1904, and 1899.

The raw silk used in 1909 amounted to 6,112,647 pounds, costing \$23,705,609, an increase of 72 per cent in quantity and 70.3 per cent in cost over the corresponding figures for 1904. The quantity of spun silk

purchased in 1909 was greater than in 1904, but the quantity of organzine and tram purchased was somewhat less. The latter condition is due to a large extent to the increase in the practice among the mills of having the raw silk thrown on contract instead of purchasing the silk in the form of organzine and tram.

Of the products, plain and fancy broad silks were the most important. The output of those made wholly of silk in 1909 was 36,759,094 yards, valued at \$24,000,880, a gain of 11.5 per cent in quantity and 26.1 per cent in value over the corresponding figures for 1904. The production of all-silk Jacquards practically doubled in the five years. In each class of broad silks, the silk-mixed fabrics show a greater relative increase than the all-silk fabrics. The value of the ribbons produced in 1909 shows a gain of 49.2 per cent over 1904, and of 79.5 per cent over 1899. The large increase in the amount received for contract work is indicative of the greater prevalence of commission throwing; the quantity of silk thrown on commission in 1909 was 2,661,205 pounds, as compared with 1,689,088 pounds in 1904.

| MATERIAL OR PRODUCT.                    | 1909         | 1904         | 1899             |
|---|--------------|--------------|------------------|
| <b>Materials used, total cost</b> ..... | \$33,205,177 | \$22,339,447 | \$21,631,118     |
| <b>Silk:</b>                            |              |              |                  |
| Raw—                                    |              |              |                  |
| Pounds.....                             | 6,112,647    | 3,553,090    | 3,155,334        |
| Cost.....                               | \$23,705,609 | \$13,920,104 | \$13,514,501     |
| Spun—                                   |              |              |                  |
| Pounds.....                             | 244,017      | 154,201      | 178,735          |
| Cost.....                               | \$928,027    | \$341,298    | \$533,612        |
| Artificial—                             |              |              |                  |
| Pounds.....                             | 103,148      | 8,066        | .....            |
| Cost.....                               | \$107,208    | \$35,074     | .....            |
| Organzine and tram—                     |              |              |                  |
| Pounds.....                             | 1,143,754    | 1,343,081    | 1,209,012        |
| Cost.....                               | \$4,800,843  | \$5,832,154  | \$5,702,506      |
| <b>Yarns, other than silk:</b>          |              |              |                  |
| Cotton—                                 |              |              |                  |
| Pounds.....                             | 1,889,158    | 1,064,973    | 757,486          |
| Cost.....                               | \$781,061    | \$402,480    | \$304,481        |
| Mergerized cotton—                      |              |              |                  |
| Pounds.....                             | 490,367      | 261,905      | 122,053          |
| Cost.....                               | \$390,198    | \$208,204    | \$90,013         |
| Woolen or worsted—                      |              |              |                  |
| Pounds.....                             | 69,160       | 25,725       | 16,940           |
| Cost.....                               | \$106,333    | \$27,962     | \$15,042         |
| Other:                                  |              |              |                  |
| Pounds.....                             | 122,303      | 14,891       | 480              |
| Cost.....                               | \$170,009    | \$10,622     | \$170            |
| Chemicals and dyestuffs.....            | \$455,342    | \$191,553    | ( <sup>1</sup> ) |
| Fuel and rent of power.....             | \$547,514    | \$404,304    | \$243,212        |
| All other materials.....                | \$1,394,033  | \$965,512    | \$1,227,581      |
| <b>Products, total value</b> .....      | \$65,429,550 | \$42,862,907 | \$39,966,662     |
| Organzine and tram for sale:            |              |              |                  |
| Pounds.....                             | 266,458      | 171,187      | 315,646          |
| Value.....                              | \$1,240,406  | \$777,250    | \$1,500,060      |
| <b>Broad silks:</b>                     |              |              |                  |
| Plain and fancy—                        |              |              |                  |
| All-silk—                               |              |              |                  |
| Yards, single width.....                | 36,759,094   | 32,971,793   | 28,268,070       |
| Value.....                              | \$24,000,880 | \$19,031,558 | \$18,871,325     |
| Silk-mixed—                             |              |              |                  |
| Yards, single width.....                | 6,077,893    | 1,822,091    | 2,331,493        |
| Value.....                              | \$3,808,772  | \$1,404,546  | \$1,680,091      |
| Jacquard—                               |              |              |                  |
| All-silk—                               |              |              |                  |
| Yards, single width.....                | 10,880,081   | 5,480,654    | 6,451,655        |
| Value.....                              | \$8,352,650  | \$4,388,069  | \$4,722,532      |
| Silk-mixed—                             |              |              |                  |
| Yards, single width.....                | 2,722,000    | 1,220,195    | 1,466,355        |
| Value.....                              | \$1,970,175  | \$749,466    | \$1,154,365      |
| Piece dyed—                             |              |              |                  |
| All-silk—                               |              |              |                  |
| Yards, single width.....                | 4,763,872    | 3,874,771    | 1,694,675        |
| Value.....                              | \$3,200,166  | \$2,175,034  | \$905,942        |
| Silk-mixed—                             |              |              |                  |
| Yards, single width.....                | 3,584,329    | 1,331,233    | 381,000          |
| Value.....                              | \$1,834,553  | \$439,935    | \$154,500        |
| Ribbons.....                            | \$14,071,005 | \$10,036,331 | \$8,341,721      |
| Laces, nets, veils, veillings, etc..... | \$531,923    | \$414,891    | \$423,257        |
| All other products.....                 | \$3,082,438  | \$2,440,937  | \$1,446,025      |
| Amount received for contract work.....  | \$2,436,573  | \$998,890    | \$764,844        |

<sup>1</sup> Not reported separately.



Woolen, worsted, and felt goods, and wool hats.—The following table gives the quantity and cost of the principal materials used in this industry in 1909, 1904, and 1899:

| MATERIAL.                                    | 1909                | 1904                | 1899               |
|--|---------------------|---------------------|--------------------|
| <b>Total cost</b> .....                      | <b>\$21,032,879</b> | <b>\$10,627,540</b> | <b>\$7,625,895</b> |
| <b>Wool:</b>                                 |                     |                     |                    |
| In condition purchased—                      |                     |                     |                    |
| Pounds.....                                  | 44,150,157          | 37,371,456          | 18,005,603         |
| Cost.....                                    | \$11,673,250        | \$6,865,098         | \$5,128,902        |
| Domestic—                                    |                     |                     |                    |
| Pounds.....                                  | 31,109,309          | 33,963,274          | 13,022,301         |
| Cost.....                                    | \$6,896,485         | \$5,038,501         | \$3,611,204        |
| Foreign—                                     |                     |                     |                    |
| Pounds.....                                  | 13,040,848          | 3,408,182           | 4,983,302          |
| Cost.....                                    | \$4,776,765         | \$1,226,597         | \$1,517,698        |
| Equivalent in scoured condition, pounds..... | 22,346,674          | 14,859,780          | 9,728,167          |
| Tailors' clippings, rags, etc.:              |                     |                     |                    |
| Pounds.....                                  | 1,051,906           | 5,813,231           | (2)                |
| Cost.....                                    | \$42,276            | \$283,393           | \$186,067          |
| <b>Cotton:</b>                               |                     |                     |                    |
| Pounds.....                                  | 228,378             | 625,301             | 1,519,608          |
| Cost.....                                    | \$26,541            | \$69,456            | \$106,204          |
| Shoddy, mungo, and wool extract:             |                     |                     |                    |
| Pounds.....                                  | 272,038             | 264,764             | 105,083            |
| Cost.....                                    | \$37,974            | \$40,562            | \$20,250           |
| Waste and noils:                             |                     |                     |                    |
| Pounds.....                                  | 1,586,752           | 973,898             | 1,209,093          |
| Cost.....                                    | \$657,593           | \$246,702           | \$326,636          |
| Yarns, purchased:                            |                     |                     |                    |
| Worsted—                                     |                     |                     |                    |
| Pounds.....                                  | 5,869,786           | 1,307,443           | 375,520            |
| Cost.....                                    | \$5,823,416         | \$995,207           | \$250,593          |
| Woolen—                                      |                     |                     |                    |
| Pounds.....                                  | 90,084              | 138,627             | 283,000            |
| Cost.....                                    | \$73,145            | \$96,907            | \$169,480          |
| Cotton—                                      |                     |                     |                    |
| Pounds.....                                  | 833,227             | 1,319,443           | 966,787            |
| Cost.....                                    | \$189,702           | \$293,020           | \$100,402          |
| Silk and spun silk—                          |                     |                     |                    |
| Pounds.....                                  | 6,122               | 5,855               | 1,806              |
| Cost.....                                    | \$31,284            | \$18,227            | \$4,965            |
| Chemicals and dyestuffs.....                 | \$482,983           | \$384,717           | \$338,234          |
| Fuel and rent of power.....                  | \$403,317           | \$262,016           | \$153,987          |
| All other materials.....                     | \$1,691,308         | \$1,070,735         | \$737,485          |

<sup>1</sup> Excluding statistics for two establishments, to avoid disclosure of individual operations.

<sup>2</sup> Not reported.

This table shows a number of important changes between 1904 and 1909 in the quantity and character of the materials used in the industry. The quantity of foreign wool used increased greatly, while that of domestic wool decreased. In 1909, of the total quantity of wool reported, 70.5 per cent was domestic and 29.5 per cent foreign, while in 1904 the proportions were 90.9 per cent and 9.1 per cent, respectively. There was an increase in total quantity of wool, as shown on the scoured-wool basis, from 9,728,167 pounds in 1899 to 22,346,674 pounds in 1909. The quantity of tailors' clippings, rags, etc., and of cotton and cotton yarn purchased fell off considerably, but the quantity of worsted yarn purchased increased 248.2 per cent from 1899 to 1904, and 349 per cent from 1904 to 1909.

The quantities and values of the products of the industry are shown in the next table.

The increase in wool manufactures as a whole has been almost entirely in the worsted goods branch of the industry. The output of worsted dress goods more than quadrupled during the decade, amounting in 1909 to 19,126,851 square yards, valued at \$10,855,092. Included under the head of "All other" all-wool woven goods are large quantities of carded wool fabrics, especially woolen dress goods. Contrasted with the large increases in all-wool fabrics are the decreases in the

quantities of cotton-mixed and cotton-warp goods. The large increase in the quantity of worsted yarn produced for sale indicates a greater degree of specialization in the industry. Because of the fact that the spinning and the weaving operations are frequently carried on in different establishments, the products of one establishment in the industry often become materials for another. To the extent, therefore, that the yarns manufactured for sale were sold by the establishments producing them to other establishments in the state engaged in the woolen industry, for use as materials in their manufacturing processes, a duplication is involved in the total cost of materials and value of products for the industry.

| PRODUCT.                                       | 1909                | 1904                | 1899                |
|--|---------------------|---------------------|---------------------|
| <b>Total value</b> .....                       | <b>\$33,938,637</b> | <b>\$16,393,689</b> | <b>\$12,270,317</b> |
| All-wool woven goods, both woolen and worsted: |                     |                     |                     |
| Worsted coatings and suitings—                 |                     |                     |                     |
| Square yards.....                              | 2,660,330           | 1,370,051           | 868,859             |
| Value.....                                     | \$3,643,730         | \$1,089,384         | \$617,316           |
| Worsted dress goods—                           |                     |                     |                     |
| Square yards.....                              | 19,126,851          | 11,093,773          | 4,368,475           |
| Value.....                                     | \$10,855,092        | \$4,206,178         | \$1,310,543         |
| All other—                                     |                     |                     |                     |
| Square yards.....                              | 5,005,897           | 3,740,102           | 2,941,188           |
| Value.....                                     | \$4,422,523         | \$2,206,403         | \$1,708,052         |
| Cotton-mixed and cotton-warp woven goods:      |                     |                     |                     |
| Square yards.....                              | 3,216,002           | 8,006,335           | 7,499,379           |
| Value.....                                     | \$1,362,695         | \$2,401,093         | \$3,802,261         |
| Worsted yarn for sale:                         |                     |                     |                     |
| Pounds.....                                    | 11,100,625          | 5,676,075           | 2,466,683           |
| Value.....                                     | \$11,517,331        | \$4,610,434         | \$3,605,322         |
| Noils:   |                     |                     |                     |
| Pounds.....                                    | 1,028,352           | 878,838             | 708,794             |
| Value.....                                     | \$588,740           | \$311,906           | \$229,424           |
| Waste:   |                     |                     |                     |
| Pounds.....                                    | 2,102,373           | 1,136,229           | 702,302             |
| Value.....                                     | \$528,624           | \$326,740           | \$211,683           |
| All other products.....                        | \$1,019,993         | \$1,061,641         | \$784,816           |

<sup>1</sup> Excluding statistics for two establishments, to avoid disclosure of individual operations.

<sup>2</sup> Includes tops.

Cotton goods, including cotton small wares.—The following table shows the quantity and cost of the principal materials used and the quantity and value of products reported for this industry in 1909, 1904, and 1899:

| MATERIAL OR PRODUCT.                               | 1909                | 1904               | 1899               |
|--|---------------------|--------------------|--------------------|
| <b>Materials used, total cost</b> .....            | <b>\$8,564,733</b>  | <b>\$5,142,785</b> | <b>\$3,157,768</b> |
| <b>Cotton:</b>                                     |                     |                    |                    |
| Pounds.....  | 18,400,527          | 16,319,367         | 15,287,868         |
| Cost.....  | \$3,113,446         | \$2,647,810        | \$1,411,743        |
| <b>Cotton yarn:</b>                                |                     |                    |                    |
| Pounds.....  | 10,451,910          | 5,523,955          | 2,016,328          |
| Cost.....  | \$4,205,068         | \$1,385,751        | \$582,029          |
| Starch.....  | \$33,040            | \$19,711           | \$26,821           |
| Chemicals and dyestuffs.....                       | \$111,385           | \$75,363           | \$208,015          |
| Fuel and rent of power.....                        | \$199,252           | \$178,579          | \$127,700          |
| All other materials.....                           | \$900,942           | \$835,550          | \$710,500          |
| <b>Products, total value</b> .....                 | <b>\$13,728,874</b> | <b>\$8,578,527</b> | <b>\$6,930,766</b> |
| Plain and fancy fabrics, twills, satens, and duck: |                     |                    |                    |
| Square yards.....                                  | 17,376,260          | 18,159,747         | 13,159,526         |
| Value.....   | \$4,064,351         | \$1,606,199        | \$1,280,540        |
| Other woven goods:                                 |                     |                    |                    |
| Square yards.....                                  | 22,820,187          | 12,145,798         | 15,107,858         |
| Value.....   | \$1,255,644         | \$468,295          | \$537,472          |
| Yarns for sale:                                    |                     |                    |                    |
| Pounds.....  | 4,926,844           | 4,230,623          | 3,727,865          |
| Value.....   | \$1,810,075         | \$1,285,629        | \$870,824          |
| Waste for sale:                                    |                     |                    |                    |
| Pounds.....  | 3,569,041           | 3,305,170          | 2,547,061          |
| Value.....   | \$211,347           | \$203,633          | \$78,208           |
| All other products.....                            | \$6,387,457         | \$5,015,377        | \$4,163,722        |

<sup>1</sup> Excluding statistics for one establishment, to avoid disclosure of individual operations.



The quantity of raw cotton consumed increased 2,081,160 pounds, or 12.8 per cent, and its cost \$465,606, or 17.6 per cent, from 1904 to 1909. The cost of cotton used in 1909 averaged almost 17 cents a pound, the highest for any of the states. This is accounted for by the extensive use of sea-island and Egyptian cottons in the manufacture of thread. The fact that the quantity of cotton yarn purchased nearly doubled during the same five-year period indicates an increasing reliance by the weavers upon independent spinners of cotton yarn.

Thread is the most important product of the cotton mills of the state, but in order to avoid disclosure of the operations of individual establishments the value is included under "All other products." The output of plain and fancy fabrics, twills, sateens, and duck was smaller in quantity in 1909 than in 1904, but more than twice as great in value. This is due very largely to a decrease in the production of fancy woven fabrics and to a very large increase in the production of high-grade duck. The products included under the head of "Other woven goods," which increased 87.9 per cent in quantity and 168.1 per cent in value from 1904 to 1909, consist principally of cotton towels and towelings, mosquito netting, and tapestries.

To the extent that the yarns made in the state for sale were sold by the establishment producing them to other establishments in New Jersey engaged in the cotton-goods industry, for use as material in their manufacturing processes, their value represents a duplication in both the total cost of materials and the total value of products for the state.

**Slaughtering and meat packing.**—The remarkable growth in this industry from 1904 to 1909 was due largely to the growth of the meat-packing branch of the industry. The table following shows the quantity and cost of materials and the quantity and value of products for 1909, 1904, and 1899.

The cost of dressed meat purchased fresh for curing increased from \$1,706,436, representing 10.6 per cent of the total cost of all materials used, in 1904, to \$10,175,511, representing 30.2 per cent of the total cost of materials, in 1909. From 1904 to 1909 the output of fresh beef increased 63.6 per cent and its value 89.1 per cent, while the quantity of beef, salted or cured, was more than eighteen times as great in 1909 as in 1904 and its value was more than nineteen times as great. The output of fresh pork, the product of greatest value at each census, decreased 20.7 per cent from 1904 to 1909, but its value increased 23.9 per cent, while the output of pork salted or cured increased 157.1 per cent and its value 247.5 per cent. The quantity of lard reported for 1909 was more than nine times, and its value more than fourteen times, as great as in 1904. Of the other products, veal and mutton show a decrease in quantity, but an increase in value, "All other fresh meats" show a small increase in quantity but a decrease in value, sheep pelts show

a decrease in both quantity and value, while the remaining products show considerable increases in both respects.

| MATERIAL OR PRODUCT.                         | 1909         | 1904             | 1899             |
|--|--------------|------------------|------------------|
| <b>Materials used, total cost</b> .....      | \$33,730,584 | \$16,070,854     | \$12,965,008     |
| <b>Beeves slaughtered:</b>                   |              |                  |                  |
| Number.....                                  | 53,234       | 33,591           | 29,080           |
| Cost.....                                    | \$3,608,821  | \$1,839,384      | \$1,552,980      |
| <b>Calves slaughtered:</b>                   |              |                  |                  |
| Number.....                                  | 95,604       | 103,389          | 63,037           |
| Cost.....                                    | \$1,145,785  | \$989,487        | \$570,599        |
| <b>Sheep slaughtered:</b>                    |              |                  |                  |
| Number.....                                  | 423,724      | 502,242          | 380,406          |
| Cost.....                                    | \$2,283,003  | \$2,370,354      | \$1,585,083      |
| <b>Hogs slaughtered:</b>                     |              |                  |                  |
| Number.....                                  | 1,210,849    | 1,282,410        | 931,604          |
| Cost.....                                    | \$11,694,440 | \$8,537,754      | \$6,408,084      |
| Dressed meat, purchased.....                 | \$10,175,511 | \$1,706,436      | \$2,266,050      |
| Fuel and rent of power.....                  | \$106,444    | \$39,610         | \$30,186         |
| All other materials.....                     | \$4,605,090  | \$581,820        | \$550,517        |
| <b>Products, total value</b> .....           | \$37,583,395 | \$17,753,610     | \$14,215,208     |
| <b>Beef, fresh:</b>                          |              |                  |                  |
| Pounds.....                                  | 35,415,243   | 21,653,910       | 18,794,370       |
| Value.....                                   | \$3,475,765  | \$1,837,742      | \$1,510,041      |
| <b>Beef, salted or cured:</b>                |              |                  |                  |
| Pounds.....                                  | 5,445,719    | 293,925          | 245,600          |
| Value.....                                   | \$661,900    | \$32,973         | \$32,540         |
| <b>Veal:</b>                                 |              |                  |                  |
| Pounds.....                                  | 8,702,274    | 10,002,263       | 5,387,285        |
| Value.....                                   | \$1,131,257  | \$1,059,140      | \$503,610        |
| <b>Mutton:</b>                               |              |                  |                  |
| Pounds.....                                  | 16,228,067   | 21,468,265       | 17,021,273       |
| Value.....                                   | \$2,085,232  | \$1,938,163      | \$1,343,451      |
| <b>Pork, fresh:</b>                          |              |                  |                  |
| Pounds.....                                  | 96,506,328   | 121,630,717      | 70,518,271       |
| Value.....                                   | \$10,115,850 | \$8,166,454      | \$5,068,300      |
| <b>Pork, salted or cured:</b>                |              |                  |                  |
| Pounds.....                                  | 40,690,550   | 19,325,693       | 41,653,811       |
| Value.....                                   | \$6,314,238  | \$1,816,944      | \$3,542,050      |
| Sausage, fresh or cured.....                 | \$2,804,049  | \$887,349        | \$631,864        |
| <b>All other fresh meat:</b>                 |              |                  |                  |
| Pounds.....                                  | 1,538,026    | 1,365,846        | .....            |
| Value.....                                   | \$70,949     | \$97,088         | .....            |
| <b>Lard:</b>                                 |              |                  |                  |
| Pounds.....                                  | 40,017,200   | 5,423,649        | 11,668,825       |
| Value.....                                   | \$4,747,104  | \$330,592        | \$711,070        |
| <b>Tallow, oleo stoc, and stearin:</b>       |              |                  |                  |
| Pounds.....                                  | 8,785,195    | ( <sup>1</sup> ) | ( <sup>1</sup> ) |
| Value.....                                   | \$504,830    | ( <sup>1</sup> ) | ( <sup>1</sup> ) |
| <b>Fertilizers and fertilizer materials:</b> |              |                  |                  |
| Tons.....                                    | 8,742        | 5,340            | 2,500            |
| Value.....                                   | \$256,815    | \$52,823         | \$61,207         |
| <b>Hides:</b>                                |              |                  |                  |
| Number.....                                  | 131,027      | 85,064           | 72,773           |
| Pounds.....                                  | 5,102,302    | 3,230,540        | 2,305,855        |
| Value.....                                   | \$636,928    | \$301,230        | \$205,278        |
| <b>Sheep pelts:</b>                          |              |                  |                  |
| Number.....                                  | 423,624      | 502,042          | ( <sup>1</sup> ) |
| Value.....                                   | \$376,030    | \$567,247        | ( <sup>1</sup> ) |
| All other products.....                      | \$4,177,698  | \$653,001        | \$510,380        |
| Custom or contract work.....                 | \$154,842    | \$12,250         | \$2,708          |

<sup>1</sup> Figures not available.

**Wire.**—This industry includes only those establishments that purchase the wire rods from which the wire is drawn. Where the wire is drawn in the same plant which manufactures the rods, the wire is reported with other products of establishments classified as "Iron and steel, steel works and rolling mills." The next table shows, for 1909, the quantity and cost of the principal materials used in the industry and the quantity and value of the products. Comparable figures are not obtainable for prior censuses.

The product of chief value in 1909 was copper wire, of which 62,686 tons were reported, having a value of \$17,777,115, or 61.6 per cent of the total value of all products for the industry in the state. New Jersey was the leading state of the Union in the production of copper wire in 1909, contributing two-fifths of the total quantity of such wire reported by the industry in the United States. There were 83,636 tons of steel and iron wire and wire manufactures produced in the state by establishments which purchased the rods,

valued at \$8,017,520, of which 39,058 tons, valued at \$2,550,661, was drawn for sale as wire, and 44,578 tons, valued at \$5,466,859, represents the manufacture of wire into nails, rope, etc. In addition to the value of products shown in the table, the value of the wire products reported by the wire departments of rolling mills was \$2,507,079, being chiefly steel wire. By adding this amount to the total value of products shown in the table below the result obtained, \$31,365,507, fairly represents the total value of the output of wire for the state.

| MATERIAL OR PRODUCT.   | 1909         |
|--|--------------|
| Materials used, total cost .....   | \$22,297,737 |
| Wire rods:   |              |
| Steel and iron 1—  |              |
| Tons.....  | 92,118       |
| Cost.....  | \$3,323,105  |
| Copper—  |              |
| Tons.....  | 62,915       |
| Cost.....  | \$16,502,669 |
| All other materials, including brass and miscellaneous wire rods and purchased wire..... | \$2,471,963  |
| Wire drawn, whether for consumption or sale, tons:                                       |              |
| Steel and iron.....  | 83,647       |
| Copper.....  | 62,686       |
| Products, total value.....   | \$28,858,428 |
| Wire and manufactures of wire:   |              |
| Steel and iron—  |              |
| Tons.....  | 83,636       |
| Value.....   | \$8,017,520  |
| Wire drawn for sale—   |              |
| Tons.....  | 39,058       |
| Value.....   | \$2,550,661  |
| Manufactures of wire, nails, rope, etc.—   |              |
| Tons.....  | 44,578       |
| Value.....   | \$5,466,859  |
| Copper—  |              |
| Tons.....  | 62,686       |
| Value.....   | \$17,777,115 |
| All other products, including wire other than steel, iron, and copper.....               | \$3,063,703  |

1 Includes 92 tons of iron rods.

**Leather, tanned, curried, and finished.**—The quantity and value of the products manufactured during the last three census years are shown in the following table:

| PRODUCT.                                 | 1909                | 1904                | 1899                |
|--|---------------------|---------------------|---------------------|
| <b>Total value .....</b>                 | <b>\$28,430,955</b> | <b>\$21,495,329</b> | <b>\$13,747,155</b> |
| Leather:                                 |                     |                     |                     |
| Sole: Oak and chrome—                    |                     |                     |                     |
| Sides.....                               | 120,300             | (1)                 | (1)                 |
| Value.....                               | \$1,015,495         | (1)                 | (1)                 |
| Patent and enameled upper leather—       |                     |                     |                     |
| Sides.....                               | 523,404             | 318,182             | 181,082             |
| Value.....                               | \$2,060,181         | \$1,497,893         | \$830,540           |
| Calf and kip skins, tanned and finished— |                     |                     |                     |
| Number.....                              | 371,666             | 96,992              | 539,350             |
| Value.....                               | \$856,533           | \$172,550           | \$909,235           |
| Goatskins, tanned and finished—          |                     |                     |                     |
| Number.....                              | 6,340,036           | 3,481,123           | 4,069,191           |
| Value.....                               | \$5,025,036         | \$3,161,780         | \$3,061,738         |
| Black—                                   |                     |                     |                     |
| Number.....                              | 5,800,833           | 3,466,523           | 3,416,489           |
| Value.....                               | \$4,573,552         | \$3,141,830         | \$2,190,402         |
| Colored—                                 |                     |                     |                     |
| Number.....                              | 539,203             | 14,600              | 1,552,702           |
| Value.....                               | \$452,384           | \$19,950            | \$871,336           |
| Sheepskins, tanned and finished—         |                     |                     |                     |
| Number.....                              | 1,001,020           | 1,228,500           | 454,088             |
| Value.....                               | \$1,529,969         | \$743,802           | \$283,012           |
| Carriage, automobile, and furniture—     |                     |                     |                     |
| Sides.....                               | 940,572             | 484,552             | 441,873             |
| Value.....                               | \$8,836,740         | \$5,143,295         | \$4,134,980         |
| Trunk, bag, and pocketbook.....          | \$1,467,097         | \$1,669,360         | \$906,733           |
| Bookbinders'.....                        | \$1,502,657         | \$1,235,594         | \$975,089           |
| Leather, sold in rough.....              | \$1,234,065         | \$873,093           | \$453,053           |
| All other.....                           | \$3,663,470         | \$5,555,857         | \$1,720,040         |
| All other products.....                  | \$471,654           | \$190,576           | \$234,035           |
| Work on materials for others.....        | \$767,158           | \$1,251,529         | \$148,694           |

1 Not reported.

In 1909 the \$28,430,955 reported as the value of products in New Jersey represented 8.7 per cent of the total shown for the industry in the United States. Corresponding percentages for 1904 and 1899 were 8.5 per cent and 6.7 per cent, respectively. Most of the different groups of products show a decided increase from 1904 to 1909. The state reported in 1909, 523,494 sides of patent and enameled upper leather, 1,901,020 tanned and finished sheepskins, and 6,340,036 tanned and finished goatskins, these figures representing 19.4 per cent, 9.7 per cent, and 13.2 per cent, respectively, of the corresponding totals for the United States.

In 1909 carriage, automobile, and furniture leather was the product of greatest value, forming 31.1 per cent in 1909 and 23.9 per cent in 1904 of the total value of products of the industry in the state. The amount received in 1909 for work on materials furnished by others (\$767,158) represents a decided decrease as compared with the amount shown for 1904, but is more than five times that reported for 1899. The estimated value of the leather treated on commission in 1909 was \$4,044,508.

**Chemicals.**—The following table shows the quantity and value of certain chemicals or groups of chemicals manufactured during 1909 and 1904:

| PRODUCT.   | 1909                | 1904                |
|--|---------------------|---------------------|
| <b>Total value .....</b>   | <b>\$22,824,140</b> | <b>\$18,023,629</b> |
| Acids:   |                     |                     |
| Hydrofluoric—  |                     |                     |
| Pounds.....  | 1,182,655           | (2)                 |
| Value.....   | \$71,720            | (2)                 |
| Muriatic—  |                     |                     |
| Pounds.....  | 44,934,781          | (2)                 |
| Value.....   | \$410,016           | (2)                 |
| Other acids (acetic, boric, citric, phosphoric, salicylic, etc.).....                          | \$2,671,086         | \$1,150,972         |
| Sodas:   |                     |                     |
| Sul soda, caustic soda, and borax—   |                     |                     |
| Tons.....  | 19,301              | 15,849              |
| Value.....   | \$1,240,076         | \$1,587,244         |
| Other soda products.....   | \$265,039           | \$180,406           |
| Coal-tar products.....   | \$852,050           | \$186,010           |
| Bleaching materials: Hypochlorites, hydrogen peroxide, and bisulphites.....                    | \$75,041            | \$40,595            |
| Plastics.....  | \$4,341,643         | \$3,774,216         |
| Compressed and liquefied gases:  |                     |                     |
| Anhydrous ammonia—   |                     |                     |
| Pounds.....  | 1,386,027           | (2)                 |
| Value.....   | \$319,590           | \$132,120           |
| All other.....   | \$104,935           | \$95,008            |
| Fine chemicals: Alkaloids, gold, silver, and platinum salts, ether, acetone, vanilla, etc..... | \$2,900,030         | \$1,998,749         |
| Bisom salts:   |                     |                     |
| Pounds.....  | 25,404,186          | (2)                 |
| Value.....   | \$122,528           | (2)                 |
| Phosphates of soda:  |                     |                     |
| Pounds.....  | 23,049,120          | 6,406,552           |
| Value.....   | \$430,958           | \$108,549           |
| Tin salts:   |                     |                     |
| Pounds.....  | 10,657,837          | 2,891,500           |
| Value.....   | \$401,080           | \$282,691           |
| Zinc salts:  |                     |                     |
| Pounds.....  | 22,427,586          | (2)                 |
| Value.....   | \$1,124,613         | (2)                 |
| All other chemicals.....   | \$7,480,811         | \$3,570,070         |

1 Not including sulphuric, nitric, or mixed acids.

2 Figures not available.

Plastics (including celluloid, etc.) formed the most important class of products at both censuses, their value increasing \$567,427, or 15 per cent, from 1904 to 1909. Acids were next in importance in point of value. The principal acids included in this group are hydrofluoric, muriatic, acetic, boric, citric, phosphoric, and salicylic; the statistics in regard to the manufacture of sulphuric and nitric acids are not included under the classification "Chemicals," but are

shown independently in Table II, page 38. Fine chemicals, which consist mainly of gold, silver, and platinum salts, ether, and alkaloids, show an increase in value in 1909 over 1904 of \$991,281, or 51.9 per cent. Sodas still remain an important product, though the value of the output in 1909 was less by \$262,625, or 14.9 per cent, than in 1904.

Phosphates of soda show remarkable gains, the increase in the output of this product from 1904 to 1909 being 16,642,577 pounds, or 259.8 per cent, and the increase in value, \$328,409, or 302.5 per cent. Zinc salts were an important product in 1909, but comparable figures for 1904 are not available. All the other classes of products show a substantial increase both in quantity and in value.

In addition to those mentioned in the above table, chemicals valued at \$1,506,845 were reported in 1909 by 13 establishments assigned to other classifications because they were engaged primarily in the manufacture of other products.

**Pottery, terra-cotta, and fire-clay products.**—Since the early part of the nineteenth century New Jersey has been prominent in this industry, especially in the manufacture of the finest porcelain, granite, and white ware, owing to the abundance of valuable clays and sands easily available within the state. As early as 1849 there were 30 potteries in the state, which reported products valued in the aggregate at \$230,900. The influence of the successful competition of the fine wares manufactured in Trenton (which is the center of this branch of the industry in the United States) with foreign-made pottery was felt shortly after 1876 and had a decidedly stimulating effect upon the industry. Measured by value of products of the industry as a whole, New Jersey ranked second among the states of the Union in this industry in 1904 and 1909. The total value of products increased \$1,421,897, or 12.1 per cent, during the five-year period. The following table shows the value of the principal products for 1909 and 1904:

| PRODUCT.  | 1909         | 1904         |
|---|--------------|--------------|
| Total value.....  | \$13,139,000 | \$11,717,103 |
| Pottery.....  | 7,791,136    | 6,462,624    |
| Ired earthenware.....   | 36,573       | 30,634       |
| Stoneware and yellow and Rockingham ware.....   | 66,293       | 58,819       |
| White ware, including C.C. ware, white granite, semi-porcelain ware, and semivitreous porcelain ware..... | 1,242,361    | 1,290,768    |
| China, bone china, delft, and belleek ware.....   | 1,082,398    | 469,360      |
| Sanitary ware, including solid porcelain bath tubs, laundry tubs, etc.....                                | 4,341,040    | 3,006,406    |
| Porcelain electrical supplies.....  | 823,056      | 328,524      |
| All other pottery products.....   | 199,415      | 1,278,113    |
| Terra-cotta and fire-clay products.....   | 5,347,864    | 5,254,479    |
| Fire brick—   |              |              |
| Thousands.....  | 135,454      | 31,057       |
| Value.....  | \$907,270    | \$709,396    |
| Architectural terra cotta.....  | 1,637,705    | 1,216,400    |
| Fireproofing.....   | 1,209,540    | 1,266,969    |
| Tile, not drain.....  | 992,600      | 245,518      |
| All other terra-cotta and fire-clay products.....   | 510,737      | 21,816,196   |

<sup>1</sup> Includes refractory blocks or tile, boiler and locomotive tile and tank blocks, and other refractory products (9-inch equivalent).  
<sup>2</sup> Includes drain tile to the value of \$23,537, and 101,431,000 of common, front, enameled, and vitrified paving brick or blocks, valued at \$967,709.

In 1909 and in 1904, New Jersey ranked first among the states in the manufacture of sanitary ware, including porcelain bath tubs, laundry tubs, etc., the

value of which increased \$1,334,634, or 44.4 per cent, during the five-year period. The state also ranked first at the census of 1909 in the production of china (porcelain), bone china, delft, and belleek ware, the value of which increased \$613,038, or 130.6 per cent. The only decrease for any class of products shown separately in the table is one of \$48,407, or 3.8 per cent, in the value of white ware, including C. C. (cream colored) ware, and white granite, semiporcelain, and semivitreous porcelain ware. Among the pottery products the largest relative gain, 150.5 per cent, was in the value of porcelain electrical supplies.

Architectural terra cotta, the principal terra-cotta product in 1909, shows an increase in value over 1904 of \$421,305, or 34.6 per cent, while the value of tile (not drain tile) increased \$747,088, or 304.3 per cent.

**Paint and varnish.**—The quantity and value of the different products are shown in the following table:

| PRODUCT.  | 1909         | 1904             | 1899             |
|---|--------------|------------------|------------------|
| Total value.....                                    | \$12,766,920 | \$6,966,860      | \$6,213,924      |
| Pigments.....                                       | \$2,939,162  | \$1,276,200      | \$1,537,076      |
| White lead, dry:                                    |              |                  |                  |
| Pounds.....   | 16,958,467   | 10,725,261       | 14,471,171       |
| Value.....  | \$580,567    | \$329,498        | \$717,047        |
| Oxides of lead:                                     |              | ( <sup>2</sup> ) | ( <sup>2</sup> ) |
| Pounds.....   | 4,854,000    | ( <sup>2</sup> ) | ( <sup>2</sup> ) |
| Value.....  | \$329,780    | ( <sup>2</sup> ) | ( <sup>2</sup> ) |
| Iron oxides and other earth colors:                 |              |                  |                  |
| Pounds.....   | 4,133,200    | 1,902,500        | 500,000          |
| Value.....  | \$27,605     | \$9,223          | \$25,000         |
| Other dry colors:                                   |              |                  |                  |
| Pounds.....   | 30,143,495   | 8,477,798        | 5,891,364        |
| Value.....  | \$1,797,277  | \$750,569        | \$632,473        |
| Pulp colors, sold moist:                            |              |                  |                  |
| Pounds.....   | 3,240,000    | 5,660,000        | 5,156,948        |
| Value.....  | \$203,933    | \$187,000        | \$162,556        |
| Paints in oil.....                                  | \$3,626,726  | \$1,816,198      | \$1,132,641      |
| White lead in oil:                                  |              | ( <sup>2</sup> ) | ( <sup>2</sup> ) |
| Pounds.....   | 3,713,557    | ( <sup>2</sup> ) | ( <sup>2</sup> ) |
| Value.....  | \$253,308    | ( <sup>2</sup> ) | ( <sup>2</sup> ) |
| Paste:  |              |                  |                  |
| Pounds.....   | 14,858,470   | 10,703,000       | 8,672,911        |
| Value.....  | \$891,493    | \$512,907        | \$552,452        |
| Ready mixed for use:                                |              |                  |                  |
| Gallons.....  | 2,584,449    | 1,490,501        | 922,542          |
| Value.....  | \$2,481,925  | \$1,303,231      | \$550,189        |
| Varnishes and japans.....                           | \$5,000,691  | \$3,441,758      | \$2,873,106      |
| Oleoresinous varnishes:                             |              |                  |                  |
| Gallons.....  | 2,614,152    | 2,030,670        | 1,604,845        |
| Value.....  | \$3,325,912  | \$2,407,316      | \$2,254,321      |
| Spirit varnishes:                                   |              |                  |                  |
| Gallons.....  | 60,376       | 103,477          | 67,543           |
| Value.....  | \$84,462     | \$195,877        | \$124,223        |
| Damar and similar turpentine and benzene varnishes: |              | ( <sup>2</sup> ) | ( <sup>2</sup> ) |
| Gallons.....  | 815,905      | ( <sup>2</sup> ) | ( <sup>2</sup> ) |
| Value.....  | \$685,966    | ( <sup>2</sup> ) | ( <sup>2</sup> ) |
| Pyroxylin varnishes:                                |              |                  |                  |
| Gallons.....  | 125,670      | 34,928           | 5,366            |
| Value.....  | \$233,322    | \$45,770         | \$10,995         |
| Drying and baking japans and lacquers.....          | \$645,685    | \$641,204        | \$374,239        |
| Other varnishes.....                                | \$34,344     | \$151,591        | \$109,328        |
| Liquid fillers:                                     |              |                  |                  |
| Gallons.....  | 31,067       | 59,477           | ( <sup>2</sup> ) |
| Value.....  | \$31,076     | \$86,659         | ( <sup>2</sup> ) |
| Paste fillers, dry fillers, and putty:              |              |                  |                  |
| Pounds.....   | 15,345,883   | 4,863,145        | ( <sup>2</sup> ) |
| Value.....  | \$98,973     | \$59,803         | ( <sup>2</sup> ) |
| Water paints dry or in paste:                       |              |                  |                  |
| Pounds.....   | 5,851,755    | 272,189          | ( <sup>2</sup> ) |
| Value.....  | \$345,988    | \$11,832         | ( <sup>2</sup> ) |
| All other products.....                             | \$715,313    | \$274,329        | \$671,101        |

<sup>1</sup> Including white lead in oil. <sup>2</sup> Not reported separately.  
<sup>3</sup> Included with white lead, dry.

Oleoresinous varnish was the leading product reported at each of the last three censuses. The totals for this varnish manufactured in New Jersey formed 14.1 per cent of the total quantity and 19.2 per cent of the total value of this class of products for the United States in 1909. Other leading products

named in order of relative importance, were paints in oil, ready mixed for use; dry colors; paints in oil, in paste; white lead, dry and in oil; and water paints, dry or in paste; each of which shows a gain in both quantity and value from 1904 to 1909. The most pronounced increase in both quantity and value is shown for water paints, the output in 1909 being over twenty-one times that reported in 1904, and its value more than twenty-nine times as great.

In addition to the various products reported in the above table for 1909, 4,225,085 pounds of dry white lead, 370,154 gallons of varnish, and 417,467 gallons of drying japans and dryers were manufactured and consumed in further processes of manufacture within the establishments reporting.

Paint and varnish to the value of \$819,194 were also manufactured by 11 establishments primarily engaged in other industries. The principal items making up this product were 5,674,890 pounds of dry colors, valued at \$556,518; 221,338 gallons of paints in oil, ready for use, valued at \$108,648; 2,119,220 pounds of paints in oil, in paste, valued at \$105,961; and 30,568 gallons of varnish, valued at \$29,565.

Among the principal materials used in the manufacture of paint and varnish in the state in 1909 were 12,151 tons of pig lead, 56,128 gallons of grain alcohol, and 28,794 gallons of wood alcohol.

**Printing and publishing.**—The newspaper and periodical branch of the printing and publishing industry in New Jersey for the five-year period, 1904–1909, shows a decrease in the number of publications and the aggregate circulation.

The following tabular statement shows the number of different newspapers and periodicals published and the aggregate circulation per issue for the census years 1909 and 1904:

| PERIOD OF ISSUE.       | NUMBER OF PUBLICATIONS. |            | AGGREGATE CIRCULATION PER ISSUE. |                  |
|------------------------|-------------------------|------------|----------------------------------|------------------|
|                        | 1909                    | 1904       | 1909                             | 1904             |
| <b>Total</b> .....     | <b>348</b>              | <b>378</b> | <b>1,071,456</b>                 | <b>1,105,723</b> |
| Daily.....             | 54                      | 55         | 437,144                          | 303,930          |
| Sunday.....            | 6                       | 7          | 70,670                           | 73,118           |
| Semiweekly.....        | 15                      | 4          | 8,774                            | 4,575            |
| Weekly.....            | 247                     | 270        | 383,231                          | 381,246          |
| Monthly.....           | 26                      | 37         | 156,862                          | 336,129          |
| All other classes..... | 10                      | 5          | 14,775                           | 6,725            |

<sup>1</sup> Includes one triweekly.

The total number of all publications decreased 7.9 per cent from 1904 to 1909, and the aggregate circulation per issue decreased 3.1 per cent. The publications included under the head of "All other classes" show the only increase in number, but all except the Sunday publications and the monthlies show an increase in circulation. While there was a decrease of one in the number of dailies, the aggregate circulation per issue increased 133,214, or 43.8 per cent.

In 1909, 18 of the 54 dailies, with an aggregate circulation of 109,659, were issued as morning papers. Of the 348 publications reported in 1909, 37 were

printed in foreign languages. These included 3 dailies and 1 Sunday paper, all of which were in German; 32 weeklies, of which 11 were in German, 11 in Italian, 3 in Dutch, 3 in Polish, 2 in Hungarian, 1 in German and English, and 1 in Italian and English, and 1 monthly in Hungarian. These publications reported an aggregate circulation per issue of 83,507, representing 7.8 per cent of the total for the state.

**Shipbuilding, including boat building.**—This industry includes the building of vessels of steel and of wood, as well as small craft of all kinds, and the repair of such vessels. The number and the tonnage of all vessels launched in 1909, 1904, and 1899 are shown, by classes, in the following table:

| CLASS.   | 1909     |                | 1904     |                | 1899     |                |
|--|----------|----------------|----------|----------------|----------|----------------|
|  | Num-ber. | Gross tonnage. | Num-ber. | Gross tonnage. | Num-ber. | Gross tonnage. |
| Vessels, 5 gross tons and over launched during the year..... | 90       | 53,261         | 92       | 42,001         | 165      | 57,160         |
| Steel.....   | 24       | 42,040         | 17       | 23,450         | 11       | 3,920          |
| Steam.....   | 0        | 27,280         | 13       | 21,088         | 10       | 3,420          |
| Unrigged.....  | 15       | 15,600         | 4        | 2,362          | 1        | 500            |
| Wooden.....  | 66       | 10,312         | 75       | 18,641         | 154      | 53,240         |
| Steam.....   | 1        | 115            | 12       | 477            | 10       | 581            |
| Motor.....   | 23       | 348            | 0        | 41             | .....    | .....          |
| Sail.....  | 12       | 251            | 26       | 880            | 80       | 357            |
| Unrigged.....  | 30       | 9,598          | 31       | 17,243         | 64       | 52,302         |
| Power boats, less than 5 gross tons.....                     | 338      | .....          | 237      | .....          | 82       | .....          |

The above table shows a decrease of 3,905 gross tons, or 6.8 per cent, in the total tonnage of all vessels of 5 gross tons and over from 1899 to 1909.

It is interesting to note the growth in the construction of steel vessels and the decline in the building of wooden vessels during this period. During the decade the gross tonnage of the steel vessels launched increased 39,023 tons, or nearly one thousand per cent, while that of wooden vessels decreased 42,928 tons, or 80.6 per cent. Of the total tonnage of vessels of 5 tons and over launched in the state in 1909, the tonnage of steel vessels formed 80.6 per cent and that of wooden vessels 19.4 per cent, while in 1899 these proportions were 6.9 per cent and 93.1 per cent, respectively.

Of the 338 power boats of less than 5 tons gross register reported in 1909, 319 were gasoline, 11 electric, and 8 operated by other kinds of power, while of the 237 such craft reported in 1904, 207 were gasoline, 29 electric, and 1 operated by other kind of power. In addition to the vessels shown in the table, the industry includes the construction of sailboats, rowboats, canoes, scows, etc., of less than 5 tons gross register; these, together with the small power boats mentioned, represented a total value of \$394,718 in 1909 and of \$279,947 in 1904.

**Glass.**—The manufacture of glass is still an important industry in New Jersey, although in relative position in the industry among the states, when measured by value of products reported, the state dropped from third place in 1899 to fifth in 1909. The value of products increased \$1,356,373, or 26.6

per cent, from 1899 to 1904 and \$510,893, or 7.9 per cent, during the following five-year period.

The next table shows the quantity of the different materials used and the value of the principal classes of products reported at the censuses of 1909, 1904, and 1899:

| MATERIAL OR PRODUCT.               | 1909               | 1904               | 1899               |
|------------------------------------|--------------------|--------------------|--------------------|
| <b>Principal materials:</b>        |                    |                    |                    |
| Glass sand, tons.....              | 58,204             | 53,191             | 81,260             |
| Soda ash, tons.....                | 21,723             | 20,825             | 20,630             |
| Salt cake, tons.....               | 271                | 338                | 697                |
| Nitrate of soda, tons.....         | 4,025              | 816                | 1,314              |
| Limestone, tons.....               | 2,428              | 5,057              | 8,577              |
| Lime, bushels.....                 | 199,132            | 145,010            | 248,654            |
| Arsenic, pounds.....               | 85,705             | 119,460            | 102,490            |
| Carbon, tons.....                  | 10                 | 129                | 20                 |
| Manganese, pounds.....             | 350,467            | 174,798            | 143,465            |
| Litharge and red lead, pounds..... | 16,782             | 33,050             | 72,049             |
| Potash and pearl ash, pounds.....  | 63,000             | 28,382             | 60,270             |
| Grinding sand, tons.....           | 203                | 674                | 433                |
| <b>Products, total value.....</b>  | <b>\$9,961,088</b> | <b>\$6,450,195</b> | <b>\$5,093,822</b> |
| Pressed and blown glass.....       | \$1,019,830        | \$181,550          | \$21,300           |
| Bottles, jars, etc.....            | \$5,884,005        | \$6,069,714        | \$4,452,219        |
| All other products.....            | \$60,647           | \$201,922          | \$620,303          |

Pressed and blown glass shows an increase in value from 1904 to 1909 of \$838,277, or 461.7 per cent, while the output of bottles and jars decreased in value \$182,109, or 3 per cent, during the same period.

In 1909 one establishment manufactured building glass; 3, pressed and blown glass; and 19, bottles, jars, etc. Of the establishments which manufactured bottles and jars, 16 made prescription vials and druggists' wares to some extent; 12 made beer, soda, and mineral-water bottles, and 11 made flasks and wares for liquors and patent and proprietary remedies, New Jersey holding the leading position in the production of the first two of these classes of glassware and fourth place in the last-named class.

The output of prescription vials and druggists' wares in 1909 amounted to 1,008,682 gross, that of beer, soda, and mineral-water bottles to 258,574 gross, and that of liquor bottles and flasks to 248,825 gross, these figures representing increases of 31.5 per cent, 11.5 per cent, and 10.6 per cent, respectively, over the corresponding figures for 1904.

**Laundries.**—Statistics for steam laundries are not included in the general tables or in the totals for manufacturing industries. The following statement summarizes the statistics for 1909:

|                                      |             |
|--------------------------------------|-------------|
| Number of establishments.....        | 112         |
| Persons engaged in the industry..... | 3,334       |
| Proprietors and firm members.....    | 101         |
| Salaried employees.....              | 249         |
| Wage earners (average number).....   | 2,984       |
| Primary horsepower.....              | 3,917       |
| Capital.....                         | \$2,137,243 |
| Expenses.....                        | 2,187,794   |
| Services.....                        | 1,395,335   |
| Materials.....                       | 439,861     |
| Miscellaneous.....                   | 352,598     |
| Amount received for work done.....   | 2,779,277   |

There were 112 steam laundries in the state of New Jersey in 1909, of which there were 17 each in Jersey City and Newark; 8 in Camden; 6 in Paterson; 5 in Trenton; 4 each in Passaic and Plainfield; and 3

each in Asbury Park, Atlantic City, East Orange, Elizabeth, Hoboken, and Orange. No other place having more than 10,000 inhabitants reported as many as 3 laundries.

Sixty-two establishments were operated by individuals, 18 by firms, and 32 by incorporated companies. Twenty-one establishments had receipts for the year's business of less than \$5,000; 47, receipts of \$5,000 but less than \$20,000; 40, receipts of \$20,000 but less than \$100,000; and 4, receipts of \$100,000 but less than \$1,000,000.

The number of wage earners employed each month and the percentage which this number represented of the greatest number employed in any month were as follows:

| MONTH.        | WAGE EARNERS. |                      | MONTH.         | WAGE EARNERS. |                      |
|---------------|---------------|----------------------|----------------|---------------|----------------------|
|               | Number.       | Per cent of maximum. |                | Number.       | Per cent of maximum. |
| January.....  | 2,800         | 85.5                 | July.....      | 3,194         | 97.5                 |
| February..... | 2,821         | 86.1                 | August.....    | 3,276         | 100.0                |
| March.....    | 2,841         | 86.7                 | September..... | 3,145         | 96.0                 |
| April.....    | 2,838         | 86.6                 | October.....   | 2,994         | 91.4                 |
| May.....      | 2,881         | 87.9                 | November.....  | 2,967         | 90.6                 |
| June.....     | 3,054         | 93.2                 | December.....  | 2,997         | 91.5                 |

The different kinds of primary power, the number of engines or motors, and the horsepower used in 1909 are shown in the following tabular statement:

| KIND.                            | Number of engines or motors. | Horsepower.  |
|----------------------------------|------------------------------|--------------|
| <b>Primary power, total.....</b> |                              | <b>3,917</b> |
| <b>Owned:</b>                    |                              |              |
| Steam.....                       | 102                          | 3,704        |
| Gas.....                         | 2                            | 20           |
| Water wheel.....                 | 1                            | 5            |
| <b>Rented:</b>                   |                              |              |
| Electric.....                    | 14                           | 63           |
| Other.....                       |                              | 26           |

The kind and amount of fuel used are shown below:

| KIND.                | Unit.           | Quantity. |
|----------------------|-----------------|-----------|
| Anthracite coal..... | Tons.....       | 25,960    |
| Bituminous coal..... | Tons.....       | 4,873     |
| Wood.....            | Cords.....      | 5         |
| Oil.....             | Barrels.....    | 1,921     |
| Gas.....             | 1,000 feet..... | 15,974    |

**Custom sawmills and gristmills.**—Statistics for custom sawmills and gristmills are not included in the general tables or in the totals for manufacturing industries, but are presented in the following summary:

|                                      | Custom sawmills. | Custom gristmills. |
|--------------------------------------|------------------|--------------------|
| Number of establishments.....        | 7                | 39                 |
| Persons engaged in the industry..... | 13               | 65                 |
| Proprietors and firm members.....    | 7                | 41                 |
| Salaried employees.....              |                  | 1                  |
| Wage earners (average number).....   | 6                | 23                 |
| Primary horsepower.....              | 213              | 1,232              |
| Capital.....                         | \$22,025         | \$134,226          |
| Expenses.....                        | 3,178            | 258,643            |
| Services.....                        | 2,065            | 9,387              |
| Materials.....                       | 440              | 1,243,662          |
| Miscellaneous.....                   | 673              | 5,594              |
| Value of products.....               | 5,422            | 1,287,050          |

<sup>1</sup> Includes estimate of all grain ground. A similar estimate for the value of lumber sawed by custom sawmills is impracticable.

## MANUFACTURES—NEW JERSEY.

TABLE I.—COMPARATIVE SUMMARY FOR 1909, 1904, AND 1899.

THE STATE—ALL INDUSTRIES COMBINED AND SELECTED INDUSTRIES.

| INDUSTRY.  | Census. | Number of establishments. | PERSONS ENGAGED IN INDUSTRY. |                               |                    |                                | Primary horse-power. | Capital.  | Salaries. | Wages.    | Cost of materials. | Value of products. | Value added by manufacture. |
|--|---------|---------------------------|------------------------------|-------------------------------|--------------------|--------------------------------|----------------------|-----------|-----------|-----------|--------------------|--------------------|-----------------------------|
|  |         |                           | Total.                       | Proprietors and firm members. | Salaried employes. | Wage earners (average number). |                      |           |           |           |                    |                    |                             |
| Expressed in thousands.  |         |                           |                              |                               |                    |                                |                      |           |           |           |                    |                    |                             |
| <b>STATE—All industries</b> .....  | 1909    | 8,817                     | 371,265                      | 8,204                         | 36,838             | 326,223                        | 612,203              | \$977,172 | \$48,330  | \$169,710 | \$720,033          | \$1,145,529        | \$425,496                   |
|  | 1904    | 7,010                     | 296,262                      | 6,730                         | 23,106             | 266,336                        | 436,274              | 715,060   | 28,967    | 128,169   | 470,449            | 774,369            | 303,920                     |
|  | 1899    | 6,416                     | .....                        | .....                         | 15,361             | 213,975                        | 322,503              | 477,302   | 19,068    | 95,165    | 334,726            | 553,006            | 218,280                     |
| Agricultural implements.....   | 1909    | 10                        | 294                          | 9                             | 61                 | 224                            | 724                  | 771       | 77        | 112       | 327                | 755                | 428                         |
|  | 1904    | 10                        | 250                          | 9                             | 37                 | 204                            | 403                  | 432       | 40        | 90        | 118                | 302                | 274                         |
|  | 1899    | 11                        | 108                          | 13                            | 8                  | 147                            | 280                  | 250       | 11        | 60        | 116                | 250                | 134                         |
| Artificial stone.....  | 1909    | 97                        | 642                          | 100                           | 54                 | 488                            | 436                  | 913       | 39        | 250       | 294                | 859                | 555                         |
|  | 1904    | 8                         | 68                           | 6                             | 11                 | 51                             | 35                   | 81        | 12        | 33        | 31                 | 94                 | 63                          |
|  | 1899    | .....                     | .....                        | .....                         | .....              | .....                          | .....                | .....     | .....     | .....     | .....              | .....              | .....                       |
| Belting and hose, woven and rubber....                                       | 1909    | 12                        | 2,583                        | .....                         | 288                | 2,295                          | 8,748                | 9,385     | 518       | 1,150     | 5,071              | 9,793              | 3,822                       |
|  | 1904    | 15                        | 2,704                        | 3                             | 246                | 2,455                          | 8,211                | 9,444     | 536       | 1,209     | 6,808              | 11,068             | 4,200                       |
|  | 1899    | 7                         | 853                          | .....                         | 77                 | 776                            | .....                | 2,200     | 174       | 308       | 1,870              | 2,800              | 930                         |
| Boots and shoes, including cut stock and findings.                           | 1909    | 53                        | 4,602                        | 46                            | 324                | 4,232                          | 1,500                | 4,108     | 448       | 1,923     | 4,727              | 8,042              | 3,315                       |
|  | 1904    | 65                        | 4,838                        | 61                            | 253                | 4,524                          | 1,598                | 3,318     | 292       | 1,865     | 4,197              | 7,588              | 3,391                       |
|  | 1899    | 105                       | 5,080                        | 108                           | 350                | 4,631                          | .....                | 3,350     | 366       | 1,806     | 4,457              | 7,519              | 3,062                       |
| Boxes, fancy and paper.....  | 1909    | 46                        | 2,321                        | 36                            | 143                | 2,142                          | 1,224                | 1,932     | 168       | 704       | 1,186              | 2,675              | 1,489                       |
|  | 1904    | 36                        | 1,435                        | 41                            | 60                 | 1,334                          | 590                  | 732       | 54        | 397       | 553                | 1,318              | 765                         |
|  | 1899    | 30                        | 1,156                        | 35                            | 41                 | 1,080                          | .....                | 517       | 51        | 275       | 398                | 897                | 499                         |
| Brass and bronze products.....   | 1909    | 66                        | 1,488                        | 61                            | 162                | 1,265                          | 4,431                | 3,104     | 250       | 719       | 3,355              | 5,131              | 1,776                       |
|  | 1904    | 51                        | 1,246                        | 53                            | 111                | 1,082                          | 2,682                | 2,713     | 156       | 570       | 2,354              | 3,754              | 1,400                       |
|  | 1899    | 45                        | .....                        | 63                            | 63                 | 1,088                          | .....                | 2,422     | 66        | 470       | 2,472              | 3,320              | 848                         |
| Bread and other bakery products.....   | 1909    | 1,217                     | 6,966                        | 1,498                         | 532                | 4,936                          | 2,184                | 8,100     | 403       | 3,309     | 12,105             | 20,080             | 7,801                       |
|  | 1904    | 1,000                     | 5,237                        | 1,074                         | 315                | 3,848                          | 1,127                | 5,406     | 199       | 2,312     | 8,204              | 13,502             | 5,298                       |
|  | 1899    | 785                       | 3,828                        | 831                           | 296                | 2,701                          | .....                | 3,831     | 183       | 1,412     | 4,562              | 8,183              | 3,621                       |
| Brick and tile.....  | 1909    | 76                        | 3,619                        | 64                            | 150                | 3,405                          | 11,410               | 7,355     | 205       | 1,625     | 844                | 4,073              | 3,229                       |
|  | 1904    | 63                        | 2,090                        | 73                            | 70                 | 1,947                          | 5,971                | 3,040     | 68        | 784       | 337                | 1,830              | 1,493                       |
|  | 1899    | 76                        | 2,525                        | 76                            | 79                 | 2,370                          | 4,798                | 3,607     | 83        | 836       | 320                | 1,846              | 1,526                       |
| Brooms and brushes.....  | 1909    | 33                        | 1,051                        | 28                            | 108                | 915                            | 723                  | 1,470     | 141       | 363       | 951                | 1,905              | 954                         |
|  | 1904    | 34                        | 450                          | 40                            | 29                 | 390                            | 180                  | 384       | 23        | 158       | 308                | 699                | 391                         |
|  | 1899    | 32                        | 447                          | 40                            | 42                 | 365                            | .....                | 472       | 37        | 137       | 390                | 893                | 404                         |
| Buttons.....   | 1909    | 64                        | 2,433                        | 60                            | 103                | 2,261                          | 1,232                | 1,506     | 149       | 913       | 1,183              | 2,750              | 1,507                       |
|  | 1904    | 46                        | 1,496                        | 45                            | 82                 | 1,369                          | 729                  | 842       | 93        | 550       | 634                | 1,592              | 958                         |
|  | 1899    | 34                        | 1,265                        | 43                            | 53                 | 1,169                          | 441                  | 510       | 50        | 410       | 399                | 1,025              | 627                         |
| Canning and preserving.....  | 1909    | 84                        | 2,051                        | 85                            | 148                | 1,818                          | 2,668                | 2,765     | 118       | 546       | 2,208              | 3,604              | 1,456                       |
|  | 1904    | 76                        | 1,878                        | 94                            | 84                 | 1,700                          | 2,076                | 1,948     | 52        | 399       | 1,701              | 2,693              | 992                         |
|  | 1899    | 93                        | .....                        | 140                           | 140                | 2,403                          | .....                | 2,275     | 113       | 561       | 2,271              | 3,521              | 1,250                       |
| Carpets and rugs, other than rag.....  | 1909    | 9                         | 939                          | 6                             | 49                 | 884                            | 970                  | 2,511     | 88        | 375       | 898                | 1,945              | 1,047                       |
|  | 1904    | 8                         | 1,203                        | 3                             | 47                 | 1,153                          | 1,268                | 2,098     | 90        | 418       | 979                | 1,749              | 770                         |
|  | 1899    | 13                        | 1,221                        | 3                             | 47                 | 1,171                          | 1,051                | 1,487     | 73        | 379       | 808                | 1,523              | 655                         |
| Carriages and wagons and materials....                                       | 1909    | 250                       | 1,080                        | 301                           | 78                 | 1,601                          | 1,645                | 2,973     | 83        | 1,019     | 1,280              | 3,250              | 1,970                       |
|  | 1904    | 213                       | 2,338                        | 247                           | 105                | 1,986                          | 1,631                | 2,998     | 116       | 1,116     | 3,349              | 3,460              | 2,111                       |
|  | 1899    | 258                       | .....                        | 112                           | 112                | 2,117                          | .....                | 3,250     | 100       | 1,081     | 1,612              | 3,910              | 2,304                       |
| Cars and general shop construction and repairs by steam-railroad companies.  | 1909    | 23                        | 7,639                        | .....                         | 1,035              | 6,004                          | 7,640                | 5,452     | 613       | 4,175     | 4,634              | 9,810              | 5,185                       |
|  | 1904    | 21                        | 5,911                        | .....                         | 355                | 5,556                          | 5,033                | 3,510     | 308       | 3,220     | 3,234              | 6,890              | 3,605                       |
|  | 1899    | 18                        | 4,773                        | .....                         | 179                | 4,594                          | 2,068                | 2,820     | 137       | 2,400     | 2,302              | 5,034              | 2,732                       |
| Cars and general shop construction and repairs by street-railroad companies. | 1909    | 15                        | 878                          | .....                         | 52                 | 826                            | 2,276                | 820       | 53        | 471       | 614                | 1,158              | 544                         |
|  | 1904    | 4                         | 376                          | .....                         | 20                 | 356                            | 445                  | 660       | 26        | 225       | 470                | 747                | 277                         |
|  | 1899    | 8                         | 238                          | .....                         | 9                  | 229                            | .....                | 369       | 7         | 140       | 188                | 381                | 193                         |
| Cement.....  | 1909    | 3                         | 1,616                        | .....                         | 171                | 1,445                          | 16,393               | 10,881    | 222       | 845       | 2,053              | 3,725              | 1,672                       |
|  | 1904    | 6                         | 1,607                        | .....                         | 171                | 1,436                          | 12,255               | 7,128     | 215       | 697       | 1,863              | 2,625              | 1,062                       |
|  | 1899    | .....                     | .....                        | .....                         | .....              | .....                          | .....                | .....     | .....     | .....     | .....              | .....              | .....                       |
| Chemicals.....   | 1909    | 50                        | 5,937                        | 4                             | 887                | 5,046                          | 13,880               | 24,355    | 1,594     | 2,895     | 12,257             | 22,824             | 10,567                      |
|  | 1904    | 47                        | 4,048                        | 26                            | 425                | 3,597                          | 9,082                | 16,294    | 678       | 1,853     | 6,630              | 13,024             | 6,394                       |
|  | 1899    | 61                        | 3,488                        | 38                            | 402                | 3,048                          | 8,147                | 17,285    | 577       | 1,575     | 6,995              | 12,207             | 5,212                       |
| Clocks and watches, including cases and materials.                           | 1909    | 9                         | 2,290                        | 1                             | 130                | 2,120                          | 1,414                | 6,795     | 225       | 1,120     | 1,720              | 3,848              | 2,119                       |
|  | 1904    | 9                         | 2,496                        | 3                             | 140                | 2,353                          | 1,186                | 5,186     | 203       | 1,302     | 1,583              | 3,871              | 2,288                       |
|  | 1899    | 11                        | 1,208                        | 5                             | 56                 | 1,207                          | .....                | 2,467     | 94        | 597       | 915                | 1,914              | 899                         |
| Clothing, men's, including shirts.....                                       | 1909    | 150                       | 7,080                        | 190                           | 487                | 6,994                          | 1,351                | 5,314     | 435       | 2,935     | 5,076              | 9,865              | 4,789                       |
|  | 1904    | 125                       | 6,180                        | 180                           | 336                | 5,664                          | 923                  | 2,431     | 207       | 2,127     | 3,417              | 7,428              | 4,011                       |
|  | 1899    | 137                       | .....                        | 142                           | 142                | 5,787                          | .....                | 2,012     | 145       | 1,947     | 2,459              | 5,754              | 3,295                       |
| Clothing, women's.....   | 1909    | 99                        | 4,691                        | 112                           | 363                | 4,216                          | 959                  | 2,882     | 326       | 1,355     | 2,855              | 5,927              | 3,072                       |
|  | 1904    | 70                        | 4,192                        | 83                            | 209                | 3,900                          | 621                  | 1,599     | 180       | 1,045     | 2,174              | 4,219              | 2,045                       |
|  | 1899    | 57                        | 2,606                        | 73                            | 144                | 2,389                          | 427                  | 1,299     | 125       | 644       | 1,156              | 2,561              | 1,405                       |
| Coffins, burial cases, and undertakers' goods.                               | 1909    | 7                         | 261                          | 4                             | 45                 | 212                            | 422                  | 515       | 56        | 122       | 265                | 521                | 256                         |
|  | 1904    | 3                         | 248                          | 3                             | 27                 | 218                            | 328                  | 363       | 20        | 112       | 226                | 453                | 227                         |
|  | 1899    | 4                         | 221                          | 4                             | 13                 | 204                            | .....                | 304       | 16        | 123       | 172                | 394                | 222                         |
| Confectionery.....   | 1909    | 71                        | 1,558                        | 70                            | 225                | 1,263                          | 1,181                | 2,830     | 189       | 456       | 2,433              | 4,116              | 1,683                       |
|  | 1904    | 38                        | 894                          | 45                            | 75                 | 774                            | 444                  | 1,130     | 66        | 273       | 988                | 2,043              | 1,055                       |
|  | 1899    | 14                        | .....                        | 42                            | 42                 | 134                            | .....                | 161       | 23        | 46        | 184                | 355                | 171                         |
| Cooperage and wooden goods, not elsewhere specified.                         | 1909    | 43                        | 1,162                        | 42                            | 74                 | 1,046                          | 1,013                | 2,773     | 102       | 522       | 2,328              | 3,230              | 902                         |
|  | 1904    | 35                        | 415                          | 33                            | 18                 | 364                            | 458                  | 453       | 17        | 176       | 427                | 801                | 374                         |
|  | 1899    | 24                        | .....                        | 18                            | 18                 | 315                            | .....                | 413       | 28        | 150       | 340                | 707                | 358                         |

1 Not reported separately.

2 Excluding statistics for one establishment, to avoid disclosure of individual operations.

3 Excluding statistics for two establishments, to avoid disclosure of individual operations.

MANUFACTURES—NEW JERSEY.

TABLE I.—COMPARATIVE SUMMARY FOR 1900, 1904, AND 1899—Continued.

THE STATE—ALL INDUSTRIES COMBINED AND SELECTED INDUSTRIES—Continued.

| INDUSTRY.   | Census.              | Number of establishments. | PERSONS ENGAGED IN INDUSTRY. |                               |                         |                                | Primary horse-power.       | Capital.                   | Salaries.               | Wages.                     | Cost of materials.         | Value of products.         | Value added by manufacture. |
|---|----------------------|---------------------------|------------------------------|-------------------------------|-------------------------|--------------------------------|----------------------------|----------------------------|-------------------------|----------------------------|----------------------------|----------------------------|-----------------------------|
|   |                      |                           | Total.                       | Proprietors and firm members. | Salaried employes.      | Wage earners (average number). |                            |                            |                         |                            |                            |                            |                             |
|   |                      |                           |                              |                               |                         |                                |                            |                            |                         |                            |                            |                            |                             |
| <b>STATE—Continued.</b>                                   |                      |                           |                              |                               |                         |                                |                            |                            |                         |                            |                            |                            |                             |
| Copper, tin, and sheet-iron products....                  | 1900<br>1904<br>1899 | 175<br>121<br>64          | 5,575<br>4,485               | 162<br>105                    | 411<br>300<br>127       | 5,002<br>4,080<br>2,136        | 3,579<br>2,771             | \$8,514<br>5,148<br>2,307  | \$576<br>415<br>130     | \$2,780<br>1,041<br>810    | \$6,172<br>2,808<br>1,200  | \$11,114<br>6,207<br>2,001 | \$4,942<br>3,360<br>1,482   |
| Cordage and twine and jute and linen goods.               | 1900<br>1904<br>1899 | 12<br>16<br>6             | 3,174<br>2,002               | 1                             | 148<br>67<br>57         | 3,025<br>2,535<br>2,127        | 6,442<br>4,310             | 0,508<br>4,076<br>3,413    | 192<br>100<br>81        | 954<br>858<br>025          | 3,806<br>2,000<br>1,700    | 5,527<br>3,371<br>2,056    | 1,631<br>1,311<br>1,196     |
| Cork, cutting.....  | 1900<br>1904<br>1899 | 10<br>6<br>8              | 466<br>241<br>178            | 2<br>3<br>7                   | 46<br>32<br>14          | 418<br>206<br>157              | 855<br>320                 | 680<br>307<br>103          | 54<br>27<br>11          | 180<br>71<br>46            | 410<br>191<br>143          | 791<br>380<br>234          | 381<br>189<br>91            |
| Corsets.....  | 1900<br>1904<br>1899 | 11<br>10<br>9             | 2,013<br>1,550               | 3<br>4                        | 165<br>93<br>63         | 1,845<br>1,450<br>1,332        | 480<br>404                 | 1,857<br>1,259<br>546      | 235<br>84<br>62         | 628<br>438<br>424          | 1,305<br>682<br>579        | 3,336<br>2,093<br>1,304    | 2,031<br>1,411<br>725       |
| Cotton goods, including cotton small wares.               | 1900<br>1904<br>1899 | 26<br>27<br>25            | 6,894<br>5,501<br>5,840      | 13<br>4<br>11                 | 243<br>135<br>187       | 6,638<br>5,302<br>5,681        | 17,288<br>15,518<br>14,317 | 17,824<br>14,290<br>14,300 | 302<br>239<br>269       | 2,577<br>2,022<br>1,931    | 8,565<br>5,143<br>3,158    | 13,729<br>8,579<br>6,931   | 5,164<br>3,436<br>3,773     |
| Cutlery and tools, not elsewhere specified.               | 1900<br>1904<br>1899 | 70<br>57<br>44            | 2,482<br>1,854               | 60<br>52                      | 208<br>135<br>162       | 2,208<br>1,667<br>1,700        | 2,540<br>2,080             | 3,003<br>2,242<br>1,762    | 276<br>174<br>191       | 1,000<br>847<br>855        | 849<br>801<br>835          | 2,735<br>2,371<br>2,307    | 1,886<br>1,510<br>1,472     |
| Dairymen's, poulterers', and apiarists' supplies.         | 1900<br>1904<br>1899 | 7<br>4                    | 425<br>55                    | 5<br>1                        | 124<br>8                | 266<br>46                      | 313<br>80                  | 1,660<br>141               | 111<br>5                | 181<br>20                  | 230<br>41                  | 954<br>88                  | 724<br>47                   |
| Dyeing and finishing textiles.....                        | 1900<br>1904<br>1899 | 67<br>57<br>59            | 10,722<br>8,180<br>7,474     | 32<br>31<br>47                | 561<br>552<br>353       | 10,120<br>7,597<br>7,074       | 19,989<br>12,835<br>12,335 | 23,315<br>13,069<br>11,601 | 1,033<br>847<br>615     | 5,010<br>3,400<br>3,003    | 6,353<br>5,052<br>4,514    | 15,796<br>11,980<br>10,489 | 9,443<br>6,928<br>5,975     |
| Electrical machinery, apparatus, and supplies.            | 1900<br>1904<br>1899 | 69<br>42<br>36            | 13,024<br>7,201              | 22<br>11                      | 1,003<br>1,012<br>623   | 11,000<br>6,268<br>3,610       | 11,326<br>6,547            | 30,229<br>18,458<br>7,009  | 2,234<br>1,063<br>667   | 5,015<br>2,804<br>1,003    | 14,426<br>6,873<br>3,539   | 28,305<br>13,803<br>7,533  | 13,030<br>6,030<br>3,094    |
| Fancy articles, not elsewhere specified.                  | 1900<br>1904<br>1899 | 31<br>21<br>37            | 1,280<br>1,443<br>1,950      | 38<br>20<br>42                | 130<br>240<br>227       | 1,112<br>1,183<br>1,681        | 730<br>993                 | 1,581<br>1,543<br>1,428    | 167<br>261<br>237       | 455<br>506<br>558          | 828<br>863<br>1,124        | 1,841<br>2,205<br>2,391    | 1,013<br>1,342<br>1,267     |
| Fertilizers.....  | 1900<br>1904<br>1899 | 22<br>25<br>28            | 1,384<br>1,253<br>1,147      | 17<br>23<br>30                | 159<br>91<br>155        | 1,208<br>1,139<br>962          | 2,459<br>3,555<br>2,678    | 7,398<br>6,291<br>5,690    | 255<br>151<br>230       | 541<br>637<br>441          | 5,685<br>3,928<br>3,146    | 7,072<br>5,652<br>4,291    | 1,987<br>1,724<br>1,145     |
| Flour-mill and gristmill products.....                    | 1900<br>1904<br>1899 | 238<br>182<br>100         | 790<br>723                   | 255<br>221                    | 82<br>48<br>58          | 453<br>454<br>374              | 10,763<br>9,612            | 3,227<br>2,907<br>2,362    | 58<br>37<br>30          | 225<br>211<br>185          | 4,561<br>4,522<br>4,447    | 5,538<br>5,467<br>5,327    | 977<br>947<br>880           |
| Foundry and machine-shop products...                      | 1900<br>1904<br>1899 | 591<br>452                | 32,076<br>20,111             | 436<br>416                    | 3,825<br>2,657<br>1,526 | 27,815<br>26,038<br>20,187     | 41,191<br>31,012           | 87,023<br>64,330<br>34,421 | 5,249<br>3,407<br>2,024 | 16,922<br>14,765<br>10,460 | 29,940<br>20,810<br>17,059 | 65,398<br>50,553<br>37,042 | 35,458<br>29,743<br>19,983  |
| Furniture and refrigerators.....                          | 1900<br>1904<br>1899 | 40<br>37<br>31            | 1,040<br>971<br>946          | 43<br>42<br>31                | 151<br>68<br>68         | 1,755<br>861<br>547            | 2,340<br>1,032             | 2,685<br>1,295<br>681      | 196<br>101<br>45        | 969<br>480<br>284          | 1,697<br>600<br>348        | 3,614<br>1,557<br>918      | 1,917<br>957<br>570         |
| Gas and electric fixtures and lamps and reflectors.       | 1900<br>1904<br>1899 | 28<br>21<br>26            | 2,319<br>1,380               | 16<br>14                      | 410<br>125<br>100       | 1,884<br>1,241<br>1,339        | 1,124<br>700               | 5,542<br>10,383<br>2,224   | 378<br>152<br>167       | 824<br>525<br>405          | 3,350<br>2,027<br>940      | 5,771<br>3,509<br>2,569    | 2,421<br>1,482<br>1,620     |
| Gas, illuminating and heating.....                        | 1900<br>1904<br>1899 | 47<br>38<br>34            | 2,804<br>2,153               | .....                         | 887<br>786<br>347       | 1,917<br>1,367<br>1,320        | 6,717<br>2,835<br>1,479    | 15,067<br>37,596<br>38,872 | 630<br>536<br>272       | 863<br>728<br>684          | 2,855<br>1,524<br>786      | 9,837<br>6,372<br>3,768    | 6,982<br>4,848<br>2,982     |
| Glass.....  | 1900<br>1904<br>1899 | 23<br>22<br>26            | 6,150<br>5,881<br>5,718      | 6<br>5<br>18                  | 502<br>369<br>317       | 5,651<br>5,507<br>5,383        | 3,081<br>2,661<br>1,766    | 7,415<br>6,304<br>5,368    | 517<br>369<br>285       | 3,340<br>3,145<br>2,463    | 1,009<br>1,856<br>1,489    | 6,961<br>6,450<br>5,094    | 4,962<br>4,594<br>3,005     |
| Gold and silver, reducing and refining, not from the ore. | 1900<br>1904<br>1899 | 8<br>11<br>12             | 161<br>146<br>80             | 4<br>9<br>16                  | 45<br>35<br>24          | 112<br>102<br>40               | 406<br>286                 | 1,034<br>786<br>527        | 63<br>50<br>25          | 86<br>72<br>26             | 3,911<br>4,835<br>2,092    | 4,436<br>5,282<br>2,262    | 525<br>447<br>160           |
| Hats, fur-felt.....                                       | 1900<br>1904<br>1899 | 58<br>63<br>59            | 5,104<br>0,078<br>4,905      | 63<br>81<br>66                | 384<br>292<br>164       | 4,657<br>5,705<br>4,745        | 5,046<br>5,016<br>3,709    | 5,335<br>4,331<br>2,932    | 478<br>318<br>186       | 2,909<br>3,276<br>2,487    | 4,112<br>4,227<br>3,637    | 8,825<br>9,540<br>7,211    | 4,713<br>5,313<br>3,574     |
| Hosiery and knit goods.....                               | 1900<br>1904<br>1899 | 37<br>28<br>25            | 2,658<br>1,840<br>1,938      | 34<br>26<br>15                | 118<br>56<br>62         | 2,506<br>1,758<br>1,861        | 1,477<br>1,077<br>913      | 3,489<br>1,953<br>1,993    | 210<br>67<br>74         | 903<br>539<br>451          | 1,826<br>1,382<br>1,011    | 3,810<br>2,549<br>1,782    | 1,984<br>1,167<br>771       |
| Ice, manufactured.....                                    | 1900<br>1904<br>1899 | 59<br>39<br>20            | 581<br>338<br>247            | 27<br>18<br>12                | 98<br>52<br>52          | 456<br>6,077<br>183            | 10,121<br>2,740<br>3,995   | 3,648<br>2,740<br>1,653    | 98<br>47<br>38          | 317<br>159<br>94           | 386<br>172<br>108          | 1,497<br>643<br>392        | 1,111<br>470<br>284         |
| Iron and steel, steel works and rolling mills.            | 1900<br>1904<br>1899 | 16<br>10<br>10            | 5,228<br>8,901<br>7,982      | .....<br>1<br>1               | 557<br>569<br>282       | 4,671<br>8,334<br>7,699        | 29,699<br>31,626<br>26,579 | 28,212<br>46,281<br>17,717 | 682<br>805<br>452       | 2,823<br>4,088<br>3,601    | 6,635<br>12,390<br>14,323  | 12,014<br>20,065<br>21,835 | 5,379<br>7,070<br>7,512     |
| Jewelry.....  | 1900<br>1904<br>1899 | 150<br>113<br>99          | 4,945<br>3,550               | 168<br>176                    | 709<br>386<br>321       | 4,008<br>2,988<br>2,776        | 1,231<br>960               | 11,988<br>7,202<br>5,623   | 1,256<br>524<br>395     | 2,537<br>1,839<br>1,562    | 6,294<br>4,047<br>3,828    | 13,272<br>9,304<br>7,377   | 6,978<br>4,657<br>3,540     |

1 Excluding statistics for three establishments, to avoid disclosure of individual operations.  
 2 Excluding statistics for one establishment, to avoid disclosure of individual operations.  
 3 Not reported separately.  
 4 Excluding statistics for two establishments, to avoid disclosure of individual operations.



## MANUFACTURES—NEW JERSEY.

TABLE I.—COMPARATIVE SUMMARY FOR 1909, 1904, AND 1899—Continued.

THE STATE—ALL INDUSTRIES COMBINED AND SELECTED INDUSTRIES—Continued.

| INDUSTRY.   | Census. | Number of establishments. | PERSONS ENGAGED IN INDUSTRY. |                               |                    |                                | Primary horse-power. | Capital. | Salaries. | Wages. | Cost of materials. | Value of products. | Value added by manufacture. |
|---|---------|---------------------------|------------------------------|-------------------------------|--------------------|--------------------------------|----------------------|----------|-----------|--------|--------------------|--------------------|-----------------------------|
|   |         |                           | Total.                       | Proprietors and firm members. | Salaried employes. | Wage earners (average number). |                      |          |           |        |                    |                    |                             |
| Expressed in thousands.                                     |         |                           |                              |                               |                    |                                |                      |          |           |        |                    |                    |                             |
| <b>STATE—Continued.</b>                                     |         |                           |                              |                               |                    |                                |                      |          |           |        |                    |                    |                             |
| Leather goods.....  | 1909    | 99                        | 2,133                        | 96                            | 224                | 1,813                          | 990                  | \$2,755  | \$332     | \$920  | \$2,140            | \$4,005            | \$1,805                     |
|   | 1904    | 75                        | 2,286                        | 80                            | 228                | 1,978                          | 828                  | 2,570    | 316       | 806    | 2,139              | 4,212              | 2,073                       |
|   | 1899    | 52                        | .....                        | .....                         | 113                | 2,170                          | .....                | 1,739    | 152       | 893    | 1,752              | 3,490              | 1,733                       |
| Leather, tanned, curried, and finished..                    | 1909    | 86                        | 6,040                        | 71                            | 409                | 5,560                          | 9,243                | 18,847   | 772       | 3,473  | 20,198             | 28,431             | 8,233                       |
|   | 1904    | 73                        | 5,358                        | 63                            | 342                | 4,953                          | 7,495                | 12,492   | 501       | 2,793  | 15,272             | 21,495             | 6,223                       |
|   | 1899    | 77                        | 4,526                        | 72                            | 276                | 4,178                          | 4,531                | 9,906    | 413       | 2,057  | 9,533              | 13,747             | 4,214                       |
| Liquors, malt.....  | 1909    | 33                        | 2,634                        | 3                             | 506                | 2,125                          | 14,082               | 40,535   | 1,202     | 1,836  | 4,881              | 20,184             | 15,303                      |
|   | 1904    | 37                        | 2,443                        | 8                             | 477                | 1,958                          | 10,795               | 30,436   | 1,031     | 1,081  | 3,861              | 17,446             | 13,585                      |
|   | 1899    | 44                        | .....                        | .....                         | 350                | 1,723                          | 8,566                | 23,330   | 819       | 1,361  | 2,732              | 14,386             | 11,604                      |
| Lumber and timber products.....                             | 1909    | 416                       | 5,745                        | 438                           | 460                | 4,857                          | 15,700               | 0,563    | 469       | 2,631  | 8,010              | 13,511             | 5,501                       |
|   | 1904    | 242                       | 4,129                        | 265                           | 272                | 3,592                          | 10,496               | 5,875    | 287       | 1,850  | 4,491              | 7,098              | 3,507                       |
|   | 1899    | 266                       | .....                        | .....                         | 213                | 3,256                          | .....                | 6,161    | 222       | 1,540  | 3,686              | 6,907              | 3,311                       |
| Marble and stone work.....                                  | 1909    | 131                       | 1,752                        | 143                           | 130                | 1,479                          | 2,756                | 3,117    | 106       | 1,329  | 1,378              | 3,901              | 2,523                       |
|   | 1904    | 164                       | 1,232                        | 63                            | 96                 | 1,073                          | 1,714                | 1,737    | 137       | 810    | 865                | 2,440              | 1,575                       |
|   | 1899    | 70                        | .....                        | .....                         | 87                 | 1,284                          | .....                | 1,874    | 96        | 735    | 916                | 2,312              | 1,396                       |
| Mattresses and spring beds.....                             | 1909    | 23                        | 600                          | 26                            | 78                 | 496                            | 288                  | 811      | 93        | 236    | 808                | 1,323              | 515                         |
|   | 1904    | 22                        | 313                          | 23                            | 48                 | 242                            | 152                  | 380      | 56        | 115    | 445                | 728                | 283                         |
|   | 1899    | 17                        | .....                        | .....                         | 18                 | 190                            | .....                | 396      | 27        | 69     | 250                | 435                | 185                         |
| Millinery and lace goods.....                               | 1909    | 179                       | 4,589                        | 198                           | 271                | 4,120                          | 1,380                | 4,595    | 321       | 1,088  | 3,185              | 6,895              | 3,710                       |
|   | 1904    | 55                        | 1,471                        | 58                            | 68                 | 1,345                          | 417                  | 1,187    | 72        | 480    | 873                | 1,032              | 1,059                       |
|   | 1899    | 17                        | 177                          | 19                            | 3                  | 155                            | .....                | 103      | 2         | 65     | 58                 | 172                | 114                         |
| Musical instruments and materials, not specified.           | 1909    | 7                         | 485                          | 5                             | 45                 | 385                            | 335                  | 1,033    | 54        | 181    | 208                | 635                | 427                         |
|   | 1904    | 7                         | 527                          | 7                             | 55                 | 465                            | 348                  | 802      | 62        | 251    | 318                | 863                | 545                         |
|   | 1899    | 13                        | 784                          | 10                            | 34                 | 740                            | 382                  | 1,110    | 39        | 365    | 365                | 880                | 515                         |
| Musical instruments, pianos and organs and materials.       | 1909    | 18                        | 1,500                        | 6                             | 101                | 1,393                          | 1,121                | 2,020    | 129       | 721    | 1,070              | 2,229              | 1,153                       |
|   | 1904    | 214                       | 1,181                        | 6                             | 65                 | 1,110                          | 1,400                | 1,522    | 77        | 590    | 657                | 1,477              | 820                         |
|   | 1899    | 15                        | 850                          | 16                            | 71                 | 763                            | 745                  | 1,407    | 44        | 390    | 593                | 1,332              | 769                         |
| Oil, not elsewhere specified.....                           | 1909    | 23                        | 765                          | 3                             | 343                | 419                            | 1,824                | 4,762    | 474       | 250    | 6,196              | 7,851              | 1,655                       |
|   | 1904    | 12                        | 291                          | 3                             | 122                | 166                            | 616                  | 1,721    | 185       | 114    | 3,078              | 3,803              | 725                         |
|   | 1899    | 11                        | 245                          | 4                             | 104                | 137                            | .....                | 1,122    | 160       | 75     | 1,851              | 2,342              | 491                         |
| Oilcloth and linoleum.....                                  | 1909    | 10                        | 2,264                        | 6                             | 135                | 2,123                          | 7,819                | 8,110    | 193       | 1,187  | 6,638              | 10,143             | 3,505                       |
|   | 1904    | 10                        | 1,551                        | 4                             | 83                 | 1,464                          | 4,904                | 5,151    | 112       | 701    | 3,690              | 5,444              | 1,778                       |
|   | 1899    | 86                        | 913                          | 2                             | 48                 | 863                            | .....                | 2,553    | 75        | 405    | 1,735              | 2,845              | 1,110                       |
| Paint and varnish.....                                      | 1909    | 63                        | 2,143                        | 41                            | 609                | 1,493                          | 5,924                | 11,372   | 1,100     | 844    | 8,226              | 12,767             | 4,541                       |
|   | 1904    | 42                        | 1,404                        | 19                            | 425                | 960                            | 2,790                | 5,837    | 630       | 527    | 4,013              | 6,907              | 2,954                       |
|   | 1899    | 51                        | 1,260                        | 31                            | 382                | 847                            | 2,333                | 6,457    | 551       | 476    | 3,826              | 6,214              | 2,388                       |
| Paper and wood pulp.....                                    | 1909    | 37                        | 2,445                        | 11                            | 211                | 2,233                          | 22,996               | 10,742   | 456       | 1,181  | 4,769              | 7,554              | 2,785                       |
|   | 1904    | 38                        | 1,773                        | 15                            | 120                | 1,629                          | 17,336               | 7,123    | 233       | 787    | 3,022              | 5,013              | 2,021                       |
|   | 1899    | 34                        | 1,308                        | 25                            | 93                 | 1,190                          | 12,978               | 3,671    | 163       | 553    | 1,715              | 3,195              | 1,480                       |
| Paper goods, not elsewhere specified....                    | 1909    | 19                        | 659                          | 7                             | 89                 | 563                            | 2,132                | 2,232    | 108       | 276    | 1,697              | 2,640              | 943                         |
|   | 1904    | 13                        | 324                          | 7                             | 38                 | 279                            | 665                  | 1,051    | 50        | 125    | 837                | 1,225              | 338                         |
|   | 1899    | 15                        | 359                          | 10                            | 43                 | 306                            | .....                | 984      | 55        | 131    | 745                | 1,168              | 423                         |
| Patent medicines and compounds and druggists' preparations. | 1909    | 111                       | 1,424                        | 77                            | 342                | 1,065                          | 1,478                | 3,743    | 488       | 432    | 2,089              | 5,410              | 3,321                       |
|   | 1904    | 78                        | 1,228                        | 55                            | 242                | 931                            | 1,209                | 2,665    | 299       | 330    | 1,315              | 3,710              | 2,395                       |
|   | 1899    | 38                        | .....                        | .....                         | 154                | 316                            | .....                | 1,180    | 178       | 128    | 544                | 1,574              | 1,030                       |
| Pottery, terra-cotta, and fire-clay products.               | 1909    | 88                        | 10,542                       | 38                            | 689                | 9,815                          | 11,817               | 22,349   | 1,036     | 5,661  | 3,551              | 13,139             | 6,588                       |
|   | 1904    | 90                        | 10,177                       | 42                            | 648                | 9,487                          | 13,463               | 21,647   | 843       | 4,722  | 2,950              | 11,717             | 8,701                       |
|   | 1899    | 81                        | 8,648                        | 67                            | 464                | 8,117                          | 8,980                | 15,325   | 634       | 3,841  | 2,384              | 8,941              | 6,557                       |
| Printing and publishing.....                                | 1909    | 684                       | 7,364                        | 647                           | 1,266              | 5,451                          | 5,636                | 13,816   | 1,309     | 3,024  | 3,472              | 12,333             | 8,861                       |
|   | 1904    | 588                       | 6,001                        | 571                           | 1,063              | 4,367                          | 4,171                | 8,732    | 1,006     | 2,470  | 2,285              | 8,627              | 6,342                       |
|   | 1899    | 480                       | 4,881                        | 487                           | 540                | 3,854                          | .....                | 6,886    | 515       | 1,923  | 1,673              | 6,104              | 4,431                       |
| Rubber goods, not elsewhere specified..                     | 1909    | 36                        | 4,860                        | 7                             | 598                | 4,255                          | 12,966               | 15,766   | 772       | 2,300  | 13,032             | 19,543             | 6,511                       |
|   | 1904    | 24                        | 1,919                        | 6                             | 185                | 1,728                          | 5,009                | 3,788    | 221       | 846    | 2,959              | 4,836              | 1,877                       |
|   | 1899    | 37                        | 2,870                        | 7                             | 254                | 2,069                          | .....                | 6,078    | 378       | 1,151  | 5,690              | 8,458              | 2,762                       |
| Shipbuilding, including boat building..                     | 1909    | 97                        | 5,533                        | 97                            | 567                | 4,869                          | 9,904                | 19,176   | 603       | 3,300  | 4,249              | 8,841              | 4,592                       |
|   | 1904    | 78                        | 5,258                        | 70                            | 316                | 4,863                          | 7,761                | 10,801   | 488       | 3,033  | 3,492              | 7,735              | 4,273                       |
|   | 1899    | 68                        | 3,058                        | 61                            | 123                | 2,874                          | 2,839                | 3,686    | 158       | 1,792  | 1,950              | 4,810              | 2,860                       |
| Silk and silk goods, including throwsters.                  | 1909    | 348                       | 32,365                       | 306                           | 1,774              | 30,285                         | 22,376               | 43,615   | 2,317     | 13,917 | 33,265             | 65,430             | 32,165                      |
|   | 1904    | 230                       | 26,986                       | 227                           | 1,278              | 25,481                         | 16,903               | 33,645   | 1,556     | 9,893  | 22,339             | 42,863             | 20,524                      |
|   | 1899    | 180                       | 25,313                       | 197                           | 959                | 24,157                         | 15,964               | 20,286   | 1,145     | 9,233  | 21,631             | 39,067             | 18,336                      |
| Silverware and plated ware.....                             | 1909    | 26                        | 1,564                        | 21                            | 247                | 1,296                          | 1,211                | 2,741    | 270       | 829    | 1,133              | 3,035              | 1,962                       |
|   | 1904    | 122                       | 1,601                        | 27                            | 171                | 1,493                          | 1,570                | 2,729    | 175       | 787    | 1,137              | 3,104              | 1,967                       |
|   | 1899    | 114                       | 1,054                        | 16                            | 108                | 930                            | .....                | 1,759    | 113       | 523    | 854                | 2,145              | 1,291                       |
| Slaughtering and meat packing.....                          | 1909    | 84                        | 2,420                        | 93                            | 510                | 1,817                          | 3,610                | 8,182    | 633       | 1,286  | 33,740             | 37,583             | 3,843                       |
|   | 1904    | 48                        | 918                          | 68                            | 105                | 745                            | 949                  | 2,593    | 117       | 488    | 16,071             | 17,754             | 1,683                       |
|   | 1899    | 50                        | 760                          | 69                            | 100                | 591                            | .....                | 1,076    | 94        | 352    | 12,965             | 14,215             | 1,250                       |
| Smelting and refining, copper.....                          | 1909    | 4                         | 2,564                        | .....                         | 242                | 2,322                          | 22,320               | 20,078   | 366       | 1,335  | 118,936            | 125,651            | 6,715                       |
|   | 1904    | 5                         | 1,345                        | .....                         | 102                | 1,243                          | 5,295                | 7,893    | 129       | 645    | 58,812             | 62,790             | 3,984                       |
|   | 1899    | 7                         | 1,783                        | .....                         | 74                 | 1,707                          | 8,320                | 6,944    | 139       | 915    | 32,545             | 38,365             | 5,820                       |

1 Excluding statistics for one establishment, to avoid disclosure of individual operations.

2 Excluding statistics for three establishments, to avoid disclosure of individual operations.

3 Excluding statistics for two establishments, to avoid disclosure of individual operations.

MANUFACTURES—NEW JERSEY.

TABLE I.—COMPARATIVE SUMMARY FOR 1909, 1904, AND 1899—Continued.

THE STATE—ALL INDUSTRIES COMBINED AND SELECTED INDUSTRIES—Continued.

| INDUSTRY.  | Census. | Number of establishments. | PERSONS ENGAGED IN INDUSTRY. |                               |                    |                                | Primary horse-power. | Capital. | Salaries. | Wages. | Cost of materials. | Value of products. | Value added by manufacture. |
|--|---------|---------------------------|------------------------------|-------------------------------|--------------------|--------------------------------|----------------------|----------|-----------|--------|--------------------|--------------------|-----------------------------|
|  |         |                           | Total.                       | Proprietors and firm members. | Salaried employes. | Wage earners (average number). |                      |          |           |        |                    |                    |                             |
| Expressed in thousands.                            |         |                           |                              |                               |                    |                                |                      |          |           |        |                    |                    |                             |
| <b>STATE—Continued.</b>                            |         |                           |                              |                               |                    |                                |                      |          |           |        |                    |                    |                             |
| Smelting and refining, not from the ore.           | 1909    | 14                        | 1,194                        | 10                            | 127                | 1,057                          | 5,931                | \$6,681  | \$188     | \$600  | \$7,227            | \$9,598            | \$2,371                     |
|  | 1904    | 13                        | 1,104                        | 7                             | 104                | 993                            | 13,637               | 5,469    | 142       | 587    | 4,842              | 7,034              | 2,192                       |
|  | 1899    | 8                         | 219                          | 8                             | 10                 | 201                            | .....                | 2,162    | 19        | 77     | 268                | 469                | 201                         |
| Soap.....  | 1909    | 21                        | 2,301                        | 10                            | 692                | 1,599                          | 2,761                | 8,306    | 881       | 796    | 7,084              | 13,674             | 6,590                       |
|  | 1904    | 14                        | 775                          | 8                             | 148                | 619                            | 625                  | 1,719    | 120       | 287    | 2,043              | 4,018              | 1,975                       |
|  | 1899    | .....                     | .....                        | .....                         | .....              | .....                          | .....                | .....    | .....     | .....  | .....              | .....              | .....                       |
| Stoves and furnaces, including gas and oil stoves. | 1909    | 8                         | 893                          | 2                             | 195                | 696                            | 1,146                | 1,838    | 253       | 607    | 574                | 1,688              | 1,114                       |
|  | 1904    | 24                        | 720                          | 1                             | 51                 | 695                            | 455                  | 958      | 131       | 565    | 440                | 1,518              | 1,078                       |
|  | 1899    | .....                     | .....                        | .....                         | .....              | .....                          | .....                | .....    | .....     | .....  | .....              | .....              | .....                       |
| Surgical appliances and artificial limbs..         | 1909    | 11                        | 1,784                        | 9                             | 363                | 1,412                          | 3,188                | 3,902    | 455       | 542    | 1,249              | 2,991              | 1,742                       |
|  | 1904    | 11                        | 952                          | 8                             | 98                 | 846                            | 1,617                | 2,327    | 102       | 283    | 1,104              | 2,108              | 1,064                       |
|  | 1899    | 10                        | 484                          | 10                            | 57                 | 417                            | .....                | 869      | 88        | 134    | 572                | 1,200              | 628                         |
| Tobacco manufactures.....                          | 1909    | 462                       | 10,610                       | 482                           | 662                | 9,466                          | 3,302                | 21,164   | 829       | 3,156  | 10,796             | 24,177             | 13,381                      |
|  | 1904    | 554                       | 7,356                        | 570                           | 278                | 6,508                          | 1,797                | 20,522   | 281       | 2,011  | 3,808              | 16,988             | 7,180                       |
|  | 1899    | 498                       | 4,346                        | 509                           | 242                | 3,595                          | 2,213                | 8,003    | 228       | 1,232  | 3,442              | 10,436             | 6,994                       |
| Typewriters and supplies.....                      | 1909    | 8                         | 363                          | .....                         | 91                 | 272                            | 512                  | 959      | 90        | 202    | 278                | 740                | 462                         |
|  | 1904    | 3                         | 166                          | 2                             | 32                 | 132                            | 228                  | 318      | 27        | 80     | 125                | 315                | 190                         |
|  | 1899    | 5                         | 745                          | 5                             | 91                 | 649                            | 365                  | 1,015    | 60        | 340    | 232                | 745                | 513                         |
| Wall paper.....                                    | 1909    | 8                         | 894                          | 6                             | 106                | 782                            | 1,442                | 3,326    | 153       | 369    | 1,500              | 2,872              | 1,372                       |
|  | 1904    | 4                         | 701                          | 2                             | 84                 | 615                            | 500                  | 2,401    | 128       | 299    | 1,032              | 2,094              | 1,062                       |
|  | 1899    | 5                         | 675                          | 6                             | 60                 | 609                            | .....                | 1,428    | 100       | 276    | 1,004              | 1,508              | 504                         |
| Wall plaster.....                                  | 1909    | 5                         | 203                          | 2                             | 23                 | 178                            | 977                  | 654      | 42        | 169    | 332                | 613                | 281                         |
|  | 1904    | 3                         | 57                           | .....                         | 11                 | 46                             | 209                  | 114      | 16        | 26     | 169                | 204                | 55                          |
|  | 1899    | .....                     | .....                        | .....                         | .....              | .....                          | .....                | .....    | .....     | .....  | .....              | .....              | .....                       |
| Wire.....  | 1909    | 7                         | 6,255                        | .....                         | 609                | 5,646                          | 17,436               | 21,829   | 624       | 2,767  | 22,298             | 28,858             | 6,560                       |
|  | 1904    | 4                         | 678                          | .....                         | 59                 | 619                            | 4,150                | 2,047    | 86        | 316    | 9,889              | 11,104             | 1,215                       |
|  | 1899    | 3                         | 192                          | 1                             | 15                 | 176                            | .....                | 1,105    | 29        | 122    | 2,899              | 3,375              | 476                         |
| Woolen, worsted, and felt goods, and wool hats.    | 1909    | 33                        | 13,110                       | 28                            | 439                | 12,652                         | 20,254               | 36,391   | 885       | 4,964  | 21,033             | 33,930             | 12,906                      |
|  | 1904    | 35                        | 9,391                        | 38                            | 280                | 8,983                          | 14,008               | 18,979   | 465       | 2,051  | 10,028             | 16,394             | 5,766                       |
|  | 1899    | 28                        | 7,235                        | 14                            | 163                | 7,058                          | 11,326               | 17,437   | 303       | 2,194  | 7,026              | 12,270             | 4,644                       |
| All other industries.....                          | 1909    | 1,321                     | 54,445                       | 1,107                         | 6,091              | 47,187                         | 113,176              | 295,722  | 8,401     | 25,487 | 178,837            | 250,551            | 71,714                      |
|  | 1904    | 1,068                     | 47,594                       | 1,013                         | 4,159              | 42,422                         | 82,099               | 163,140  | 5,513     | 21,382 | 145,337            | 204,140            | 58,803                      |
|  | 1899    | 1,095                     | .....                        | .....                         | 2,550              | 27,009                         | .....                | 95,280   | 3,076     | 12,940 | 104,116            | 137,304            | 33,188                      |

CITIES OF 50,000 INHABITANTS OR MORE—ALL INDUSTRIES COMBINED AND SELECTED INDUSTRIES.

|  |      |     |        |       |       |        |        |          |         |         |          |          |          |
|--|------|-----|--------|-------|-------|--------|--------|----------|---------|---------|----------|----------|----------|
| <b>BAYONNE—All industries.....</b>                 | 1909 | 97  | 8,790  | 84    | 1,187 | 7,519  | 28,094 | \$62,281 | \$1,762 | \$4,775 | \$58,933 | \$73,641 | \$14,708 |
|  | 1904 | 58  | 7,851  | 48    | 746   | 7,057  | .....  | 50,297   | 1,087   | 4,277   | 46,984   | 60,634   | 13,650   |
|  | 1899 | 63  | .....  | ..... | 248   | 4,670  | .....  | 26,251   | 413     | 2,623   | 33,794   | 38,601   | 4,807    |
| Bread and other bakery products.....               | 1909 | 17  | 106    | 18    | 13    | 75     | 29     | 159      | 5       | 58      | 207      | 340      | 133      |
|  | 1904 | 13  | 86     | 13    | ..... | 73     | .....  | 72       | .....   | 41      | 156      | 238      | 82       |
|  | 1899 | 15  | 65     | 16    | 3     | 46     | .....  | 30       | 1       | 23      | 82       | 145      | 63       |
| Foundry and machine-shop products...               | 1909 | 7   | 1,234  | 10    | 308   | 916    | 1,722  | 10,649   | 452     | 636     | 1,642    | 4,155    | 2,513    |
|  | 1904 | 24  | 1,756  | 2     | 188   | 1,596  | .....  | 6,429    | 245     | 1,012   | 1,919    | 4,371    | 2,452    |
|  | 1899 | 3   | .....  | ..... | 3     | 17     | .....  | 26       | 2       | 9       | 7        | 24       | 17       |
| All other industries.....                          | 1909 | 73  | 7,450  | 56    | 866   | 6,528  | 26,343 | 51,473   | 1,305   | 4,081   | 57,084   | 69,146   | 12,062   |
|  | 1904 | 41  | 6,009  | 33    | 558   | 5,418  | .....  | 43,790   | 792     | 3,221   | 44,909   | 56,025   | 11,116   |
|  | 1899 | 45  | .....  | ..... | 242   | 4,007  | .....  | 26,186   | 410     | 2,591   | 33,705   | 38,432   | 4,727    |
| <b>CAMDEN—All industries.....</b>                  | 1909 | 305 | 18,709 | 315   | 1,867 | 16,527 | 29,056 | \$49,158 | \$2,406 | \$8,607 | \$27,384 | \$49,138 | \$21,754 |
|  | 1904 | 298 | 14,127 | 265   | 1,291 | 12,661 | .....  | 31,992   | 1,496   | 6,098   | 20,423   | 33,587   | 13,164   |
|  | 1899 | 322 | .....  | ..... | 658   | 7,742  | .....  | 16,693   | 682     | 3,217   | 10,442   | 17,970   | 7,528    |
| Boots and shoes, including cut stock and findings. | 1909 | 10  | 456    | 13    | 21    | 422    | 99     | 382      | 22      | 215     | 497      | 845      | 348      |
|  | 1904 | 15  | 520    | 20    | 26    | 474    | .....  | 319      | 22      | 193     | 417      | 759      | 342      |
|  | 1899 | 23  | 478    | 20    | 29    | 429    | .....  | 318      | 23      | 155     | 365      | 609      | 244      |
| Bread and other bakery products.....               | 1909 | 60  | 330    | 61    | 6     | 272    | 94     | 398      | 4       | 154     | 453      | 702      | 309      |
|  | 1904 | 57  | 205    | 60    | 10    | 136    | .....  | 162      | 5       | 76      | 274      | 448      | 174      |
|  | 1899 | 61  | 180    | 62    | 17    | 101    | .....  | 120      | 7       | 46      | 164      | 309      | 145      |
| Foundry and machine-shop products...               | 1909 | 25  | 1,799  | 17    | 253   | 1,529  | 1,408  | 4,538    | 242     | 910     | 2,407    | 3,948    | 1,541    |
|  | 1904 | 28  | 1,210  | 6     | 89    | 1,115  | .....  | 2,853    | 79      | 614     | 1,086    | 2,080    | 694      |
|  | 1899 | 13  | .....  | ..... | 107   | 1,076  | .....  | 1,787    | 116     | 559     | 877      | 2,183    | 1,306    |
| Leather, tanned, curried, and finished.            | 1909 | 7   | 1,171  | ..... | 60    | 1,111  | 1,320  | 3,461    | 129     | 612     | 4,270    | 5,920    | 1,650    |
|  | 1904 | 4   | 811    | ..... | 62    | 749    | .....  | 1,664    | 71      | 342     | 5,695    | 6,365    | 670      |
|  | 1899 | 3   | 480    | ..... | 28    | 452    | .....  | 838      | 40      | 188     | 1,175    | 1,516    | 341      |
| Lumber and timber products.....                    | 1909 | 4   | 150    | 2     | 20    | 128    | 411    | 177      | 17      | 70      | 236      | 362      | 126      |
|  | 1904 | 3   | 192    | 3     | 17    | 172    | .....  | 301      | 15      | 92      | 548      | 734      | 186      |
|  | 1899 | 4   | 138    | 5     | 18    | 115    | .....  | 251      | 20      | 61      | 217      | 371      | 154      |
| Printing and publishing.....                       | 1909 | 25  | 266    | 32    | 43    | 191    | 139    | 357      | 37      | 105     | 90       | 350      | 260      |
|  | 1904 | 23  | 192    | 30    | 34    | 128    | .....  | 277      | 33      | 70      | 60       | 265      | 205      |
|  | 1899 | 20  | 196    | 31    | 24    | 141    | .....  | 261      | 21      | 53      | 53       | 221      | 168      |

<sup>1</sup> Not reported separately.

<sup>2</sup> Excluding statistics for one establishment, to avoid disclosure of individual operations.

<sup>3</sup> Excluding statistics for two establishments, to avoid disclosure of individual operations.

## MANUFACTURES—NEW JERSEY.

TABLE I.—COMPARATIVE SUMMARY FOR 1909, 1904, AND 1899—Continued.

CITIES OF 50,000 INHABITANTS OR MORE—ALL INDUSTRIES COMBINED AND SELECTED INDUSTRIES—Continued.

| INDUSTRY.                                       | Census. | Number of establishments. | PERSONS ENGAGED IN INDUSTRY. |                               |                    |                                | Primary horse-power. | Capital. | Salaries. | Wages.  | Cost of materials. | Value of products. | Value added by manufacture. |
|---|---------|---------------------------|------------------------------|-------------------------------|--------------------|--------------------------------|----------------------|----------|-----------|---------|--------------------|--------------------|-----------------------------|
|   |         |                           | Total.                       | Proprietors and firm members. | Salaried employes. | Wage earners (average number). |                      |          |           |         |                    |                    |                             |
| Expressed in thousands.                         |         |                           |                              |                               |                    |                                |                      |          |           |         |                    |                    |                             |
| <b>CAMDEN—Continued.</b>                        |         |                           |                              |                               |                    |                                |                      |          |           |         |                    |                    |                             |
| Shipbuilding, including boat building..         | 1909    | 15                        | 3,682                        | 12                            | 346                | 3,324                          | 6,098                | \$14,124 | \$441     | \$2,047 | \$3,100            | \$5,026            | \$2,526                     |
|   | 1904    | 12                        | 3,385                        | 14                            | 225                | 3,140                          | .....                | 7,650    | 379       | 1,906   | 2,533              | 5,035              | 2,502                       |
|   | 1899    | 19                        | 288                          | 10                            | 12                 | 266                            | .....                | 220      | 9         | 177     | 143                | 410                | 267                         |
| Slaughtering and meat packing.....              | 1909    | 6                         | 52                           | 10                            | .....              | 42                             | 51                   | 147      | .....     | 32      | 603                | 763                | 70                          |
|   | 1904    | 3                         | 25                           | 6                             | 5                  | 15                             | .....                | 64       | 3         | 9       | 391                | 422                | 31                          |
|   | 1899    | 13                        | 31                           | 5                             | 1                  | 25                             | .....                | 43       | 1         | 15      | 423                | 456                | 33                          |
| Soap.....                                       | 1909    | 5                         | 260                          | .....                         | 72                 | 188                            | 270                  | 951      | 146       | 70      | 723                | 1,265              | 542                         |
|   | 1904    | 4                         | 89                           | .....                         | 24                 | 65                             | .....                | 387      | 33        | 31      | 189                | 395                | 206                         |
|   | 1899    | 3                         | 58                           | .....                         | 20                 | 38                             | .....                | 433      | 19        | 16      | 97                 | 182                | 85                          |
| Tobacco manufactures.....                       | 1909    | 25                        | 582                          | 24                            | 26                 | 532                            | 293                  | 270      | 28        | 135     | 258                | 661                | 403                         |
|   | 1904    | 27                        | 692                          | 20                            | 28                 | 545                            | .....                | 1,314    | 19        | 130     | 247                | 576                | 320                         |
|   | 1899    | 24                        | 79                           | 26                            | 4                  | 49                             | .....                | 20       | 1         | 19      | 26                 | 60                 | 34                          |
| Woolen, worsted, and felt goods, and wool hats. | 1909    | 4                         | 1,179                        | 9                             | 21                 | 1,149                          | 2,900                | 3,248    | 63        | 355     | 2,704              | 3,608              | 904                         |
|   | 1904    | 5                         | 1,022                        | 7                             | 33                 | 982                            | .....                | 2,377    | 67        | 261     | 1,855              | 2,528              | 673                         |
|   | 1899    | 5                         | 978                          | 7                             | 13                 | 958                            | .....                | 2,693    | 23        | 241     | 1,406              | 2,091              | 685                         |
| All other industries.....                       | 1909    | 160                       | 8,773                        | 135                           | 999                | 7,639                          | 15,973               | 21,105   | 1,277     | 3,884   | 11,053             | 25,028             | 13,075                      |
|   | 1904    | 127                       | 5,873                        | 91                            | 648                | 5,134                          | .....                | 14,534   | 770       | 2,374   | 7,128              | 13,980             | 6,852                       |
|   | 1899    | 144                       | .....                        | .....                         | 385                | 4,692                          | .....                | 8,600    | 402       | 1,683   | 5,496              | 9,562              | 4,666                       |
| <b>ELIZABETH—All industries...</b>              |         |                           |                              |                               |                    |                                |                      |          |           |         |                    |                    |                             |
| Bread and other bakery products.....            | 1909    | 31                        | 142                          | 31                            | .....              | 111                            | 38                   | 194      | .....     | 69      | 182                | 347                | 165                         |
|   | 1904    | 27                        | 121                          | 30                            | 4                  | 87                             | .....                | 192      | 1         | 56      | 196                | 310                | 114                         |
|   | 1899    | 35                        | 135                          | 39                            | 1                  | 95                             | .....                | 135      | (1)       | 45      | 169                | 288                | 119                         |
| Foundry and machine-shop products...            | 1909    | 18                        | 1,095                        | 13                            | 166                | 916                            | 1,571                | 2,496    | 215       | 604     | 996                | 1,877              | 881                         |
|   | 1904    | 15                        | 2,633                        | 10                            | 229                | 2,394                          | .....                | 7,436    | 243       | 1,561   | 1,436              | 3,887              | 2,451                       |
|   | 1899    | 16                        | 2,183                        | 12                            | 211                | 1,960                          | .....                | 4,292    | 207       | 1,153   | 2,093              | 4,444              | 2,351                       |
| Leather, tanned, curried, and finished..        | 1909    | 3                         | 207                          | 6                             | 8                  | 103                            | 225                  | 742      | 12        | 85      | 713                | 901                | 278                         |
|   | 1904    | 3                         | 326                          | 3                             | 20                 | 294                            | .....                | 310      | 52        | 138     | 104                | 385                | 281                         |
|   | 1899    | .....                     | .....                        | .....                         | .....              | .....                          | .....                | .....    | .....     | .....   | .....              | .....              | .....                       |
| Oil, not elsewhere specified.....               | 1909    | 5                         | 76                           | 1                             | 32                 | 43                             | 425                  | 553      | 53        | 29      | 797                | 1,005              | 208                         |
|   | 1904    | 3                         | 125                          | 1                             | 54                 | 70                             | .....                | 1,101    | 75        | 52      | 2,102              | 2,388              | 286                         |
|   | 1899    | 3                         | .....                        | .....                         | 65                 | 55                             | .....                | 751      | 91        | 35      | 1,405              | 1,679              | 274                         |
| Printing and publishing.....                    | 1909    | 9                         | 548                          | 7                             | 62                 | 479                            | 661                  | 2,306    | 76        | 406     | 166                | 807                | 701                         |
|   | 1904    | 11                        | 152                          | 9                             | 40                 | 103                            | .....                | 142      | 27        | 59      | 38                 | 172                | 134                         |
|   | 1899    | 10                        | .....                        | .....                         | 15                 | 77                             | .....                | 109      | 15        | 40      | 33                 | 148                | 115                         |
| All other industries.....                       | 1909    | 97                        | 11,602                       | 74                            | 533                | 10,995                         | 17,204               | 20,483   | 696       | 6,320   | 13,575             | 24,060             | 10,485                      |
|   | 1904    | 65                        | 9,818                        | 47                            | 384                | 9,387                          | .....                | 14,383   | 468       | 5,532   | 13,100             | 22,159             | 9,053                       |
|   | 1899    | 77                        | .....                        | .....                         | 292                | 7,311                          | .....                | 10,664   | 398       | 4,203   | 9,213              | 16,302             | 7,089                       |
| <b>HOBOKEN—All industries.....</b>              |         |                           |                              |                               |                    |                                |                      |          |           |         |                    |                    |                             |
| Bread and other bakery products.....            | 1909    | 36                        | 492                          | 36                            | 35                 | 421                            | 255                  | 420      | 23        | 321     | 873                | 1,410              | 537                         |
|   | 1904    | 43                        | 371                          | 44                            | 13                 | 314                            | .....                | 463      | 13        | 201     | 618                | 1,011              | 303                         |
|   | 1899    | 25                        | 216                          | 27                            | 42                 | 147                            | .....                | 275      | 28        | 90      | 301                | 525                | 224                         |
| Copper, tin, and sheet-iron products....        | 1909    | 7                         | 132                          | 4                             | 20                 | 108                            | 90                   | 114      | 24        | 105     | 126                | 301                | 175                         |
|   | 1904    | 5                         | 32                           | 6                             | 2                  | 24                             | .....                | 34       | 2         | 19      | 24                 | 56                 | 32                          |
|   | 1899    | .....                     | .....                        | .....                         | .....              | .....                          | .....                | .....    | .....     | .....   | .....              | .....              | .....                       |
| Foundry and machine-shop products...            | 1909    | 23                        | 957                          | 9                             | 93                 | 855                            | 1,101                | 1,843    | 153       | 558     | 582                | 1,808              | 1,226                       |
|   | 1904    | 22                        | 1,052                        | 13                            | 90                 | 943                            | .....                | 1,035    | 138       | 542     | 737                | 1,763              | 1,028                       |
|   | 1899    | 18                        | 1,103                        | 16                            | 58                 | 1,029                          | .....                | 1,359    | 85        | 622     | 847                | 1,869              | 1,022                       |
| Furniture and refrigerators.....                | 1909    | 5                         | 676                          | 4                             | 56                 | 610                            | 625                  | 1,064    | 86        | 334     | 557                | 1,314              | 757                         |
|   | 1904    | 3                         | 349                          | 2                             | 38                 | 309                            | .....                | 490      | 65        | 146     | 190                | 544                | 354                         |
|   | 1899    | .....                     | .....                        | .....                         | .....              | .....                          | .....                | .....    | .....     | .....   | .....              | .....              | .....                       |
| Leather goods.....                              | 1909    | 3                         | 274                          | 1                             | 30                 | 243                            | 190                  | 216      | 73        | 112     | 304                | 507                | 203                         |
|   | 1904    | 5                         | 528                          | 6                             | 67                 | 455                            | .....                | 588      | 92        | 139     | 408                | 783                | 315                         |
|   | 1899    | .....                     | .....                        | .....                         | .....              | .....                          | .....                | .....    | .....     | .....   | .....              | .....              | .....                       |
| Lumber and timber products.....                 | 1909    | 7                         | 150                          | 6                             | 16                 | 128                            | 293                  | 242      | 16        | 100     | 227                | 442                | 215                         |
|   | 1904    | 6                         | 82                           | 6                             | 9                  | 67                             | .....                | 104      | 9         | 45      | 121                | 201                | 80                          |
|   | 1899    | 3                         | 52                           | 3                             | 3                  | 46                             | .....                | 122      | 5         | 30      | 61                 | 114                | 53                          |
| Printing and publishing.....                    | 1909    | 17                        | 344                          | 17                            | 93                 | 234                            | 235                  | 440      | 108       | 165     | 186                | 577                | 391                         |
|   | 1904    | 25                        | 286                          | 24                            | 94                 | 168                            | .....                | 328      | 89        | 112     | 109                | 487                | 378                         |
|   | 1899    | 13                        | 122                          | 14                            | 26                 | 82                             | .....                | 115      | 16        | 55      | 43                 | 163                | 120                         |
| Silk and silk goods, including throwsters       | 1909    | 4                         | 339                          | 1                             | 20                 | 318                            | 133                  | 471      | 28        | 143     | 397                | 706                | 309                         |
|   | 1904    | 3                         | 349                          | 1                             | 22                 | 326                            | .....                | 405      | 24        | 111     | 193                | 456                | 263                         |
|   | 1899    | 3                         | 257                          | 9                             | 4                  | 244                            | .....                | 239      | 8         | 80      | 96                 | 222                | 126                         |
| All other industries.....                       | 1909    | 142                       | 5,975                        | 128                           | 670                | 5,177                          | 8,186                | 15,088   | 854       | 2,715   | 6,217              | 13,348             | 7,131                       |
|   | 1904    | 167                       | 5,181                        | 176                           | 384                | 4,621                          | .....                | 7,730    | 482       | 2,258   | 4,120              | 8,776              | 4,656                       |
|   | 1899    | 132                       | .....                        | .....                         | 260                | 4,164                          | .....                | 5,365    | 353       | 1,748   | 3,678              | 7,590              | 3,912                       |

1 Excluding statistics for one establishment, to avoid disclosure of individual operations.

2 Figures can not be shown without disclosing individual operations.

MANUFACTURES—NEW JERSEY.

TABLE I.—COMPARATIVE SUMMARY FOR 1909, 1904, AND 1899—Continued.

CITIES OF 50,000 INHABITANTS OR MORE—ALL INDUSTRIES COMBINED AND SELECTED INDUSTRIES—Continued.

| INDUSTRY.   | Census. | Number of establishments. | PERSONS ENGAGED IN INDUSTRY. |                               |                    |                                | Primary horse-power. | Capital. | Salaries. | Wages.   | Cost of materials. | Value of products. | Value added by manufacture. |
|---|---------|---------------------------|------------------------------|-------------------------------|--------------------|--------------------------------|----------------------|----------|-----------|----------|--------------------|--------------------|-----------------------------|
|   |         |                           | Total.                       | Proprietors and firm members. | Salaried employes. | Wage earners (average number). |                      |          |           |          |                    |                    |                             |
| Expressed in thousands.   |         |                           |                              |                               |                    |                                |                      |          |           |          |                    |                    |                             |
| <b>JERSEY CITY—All industries.</b>  | 1909    | 745                       | 30,239                       | 614                           | 4,171              | 25,454                         | 35,917               | \$79,794 | \$5,049   | \$13,210 | \$89,317           | \$128,775          | \$39,458                    |
|   | 1904    | 628                       | 23,312                       | 580                           | 2,379              | 20,353                         |                      | 82,395   | 2,960     | 10,021   | 48,790             | 75,741             | 26,942                      |
|   | 1899    | 536                       |                              |                               | 1,614              | 17,391                         |                      | 78,612   | 2,039     | 7,965    | 50,266             | 72,930             | 22,664                      |
| Boxes, fancy and paper.....   | 1909    | 5                         | 589                          | 3                             | 29                 | 557                            | 194                  | 365      | 42        | 106      | 238                | 527                | 289                         |
|   | 1904    | 4                         | 488                          | 2                             | 20                 | 466                            |                      | 265      | 19        | 127      | 173                | 408                | 235                         |
|   | 1899    | 4                         | 430                          | 3                             | 19                 | 408                            |                      | 224      | 18        | 105      | 110                | 283                | 173                         |
| Brass and bronze products.....  | 1909    | 9                         | 400                          | 5                             | 55                 | 340                            | 550                  | 1,277    | 113       | 185      | 1,577              | 2,180              | 603                         |
|   | 1904    | 9                         | 354                          | 7                             | 47                 | 300                            |                      | 1,207    | 64        | 172      | 1,201              | 1,730              | 520                         |
|   | 1899    | 8                         | 173                          | 7                             | 17                 | 149                            |                      | 960      | 10        | 84       | 719                | 881                | 162                         |
| Bread and other bakery products.....  | 1909    | 113                       | 757                          | 117                           | 100                | 534                            | 221                  | 954      | 74        | 387      | 1,531              | 2,485              | 954                         |
|   | 1904    | 113                       | 525                          | 121                           | 24                 | 380                            |                      | 602      | 9         | 247      | 927                | 1,499              | 572                         |
|   | 1899    | 70                        | 311                          | 70                            | 7                  | 234                            |                      | 286      | 4         | 144      | 382                | 748                | 360                         |
| Cars and general shop construction and repairs by steam-railroad companies. | 1909    | 4                         | 2,106                        |                               | 288                | 1,818                          | 927                  | 405      | 101       | 1,044    | 1,273              | 2,539              | 1,260                       |
|   | 1904    | 4                         | 2,482                        |                               | 145                | 2,337                          |                      | 1,440    | 121       | 1,280    | 1,190              | 2,593              | 1,433                       |
|   | 1899    | 3                         | 2,358                        |                               | 86                 | 2,272                          |                      | 1,408    | 65        | 1,212    | 1,289              | 2,613              | 1,324                       |
| Chemicals.....  | 1909    | 5                         | 244                          |                               | 40                 | 195                            | 657                  | 1,301    | 104       | 125      | 1,097              | 1,626              | 559                         |
|   | 1904    | 6                         | 152                          | 2                             | 18                 | 132                            |                      | 800      | 41        | 87       | 740                | 1,059              | 313                         |
|   | 1899    | 9                         | 300                          | 7                             | 26                 | 207                            |                      | 967      | 41        | 142      | 1,683              | 2,079              | 396                         |
| Confectionery.....  | 1909    | 7                         | 389                          | 2                             | 59                 | 328                            | 493                  | 665      | 47        | 140      | 830                | 1,151              | 312                         |
|   | 1904    | 4                         | 69                           | 5                             | 6                  | 58                             |                      | 129      | 6         | 19       | 97                 | 169                | 72                          |
|   | 1899    |                           |                              |                               |                    |                                |                      |          |           |          |                    |                    |                             |
| Cooperage and wooden goods, not elsewhere specified.                        | 1909    | 6                         | 232                          | 3                             | 27                 | 202                            | 205                  | 424      | 36        | 99       | 351                | 547                | 196                         |
|   | 1904    | 5                         | 207                          | 3                             | 10                 | 254                            |                      | 279      | 11        | 111      | 253                | 471                | 218                         |
|   | 1899    | 5                         |                              |                               | 15                 | 233                            |                      | 253      | 25        | 104      | 234                | 480                | 252                         |
| Copper, tin, and sheet-iron products...                                     | 1909    | 28                        | 436                          | 24                            | 72                 | 340                            | 478                  | 862      | 74        | 241      | 732                | 1,284              | 552                         |
|   | 1904    | 27                        | 293                          | 31                            | 32                 | 233                            |                      | 464      | 36        | 149      | 205                | 510                | 305                         |
|   | 1899    | 13                        |                              |                               | 16                 | 252                            |                      | 422      | 17        | 120      | 188                | 407                | 219                         |
| Electrical machinery, apparatus, and supplies.                              | 1909    | 10                        | 663                          | 6                             | 72                 | 585                            | 522                  | 933      | 85        | 293      | 596                | 1,253              | 657                         |
|   | 1904    | 4                         | 471                          |                               | 47                 | 424                            |                      | 751      | 47        | 154      | 380                | 663                | 283                         |
|   | 1899    | 5                         | 389                          | 1                             | 80                 | 308                            |                      | 500      | 56        | 108      | 277                | 540                | 269                         |
| Foundry and machine-shop products...  | 1909    | 49                        | 2,119                        | 27                            | 302                | 1,790                          | 2,830                | 5,784    | 396       | 1,236    | 1,941              | 4,700              | 2,759                       |
|   | 1904    | 37                        | 2,122                        | 21                            | 202                | 1,890                          |                      | 3,004    | 239       | 1,221    | 1,599              | 3,558              | 2,259                       |
|   | 1899    | 36                        | 1,400                        | 27                            | 160                | 1,213                          |                      | 3,191    | 187       | 707      | 934                | 2,270              | 1,342                       |
| Leather goods.....  | 1909    | 10                        | 571                          | 11                            | 24                 | 536                            | 124                  | 592      | 65        | 228      | 575                | 980                | 411                         |
|   | 1904    | 4                         | 473                          | 3                             | 33                 | 437                            |                      | 563      | 76        | 173      | 407                | 828                | 421                         |
|   | 1899    | 3                         |                              |                               | 16                 | 384                            |                      | 175      | 43        | 143      | 284                | 603                | 319                         |
| Lumber and timber products.....   | 1909    | 20                        | 671                          | 19                            | 66                 | 586                            | 1,053                | 1,395    | 80        | 329      | 936                | 1,619              | 683                         |
|   | 1904    | 12                        | 599                          | 13                            | 54                 | 532                            |                      | 1,188    | 89        | 259      | 1,225              | 1,798              | 573                         |
|   | 1899    | 9                         | 565                          | 6                             | 45                 | 514                            |                      | 1,385    | 61        | 253      | 747                | 1,390              | 643                         |
| Millinery and lace goods.....   | 1909    | 34                        | 730                          | 43                            | 62                 | 625                            | 269                  | 800      | 59        | 269      | 504                | 1,085              | 581                         |
|   | 1904    | 15                        | 231                          | 20                            | 7                  | 204                            |                      | 168      | 8         | 78       | 116                | 277                | 161                         |
|   | 1899    | 7                         | 80                           | 10                            | 1                  | 60                             |                      | 29       | 1         | 28       | 20                 | 65                 | 45                          |
| Paint and varnish.....  | 1909    | 6                         | 156                          | 2                             | 57                 | 97                             | 410                  | 571      | 78        | 63       | 550                | 882                | 320                         |
|   | 1904    | 3                         | 67                           | 1                             | 14                 | 52                             |                      | 309      | 22        | 34       | 244                | 421                | 177                         |
|   | 1899    | 3                         | 67                           | 2                             | 11                 | 54                             |                      | 329      | 17        | 27       | 223                | 342                | 119                         |
| Paper and wood pulp.....  | 1909    | 4                         | 171                          |                               | 14                 | 157                            | 1,250                | 567      | 36        | 90       | 242                | 462                | 220                         |
|   | 1904    | 4                         | 165                          | 2                             | 13                 | 150                            |                      | 482      | 31        | 78       | 202                | 430                | 228                         |
|   | 1899    | 4                         | 140                          | 4                             | 9                  | 127                            |                      | 353      | 21        | 68       | 158                | 315                | 157                         |
| Patent medicines and compounds and druggists' preparations.                 | 1909    | 13                        | 142                          | 7                             | 59                 | 76                             | 185                  | 362      | 76        | 40       | 141                | 479                | 338                         |
|   | 1904    | 15                        | 183                          | 12                            | 50                 | 121                            |                      | 309      | 54        | 51       | 231                | 623                | 392                         |
|   | 1899    | 8                         |                              |                               | 31                 | 61                             |                      | 174      | 26        | 31       | 81                 | 289                | 208                         |
| Printing and publishing.....  | 1909    | 48                        | 648                          | 35                            | 147                | 466                            | 642                  | 1,166    | 161       | 295      | 457                | 1,193              | 736                         |
|   | 1904    | 44                        | 597                          | 47                            | 108                | 442                            |                      | 1,050    | 112       | 302      | 349                | 1,176              | 827                         |
|   | 1899    | 24                        | 651                          | 24                            | 45                 | 582                            |                      | 700      | 61        | 290      | 250                | 739                | 489                         |
| Silk and silk goods, including throwsters.                                  | 1909    | 7                         | 1,093                        | 6                             | 39                 | 1,048                          | 780                  | 1,200    | 54        | 550      | 1,002              | 2,071              | 1,069                       |
|   | 1904    | 6                         | 1,001                        | 7                             | 33                 | 961                            |                      | 1,416    | 42        | 417      | 759                | 1,466              | 707                         |
|   | 1899    | 6                         | 900                          | 7                             | 20                 | 873                            |                      | 674      | 24        | 349      | 604                | 1,275              | 671                         |
| Slaughtering and meat packing.....  | 1909    | 20                        | 1,124                        | 13                            | 255                | 856                            | 945                  | 4,250    | 351       | 593      | 20,537             | 22,314             | 1,777                       |
|   | 1904    | 9                         | 184                          | 13                            | 23                 | 148                            |                      | 349      | 31        | 106      | 7,146              | 7,569              | 423                         |
|   | 1899    | 12                        | 179                          | 17                            | 13                 | 149                            |                      | 374      | 17        | 110      | 5,392              | 5,769              | 317                         |
| Tobacco manufactures.....   | 1909    | 51                        | 2,814                        | 50                            | 187                | 2,577                          | 1,479                | 4,959    | 223       | 943      | 5,886              | 11,065             | 5,179                       |
|   | 1904    | 73                        | 1,610                        | 72                            | 47                 | 1,491                          |                      | 5,323    | 45        | 373      | 644                | 2,162              | 1,518                       |
|   | 1899    | 81                        | 1,710                        | 81                            | 60                 | 1,563                          |                      | 5,486    | 58        | 399      | 1,947              | 6,037              | 4,080                       |
| All other industries.....   | 1909    | 296                       | 14,184                       | 241                           | 2,202              | 11,741                         | 21,703               | 50,962   | 2,704     | 5,894    | 48,336             | 68,327             | 19,991                      |
|   | 1904    | 230                       | 10,976                       | 198                           | 1,440              | 9,332                          |                      | 61,193   | 1,887     | 4,583    | 30,735             | 40,631             | 15,296                      |
|   | 1899    | 226                       |                              |                               | 931                | 7,079                          |                      | 60,722   | 1,281     | 3,541    | 34,744             | 45,847             | 11,103                      |

<sup>1</sup> Excluding statistics for two establishments, to avoid disclosure of individual operations.  
<sup>2</sup> Figures can not be shown without disclosing individual operations.  
<sup>3</sup> Excluding statistics for one establishment, to avoid disclosure of individual operations.

## MANUFACTURES—NEW JERSEY.

TABLE I.—COMPARATIVE SUMMARY FOR 1909, 1904, AND 1899—Continued.

CITIES OF 50,000 INHABITANTS OR MORE—ALL INDUSTRIES COMBINED AND SELECTED INDUSTRIES—Continued.

| INDUSTRY.  | Census. | Number of establishments. | PERSONS ENGAGED IN INDUSTRY. |                               |                     |                                | Primary horse-power. | Capital.  | Salaries. | Wages.   | Cost of materials. | Value of products. | Value added by manufacture. |
|--|---------|---------------------------|------------------------------|-------------------------------|---------------------|--------------------------------|----------------------|-----------|-----------|----------|--------------------|--------------------|-----------------------------|
|  |         |                           | Total.                       | Proprietors and firm members. | Salaries employees. | Wage earners (average number). |                      |           |           |          |                    |                    |                             |
| Expressed in thousands.                            |         |                           |                              |                               |                     |                                |                      |           |           |          |                    |                    |                             |
| <b>NEWARK—All industries</b> .....                 | 1909    | 1,858                     | 69,980                       | 1,704                         | 8,327               | 59,955                         | 78,263               | \$154,233 | \$11,777  | \$33,076 | \$114,679          | \$202,512          | \$87,833                    |
|  | 1904    | 1,600                     | 57,463                       | 1,631                         | 6,135               | 50,697                         | .....                | 119,026   | 6,085     | 25,622   | 80,689             | 150,055            | 69,366                      |
|  | 1899    | 1,573                     | .....                        | .....                         | 4,146               | 42,878                         | .....                | 97,182    | 5,256     | 20,365   | 60,772             | 112,728            | 51,956                      |
| Boots and shoes, including cut stock and findings. | 1909    | 12                        | 1,585                        | 8                             | 128                 | 1,449                          | 490                  | 1,505     | 174       | 704      | 1,673              | 2,901              | 1,228                       |
|  | 1904    | 15                        | 1,650                        | 12                            | 84                  | 1,560                          | .....                | 1,172     | 119       | 098      | 1,470              | 2,732              | 1,262                       |
|  | 1899    | 23                        | .....                        | .....                         | 147                 | 1,665                          | .....                | 1,225     | 167       | 710      | 1,546              | 2,090              | 1,444                       |
| Boxes, fancy and paper.....                        | 1909    | 13                        | 601                          | 10                            | 31                  | 620                            | 301                  | 204       | 35        | 187      | 261                | 648                | 387                         |
|  | 1904    | 11                        | 410                          | 10                            | 16                  | 384                            | .....                | 148       | 12        | 123      | 159                | 342                | 183                         |
|  | 1899    | 9                         | 370                          | 9                             | 10                  | 357                            | .....                | 132       | 9         | 90       | 142                | 301                | 159                         |
| Brass and bronze products.....                     | 1909    | 22                        | 304                          | 18                            | 45                  | 241                            | 264                  | 313       | 47        | 139      | 321                | 611                | 290                         |
|  | 1904    | 21                        | 203                          | 24                            | 12                  | 167                            | .....                | 215       | 15        | 95       | 150                | 347                | 197                         |
|  | 1899    | 16                        | .....                        | .....                         | 7                   | 165                            | .....                | 493       | 5         | 88       | 246                | 421                | 175                         |
| Bread and other bakery products.....               | 1909    | 205                       | 1,357                        | 204                           | 127                 | 1,026                          | 566                  | 1,646     | 163       | 738      | 2,711              | 4,627              | 1,916                       |
|  | 1904    | 163                       | 1,130                        | 163                           | 135                 | 833                            | .....                | 1,347     | 107       | 560      | 1,403              | 3,115              | 1,212                       |
|  | 1899    | 179                       | 1,134                        | 185                           | 140                 | 803                            | .....                | 1,340     | 107       | 433      | 1,498              | 2,540              | 1,042                       |
| Buttons.....                                       | 1909    | 30                        | 1,608                        | 31                            | 78                  | 1,499                          | 786                  | 1,018     | 122       | 625      | 856                | 1,007              | 1,051                       |
|  | 1904    | 27                        | 1,174                        | 28                            | 71                  | 1,075                          | .....                | 654       | 81        | 445      | 511                | 1,282              | 771                         |
|  | 1899    | 23                        | 1,113                        | 31                            | 49                  | 1,033                          | .....                | 432       | 46        | 307      | 362                | 612                | 550                         |
| Carrriages and wagons and materials....            | 1909    | 39                        | 394                          | 48                            | 22                  | 324                            | 277                  | 688       | 27        | 204      | 214                | 500                | 385                         |
|  | 1904    | 44                        | 737                          | 54                            | 37                  | 646                            | .....                | 967       | 54        | 369      | 431                | 1,144              | 713                         |
|  | 1899    | 50                        | .....                        | .....                         | 54                  | 605                            | .....                | 1,165     | 58        | 364      | 537                | 1,243              | 706                         |
| Chemicals.....                                     | 1909    | 9                         | 1,795                        | 3                             | 228                 | 1,504                          | 4,455                | 6,029     | 386       | 823      | 2,404              | 4,805              | 2,401                       |
|  | 1904    | 9                         | 1,557                        | 16                            | 176                 | 1,365                          | .....                | 7,542     | 209       | 630      | 1,705              | 3,065              | 2,170                       |
|  | 1899    | 9                         | 1,231                        | 7                             | 161                 | 1,063                          | .....                | 7,212     | 252       | 503      | 1,461              | 3,113              | 1,652                       |
| Clocks and watches, including cases and materials. | 1909    | 6                         | 586                          | 1                             | 43                  | 542                            | 363                  | 1,763     | 70        | 324      | 569                | 1,179              | 586                         |
|  | 1904    | 3                         | 110                          | 1                             | 12                  | 97                             | .....                | 276       | 19        | 61       | 65                 | 170                | 105                         |
|  | 1899    | 8                         | .....                        | .....                         | 42                  | 606                            | .....                | 1,001     | 59        | 341      | 708                | 1,389              | 596                         |
| Clothing, men's, including shirts.....             | 1909    | 73                        | 2,177                        | 91                            | 90                  | 1,996                          | 285                  | 1,131     | 95        | 998      | 802                | 2,473              | 1,671                       |
|  | 1904    | 48                        | 1,771                        | 59                            | 50                  | 1,662                          | .....                | 665       | 57        | 716      | 672                | 1,850              | 1,173                       |
|  | 1899    | 49                        | .....                        | .....                         | 30                  | 1,250                          | .....                | 359       | 44        | 455      | 319                | 1,143              | 824                         |
| Clothing, women's.....                             | 1909    | 30                        | 2,615                        | 30                            | 265                 | 2,320                          | 382                  | 1,730     | 212       | 767      | 1,560              | 3,349              | 1,780                       |
|  | 1904    | 20                        | 2,041                        | 26                            | 127                 | 1,891                          | .....                | 936       | 121       | 488      | 1,348              | 2,374              | 1,026                       |
|  | 1899    | 24                        | 1,460                        | 27                            | 103                 | 1,330                          | .....                | 932       | 88        | 410      | 710                | 1,043              | 927                         |
| Confectionery.....                                 | 1909    | 16                        | 471                          | 17                            | 73                  | 381                            | 252                  | 1,328     | 70        | 131      | 837                | 1,635              | 798                         |
|  | 1904    | 11                        | 307                          | 16                            | 23                  | 268                            | .....                | 409       | 18        | 96       | 387                | 932                | 545                         |
|  | 1899    | 6                         | .....                        | .....                         | 19                  | 46                             | .....                | 87        | 8         | 20       | 85                 | 164                | 69                          |
| Copper, tin, and sheet-iron products....           | 1909    | 43                        | 2,883                        | 35                            | 185                 | 2,603                          | 1,257                | 3,612     | 281       | 1,424    | 1,800              | 4,166              | 2,366                       |
|  | 1904    | 48                        | 2,646                        | 42                            | 161                 | 2,443                          | .....                | 2,750     | 235       | 1,067    | 1,522              | 3,324              | 1,802                       |
|  | 1899    | 27                        | .....                        | .....                         | 53                  | 1,081                          | .....                | 1,018     | 60        | 410      | 520                | 1,245              | 719                         |
| Cutlery and tools, not elsewhere specified.        | 1909    | 39                        | 1,759                        | 38                            | 145                 | 1,576                          | 1,616                | 2,162     | 192       | 756      | 646                | 2,081              | 1,435                       |
|  | 1904    | 32                        | 1,407                        | 30                            | 97                  | 1,280                          | .....                | 1,667     | 121       | 671      | 546                | 1,722              | 1,176                       |
|  | 1899    | 30                        | .....                        | .....                         | 128                 | 1,366                          | .....                | 1,239     | 147       | 628      | 615                | 1,686              | 1,071                       |
| Electrical machinery, apparatus, and supplies.     | 1909    | 21                        | 3,346                        | 6                             | 520                 | 2,820                          | 2,508                | 7,433     | 658       | 1,516    | 1,482              | 5,617              | 4,135                       |
|  | 1904    | 15                        | 1,538                        | 5                             | 155                 | 1,378                          | .....                | 5,177     | 170       | 670      | 845                | 2,549              | 1,704                       |
|  | 1899    | 12                        | 574                          | 8                             | 91                  | 475                            | .....                | 1,463     | 90        | 204      | 422                | 1,169              | 747                         |
| Fancy articles, not elsewhere specified..          | 1909    | 14                        | 372                          | 19                            | 70                  | 283                            | 251                  | 360       | 52        | 137      | 155                | 439                | 281                         |
|  | 1904    | 11                        | 1,084                        | 6                             | 100                 | 918                            | .....                | 1,022     | 171       | 409      | 552                | 1,583              | 1,031                       |
|  | 1899    | 10                        | .....                        | .....                         | 182                 | 794                            | .....                | 842       | 175       | 321      | 408                | 1,160              | 692                         |
| Foundry and machine-shop products....              | 1909    | 168                       | 7,585                        | 121                           | 797                 | 6,667                          | 8,923                | 13,136    | 1,376     | 4,228    | 6,661              | 15,482             | 8,821                       |
|  | 1904    | 150                       | 6,528                        | 137                           | 593                 | 5,798                          | .....                | 9,780     | 883       | 3,124    | 3,871              | 10,637             | 6,766                       |
|  | 1899    | 149                       | 4,992                        | 138                           | 383                 | 4,471                          | .....                | 7,083     | 519       | 2,216    | 3,166              | 7,717              | 4,551                       |
| Hats, fur-felt.....                                | 1909    | 35                        | 2,384                        | 47                            | 179                 | 2,158                          | 2,553                | 2,176     | 196       | 1,419    | 2,074              | 4,433              | 2,359                       |
|  | 1904    | 37                        | 2,795                        | 44                            | 108                 | 2,583                          | .....                | 2,334     | 107       | 1,502    | 2,204              | 4,686              | 2,382                       |
|  | 1899    | 31                        | 2,395                        | 27                            | 95                  | 2,273                          | .....                | 1,272     | 111       | 1,155    | 1,741              | 3,454              | 1,713                       |
| Jewelry.....                                       | 1909    | 145                       | 4,777                        | 162                           | 766                 | 3,849                          | 1,214                | 11,937    | 1,252     | 2,511    | 6,240              | 13,162             | 6,912                       |
|  | 1904    | 110                       | 3,532                        | 172                           | 384                 | 2,976                          | .....                | 7,133     | 522       | 1,833    | 4,628              | 9,258              | 4,630                       |
|  | 1899    | 98                        | 3,254                        | 165                           | 321                 | 2,768                          | .....                | 5,513     | 395       | 1,556    | 3,823              | 7,364              | 3,541                       |
| Leather goods.....                                 | 1909    | 46                        | 865                          | 43                            | 135                 | 687                            | 505                  | 1,304     | 134       | 382      | 850                | 1,606              | 807                         |
|  | 1904    | 48                        | 906                          | 54                            | 92                  | 700                            | .....                | 911       | 96        | 379      | 907                | 1,811              | 904                         |
|  | 1899    | 36                        | .....                        | .....                         | 78                  | 1,193                          | .....                | 1,128     | 82        | 578      | 988                | 2,050              | 1,062                       |
| Leather, tanned, curried, and finished..           | 1909    | 63                        | 4,149                        | 51                            | 304                 | 3,704                          | 6,786                | 12,837    | 566       | 2,504    | 13,416             | 18,358             | 5,442                       |
|  | 1904    | 52                        | 3,790                        | 48                            | 227                 | 3,524                          | .....                | 9,790     | 347       | 2,108    | 8,610              | 13,578             | 4,968                       |
|  | 1899    | 61                        | 3,562                        | 58                            | 221                 | 3,283                          | .....                | 8,087     | 338       | 1,661    | 7,392              | 10,857             | 3,465                       |
| Liquors, malt.....                                 | 1909    | 14                        | 1,540                        | .....                         | 311                 | 1,229                          | 8,319                | 19,928    | 714       | 1,041    | 2,799              | 12,361             | 9,562                       |
|  | 1904    | 17                        | 1,461                        | 2                             | 305                 | 1,154                          | .....                | 15,824    | 607       | 958      | 2,337              | 10,917             | 8,580                       |
|  | 1899    | 16                        | 1,180                        | 0                             | 204                 | 970                            | .....                | 12,176    | 490       | 775      | 1,654              | 8,236              | 6,582                       |
| Lumber and timber products.....                    | 1909    | 26                        | 829                          | 14                            | 84                  | 781                            | 1,413                | 1,329     | 86        | 346      | 1,076              | 1,916              | 840                         |
|  | 1904    | 27                        | 774                          | 25                            | 53                  | 696                            | .....                | 665       | 53        | 393      | 693                | 1,253              | 560                         |
|  | 1899    | 20                        | 479                          | 17                            | 39                  | 423                            | .....                | 459       | 43        | 183      | 450                | 793                | 343                         |
| Marble and stone work.....                         | 1909    | 28                        | 333                          | 31                            | 31                  | 271                            | 696                  | 713       | 47        | 250      | 322                | 334                | 512                         |
|  | 1904    | 13                        | 412                          | 8                             | 25                  | 379                            | .....                | 486       | 47        | 325      | 288                | 386                | 598                         |
|  | 1899    | 16                        | .....                        | .....                         | 21                  | 376                            | .....                | 430       | 34        | 247      | 325                | 723                | 398                         |

<sup>1</sup> Excluding statistics for two establishments, to avoid disclosure of individual operations.  
<sup>2</sup> Excluding statistics for one establishment, to avoid disclosure of individual operations.

MANUFACTURES—NEW JERSEY.

TABLE I.—COMPARATIVE SUMMARY FOR 1909, 1904, AND 1899—Continued.

CITIES OF 50,000 INHABITANTS OR MORE—ALL INDUSTRIES COMBINED AND SELECTED INDUSTRIES—Continued.

| INDUSTRY.   | Census. | Number of establishments. | PERSONS ENGAGED IN INDUSTRY. |                               |                    |                                | Primary horse-power. | Capital. | Salaries. | Wages.   | Cost of materials. | Value of products. | Value added by manufacture. |
|---|---------|---------------------------|------------------------------|-------------------------------|--------------------|--------------------------------|----------------------|----------|-----------|----------|--------------------|--------------------|-----------------------------|
|   |         |                           | Total.                       | Proprietors and firm members. | Salaried employes. | Wage earners (average number). |                      |          |           |          |                    |                    |                             |
| Expressed in thousands.                                     |         |                           |                              |                               |                    |                                |                      |          |           |          |                    |                    |                             |
| <b>NEWARK—Continued.</b>                                    |         |                           |                              |                               |                    |                                |                      |          |           |          |                    |                    |                             |
| Mattresses and spring beds.....                             | 1909    | 7                         | 323                          | 10                            | 43                 | 270                            | 113                  | \$370    | \$44      | \$131    | \$437              | \$604              | \$227                       |
|   | 1904    | 6                         | 83                           | 7                             | 11                 | 65                             | .....                | 86       | 13        | 35       | 152                | 240                | 88                          |
|   | 1899    | 6                         | .....                        | .....                         | 4                  | 36                             | .....                | 32       | 4         | 17       | 72                 | 110                | 38                          |
| Millinery and lace goods.....                               | 1909    | 9                         | 260                          | 13                            | 15                 | 241                            | 98                   | 215      | 12        | 104      | 201                | 404                | 203                         |
|   | 1904    | 4                         | 327                          | 4                             | 5                  | 318                            | .....                | 217      | 4         | 94       | 181                | 367                | 186                         |
|   | 1899    | .....                     | .....                        | .....                         | .....              | .....                          | .....                | .....    | .....     | .....    | .....              | .....              | .....                       |
| Oil, not elsewhere specified.....                           | 1909    | 5                         | 217                          | .....                         | 88                 | 129                            | 172                  | 1,087    | 133       | 70       | 1,215              | 1,614              | 390                         |
|   | 1904    | 4                         | 92                           | 1                             | 29                 | 62                             | .....                | 434      | 61        | 43       | 753                | 994                | 241                         |
|   | 1899    | 5                         | 70                           | .....                         | 35                 | 44                             | .....                | 322      | 62        | 24       | 424                | 588                | 164                         |
| Paint and varnish.....                                      | 1909    | 25                        | 1,033                        | 6                             | 414                | 613                            | 2,548                | 6,028    | 770       | 385      | 4,208              | 6,733              | 2,465                       |
|   | 1904    | 20                        | 790                          | 5                             | 306                | 479                            | .....                | 4,122    | 475       | 284      | 2,522              | 4,706              | 2,184                       |
|   | 1899    | 23                        | 709                          | 10                            | 277                | 422                            | .....                | 4,561    | 416       | 277      | 1,945              | 3,644              | 1,609                       |
| Patent medicines and compounds and druggists' preparations. | 1909    | 33                        | 244                          | 20                            | 86                 | 138                            | 184                  | 700      | 180       | 63       | 372                | 1,388              | 966                         |
|   | 1904    | 17                        | 138                          | 10                            | 28                 | 100                            | .....                | 404      | 37        | 30       | 183                | 659                | 770                         |
|   | 1899    | 11                        | 77                           | 3                             | 20                 | 54                             | .....                | 40       | 16        | 16       | 64                 | 173                | 109                         |
| Printing and publishing.....                                | 1909    | 118                       | 2,180                        | 120                           | 392                | 1,668                          | 1,307                | 4,273    | 440       | 1,184    | 1,247              | 4,510              | 3,272                       |
|   | 1904    | 81                        | 1,750                        | 86                            | 352                | 1,312                          | .....                | 2,638    | 352       | 743      | 748                | 2,752              | 2,004                       |
|   | 1899    | 283                       | 1,386                        | 80                            | 189                | 1,108                          | .....                | 1,908    | 197       | 580      | 626                | 2,045              | 1,419                       |
| Rubber goods, not elsewhere specified..                     | 1909    | 4                         | 169                          | 2                             | 22                 | 145                            | 470                  | 617      | 34        | 75       | 477                | 691                | 214                         |
|   | 1904    | 4                         | 110                          | 3                             | 9                  | 107                            | .....                | 428      | 16        | 40       | 270                | 434                | 164                         |
|   | 1899    | 5                         | 108                          | 1                             | 7                  | 100                            | .....                | 213      | 11        | 39       | 242                | 361                | 110                         |
| Slaughtering and meat packing.....                          | 1909    | 13                        | 355                          | 12                            | 55                 | 288                            | 687                  | 886      | 55        | 188      | 3,760              | 4,297              | 537                         |
|   | 1904    | 210                       | 232                          | 12                            | 18                 | 202                            | .....                | 422      | 12        | 126      | 2,520              | 2,634              | 414                         |
|   | 1899    | 12                        | .....                        | .....                         | 39                 | 179                            | .....                | 377      | 33        | 96       | 3,292              | 3,559              | 267                         |
| Tobacco manufactures.....                                   | 1909    | 101                       | 1,735                        | 106                           | 104                | 1,525                          | 175                  | 2,298    | 146       | 556      | 1,003              | 2,771              | 1,768                       |
|   | 1904    | 2112                      | 1,413                        | 119                           | 49                 | 1,245                          | .....                | 1,076    | 52        | 406      | 651                | 1,743              | 1,092                       |
|   | 1899    | 2113                      | 824                          | 123                           | 22                 | 679                            | .....                | 561      | 22        | 299      | 379                | 1,040              | 670                         |
| All other industries.....                                   | 1909    | 451                       | 10,086                       | 387                           | 2,451              | 16,248                         | 28,647               | 42,760   | 2,990     | 8,160    | 51,928             | 73,742             | 21,814                      |
|   | 1904    | 401                       | 14,538                       | 403                           | 1,165              | 12,970                         | .....                | 37,314   | 1,372     | 6,083    | 36,815             | 54,569             | 17,754                      |
|   | 1899    | 404                       | 76                           | 4                             | 969                | 11,710                         | .....                | 33,474   | 1,168     | 5,242    | 24,453             | 38,896             | 14,443                      |
| <b>PASSAIC—All industries.....</b>                          |         |                           |                              |                               |                    |                                |                      |          |           |          |                    |                    |                             |
|   | 1909    | 169                       | 16,386                       | 145                           | 1,155              | 15,086                         | 23,245               | \$42,841 | \$1,784   | \$6,269  | \$24,335           | \$41,729           | \$17,394                    |
|   | 1904    | 95                        | 11,854                       | 78                            | 770                | 11,000                         | .....                | 28,611   | 1,073     | 3,866    | 13,110             | 22,783             | 9,673                       |
|   | 1899    | 70                        | .....                        | .....                         | 403                | 6,399                          | .....                | 18,377   | 623       | 2,374    | 7,418              | 12,805             | 5,387                       |
| Bread and other bakery products.....                        | 1909    | 42                        | 196                          | 46                            | 15                 | 135                            | 30                   | 192      | 7         | 92       | 321                | 554                | 233                         |
|   | 1904    | 17                        | 73                           | 17                            | 3                  | 53                             | .....                | 68       | 3         | 28       | 110                | 176                | 66                          |
|   | 1899    | 17                        | 65                           | 16                            | .....              | 49                             | .....                | 63       | .....     | 23       | 84                 | 195                | 111                         |
| Cotton goods, including cotton small wares.                 | 1909    | 5                         | 1,371                        | .....                         | 65                 | 1,306                          | 2,510                | 3,529    | 112       | 544      | 2,544              | 3,954              | 1,410                       |
|   | 1904    | 3                         | 549                          | .....                         | 42                 | 507                            | .....                | 1,930    | 80        | 183      | 685                | 1,123              | 438                         |
|   | 1899    | .....                     | .....                        | .....                         | .....              | .....                          | .....                | .....    | .....     | .....    | .....              | .....              | .....                       |
| Foundry and machine-shop products...                        | 1909    | 13                        | 282                          | 13                            | 68                 | 201                            | 468                  | 710      | 90        | 132      | 318                | 692                | 374                         |
|   | 1904    | 9                         | 396                          | 9                             | 111                | 276                            | .....                | 674      | 120       | 145      | 239                | 792                | 553                         |
|   | 1899    | 6                         | 75                           | 7                             | 4                  | 64                             | .....                | 123      | 8         | 30       | 111                | 175                | 64                          |
| Woolen, worsted, and felt goods, and wool hats.             | 1909    | 6                         | 7,184                        | 6                             | 293                | 6,885                          | 8,960                | 20,889   | 547       | 2,752    | 8,944              | 16,582             | 7,638                       |
|   | 1904    | 24                        | 848                          | .....                         | 20                 | 828                            | .....                | 1,088    | 34        | 298      | 584                | 1,038              | 454                         |
|   | 1899    | 23                        | 500                          | .....                         | 14                 | 486                            | .....                | 1,833    | 27        | 168      | 388                | 737                | 349                         |
| All other industries.....                                   | 1909    | 103                       | 7,353                        | 80                            | 714                | 6,559                          | 11,277               | 17,521   | 1,028     | 2,749    | 12,208             | 19,947             | 7,739                       |
|   | 1904    | 62                        | 9,088                        | 52                            | 600                | 9,336                          | .....                | 24,251   | 827       | 3,212    | 11,492             | 19,654             | 8,162                       |
|   | 1899    | 44                        | 1,372                        | .....                         | 385                | 5,800                          | .....                | 17,358   | 588       | 2,147    | 6,835              | 11,698             | 4,863                       |
| <b>PATERSON—All industries.....</b>                         |         |                           |                              |                               |                    |                                |                      |          |           |          |                    |                    |                             |
|   | 1909    | 702                       | 35,116                       | 871                           | 2,241              | 32,004                         | 35,889               | \$66,402 | \$2,981   | \$15,205 | \$34,728           | \$69,584           | \$34,856                    |
|   | 1904    | 513                       | 30,875                       | 507                           | 1,859              | 28,599                         | .....                | 53,666   | 2,164     | 13,002   | 27,441             | 54,673             | 27,232                      |
|   | 1899    | 487                       | .....                        | .....                         | 1,190              | 28,542                         | .....                | 46,894   | 1,588     | 11,843   | 25,055             | 48,502             | 23,447                      |
| Bread and other bakery products.....                        | 1909    | 86                        | 572                          | 312                           | 22                 | 238                            | 95                   | 388      | 11        | 155      | 692                | 1,011              | 319                         |
|   | 1904    | 73                        | 266                          | 82                            | 11                 | 173                            | .....                | 241      | 4         | 101      | 419                | 632                | 213                         |
|   | 1899    | 80                        | 224                          | 86                            | .....              | 138                            | .....                | 243      | .....     | 75       | 294                | 520                | 226                         |
| Clothing, men's, including shirts.....                      | 1909    | 12                        | 1,985                        | 11                            | 118                | 1,866                          | 411                  | 2,219    | 157       | 828      | 2,016              | 3,445              | 1,429                       |
|   | 1904    | 20                        | 1,147                        | 15                            | 30                 | 1,102                          | .....                | 447      | 20        | 412      | 731                | 1,088              | 957                         |
|   | 1899    | 23                        | 987                          | 8                             | 17                 | 962                            | .....                | 533      | 16        | 398      | 433                | 942                | 509                         |
| Cordage and twine and jute and linen goods.                 | 1909    | 5                         | 2,007                        | .....                         | 72                 | 1,935                          | 4,150                | 3,671    | 79        | 576      | 1,882              | 2,794              | 912                         |
|   | 1904    | 23                        | 733                          | .....                         | 25                 | 708                            | .....                | 1,143    | 38        | 227      | 497                | 929                | 432                         |
|   | 1899    | 4                         | .....                        | .....                         | 35                 | 1,422                          | .....                | 2,016    | 49        | 394      | 1,066              | 1,902              | 806                         |
| Cotton goods, including cotton small wares.                 | 1909    | 6                         | 272                          | 6                             | 42                 | 224                            | 305                  | 604      | 27        | 78       | 204                | 380                | 176                         |
|   | 1904    | 3                         | 96                           | 2                             | 8                  | 86                             | .....                | 180      | 5         | 18       | 72                 | 131                | 59                          |
|   | 1899    | 3                         | .....                        | .....                         | 6                  | 174                            | .....                | 358      | 26        | 64       | 155                | 288                | 133                         |
| Dyeing and finishing textiles.....                          | 1909    | 24                        | 3,858                        | 14                            | 194                | 3,650                          | 7,739                | 11,048   | 320       | 1,832    | 2,759              | 6,207              | 3,448                       |
|   | 1904    | 27                        | 3,270                        | 12                            | 193                | 3,074                          | .....                | 4,190    | 282       | 1,567    | 2,694              | 5,699              | 3,005                       |
|   | 1899    | 30                        | 2,882                        | 24                            | 151                | 2,707                          | .....                | 2,826    | 221       | 1,185    | 1,809              | 3,836              | 2,027                       |
| Foundry and machine-shop products...                        | 1909    | 47                        | 2,530                        | 44                            | 217                | 2,269                          | 1,880                | 6,594    | 280       | 1,178    | 1,535              | 3,797              | 2,262                       |
|   | 1904    | 242                       | 1,980                        | 41                            | 166                | 1,773                          | .....                | 3,004    | 208       | 797      | 778                | 2,430              | 1,652                       |
|   | 1899    | 242                       | 4,088                        | 39                            | 160                | 3,880                          | .....                | 6,609    | 234       | 1,858    | 3,127              | 5,956              | 2,829                       |

1 Figures can not be shown without disclosing individual operations.  
 2 Excluding statistics for one establishment, to avoid disclosure of individual operations.  
 3 Excluding statistics for two establishments, to avoid disclosure of individual operations.

## MANUFACTURES—NEW JERSEY.

TABLE I.—COMPARATIVE SUMMARY FOR 1909, 1904, AND 1899—Continued.

CITIES OF 50,000 INHABITANTS OR MORE—ALL INDUSTRIES COMBINED AND SELECTED INDUSTRIES—Continued.

| INDUSTRY.                                     | Census. | Number of establishments. | PERSONS ENGAGED IN INDUSTRY. |                               |                    |                                | Primary horse-power. | Capital. | Salaries. | Wages.  | Cost of materials. | Value of products. | Value added by manufacture. |
|---|---------|---------------------------|------------------------------|-------------------------------|--------------------|--------------------------------|----------------------|----------|-----------|---------|--------------------|--------------------|-----------------------------|
|   |         |                           | Total.                       | Proprietors and firm members. | Salaried employes. | Wage earners (average number). |                      |          |           |         |                    |                    |                             |
| Expressed in thousands.                       |         |                           |                              |                               |                    |                                |                      |          |           |         |                    |                    |                             |
| <b>PATERSON—Continued.</b>                    |         |                           |                              |                               |                    |                                |                      |          |           |         |                    |                    |                             |
| Lumber and timber products.....               | 1909    | 8                         | 193                          | 5                             | 25                 | 103                            | 361                  | \$353    | \$28      | \$99    | \$234              | \$420              | \$186                       |
|   | 1904    | 16                        | 112                          | 6                             | 31                 | 75                             | .....                | 405      | 28        | 41      | 163                | 259                | 96                          |
|   | 1899    | 13                        | 33                           | 2                             | 6                  | 25                             | .....                | 111      | 4         | 11      | 72                 | 101                | 29                          |
| Printing and publishing.....                  | 1909    | 42                        | 425                          | 38                            | 75                 | 312                            | 471                  | 644      | 73        | 183     | 159                | 610                | 451                         |
|   | 1904    | 130                       | 304                          | 27                            | 53                 | 224                            | .....                | 530      | 51        | 128     | 120                | 393                | 273                         |
|   | 1899    | 122                       | 224                          | 15                            | 29                 | 180                            | .....                | 452      | 36        | 108     | 63                 | 296                | 233                         |
| Silk and silk goods, including throwsters.    | 1909    | 276                       | 20,099                       | 250                           | 1,021              | 18,828                         | 13,361               | 26,447   | 1,456     | 8,872   | 19,529             | 40,358             | 20,838                      |
|   | 1904    | 190                       | 15,562                       | 190                           | 748                | 14,624                         | .....                | 18,725   | 883       | 6,107   | 13,004             | 25,433             | 12,429                      |
|   | 1899    | 136                       | 16,704                       | 159                           | 602                | 15,943                         | .....                | 19,026   | 736       | 6,292   | 14,106             | 26,006             | 11,900                      |
| Slaughtering and meat packing.....            | 1909    | 6                         | 166                          | 4                             | 47                 | 115                            | 408                  | 578      | 73        | 118     | 2,529              | 3,003              | 474                         |
|   | 1904    | 3                         | 156                          | 1                             | 28                 | 127                            | .....                | 900      | 37        | 95      | 1,965              | 2,207              | 242                         |
|   | 1899    | 3                         | 90                           | 4                             | 11                 | 75                             | .....                | 400      | 15        | 42      | 1,043              | 1,370              | 327                         |
| Tobacco manufactures.....                     | 1909    | 37                        | 208                          | 42                            | 7                  | 159                            | 26                   | 169      | 10        | 90      | 172                | 333                | 161                         |
|   | 1904    | 37                        | 185                          | 36                            | 10                 | 139                            | .....                | 124      | 19        | 83      | 113                | 297                | 184                         |
|   | 1899    | 128                       | 103                          | 28                            | 4                  | 71                             | .....                | 87       | 2         | 38      | 66                 | 146                | 80                          |
| All other industries.....                     | 1909    | 153                       | 2,801                        | 145                           | 401                | 2,255                          | 6,622                | 13,627   | 467       | 1,196   | 3,026              | 7,226              | 4,200                       |
|   | 1904    | 93                        | 7,055                        | 95                            | 556                | 6,404                          | .....                | 24,107   | 589       | 3,426   | 6,885              | 14,575             | 7,690                       |
|   | 1899    | 133                       | .....                        | .....                         | 169                | 2,965                          | .....                | 14,163   | 240       | 1,378   | 2,791              | 7,139              | 4,348                       |
| <b>TRENTON—All Industries.....</b>            |         |                           |                              |                               |                    |                                |                      |          |           |         |                    |                    |                             |
|   | 1909    | 340                       | 20,679                       | 295                           | 1,841              | 18,543                         | 29,839               | \$46,639 | \$2,232   | \$9,726 | \$27,673           | \$49,009           | \$21,336                    |
|   | 1904    | 311                       | 15,435                       | 293                           | 1,012              | 14,130                         | .....                | 40,861   | 1,311     | 6,921   | 17,551             | 32,360             | 14,809                      |
|   | 1899    | 246                       | .....                        | .....                         | 739                | 13,138                         | .....                | 24,625   | 903       | 6,003   | 16,581             | 28,458             | 11,877                      |
| Bread and other bakery products.....          | 1909    | 48                        | 442                          | 53                            | 40                 | 349                            | 221                  | 496      | 20        | 187     | 832                | 1,270              | 447                         |
|   | 1904    | 43                        | 359                          | 56                            | 21                 | 282                            | .....                | 340      | 15        | 144     | 541                | 867                | 326                         |
|   | 1899    | 45                        | 300                          | 50                            | 21                 | 229                            | .....                | 266      | 13        | 100     | 285                | 550                | 206                         |
| Clothing, men's, including shirts.....        | 1909    | 6                         | 240                          | 9                             | 17                 | 214                            | 52                   | 217      | 22        | 57      | 247                | 375                | 125                         |
|   | 1904    | 4                         | 69                           | 7                             | 6                  | 56                             | .....                | 41       | 5         | 26      | 86                 | 168                | 72                          |
|   | 1899    | .....                     | .....                        | .....                         | .....              | .....                          | .....                | .....    | .....     | .....   | .....              | .....              | .....                       |
| Confectionery.....                            | 1909    | 10                        | 188                          | 8                             | 37                 | 143                            | 96                   | 190      | 31        | 43      | 189                | 374                | 185                         |
|   | 1904    | 3                         | 53                           | 2                             | 4                  | 47                             | .....                | 84       | 6         | 21      | 71                 | 128                | 57                          |
|   | 1899    | .....                     | .....                        | .....                         | .....              | .....                          | .....                | .....    | .....     | .....   | .....              | .....              | .....                       |
| Foundry and machine-shop products...          | 1909    | 28                        | 2,261                        | 21                            | 242                | 1,908                          | 3,327                | 4,960    | 278       | 1,006   | 1,785              | 3,838              | 2,053                       |
|   | 1904    | 27                        | 1,095                        | 25                            | 108                | 962                            | .....                | 2,255    | 122       | 546     | 1,142              | 2,089              | 947                         |
|   | 1899    | 17                        | 687                          | 13                            | 40                 | 634                            | .....                | 621      | 57        | 282     | 419                | 894                | 475                         |
| Furniture and refrigerators.....              | 1909    | 4                         | 246                          | 3                             | 26                 | 217                            | 282                  | 355      | 24        | 131     | 135                | 392                | 257                         |
|   | 1904    | 3                         | 180                          | 1                             | 13                 | 166                            | .....                | 335      | 18        | 108     | 137                | 344                | 207                         |
|   | 1899    | 14                        | .....                        | .....                         | 16                 | 95                             | .....                | 95       | 13        | 41      | 48                 | 129                | 81                          |
| Pottery, terra-cotta, and fire-clay products. | 1909    | 34                        | 5,347                        | 13                            | 304                | 5,030                          | 3,113                | 8,892    | 451       | 3,143   | 2,635              | 6,996              | 4,061                       |
|   | 1904    | 40                        | 4,876                        | 24                            | 281                | 4,571                          | .....                | 8,489    | 397       | 2,474   | 1,446              | 5,883              | 4,437                       |
|   | 1899    | 29                        | 4,521                        | 34                            | 108                | 4,289                          | .....                | 7,097    | 200       | 2,344   | 1,166              | 4,785              | 3,589                       |
| Printing and publishing.....                  | 1909    | 35                        | 431                          | 40                            | 67                 | 324                            | 255                  | 641      | 81        | 223     | 188                | 738                | 550                         |
|   | 1904    | 33                        | 320                          | 38                            | 46                 | 236                            | .....                | 577      | 46        | 172     | 130                | 505                | 375                         |
|   | 1899    | 20                        | 275                          | 21                            | 36                 | 218                            | .....                | 476      | 26        | 139     | 93                 | 382                | 289                         |
| Rubber goods, not elsewhere specified...      | 1909    | 8                         | 1,059                        | 1                             | 122                | 936                            | 2,614                | 2,930    | 176       | 501     | 3,081              | 4,900              | 1,288                       |
|   | 1904    | 5                         | 391                          | .....                         | 45                 | 346                            | .....                | 789      | 46        | 165     | 715                | 1,114              | 399                         |
|   | 1899    | 6                         | 584                          | .....                         | 54                 | 530                            | .....                | 1,225    | 90        | 228     | 957                | 1,690              | 733                         |
| Slaughtering and meat packing.....            | 1909    | 9                         | 66                           | 10                            | 9                  | 47                             | 104                  | 202      | 5         | 30      | 541                | 636                | 95                          |
|   | 1904    | 4                         | 27                           | 5                             | 1                  | 21                             | .....                | 86       | 1         | 11      | 60                 | 90                 | 30                          |
|   | 1899    | .....                     | .....                        | .....                         | .....              | .....                          | .....                | .....    | .....     | .....   | .....              | .....              | .....                       |
| Tobacco manufactures.....                     | 1909    | 19                        | 1,116                        | 17                            | 71                 | 1,028                          | 120                  | 408      | 93        | 287     | 599                | 1,528              | 929                         |
|   | 1904    | 31                        | 559                          | 29                            | 35                 | 495                            | .....                | 1,215    | 28        | 119     | 258                | 562                | 304                         |
|   | 1899    | 20                        | 63                           | 20                            | 1                  | 42                             | .....                | 29       | (4)       | 22      | 27                 | 72                 | 45                          |
| All other industries.....                     | 1909    | 139                       | 9,283                        | 120                           | 906                | 8,257                          | 19,655               | 27,348   | 1,042     | 4,028   | 17,441             | 27,884             | 10,443                      |
|   | 1904    | 118                       | 7,506                        | 106                           | 452                | 6,948                          | .....                | 26,650   | 627       | 3,135   | 12,955             | 20,620             | 7,655                       |
|   | 1899    | 105                       | .....                        | .....                         | 373                | 7,101                          | .....                | 14,816   | 444       | 2,847   | 13,556             | 19,966             | 6,400                       |

1 Excluding statistics for one establishment, to avoid disclosure of individual operations.  
2 Excluding statistics for two establishments, to avoid disclosure of individual operations.  
3 Figures can not be shown without disclosing individual operations.  
4 Less than \$500.



MANUFACTURES—NEW JERSEY.

TABLE I.—COMPARATIVE SUMMARY FOR 1909, 1904, AND 1899—Continued.

CITIES OF 10,000 TO 50,000 INHABITANTS—ALL INDUSTRIES COMBINED.

| CITY, TOWN, OR BOROUGH. | Census.              | Number of establishments. | PERSONS ENGAGED IN INDUSTRY. |                               |                    |                                | Primary horse-power. | Capital.                  | Salaries.           | Wages.                  | Cost of materials.         | Value of products.         | Value added by manufacture. |
|-------------------------|----------------------|---------------------------|------------------------------|-------------------------------|--------------------|--------------------------------|----------------------|---------------------------|---------------------|-------------------------|----------------------------|----------------------------|-----------------------------|
|                         |                      |                           | Total.                       | Proprietors and firm members. | Salaried employes. | Wage earners (average number). |                      |                           |                     |                         |                            |                            |                             |
|                         |                      |                           |                              |                               |                    |                                |                      |                           |                     |                         |                            |                            |                             |
| Asbury Park             | 1909<br>1904<br>1899 | 27                        | 332                          | 28                            | 40                 | 264                            | 302                  | \$537                     | \$30                | \$175                   | \$294                      | \$602                      | \$308                       |
| Atlantic City           | 1909<br>1904<br>1899 | 94<br>62<br>36            | 973<br>512                   | 94<br>64                      | 153<br>67<br>32    | 726<br>381<br>305              | 1,718                | 4,242<br>1,919<br>1,332   | 110<br>53<br>20     | 480<br>223<br>165       | 1,136<br>365<br>281        | 2,260<br>975<br>608        | 1,124<br>610<br>327         |
| Bloomfield              | 1909<br>1904<br>1899 | 45<br>33<br>39            | 3,435<br>2,182               | 35<br>28                      | 443<br>201<br>142  | 2,957<br>1,803<br>1,612        | 6,031                | 7,769<br>4,177<br>3,194   | 591<br>314<br>221   | 1,401<br>1,024<br>770   | 2,301<br>1,750<br>1,706    | 5,895<br>4,045<br>3,371    | 3,594<br>2,895<br>1,665     |
| Bridgeton               | 1909<br>1904<br>1899 | 74<br>61<br>62            | 2,649<br>2,492               | 62<br>54                      | 200<br>162<br>115  | 2,387<br>2,276<br>2,182        | 2,105                | 3,302<br>2,147<br>2,155   | 207<br>128<br>108   | 1,163<br>1,014<br>749   | 1,967<br>1,239<br>1,043    | 4,071<br>2,904<br>2,259    | 2,074<br>1,725<br>1,216     |
| East Orange             | 1909<br>1904<br>1899 | 42<br>17<br>22            | 1,861<br>1,251               | 45<br>14                      | 430<br>383<br>150  | 1,386<br>854<br>690            | 1,987                | 3,849<br>3,048<br>1,896   | 264<br>267<br>186   | 858<br>454<br>356       | 1,768<br>1,108<br>911      | 3,725<br>2,327<br>2,087    | 1,957<br>1,218<br>1,176     |
| Garfield                | 1909<br>1904<br>1899 | 25                        | 2,661                        | 20                            | 111                | 2,530                          | 5,416                | 8,006                     | 205                 | 1,080                   | 5,076                      | 8,804                      | 2,918                       |
| Hackensack              | 1909<br>1904<br>1899 | 46<br>23<br>21            | 873<br>899                   | 44<br>18                      | 91<br>69<br>29     | 738<br>812<br>487              | 1,021                | 1,846<br>2,033<br>1,509   | 119<br>57<br>22     | 360<br>278<br>173       | 809<br>687<br>371          | 1,978<br>1,488<br>782      | 1,079<br>801<br>411         |
| Harrison                | 1909<br>1904<br>1899 | 54<br>41<br>41            | 7,339<br>4,472               | 33<br>19                      | 806<br>413<br>202  | 6,500<br>4,040<br>2,859        | 8,021                | 20,602<br>11,389<br>5,076 | 925<br>3,629<br>234 | 3,672<br>1,929<br>1,381 | 5,413<br>8,409<br>3,202    | 13,142<br>4,780<br>6,086   | 7,729<br>4,780<br>2,884     |
| Irlington               | 1909<br>1904<br>1899 | 51                        | 656                          | 40                            | 76                 | 540                            | 967                  | 1,406                     | 163                 | 278                     | 2,343                      | 3,018                      | 675                         |
| Kearny                  | 1909<br>1904<br>1899 | 18<br>11<br>16            | 3,111<br>1,362               | 14<br>15                      | 277<br>44<br>28    | 2,820<br>1,303<br>980          | 5,879                | 6,551<br>2,925<br>1,983   | 269<br>63<br>43     | 1,540<br>505<br>359     | 5,263<br>3,505<br>984      | 8,306<br>4,428<br>1,607    | 3,043<br>923<br>623         |
| Long Branch             | 1909<br>1904<br>1899 | 34<br>26<br>11            | 562<br>397                   | 36<br>36                      | 111<br>67<br>23    | 415<br>294<br>96               | 922                  | 2,302<br>2,038<br>1,762   | 75<br>155<br>18     | 225<br>155<br>49        | 584<br>207<br>109          | 1,117<br>577<br>281        | 533<br>370<br>172           |
| Millville               | 1909<br>1904<br>1899 | 39<br>35<br>18            | 3,144<br>3,022               | 37<br>26                      | 346<br>229<br>152  | 2,761<br>2,767<br>2,239        | 3,681                | 3,578<br>3,810<br>3,169   | 368<br>236<br>160   | 1,424<br>1,528<br>1,098 | 1,599<br>1,384<br>919      | 4,182<br>3,719<br>2,513    | 2,583<br>2,336<br>1,594     |
| Montclair               | 1909<br>1904<br>1899 | 23<br>19<br>23            | 321<br>188                   | 17<br>17                      | 52<br>20<br>12     | 252<br>151<br>169              | 1,245                | 1,105<br>596<br>505       | 44<br>72<br>14      | 139<br>72<br>86         | 660<br>419<br>386          | 1,026<br>621<br>664        | 357<br>292<br>278           |
| Morristown              | 1909<br>1904<br>1899 | 31<br>26<br>22            | 278<br>359                   | 32<br>27                      | 45<br>25<br>36     | 201<br>307<br>252              | 766                  | 948<br>752<br>747         | 39<br>22<br>24      | 130<br>171<br>146       | 369<br>290<br>310          | 724<br>704<br>596          | 355<br>405<br>286           |
| New Brunswick           | 1909<br>1904<br>1899 | 93<br>71<br>72            | 5,948<br>4,991               | 72<br>63                      | 612<br>498<br>238  | 5,264<br>4,590<br>3,836        | 6,337                | 11,189<br>10,393<br>6,310 | 780<br>400<br>303   | 2,020<br>1,792<br>1,304 | 4,549<br>4,158<br>2,994    | 10,005<br>8,917<br>5,791   | 5,456<br>4,759<br>2,797     |
| Orange                  | 1909<br>1904<br>1899 | 85<br>66<br>74            | 5,054<br>2,687               | 65<br>80                      | 606<br>157<br>50   | 4,383<br>2,450<br>1,640        | 5,962                | 11,148<br>3,441<br>1,300  | 772<br>192<br>46    | 2,463<br>1,312<br>912   | 3,688<br>2,642<br>1,580    | 9,176<br>6,151<br>2,996    | 5,488<br>3,509<br>1,416     |
| Perth Amboy             | 1909<br>1904<br>1899 | 80<br>53<br>47            | 6,595<br>4,333               | 55<br>37                      | 674<br>346<br>157  | 5,866<br>3,950<br>2,005        | 22,314               | 25,100<br>11,583<br>6,374 | 986<br>400<br>185   | 2,679<br>1,827<br>920   | 63,932<br>30,316<br>11,347 | 73,093<br>34,800<br>14,061 | 9,161<br>4,484<br>2,714     |
| Phillipsburg            | 1909<br>1904<br>1899 | 39<br>32<br>34            | 3,753<br>3,279               | 27<br>21                      | 294<br>110<br>74   | 3,432<br>3,148<br>2,216        | 7,061                | 9,764<br>6,723<br>3,308   | 362<br>179<br>104   | 1,732<br>1,472<br>887   | 4,770<br>3,566<br>2,803    | 9,150<br>6,684<br>4,585    | 4,380<br>3,118<br>1,782     |
| Plainfield              | 1909<br>1904<br>1899 | 60<br>49<br>32            | 2,027<br>2,283               | 55<br>51                      | 214<br>246<br>121  | 1,758<br>1,980<br>1,384        | 3,912                | 6,508<br>5,101<br>2,450   | 281<br>238<br>139   | 968<br>1,026<br>761     | 1,530<br>1,154<br>813      | 3,649<br>3,572<br>2,437    | 2,119<br>2,418<br>1,624     |
| Union                   | 1909<br>1904<br>1899 | 83<br>77<br>57            | 3,155<br>2,038               | 83<br>78                      | 178<br>104<br>92   | 2,804<br>1,856<br>1,376        | 3,034                | 10,910<br>7,295<br>5,354  | 230<br>183<br>164   | 1,411<br>875<br>665     | 3,539<br>1,392<br>1,408    | 7,941<br>3,512<br>3,403    | 4,402<br>2,121<br>1,995     |
| West Hoboken            | 1909<br>1904<br>1899 | 137<br>95<br>65           | 3,179<br>3,923               | 154<br>102                    | 243<br>259<br>172  | 2,782<br>3,562<br>2,733        | 1,477                | 4,861<br>6,015<br>3,732   | 268<br>258<br>152   | 1,425<br>3,122<br>1,059 | 2,488<br>3,122<br>2,529    | 5,577<br>5,947<br>4,769    | 3,089<br>2,825<br>2,240     |
| West New York           | 1909<br>1904<br>1899 | 66                        | 1,779                        | 70                            | 201                | 1,508                          | 1,443                | 4,163                     | 287                 | 720                     | 7,400                      | 9,274                      | 1,865                       |
| West Orange             | 1909<br>1904<br>1899 | 10                        | 530                          | 8                             | 46                 | 476                            | 1,032                | 1,004                     | 44                  | 285                     | 399                        | 748                        | 349                         |

1Figures not available.

MANUFACTURES—NEW JERSEY.

TABLE II.—DETAIL STATEMENT FOR

| INDUSTRY.  | Number of establishments | PERSONS ENGAGED IN INDUSTRY. |                               |   |         |         |                 |                     |                     |        |         | WAGE EARNERS—NUMBER DEC. 15, OR NEAREST REPRESENTATIVE DAY. |              |         |           |  | Primary horse-power. |
|--|--------------------------|------------------------------|-------------------------------|---|---------|---------|-----------------|---------------------|---------------------|--------|---------|---|--------------|---------|-----------|--|----------------------|
|  |                          | Total.                       | Proprietors and firm members. | Salaried officers, supts. and managers. | Clerks. |         | Wage earners.   |                     |                     |        |         | Total.  | 16 and over. |         | Under 16. |  |                      |
|  |                          |                              |                               |   | Male.   | Female. | Average number. | Number.             |                     | Male.  | Female. |   | Male.        | Female. |           |  |                      |
|  |                          |                              |                               |   |         |         |                 | Maximum month.      | Minimum month.      |        |         |   |              |         |           |  |                      |
| 1 All industries .....   | 8,817                    | 371,265                      | 8,204                         | 9,377                                   | 21,652  | 5,809   | 326,223         | De 343,389          | Ja 313,158          | (1)    | (1)     | (1)   | (1)          | (1)     | 612,293   |  |                      |
| 2 Agricultural implements .....  | 10                       | 294                          | 9                             | 17                                      | 36      | 8       | 224             | Ap 277              | Au 181              | 219    | 217     | 1   | 1            | .....   | 724       |  |                      |
| 3 Artificial flowers and feathers and plumes .....                                   | 15                       | 106                          | 19                            | 1                                       | 5       | 1       | 80              | Mh 113              | Je 54               | 90     | 10      | 77  | 1            | 2       | 16        |  |                      |
| 4 Artificial stone .....   | 97                       | 642                          | 100                           | 34                                      | 14      | 6       | 488             | My 577              | Fe 374              | 534    | 533     | .....   | 1            | .....   | 430       |  |                      |
| 5 Automobiles, including bodies and parts .....                                      | 24                       | 1,159                        | 8                             | 51                                      | 50      | 26      | 1,024           | De 1,211            | Ja 897              | 1,211  | 1,202   | 10  | 0            | .....   | 1,311     |  |                      |
| 6 Baskets, and rattan and willow ware .....  | 32                       | 181                          | 36                            | 4                                       | .....   | .....   | 141             | My 157              | De 110              | 145    | 134     | 6   | 5            | .....   | 341       |  |                      |
| 7 Belting and hose, leather .....  | 8                        | 75                           | 10                            | 5                                       | 11      | 3       | 46              | Ja <sup>2</sup> 47  | Ap 45               | 46     | 43      | 2   | 1            | .....   | 50        |  |                      |
| 8 Belting and hose, woven and rubber .....   | 12                       | 2,583                        | .....                         | 55                                      | 186     | 47      | 2,295           | De 2,551            | My 2,185            | 2,566  | 2,208   | 347   | 8            | 3       | 8,748     |  |                      |
| 9 Blacking and cleansing and polishing preparations .....                            | 35                       | 336                          | 28                            | 30                                      | 14      | 11      | 233             | No 333              | Jy 184              | 303    | 173     | 99  | 20           | 11      | 631       |  |                      |
| 10 Boots and shoes, including cut stock and findings .....                           | 53                       | 4,002                        | 46                            | 111                                     | 153     | 60      | 4,232           | De 4,366            | Ap 4,126            | 4,369  | 2,656   | 1,587   | 68           | 58      | 1,500     |  |                      |
| 11 Boxes, cigar .....  | 5                        | 81                           | 5                             | 2                                       | 1       | 2       | 71              | Ja 74               | Ap 68               | 72     | 20      | 37  | .....        | 15      | 56        |  |                      |
| 12 Boxes, fancy and paper .....  | 46                       | 2,321                        | 36                            | 55                                      | 56      | 32      | 2,142           | No 2,292            | Fe 2,046            | 2,271  | 734     | 1,387   | 24           | 120     | 1,224     |  |                      |
| 13 Brass and bronze products .....   | 66                       | 1,488                        | 61                            | 68                                      | 73      | 21      | 1,265           | De 1,430            | Ja 1,157            | 1,426  | 1,301   | 20  | 15           | .....   | 4,431     |  |                      |
| 14 Bread and other bakery products .....   | 1,217                    | 6,966                        | 1,498                         | 86                                      | 253     | 193     | 4,936           | Au 5,112            | Ja 4,843            | 5,018  | 4,703   | 244   | 67           | 4       | 2,184     |  |                      |
| 15 Brick and tile .....  | 76                       | 3,610                        | 64                            | 75                                      | 72      | 3       | 3,405           | Au 4,621            | Ja 1,520            | 3,060  | 3,877   | 36  | 47           | .....   | 11,410    |  |                      |
| 16 Brooms .....  | 8                        | 83                           | 8                             | 5                                       | 6       | 3       | 61              | Ja 67               | Oc 57               | 58     | 47      | 11  | .....        | 41      |           |  |                      |
| 17 Brushes .....   | 25                       | 968                          | 20                            | 31                                      | 50      | 13      | 854             | De 912              | Jy 812              | 912    | 610     | 255   | 26           | 21      | 682       |  |                      |
| 18 Butter, cheese, and condensed milk .....  | 20                       | 102                          | 15                            | 8                                       | 3       | 3       | 73              | Jy <sup>2</sup> 79  | Ja <sup>2</sup> 69  | 72     | 72      | .....   | .....        | .....   | 771       |  |                      |
| 19 Buttons .....   | 64                       | 2,433                        | 69                            | 46                                      | 34      | 23      | 2,261           | Oc 2,340            | Je 2,154            | 2,294  | 1,490   | 721   | 36           | 47      | 1,232     |  |                      |
| 20 Canning and preserving .....  | 84                       | 2,051                        | 85                            | 61                                      | 67      | 20      | 1,818           | Se 6,021            | Ja 273              | 5,050  | 2,191   | 3,436   | 21           | 2       | 2,608     |  |                      |
| 21 Carpets and rugs, other than rag .....  | 9                        | 939                          | 6                             | 26                                      | 21      | 2       | 884             | De 1,008            | Je 770              | 1,008  | 697     | 294   | 15           | 2       | 970       |  |                      |
| 22 Carpets, rag .....  | 18                       | 66                           | 21                            | .....                                   | .....   | .....   | 44              | De 48               | Mh <sup>2</sup> 42  | 48     | 45      | 1   | 2            | .....   | 17        |  |                      |
| 23 Carriages and wagons and materials .....  | 256                      | 1,980                        | 301                           | 37                                      | 32      | 9       | 1,601           | Au 1,655            | Ja 1,497            | 1,632  | 1,630   | 1   | 1            | .....   | 1,645     |  |                      |
| 24 Cars and general shop construction and repairs by steam-railroad companies .....  | 23                       | 7,639                        | .....                         | 526                                     | 498     | 11      | 6,604           | No 6,736            | Jy 6,435            | 6,688  | 6,629   | 56  | 3            | .....   | 7,040     |  |                      |
| 25 Cars and general shop construction and repairs by street-railroad companies ..... | 15                       | 878                          | .....                         | 21                                      | 31      | .....   | 826             | Jy 850              | Mh 705              | 830    | 830     | .....   | .....        | .....   | 2,276     |  |                      |
| 26 Cement .....  | 3                        | 1,610                        | .....                         | 15                                      | 150     | 6       | 1,445           | Jy 1,860            | Ja 1,000            | 1,117  | 1,110   | 4   | 3            | .....   | 16,393    |  |                      |
| 27 Chemicals .....   | 50                       | 5,937                        | 4                             | 213                                     | 587     | 87      | 5,046           | De 5,252            | Au 4,780            | 5,267  | 4,758   | 458   | 17           | 34      | 13,880    |  |                      |
| 28 Chocolata and cocoa products .....  | 4                        | 350                          | .....                         | 11                                      | 47      | 2       | 290             | Oc 336              | Jy 254              | 309    | 202     | 96  | 6            | 5       | 660       |  |                      |
| 29 Clocks and watches, including cases and materials .....                           | 9                        | 2,200                        | 1                             | 30                                      | 60      | 40      | 2,129           | Fe 2,212            | No 2,011            | 2,088  | 1,391   | 631   | 52           | 14      | 1,414     |  |                      |
| 30 Clothing, men's, including shirts .....   | 150                      | 7,680                        | 199                           | 98                                      | 240     | 140     | 6,994           | De 7,255            | Jy 6,696            | 7,430  | 2,346   | 4,034   | 56           | 103     | 1,351     |  |                      |
| 31 Clothing, women's .....   | 99                       | 4,691                        | 112                           | 70                                      | 102     | 191     | 4,210           | De 4,460            | Jy 3,899            | 4,482  | 402     | 3,927   | 8            | 145     | 959       |  |                      |
| 32 Coffins, burial cases, and undertakers' goods .....                               | 7                        | 261                          | 4                             | 7                                       | 35      | 3       | 212             | Je <sup>2</sup> 221 | Jy 198              | 214    | 197     | 17  | .....        | .....   | 422       |  |                      |
| 33 Confectionery .....   | 71                       | 1,558                        | 70                            | 55                                      | 107     | 63      | 1,263           | No 1,440            | Ja 1,148            | 1,394  | 577     | 742   | 23           | 62      | 1,181     |  |                      |
| 34 Cooperage and wooden goods, not elsewhere specified .....                         | 43                       | 1,162                        | 42                            | 35                                      | 33      | 6       | 1,043           | Ja 1,177            | Je 977              | 1,080  | 1,077   | 2   | 1            | .....   | 1,613     |  |                      |
| 35 Copper, tin, and sheet-iron products .....  | 175                      | 5,575                        | 162                           | 157                                     | 189     | 65      | 5,002           | No 5,511            | Ja 4,495            | 5,507  | 4,454   | 838   | 194          | 81      | 3,579     |  |                      |
| 36 Cordage and twine and jute and linen goods .....                                  | 12                       | 3,174                        | 1                             | 31                                      | 103     | 14      | 3,025           | De 3,090            | Jy 2,903            | 3,006  | 1,421   | 1,419   | 140          | 116     | 6,442     |  |                      |
| 37 Cork, cutting .....   | 10                       | 466                          | 2                             | 16                                      | 25      | 5       | 418             | No 502              | Mh 318              | 469    | 394     | 68  | 1            | 6       | 855       |  |                      |
| 38 Corsets .....   | 11                       | 2,013                        | 3                             | 21                                      | 110     | 34      | 1,845           | No 1,947            | Ja 1,736            | 1,939  | 159     | 1,694   | 2            | 84      | 489       |  |                      |
| 39 Cotton goods, including cotton small wares .....                                  | 26                       | 6,894                        | 13                            | 83                                      | 136     | 24      | 6,638           | No 6,826            | Jy 6,500            | 6,816  | 2,600   | 3,607   | 270          | 339     | 17,288    |  |                      |
| 40 Cutlery and tools, not elsewhere specified .....                                  | 70                       | 2,482                        | 66                            | 48                                      | 124     | 36      | 2,208           | Oc 2,367            | Ja 2,042            | 2,346  | 2,086   | 205   | 51           | 4       | 2,540     |  |                      |
| 41 Dairymen's, poulterers', and apiarists' supplies .....                            | 7                        | 425                          | 5                             | 12                                      | 87      | 25      | 206             | Ap 338              | De 257              | 286    | 276     | 2   | 8            | .....   | 313       |  |                      |
| 42 Dyeing and finishing textiles .....   | 67                       | 10,722                       | 32                            | 162                                     | 340     | 59      | 10,120          | De 10,557           | Jy 9,526            | 10,180 | 8,718   | 1,361   | 75           | 32      | 10,969    |  |                      |
| 43 Electrical machinery, apparatus, and supplies .....                               | 69                       | 13,024                       | 22                            | 304                                     | 1,189   | 410     | 11,099          | Fe 12,418           | Ja 10,295           | 12,354 | 7,405   | 4,860   | 59           | 30      | 11,326    |  |                      |
| 44 Electroplating .....  | 16                       | 115                          | 20                            | 3                                       | 9       | .....   | 83              | No 92               | Jy <sup>2</sup> 73  | 85     | 79      | 5   | 1            | .....   | 125       |  |                      |
| 45 Enameling and japanning .....   | 13                       | 60                           | 13                            | 2                                       | 1       | 1       | 43              | Ja <sup>3</sup> 43  | Jy <sup>3</sup> 43  | 43     | 39      | 4   | .....        | 30      |           |  |                      |
| 46 Fancy articles, not elsewhere specified .....                                     | 31                       | 1,280                        | 38                            | 22                                      | 59      | 49      | 1,112           | Oc 1,213            | My 1,047            | 1,152  | 794     | 330   | 19           | 0       | 730       |  |                      |
| 47 Fertilizers .....   | 22                       | 1,384                        | 17                            | 40                                      | 110     | 9       | 1,208           | Mh 1,518            | Ja 1,086            | 1,235  | 1,217   | 15  | 3            | .....   | 2,459     |  |                      |
| 48 Flags, banners, regalia, society badges and emblems .....                         | 9                        | 81                           | 8                             | 3                                       | 1       | 6       | 63              | Se 73               | Ja 53               | 63     | 30      | 29  | 1            | 3       | 19        |  |                      |
| 49 Fireworks .....   | 7                        | 253                          | 11                            | 7                                       | 6       | 1       | 228             | Je 254              | De 203              | 206    | 121     | 73  | 7            | 5       | 40        |  |                      |
| 50 Flour-mill and gristmill products .....   | 238                      | 790                          | 265                           | 28                                      | 46      | 8       | 453             | No <sup>2</sup> 471 | Je 431              | 474    | 471     | .....   | .....        | .....   | 10,763    |  |                      |
| 51 Foundry and machine-shop products .....   | 591                      | 32,076                       | 436                           | 938                                     | 2,477   | 410     | 27,815          | De 30,580           | Ja 25,845           | 30,616 | 20,552  | 848   | 188          | 28      | 41,191    |  |                      |
| 52 Fur goods .....   | 9                        | 55                           | 10                            | 4                                       | .....   | .....   | 41              | No <sup>2</sup> 55  | Ap 27               | 55     | 23      | 32  | .....        | .....   | 3         |  |                      |
| 53 Furnishing goods, men's .....   | 21                       | 2,740                        | 15                            | 35                                      | 62      | 140     | 2,468           | De 2,708            | Ja 2,039            | 2,714  | 284     | 2,280   | 50           | 100     | 973       |  |                      |
| 54 Furniture and refrigerators .....   | 49                       | 1,949                        | 43                            | 48                                      | 77      | 26      | 1,755           | Oc 1,849            | Ja 1,633            | 1,771  | 1,721   | 48  | 2            | .....   | 2,340     |  |                      |
| 55 Gas and electric fixtures and lamps and reflectors .....                          | 28                       | 2,319                        | 16                            | 101                                     | 289     | 29      | 1,884           | Ap 2,123            | Jy 1,678            | 2,253  | 1,259   | 835   | 24           | 135     | 1,124     |  |                      |
| 56 Gas, illuminating and heating .....   | 47                       | 2,804                        | .....                         | 139                                     | 709     | 39      | 1,917           | Je 1,974            | Ja 1,864            | 1,891  | 1,890   | 1   | .....        | .....   | 6,717     |  |                      |
| 57 Glass .....   | 23                       | 6,159                        | 6                             | 115                                     | 287     | 100     | 5,651           | Ap 7,286            | Au 1,151            | 7,575  | 7,046   | 143   | 384          | 2       | 3,981     |  |                      |
| 58 Gloves and mittens, leather .....   | 6                        | 172                          | 8                             | 1                                       | 1       | .....   | 162             | Ap 166              | Au 159              | 163    | 37      | 126   | .....        | .....   | 26        |  |                      |
| 59 Gold and silver, leaf and foil .....  | 16                       | 190                          | 21                            | 3                                       | 1       | .....   | 165             | No 171              | Se 152              | 170    | 79      | 8   | .....        | .....   | 15        |  |                      |
| 60 Gold and silver, reducing and refining, not from the ore .....                    | 8                        | 161                          | 4                             | 17                                      | 16      | 12      | 112             | Fe 121              | Au 107              | 113    | 111     | .....   | .....        | .....   | 409       |  |                      |
| 61 Hand stamps and stencils and brands .....   | 4                        | 8                            | 4                             | .....                                   | .....   | .....   | 4               | Ja <sup>3</sup> 4   | Jy <sup>3</sup> 4   | 4      | 4       | .....   | .....        | .....   | 2         |  |                      |
| 62 Hats and caps, other than felt, straw, and wool .....                             | 7                        | 236                          | 10                            | .....                                   | 40      | 16      | 170             | Oc 190              | My <sup>3</sup> 153 | 179    | 145     | 34  | .....        | .....   | 51        |  |                      |
| 63 Hats, fur-felt .....  | 58                       | 5,104                        | 63                            | 148                                     | 202     | 34      | 4,657           | De 6,136            | Fe 2,860            | 6,296  | 4,889   | 1,304   | 49           | 54      | 5,046     |  |                      |
| 64 Hosiery and knit goods .....  | 37                       | 2,658                        | 34                            | 60                                      | 44      | 14      | 2,500           | No 2,780            | Ja 2,256            | 2,767  | 1,028   | 1,604   | 36           | 99      | 1,477     |  |                      |
| 65 Ice, manufactured .....   | 59                       | 581                          | 27                            | 62                                      | 30      | 6       | 456             | Au 662              | Ja 234              | 415    | 415     | .....   | .....        | .....   | 10,121    |  |                      |

<sup>1</sup> No figures given for reasons explained in the Introduction, page 2. See also discussion of wage earners on page 10.

MANUFACTURES—NEW JERSEY.

THE STATE, BY INDUSTRIES: 1909.

|    | Capital.      | EXPENSES.       |              |              |               |                         |               |                  |                                    |                |              | Value of products. | Value added by manu-<br>facture. |
|----|---------------|-----------------|--------------|--------------|---------------|-------------------------|---------------|------------------|------------------------------------|----------------|--------------|--------------------|----------------------------------|
|    |               | Total.          | Services.    |              |               | Materials.              |               | Miscellaneous.   |                                    |                |              |                    |                                  |
|    |               |                 | Officials.   | Clerks.      | Wage earners. | Fuel and rent of power. | Other.        | Rent of factory. | Taxes, including internal revenue. | Contract work. | Other.       |                    |                                  |
| 1  | \$977,172,141 | \$1,032,697,779 | \$23,531,887 | \$24,804,446 | \$169,710,033 | \$24,288,913            | \$695,744,486 | \$7,699,818      | \$10,729,242                       | \$8,445,253    | \$97,773,701 | \$1,145,529,076    | \$425,495,677                    |
| 2  | 770,916       | 603,977         | 29,278       | 47,280       | 111,516       | 7,983                   | 318,702       | 600              | 1,509                              | 100            | 80,043       | 754,909            | 423,224                          |
| 3  | 82,745        | 63,271          | 320          | 2,807        | 23,738        | 955                     | 30,774        | 2,011            | 381                                | 311            | 1,974        | 97,844             | 66,115                           |
| 4  | 912,849       | 654,339         | 20,325       | 10,044       | 250,100       | 6,771                   | 287,030       | 6,050            | 4,118                              | 8,513          | 52,322       | 855,788            | 504,081                          |
| 5  | 2,702,587     | 1,876,480       | 102,287      | 58,027       | 615,300       | 27,898                  | 864,270       | 23,361           | 5,878                              | .....          | 179,450      | 2,007,516          | 1,115,339                        |
| 6  | 147,934       | 102,884         | 4,025        | .....        | 53,028        | 1,808                   | 94,098        | 3,008            | 601                                | 13             | 5,583        | 206,156            | 110,190                          |
| 7  | 137,458       | 188,127         | 9,580        | 13,770       | 31,393        | 1,508                   | 117,147       | 6,071            | 171                                | 1,000          | 7,397        | 203,713            | 84,968                           |
| 8  | 9,385,357     | 8,009,231       | 232,439      | 285,085      | 1,150,487     | 163,156                 | 5,807,372     | 360              | 31,429                             | .....          | 998,903      | 9,792,625          | 3,822,097                        |
| 9  | 573,007       | 1,069,347       | 62,842       | 63,314       | 102,334       | 7,403                   | 583,408       | 6,381            | 2,280                              | 300            | 241,085      | 1,154,532          | 563,721                          |
| 10 | 4,107,004     | 7,502,291       | 213,784      | 234,482      | 1,923,198     | 28,548                  | 4,698,577     | 18,052           | 10,763                             | 27,947         | 346,340      | 8,041,623          | 3,314,498                        |
| 11 | 68,550        | 82,970          | 1,728        | 1,770        | 22,690        | 1,630                   | 51,200        | 700              | 937                                | .....          | 2,225        | 89,635             | 36,715                           |
| 12 | 1,931,595     | 2,312,782       | 97,479       | 70,237       | 704,014       | 23,549                  | 1,162,353     | 37,823           | 7,273                              | 16,690         | 193,904      | 2,674,530          | 1,488,637                        |
| 13 | 3,104,433     | 4,536,011       | 155,985      | 93,094       | 718,045       | 98,555                  | 3,256,588     | 29,019           | 15,435                             | 1,750          | 166,040      | 5,130,550          | 1,775,407                        |
| 14 | 8,100,321     | 10,993,117      | 143,368      | 259,598      | 3,309,099     | 377,454                 | 11,817,751    | 305,099          | 62,891                             | 6,188          | 711,789      | 20,085,629         | 7,800,424                        |
| 15 | 7,354,600     | 3,080,500       | 142,840      | 62,340       | 1,025,200     | 62,002                  | 214,161       | 24,800           | 26,975                             | 400            | 354,116      | 4,073,286          | 3,229,523                        |
| 16 | 89,897        | 293,913         | 5,025        | 4,755        | 27,485        | 712                     | 240,599       | 1,404            | 267                                | 6,750          | 6,016        | 341,004            | 99,693                           |
| 17 | 1,380,089     | 1,368,684       | 63,942       | 60,992       | 335,896       | 19,171                  | 690,361       | 10,369           | 5,408                              | .....          | 176,545      | 1,563,951          | 854,419                          |
| 18 | 255,690       | 737,788         | 4,010        | 4,300        | 41,675        | 17,003                  | 652,721       | 2                | 1,548                              | 20             | 16,500       | 793,423            | 123,699                          |
| 19 | 1,608,252     | 2,410,528       | 110,493      | 38,497       | 912,986       | 35,801                  | 1,147,132     | 37,267           | 4,365                              | 3,170          | 120,827      | 2,749,628          | 1,566,695                        |
| 20 | 2,764,544     | 3,091,797       | 77,504       | 40,838       | 546,114       | 32,457                  | 2,175,632     | 23,831           | 9,950                              | 50             | 185,421      | 3,604,098          | 1,456,009                        |
| 21 | 2,510,704     | 1,500,709       | 59,802       | 28,032       | 374,823       | 13,711                  | 883,804       | 240              | 8,775                              | .....          | 131,522      | 1,945,217          | 1,047,702                        |
| 22 | 55,431        | 46,714          | .....        | 624          | 19,670        | 706                     | 21,044        | 1,374            | 508                                | .....          | 1,822        | 67,175             | 44,465                           |
| 23 | 2,973,362     | 2,573,416       | 57,394       | 25,110       | 1,018,617     | 43,053                  | 1,230,706     | 44,066           | 16,778                             | 3,321          | 127,471      | 3,250,456          | 1,076,697                        |
| 24 | 5,452,208     | 9,818,839       | 258,589      | 354,435      | 4,174,744     | 206,791                 | 4,426,743     | .....            | 146,099                            | 4,000          | 247,438      | 9,818,840          | 5,185,306                        |
| 25 | 819,755       | 1,157,636       | 31,380       | 21,866       | 470,548       | 12,220                  | 601,848       | 2,400            | 10,996                             | 340            | 6,059        | 1,158,036          | 543,068                          |
| 26 | 10,880,880    | 3,542,272       | 61,047       | 160,613      | 845,103       | 833,034                 | 1,219,775     | .....            | 15,320                             | .....          | 407,371      | 3,724,546          | 1,671,737                        |
| 27 | 24,355,116    | 18,881,485      | 856,382      | 737,417      | 2,894,004     | 600,321                 | 11,567,167    | 27,099           | 109,394                            | 100,996        | 1,897,755    | 22,824,140         | 10,566,662                       |
| 28 | 824,641       | 1,724,421       | 32,043       | 60,092       | 110,889       | 22,152                  | 1,404,772     | 900              | 5,276                              | 3,361          | 69,036       | 1,842,911          | 416,987                          |
| 29 | 6,795,493     | 3,252,288       | 123,560      | 101,411      | 1,110,593     | 54,156                  | 1,074,572     | 2,302            | 12,209                             | .....          | 164,485      | 3,847,786          | 2,110,058                        |
| 30 | 5,313,927     | 9,272,503       | 197,807      | 237,483      | 2,035,304     | 62,255                  | 5,014,118     | 89,198           | 19,597                             | 376,700        | 340,131      | 9,864,646          | 4,788,273                        |
| 31 | 2,881,952     | 4,928,496       | 162,414      | 173,527      | 1,354,698     | 30,155                  | 2,825,134     | 61,356           | 5,895                              | 8,230          | 317,087      | 5,927,091          | 3,071,802                        |
| 32 | 515,082       | 485,861         | 16,282       | 40,039       | 122,096       | 5,146                   | 269,450       | 5,523            | 2,479                              | .....          | 31,837       | 521,100            | 260,495                          |
| 33 | 2,829,775     | 3,543,499       | 39,318       | 99,884       | 455,532       | 38,048                  | 2,393,973     | 46,835           | 16,852                             | 60             | 402,397      | 4,115,633          | 1,682,912                        |
| 34 | 2,773,208     | 3,061,061       | 66,519       | 35,601       | 522,257       | 17,627                  | 2,310,168     | 10,246           | 13,987                             | 1,025          | 83,731       | 3,230,247          | 962,552                          |
| 35 | 8,514,054     | 10,094,358      | 330,679      | 245,520      | 2,779,559     | 111,952                 | 6,059,916     | 52,052           | 40,714                             | 10,370         | 463,587      | 11,113,644         | 4,941,776                        |
| 36 | 6,598,245     | 5,395,697       | 98,729       | 93,711       | 653,792       | 78,875                  | 3,816,825     | 3,000            | 38,363                             | 369            | 312,033      | 5,526,721          | 1,631,021                        |
| 37 | 686,054       | 711,853         | 33,910       | 20,070       | 180,060       | 21,793                  | 388,573       | 10,580           | 2,408                              | .....          | 54,360       | 791,172            | 380,806                          |
| 38 | 1,857,156     | 2,831,729       | 104,860      | 129,676      | 627,627       | 7,013                   | 1,297,428     | 24,814           | 5,130                              | .....          | 634,278      | 3,530,348          | 2,031,010                        |
| 39 | 17,823,899    | 12,377,650      | 247,104      | 144,568      | 2,577,121     | 199,252                 | 8,365,481     | 8,117            | 67,522                             | 123,804        | 644,681      | 13,728,874         | 5,164,141                        |
| 40 | 3,002,899     | 2,557,401       | 128,370      | 147,027      | 1,060,450     | 62,631                  | 786,128       | 24,520           | 12,805                             | 300            | 325,171      | 2,735,244          | 1,886,485                        |
| 41 | 1,060,030     | 873,268         | 34,846       | 76,016       | 180,785       | 6,410                   | 223,340       | 1,320            | 2,452                              | 5,000          | 343,199      | 953,798            | 724,048                          |
| 42 | 23,314,817    | 13,518,868      | 639,264      | 393,846      | 5,015,561     | 980,052                 | 5,372,644     | 47,700           | 70,473                             | .....          | 999,319      | 15,795,788         | 9,443,992                        |
| 43 | 30,228,611    | 25,551,858      | 833,767      | 1,400,610    | 5,614,592     | 374,659                 | 14,050,866    | 68,204           | 88,812                             | 78,224         | 3,042,124    | 28,365,377         | 13,939,852                       |
| 44 | 148,821       | 111,410         | 4,000        | 10,009       | 49,202        | 4,398                   | 31,350        | 5,532            | 1,169                              | .....          | 5,660        | 143,684            | 107,936                          |
| 45 | 72,351        | 77,663          | 1,900        | 1,280        | 26,504        | 5,672                   | 37,327        | 2,250            | 435                                | .....          | 2,205        | 133,504            | 90,505                           |
| 46 | 1,580,683     | 1,620,629       | 55,530       | 111,787      | 454,548       | 32,698                  | 795,270       | 22,831           | 3,441                              | 353            | 144,165      | 1,841,107          | 1,013,133                        |
| 47 | 7,898,293     | 6,973,589       | 126,956      | 129,020      | 541,188       | 94,821                  | 5,590,366     | 2,175            | 22,933                             | .....          | 467,030      | 7,671,859          | 1,986,672                        |
| 48 | 67,591        | 68,809          | 3,800        | 3,236        | 22,404        | 667                     | 33,408        | 3,286            | 220                                | .....          | 2,178        | 87,739             | 54,054                           |
| 49 | 321,405       | 295,679         | 12,466       | 8,010        | 82,796        | 1,777                   | 173,987       | 1,150            | 1,944                              | 600            | 12,010       | 380,037            | 204,273                          |
| 50 | 3,227,345     | 4,063,061       | 22,618       | 35,201       | 225,041       | 20,040                  | 4,531,842     | 26,004           | 15,821                             | .....          | 75,904       | 5,537,678          | 976,196                          |
| 51 | 87,923,313    | 58,538,400      | 2,561,536    | 2,687,684    | 16,021,659    | 1,357,253               | 28,582,797    | 321,612          | 201,843                            | 852,825        | 4,061,191    | 65,398,437         | 35,458,387                       |
| 52 | 145,871       | 109,190         | 4,980        | 4,980        | 23,282        | 425                     | 65,200        | 5,309            | 715                                | .....          | 9,279        | 144,640            | 79,015                           |
| 53 | 3,123,229     | 3,016,775       | 86,258       | 148,833      | 774,332       | 22,798                  | 2,708,898     | 8,790            | 8,077                              | 39,769         | 119,020      | 4,131,100          | 1,599,404                        |
| 54 | 2,085,130     | 3,129,866       | 109,500      | 85,809       | 998,655       | 32,157                  | 1,665,336     | 17,022           | 13,008                             | 924            | 227,365      | 3,613,831          | 1,916,338                        |
| 55 | 5,542,270     | 4,936,678       | 177,953      | 199,553      | 823,765       | 59,284                  | 3,290,834     | 18,720           | 14,065                             | 3,077          | 349,427      | 5,770,983          | 2,420,865                        |
| 56 | 15,666,761    | 9,092,466       | 182,270      | 447,263      | 853,129       | 1,830,013               | 1,024,721     | 3,980,581        | 386,905                            | 485            | 437,080      | 9,836,806          | 6,982,072                        |
| 57 | 7,415,413     | 6,500,780       | 230,145      | 289,597      | 3,340,284     | 527,863                 | 1,470,744     | 550              | 41,736                             | .....          | 602,871      | 6,991,088          | 4,902,491                        |
| 58 | 61,472        | 109,190         | 1,200        | 330          | 56,511        | 438                     | 58,770        | 2,280            | 1,823                              | .....          | 1,823        | 135,732            | 76,524                           |
| 59 | 78,295        | 244,581         | 3,560        | 1,000        | 67,358        | 1,494                   | 165,078       | 844              | 498                                | .....          | 4,754        | 279,172            | 112,005                          |
| 60 | 1,033,682     | 4,110,447       | 37,856       | 25,002       | 85,942        | 28,578                  | 3,882,725     | 1,473            | 3,574                              | .....          | 246          | 4,436,139          | 524,836                          |
| 61 | 6,370         | 5,922           | .....        | .....        | 2,500         | 92                      | .....         | 876              | 27                                 | .....          | 375          | 8,550              | 6,406                            |
| 62 | 224,732       | 330,750         | .....        | 36,166       | 86,022        | 1,702                   | 171,674       | 1,440            | 770                                | .....          | 32,976       | 364,786            | 191,410                          |
| 63 | 5,335,313     | 8,184,099       | 275,836      | 202,093      | 2,969,230     | 149,633                 | 3,961,935     | 20,086           | 20,736                             | 108,469        | 470,081      | 8,825,217          | 4,713,649                        |
| 64 | 3,489,294     | 3,048,159       | 138,865      | 70,741       | 903,311       | 39,254                  | 1,786,624     | 13,743           | 8,232                              | 5,658          | 81,731       | 3,810,241          | 1,984,363                        |
| 65 | 3,647,701     | 1,009,602       | 73,953       | 24,066       | 317,015       | 264,731                 | 121,344       | 8,484            | 23,874                             | 3,469          | 172,863      | 1,496,555          | 1,110,479                        |

\* Same number reported for one or more other months.

\* Same number reported throughout the year.

MANUFACTURES—NEW JERSEY.

TABLE II.—DETAIL STATEMENT FOR

| INDUSTRY.   | Number of establishments | PERSONS ENGAGED IN INDUSTRY. |                               |   |         |         |                 |                 |                |                 |         | WAGE EARNERS—NUMBER DEC. 15, OR NEAREST REPRESENTATIVE DAY. |         |           |       |       | Primary horse-power. |     |
|---|--------------------------|------------------------------|-------------------------------|---|---------|---------|-----------------|-----------------|----------------|-----------------|---------|---|---------|-----------|-------|-------|----------------------|-----|
|   |                          | Total.                       | Proprietors and firm members. | Salaried officers, supts. and managers. | Clerks. |         | Wage earners.   |                 |                |                 |         | 16 and over.  |         | Under 16. |       |       |                      |     |
|   |                          |                              |                               |   | Male.   | Female. | Average number. | Number.         |                | Male.           | Female. | Male.   | Female. |           |       |       |                      |     |
|   |                          |                              |                               |   |         |         |                 | Maximum month.  | Minimum month. |                 |         |   |         |           |       |       |                      |     |
| 1 Iron and steel, steel works and rolling mills.              | 16                       | 5,228                        | .....                         | 102                                     | 401     | 54      | 4,671           | De              | 5,773          | My              | 4,236   | 5,785   | 5,749   | 31        | 5     | ..... | 29,699               |     |
| 2 Jewelry   | 150                      | 4,945                        | 168                           | 220                                     | 354     | 195     | 4,008           | Oc              | 4,314          | Jy              | 3,807   | 4,172   | 3,922   | 977       | 93    | 80    | 1,231                |     |
| 3 Kaolin and ground earths                                    | 12                       | 251                          | 5                             | 17                                      | 13      | 4       | 212             | No              | 226            | At              | 200     | 216   | 216     | .....     | ..... | ..... | 1,885                |     |
| 4 Lapidary work   | 3                        | 14                           | 3                             | .....                                   | .....   | 1       | 10              | Oc <sup>1</sup> | 11             | Ja <sup>1</sup> | 10      | 11  | 9       | 2         | ..... | ..... | 10                   |     |
| 5 Leather goods   | 99                       | 2,133                        | 96                            | 63                                      | 124     | 37      | 1,813           | No              | 1,905          | Jy              | 1,731   | 1,841   | 1,371   | 409       | 36    | 25    | 900                  |     |
| 6 Leather, tanned, curried, and finished.                     | 86                       | 6,040                        | 71                            | 163                                     | 203     | 43      | 5,560           | De              | 5,990          | Jy              | 5,303   | 6,000   | 5,836   | 61        | 103   | ..... | 9,243                |     |
| 7 Lime  | 19                       | 241                          | 21                            | 7                                       | 2       | .....   | 211             | At              | 251            | Ja              | 170     | 196   | 195     | .....     | ..... | ..... | 342                  |     |
| 8 Liquors, distilled  | 29                       | 65                           | 30                            | 3                                       | .....   | .....   | 32              | Oc              | 67             | Ja              | 15      | 61  | 62      | .....     | ..... | ..... | 540                  |     |
| 9 Liquors, malt   | 33                       | 2,634                        | 3                             | 132                                     | 309     | 5       | 2,125           | Jy              | 2,210          | Ja              | 2,034   | 2,121   | 2,112   | .....     | 11    | ..... | 14,082               |     |
| 10 Liquors, vinous  | 6                        | 47                           | 1                             | 12                                      | 4       | 1       | 20              | Se              | 55             | Fe              | 22      | 30  | 25      | 5         | ..... | ..... | 109                  |     |
| 11 Lumber and timber products                                 | 416                      | 5,745                        | 438                           | 192                                     | 204     | 54      | 4,857           | De              | 5,212          | Ja              | 4,658   | 5,383   | 5,288   | 65        | 27    | 3     | 15,760               |     |
| 12 Marble and stone work                                      | 131                      | 1,752                        | 143                           | 64                                      | 55      | 11      | 1,479           | No              | 1,547          | Ap              | 1,414   | 1,497   | 1,496   | .....     | 1     | ..... | 2,756                |     |
| 13 Matches  | 3                        | 115                          | 5                             | 3                                       | 4       | .....   | 103             | No              | 125            | At              | 57      | 119   | 61      | 58        | ..... | ..... | 290                  |     |
| 14 Mattresses and spring beds                                 | 23                       | 600                          | 26                            | 18                                      | 45      | 15      | 496             | Oc              | 520            | Ja              | 453     | 403   | 428     | 62        | 3     | ..... | 288                  |     |
| 15 Millinery and lace goods                                   | 179                      | 4,589                        | 198                           | 72                                      | 151     | 48      | 4,120           | Oc              | 4,285          | Je              | 3,971   | 4,342   | 965     | 3,243     | 35    | 150   | 1,380                |     |
| 16 Mirrors  | 6                        | 187                          | 5                             | 10                                      | 12      | 2       | 158             | Se              | 171            | Fe              | 141     | 165   | 139     | 19        | 4     | 3     | 153                  |     |
| 17 Models and patterns, not including paper patterns          | 36                       | 304                          | 49                            | 1                                       | 1       | 2       | 251             | Jy              | 280            | At              | 191     | 270   | 267     | 1         | 2     | ..... | 341                  |     |
| 18 Musical instruments and materials, not specified           | 7                        | 435                          | 5                             | 13                                      | 18      | 14      | 385             | De              | 442            | Fe              | 350     | 442   | 341     | 92        | 5     | 4     | 335                  |     |
| 19 Musical instruments, pianos and organs and materials       | 18                       | 1,500                        | 6                             | 28                                      | 33      | 40      | 1,393           | Mh              | 1,436          | At              | 1,325   | 1,468   | 1,253   | 204       | 2     | 9     | 1,121                |     |
| 20 Needles, pins, and hooks and eyes                          | 7                        | 586                          | 1                             | 15                                      | 9       | 4       | 557             | Ap              | 581            | Ja              | 539     | 582   | 232     | 220       | 113   | 17    | 524                  |     |
| 21 Oil, not elsewhere specified                               | 23                       | 765                          | 3                             | 63                                      | 224     | 56      | 419             | Oc              | 463            | At              | 392     | 440   | 404     | 35        | 1     | ..... | 1,824                |     |
| 22 Oilcloth and linoleum                                      | 10                       | 2,264                        | 6                             | 32                                      | 73      | 30      | 2,123           | Oc              | 2,230          | Ap              | 2,035   | 2,294   | 2,247   | 16        | 31    | ..... | 7,819                |     |
| 23 Optical goods  | 10                       | 75                           | 9                             | 4                                       | 1       | 5       | 56              | Je              | 59             | Ap <sup>1</sup> | 55      | 57  | 43      | 20        | 4     | ..... | 51                   |     |
| 24 Paint and varnish  | 63                       | 2,143                        | 41                            | 128                                     | 397     | 84      | 1,493           | Ap              | 1,535          | Jy              | 1,434   | 1,467   | 1,353   | 112       | 2     | ..... | 5,024                |     |
| 25 Paper and wood pulp  | 37                       | 2,445                        | 11                            | 81                                      | 80      | 41      | 2,223           | No              | 2,344          | Ja              | 2,100   | 2,348   | 2,148   | 108       | 14    | 18    | 22,996               |     |
| 26 Paper goods, not elsewhere specified                       | 19                       | 659                          | 7                             | 34                                      | 30      | 25      | 593             | No              | 642            | My              | 507     | 654   | 478     | 163       | 3     | 10    | 2,132                |     |
| 27 Patent medicines and compounds and druggists' preparations | 111                      | 1,424                        | 77                            | 81                                      | 184     | 77      | 1,005           | Mh              | 1,077          | Se              | 940     | 1,074   | 552     | 486       | 21    | 15    | 1,478                |     |
| 28 Photographic apparatus and materials                       | 10                       | 73                           | 4                             | 8                                       | 3       | 3       | 55              | My <sup>1</sup> | 58             | De              | 53      | 55  | 42      | 3         | ..... | ..... | 70                   |     |
| 29 Photo-engraving  | 3                        | 33                           | 2                             | .....                                   | 3       | .....   | 28              | Se <sup>1</sup> | 32             | Ja <sup>1</sup> | 25      | 30  | 26      | 3         | ..... | ..... | 14                   |     |
| 30 Pottery, terra-cotta, and fire-clay products               | 88                       | 10,542                       | 38                            | 245                                     | 347     | 97      | 9,815           | No              | 10,507         | Ja              | 8,840   | 10,486  | 9,192   | 1,184     | 75    | 45    | 11,817               |     |
| 31 Printing and publishing                                    | 684                      | 7,364                        | 647                           | 301                                     | 745     | 220     | 5,451           | No              | 5,732          | Fe              | 5,245   | 5,789   | 4,717   | 954       | 103   | 15    | 5,636                |     |
| 32 Rubber goods, not elsewhere specified                      | 36                       | 4,860                        | 7                             | 115                                     | 362     | 121     | 4,255           | No              | 4,458          | Ja              | 4,151   | 4,477   | 3,846   | 554       | 51    | 26    | 12,900               |     |
| 33 Scales and balances  | 11                       | 234                          | 7                             | 14                                      | 38      | 5       | 170             | Mh              | 194            | Fe              | 158     | 173   | 168     | .....     | ..... | ..... | 144                  |     |
| 34 Shipbuilding, including boat building                      | 97                       | 5,533                        | 97                            | 190                                     | 368     | 9       | 4,860           | Ap              | 5,223          | Fe              | 4,431   | 4,881   | 4,879   | 2         | ..... | ..... | 9,094                |     |
| 35 Signs and advertising novelties                            | 17                       | 1,327                        | 8                             | 40                                      | 134     | 101     | 1,044           | No              | 1,123          | Fe              | 962     | 1,220   | 1,120   | 715       | 380   | 10    | 15                   | 588 |
| 36 Silk and silk goods, including throwsters                  | 348                      | 32,365                       | 306                           | 518                                     | 1,032   | 224     | 30,285          | Mh              | 30,951         | Jy              | 29,726  | 31,342  | 13,628  | 16,585    | 398   | 731   | 22,376               |     |
| 37 Silverware and plated ware                                 | 26                       | 1,564                        | 21                            | 63                                      | 97      | 87      | 1,296           | Oc              | 1,404          | Je              | 1,154   | 1,372   | 1,062   | 273       | 24    | 13    | 1,211                |     |
| 38 Slaughtering and meat packing                              | 34                       | 2,420                        | 93                            | 81                                      | 366     | 63      | 1,817           | Ja              | 2,050          | At              | 1,617   | 1,820   | 1,742   | 76        | ..... | ..... | 3,610                |     |
| 39 Smelting and refining, copper                              | 4                        | 2,564                        | .....                         | 60                                      | 177     | 5       | 2,322           | De              | 2,505          | At              | 1,808   | 2,505   | 2,505   | .....     | ..... | ..... | 22,320               |     |
| 40 Smelting and refining, not from the ore                    | 14                       | 1,194                        | 10                            | 18                                      | 101     | 8       | 1,057           | No              | 1,220          | At              | 777     | 1,193   | 1,193   | .....     | ..... | ..... | 5,931                |     |
| 41 Soap   | 21                       | 2,301                        | 10                            | 57                                      | 409     | 226     | 1,599           | No              | 1,724          | Ja              | 1,387   | 1,708   | 1,134   | 532       | 34    | 8     | 2,761                |     |
| 42 Steam packing  | 11                       | 140                          | 2                             | 25                                      | 14      | 11      | 88              | Mh              | 97             | Se              | 76      | 112   | 94      | 18        | ..... | ..... | 237                  |     |
| 43 Stereotyping and electrotyping                             | 4                        | 38                           | 4                             | 1                                       | 1       | 1       | 31              | Jy <sup>1</sup> | 32             | Ja <sup>1</sup> | 28      | 32  | 31      | 1         | ..... | ..... | 46                   |     |
| 44 Stoves and furnaces, including gas and oil stoves          | 8                        | 893                          | 2                             | 28                                      | 155     | 12      | 696             | Mh              | 778            | Ja              | 334     | 702   | 701     | 1         | ..... | ..... | 1,146                |     |
| 45 Sulphuric, nitric, and mixed acids                         | 6                        | 494                          | .....                         | 19                                      | 33      | 8       | 434             | No              | 475            | Fe              | 395     | 452   | 452     | .....     | ..... | ..... | 1,575                |     |
| 46 Surgical appliances and artificial limbs                   | 11                       | 1,784                        | 9                             | 18                                      | 251     | 94      | 1,412           | De              | 1,523          | Ja              | 1,269   | 1,523   | 583     | 929       | 5     | 6     | 3,188                |     |
| 47 Tobacco manufactures                                       | 462                      | 10,610                       | 482                           | 220                                     | 337     | 105     | 9,466           | De              | 10,248         | Ja              | 9,034   | 10,257  | 2,538   | 7,201     | 81    | 437   | 3,302                |     |
| 48 Typewriters and supplies                                   | 8                        | 363                          | .....                         | 21                                      | 57      | 13      | 272             | De              | 318            | Fe              | 233     | 315   | 287     | 28        | ..... | ..... | 512                  |     |
| 49 Wall paper   | 8                        | 894                          | 6                             | 24                                      | 56      | 26      | 782             | No              | 835            | Se              | 658     | 935   | 800     | 121       | 14    | ..... | 1,442                |     |
| 50 Wall plaster   | 5                        | 203                          | 2                             | 12                                      | 11      | .....   | 178             | Se              | 211            | Fe              | 137     | 200   | 200     | .....     | ..... | ..... | 977                  |     |
| 51 Wire   | 7                        | 6,255                        | .....                         | 49                                      | 492     | 98      | 5,646           | De              | 6,077          | Mh              | 5,392   | 6,077   | 5,581   | 467       | 29    | ..... | 17,436               |     |
| 52 Woolen, worsted, and felt goods, and wool hats             | 33                       | 13,119                       | 28                            | 96                                      | 324     | 19      | 12,652          | De              | 13,712         | Je              | 11,586  | 13,716  | 6,110   | 6,984     | 326   | 290   | 20,254               |     |
| 53 All other industries <sup>2</sup>                          | 859                      | 43,855                       | 749                           | 1,101                                   | 2,000   | 797     | 38,299          | .....           | .....          | .....           | .....   | .....   | .....   | .....     | ..... | ..... | 101,150              |     |

<sup>1</sup> Same number reported for one or more other months.

<sup>2</sup> All other industries embrace—

|   |    |   |    |  |    |
|---|----|---|----|--|----|
| Artists' materials  | 6  | China decorating                        | 7  | Furs, dressed  | 4  |
| Awnings, tents, and sails   | 25 | Clothing, men's, buttonholes            | 2  | Galvanizing  | 3  |
| Axle grease   | 2  | Coffee and spice, roasting and grinding | 16 | Glass, cutting, staining, and ornamenting  | 42 |
| Babbitt metal and solder  | 4  | Coke                                    | 1  | Glucose and starch   | 1  |
| Bags, other than paper  | 3  | Coriands and sirups                     | 5  | Glue   | 1  |
| Baking powders and yeast  | 2  | Crucibles                               | 3  | Graphite and graphite refining   | 2  |
| Bicycles, motorcycles, and parts                                      | 2  | Dentists' materials                     | 3  | Grease and tallow  | 44 |
| Billiard tables and materials   | 2  | Drug grinding                           | 3  | Hair work  | 1  |
| Bluing  | 3  | Dyestuffs and extracs.                  | 13 | Hat and cap materials  | 14 |
| Bone, carbon, and lamp black  | 1  | Emery and other abrasive wheels         | 4  | Hats, straw  | 2  |
| Boots and shoes, rubber   | 2  | Engravers' materials                    | 15 | Hones and whetstones   | 1  |
| Candles   | 2  | Engraving and diesinking                | 1  | Horseshoes, not made in steel works or rolling mills                                       | 7  |
| Card cutting and designing  | 9  | Engraving, wood                         | 2  | House-furnishing goods, not elsewhere specified  | 6  |
| Carriages and sleds, children's                                       | 5  | Explosives                              | 2  | Ink, printing  | 3  |
| Cars, steam-railroad, not including operations of railroad companies  | 3  | Files                                   | 7  | Ink, writing   | 17 |
| Cars, street-railroad, not including operations of railroad companies | 1  | Firearms and ammunition                 | 11 | Instruments, professional and scientific   | 4  |
| Cash registers and calculating machines                               | 2  | Flavoring extracts                      | 47 | Iron and steel, blast furnaces   | 1  |
| Charcoal  | 2  | Food preparations                       | 3  | Iron and steel, bolts, nuts, washers, and rivets, not made in steel works or rolling mills | 4  |
|   |    | Foundry supplies                        | 1  | Iron and steel, doors and shutters   | 1  |
|   |    | Fuel, manufactured                      | 1  |  |    |

MANUFACTURES—NEW JERSEY.

THE STATE, BY INDUSTRIES: 1909—Continued.

| Capital.       | EXPENSES.    |            |           |               |                         |             |                  |                                    |                |             |              | Value of products. | Value added by manufacture. |
|----------------|--------------|------------|-----------|---------------|-------------------------|-------------|------------------|------------------------------------|----------------|-------------|--------------|--------------------|-----------------------------|
|                | Total.       | Services.  |           |               | Materials.              |             | Miscellaneous.   |                                    |                |             |              |                    |                             |
|                |              | Officials. | Clerks.   | Wage earners. | Fuel and rent of power. | Other.      | Rent of factory. | Taxes, including internal revenue. | Contract work. | Other.      |              |                    |                             |
| 1 \$28,212,208 | \$11,042,405 | \$297,031  | \$385,010 | \$2,823,436   | \$837,030               | \$5,708,010 | \$8,385          | \$54,357                           | \$7,071        | \$831,475   | \$12,013,710 | \$5,378,079        |                             |
| 2 11,987,812   | 11,159,770   | 675,094    | 581,319   | 2,536,937     | 35,660                  | 6,258,738   | 128,567          | 25,063                             | 14,869         | 903,523     | 13,272,004   | 6,977,606          |                             |
| 3 1,183,507    | 668,564      | 46,920     | 16,410    | 46,270        | 121,543                 | 368,393     | 3,414            | 5,435                              | 60,179         | 784,833     | 370,170      | 784,833            |                             |
| 4 10,000       | 8,448        | 520        | 520       | 6,492         | 150                     | 200         | 742              | 158                                | 1,053          | 180         | 15,000       | 14,650             |                             |
| 5 2,755,070    | 3,765,738    | 164,818    | 167,677   | 919,929       | 19,906                  | 2,120,407   | 50,944           | 11,952                             | 1,053          | 308,002     | 4,004,739    | 1,804,330          |                             |
| 6 18,847,079   | 25,477,049   | 516,522    | 255,849   | 3,473,174     | 293,804                 | 10,904,576  | 54,000           | 64,098                             | 27,228         | 887,618     | 28,430,955   | 8,232,485          |                             |
| 7 1,002,826    | 184,419      | 12,250     | 1,500     | 77,932        | 38,258                  | 34,677      | 497              | 1,522                              | 60             | 17,723      | 201,357      | 128,422            |                             |
| 8 207,863      | 177,983      | 6,500      | 500       | 18,116        | 4,191                   | 86,339      | 3,814            | 51,045                             | 75             | 7,903       | 213,085      | 122,555            |                             |
| 9 40,534,894   | 16,257,738   | 648,376    | 553,987   | 1,836,218     | 362,612                 | 4,518,775   | 84               | 3,297,412                          | 36,447         | 5,003,827   | 20,183,680   | 15,302,293         |                             |
| 10 315,242     | 108,309      | 12,707     | 4,719     | 10,368        | 824                     | 58,977      | 1,500            | 1,373                              | 17,841         | 17,841      | 168,771      | 108,970            |                             |
| 11 9,562,967   | 11,672,195   | 281,670    | 187,039   | 2,631,468     | 89,654                  | 7,920,301   | 52,363           | 52,037                             | 59,758         | 397,005     | 13,511,162   | 5,501,207          |                             |
| 12 3,117,236   | 3,195,771    | 135,008    | 61,468    | 1,328,627     | 35,790                  | 1,342,349   | 14,192           | 12,752                             | 84,463         | 181,122     | 3,901,393    | 2,523,254          |                             |
| 13 222,644     | 187,905      | 7,400      | 3,350     | 46,038        | 3,050                   | 111,768     | 3,500            | 1,600                              | 1,600          | 11,100      | 115,890      | 101,063            |                             |
| 14 810,647     | 1,200,972    | 52,300     | 40,610    | 235,081       | 5,639                   | 802,032     | 9,600            | 2,446                              | 220,440        | 52,574      | 1,322,800    | 515,129            |                             |
| 15 4,594,854   | 5,753,109    | 136,460    | 184,793   | 1,687,551     | 63,520                  | 3,121,465   | 52,161           | 15,337                             | 220,440        | 265,472     | 6,895,339    | 3,710,354          |                             |
| 16 520,285     | 422,701      | 25,440     | 13,370    | 85,133        | 6,826                   | 277,192     | 5,320            | 706                                | 8,624          | 450,968     | 166,950      | 166,950            |                             |
| 17 316,792     | 346,859      | 1,250      | 958       | 227,500       | 7,371                   | 84,834      | 6,828            | 1,252                              | 2,260          | 14,606      | 444,702      | 352,497            |                             |
| 18 1,032,920   | 500,888      | 49,962     | 13,005    | 180,502       | 5,114                   | 202,957     | 456              | 3,607                              | 78             | 54,207      | 635,209      | 427,138            |                             |
| 19 2,019,925   | 2,141,486    | 65,962     | 62,605    | 720,594       | 24,766                  | 1,051,307   | 26,700           | 7,647                              | 24,094         | 156,011     | 2,229,145    | 1,153,072          |                             |
| 20 704,828     | 497,486      | 30,751     | 6,602     | 230,175       | 15,258                  | 108,469     | 1,000            | 3,765                              | 3,659          | 37,717      | 620,095      | 436,368            |                             |
| 21 4,762,137   | 7,439,549    | 229,160    | 245,331   | 250,253       | 54,571                  | 6,141,816   | 15,435           | 12,979                             | 500            | 489,504     | 7,861,465    | 1,655,078          |                             |
| 22 8,109,744   | 8,839,919    | 96,003     | 97,334    | 1,187,248     | 237,217                 | 6,400,777   | 32,650           | 4,207                              | 784,483        | 10,142,596  | 3,504,602    | 3,504,602          |                             |
| 23 84,372      | 87,738       | 7,290      | 3,674     | 26,278        | 840                     | 34,450      | 6,207            | 113                                | 8,817          | 114,784     | 79,485       | 79,485             |                             |
| 24 11,372,234  | 11,091,618   | 460,456    | 640,036   | 843,924       | 193,829                 | 8,032,144   | 36,010           | 49,499                             | 9,300          | 826,411     | 12,705,920   | 4,540,950          |                             |
| 25 10,741,820  | 7,024,916    | 315,768    | 140,006   | 1,181,485     | 597,233                 | 4,171,518   | 15,900           | 35,585                             | 567,421        | 7,594,428   | 2,785,077    | 2,785,077          |                             |
| 26 2,231,611   | 2,416,916    | 52,580     | 55,717    | 276,320       | 34,567                  | 1,662,118   | 31,473           | 36,681                             | 1,723          | 207,460     | 2,639,947    | 943,262            |                             |
| 27 3,743,161   | 4,516,683    | 256,884    | 230,664   | 432,405       | 55,603                  | 2,033,833   | 31,110           | 17,200                             | 1,723          | 1,457,221   | 5,410,127    | 3,320,651          |                             |
| 28 145,420     | 112,761      | 16,706     | 3,504     | 32,843        | 2,405                   | 41,033      | 2,245            | 1,155                              | 250            | 12,620      | 116,803      | 73,305             |                             |
| 29 20,845      | 39,086       | 1,491      | 1,491     | 16,482        | 745                     | 13,261      | 1,910            | 1,910                              | 1,910          | 53,197      | 32,894       | 32,894             |                             |
| 30 22,348,615  | 11,349,670   | 627,917    | 407,646   | 5,661,153     | 1,171,826               | 2,379,342   | 14,972           | 76,337                             | 17,385         | 993,092     | 13,139,000   | 9,587,832          |                             |
| 31 13,816,049  | 9,775,922    | 591,034    | 718,342   | 3,624,266     | 153,202                 | 3,318,949   | 215,244          | 40,869                             | 198,868        | 906,148     | 12,332,700   | 8,800,549          |                             |
| 32 15,765,707  | 17,197,201   | 338,971    | 433,070   | 2,300,053     | 332,550                 | 12,699,438  | 38,050           | 42,692                             | 1,011,977      | 19,543,489  | 6,511,101    | 6,511,101          |                             |
| 33 657,032     | 369,753      | 42,413     | 39,822    | 89,581        | 6,214                   | 92,626      | 5,336            | 1,652                              | 318            | 91,791      | 429,032      | 330,792            |                             |
| 34 19,175,516  | 8,407,459    | 247,997    | 355,316   | 3,299,635     | 125,026                 | 4,124,250   | 52,029           | 38,845                             | 54,462         | 8,840,515   | 4,591,239    | 4,591,239          |                             |
| 35 1,451,379   | 1,937,607    | 129,332    | 190,526   | 574,412       | 20,185                  | 587,588     | 14,255           | 5,472                              | 111,468        | 304,369     | 2,089,935    | 1,482,162          |                             |
| 36 43,615,438  | 59,576,339   | 1,201,580  | 1,115,270 | 13,917,300    | 537,514                 | 32,727,663  | 532,230          | 145,655                            | 5,503,935      | 3,895,126   | 65,429,550   | 32,164,373         |                             |
| 37 2,741,424   | 2,487,088    | 135,275    | 135,092   | 828,688       | 15,100                  | 1,118,096   | 60,159           | 5,272                              | 959            | 188,456     | 3,034,543    | 1,901,347          |                             |
| 38 8,181,551   | 36,575,130   | 205,873    | 420,761   | 1,286,317     | 166,444                 | 33,573,140  | 88,851           | 47,405                             | 68,580         | 711,750     | 37,583,395   | 3,843,811          |                             |
| 39 20,078,100  | 121,338,717  | 215,646    | 160,619   | 1,334,783     | 794,454                 | 118,141,828 | 118,141,828      | 57,015                             | 644,472        | 125,651,087 | 0,714,805    | 0,714,805          |                             |
| 40 6,680,662   | 8,445,601    | 72,743     | 115,388   | 606,031       | 381,640                 | 6,845,557   | 2,148            | 29,803                             | 392,692        | 9,598,023   | 2,370,817    | 2,370,817          |                             |
| 41 8,306,346   | 11,796,074   | 342,131    | 538,739   | 796,156       | 110,328                 | 6,973,838   | 4,210            | 38,504                             | 2,992,168      | 13,073,942  | 6,589,776    | 6,589,776          |                             |
| 42 323,695     | 349,207      | 37,100     | 24,345    | 46,900        | 7,784                   | 157,632     | 5,570            | 1,375                              | 68,426         | 403,463     | 238,047      | 238,047            |                             |
| 43 40,567      | 51,726       | 5,000      | 884       | 28,244        | 2,024                   | 12,600      | 2,108            | 46                                 | 821            | 53,731      | 59,107       | 59,107             |                             |
| 44 1,838,083   | 1,560,801    | 70,651     | 181,933   | 606,525       | 24,450                  | 549,815     | 1,682            | 7,732                              | 29,287         | 94,726      | 1,637,834    | 1,113,569          |                             |
| 45 3,450,357   | 1,631,720    | 62,460     | 42,682    | 281,437       | 103,622                 | 958,602     | 17,945           | 165,872                            | 517,022        | 2,127,637   | 1,065,413    | 1,065,413          |                             |
| 46 3,902,082   | 2,774,986    | 104,954    | 350,267   | 542,021       | 46,904                  | 1,201,815   | 2,568            | 9,435                              | 21,270         | 2,990,835   | 1,742,116    | 1,742,116          |                             |
| 47 21,164,367  | 20,894,113   | 407,089    | 422,261   | 3,156,181     | 103,278                 | 10,692,096  | 100,134          | 3,699,298                          | 2,291,597      | 24,177,343  | 13,381,069   | 13,381,069         |                             |
| 48 958,700     | 651,909      | 52,879     | 35,749    | 201,666       | 8,219                   | 269,526     | 7,760            | 2,016                              | 72,684         | 740,117     | 462,372      | 462,372            |                             |
| 49 3,326,315   | 2,693,474    | 73,944     | 79,286    | 368,532       | 28,104                  | 1,471,473   | 10,417           | 9,278                              | 522,440        | 2,872,424   | 1,372,847    | 1,372,847          |                             |
| 50 654,389     | 502,485      | 32,728     | 9,408     | 109,449       | 10,673                  | 321,494     | 725              | 5,940                              | 12,059         | 612,928     | 250,761      | 250,761            |                             |
| 51 21,828,514  | 27,352,436   | 148,741    | 474,838   | 2,766,951     | 424,705                 | 21,873,032  | 30,609           | 1,627,500                          | 1,627,500      | 28,858,428  | 6,560,691    | 6,560,691          |                             |
| 52 36,390,714  | 28,095,452   | 447,612    | 437,315   | 4,964,299     | 403,317                 | 20,629,562  | 7,715            | 98,207                             | 41,620         | 1,065,739   | 33,938,637   | 12,905,738         |                             |
| 53 185,957,269 | 209,686,724  | 3,299,313  | 3,543,491 | 21,351,598    | 6,397,129               | 161,037,569 | 444,489          | 737,187                            | 86,406         | 12,129,542  | 229,784,039  | 61,689,341         |                             |

2 All other industries embrace—Continued.

|  |     |  |    |  |    |
|--|-----|--|----|--|----|
| Iron and steel forgings.....   | 9   | Paper patterns.....                          | 2  | Springs, steel, car and carriage.....                      | 5  |
| Iron and steel pipe, wrought.....  | 2   | Paving materials.....                        | 4  | Stationery goods, not elsewhere specified.....             | 11 |
| Jewelry and instrument cases.....  | 15  | Pencils, lead.....                           | 4  | Statuary and art goods.....                                | 2  |
| Labels and tags.....   | 1   | Pens, fountain, stylographic, and gold.....  | 2  | Sugar refining, not including beet sugar.....              | 15 |
| Lard, refined, not made in slaughtering and meat-packing establishments..... | 1   | Pens, steel.....                             | 2  | Toys and games.....  | 4  |
| Lasts.....   | 4   | Petroleum, refining.....                     | 6  | Type founding and printing materials.....                  | 4  |
| Lead, bar, pipe, and sheet.....  | 2   | Phonographs and graphophones.....            | 6  | Umbrellas and canes.....                                   | 12 |
| Locomotives.....   | 11  | Pipes, tobacco.....                          | 4  | Upholstering materials.....                                | 1  |
| Looking-glass and picture frames.....  | 2   | Pulp goods.....                              | 1  | Vault lights and ventilators.....                          | 34 |
| Malt.....  | 1   | Pumps, not including steam pumps.....        | 1  | Vinegar and cider.....                                     | 2  |
| Mats and matting.....  | 1   | Roofing materials.....                       | 13 | Waste.....   | 1  |
| Mineral and soda waters.....   | 174 | Sates and vanils.....                        | 2  | Wheelbarrows.....  | 14 |
| Moving pictures.....   | 2   | Saws.....                                    | 4  | Window shades and fixtures.....                            | 25 |
| Mucilage and paste.....  | 2   | Screws, machine.....                         | 2  | Wirework, including wire rope and cable.....               | 25 |
| Oakum.....   | 1   | Sewing machines, cases, and attachments..... | 3  | Wood distillation, not including turpentine and rosin..... | 1  |
| Oil, castor.....   | 1   | Shoddy.....                                  | 5  | Wood preserving.....                                       | 3  |
| Oil, cottonseed, and cake.....   | 1   | Smelting and refining, lead.....             | 1  | Wood, turned and carved.....                               | 28 |
| Oil, essential.....  | 2   | Smelting and refining, zinc.....             | 1  | Wool pulling.....  | 1  |
| Oleomargarine.....   | 1   | Soda-water apparatus.....                    | 6  | Wool scouring.....   | 1  |
|  |     | Sporting and athletic goods.....             | 6  |  |    |