
MANUFACTURES



CHAPTER 15.—STATISTICS FOR STATES, CITIES, AND INDUSTRIES

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STATISTICS OF MANUFACTURES FOR STATES, CITIES, AND INDUSTRIES.

Introduction.—This chapter contains a summary of the statistics of manufactures for the United States for the calendar year 1909, as shown by the Thirteenth Census.

The principal facts derived from the census inquiry are presented in four general tables at the end of the chapter, the first giving statistics for individual industries, the second for states and territories, the third for each of the 25 leading manufacturing cities, and the fourth for each city of 10,000 or more inhabitants.

Table 110 gives for each industry in 1909, 1904, and 1899 the number of establishments; number of persons engaged in the industry during the year, classified as proprietors and firm members, salaried employees, and wage earners; primary power; capital; salaries; wages; cost of materials; value of products; value added by manufacture; and the percentage of increase in average number of wage earners and in value of products, from census to census. The industries are arranged alphabetically.

Table 111 gives similar statistics for the different states and territories, arranged geographically.

Table 112 gives for each of the 25 leading manufacturing cities the same items given in Tables 110 and 111; the cities are arranged according to the value of their manufactured products.

Table 113 gives, for each city of 10,000 or more inhabitants, the number of establishments, the average number of wage earners, the value of products, and the value added by manufacture for 1909, 1904, and 1899. The cities are arranged alphabetically by states.

In addition to these general tables there are interspersed in the text discussion a series of special text tables analyzing certain of the data contained in the general tables. Some of these special text tables present figures only for all industries combined in continental United States as a whole; others give statistics for the principal industries separately; and still others give figures for states and territories.

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.

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, as far as possible, 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.—As a rule, the term "establishment" represents a separated plant or mill. In some cases it represents two or more plants operated under a common ownership or for which one set of books of account is kept.

If 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.

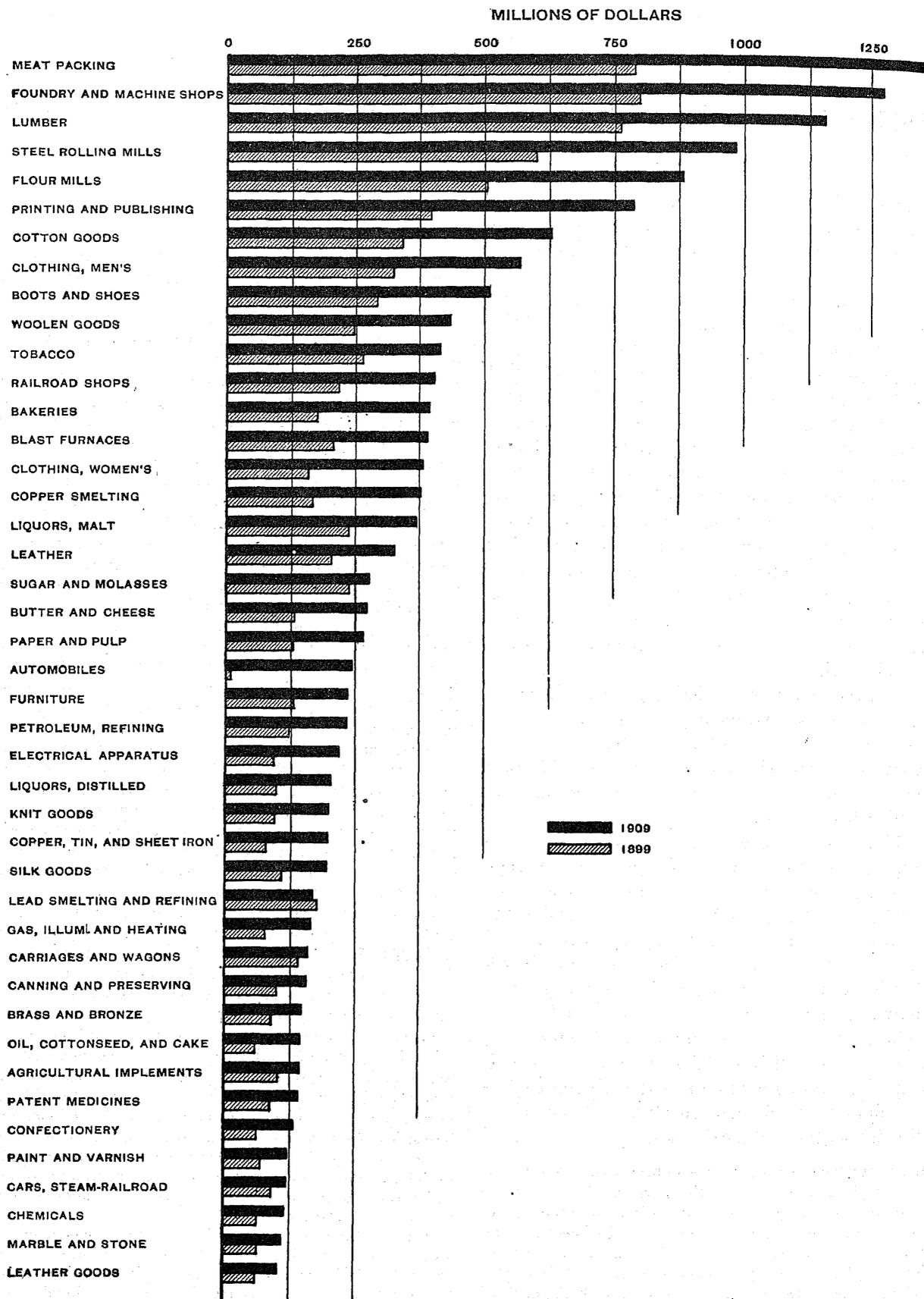
Classification by industries.—The establishments were assigned to the several classes of industries according to their products of chief value. The value of products reported for a given industry may thus, on the one hand, include minor products very different from those covered by the class designation, 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.

The number of industries for which a separate presentation is made is 264, a much smaller number than in the reports for the census of 1904, in which 339 industries were shown separately. This decrease is due to the fact that an attempt to make a separate presentation would in the case of many industries be misleading, inasmuch as a large part of the product of the class described by the industry designation is made, not by establishments engaged primarily in manufacturing that class of commodities, but by establishments whose principal product is such as to necessitate their classification elsewhere. In order to avoid this difficulty it is necessary in many cases to combine a number of closely related industries under a more general designation. This condition is constantly becoming more conspicuous in the manufacturing business of the country, and consequently the number of industries which can properly be shown separately is smaller at this census than at previous censuses.

Owing to changes in industrial conditions, moreover, it is not always possible to classify establishments by industries in such a way as to permit accurate comparison with preceding censuses, and for some of the industries covered by Table 110, therefore, comparative statistics for earlier censuses are necessarily omitted.

ABSTRACT OF THE CENSUS—MANUFACTURES.

VALUE OF PRODUCTS, BY INDUSTRIES: 1909 AND 1899.



GENERAL SUMMARY.

Continental United States and noncontiguous territory: 1909.—The following table gives for 1909 the more important figures for the manufactures of continental United States and for Alaska, Hawaii, and Porto Rico. The table does not cover possessions of the United States other than those mentioned. The statistics of manufactures included in the census of the Philippine Islands taken by the War Department for

1902 are not comparable with those shown in the reports for continental United States; and there has been no census of manufactures in Guam, Samoa, or the Canal Zone. The statistics for Alaska, Hawaii, and Porto Rico include some small establishments of the nature of hand or neighborhood industries, such as are omitted from the canvass for continental United States.

Table 1	NUMBER OR AMOUNT.				
	Total.	Continental United States.	Alaska.	Hawaii.	Porto Rico.
Number of establishments.....	270,082	268,491	152	500	939
Persons engaged in manufactures.....	7,707,751	7,678,578	3,479	7,572	18,122
Proprietors and firm members.....	275,952	273,265	135	1,074	1,478
Salaried employees.....	792,168	790,267	245	594	1,062
Wage earners (average number).....	6,639,931	6,615,046	3,099	5,904	15,582
Primary horsepower.....	18,755,286	18,675,376	3,975	41,930	34,005
Capital.....	\$18,490,749,000	\$18,428,270,000	\$13,060,000	\$23,875,000	\$25,544,000
Expenses.....	18,526,436,000	18,454,090,000	9,454,000	31,753,000	31,139,000
Services.....	4,375,634,000	4,365,613,000	2,328,000	2,795,000	4,898,000
Salaries.....	940,900,000	938,575,000	380,000	686,000	1,259,000
Wages.....	3,434,734,000	3,427,038,000	1,948,000	2,109,000	3,639,000
Materials.....	12,195,019,000	12,142,791,000	5,120,000	25,629,000	21,479,000
Miscellaneous.....	1,955,783,000	1,945,686,000	2,006,000	3,329,000	4,762,000
Value of products.....	20,767,546,000	20,672,052,000	11,340,000	47,404,000	36,750,000
Value added by manufacture (value of products less cost of materials).....	8,572,527,000	8,529,261,000	6,220,000	21,775,000	15,271,000

The total value of manufactures in the area covered by this table for 1909 was \$20,767,546,000, of which 99.5 per cent was contributed by continental United States, the manufactures of Alaska, Hawaii, and Porto Rico being comparatively unimportant. The most important industry in Alaska is the canning and preserving of fish; in Hawaii, the manufacture of sugar; and in Porto Rico, the manufacture of sugar and of tobacco products.

The above table is the only one in this report in which the statistics for the noncontiguous territories are included, all the other tables relating exclusively to continental United States.

Explanation of terms.—With reference to some of the items contained in the above and following tables certain explanations are necessary:

Persons engaged in manufacturing industries.—The statistics of the number of proprietors and firm members and the number of salaried employees are based on the returns for a single representative day only. In the case of wage earners a report was obtained of the number employed on the 15th of each month, and from these returns the average number employed during the year has been calculated by dividing the sum of the numbers reported for the several months by 12. (See also p. 452.)

Capital.—For reasons stated in reports of prior censuses the statistics of capital secured by the census canvass are so defective as to be of little 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.—The statistics as to cost of materials relate 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. Under the head of "fuel" is included 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 amounts given under this head 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.

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 horsepower.—This item represents the total primary power generated by the manufacturing establishments plus the amount of power, principally electric, rented by them from other concerns. It does not cover the electric power developed by the primary power of the establishments themselves, the inclusion of which would evidently result in duplication.

General comparison for the United States: 1909, 1904, and 1899.—The following table gives the principal items of information covered by census inquiries

relative to manufactures in continental United States for 1909, 1904, and 1899, together with the percentages of increase from census to census:

Table 2	NUMBER OR AMOUNT.			PER CENT OF INCREASE.	
	1909	1904	1899	1904-1909	1899-1904
Number of establishments.....	268, 491	216, 180	207, 514	24. 2	4. 2
Persons engaged in manufactures.....	7, 678, 578	6, 213, 612	(¹)	23. 6	-----
Proprietors and firm members.....	273, 265	225, 673	(¹)	21. 1	-----
Salaried employees.....	790, 267	519, 556	364, 120	52. 1	42. 7
Wage earners (average number).....	6, 615, 046	5, 468, 383	4, 712, 763	21. 0	16. 0
Primary horsepower.....	18, 675, 376	13, 487, 707	10, 097, 893	38. 5	33. 6
Capital.....	\$18, 428, 270, 000	\$12, 675, 581, 000	\$8, 975, 256, 000	45. 4	41. 2
Expenses.....	18, 454, 090, 000	13, 138, 260, 000	9, 870, 425, 000	40. 5	33. 1
Services.....	4, 365, 613, 000	3, 184, 884, 000	2, 389, 132, 000	37. 1	33. 3
Salaries.....	938, 575, 000	574, 439, 000	380, 771, 000	63. 4	50. 9
Wages.....	3, 427, 038, 000	2, 610, 445, 000	2, 008, 361, 000	31. 3	30. 0
Materials.....	12, 142, 791, 000	8, 500, 208, 000	6, 575, 851, 000	42. 9	29. 3
Miscellaneous.....	1, 945, 686, 000	1, 453, 168, 000	905, 442, 000	33. 9	60. 5
Value of products.....	20, 672, 052, 000	14, 793, 903, 000	11, 406, 927, 000	39. 7	29. 7
Value added by manufacture (value of products less cost of materials).....	8, 529, 261, 000	6, 293, 695, 000	4, 831, 076, 000	35. 5	30. 3

¹ Figures not available.

In 1909 the United States had 268,491 manufacturing establishments, which gave employment during the year to an average of 7,678,578 persons, of whom 6,615,046 were wage earners. These manufacturing establishments paid \$4,365,613,000 in salaries and wages, and turned out products to the value of \$20,672,052,000, to produce which materials costing \$12,142,791,000 were consumed. The value added by manufacture, namely, the difference between the cost of materials and the total value of products, was \$8,529,261,000. This figure best represents the net wealth created by manufacturing operations, because the gross value of products includes the cost of the materials used, which are either the products of non-manufacturing industries, such as agriculture, forestry, fisheries, and mining, or else are themselves the product of manufacturing establishments. The value of products derived from this latter class of materials involves a duplication, inasmuch as the value of these materials has already figured in the value of products reported for the establishments manufacturing them in the first instance; in some cases, indeed, where a given product has passed through several distinct stages of manufacture in different establishments before reaching its final form, this duplication may be repeated several times. All such duplications, as well as the original value of materials, are, however, eliminated in the figures for value added by manufacture. This value covers salaries and wages—which represent over one-half of the total—overhead charges, depreciation, interest, taxes, and other expenses attendant upon the manufacturing operations, as well as the profits of the undertaking.

Table 2 shows that the manufacturing industries of the United States as a whole experienced a more rapid growth during the five-year period 1904-1909

than during the period 1899-1904, although in both periods the progress was very marked. During the first five years of the decade the average number of wage earners increased 16 per cent; during the second five years, 21 per cent. The value of products increased 29.7 per cent during the first period and 39.7 per cent during the second period. The rate of increase in the value added by manufacture shows less difference between the two periods, being 30.3 per cent during the first five years and 35.5 per cent during the second five years. In this connection it may be noted that there was a greater rate of increase in the cost of materials during the second period than during the first.

During the 10 years from 1899 to 1909 the number of establishments increased 29.4 per cent; the capital employed, 105.3 per cent; the average number of wage earners, 40.4 per cent; the amount of primary power, 84.9 per cent; the value of materials consumed, 84.7 per cent; the value of products, 81.2 per cent; and the value added by manufacture, 76.6 per cent. The gross value of products in 1909 exceeded that in 1899 by more than \$9,000,000,000, and the value added by manufacture in 1909 was, in round numbers, \$3,700,000,000 more than in 1899.

It would be improper to infer that manufactures increased in volume during either of the five-year periods covered by the table to the full extent indicated by the increase in value of materials consumed or in the value of products, since the increase shown in these items is certainly due in part to the increase that has taken place in the price of commodities. It may be presumed that the quantity of products increased somewhat more rapidly than the number of wage earners; this might be expected from the fact that the amount of primary power increased much faster than the number of wage earners; in

other words, each wage earner, on the average, had greater assistance from mechanical power in 1909 than in 1904 or 1899.

It is a matter of interest to note that during both of the five-year periods the wages paid showed a higher percentage of increase than the average number of wage earners, thus indicating an increase in the average wages.

Comparison with earlier censuses.—In 1810 the Secretary of the Treasury made a report on the condition of manufactures in the United States and estimated that the value of products for 1809 exceeded \$120,000,000. An estimate based on the returns of the census of 1810 placed the value of the annual product at \$198,613,471. Further efforts to secure statistics of manufactures were made in 1820 and 1840, but the results were more or less unsatisfactory. In 1830 no such attempt was made. The census of 1850 was the first to present fairly complete statistics for manufactures. Each census from that time to 1890 was based in part on returns for the preceding calendar year and in part on returns for other 12-month periods, mainly ending during the census year itself. The last three censuses cover principally returns for the preceding calendar year or for 12-month periods ending within that year. In general, in this report the statistics for all censuses are referred to by the year preceding that in which the census was taken.

The statistics of manufactures secured at the decennial censuses from 1850 to 1900, inclusive, covered the neighborhood, hand, and building industries, as well as the factory industries, while the reports for 1904 and 1909 were confined to factory industries. The statistics for 1899 obtained at the decennial census of 1900, although originally taken on the broader basis, have, for the purpose of comparison with later censuses, been reduced to the factory basis by eliminating as far as possible the neighborhood, hand, and building trades, but no such elimination is possible with respect to the earlier censuses. For this reason the statistics for years prior to 1899 are not entirely comparable with those for 1904 and 1909. Nevertheless, for the purpose of showing in a rough way the movement during each decade since 1850, the following summary table is presented. Two sets of figures are given in this table for 1899, the one including the neighborhood, hand, and building trades, in order to make the data comparable with those for preceding censuses, and the other excluding them in order to make the figures comparable with those for later censuses. The values and wages for 1869 have been reduced to a gold basis, inasmuch as the figures as reported would, because of the inflation of the currency at that time, exaggerate the increase from 1859 to 1869, and understate the increase from 1869 to 1879.

Table 3	Number of establishments.	Capital.	Wage earners (average number).	Wages.	Cost of materials.	Value of products.	Value added by manufacture.
Factories and hand and neighborhood industries:							
1849 (census of 1850).....	123,025	\$533,245,000	957,059	\$236,755,000	\$555,124,000	\$1,019,107,000	\$403,953,000
1859 (census of 1860).....	140,433	1,009,856,000	1,311,246	373,879,000	1,031,005,000	1,885,862,000	854,257,000
Per cent of increase, 1849 to 1859.....	14.1	89.4	37.0	60.0	85.8	85.0	84.1
1869 (census of 1870) (gold value).....	252,148	1,694,567,000	2,053,996	620,467,000	1,990,742,000	3,355,960,000	1,395,118,000
Per cent of increase, 1859 to 1869.....	79.6	67.8	56.6	63.8	93.0	79.5	62.3
1879 (census of 1880).....	253,852	2,790,273,000	2,732,595	947,954,000	3,396,824,000	5,369,579,000	1,972,755,000
Per cent of increase, 1869 to 1879.....	0.7	64.7	33.0	52.8	90.6	74.5	41.4
1889 (census of 1890).....	355,405	6,525,051,000	4,251,535	1,891,210,000	5,162,014,000	9,372,379,000	4,210,365,000
Per cent of increase, 1879 to 1889.....	40.0	133.8	55.6	99.5	52.0	74.5	113.4
1899 (census of 1900).....	512,191	9,813,834,000	5,306,143	2,320,938,000	7,343,623,000	13,000,149,000	5,656,521,000
Per cent of increase, 1889 to 1899.....	44.1	50.4	24.8	22.7	42.3	38.7	34.3
Factories, excluding hand and neighborhood industries:							
1899 (census of 1900).....	207,514	8,975,256,000	4,712,763	2,008,361,000	6,575,851,000	11,406,927,000	4,831,076,000
1904 (census of 1905).....	216,180	12,675,581,000	5,468,333	2,610,445,000	8,500,208,000	14,732,903,000	6,293,695,000
Per cent of increase, 1899 to 1904.....	4.2	41.2	16.0	30.0	29.3	29.7	30.3
1909 (census of 1910).....	268,491	18,428,270,000	6,615,046	3,427,038,000	12,142,791,000	20,672,062,000	8,529,261,000
Per cent of increase, 1904 to 1909.....	24.2	45.4	21.0	31.3	42.9	39.7	35.5
Per cent of increase, 1899 to 1909.....	29.4	105.3	40.4	70.6	84.7	81.2	76.6

This table shows that, although the returns for 1849 included neighborhood, hand, and building trades and those for 1909 did not, nevertheless the value of products in the latter year was over twenty times as great as the value reported 60 years before. During the same time the number of wage earners employed increased almost sixfold.

As judged by the number of wage earners, the decade showing the greatest percentage of increase was that from 1859 to 1869, during which the average number of wage earners increased 56.6 per cent. The decade 1879

to 1889 also showed an exceptionally high percentage of increase in this respect, while the next largest percentage of increase occurred during the decade from 1899 to 1909. As respects value of products, the percentage of increase during the past decade exceeds that in any other except the decade from 1849 to 1859; but in value added by manufacture, the percentage of increase during the past 10 years falls below that from 1879 to 1889, as well as that from 1849 to 1859.

The absolute increases shown for the various items covered by the table during the decade 1899 to 1909

were much greater than during any other decade; the increase in value of products, in fact, almost equaled the total value of all manufactured products in 1889.

Leading industries.—The relative importance of the leading manufacturing industries in the United States in 1909 and their growth from 1899 to 1909 are shown in Table 4, which includes the industries having a gross value of products in 1909 of \$100,000,000 or more. The industries are arranged in the order of the value of products. The table also shows the rank of the industries listed, not only with respect to value of products, but with respect to number of wage earners employed and value added by manufacture, and the percentage of the total of each of these items for all industries combined which is represented by each specified industry. While the column of rank under "Value of products" represents correctly the order of the industries named among all the industries of the country, the ranking shown with reference to number of wage earners and value added by manufacture relates only to the relative order of the industries covered by this particular table. There are various industries not named which rank higher in these respects than some of the industries listed in the table.

The number of wage earners and the value added by manufacture are, at least from certain standpoints, a better measure of the relative importance of manufacturing industries than the gross value of products. In some industries the value of the materials used constitutes by far the larger part of the total value of products, the manufacturing process involving the addition of only a small amount of labor cost and other expenses and of manufacturer's profit to the cost of the materials. Moreover, in some of the industries there is a much greater duplication in the gross value of products than in others. This duplication, of course, does not appear in the value added by manufacture.

In considering the ranking of the industries in Table 4, it should be borne in mind that some of the industries specified are in a sense groups of industries rather than single industries. As stated in the Introduction, in certain cases, in order to avoid a misleading understatement of the importance of the production of a given minor class of commodities, the returns for establishments making these commodities as their sole or principal product have had to be combined with those of establishments in larger industries which produce primarily other commodities, but which incidentally make a large part of the distinctive products in question. In a few instances where a similar condition exists, however, it was deemed best not to make such a combination of industries. As also stated in the Introduction, the report for each establishment, as a whole, has been assigned to a given class of industry according to its products of chief value, so that the figures for any given class must not be taken either as fully covering or as represent-

ing exclusively the operations of that branch of manufacturing indicated by the industry designation.

The following explanations show the scope of those classifications in the table which are not on their face entirely clear:

Slaughtering and meat packing.—This classification includes the wholesale slaughtering and meat-packing establishments and those engaged in the manufacture of sausage, but not the numerous retail butcher shops which in the aggregate slaughter a large number of animals. It includes the manufacture of many by-products, some of which are carried to a high degree of elaboration.

Foundry and machine-shop products.—This industry includes all allied industries excepting those which manufacture a distinctive product indicated by some other classification, such as cash registers, calculating machines, sewing machines, and electrical machinery. The establishments engaged in the manufacture of bells, gas machines and gas and water meters, hardware, plumbers' supplies, saddlery hardware, steam fittings, structural ironwork, and cast-iron and cast-steel pipe, some of which were reported under separate classifications at previous censuses, are all included under this general heading.

Lumber and timber products.—This industry embraces logging operations, ordinary sawmills, planing mills, and establishments engaged in the manufacture of wooden packing boxes. It does not include statistics of mills engaged exclusively in custom sawing for local consumption.

Iron and steel, steel works and rolling mills.—This industry embraces the manufacture of steel and the hot rolling of iron and steel. It also includes the making of forgings and castings and the manufacture of rolled iron and steel into more highly finished forms when conducted as a part of the rolling-mill operations, as well as the few extant forges and bloomeries. It does not, however, include the making of cold-rolled products, nor of forgings, castings, and manufactures of iron and steel by establishments not equipped with steel-making furnaces or hot trains of rolls.

Flour-mill and gristmill products.—This classification includes statistics for all mills grinding wheat, rye, or buckwheat flour, or corn meal, hominy, grits, or feed, but it does not include statistics for mills doing custom grinding exclusively, or for factories making fancy cereal food or other special food preparations as a chief product.

Printing and publishing.—This classification includes job-printing establishments, the printing and publishing of books, newspapers and periodicals, and music, bookbinding, steel engraving, and lithographing.

Cotton goods, including cotton small wares.—In addition to the statistics for cotton mills proper, there are included under this head the statistics for establishments that make a specialty of small wares, such as

braids, tapes, bindings, corset and shoe laces, and the like.

Clothing, men's, including shirts.—This classification includes the making of men's and boys' ready-made clothing; the making of overalls, butchers' aprons, bathing suits, and gymnasium clothing; and the manufacture of all kinds of shirts—cotton, linen, flannel, etc.—as well as shirt bosoms and shirt waists for men and boys.

Boots and shoes, including cut stock and findings.—Under this head are included not only factories making the finished product, but those doing the whole or part of the work on materials furnished by others, as well as shops doing stitching, crimping, fitting, and bottoming, or performing other special operations. The manufacture of footwear not coming strictly under the head of boots and shoes, such as overgaiters, moccasins, and leggings, is also covered by this designation. It does not include the manufacture of rubber boots and shoes.

Clothing, women's.—Besides the making of suits, dresses, skirts, and shirt waists, this industry includes the manufacture of women's underwear and night robes, of infants' clothing, and of such articles as aprons, linings, belts, dress shields, and hose supporters.

Sugar and molasses, not including beet sugar.—Under this classification are included the manufacture of sugar and of some by-products of the sugar industry, such as molasses and sirup, and also the operations of sugar refineries, together with the manufacture of maple sugar. It does not, however, include the small plantation or custom sugar mills.

Furniture and refrigerators.—This industry embraces the manufacture of wood and metal furniture of all kinds, store and office fixtures, and refrigerators and ice boxes, except where such products are provided for by a distinct classification, such as show cases.

Copper, tin, and sheet-iron products.—This classification comprises the manufacture of sheet-metal products of copper, tin, and iron, including the preparation of copper, tin, or sheet-iron material for building construction. It includes the factory work on cornices, skylights, roofing, etc., but does not include the erection or installation of the same.

Canning and preserving.—This industry includes the canning and preserving of fruits and vegetables, fish, oysters, clams, etc., and the manufacture of pickles, preserves, jellies, sauces, etc. It includes the preparation of pickled, smoked, and dried fish, and the packing of dried fruits by packing houses which make a specialty of such business, but does not include the drying and packing of fruits by the grower on the farm, nor does it include the canning of meats, soups, and similar products in meat-packing establishments, the statistics for which are included with those for the slaughtering and meat-packing industry.

Patent medicines and compounds and druggists' preparations.—Under this head are included establishments making so-called patent medicines, and also some compounds that are not used for medicinal purposes, and the manufacture of capsules, extracts, tinctures, and other pharmaceutical preparations, together with perfumery and cosmetics.

Chemicals.—This classification includes establishments engaged primarily in the manufacture of acids, sodas, potashes, alums, coal-tar products, cyanides, bleaching materials, plastics, compressed or liquefied gases, alkaloids, gold, silver, and platinum salts, chloroform, ether, and other fine chemicals, glycerin, epsom salts, copperas, blue vitriol, and other bases and salts, when they are made as a chief product by the establishment reporting. Chemical substances produced by the aid of electricity are presented in a group by themselves. Chemicals of the class above specified are frequently manufactured as by-products by establishments classified in the census reports under a different head, for example, by establishments making patent medicines and compounds and druggists' preparations, soap, fertilizers, baking powders, and flavoring extracts; by refiners of coal tar for use as roofing material; by smelters and refiners of lead and zinc; and by establishments engaged in the manufacture of sulphuric, nitric, and mixed acids and of explosives, in wood distillation, and in making tin and terne plate.

It will be seen from Table 4 that some of the industries that hold a very high rank in gross value of products rank comparatively low in the number of wage earners employed and in the 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 slaughtering and meat-packing industry, which ranks first in gross value of products, and the flour-mill and gristmill industry, which ranks fifth in that respect, both hold a comparatively low rank with regard to number of wage earners and value added by manufacture. The blast-furnace industry, the smelting and refining of copper, the manufacture and refining of sugar and molasses, the manufacture of butter, cheese, and condensed milk, the refining of petroleum, and the smelting and refining of lead are other industries which rank much higher in gross value of products than in the number of wage earners or the value added by manufacture.

There are several industries the rank of which according to the number of wage earners and the value added by manufacture is decidedly higher than the rank according to value of products; in other words, the cost of materials is relatively a smaller part of the total value of products for these industries than for

most others. Among the industries of this class are the making of women's clothing, the manufacture of automobiles, furniture, electrical machinery, apparatus, and supplies, hosiery and knit goods, silk goods, and agricultural implements, and the confectionery and marble and stone work industries.

The foundry and machine-shop industry, the lumber industry, the steel works and rolling mills, the printing and publishing industry, the manufacture of cotton goods, of men's clothing, and of boots and shoes all rank among the first 10 industries in the table on

each of the three bases shown in the table. The figures for both value of products and value added by manufacture in the case of the brewery and distillery industries include a very large amount of tax paid to the Federal Government, and are therefore misleading as an indication of the relative importance of these industries from a purely manufacturing standpoint. That importance is best shown by their ranking in number of wage earners; in this respect the brewery industry ranks twenty-fifth among the industries listed, and the distillery industry forty-third.

INDUSTRY.	Number of establishments.	WAGE EARNERS.		VALUE OF PRODUCTS.		VALUE ADDED BY MANUFACTURE.		PER CENT OF INCREASE. ¹								
		Average number.	Per cent distribution.	Amount (expressed in thousands).	Per cent distribution.	Amount (expressed in thousands).	Per cent distribution.	Wage earners (average number).		Value of products.		Value added by manufacture.				
								1904-1909	1899-1904	1904-1909	1899-1904	1904-1909	1899-1904			
		Rank.	Rank.	Rank.	Rank.	Rank.	Rank.									
All industries.....	268,491	6,615,046	100.0	\$20,672,052	100.0	\$8,529,261	100.0	21.0	16.0	39.7	29.7	35.5	30.8			
Slaughtering and meat packing.....	1,641	89,728	16	1.4	1,370,568	1	6.6	167,740	13	2.0	19.0	8.9	48.6	17.0	51.6	7.3
Foundry and machine-shop products.....	13,253	531,011	2	8.0	1,228,475	2	5.9	688,464	1	8.1	19.8	3.8	39.5	10.3	34.2	17.8
Lumber and timber products.....	40,671	695,019	1	10.5	1,156,129	3	5.6	648,011	2	7.6	30.5	4.7	30.7	16.2	23.7	32.3
Iron and steel, steel works and rolling mills.....	446	240,076	6	3.6	985,723	4	4.8	328,222	4	3.9	15.7	13.3	46.3	12.9	41.0	12.8
Flour-mill and gristmill products.....	11,691	39,453	30	0.6	883,584	5	4.3	116,008	18	1.4	0.9	21.4	23.9	42.2	24.7	27.0
Printing and publishing.....	31,445	258,434	5	3.9	737,876	6	3.6	536,101	3	6.3	18.0	12.2	33.6	39.8	30.8	40.6
Cotton goods, including cotton small wares.....	1,324	378,880	3	5.7	628,392	7	3.0	257,383	7	3.0	19.9	4.3	39.5	32.8	56.7	1.0
Clothing, men's, including shirts.....	6,354	239,696	7	3.6	568,077	8	2.7	270,562	6	3.2	38.0	10.2	39.7	25.6	38.5	25.5
Boots and shoes, including cut stock and findings.....	1,918	198,297	8	3.0	512,798	9	2.5	180,060	10	2.1	23.7	6.0	43.4	23.3	36.0	34.3
Woolen, worsted, and felt goods, and wool hats.....	985	168,722	9	2.6	435,979	10	2.1	153,101	15	1.8	15.0	12.3	36.5	28.4	33.4	20.9
Tobacco manufactures.....	15,822	166,810	10	2.5	416,695	11	2.0	239,509	8	2.8	4.6	20.3	25.8	25.6	16.8	20.0
Cars and general shop construction and repairs by steam-railroad companies.....	1,145	282,174	4	4.3	405,601	12	2.0	206,188	9	2.4	19.1	36.4	30.9	42.0	29.9	46.0
Bread and other bakery products.....	23,926	100,216	14	1.5	396,865	13	1.9	158,831	14	1.9	23.3	35.0	47.2	53.7	39.8	41.4
Iron and steel, blast furnaces.....	208	38,429	31	0.6	391,429	14	1.9	70,791	30	0.8	9.6	10.6	68.8	12.1	33.9	29.7
Clothing, women's.....	4,558	153,743	11	2.3	384,752	15	1.9	175,964	11	2.1	32.9	38.2	55.4	55.4	50.5	56.7
Smelting and refining, copper.....	38	15,628	38	0.2	378,806	16	1.8	45,274	36	0.5	22.6	12.6	57.3	45.8	2.8	2.5
Liquors, malt.....	1,414	54,579	25	0.8	374,730	17	1.8	278,134	5	3.3	13.4	22.0	25.6	25.9	24.5	20.6
Leather, tanned, curried, and finished.....	919	62,202	23	0.9	327,874	18	1.6	79,595	27	0.9	8.7	9.8	29.8	23.8	29.5	25.3
Sugar and molasses, not including beet sugar.....	233	13,526	41	0.2	279,249	10	1.4	31,666	41	0.4	-0.2	-4.1	0.7	15.7	-2.7	77.5
Butter, cheese, and condensed milk.....	8,479	18,431	36	0.3	274,558	20	1.3	39,012	30	0.5	18.5	21.5	63.2	28.6	54.4	15.1
Paper and wood pulp.....	777	75,978	18	1.2	267,657	21	1.3	102,215	21	1.2	15.2	32.9	41.8	48.2	32.0	36.4
Automobiles, including bodies and parts.....	743	75,721	19	1.1	249,202	22	1.2	117,556	17	1.4	528.4	437.7	729.7	532.6	596.3	473.5
Furniture and refrigerators.....	3,155	128,452	13	1.9	239,887	23	1.2	131,112	16	1.5	12.5	20.0	34.9	36.1	29.9	37.8
Petroleum, refining.....	147	13,929	40	0.2	236,998	24	1.1	37,725	40	0.4	-16.9	37.4	35.4	41.2	5.9	69.0
Electrical machinery, apparatus, and supplies.....	1,009	87,256	17	1.3	221,309	25	1.1	112,743	20	1.3	44.3	43.9	57.2	52.3	52.4	72.1
Liquors, distilled.....	613	6,430	43	0.1	204,699	26	1.0	168,722	12	2.0	20.1	44.0	55.9	35.6	59.7	29.4
Hosiery and knit goods.....	1,374	129,275	12	2.0	200,144	27	1.0	89,903	23	1.1	24.2	24.4	46.0	43.0	49.1	35.1
Copper, tin, and sheet-iron products.....	4,228	73,615	20	1.1	199,824	28	1.0	87,242	25	1.0	38.8	38.4	66.6	53.1	55.8	56.6
Silk and silk goods, including throwsters.....	852	99,037	15	1.5	106,912	29	1.0	89,145	24	1.0	24.4	21.7	47.7	24.3	55.2	28.0
Smelting and refining, lead.....	28	7,424	42	0.1	167,406	30	0.8	15,443	43	0.2	-2.0	-9.0	-9.9	5.9	-8.5	-46.1
Gas, illuminating and heating.....	1,296	37,215	32	0.6	166,814	31	0.8	114,386	19	1.3	21.8	36.1	33.3	65.3	30.0	59.6
Carriages and wagons and materials.....	5,492	69,928	21	1.1	159,893	32	0.8	77,942	28	0.9	-10.2	5.5	2.6	12.7	-0.5	9.6
Canning and preserving.....	3,767	56,968	24	0.9	157,101	33	0.8	55,278	31	0.7	5.3	-0.1	20.4	31.3	16.8	32.7
Brass and bronze products.....	1,021	40,618	29	0.6	149,889	34	0.7	50,761	34	0.6	22.5	22.1	46.5	15.5	38.1	33.8
Oil, cottonseed, and cake.....	817	17,071	37	0.3	147,868	35	0.7	28,035	42	0.3	9.9	41.2	53.4	64.2	71.2	20.8
Agricultural implements.....	640	50,551	26	0.8	146,329	36	0.7	86,022	26	1.0	6.7	1.7	30.6	10.7	35.0	11.3
Patent medicines and compounds and druggists' preparations.....	3,642	22,895	35	0.3	141,942	37	0.7	91,566	22	1.1	11.8	7.6	20.9	32.3	17.5	37.1
Confectionery.....	1,944	44,638	27	0.7	134,796	38	0.7	53,645	32	0.6	23.2	34.9	54.8	43.6	40.1	51.4
Paint and varnish.....	791	14,240	39	0.2	124,889	39	0.6	45,873	35	0.5	22.4	20.0	37.5	30.6	47.9	24.9
Cars, steam-railroad, not including operations of railroad companies.....	110	43,086	28	0.7	123,730	40	0.6	44,977	37	0.5	26.5	1.8	11.3	22.8	26.6	23.5
Chemicals.....	349	23,714	34	0.4	117,689	41	0.6	53,567	33	0.6	19.7	4.1	56.5	20.1	61.5	18.0
Marble and stone work.....	4,964	65,603	22	1.0	113,093	42	0.5	75,696	29	0.9	28.4	22.6	33.3	33.3	29.9	38.4
Leather goods.....	2,375	34,907	33	0.5	104,719	43	0.5	44,692	38	0.5	2.1	16.8	27.5	35.9	18.6	38.5
All other industries.....	61,887	1,648,441	24.9		4,561,002	22.0		2,084,399	24.4		18.5	23.9	41.8	41.5	36.6	47.1

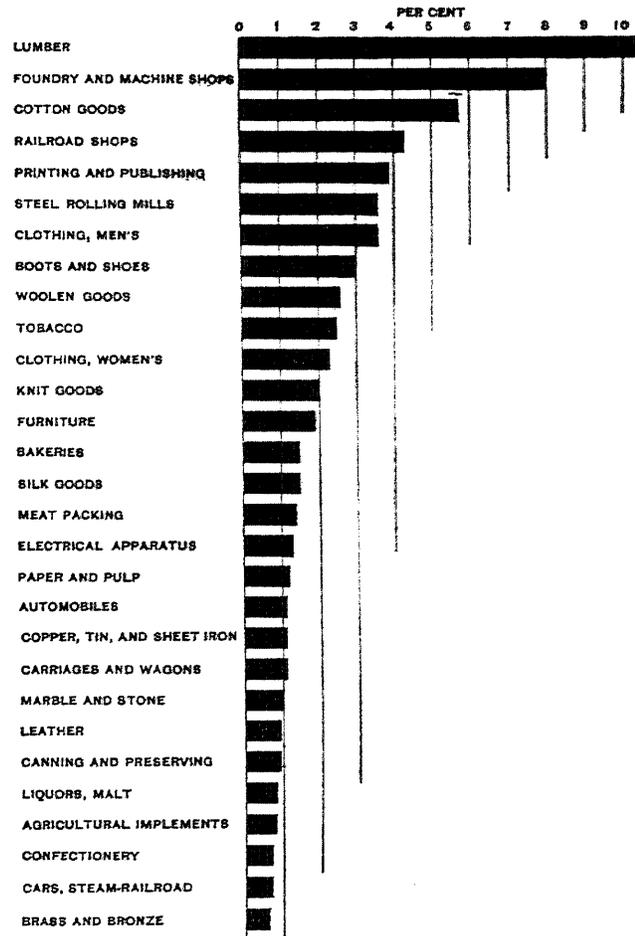
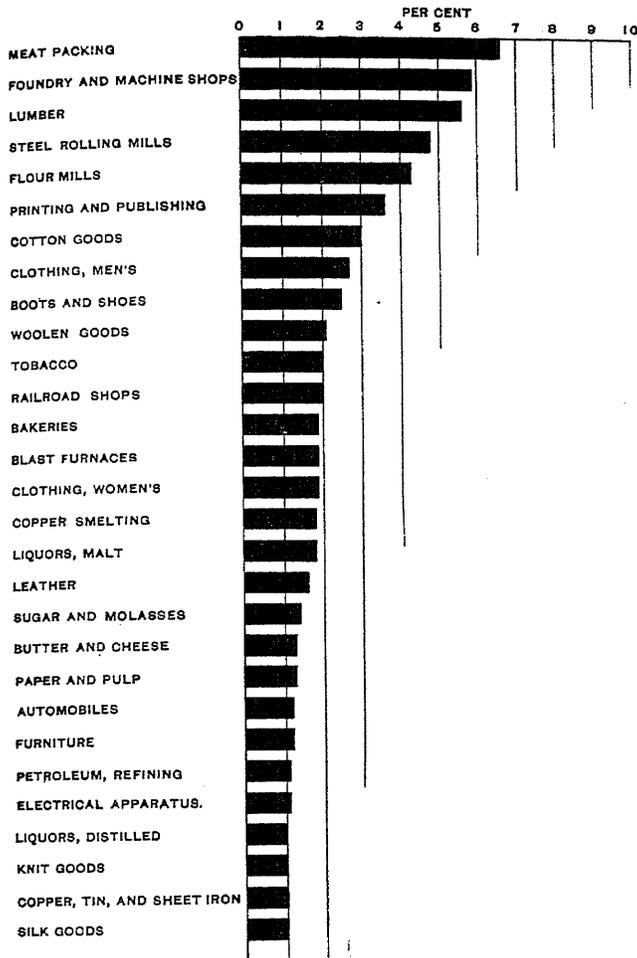
¹ Per cent of increase is based on figures in Table 110. A minus sign (-) denotes decrease.

The table shows very great differences among the several industries with respect to the percentages of increase in the number of wage earners, value of products, and value added by manufacture. The great majority of the industries, however, show an

increase in each of these items for each of the five-year periods, the exceptions being the sugar industry and the smelting and refining of lead, which show a decrease in one or more items for each five-year period; the refining of petroleum, which shows a

PER CENT DISTRIBUTION OF VALUE OF PRODUCTS, BY INDUSTRIES: 1909.

PER CENT DISTRIBUTION OF AVERAGE NUMBER OF WAGE EARNERS, BY INDUSTRIES: 1909.



decrease in one item, and the manufacture of carriages and wagons, which shows a decrease in two items, for the period 1904 to 1909; and the blast-furnace industry and the canning and preserving industry, which show a decrease in one item each during the period 1899 to 1904.

By far the highest percentages of increase are shown for the automobile industry, the gross value of products of which increased more than sevenfold during the five years 1904 to 1909, and more than fiftyfold during the decade as a whole. Other industries which show exceptionally large increases for both five-year periods in all three items are the making of men's and of women's clothing, the bakery and the butter, cheese, and condensed-milk industries, the manufacture of electrical machinery, apparatus, and supplies, and of copper, tin, and sheet-iron products, the distillery industry, the manufacture of hosiery and knit goods and of silk and silk goods, the illuminating-gas industry, the manufacture of brass and bronze products, and the confectionery, paint and varnish, and marble and stone work industries. It is interesting to note that the group of "all other industries," which in-

cludes the less important industries of the country, shows greater percentages of increase than all industries combined, thus indicating possibly an increased tendency toward diversification in manufacturing industries.

The percentage of increase in all three of the items—number of wage earners, gross value of products, and value added by manufacture—was greater during the second five-year period (1904 to 1909) than during the first (1899 to 1904) in the slaughtering and meat-packing and foundry and machine-shop industries, the manufacture of cotton goods, the men's clothing, boot and shoe, and woolen-goods industries, the smelting and refining of copper, the manufacture of automobiles, silk and silk goods, brass and bronze products, agricultural implements, and paint and varnish, the steel works and rolling mills, and the chemical industry. On the other hand, the percentage of increase in all three items was less during the later five-year period than during the earlier in the flour-mill and gristmill, railroad repair shop, bakery, women's clothing, paper and wood pulp, petroleum refining, furniture, illuminating gas, carriage and wagon, and leather-goods industries.

In all the other industries covered by the table the increases during the second period are in some items greater than during the first period, while in other items they are less, or else the industry shows a decrease during one or both periods.

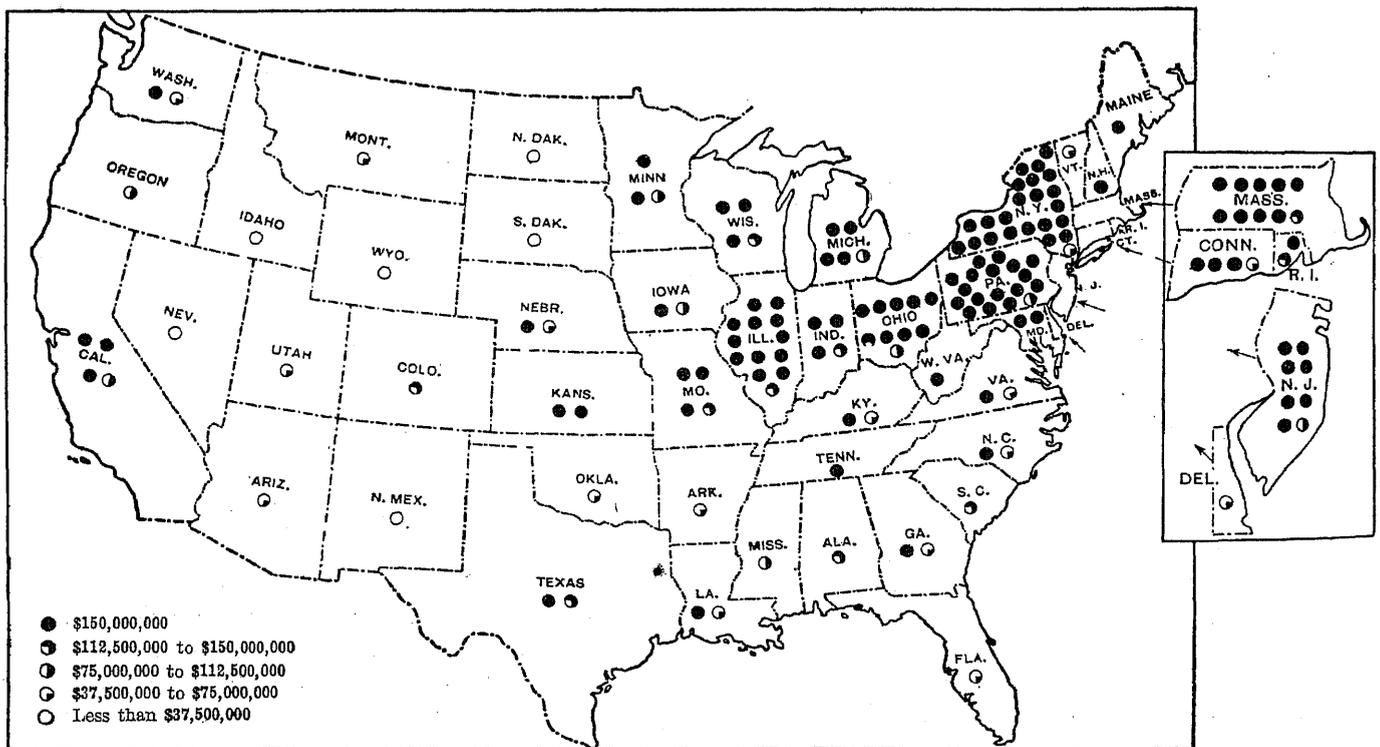
In considering the relative importance of the industries shown in Table 110 and not included in Table 4, it should be noted that there are several industries listed the figures given for which fall far short of being a complete presentation of the statistics for that branch of manufactures covered by the industry designation, for the reason that they cover only establishments engaged primarily in manufacturing the class of products indicated by this designation, while large quantities of the same products are manufactured incidentally by establishments classified under other heads. Some conspicuous examples are the manufacture of glue, candles, lard, and fertilizers, and the dyeing and finishing of textiles. A large proportion of the glue, lard, and fertilizers are manufactured by slaughtering and meat-packing establishments, and quantities of fertilizers are also made in cottonseed-oil mills. The dyeing and finishing of textiles is done largely in the establishments that manufacture the fabric. Candles are manufactured in establishments classified under the head of "soap" and in those engaged in the manufacture of petroleum products. For reasons of this character the roasting and grinding of coffee and spice, and the manufacture of fertilizers, food preparations, and rubber goods, and the soap industry, for each of which products valued at over \$100,000,000 were reported, are not shown in Table 4.

Summary by states and geographic divisions.—Table 5 on the next page shows, for each state, the population, also the number of wage earners, value of products, and value added by manufacture in 1909, together with the rank of the state with respect to each of these items and the percentage of the total reported from each state. It also shows the percentage of increase with respect to each of these three items from 1904 to 1909 and from 1899 to 1904, respectively. The states are arranged in the order of their rank with respect to value of products.

The first seven states in respect to value of products are also the first seven in respect to number of wage earners and value added by manufacture. Each of these seven states has the same rank in all three respects except that Illinois, which is third in value of products and value added by manufacture, ranks fourth in number of wage earners, Massachusetts advancing to third place. These seven states together reported over three-fifths of the total value of manufactured products for the United States.

Most of the other states show approximately the same rank in each of the three items, but there are several states in which, because of the large proportion which the cost of materials represents of the total value of products, the rank according to value of products is materially higher than that in number of wage earners or in value added by manufacture. This is particularly true of states in which the flour-mill and slaughtering industries are the most important. The most noteworthy case of this character is Kansas, which ranks four-

VALUE OF PRODUCTS OF MANUFACTURES: 1909.



teenth in value of products, but only thirty-third in number of wage earners and twenty-eighth in value added by manufacture.

With only one exception all of the states show an increase in each of the three items from 1904 to 1909; in Montana, however, the value added by manufacture shows a decrease for this period, due largely to merely technical differences in methods of accounting in the smelting industry, which is the principal one in that state. A few of the states showed a decrease in one or more items for the period 1899 to 1904.

The greatest percentages of increase are naturally in those states in which the development of manufacturing industries is comparatively recent. Thus Texas, Washington, Oregon, Utah, Oklahoma, Idaho, North Dakota, and Nevada show exceptionally high rates of increase for both five-year periods. Among the 10 states which are most important in manufacturing the most conspicuous advances are in Ohio, New Jersey, and Michigan. The absolute increase, as distinguished from the percentage of increase, was greater in New York, the leading manufacturing state, than in any other state.

Table 5

STATE.	Population.	Number of establishments.	WAGE EARNERS.		VALUE OF PRODUCTS.		VALUE ADDED BY MANUFACTURE.		PER CENT OF INCREASE. ¹								
			Average number.	Rank.	Per cent distribution.	Amount (expressed in thousands).	Rank.	Per cent distribution.	Amount (expressed in thousands).	Rank.	Per cent distribution.	Wage earners (average number).		Value of products.		Value added by manufacture.	
												1904-1909	1899-1904	1904-1909	1899-1904	1904-1909	1899-1904
United States.....	91,972,266	268,491	6,615,046	100.0	\$20,672,052	100.0	\$8,529,261	100.0	21.0	16.0	29.7	29.7	35.5	30.3			
New York.....	9,113,614	44,935	1,003,981	1	3,369,490	1	1,512,586	1	17.2	17.9	35.4	32.9	32.7	33.5			
Pennsylvania.....	7,665,111	27,563	877,543	2	2,626,742	2	1,044,182	2	15.0	15.0	34.3	18.5	28.5	17.5			
Illinois.....	5,638,591	18,026	465,764	4	1,919,277	3	758,350	3	22.8	14.0	26.1	25.8	33.0	29.6			
Massachusetts.....	3,366,416	11,684	584,559	3	1,490,529	4	659,764	4	19.7	11.4	32.6	23.8	32.6	21.7			
Ohio.....	4,767,121	15,138	446,934	5	1,437,936	5	613,734	5	22.7	18.2	49.7	28.3	41.7	27.6			
New Jersey.....	2,537,167	8,817	326,223	6	1,145,529	6	425,496	6	22.5	24.5	47.9	49.0	49.0	29.2			
Michigan.....	2,810,173	9,159	685,109	7	685,109	7	316,497	7	22.1	12.5	59.7	34.2	59.6	28.5			
Wisconsin.....	2,333,860	9,721	182,553	10	590,306	8	243,949	9	20.6	10.1	43.6	25.8	32.7	30.4			
Indiana.....	2,700,876	7,969	186,984	9	579,075	9	244,700	8	21.3	10.9	47.0	16.9	41.1	22.2			
Missouri.....	3,293,335	8,375	152,993	11	574,111	10	219,700	11	14.9	23.6	30.6	39.0	17.3	41.8			
California.....	2,377,549	7,659	115,296	13	529,761	11	204,528	12	14.9	30.0	44.3	42.7	35.0	63.8			
Connecticut.....	1,114,756	4,251	210,792	8	490,272	12	233,013	10	16.1	13.7	32.8	17.1	31.1	22.2			
Minnesota.....	2,075,708	5,561	84,767	13	409,420	13	127,798	13	21.7	7.9	35.0	37.6	31.3	32.6			
Kansas.....	1,690,949	3,435	44,215	33	325,104	14	66,220	28	24.9	31.2	64.0	25.7	58.7	25.4			
Maryland.....	1,295,346	4,837	107,921	15	315,669	15	116,620	15	14.6	(?)	29.7	15.3	24.9	14.2			
Rhode Island.....	542,610	1,951	113,538	14	280,344	16	122,152	14	16.7	10.3	38.7	22.1	36.9	15.0			
Texas.....	3,896,542	4,588	70,230	25	1,836,596	17	94,717	19	43.1	27.1	61.3	62.0	60.7	53.0			
Iowa.....	2,224,771	5,528	61,635	29	259,238	18	112,122	22	24.6	11.4	61.4	20.8	53.4	22.6			
Louisiana.....	1,656,388	2,516	76,165	21	223,949	19	89,084	21	36.4	36.6	20.2	67.3	28.5	92.7			
Kentucky.....	2,289,905	4,776	65,400	27	223,754	20	111,975	16	9.4	15.6	49.1	26.3	53.0	23.9			
Washington.....	1,141,990	3,674	69,120	26	220,746	21	102,858	17	52.9	43.4	71.4	81.9	64.2	92.5			
Virginia.....	2,061,612	5,685	105,676	16	219,794	22	94,211	20	31.6	21.2	47.7	37.0	44.5	33.3			
North Carolina.....	2,206,287	4,931	121,473	12	216,656	23	100,000	18	42.3	18.0	52.0	67.1	49.9	56.5			
Georgia.....	2,609,121	4,982	104,863	17	202,863	24	85,893	23	12.8	11.2	34.3	59.8	27.4	49.2			
Nebraska.....	1,192,214	2,500	24,336	37	199,019	25	47,938	31	20.1	8.5	28.5	18.9	55.3	19.2			
Tennessee.....	2,184,789	4,609	73,840	22	180,217	26	76,201	25	21.9	31.8	30.6	48.7	30.0	53.5			
Maine.....	742,371	3,546	79,955	19	176,029	27	78,928	24	6.7	7.2	22.2	27.5	23.4	23.6			
New Hampshire.....	430,572	1,961	78,658	20	164,581	28	66,424	27	20.3	-3.4	33.1	14.9	31.8	6.3			
West Virginia.....	1,221,119	2,586	63,893	28	161,950	29	69,072	26	46.0	32.3	63.5	47.8	54.8	48.8			
Alabama.....	2,138,093	3,398	72,148	24	145,962	30	62,519	29	16.0	18.0	33.7	51.4	28.3	42.8			
Colorado.....	799,024	2,034	28,067	36	130,044	31	49,553	30	28.7	11.9	29.9	12.4	33.8	30.8			
South Carolina.....	1,515,400	1,854	73,046	33	113,236	32	46,885	32	22.9	26.4	42.7	48.8	59.4	28.7			
Oregon.....	672,765	2,246	28,750	35	93,005	33	42,453	35	55.2	28.1	67.5	51.7	74.3	57.7			
Mississippi.....	1,797,114	2,598	50,384	31	80,555	34	43,629	34	30.2	44.4	40.2	70.4	37.8	84.3			
Arkansas.....	1,574,449	2,925	44,982	32	74,916	35	39,981	36	35.9	5.0	39.1	35.0	24.7	48.5			
Montana.....	376,053	677	11,655	41	73,272	36	24,092	38	30.1	-9.1	10.3	35.9	-5.5	12.4			
Florida.....	752,619	2,159	57,473	30	72,890	37	46,782	33	36.5	18.7	44.9	47.1	38.5	58.3			
Vermont.....	355,956	1,958	33,788	34	68,310	38	33,487	37	0.4	2.1	17.5	8.3	22.5	9.2			
Utah.....	373,351	749	11,785	40	61,989	39	20,723	40	46.4	48.8	59.2	116.5	48.2	113.8			
Oklahoma.....	1,657,155	2,310	13,143	39	53,682	40	19,529	41	140.9	129.1	119.5	203.7	142.1	198.3			
Delaware.....	202,322	726	21,238	38	52,840	41	21,902	39	15.0	-10.2	28.4	-0.4	34.6	-1.9			
Arizona.....	204,354	311	50,257	42	50,257	42	16,657	42	34.4	53.3	79.0	37.4	23.5	7.4			
District of Columbia.....	331,069	518	7,707	43	25,289	43	15,042	43	2.3	2.3	37.7	11.8	41.5	18.7			
Idaho.....	325,594	725	8,220	42	22,400	44	12,480	44	168.5	97.2	155.4	192.2	165.5	206.9			
North Dakota.....	577,056	752	2,789	48	19,138	45	5,464	46	58.9	29.2	87.3	68.2	75.0	48.0			
South Dakota.....	583,888	1,020	3,602	46	17,870	46	6,294	45	44.5	12.0	36.6	37.3	45.7	44.1			
Nevada.....	81,875	177	2,257	49	11,887	47	3,521	47	181.4	59.1	283.9	145.5	129.8	145.1			
New Mexico.....	327,301	313	4,143	45	7,898	48	4,637	47	19.1	29.7	38.4	40.5	33.6	68.3			
Wyoming.....	145,985	268	2,867	47	6,249	49	3,641	48	56.3	-11.0	77.4	7.8	63.9	17.1			

¹ Per cent of increase is based on figures in Table 111. A minus sign (-) denotes decrease.

² Less than one-tenth of 1 per cent.

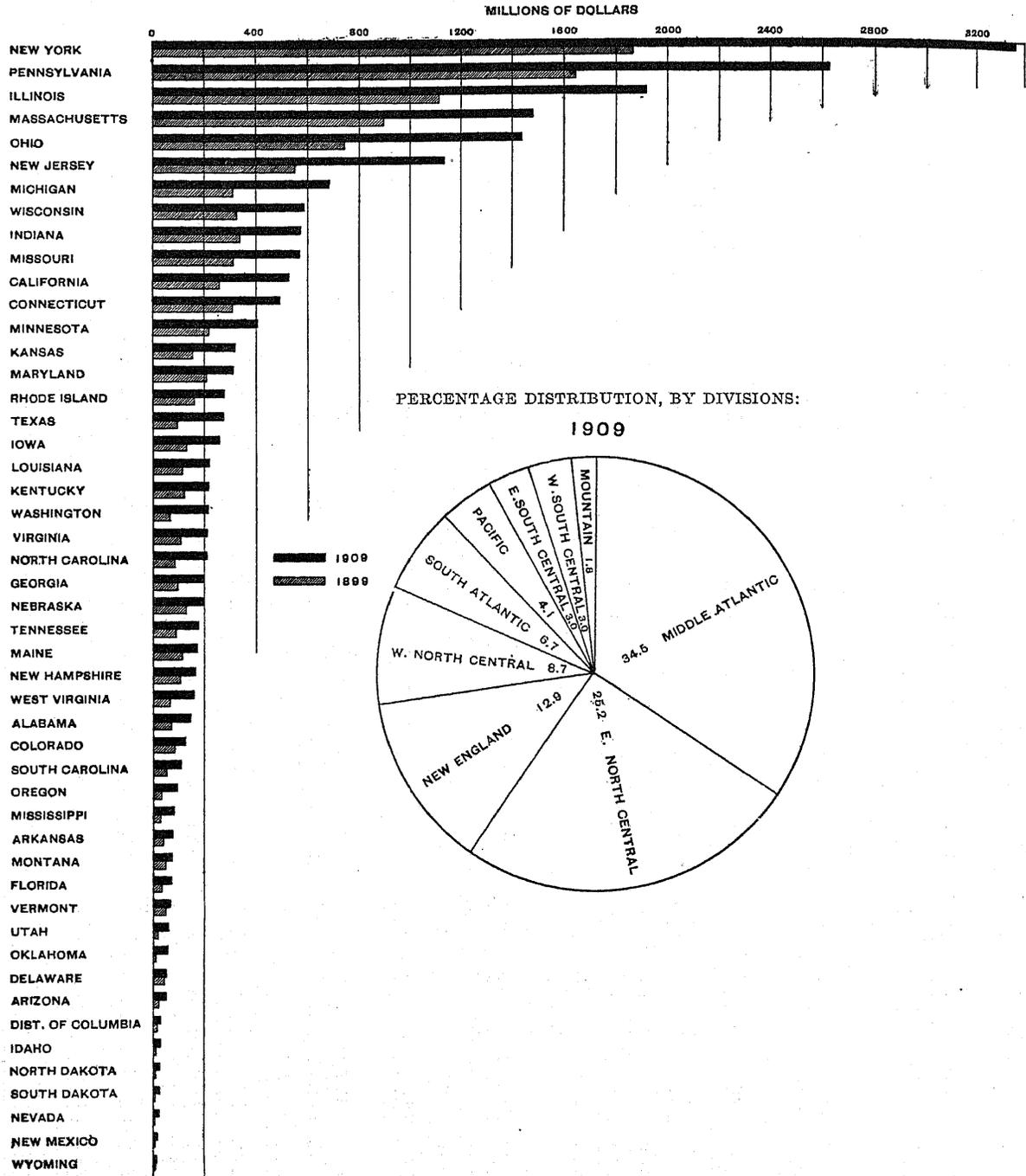
Table 6, on page 448, presents similar data for the nine grand geographic divisions of the United States, arranged in the order of their rank in value of products. The states included in each division are shown in Table 111.

The three Middle Atlantic states—New York, New Jersey, and Pennsylvania—together reported more than one-third of the total value of manufactured products

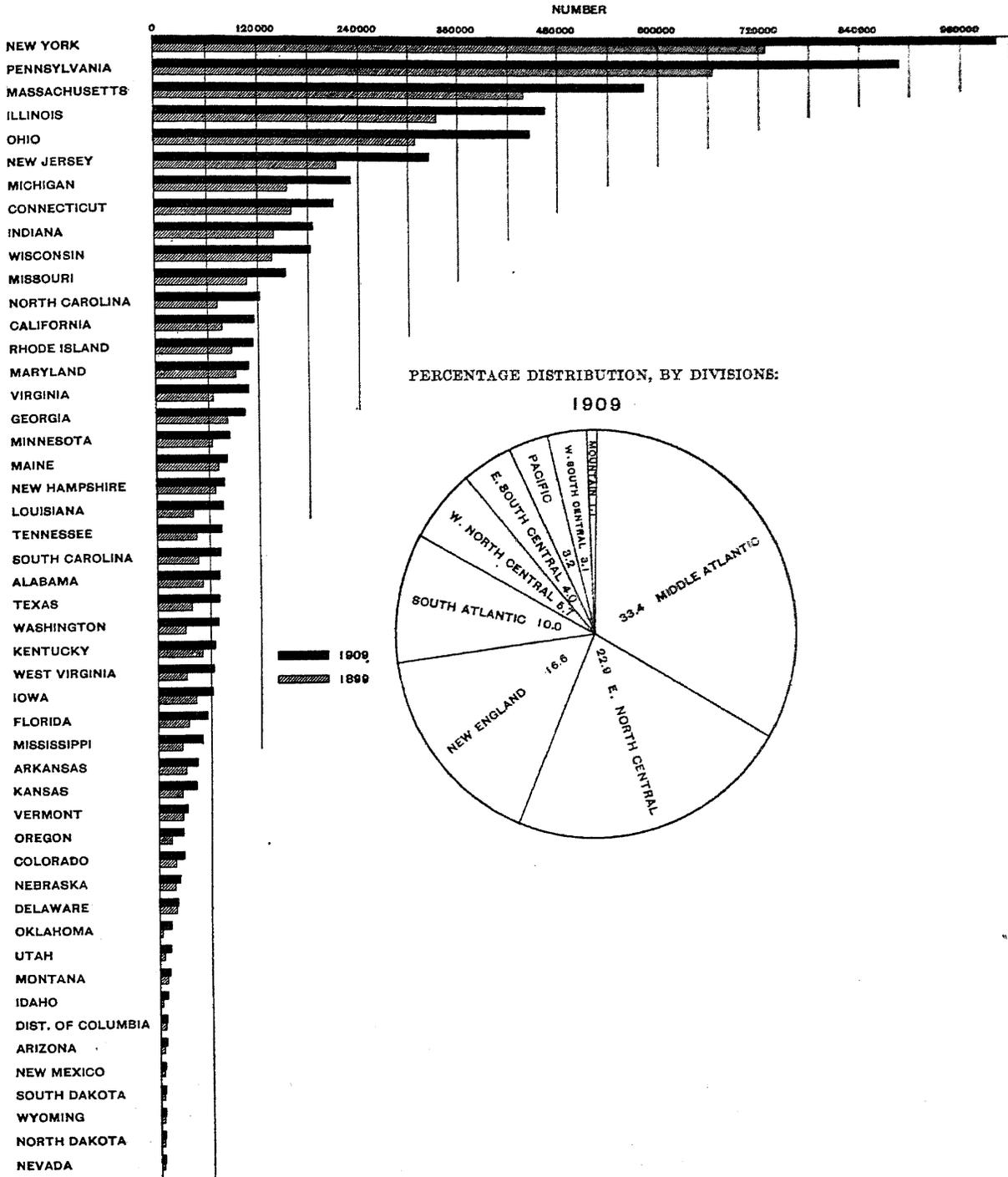
for the country; the East North Central states, about one-fourth; and the New England states, somewhat over one-eighth. These three divisions together contributed 72.6 per cent of the total value of manufactured products in 1909; they showed, however, somewhat lower percentages of increase during the past decade than the other divisions, in which manufacturing is of more recent development.

ABSTRACT OF THE CENSUS—MANUFACTURES.

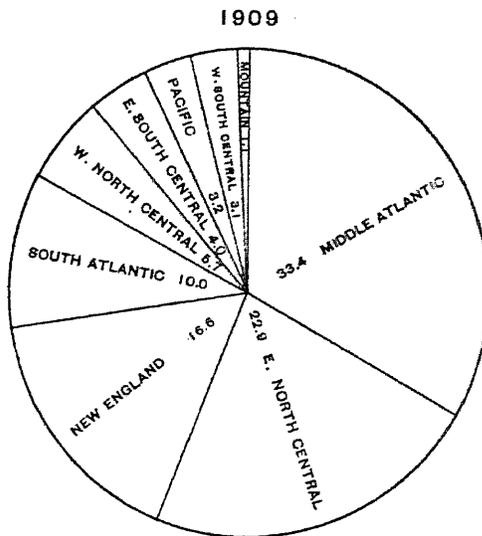
VALUE OF PRODUCTS OF MANUFACTURES, BY STATES: 1909 AND 1899.



AVERAGE NUMBER OF WAGE EARNERS, BY STATES: 1909 AND 1899.



PERCENTAGE DISTRIBUTION, BY DIVISIONS:



DIVISION.	Popula- tion.	Number of estab- lish- ments.	WAGE EARNERS.			VALUE OF PRODUCTS.			VALUE ADDED BY MANUFACTURE.			PER CENT OF INCREASE.					
			Average number.	Rank.	Per cent dis- tribu- tion.	Amount (expressed in thou- sands).	Rank.	Per cent dis- tribu- tion.	Amount (expressed in thou- sands).	Rank.	Per cent dis- tribu- tion.	Wage earners (average number).		Value of products.		Value added by manu- facture.	
												1904- 1909	1899- 1904	1904- 1909	1899- 1904	1904- 1909	1899- 1904
United States	91,972,266	268,491	6,615,046	....	100.0	\$20,672,052	....	100.0	\$8,529,261	....	100.0	21.0	16.0	39.7	29.7	35.5	30.8
Middle Atlantic.....	19,315,892	81,315	2,207,747	1	33.4	7,141,761	1	34.5	2,982,263	1	35.0	17.0	17.6	36.9	28.1	32.2	28.0
East North Central.....	18,250,621	60,013	1,513,764	2	22.9	5,211,702	2	25.2	2,177,230	2	25.5	23.6	14.1	44.6	26.4	39.6	29.4
New England.....	6,552,681	25,351	1,101,290	3	16.6	2,670,065	3	12.9	1,193,768	3	14.0	17.1	10.4	31.8	22.0	31.2	20.3
West North Central.....	11,637,921	27,171	374,337	5	5.7	1,803,899	4	8.7	562,044	5	6.6	19.8	17.4	40.4	32.0	33.0	28.8
South Atlantic.....	12,194,895	28,088	663,015	4	10.0	1,381,186	5	6.7	591,181	4	6.9	26.9	14.0	41.8	36.8	39.5	34.1
Pacific.....	4,192,304	13,579	213,166	7	3.2	843,512	6	4.1	349,834	6	4.1	29.9	33.2	52.9	51.2	46.3	69.7
East South Central.....	8,409,901	15,381	261,772	6	4.0	630,488	7	3.0	294,325	7	3.4	18.3	24.8	35.8	42.8	38.7	42.8
West South Central.....	8,784,534	12,339	204,520	8	3.1	625,448	8	3.0	243,312	8	2.9	42.6	26.5	50.6	64.6	44.5	70.4
Mountain.....	2,633,517	5,254	75,435	9	1.1	363,996	9	1.8	135,304	9	1.6	42.9	18.6	42.9	32.8	32.8	33.6

Summary for 50 leading cities: 1909.—Table 7 presents, for the 50 cities which stand highest in value of manufactured products, arranged in order of rank, data similar to those presented for the geographic divisions in Table 6. It should be particularly noted in considering this table that the figures relate only to the manufacturing establishments situated actually within the boundaries of the several cities.

In the case of practically every city listed there are important manufacturing establishments in the immediate vicinity, and in the case of several of the cities such outside establishments, which virtually constitute a part of the city's industrial interests, have a greater value of products than those within the city itself. The most notable instances of this character are Pittsburgh and Boston, which would rank decidedly higher in a table based on metropolitan or industrial districts than they do in the table for cities proper. While the population of Pittsburgh proper is 533,905, the population of the metropolitan district of Pittsburgh, as defined by the Census Bureau, is 1,042,855. Similarly, the population of the Boston metropolitan district is 1,520,470, as compared with 670,585 for the city proper. Further details regarding the manufactures of the 25 leading cities are given in Table 112.

The rank of the cities of the country with respect to manufactures is in many cases decidedly different from their rank in population. Thus Boston ranks fifth in population, but eighth in value of manufactured products; Baltimore, seventh in population, but thirteenth in value of manufactured products; and Los Angeles, sixteenth in population, but thirty-second in value of products. Kansas City, Kans., on the other hand, by reason of the large slaughtering establishments there, ranks fifteenth in value of manufactured products, but is not among the 50 principal cities from the standpoint of population. Of the 50 cities in the United States which have over 100,000 inhabitants, 14 are not included among the 50 cities having the largest value of manufactures.

In the case of some of the cities listed in the table, the rank with respect to the number of wage earners and the value added by manufacture is very different from that with respect to the gross value of products, these differences being dependent upon the character of the predominating industries. It is noteworthy, however, that the 13 cities which rank highest in gross value of products are also the 13 which occupy the highest rank with respect to wage earners and value added by manufacture, although considered individually these cities do not in all cases hold the same rank in each of the three respects. Conspicuous instances of cities having higher rank in gross value of products than in number of wage earners or value added by manufacture are Kansas City, Kans., South Omaha, Youngstown, Bayonne, and Perth Amboy. On the other hand, cities which lead in the manufacture of textiles, such as Lawrence, Fall River, Lowell, New Bedford, and Paterson, have a decidedly higher rank with respect to number of wage earners than with respect to either value of products or value added by manufacture.

For every city listed in the table a greater gross value of products and, with the exception of Omaha, a greater value added by manufacture were reported in 1909 than in 1899. Only two cities—San Francisco and New Orleans—showed a loss in gross value in 1909 as compared with 1904, and only San Francisco a loss in value added by manufacture. Between 1899 and 1904, however, decreases in gross value of manufactures occurred in four cities. In number of wage earners, Pittsburgh, San Francisco, South Omaha, and Peoria showed a decline in 1909 as compared with 1899; several other cities showed decreases from 1899 to 1904, but these were more than made up during the second half of the decade. It may be noted that the statistics for the Pittsburgh industrial district, which is more comprehensive than the city, would show decided gains and that the decrease in the manufacturing industries in San Francisco is the natural result of the great earthquake and fire.

Of the cities reporting products of \$200,000,000 or more, Detroit showed the greatest percentage

of increase in all of the items under consideration and Cleveland the next greatest, with the exception of the number of wage earners, in which it was exceeded by Milwaukee. Among the smaller manufacturing cities included in the table, those showing conspicuous

increases are Akron, Perth Amboy, Los Angeles, and Seattle.

In the case of most of the cities higher rates of increase in all three items are shown for the period 1904 to 1909 than for the period 1899 to 1904.

CITY.	Population.	Number of establishments.	WAGE EARNERS.		VALUE OF PRODUCTS.		VALUE ADDED BY MANUFACTURE.		PER CENT OF INCREASE. ¹					
			Average number.	Rank.	Amount (expressed in thousands).	Rank.	Amount (expressed in thousands).	Rank.	Wage earners (average number).		Value of products.		Value added by manufacture.	
									1904-1909	1899-1904	1904-1909	1899-1904	1904-1909	1899-1904
New York, N. Y.	4,766,883	25,938	554,002	1	\$2,029,693	1	\$937,538	1	19.2	19.6	33.0	30.2	32.3	31.5
Chicago, Ill.	2,185,283	9,656	293,977	2	1,281,171	2	487,701	2	21.5	9.4	34.1	19.7	33.6	23.5
Philadelphia, Pa.	1,549,008	8,379	251,834	3	746,076	3	316,984	3	10.0	6.6	26.2	13.7	22.8	14.8
St. Louis, Mo.	687,029	2,667	87,371	4	328,495	4	140,306	4	5.6	27.6	22.9	38.0	8.3	41.0
Cleveland, Ohio.	560,663	2,148	84,728	5	271,961	5	117,046	6	32.3	15.7	58.2	23.4	57.4	18.2
Detroit, Mich.	465,766	2,036	81,011	6	252,992	6	122,774	5	67.1	26.8	97.3	45.1	99.1	49.1
Pittsburgh, Pa.	533,905	1,659	67,474	9	243,454	7	94,927	8	-5.8	-0.2	15.2	-3.2	2.5	-3.4
Boston, Mass.	670,585	3,155	69,637	8	237,457	8	112,880	7	17.7	11.9	28.3	13.3	25.8	11.5
Buffalo, N. Y.	423,715	1,753	51,412	13	218,804	9	82,266	12	18.6	27.1	48.5	39.5	39.4	48.7
Milwaukee, Wis.	373,857	1,764	59,502	12	208,324	10	87,703	10	37.2	5.2	51.0	24.5	31.1	30.8
Newark, N. J.	347,469	1,858	59,955	11	202,511	11	87,832	11	18.3	13.2	35.0	33.1	26.6	33.5
Cincinnati, Ohio	363,591	2,184	60,192	10	194,516	12	92,584	9	2.7	6.6	17.1	17.2	11.8	17.8
Baltimore, Md.	558,485	2,502	71,444	7	186,978	13	79,964	13	9.8	-2.3	34.5	11.1	14.9	16.2
Minneapolis, Minn.	301,408	1,102	26,962	25	165,405	14	45,412	18	24.4	19.5	36.5	22.3	49.7	26.6
Kansas City, Kans.	82,331	165	12,294	42	164,061	15	19,691	44	16.8	11.0	79.1	20.6	56.4	12.9
San Francisco, Cal.	416,912	1,796	28,244	21	133,041	16	56,824	15	-26.5	18.0	-3.4	28.7	-8.1	49.1
Jersey City, N. J.	287,779	745	25,454	28	128,775	17	39,458	21	25.1	17.0	70.0	3.9	46.5	18.9
Indianapolis, Ind.	233,650	855	31,815	19	126,522	18	42,371	20	19.0	27.4	53.9	38.6	28.1	44.8
Providence, R. I.	224,326	1,080	46,381	14	120,241	19	55,471	16	16.5	3.7	30.7	16.9	32.0	16.3
Rochester, N. Y.	218,149	1,203	39,108	15	112,676	20	62,002	14	23.1	13.3	38.9	35.9	43.6	37.4
Louisville, Ky.	223,928	903	27,023	24	101,284	21	47,156	17	8.2	8.3	21.7	25.9	25.7	20.1
South Omaha, Nebr.	26,259	71	6,306	48	92,436	22	14,763	48	11.4	-10.5	37.1	-3.9	73.6	-3.2
Youngstown, Ohio	79,066	115	10,498	45	81,271	23	18,979	45	29.7	-6.7	73.5	38.2	82.6	8.3
Lawrence, Mass.	85,892	162	30,542	20	79,993	24	34,555	23	39.4	4.8	66.5	15.1	85.8	19.2
New Orleans, La.	339,075	848	17,186	37	78,794	25	30,062	28	-1.6	7.9	-3.2	41.7	38.1	32.4
Worcester, Mass.	145,986	580	28,221	22	77,148	26	34,547	25	23.8	0.9	47.9	11.4	37.5	7.8
Bayonne, N. J.	55,545	97	7,519	47	73,641	27	14,709	49	6.5	57.1	21.5	57.1	7.8	184.0
Akron, Ohio	69,067	246	15,831	39	73,158	28	30,087	27	64.5	16.6	118.0	59.4	128.3	41.4
Perth Amboy, N. J.	32,121	80	5,866	50	73,093	29	9,161	50	48.5	27.0	119.0	147.5	184.3	68.2
Lynn, Mass.	89,336	431	27,368	23	71,503	30	30,142	26	27.1	31.5	30.0	38.8	34.6	59.5
Paterson, N. J.	125,600	702	32,004	18	69,584	31	34,856	22	12.3	-0.1	27.3	12.7	28.0	18.1
Los Angeles, Cal.	319,198	1,325	17,327	36	68,586	32	29,673	29	66.2	101.5	97.0	139.0	84.0	128.9
Bridgeport, Conn.	102,054	367	25,775	27	65,609	33	27,662	32	32.2	14.4	47.2	32.9	24.3	39.9
Fall River, Mass.	119,295	288	37,139	16	64,146	34	28,622	31	38.4	-12.4	47.6	11.2	64.7	-17.4
Peoria, Ill.	66,950	283	5,981	49	63,061	35	45,288	19	2.5	-2.7	4.4	35.6	1.6	41.2
Toledo, Ohio.	168,497	760	18,878	34	61,230	36	27,146	35	20.3	23.1	37.6	39.2	42.6	51.3
Omaha, Nebr.	124,096	432	8,023	46	60,854	37	17,439	46	37.8	16.3	12.7	41.8	57.0	-38.8
Dayton, Ohio	116,577	513	21,649	31	60,378	38	32,850	24	26.1	18.6	52.5	27.7	55.7	28.4
Lowell, Mass.	106,294	320	32,575	17	60,271	39	27,440	34	11.2	0.2	28.6	13.8	37.4	-4.6
Yonkers, N. Y.	79,803	158	12,711	41	59,334	40	16,132	47	30.0	29.4	78.9	98.9	57.9	31.7
St. Paul, Minn.	214,744	719	19,339	33	58,990	41	28,690	30	34.6	16.3	53.9	27.5	52.4	33.1
Kansas City, Mo.	248,381	902	14,043	40	54,704	42	23,742	38	32.6	13.8	53.8	50.8	47.9	45.1
New Bedford, Mass.	96,652	207	26,566	26	53,238	43	24,674	37	45.8	17.0	90.7	26.0	54.4	15.2
Denver, Colo.	213,381	766	12,058	43	51,538	44	20,611	43	20.1	13.8	40.6	-3.3	31.6	16.6
Reading, Pa.	96,071	482	24,145	29	51,135	45	21,287	42	33.7	6.9	67.7	-6.7	54.5	-12.1
New Haven, Conn.	133,605	590	23,547	30	51,071	46	26,752	36	9.5	21.8	28.8	13.7	26.5	12.7
Seattle, Wash.	237,194	751	11,331	44	50,569	47	21,834	39	77.3	43.9	99.0	66.8	98.1	71.0
Waterbury, Conn.	73,141	169	20,170	32	50,350	48	21,624	41	30.9	16.5	55.6	6.7	48.1	20.4
Syracuse, N. Y.	137,249	738	18,148	35	49,435	49	27,659	33	24.7	23.2	42.5	39.7	48.7	32.9
Camden, N. J.	94,538	365	16,527	38	49,138	50	21,754	40	30.5	63.5	46.3	86.9	65.3	74.9

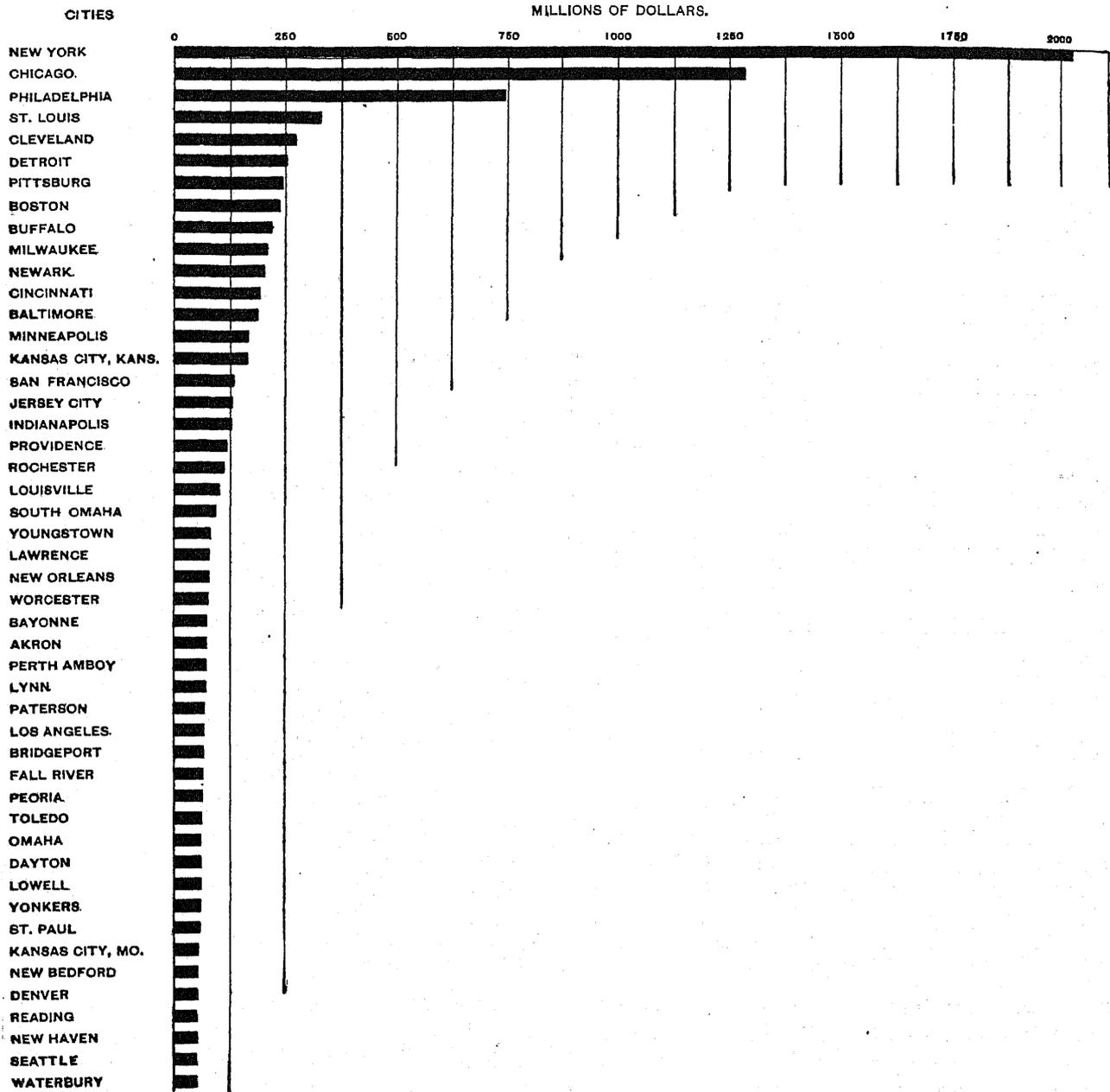
¹ Per cent of increase is based on figures in Table 113. A minus sign (-) denotes decrease.

Distribution according to size of communities.— It is a matter of interest to know the extent to which the manufacturing enterprises of the country are located in the larger cities as compared with the smaller cities and rural districts. Some indication of this is given in Table 8, on page 451, which distributes the total number of establishments, average number of wage earners, value of products, and value added by manufacture reported in 1909 and 1899 by classes of places, the classes distinguished being cities of 100,000 inhabitants or over, cities of 25,000 to 100,000 inhabitants, cities of 10,000 to 25,000 inhabitants, and the remainder of the country, the latter including the

smaller cities, towns, and other incorporated places and the rural districts. The aggregate population of each group in 1910 and 1900 is also given. Statistics for 1904 are not given because there was no Federal census of population for that year, and it is impossible to determine with accuracy what cities belonged to each group.

In considering this table it should be noted that each place is classed at each census according to its population at that census, so that the same community may be in one class in 1900 and in another class in 1910; and consequently the change in the totals for any given class of communities from 1899 to 1909 should not be

VALUE OF PRODUCTS FOR PRINCIPAL CITIES: 1909.



taken as measuring the increase in manufacturing business in the same communities. The significant figures are the percentages of the totals reported by each class of places at the two censuses. It should be noted further that the statistics of manufactures shown for any given community are those reported from establishments lying strictly within the municipal

boundaries. Since in many cases large manufacturing establishments are located just outside of city boundaries, the proportion of the manufacturing business of the country as a whole which, in a sense, can be properly credited to places of 10,000 or more inhabitants is somewhat greater than can be shown by the statistics in this table.

	Year.	Aggregate.	CITIES AND TOWNS HAVING A POPULATION OF 10,000 AND OVER.								DISTRICTS OUTSIDE OF CITIES AND TOWNS 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.	Per cent distribution.	
			Number or amount.	Per cent distribution.	Number or amount.	Per cent distribution.	Number or amount.	Per cent distribution.	Number or amount.	Per cent distribution.			
Number of cities.....	1910 1900		593 436		365 277		178 122		50 27				
Population.....	1910 1900	91,972,266 75,994,575	34,002,692 24,052,670	37.0 31.7	5,495,594 4,297,118	6.0 5.7	8,204,960 5,547,205	8.9 7.3	20,302,138 14,206,347	22.1 18.7	57,968,574 51,941,905	63.0 68.3	
Number of establishments.....	1909 1899	268,491 207,514	135,772 102,918	50.6 49.6	18,936 15,463	7.1 7.5	27,061 20,147	10.1 9.7	89,775 67,308	33.4 32.4	132,719 104,596	49.4 50.4	
Average number of wage earners.	1909 1899	6,615,046 4,712,763	4,316,642 3,044,439	65.3 64.6	678,467 524,900	10.3 11.1	1,126,253 767,293	17.0 16.3	2,511,922 1,732,246	38.6 37.2	2,298,464 1,668,234	34.7 35.4	
Value of products.....	1909 1899	\$20,672,051,870 11,406,926,701	\$14,264,878,807 7,864,564,177	69.0 68.9	\$1,946,703,215 1,052,639,594	9.4 9.2	\$3,582,403,574 1,843,124,795	17.3 16.1	\$8,735,772,018 4,968,799,788	42.3 43.6	\$6,407,178,003 3,542,362,524	31.0 31.1	
Value added by manufacture..	1909 1899	8,529,260,992 4,831,075,210	6,003,005,285 3,377,477,927	70.4 69.9	801,766,297 458,679,363	9.4 9.5	1,431,652,146 773,117,708	16.8 16.0	3,769,526,842 2,145,680,656	44.2 44.4	2,826,255,707 1,453,597,283	29.6 30.1	

In 1909 places of more than 10,000 inhabitants, although they included only 37 per cent of the total population of the country, contained a little over one-half of the total number of manufacturing establishments in the country. These establishments employed nearly two-thirds of the wage earners employed in manufactures (65.3 per cent), and reported more than two-thirds of the total value of products and of the value added by manufacture, the actual percentages being 69 and 70.4, respectively.

It is noteworthy, however, that, whereas communities of this size contained a materially larger proportion of the population of the country in 1910 than they did in 1900—37 per cent as against 31.7 per cent—there was only a very slight increase in their proportion of the total number of manufacturing establishments and of wage earners, and of the total value added by manufacture, and practically no change in their proportion of the total value of products. In other words, while these communities, considered as a

group, have perhaps a little more than held their own in relative importance in manufacturing industry, they have not gained in this respect commensurately with their gain in population. The foregoing statement regarding this group as a whole holds true likewise for the class of cities having from 25,000 to 100,000 inhabitants and for the class having 100,000 or more inhabitants, except that for the latter group there was a slight decrease in the proportion of the value of products and value added by manufacture. On the other hand, the class of communities having from 10,000 to 25,000 inhabitants reported a slight increase in its proportion of the total population in 1910 as compared with 1900, and a slightly larger proportion of the total value of products in 1909 than in 1899, although in respect to number of establishments, average number of wage earners, and value added by manufacture, the proportion for such communities was slightly lower in the later year than in the earlier.

PERSONS ENGAGED IN MANUFACTURING INDUSTRIES.

Definitions and explanations.—Attention is called to certain differences between the census of 1909 and previous censuses in respect to the manner of collecting and presenting statistics of persons engaged in manufacturing industries.

At the censuses of 1899, 1904, and 1909 the following general classes of persons engaged in manufacturing industries were distinguished: (1) Proprietors and firm members, (2) salaried officers of corporations, (3) superintendents and managers, (4) clerks, and (5)

wage earners. In the reports for 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 certain tables relating exclusively to the present census a somewhat 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. In comparative tables covering the censuses of 1899 and 1904 it is of course necessary to group the figures for 1909 according to the same classification that was employed in the earlier censuses.

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.

In addition to the more detailed 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 in certain tables 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 for all industries combined 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 for a given state as a whole, the per cent 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. The percentages thus obtained have 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 each state as a whole and for the entire country.

In 1899 and 1904 the schedule called for the average number of wage earners of each sex 16 years and over, and the average number under 16 years of age without distinction of sex, 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 employed on the average 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.

Summary for United States: 1909.—The following table shows, for 1909, the distribution of the persons engaged in manufacturing, each class being distributed by sex, and the average number of wage earners by age also:

CLASS.	PERSONS ENGAGED IN MANUFACTURES.		
	Total.	Male.	Female.
All classes.....	7,678,578	6,162,263	1,516,315
Proprietors and officials.....	487,173	472,914	14,259
Proprietors and firm members.....	273,265	263,873	9,392
Salaried officers of corporations.....	80,735	78,937	1,798
Superintendents and managers.....	133,173	130,304	2,869
Clerks.....	576,359	437,056	139,303
Wage earners (average number).....	6,615,046	5,252,293	1,362,753
16 years of age and over.....	6,453,553	5,163,164	1,290,389
Under 16 years of age.....	161,493	89,129	72,364

The average number of persons engaged in manufacturing industries during 1909 was 7,678,578. Of these, 6,615,046, or 86.1 per cent, were wage earners; 487,173, or 6.3 per cent, proprietors and officials; and 576,359, or 7.5 per cent, clerks. Of the wage earners, 5,163,164 were males 16 years of age and over; 1,290,389 females 16 years of age and over; and 161,493 children under the age of 16.

Statistics of employees for the last three censuses are given for individual industries in Table 110, and for each state and geographic division in Table 111.

Occupational status by leading industries: 1909.—The following table shows for the 43 leading industries the number of proprietors, officers of corporations, superintendents and managers, clerks, and wage earners,

respectively, and the percentage which the persons included in each of the principal groups represent of the total number employed. The figures for wage earners represent the average number for the year.

Table 10

INDUSTRY.	PERSONS ENGAGED IN MANUFACTURES.										
	Total number.	Proprietors and officials.					Clerks.	Wage earners (average number).	Per cent of total.		
		Total.	Proprietors and firm members.	Salaried officials of corporations.	Superintendents and managers.	Proprietors and officials.			Clerks.	Wage earners (average number).	
All industries.....	7,678,578	487,178	273,265	80,785	133,173	576,359	6,615,048	6.3	7.5	86.1	
Agricultural implements.....	60,229	2,489	465	569	1,455	7,189	50,551	4.1	11.9	83.9	
Automobiles, including bodies and parts.....	85,359	2,564	406	758	1,401	7,074	75,721	3.0	8.3	88.7	
Boots and shoes, including cut stock and findings.....	215,923	5,752	1,838	1,027	2,887	11,874	198,287	2.7	5.5	91.8	
Brass and bronze products.....	45,441	2,180	228	584	746	2,663	40,618	4.8	5.9	89.4	
Bread and other bakery products.....	144,322	29,136	26,982	801	1,353	14,970	100,216	20.2	10.4	69.4	
Butter, cheese, and condensed milk.....	31,506	10,480	8,019	1,032	1,429	2,595	18,451	33.3	8.2	58.5	
Canning and preserving.....	71,972	6,920	4,244	968	1,708	5,084	59,968	9.6	7.1	83.3	
Carrriages and wagons and materials.....	82,944	8,844	6,213	1,166	1,465	4,172	69,928	10.7	5.0	84.3	
Cars and general shop construction and repairs by steam-railroad companies.....	301,273	6,974	2	1,877	5,095	12,125	282,174	2.3	4.0	93.7	
Cars, steam-railroad, not including operations of railroad companies.....	47,094	1,041	7	241	793	2,967	43,086	2.2	6.3	91.5	
Chemicals.....	27,791	1,086	154	367	565	2,991	23,714	3.9	10.8	85.3	
Clothing, men's, including shirts.....	271,437	12,041	8,502	1,059	2,450	19,700	239,696	4.4	7.3	88.3	
Clothing, women's.....	179,021	9,281	6,482	842	1,957	15,997	153,743	5.2	8.9	85.9	
Confectionery.....	54,854	3,362	1,832	766	764	8,854	44,636	6.1	12.5	81.4	
Copper, tin, and sheet-iron products.....	86,934	7,269	4,423	1,288	1,558	6,050	73,615	8.4	7.0	84.7	
Cotton goods, including cotton small wares.....	387,771	4,461	377	1,726	2,358	4,430	378,880	1.2	1.1	97.7	
Electrical machinery, apparatus, and supplies.....	105,600	4,121	439	907	2,685	14,223	87,256	3.9	13.5	82.6	
Flour-mill and gristmill products.....	66,054	18,763	14,570	1,486	2,707	7,538	39,453	28.4	11.9	59.7	
Foundry and machine-shop products.....	615,485	31,605	9,345	9,345	12,406	52,869	531,011	5.1	8.6	86.3	
Furniture and refrigerators.....	144,140	7,281	2,657	2,170	2,454	8,407	128,452	5.1	5.8	89.1	
Gas, illuminating and heating.....	51,007	2,986	277	990	1,719	10,896	37,215	5.9	21.2	73.0	
Hosiery and knit goods.....	136,130	3,308	1,134	799	1,375	3,547	129,275	2.4	2.6	95.0	
Iron and steel, blast furnaces.....	43,061	1,119	48	262	809	3,513	38,429	2.6	8.2	89.2	
Iron and steel, steel works and rolling mills.....	280,762	4,286	47	779	3,460	16,400	240,079	1.6	6.3	92.1	
Leather goods.....	43,525	4,209	2,552	760	897	4,409	34,947	9.7	10.1	80.2	
Leather, tanned, curried, and finished.....	67,100	2,331	784	629	918	2,567	62,202	2.5	3.8	92.7	
Liquors, distilled.....	8,328	1,111	563	217	331	787	6,430	13.3	9.4	77.2	
Liquors, malt.....	66,725	4,362	629	1,819	1,904	7,784	54,579	6.5	11.7	81.8	
Lumber and timber products.....	784,989	68,165	48,825	6,616	12,724	21,805	685,019	8.7	2.8	88.5	
Marble and stone work.....	77,275	8,453	6,026	867	1,500	3,219	65,603	10.9	4.2	84.9	
Oil, cottonseed, and cake.....	21,273	2,167	110	576	1,481	2,035	17,071	10.2	9.6	80.2	
Paint and varnish.....	21,896	2,016	456	793	767	5,640	14,240	9.2	25.8	65.0	
Paper and wood pulp.....	81,473	2,298	280	773	1,278	3,197	75,978	2.8	3.9	93.3	
Patent medicines and compounds and druggists' preparations.....	41,101	5,647	2,802	1,427	1,418	12,559	22,895	13.7	36.6	53.7	
Petroleum, refining.....	16,640	671	42	211	418	2,040	13,929	4.0	12.3	83.7	
Printing and publishing.....	388,466	49,332	30,424	7,265	11,642	80,700	288,434	12.7	20.8	66.5	
Silk and silk goods, including throwsters.....	105,238	2,236	664	480	1,022	3,965	99,037	2.1	3.8	94.1	
Slaughtering and meat packing.....	108,716	3,514	1,659	731	1,124	15,474	99,728	3.2	14.2	82.5	
Smelting and refining, copper.....	16,832	275	7	53	215	929	15,628	1.6	5.5	92.8	
Smelting and refining, lead.....	8,059	132	.....	44	88	503	7,424	1.6	6.2	92.1
Sugar and molasses, not including beet sugar.....	15,658	789	204	140	445	1,343	13,526	5.0	8.6	86.4	
Tobacco manufactures.....	197,637	21,012	17,034	899	2,569	9,815	166,810	10.6	5.0	84.4	
Woolen, worsted, and felt goods, and wool hats.....	175,176	3,192	732	782	1,678	3,262	168,722	1.8	1.9	96.3	
All other industries.....	1,016,361	117,932	59,096	23,811	35,025	149,988	1,648,441	6.2	7.8	86.0	

The highest proportion of proprietors and officials shown for any individual industry covered by the table, 33.3 per cent, is for the butter, cheese, and condensed-milk industry. Many of the establishments in this industry are carried on by cooperative associations, and the practice in 1909, as at prior censuses, was not to include the members of such associations as proprietors in the totals, but to omit them altogether. From the information contained in the reports, it is impossible, in some instances, to distinguish such associations from partnerships, and the large number of proprietors and officials shown for this industry indicates the probability that the members of some associations were inadvertently included as partners. The high percentage of proprietors and

officials in the flour-mill and gristmill and the bakery industries is explained by the fact that the majority of the establishments are small and the work is to a large extent done by the proprietors or their immediate representatives, while in the large flour mills automatic machinery has reduced the amount of labor to a minimum.

A factor which has much to do with the proportion of clerks among the total number of employees in an industry is the method of marketing the product. Thus there are high percentages of clerks in the manufacture of patent medicines and compounds and druggists' preparations, and in the paint and varnish, illuminating-gas, and printing and publishing industries. In these industries the average num-

ber of customers or patrons for each establishment is large and this necessitates a large force of employees for soliciting trade, correspondence, accounting, and collection.

In general, though not in all cases, the larger the average size of establishments in an industry, the smaller is the proportion of proprietors, officials, and clerks, and the larger the proportion of wage earners. Thus the four textile industries—the cotton, woolen, hosiery and knit-goods, and silk-manufacturing industries—which are mainly conducted in large factories, show the largest proportions of wage earners. An unusually large proportion of wage earners is shown also for the paper and pulp mills, the steel works and rolling mills, the construction of steam-railroad cars, the smelting and refining of copper and lead, the tanning and finishing of leather, boots and shoes, and the repair shops of steam railroads.

Comparison with previous censuses as to occupational status.—In order to compare the distribution of persons engaged in manufacturing industries according to occupational status in 1909 with that shown at the census of 1904, it is necessary to use the classification employed at the earlier census. (See p. 451.) Such a comparison is made in the following table. Comparable figures for 1899 are not available.

CLASS.	PERSONS ENGAGED IN MANUFACTURES.				Per cent of increase, 1904-1909.
	1909		1904		
	Number.	Per cent distribution.	Number.	Per cent distribution.	
Total.....	7,678,578	100.0	6,213,612	100.0	23.6
Proprietors and firm members.....	273,265	3.6	225,673	3.6	21.1
Salaried employees.....	790,267	10.3	519,556	8.4	52.1
Wage earners (average number).....	6,615,046	86.1	5,468,383	88.0	21.0

A greater percentage of increase is shown for salaried employees than for the other two classes. This is due in part to the changes from individual and firm ownership to corporate organization, a change which frequently involves the transfer of proprietors and firm members to the class of officials. At the same time there is no doubt that the number of clerks here classified with the other salaried employees has increased relatively faster than the number of wage earners. This may indicate an increase of the practice on the part of the manufacturers of direct sale of

goods without the interposition of so many middlemen as formerly handled the product.

Sex and age distribution, by leading industries: 1909.—Table 12, on the opposite page, shows, for the 43 leading industries, the number and per cent distribution, by age and sex, of wage earners as reported for December 15, or the nearest representative day. As a means of judging the true importance of the several industries as employers of labor, the average number employed for the entire year is also given in each case, this number, in the case of seasonal industries, being much smaller than the number on the representative day. The per cent distribution for all industries combined, based on the average number employed as shown in Table 9, is also presented.

In all industries combined 78 per cent of the average number of wage earners were males 16 years of age or over, 19.5 per cent females 16 years of age or over, and 2.5 per cent children under the age of 16.

The industries for which the largest proportions of males 16 years of age or over are shown are those in which the work is of a nature requiring much physical strength or a high degree of skill. Thus in the smelting and refining of both copper and lead males 16 years of age or over constitute 99.9 per cent of the total number of wage earners, and in the blast furnaces they constitute 99.8 per cent. Other industries in which males of 16 years or over represent more than 99 per cent of the wage earners are the gas industry, construction of steam-railroad cars, steel works and rolling mills, marble and stone work, the repair shops of steam railroads, and the manufacture of cotton-seed oil.

The proportion of women and children, naturally, is larger in those industries in which the processes require dexterity rather than strength. In six of the industries covered by Table 12—the making of men's and women's clothing, the confectionery industry, and the manufacture of hosiery and knit goods, of patent medicines and compounds and druggists' preparations, and of silk and silk goods—more than half of the wage earners are females 16 years of age or over.

The proportion of wage earners under 16 years is larger in three of the textile industries—the cotton goods, silk and silk goods, and hosiery and knit-goods industries—than in any other of the principal industries of the country. The proportion is also relatively high in the canning and preserving, confectionery, and woolen-goods industries.

Table 12

INDUSTRY.	WAGE EARNERS.							
	Average number.	Number Dec. 15, or nearest representative day.				Per cent of total.		
		Total.	16 years of age and over.		Under 16 years of age.	16 years of age and over.		Under 16 years of age.
			Male.	Female.		Male.	Female.	
All industries.....	6,615,046	(1)	(1)	(1)	(1)	78.0	19.5	2.5
Agricultural implements.....	50,551	55,429	54,529	674	226	98.4	1.2	0.4
Automobiles, including bodies and parts.....	75,721	87,250	96,060	982	208	98.8	1.0	0.2
Boots and shoes, including cut stock and findings.....	198,297	211,507	132,411	70,457	8,639	62.6	33.2	4.1
Brass and bronze products.....	40,618	46,230	42,908	2,774	548	92.8	6.0	1.2
Bread and other bakery products.....	100,216	104,443	84,956	17,407	2,080	81.3	16.7	2.0
Butter, cheese, and condensed milk.....	18,431	19,323	17,743	1,465	112	91.2	7.6	0.1
Canning and preserving.....	59,968	155,847	67,219	77,593	11,085	42.1	49.8	7.6
Carriages and wagons and materials.....	69,223	72,783	71,104	1,126	553	97.7	1.5	0.8
Cars and general shop construction and repairs by steam-railroad companies.....	282,174	302,080	301,431	455	194	99.8	0.2	0.1
Cars, steam-railroad, not including operations of railroad companies.....	43,086	58,274	58,045	190	38	99.6	0.3	0.1
Chemicals.....	23,714	25,341	24,102	1,061	178	95.1	4.2	0.7
Clothing, men's, including shirts.....	239,696	257,128	109,139	142,781	5,208	42.4	55.5	2.0
Clothing, women's.....	153,743	162,859	58,316	108,083	1,480	35.8	63.3	0.9
Confectionery.....	44,638	52,421	18,836	30,453	2,132	35.9	58.1	6.0
Copper, tin, and sheet-iron products.....	73,615	78,909	66,797	9,716	2,396	84.6	12.2	3.0
Cotton goods, including cotton small wares.....	378,880	387,698	197,420	150,057	40,221	50.9	38.7	10.4
Electrical machinery, apparatus, and supplies.....	87,966	102,950	78,605	22,392	947	76.4	23.7	0.9
Flour-mill and gristmill products.....	39,453	42,495	41,787	566	148	98.3	1.3	0.3
Foundry and machine-shop products.....	531,011	604,167	587,636	11,895	4,636	97.3	2.0	0.8
Furniture and refrigerators.....	128,452	138,820	132,176	3,677	2,976	96.2	2.6	2.1
Gas, illuminating and heating.....	37,215	37,396	37,396	71	17	99.8	0.2	(2)
Hosiery and knit goods.....	129,772	136,712	37,419	88,183	11,111	27.4	64.5	8.1
Iron and steel, blast furnaces.....	38,429	47,278	47,184	10	84	99.8	(2)	0.2
Iron and steel, steel works and rolling mills.....	240,076	284,264	281,801	1,114	1,349	99.1	0.4	0.5
Leather goods.....	34,907	36,502	29,868	5,738	896	81.8	15.7	2.5
Leather, tanned, curried, and finished.....	62,202	66,717	64,005	2,280	482	95.9	2.2	0.7
Liquors, distilled.....	6,430	8,130	7,008	1,137	11	88.2	13.7	0.1
Liquors, malt.....	54,579	54,135	52,865	1,040	230	97.7	1.9	0.4
Lumber and timber products.....	695,019	838,160	826,978	4,027	7,155	98.7	0.5	0.9
Marble and stone work.....	65,603	67,921	67,575	112	284	99.5	0.2	0.3
Oil, cottonseed, and cake.....	17,071	20,691	20,551	49	91	99.5	0.2	0.3
Paint and varnish.....	14,240	14,426	13,207	1,157	82	91.5	7.9	0.6
Paper and wood pulp.....	75,978	78,672	68,497	9,909	206	87.1	12.6	0.3
Patent medicines and compounds and druggists' preparations.....	22,895	24,683	11,503	12,672	508	46.6	51.3	2.1
Petroleum, refining.....	13,929	14,873	14,657	170	46	98.5	1.1	0.2
Printing and publishing.....	258,434	272,027	204,288	60,973	6,666	75.1	22.4	2.4
Silk and silk goods, including throwsters.....	99,087	102,869	35,785	58,441	8,148	35.0	57.1	8.0
Slaughtering and meat packing.....	89,728	94,854	88,352	5,960	542	98.1	6.3	0.6
Smelting and refining, copper.....	15,628	16,029	16,013	16	16	99.9	0.1	0.1
Smelting and refining, lead.....	7,424	8,002	8,001	1	1	99.9	(2)	0.1
Sugar and molasses, not including beet sugar.....	13,526	25,134	24,636	376	132	98.0	1.5	0.5
Tobacco manufactures.....	186,810	181,086	90,417	84,193	6,426	49.9	46.5	3.6
Woolen, worsted, and felt goods, and wool hats.....	168,722	175,171	92,820	72,409	9,942	53.0	41.3	5.7

¹ No totals given for reasons explained on page 452.

² Less than one-tenth of 1 per cent.

In addition to the industries shown in the above table, which were selected according to their importance with respect to gross value of products, certain others are of interest because of the relatively large number of women and children employed. Table 13, on the following page, shows the sex and age distribution of wage earners in all industries not covered by the preceding table in which there were at least 5,000 women, or in which the women constituted over 40 per cent of the wage earners and numbered not less than 500.

The table shows that there are a large number of industries, some of considerable importance, in which women 16 years of age or over represent more than 40 per cent of the total number of wage earners. In the manufacture of corsets, of artificial flowers, feathers, and plumes, and of steel pens, more than 80 per cent

of the wage earners are women. Other industries in which female wage earners 16 years of age or over constitute over three-fourths of the total number employed are the manufacture of men's furnishing goods and of millinery and lace goods, and the grading, roasting, cleaning, and shelling of peanuts. Large numbers of women are also employed in several industries listed in this table in which, however, the proportion which these represent of the total number of wage earners is less than 40 per cent.

Of the industries shown in Table 13, those in which the proportion of children under 16 years of age exceeds 5 per cent are the manufacture of bags, other than paper; cigar boxes; fancy and paper boxes; horse clothing; cordage and twine; needles, pins, and hooks and eyes; lead pencils; stationery goods, not elsewhere specified; and the cork-cutting industry.

Table 18

INDUSTRY.	WAGE EARNERS.							
	Average number.	Number Dec. 15, or nearest representative day.				Per cent of total.		
		Total	16 years of age and over.		Under 16 years of age.	16 years and over.		Under 16 years of age.
			Male	Female.		Male.	Female.	
Artificial flowers and feathers and plumes.....	10,016	10,769	1,416	9,017	336	13.1	83.7	3.1
Awnings, tents, and sails.....	4,242	4,043	2,264	1,715	64	56.0	42.4	1.6
Bags, other than paper.....	7,968	8,437	2,870	4,794	773	34.0	56.8	9.2
Bags, paper.....	3,212	3,299	1,680	1,561	58	50.9	47.3	1.8
Baking powders and yeast.....	2,155	2,273	1,199	1,020	54	52.7	44.9	2.4
Boots and shoes, rubber.....	17,612	18,528	10,995	7,060	473	59.3	38.1	2.6
Boxes, cigar.....	6,115	6,554	2,914	3,260	380	44.5	49.7	5.8
Boxes, fancy and paper.....	39,514	43,239	14,198	25,961	3,080	32.8	60.0	7.1
Buttons.....	16,427	17,873	10,721	6,530	622	60.0	36.5	3.5
Carpets and rugs, other than rag.....	33,307	34,874	19,601	13,859	1,414	56.2	39.7	4.1
Clocks and watches, including cases and materials.....	23,857	25,574	15,775	9,262	537	61.7	36.2	2.1
Clothing, horse.....	1,648	1,789	580	1,047	162	32.4	58.5	9.1
Cordage and twine and jute and linen goods.....	25,820	26,941	13,019	12,083	1,839	48.3	44.8	6.8
Cork, cutting.....	3,142	3,239	1,756	1,310	173	54.2	40.4	5.3
Corsets.....	17,152	18,152	2,291	15,234	627	12.6	83.9	3.5
Dyeing and finishing textiles.....	44,046	45,841	36,486	8,269	1,086	79.6	18.0	2.4
Fireworks.....	1,403	1,380	756	564	60	54.8	40.9	4.3
Flags, banners, regalia, society badges, and emblems.....	3,572	3,552	1,267	2,192	93	35.7	61.7	2.6
Flavoring extracts.....	1,229	1,270	722	522	26	56.8	41.1	2.0
Food preparations.....	14,968	17,786	12,070	5,449	267	67.9	30.6	1.5
Fur goods.....	11,927	14,450	8,539	5,853	58	59.1	40.5	0.4
Furnishing goods, men's.....	38,482	41,970	9,153	31,926	891	21.8	76.1	2.1
Gloves and mittens, leather.....	11,354	12,188	5,202	6,697	289	42.7	54.9	2.4
Gold and silver, leaf and foil.....	1,383	1,417	612	756	49	43.2	53.4	3.5
Hair work.....	3,534	3,885	1,338	2,464	83	34.4	63.4	2.1
Hats, fur-felt.....	25,064	30,292	21,182	8,468	642	69.9	28.0	2.1
Hats, straw.....	8,814	10,328	3,512	6,461	175	34.0	64.3	1.7
House-furnishing goods, not elsewhere specified.....	4,907	5,371	2,713	2,570	88	50.5	47.8	1.6
Jewelry.....	30,347	33,914	23,336	9,645	933	68.8	28.4	2.8
Jewelry and instrument cases.....	2,070	2,343	1,045	1,289	59	44.6	52.9	2.5
Millinery and lace goods.....	39,201	40,522	8,061	31,290	1,171	19.9	77.2	2.9
Needles, pins, and hooks and eyes.....	4,638	4,955	2,262	2,813	380	45.6	46.7	7.7
Paper goods, not elsewhere specified.....	19,211	20,500	10,141	9,707	652	49.5	47.4	3.2
Peanuts, grading, roasting, cleaning, and shelling.....	1,949	2,346	473	1,833	40	20.2	78.1	1.7
Pencils, lead.....	4,134	4,412	1,843	2,244	325	41.8	50.9	7.4
Pens, steel.....	699	729	113	591	25	15.5	81.1	3.4
Pottery, terra-cotta, and fire-clay products.....	56,168	60,842	53,159	6,799	884	87.4	11.2	1.5
Stationery goods, not elsewhere specified.....	6,206	6,417	3,405	2,635	377	53.1	41.1	5.9
Surgical appliances and artificial limbs.....	4,241	4,440	2,193	2,118	134	49.4	47.6	3.0
Umbrellas and canes.....	5,472	5,837	2,586	3,017	234	44.3	51.7	4.0

Sex and age distribution, by states: 1909.—Table 14 shows, for each geographic division and each state, the distribution of wage earners by sex and age and the per cent that each class represents of the total average number of wage earners. The numbers of each sex and each age period are obtained by applying to the average number employed in each industry in each state the percentages of each age and sex in the number of wage earners reported for December 15, or the nearest representative day, and then totaling the result, as more fully explained on page 452.

The relative number of males 16 years of age or over, females 16 years of age or over, and children under 16 employed in each state depends primarily upon the character of the industries in that state, but the number of persons under 16 employed is also affected by the legislation of the several states with regard to child labor. The largest proportions of female wage earners 16 years of age or over are found in the New England and Middle Atlantic divisions,

owing chiefly to the importance of the textile and clothing industries in these divisions. Next to these two divisions in this respect ranks the South Atlantic division, and in this division appears the largest proportion of wage earners under 16 years of age, 6.3 per cent. This large proportion is due chiefly to the predominance of the textile industries in the South Atlantic states. The proportions of females 16 years of age or over and of children under 16 are lowest in the West South Central, Mountain, and Pacific divisions, where the textile and clothing industries are relatively unimportant.

Among the individual states the largest proportion of female wage earners 16 years of age or over, 32.3 per cent, is found in Rhode Island, and the next largest proportion in New Hampshire, followed closely by Massachusetts and New York. The proportion of children employed is largest in South Carolina, 12.9 per cent, and next largest in North Carolina. Among the Northern states Rhode Island shows the largest percentage of children.

Table 14

DIVISION AND STATE.	AVERAGE NUMBER OF WAGE EARNERS.				PER CENT OF TOTAL.		
	Total.	16 years of age and over.		Under 16 years of age.	16 years of age and over.		Under 16 years of age.
		Male.	Female.		Male.	Female.	
United States.....	6,615,046	5,163,164	1,290,389	161,493	78.1	19.5	2.4
GEOGRAPHIC DIVISIONS:							
New England.....	1,101,290	760,639	307,076	33,575	69.1	27.9	3.0
Middle Atlantic.....	2,207,747	1,618,967	544,316	44,464	73.3	24.7	2.0
East North Central.....	1,513,764	1,271,013	220,194	22,557	84.0	14.5	1.5
West North Central.....	374,337	311,140	57,471	5,726	83.1	15.4	1.5
South Atlantic.....	663,015	517,456	103,703	41,856	78.0	15.6	6.3
East South Central.....	261,772	223,788	24,995	7,989	87.4	9.5	3.1
West South Central.....	204,520	191,353	9,724	3,443	93.6	4.7	1.7
Mountain.....	75,435	71,142	3,834	459	94.3	5.1	0.6
Pacific.....	213,166	192,666	19,076	1,424	90.4	8.9	0.7
NEW ENGLAND:							
Maine.....	79,955	60,612	17,956	1,387	75.8	22.5	1.7
New Hampshire.....	78,658	53,574	23,888	1,196	68.1	30.4	1.5
Vermont.....	33,788	28,946	4,631	211	85.7	13.7	0.6
Massachusetts.....	584,559	390,544	173,280	20,735	66.8	29.6	3.5
Rhode Island.....	113,538	72,239	36,674	4,625	63.6	32.3	2.1
Connecticut.....	210,792	154,724	50,647	5,421	73.4	24.0	4.6
MIDDLE ATLANTIC:							
New York.....	1,003,981	702,637	293,525	7,819	70.0	29.2	0.8
New Jersey.....	326,223	236,499	82,186	7,538	72.5	25.2	2.3
Pennsylvania.....	877,543	679,831	168,605	29,107	77.5	19.2	3.3
EAST NORTH CENTRAL:							
Ohio.....	446,934	372,694	68,996	5,244	83.4	15.4	1.2
Indiana.....	186,984	161,117	22,255	3,612	86.2	11.9	1.9
Illinois.....	465,764	382,691	76,156	6,917	82.2	16.3	1.5
Michigan.....	231,409	197,777	31,205	2,517	85.4	13.5	1.1
Wisconsin.....	182,583	156,734	21,582	4,267	85.8	11.8	2.3
WEST NORTH CENTRAL:							
Minnesota.....	84,767	73,038	11,423	306	86.2	13.5	0.4
Iowa.....	61,635	51,128	9,460	1,047	83.0	15.3	1.7
Missouri.....	152,993	119,980	29,195	3,818	78.4	19.1	2.5
North Dakota.....	2,789	2,489	243	57	89.2	8.7	2.0
South Dakota.....	3,602	3,099	457	46	86.0	12.7	1.3
Nebraska.....	24,336	20,763	3,356	217	85.3	13.8	0.9
Kansas.....	44,215	40,643	3,337	235	91.9	7.5	0.5
SOUTH ATLANTIC:							
Delaware.....	21,238	17,205	3,504	529	81.0	16.5	2.5
Maryland.....	107,921	72,416	28,957	6,548	67.1	26.8	6.1
District of Columbia.....	7,707	6,861	827	19	89.0	10.7	0.2
Virginia.....	105,676	88,191	13,963	3,622	83.5	13.1	3.4
West Virginia.....	63,893	58,335	4,505	1,053	91.3	7.1	1.6
North Carolina.....	121,473	86,062	21,693	13,698	70.9	17.9	11.3
South Carolina.....	73,046	50,848	12,793	9,405	69.6	17.5	12.9
Georgia.....	104,588	83,998	14,549	6,041	80.9	13.9	5.8
Florida.....	57,473	53,520	3,012	941	93.1	5.2	1.6
EAST SOUTH CENTRAL:							
Kentucky.....	65,400	55,072	9,495	833	84.2	14.5	1.3
Tennessee.....	73,840	63,016	8,379	2,445	85.3	11.3	3.3
Alabama.....	72,148	63,413	5,082	3,653	87.9	7.0	5.1
Mississippi.....	50,384	47,287	2,039	1,058	93.9	4.0	2.1
WEST SOUTH CENTRAL:							
Arkansas.....	44,982	43,763	694	525	97.3	1.5	1.2
Louisiana.....	76,165	70,153	4,473	1,539	92.1	5.9	2.0
Oklahoma.....	13,143	12,345	675	123	93.9	5.1	0.9
Texas.....	70,280	65,092	3,882	1,256	92.7	5.5	1.8
MOUNTAIN:							
Montana.....	11,655	11,436	189	30	98.1	1.6	0.3
Idaho.....	8,220	8,085	155	30	97.7	1.9	0.4
Wyoming.....	2,867	2,810	45	12	98.0	1.6	0.4
Colorado.....	28,067	25,808	2,094	165	92.0	7.5	0.6
New Mexico.....	4,143	3,965	82	66	96.4	2.0	1.6
Arizona.....	6,441	6,366	38	37	98.6	0.6	0.6
Utah.....	11,785	10,470	1,205	110	98.8	10.2	0.9
Nevada.....	2,257	2,222	26	9	98.4	1.2	0.4
PACIFIC:							
Washington.....	69,120	66,042	2,812	266	95.5	4.1	0.4
Oregon.....	28,750	26,406	2,246	98	91.8	7.8	0.3
California.....	115,296	100,218	14,018	1,060	86.9	12.2	0.9

Comparison with previous censuses as to sex and age.—The following table shows, for all industries combined, the distribution of the average number of wage earners according to age periods, and in the case of those 16 years of age or over according to sex, for 1909, 1904, and 1899. As already explained (p. 452), the distribution for 1909 is estimated on the basis of the actual proportions reported for a single represent-

ative day, while the figures for the other two censuses represent averages computed from the number of each class reported for each month of the year.

Table 15

CLASS.	AVERAGE NUMBER OF WAGE EARNERS.					
	1909		1904		1899	
	Number.	Per cent distribution.	Number.	Per cent distribution.	Number.	Per cent distribution.
Total.....	6,615,046	100.0	5,488,323	100.0	4,712,763	100.0
16 years of age and over.....	6,453,553	97.6	5,308,498	97.1	4,551,487	96.6
Male.....	5,163,164	78.1	4,242,643	77.6	3,632,977	77.1
Female.....	1,290,389	19.5	1,065,855	19.5	918,510	19.5
Under 16 years of age.....	161,493	2.4	159,855	2.9	161,276	3.4

From an examination of this table it will be seen that, while the numbers of men and women workers increased at each census, the number of children under 16 years of age has been comparatively stationary. For all industries combined there was a slight net increase during the 10 years in the number of children employed, although from 1899 to 1904 the number decreased. The percentage which children represent of the total number of wage earners, however, decreased from census to census. The proportion of adult female wage earners has been the same at each census, while the proportion of adult males has increased slightly.

Comparison of sex and age distribution in selected industries: 1909, 1904, and 1899.—Table 16 shows, in percentages, the distribution of wage earners according to sex and age periods, in 1909, 1904, and 1899, for all industries of any importance in which the proportion of women and children is relatively high or in which the absolute number of women and children is large. The percentages for the three years are comparable though not precisely parallel, for the reason that those for 1909 relate to the number employed on December 15, or the nearest representative day, which in the case of many establishments in some industries was in another month than December, while those for 1904 and 1899 (in which years reports were made for each month of the average number of wage earners by sex and age) are based upon the average number in each group for the month of December. Nevertheless, the figures should be very closely comparable for nearly all industries.

In about three-fifths of the 61 industries shown in this table the number of females 16 years of age or over and of children under the age of 16, taken together, formed a smaller proportion of the wage earners reported for December in 1909 than in 1899, or, in other words, the proportion of males 16 years of age or over increased during the decade. In the cotton-goods industry, in which the number of women and children is greater than in any other industry, each of these classes represented a smaller

percentage of the total number of wage earners in 1909 than in 1899. Similar changes have occurred in the men's clothing and the hosiery and knit-goods industries, both of which are important as employers of women and children. In the silk and woolen industries the proportion of women has increased slightly, but the proportion of children under 16 has decreased. For the tobacco-products industry, in which the proportion of

children has likewise decreased, a marked increase is shown in the proportion of women employed.

Among the 61 industries listed in the table there were 22 in which the percentage of children was higher in 1909 than in 1899, but most of these are relatively unimportant industries. The most conspicuous increase in the proportion of children employed is in the manufacture of bags, other than paper.

Table 16

INDUSTRY.	PER CENT OF ALL WAGE EARNERS EMPLOYED. ¹								
	16 years of age and over.						Under 16 years of age.		
	Male.			Female.					
	1909	1904	1899	1909	1904	1899	1909	1904	1899
Artificial flowers and feathers and plumes.....	13.1	14.1	12.9	83.7	80.7	79.1	3.1	5.2	3.0
Awnings, tents, and sails.....	56.0	59.5	65.1	42.4	39.4	34.0	1.6	1.2	0.9
Bags, other than paper.....	34.0	34.0	31.3	56.8	60.2	65.3	9.2	5.9	3.4
Bags, paper.....	50.9	52.0	53.6	47.3	45.2	45.4	1.8	2.7	1.0
Baking powders and yeast.....	52.7	47.0	49.9	44.9	51.3	48.4	2.4	1.7	1.7
Boots and shoes, including cut stock and findings.....	62.6	63.4	63.6	33.3	33.2	33.4	4.1	3.4	3.1
Boots and shoes, rubber.....	59.3	57.1	60.3	38.1	39.8	38.2	2.6	3.1	1.5
Boxes, cigar.....	44.5	44.5	46.4	49.7	50.0	49.4	5.8	5.5	4.2
Boxes, fancy and paper.....	32.8	29.3	27.9	60.0	64.5	65.9	7.1	6.2	6.2
Bread and other bakery products.....	81.3	79.6	79.2	16.7	18.1	17.7	2.0	2.3	3.1
Buttons.....	60.0	50.8	47.4	36.5	45.9	47.2	3.5	3.3	3.4
Canning and preserving.....	43.1	48.2	55.6	49.8	45.7	40.0	7.1	6.1	4.4
Carpets and rugs, other than rag.....	56.2	51.0	48.4	39.7	43.3	44.1	4.1	5.7	7.5
Clocks and watches, including cases and materials.....	61.7	61.8	63.8	36.2	36.9	34.4	2.1	1.4	1.8
Clothing, horse.....	32.4	36.8	25.2	58.5	56.6	65.5	9.1	6.6	9.2
Clothing, men's, including shirts.....	42.4	37.6	33.9	55.5	60.0	63.4	2.0	2.4	2.6
Clothing, women's.....	35.8	34.9	29.6	63.3	64.4	69.4	0.9	0.8	0.9
Coffee and spice, roasting and grinding.....	59.4	60.3	51.9	39.1	38.3	46.1	1.4	1.4	2.0
Confectionery.....	35.9	35.9	44.7	58.1	59.3	49.8	6.0	4.8	5.4
Copper, tin, and sheet-iron products.....	84.6	85.0	86.7	12.3	12.4	9.2	3.0	2.6	4.1
Cordage and twine and jute and linen goods.....	48.3	57.6	55.2	44.8	35.6	36.8	6.8	6.7	3.1
Cork, cutting.....	54.2	45.1	43.8	40.4	46.7	48.2	5.3	8.3	3.0
Corsets.....	12.6	10.9	9.9	83.9	86.3	87.4	3.5	2.8	2.7
Cotton goods, including cotton small wares.....	50.9	46.6	44.8	38.7	40.5	41.9	10.4	12.9	13.3
Dyeing and finishing textiles.....	79.6	80.2	81.9	18.0	15.9	14.4	2.4	3.9	3.7
Electrical machinery, apparatus, and supplies.....	76.4	80.6	82.8	22.7	18.3	15.8	0.9	1.0	1.5
Fireworks.....	54.8	55.7	54.7	40.9	39.0	36.7	4.3	5.3	3.6
Flags, banners, regalia, society badges, and emblems.....	35.7	32.8	28.2	61.7	65.6	68.9	2.6	1.6	2.9
Flavoring extracts.....	56.8	51.7	51.2	41.1	46.5	46.5	2.0	1.8	2.3
Food preparations.....	67.9	59.0	65.6	30.6	39.2	31.7	1.5	1.8	2.7
Foundry and machine-shop products.....	97.3	97.3	97.7	2.0	1.9	1.4	0.8	0.8	0.9
Fur goods.....	59.1	57.3	45.3	40.5	42.3	53.9	0.4	0.4	0.7
Furnishing goods, men's.....	21.8	14.1	14.7	76.1	84.3	83.3	2.1	1.6	2.6
Gloves and mittens, leather.....	42.7	39.6	30.9	54.9	58.3	67.1	2.4	2.1	2.0
Gold and silver, leaf and foil.....	43.2	45.5	51.0	53.4	51.8	46.8	3.5	2.8	2.2
Hair work.....	34.4	17.8	13.9	63.4	80.5	85.8	2.1	1.7	0.4
Hats, fur-felt.....	69.9	70.3	70.2	28.0	27.6	28.4	2.1	2.1	1.4
Hats, straw.....	34.0	33.4	.....	64.3	65.6	.....	1.7	0.9	.....
Hosiery and knit goods.....	27.4	24.2	25.0	64.5	66.2	64.5	8.1	9.6	10.5
House-furnishing goods, not elsewhere specified.....	50.5	56.0	57.3	47.8	41.5	40.5	1.6	2.5	2.2
Jewelry.....	68.8	71.9	67.2	28.4	26.1	31.0	2.8	2.0	1.3
Jewelry and instrument cases.....	44.6	47.7	48.5	52.9	51.0	47.5	2.5	1.3	4.0
Leather goods.....	81.8	79.7	84.4	15.7	17.3	12.3	2.5	3.0	3.3
Mattresses and spring beds.....	79.9	79.7	77.0	18.4	18.8	20.4	1.7	1.5	2.6
Millinery and lace goods.....	19.9	13.4	16.9	77.2	85.1	81.9	2.9	1.5	1.2
Needles, pins, and hooks and eyes.....	45.6	47.5	50.9	46.7	46.5	44.0	7.7	6.0	5.1
Paper and wood pulp.....	87.1	85.9	83.2	12.6	13.7	16.5	0.3	0.4	0.4
Paper goods, not elsewhere specified.....	49.5	41.5	46.0	47.4	55.3	51.6	3.2	3.2	2.4
Patent medicines and compounds and druggists' preparations.....	46.6	42.2	44.5	51.3	55.4	53.9	2.1	2.4	1.6
Peanuts, grading, roasting, cleaning, and shelling.....	20.2	19.7	.....	78.1	75.4	.....	1.7	4.9	.....
Pencils, lead.....	41.8	42.1	35.8	50.9	54.0	51.9	7.4	3.8	12.3
Pens, steel.....	15.5	9.3	13.6	81.1	83.7	78.8	3.4	7.0	7.6
Pottery, terra-cotta, and fire-clay products.....	87.4	85.8	87.2	11.2	11.8	10.5	1.5	2.4	2.3
Printing and publishing.....	75.1	74.5	74.8	22.4	22.9	20.6	2.4	2.6	4.7
Silk and silk goods, including throwsters.....	35.0	34.1	36.6	57.1	56.7	53.4	8.0	9.2	10.0
Slaughtering and meat packing.....	93.1	92.0	93.1	6.3	6.7	4.5	0.6	1.2	2.4
Stationery goods, not elsewhere specified.....	53.1	49.6	42.9	41.1	46.5	50.7	5.9	3.9	6.4
Surgical appliances and artificial limbs.....	49.4	48.4	54.3	47.6	49.8	40.3	3.0	1.8	5.4
Tobacco manufactures.....	49.9	54.1	57.8	46.5	41.3	37.6	3.6	4.6	4.7
Umbrellas and canes.....	44.3	39.3	39.9	51.7	56.0	56.0	4.0	4.7	4.1
Woolen, worsted, and felt goods, and wool hats.....	53.0	52.8	53.0	41.3	39.6	39.7	5.7	7.6	7.2

¹ For 1904 and 1899 the percentages are based on the average numbers reported for the month of December; for 1909, on the number employed on Dec. 15, or the nearest representative day.

Comparison of sex and age distribution, by states: 1909, 1904, and 1899.—Table 17 shows, for each geographic division and state, for 1909, 1904, and

1899, respectively, the percentage of the average number of wage earners employed during the year represented by males 16 years of age or over, females 16

years of age or over, and children under 16 years of age. For 1909 the percentages have been computed from the returns for a representative day in the manner described on page 452; for the other two years the bases of calculation are average numbers computed for the year from the returns made for each month.

Table 17

DIVISION AND STATE.	PER CENT OF AVERAGE NUMBER OF WAGE EARNERS.								
	16 years of age and over.						Under 16 years of age.		
	Male.			Female.					
	1909	1904	1899	1909	1904	1899	1909	1904	1899
United States.....	78.1	77.6	77.1	19.5	19.5	19.5	2.4	2.9	3.4
GEOGRAPHIC DIVISIONS:									
New England.....	69.1	69.1	68.4	27.9	28.0	28.7	3.0	2.9	2.9
Middle Atlantic.....	73.3	73.9	73.3	24.7	23.5	23.4	2.0	2.7	3.3
East North Central.....	84.0	83.8	84.4	14.5	14.5	13.2	1.5	1.7	2.4
West North Central.....	83.1	83.6	83.4	15.4	14.2	13.6	1.5	2.3	3.0
South Atlantic.....	78.0	75.4	74.7	15.6	17.0	17.4	6.3	7.6	7.9
West South Central.....	87.4	85.9	86.2	9.5	9.7	9.0	3.1	4.3	4.8
East South Central.....	93.6	92.6	91.3	4.7	5.5	6.4	1.7	1.9	2.4
Mountain.....	94.3	93.6	94.4	5.1	5.2	4.2	0.6	1.3	1.3
Pacific.....	90.4	88.6	85.5	8.9	10.3	12.6	0.7	1.2	1.9
NEW ENGLAND:									
Maine.....	75.8	75.6	72.1	22.5	22.4	24.8	1.7	2.0	3.1
New Hampshire.....	68.1	68.1	67.1	30.4	30.5	30.4	1.5	1.5	2.4
Vermont.....	85.7	85.5	85.0	13.7	13.8	14.1	0.6	0.7	0.9
Massachusetts.....	66.8	66.9	66.6	29.6	30.1	30.6	3.6	3.0	2.8
Rhode Island.....	63.6	63.0	62.7	32.3	31.6	31.6	4.1	5.4	5.7
Connecticut.....	73.4	73.1	72.3	24.0	24.5	25.6	2.6	2.4	2.1
MIDDLE ATLANTIC:									
New York.....	70.0	70.4	69.3	29.2	28.6	29.0	0.8	0.9	1.7
New Jersey.....	72.5	73.4	73.3	25.2	23.6	23.1	2.3	3.0	3.7
Pennsylvania.....	77.5	77.9	77.7	19.2	17.6	17.4	3.3	4.5	4.9
EAST NORTH CENTRAL:									
Ohio.....	83.4	83.4	84.0	15.4	15.2	14.7	1.2	1.4	1.3
Indiana.....	86.2	85.3	86.0	11.9	12.5	11.4	1.9	2.2	2.5
Illinois.....	82.2	82.8	82.6	16.3	15.9	14.4	1.5	1.3	3.0
Michigan.....	85.4	84.3	86.2	13.5	13.8	12.2	1.1	1.9	1.6
Wisconsin.....	85.8	85.4	86.0	11.8	11.9	9.9	2.3	2.7	4.0
WEST NORTH CENTRAL:									
Minnesota.....	86.2	87.4	88.5	13.5	12.1	10.4	0.4	0.5	1.1
Iowa.....	83.0	83.0	83.1	15.3	14.8	12.9	1.7	2.2	4.0
Missouri.....	78.4	79.5	78.1	19.1	17.1	18.5	2.5	3.4	3.5
North Dakota.....	89.2	86.7	90.7	8.7	11.3	6.8	2.0	2.0	2.5
South Dakota.....	86.0	87.4	91.4	12.7	11.2	3.6	1.3	1.3	4.9
Nebraska.....	85.3	85.5	86.9	13.8	12.5	9.2	0.9	2.0	3.9
Kansas.....	91.9	90.4	89.9	7.5	7.6	7.2	0.5	2.0	2.9
SOUTH ATLANTIC:									
Delaware.....	81.0	80.5	79.8	16.5	16.0	16.1	2.5	3.5	4.1
Maryland.....	67.1	67.4	65.5	26.8	26.7	28.6	6.1	5.9	6.0
District of Columbia.....	89.0	89.1	87.1	10.7	9.7	11.7	0.2	1.2	1.2
Virginia.....	83.5	81.0	79.5	13.1	14.9	14.9	3.4	4.0	5.5
West Virginia.....	91.3	90.0	89.0	7.1	7.4	8.5	1.6	2.6	2.4
North Carolina.....	70.9	64.9	65.0	17.8	21.4	20.9	11.3	13.6	14.1
South Carolina.....	69.6	63.3	61.9	17.5	20.2	20.1	12.9	16.4	18.0
Georgia.....	80.3	73.5	80.4	13.9	13.6	12.1	5.8	7.9	7.5
Florida.....	93.1	94.2	94.8	5.2	5.0	4.3	1.6	0.8	0.9
EAST SOUTH CENTRAL:									
Kentucky.....	84.2	82.8	84.1	14.5	13.9	11.8	1.3	3.3	4.2
Tennessee.....	85.3	85.4	85.1	11.3	10.9	10.6	3.3	3.6	4.3
Alabama.....	87.9	86.0	87.0	7.0	7.3	6.6	5.1	6.6	6.5
Mississippi.....	93.9	91.4	90.8	4.0	5.3	5.4	2.1	3.3	3.8
WEST SOUTH CENTRAL:									
Arkansas.....	97.3	96.9	96.7	1.5	1.5	1.3	1.2	1.6	2.0
Louisiana.....	92.1	89.4	85.0	5.9	8.2	12.3	2.0	2.4	2.7
Oklahoma.....	93.9	92.0	94.7	5.1	6.0	3.2	0.9	2.0	2.1
Texas.....	92.7	93.3	93.2	5.5	5.1	4.4	1.8	1.7	2.4
MOUNTAIN:									
Montana.....	98.1	97.7	98.1	1.6	1.6	0.9	0.3	0.7	1.1
Idaho.....	97.7	95.8	96.5	1.9	2.9	2.1	0.4	1.3	1.4
Wyoming.....	98.0	97.8	98.5	1.6	1.8	0.7	0.4	0.4	0.7
Colorado.....	92.0	92.4	93.4	7.5	6.2	5.5	0.6	1.4	1.0
New Mexico.....	96.4	97.4	96.5	2.0	1.5	2.4	1.6	1.1	1.0
Arizona.....	98.4	98.9	98.0	0.6	0.7	0.9	0.6	0.4	1.1
Utah.....	88.8	84.9	86.1	10.2	12.6	10.7	0.9	2.4	3.2
Nevada.....	98.4	98.5	95.4	1.2	1.0	1.2	0.4	0.5	3.4
PACIFIC:									
Washington.....	95.5	96.9	97.2	4.1	2.9	2.0	0.4	0.2	0.8
Oregon.....	91.8	90.9	90.4	7.8	8.0	7.7	0.3	1.1	1.9
California.....	86.9	84.4	79.7	12.2	14.0	17.9	0.9	1.6	2.4

In every geographic division except New England, children under 16 years of age constituted a smaller proportion of the average number of wage earners in 1909 than in 1899, while the proportion in New Eng-

land rose slightly, wholly on account of increased proportions in Massachusetts and Connecticut. The proportion of children decreased during the decade in all but five of the states, the exceptions being Massachusetts, Connecticut, Maryland (where there was very little change), Florida, and New Mexico. In the Middle Atlantic, East North Central, West North Central, East South Central, and Mountain divisions women 16 years of age or over represented a larger proportion of the total in 1909 than in 1899, but in the other divisions they constituted a somewhat smaller proportion. Most of the individual states show comparatively little change in the proportion of women, the most conspicuous increases being in certain states where the manufacturing industries are still comparatively undeveloped, such as South Dakota and Nebraska. Marked decreases in the proportion of women took place in Louisiana and California.

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 purposes of comparison figures for 1904 are also given, but these are on a slightly different basis, since at that census each establishment was asked to report the average number employed for each month rather than the number employed on a specified day of each month.

Table 18

MONTH.	WAGE EARNERS IN ALL MANUFACTURING INDUSTRIES. ¹			
	Number.		Per cent of maximum.	
	1909	1904	1909	1904
January.....	6,210,063	5,262,472	88.6	92.7
February.....	6,297,627	5,336,471	89.9	93.9
March.....	6,423,517	5,459,736	91.7	96.0
April.....	6,437,653	5,493,343	91.9	96.8
May.....	6,457,279	5,512,373	92.2	97.1
June.....	6,517,469	5,463,804	93.0	95.2
July.....	6,486,676	5,323,966	92.6	95.5
August.....	6,656,933	5,420,618	96.0	98.5
September.....	6,898,766	5,808,412	98.5	98.8
October.....	6,997,090	5,676,320	99.9	100.0
November.....	7,006,853	5,587,028	100.0	98.4
December.....	6,990,652	5,490,453	99.8	96.7

¹ The numbers for 1909 represent the number employed on the 15th of each month, or the nearest representative day; those for 1904, the average number employed during each month.

In 1909 the largest number of wage earners, 7,006,853, was employed in November, and the smallest number, 6,210,063, in January, this number being equal to 88.6 per cent of the maximum. In 1904 the largest number was employed in October and the smallest number in January, the minimum representing 92.7 per cent of the maximum. In 1909 a fairly constant increase in employment was shown from January to November, except that the number employed in July was a little lower than in June.

The figures for employment by months for all industries combined fail to show fully the variations in employment, since a variation in one direction in one industry may be offset by a variation in the opposite direction in another industry. Except for distinctly

seasonal industries, however, the employment in most of the important industries of the country appears to have been comparatively steady throughout the year 1909. The following table shows the amount of variation in certain industries. It gives (1) the 14 industries which reported the largest average number of wage earners, including all reporting 100,000 or more, and (2) the 12 industries which show the greatest variations in employment, including all (except one or two employing less than 1,000 wage earners each) in which the number for the month of least activity is less than one-half that for the month of greatest activity.

INDUSTRY.	WAGE EARNERS.					
	Average number.	Maximum number.		Minimum number.		Per cent of maximum.
		Month.	Number.	Month.	Number.	
<i>Principal industries.</i>						
Lumber and timber products..	695,019	Nov...	739,160	Jan...	649,239	87.8
Foundry and machine-shop products.....	531,011	Dec...	597,234	Jan....	482,080	80.7
Cotton goods, including cotton small wares.....	378,880	Dec...	383,529	Jan...	374,433	97.6
Cars and general shop construction and repairs by steam-railroad companies...	282,174	Dec...	301,538	May...	268,700	89.1
Printing and publishing.....	258,434	Dec...	269,884	July...	251,757	93.3
Iron and steel, steel works and rolling mills.....	240,076	Dec...	283,629	Mar...	215,076	75.8
Clothing, men's, including shirts.....	239,696	Dec...	251,349	Jan....	230,650	91.8
Boots and shoes, including cut stock and findings.....	198,297	Dec...	207,452	May...	190,382	91.8
Woolen, worsted, and felt goods, and wool hats.....	168,722	Nov...	173,943	Jan....	158,318	91.0
Tobacco manufactures.....	166,810	Dec...	176,369	Jan....	161,563	91.6
Clothing, women's.....	153,743	Oct...	167,525	July...	135,034	80.6
Hosiery and knit goods.....	129,275	Nov...	134,540	Jan....	123,308	91.7
Furniture and refrigerators.....	128,452	Nov...	136,615	Jan....	120,524	88.2
Bread and other bakery products.....	100,216	Oct...	102,770	Jan....	96,639	94.0
<i>Industries showing large variation.</i>						
Brick and tile.....	76,528	July...	104,930	Jan....	38,312	36.5
Canning and preserving.....	59,968	Sept...	154,800	Jan....	19,998	12.9
Fertilizers.....	18,310	Mar...	29,310	July...	14,264	48.7
Oil, cottonseed, and cake.....	17,071	Nov...	29,334	July...	5,174	17.6
Ice, manufactured.....	16,114	July...	22,872	Jan....	9,847	43.1
Artificial stone.....	9,957	Aug...	12,884	Jan....	4,856	37.7
Hats, straw.....	8,814	Mar...	11,488	July...	4,700	40.9
Beet sugar.....	7,204	Nov...	16,807	Feb...	2,206	13.1
Sugar and molasses.....	4,127	Nov...	15,761	Feb...	559	3.5
Vinegar and cider.....	1,542	Oct...	3,464	Mar...	886	25.6
Grindstones.....	1,394	May...	1,665	Jan....	795	47.7
Rice, cleaning and polishing...	1,239	Oct...	2,017	July...	436	21.6

Considering first the principal industries, it will be seen that the greatest regularity of employment was in the manufacture of cotton goods, in which the number employed during the month of least activity, January, was equal to 97.6 per cent of the number employed in the month of greatest activity, Decem-

ber. Other industries in which the number for the month of least activity was more than 90 per cent of the number for the month of greatest activity are the manufacture of boots and shoes, bakeries, the men's clothing industry, the tobacco-products industry, the manufacture of woolen goods and of hosiery and knit goods, and printing and publishing. Among the principal industries the greatest variation appears in the steel works and rolling mills, in which the number employed during March, the month of least activity, was only 75.8 per cent of the number employed during December, the month of greatest activity. The women's clothing and foundry and machine shop industries also show a comparatively large degree of variation in the number employed.

The lumber industry, as already stated, includes logging camps as well as sawmills, and also includes planing mills and wooden packing-box factories. The variation in employment in all of these branches taken together for the country as a whole is not very great, the number employed during the month of least activity being 87.8 per cent of the number employed during the month of greatest activity. For the logging camps alone, however, there is greater variation, the number employed during July, 170,587, being only 76.6 per cent of the number employed in December, which was 222,564. Furthermore, since in different sections of the country the active season in the woods covers different months, if the operations of the logging camps in each geographic division are considered separately, a much wider variation appears in the number employed, this being particularly true in the Northern states.

There are a number of industries which are conspicuously seasonal in character. In the case of some of these the weather will not permit work except at certain seasons, and in others the raw material used is available only at certain seasons and must be handled immediately, while in the case of the remainder the demand for the products is conspicuously seasonal. The most variable large industry is canning and preserving, which naturally is confined mainly to the period at which fruits and vegetables are harvested. The industry includes the canning and preserving of fish and oysters, which is carried on in the winter months; if this were excluded there would necessarily be a much greater variation in the numbers employed. In this industry the number employed during January, the month of least activity, formed only 12.9 per cent of the number employed during September.

CHARACTER OF OWNERSHIP.

Summary for United States.—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. Comparative figures are given, covering all industries combined, for the censuses of 1909 and 1904. Similar data for 1899 are not available.

CHARACTER OF OWNERSHIP.	Number of establishments.	Average number of wage earners.	Value of products.	Value added by manufacture.
All classes:				
1909.....	268,491	6,615,046	\$20,672,051,870	\$8,529,260,992
1904.....	216,180	5,458,383	14,793,902,563	6,293,694,753
Average per establishment—				
1909.....		25	78,993	31,787
1904.....		25	68,433	29,113
Individual:				
1909.....	140,605	804,883	2,042,061,500	968,824,072
1904.....	113,946	756,923	1,702,830,624	824,292,887
Average per establishment—				
1909.....		6	14,523	6,890
1904.....		7	14,944	7,234
Firm:				
1909.....	54,265	794,836	2,184,107,632	951,333,741
1904.....	47,934	841,242	2,132,536,604	930,143,823
Average per establishment—				
1909.....		15	40,249	17,532
1904.....		18	44,489	19,405
Corporation:				
1909.....	69,501	5,002,393	16,341,116,634	6,582,207,117
1904.....	51,097	3,862,698	10,904,069,307	4,526,055,153
Average per establishment—				
1909.....		72	235,121	94,721
1904.....		76	213,399	88,578
Other:				
1909.....	4,120	12,934	104,766,104	26,846,062
1904.....	3,203	8,520	54,466,028	13,202,890
Average per establishment—				
1909.....		3	25,429	6,516
1904.....		3	17,005	4,122
Per cent of total—				
1909.....	100.0	100.0	100.0	100.0
1904.....	100.0	100.0	100.0	100.0
Individual:				
1909.....	52.4	12.2	9.9	11.4
1904.....	52.7	13.8	11.5	13.1
Firm:				
1909.....	20.2	12.0	10.6	11.2
1904.....	22.2	15.4	14.4	14.8
Corporation:				
1909.....	25.9	75.6	79.0	77.2
1904.....	23.6	70.6	73.7	71.9
Other:				
1909.....	1.5	0.2	0.5	0.3
1904.....	1.5	0.2	0.4	0.2

The most important distinction shown is that between corporate and all other forms of ownership. Of the total number of establishments reported as engaged in manufacturing industries in 1909, 25.9 per cent were under corporate ownership. The corresponding figure for 1904 was 23.6 per cent. While corporations thus controlled only about one-fourth of the total number of establishments, they gave employment to a large proportion of all wage earners reported, namely, 75.6 per cent in 1909 and 70.6 per cent in 1904. The value of the products of the factories operated by corporations represented 79 per cent of the total value of products for all establishments in 1909 and 73.7 per cent in 1904. These figures show that even during this short period of five years the corporate form of ownership increased so greatly that it represented an appreciably larger proportion of the manufacturing interests of the country in 1909 than in 1904.

Partnerships (including limited partnerships) controlled about one-fifth of the total number of manufacturing establishments in 1909, and individuals rather more than one-half of the total number. These two classes of establishments were about equal in volume of business, each reporting in the neighborhood of one-eighth of the total number of wage earners and one-tenth of the total value of products in 1909. During the five years from 1904 to 1909 partnerships lost ground, relatively, to a greater degree than individual ownership, presumably because of the incorporation of many concerns previously operated by firms.

In 1909 there were 4,120 establishments operated by cooperative companies and other miscellaneous forms of ownership that could not be classified as individual, firm, or corporate ownership. These establishments gave employment to only two-tenths of 1 per cent of the wage earners, and the value of their products was only five-tenths of 1 per cent of the total value reported for all establishments.

From 1904 to 1909 the average number of wage earners per establishment decreased for all three principal classes of ownership, while the average value of products per establishment decreased for the establishments under individual and firm ownership but increased for corporate ownership.

Proportion of business done by corporations in the principal industries: 1909 and 1904.—Table 21, on the following page, shows, for the principal industries, the number of manufacturing establishments operated by corporations in 1909 and 1904, and the percentage which they represent of the entire number of establishments; also the value of the manufactured products made in establishments under corporate ownership and the percentage which this represents of the total value. The figures as to total value, on which the percentages are based, will be found in Table 110. Two important industries, the repair shops of steam railroads and the smelting and refining of copper, are not shown separately in this table, as to do so would disclose the operations of individual establishments.

This table shows that in industries where a large investment in plant and machinery is necessary to the proper conduct of the business, the establishments are as a rule operated by corporations, it being easier under this form of ownership to obtain the necessary capital. All of the establishments engaged in the smelting and refining of lead in 1909 were operated by corporations, and more than 90 per cent of the blast furnaces, steel works and rolling mills, cottonseed-oil mills, and establishments manufacturing steam-railroad cars were under this form of ownership. The general tendency has been toward an increase in the proportion of the establishments operated by corporations, and 35 of the 41 selected

industries show an increase in this respect. In 24 of the 41 selected industries, less than 50 per cent of the establishments were operated by corporations.

As a rule corporations control a much larger proportion of the output of manufactures than they do of the number of establishments. In 16 of the 41 industries the value of the products reported by corporations formed in 1909 more than 90 per cent of the value

reported for all establishments, and in all but 5 of the industries the corporations reported more than 50 per cent of the total value of products. In only 1 of the selected industries, the manufacture of women's clothing, did the proportion of the total value of products reported by corporations fall as low as one-fourth. In this industry it formed only 23.6 per cent of the total value reported for 1909.

Table 21

INDUSTRY.	NUMBER OF ESTABLISHMENTS.						VALUE OF PRODUCTS OF ESTABLISHMENTS OPERATED BY CORPORATIONS.			
	Total.		Operated by corporations.				Amount.		Per cent of total.	
			Number.		Per cent of total.					
	1909	1904	1909	1904	1909	1904	1909	1904	1909	1904
All industries	268,491	216,180	69,501	51,097	25.9	23.6	\$16,341,116,634	\$10,904,069,307	79.0	73.7
Agricultural implements.....	640	648	349	327	54.5	50.5	140,663,575	105,325,880	96.1	94.0
Automobiles, including bodies and parts.....	743	178	478	113	64.3	63.5	235,802,964	26,454,851	94.6	88.1
Boots and shoes, including cut stock and findings.....	1,918	1,895	734	561	38.3	29.6	365,716,678	210,493,693	71.3	58.8
Brass and bronze products.....	1,021	813	417	271	40.8	33.3	134,981,702	89,004,043	90.0	86.9
Bread and other bakery products.....	23,926	18,226	838	483	3.5	2.6	140,238,713	86,595,177	35.3	32.1
Butter, cheese, and condensed milk.....	8,479	8,926	1,313	1,385	15.5	15.5	113,493,555	61,309,538	41.3	36.5
Canning and preserving.....	3,767	3,168	1,167	940	31.0	29.7	116,496,603	78,308,836	74.2	60.0
Carriages and wagons and materials.....	5,492	5,588	884	806	16.1	14.4	109,348,007	96,894,926	68.4	62.2
Cars, steam-railroad, not including operations of railroad companies.....	110	73	104	67	94.5	91.8	120,486,355	109,079,572	97.4	98.1
Chemicals.....	349	275	266	207	76.2	75.3	115,290,377	65,786,129	98.0	87.5
Clothing, men's, including shirts.....	6,354	5,145	824	538	13.0	10.5	187,167,188	.....	32.9	.....
Clothing, women's.....	4,558	3,851	583	319	12.8	9.5	90,696,932	46,168,946	23.6	18.6
Confectionery.....	1,944	1,848	595	384	30.6	28.5	96,821,995	52,802,483	71.8	60.6
Copper, tin, and sheet-iron products.....	4,228	2,540	1,034	591	24.5	23.3	149,640,465	80,398,170	74.9	67.0
Cotton goods, including cotton small wares.....	1,324	1,154	1,113	922	84.1	79.9	598,770,236	417,926,307	95.3	92.8
Electrical machinery, apparatus, and supplies.....	1,009	784	720	524	71.4	66.8	213,088,053	133,777,339	96.3	95.0
Flour-mill and gristmill products.....	11,691	10,051	2,271	1,732	19.4	17.2	588,189,883	429,736,098	66.6	60.3
Foundry and machine-shop products.....	13,253	10,765	6,408	4,542	48.4	42.2	1,082,715,968	724,924,320	88.1	82.3
Furniture and refrigerators.....	3,155	2,593	1,499	1,128	47.5	43.5	192,097,264	128,051,459	80.1	72.0
Gas, illuminating and heating.....	1,296	1,019	1,091	931	84.2	91.4	165,108,539	123,788,392	99.0	96.9
Hosiery and knit goods.....	1,374	1,144	651	476	47.4	41.6	142,021,832	.....	71.0	.....
Iron and steel, blast furnaces.....	208	190	195	182	93.8	95.8	386,361,856	226,518,168	98.7	97.7
Iron and steel, steel works and rolling mills.....	446	415	424	385	95.1	92.8	980,546,617	666,630,620	99.5	96.9
Leather goods.....	2,375	1,918	569	403	24.0	21.0	61,527,700	39,869,146	58.8	48.5
Leather, tanned, curried, and finished.....	919	1,049	454	391	49.4	37.3	250,296,374	168,736,461	76.3	66.8
Liquors, distilled.....	613	805	229	178	37.4	22.1	180,427,167	116,399,668	88.1	88.7
Liquors, malt.....	1,414	1,530	996	930	70.4	60.8	338,480,960	263,219,137	90.3	88.2
Lumber and timber products.....	40,671	25,153	6,969	4,900	17.1	19.5	793,810,129	724,924,320	88.1	60.7
Marble and stone work.....	4,964	2,608	811	467	16.3	17.9	54,859,987	.....	48.5	.....
Oil, cottonseed, and cake.....	817	715	756	677	92.5	94.7	141,730,982	93,817,578	95.8	97.3
Paint and varnish.....	791	639	526	360	66.5	56.3	106,349,811	75,473,279	85.2	83.1
Paper and wood pulp.....	777	761	633	587	81.5	77.1	248,435,331	169,665,695	92.8	89.9
Patent medicines and compounds and druggists' preparations.....	3,642	2,777	1,610	1,161	44.2	41.8	111,493,887	81,831,451	78.5	69.7
Petroleum, refining.....	147	98	131	83	89.1	84.7	232,539,969	169,548,502	98.1	96.9
Printing and publishing.....	31,445	27,793	7,184	5,354	22.8	19.3	516,400,736	368,729,392	70.0	66.7
Silk and silk goods, including throwsters.....	852	624	468	315	54.9	50.5	134,495,967	92,403,120	68.3	66.3
Slaughtering and meat packing.....	1,641	1,221	488	298	29.7	24.4	1,215,428,015	793,971,346	88.7	86.1
Smelting and refining, lead.....	28	32	28	28	100.0	87.5	167,405,650	185,366,977	100.0	99.8
Sugar and molasses, not including beet sugar.....	233	344	114	112	48.9	32.6	255,895,127	223,854,504	91.6	80.7
Tobacco manufactures.....	15,822	16,827	722	563	4.6	3.3	277,102,771	188,186,069	66.5	56.8
Woolen, worsted, and felt goods, and wool hats.....	985	1,074	578	518	58.7	48.2	363,283,846	239,816,937	83.3	75.1
All other industries.....	63,070	49,923	22,277	15,958	35.3	32.0	4,425,406,968	3,136,410,027	82.8	83.3

Proportion of business done by corporations, by states: 1909 and 1904.—Table 22 shows, for the geographic divisions and for each state, the number of manufacturing establishments operated by corporations in 1909 and 1904, and the percentage which they represent of the entire number of establishments;

also the value of the manufactured products made in establishments under corporate ownership, and the percentage which this represents of the total value. The figures as to total value for each of the states, on which the percentages are based, will be found in Table 111.

Table 22

DIVISION AND STATE.	NUMBER OF ESTABLISHMENTS.						VALUE OF PRODUCTS OF ESTABLISHMENTS OPERATED BY CORPORATIONS.			
	Total.		Operated by corporations.				Amount.		Per cent of total.	
			Number.		Per cent of total.					
	1909	1904	1909	1904	1909	1904	1909	1904	1909	1904
United States	268,491	216,180	69,501	51,097	25.9	23.6	\$16,341,116,634	\$10,904,069,307	79.0	73.7
GEOGRAPHIC DIVISIONS:										
New England.....	25,351	22,279	7,300	5,572	28.8	25.0	2,173,070,560	1,509,457,541	81.4	74.5
Middle Atlantic.....	81,315	67,699	17,785	12,460	21.9	18.4	5,133,389,739	3,417,242,344	71.9	65.5
East North Central.....	60,013	51,754	17,755	14,093	29.6	27.2	4,434,329,994	2,913,000,832	85.1	80.8
West North Central.....	27,171	21,492	6,649	4,816	24.5	22.4	1,513,583,331	1,044,005,587	83.9	81.3
South Atlantic.....	28,088	19,584	6,765	4,820	24.1	24.7	1,059,302,614	701,534,357	76.7	72.0
East South Central.....	15,381	10,311	3,558	2,672	23.1	25.9	494,623,131	349,227,144	78.5	75.2
West South Central.....	12,339	8,279	3,403	2,298	27.6	27.8	509,339,325	315,236,430	81.4	75.9
Mountain.....	5,254	3,610	1,743	1,114	33.3	30.9	328,652,051	230,401,412	90.3	90.5
Pacific.....	13,579	11,192	4,543	3,252	33.5	29.1	695,015,111	423,992,759	82.4	70.9
NEW ENGLAND:										
Maine.....	3,546	3,145	861	671	24.3	21.3	136,156,275	101,575,154	77.3	70.5
New Hampshire.....	1,961	1,618	424	338	21.6	20.9	126,642,602	88,159,093	76.9	71.3
Vermont.....	1,958	1,699	372	309	19.0	18.2	42,641,046	36,373,592	82.4	87.7
Massachusetts.....	11,684	10,723	3,483	2,555	29.8	23.8	1,182,935,652	810,543,092	78.4	72.1
Rhode Island.....	1,951	1,617	659	512	33.8	31.7	243,426,998	158,322,691	86.8	78.3
Connecticut.....	4,251	3,477	1,501	1,187	35.3	34.1	441,267,987	314,484,099	90.0	85.2
MIDDLE ATLANTIC:										
New York.....	44,935	37,194	9,345	6,086	20.8	16.4	2,108,026,670	1,396,924,211	62.6	55.1
New Jersey.....	8,817	7,010	2,560	1,834	29.0	26.2	971,904,531	617,236,276	84.8	78.7
Pennsylvania.....	27,563	23,495	5,880	4,540	21.3	19.3	2,053,458,538	1,403,061,557	78.2	71.7
EAST NORTH CENTRAL:										
Ohio.....	15,138	13,785	5,123	4,008	33.8	29.1	1,249,778,444	777,392,416	86.9	80.9
Indiana.....	7,969	7,044	2,363	1,915	29.7	27.2	495,570,090	317,451,228	85.6	80.6
Illinois.....	18,026	14,921	5,209	4,145	28.9	27.8	1,646,518,916	1,179,028,840	85.8	82.6
Michigan.....	9,159	7,446	2,638	2,044	28.8	27.4	571,102,107	328,185,756	83.4	76.5
Wisconsin.....	9,721	8,558	2,422	1,981	24.9	23.1	471,360,437	310,912,592	79.8	75.6
WEST NORTH CENTRAL:										
Minnesota.....	5,561	4,756	1,326	922	23.8	19.4	330,924,567	234,013,794	80.8	76.0
Iowa.....	5,528	4,785	1,317	1,041	23.8	21.8	189,182,389	116,246,555	73.0	72.4
Missouri.....	8,375	6,464	2,447	1,847	29.2	28.6	508,761,173	379,406,293	88.6	85.3
North Dakota.....	752	507	133	81	17.7	16.0	13,586,008	5,146,817	71.0	50.4
South Dakota.....	1,020	686	216	112	21.2	16.3	9,870,131	6,008,547	55.2	45.9
Nebraska.....	2,500	1,819	487	359	19.5	19.7	175,621,402	138,623,975	88.2	89.5
Kansas.....	3,435	2,475	723	454	21.0	18.3	285,637,061	164,565,576	87.9	83.0
SOUTH ATLANTIC:										
Delaware.....	726	631	202	160	27.8	25.0	36,071,988	128,921,912	63.3	78.3
Maryland.....	4,837	3,852	873	650	18.0	16.9	207,102,289	147,744,248	65.6	60.7
District of Columbia.....	518	482	122	91	23.6	18.9	16,544,835	10,150,928	65.4	55.3
Virginia.....	5,685	3,187	1,099	702	19.3	22.0	163,780,071	109,546,390	74.5	73.6
West Virginia.....	2,586	2,109	813	638	31.4	30.3	140,385,264	78,951,053	86.7	79.7
North Carolina.....	4,931	3,272	1,339	879	27.2	26.9	182,140,664	113,510,110	84.1	79.6
South Carolina.....	1,854	1,399	564	464	30.4	33.2	102,403,671	70,493,378	90.4	88.8
Georgia.....	4,792	3,219	1,252	931	26.1	28.9	165,057,980	114,976,872	81.4	76.1
Florida.....	2,159	1,413	501	308	23.2	21.7	45,815,852	127,239,766	62.9	54.2
EAST SOUTH CENTRAL:										
Kentucky.....	4,776	3,734	1,147	862	24.0	23.1	178,650,245	117,046,736	79.8	73.3
Tennessee.....	4,609	3,175	1,068	785	23.2	24.7	133,750,538	97,285,799	74.2	70.5
Alabama.....	3,398	1,882	788	578	23.2	30.7	123,502,394	92,725,327	84.6	84.9
Mississippi.....	2,898	1,520	555	447	21.4	29.4	58,719,954	42,169,292	72.9	73.4
WEST SOUTH CENTRAL:										
Arkansas.....	2,925	1,907	640	518	21.9	27.2	55,585,982	38,724,917	74.2	71.9
Louisiana.....	2,516	2,091	910	700	36.2	33.5	183,303,633	138,977,223	81.8	74.6
Oklahoma.....	2,310	1,123	501	1,242	21.7	21.5	39,390,339	17,401,144	73.4	71.1
Texas.....	4,588	3,158	1,352	839	29.5	26.6	231,059,361	120,133,146	84.7	79.3
MOUNTAIN:										
Montana.....	677	382	203	118	30.0	30.9	68,458,197	53,369,703	93.4	95.4
Idaho.....	725	364	200	105	27.6	28.8	16,982,034	6,136,137	75.8	70.0
Wyoming.....	268	169	168	155	25.0	32.0	14,664,800	12,751,358	74.6	78.1
Colorado.....	2,034	1,606	698	478	34.3	29.8	116,991,543	89,377,091	90.0	89.2
New Mexico.....	313	199	196	153	30.4	25.6	16,253,689	14,645,600	79.2	81.4
Arizona.....	311	169	122	71	38.6	42.0	148,305,675	27,135,784	95.1	96.6
Utah.....	749	606	294	203	39.3	33.5	56,234,329	34,765,530	90.7	89.3
Nevada.....	177	115	170	34	37.3	29.6	110,761,784	2,220,209	99.5	71.7
PACIFIC:										
Washington.....	3,674	2,751	1,444	926	39.3	33.7	185,171,875	103,215,832	83.9	80.1
Oregon.....	2,246	1,602	640	409	28.5	25.5	70,781,269	40,034,288	76.1	72.1
California.....	7,659	6,839	2,459	1,917	32.1	28.0	439,064,967	280,742,589	82.9	76.5

¹ Includes establishments operated under other forms of ownership, to avoid disclosing individual operations. There were eight of these establishments in 1909 and seven in 1904 which were included in the total for geographic divisions but are not included in the total for the United States.

Table 22 shows that in most of the states in 1909 the number of manufacturing establishments owned by corporations represented between one-fifth and one-third of the total number of manufacturing establishments. Vermont, North Dakota, Nebraska, Maryland, and Virginia were the only states in which less than one-fifth of the establishments were owned by corporations, and Rhode Island, Connecticut, Ohio, Louisiana, and five states in the western part of the country were the only ones in which over one-third were under this form of ownership. In a large majority of the states the proportion of establishments operated by corporations was larger in 1909 than in 1904, the exceptions being Nebraska, Virginia, South Carolina, Georgia, Tennessee, Alabama, Mississippi, Arkansas, Montana, Idaho, Wyoming, and Arizona.

In most of the states between three-fifths and nine-tenths of the total value of manufactured products in 1909 was reported by establishments under corporate

ownership. The only state in which the proportion was less than three-fifths was South Dakota, while in Connecticut, South Carolina, Montana, Colorado, Arizona, Utah, and Nevada the proportion was nine-tenths or more. Among the great manufacturing states, New York is conspicuous for the comparatively small proportion, 62.6 per cent, of the value of its products contributed by this class of establishments. In almost every state a larger percentage of the total value of products was reported by such establishments in 1909 than in 1904, thus indicating that the tendency toward the incorporation of manufacturing concerns, particularly the larger concerns, is general and to a considerable degree independent of variations in state legislation regarding corporations. The only states in which the proportion of the total value produced by corporations was less in 1909 than in 1904 are Nebraska, Delaware, Alabama, Mississippi, Montana, Wyoming, New Mexico, and Arizona, and the difference in each case was slight.

SIZE OF ESTABLISHMENTS.

Summary for United States.—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, Table 23 groups the establishments in all industries combined according to the value of their products, and shows for each group, for 1909 and 1904, the number of wage earners, value of products, and value added by manufacture, together with the percentage of the respective totals represented by each group. It also gives the average size of establishments as measured by these three items; the changes in this average are, however, much less significant than the changes in the percentages for the several groups.

Of the 268,491 establishments reported as engaged in manufacturing industries in 1909, there were 3,060, or 1.1 per cent, whose products were valued at more than \$1,000,000 each. The corresponding figures for 1904 were 1,900 establishments out of 216,180, or nine-tenths of 1 per cent. While these establishments represented a comparatively small proportion of the total number of establishments, they gave employment to a much larger proportion of all the wage earners reported, namely, 30.5 per cent in 1909 and 25.6 per cent in 1904. The value of products of such establishments represented 43.8 per cent of the total value of products in 1909 and 38 per cent in 1904.

The figures indicate that establishments of this class produced a considerably larger proportion of the manufactures of the country in 1909 than in 1904. It should be noted that the increased proportion is due partly to the fact that certain establishments included in the other groups in 1904 were included in this group in 1909 as the result of an increase in the value of their output.

Table 23 VALUE OF PRODUCTS.	Number of establishments.	Average number of wage earners.	Value of products.	Value added by manufacture.
All classes:				
1909	268,491	6,615,046	\$20,672,051,870	\$8,529,280,992
1904	216,180	5,468,383	14,793,902,563	6,283,694,753
Less than \$5,000:				
1909	93,349	142,430	222,463,847	144,246,008
1904	71,147	106,353	176,128,212	114,781,124
\$5,000 and less than \$20,000:				
1909	86,983	470,006	904,645,664	509,907,934
1904	72,791	419,466	751,047,759	424,129,643
\$20,000 and less than \$100,000:				
1909	57,270	1,090,449	2,544,426,711	1,258,317,991
1904	48,096	1,027,047	2,129,257,883	1,090,271,887
\$100,000 and less than \$1,000,000:				
1909	27,824	2,896,532	7,946,935,255	3,572,746,038
1904	22,246	2,515,064	6,109,012,538	2,732,641,883
\$1,000,000 and over:				
1909	3,060	2,015,629	9,053,580,393	3,044,043,021
1904	1,900	1,400,453	5,628,456,171	1,881,870,216
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	34.8	2.2	1.1	1.7
1904	32.9	1.9	1.2	1.8
\$5,000 and less than \$20,000:				
1909	32.4	7.1	4.4	6.0
1904	33.7	7.7	5.1	6.7
\$20,000 and less than \$100,000:				
1909	21.3	16.5	12.3	14.8
1904	22.2	13.8	14.4	17.3
\$100,000 and less than \$1,000,000:				
1909	10.4	43.8	38.4	41.9
1904	10.3	46.0	41.3	44.2
\$1,000,000 and over:				
1909	1.1	30.5	43.8	35.7
1904	0.9	25.6	38.0	29.9
Average per establishment:				
1909		25	\$76,993	\$31,767
1904		25	68,433	29,113

In 1909 establishments with a product valued between \$100,000 and \$1,000,000, gave employment to 43.8 per cent of the wage earners, and the value of their products formed 38.4 per cent of the total. Establishments with a product valued between \$20,000 and \$100,000 gave employment to about one-sixth of the wage earners, and the value of their products formed about one-eighth of the total. The establishments which

had a product valued between \$5,000 and \$20,000, constituted about one-third of the whole number, but gave employment to only 7.1 per cent of the wage earners, and the value of their products formed only 4.4 per cent of the total. Establishments that had a product in 1909 valued at less than \$5,000 also formed about one-third of the total number, but they gave employment to only 2.2 per cent of the wage earners and turned out products whose value amounted to only 1.1 per cent of the total. In this class of establishments a large proportion of the work was done by the proprietors and firm members.

Of the five classes designated, the class of establishments with products valued at \$1,000,000 or over is the only one that reported a larger proportion of the total value of products in 1909 than in 1904, every other class having lost relatively. The same statement is true as to the number of wage earners, except that the establishments of smallest size, as well as those of largest size, have gained somewhat in their proportion of the total number employed.

During the five years 1904-1909 the average value of products per establishment increased from \$68,433 to \$76,993, and the average value added by manufacture from \$29,113 to \$31,767. These changes can scarcely be taken as in themselves indicating a tendency toward concentration, as the increased values shown are due in part to the increase that has taken place in the prices of commodities. The average number of wage earners per establishment was the same at the two censuses, namely, 25.

Relative importance of large establishments in the principal industries: 1909 and 1904.—The following table shows for the principal industries of the United States, for 1909 and 1904, the number of establishments manufacturing products to the value of \$1,000,000 or more, and the percentage which such establishments represent of the total number of establishments; also the value of products made by establishments of this class and the proportion which that value represents of the total for all establishments in the industry.

Table 24

INDUSTRY.	NUMBER OF ESTABLISHMENTS.						VALUE OF PRODUCTS OF ESTABLISHMENTS REPORTING PRODUCTS VALUED AT \$1,000,000 OR OVER.			
	Total.		Reporting products valued at \$1,000,000 or over.				Amount.		Per cent of total.	
			Number.		Per cent of total.					
	1909	1904	1909	1904	1909	1904	1909	1904	1909	1904
All industries.....	268,491	216,180	3,060	1,900	1.1	0.9	\$9,052,580,393	\$5,622,456,171	43.3	23.0
Agricultural implements.....	640	648	34	27	5.3	4.2	94,138,206	58,479,820	64.3	52.2
Automobiles, including bodies and parts.....	743	178	56	10	7.5	5.6	170,366,962	12,995,969	68.4	46.6
Boots and shoes, including cut stock and findings.....	1,918	1,895	135	162	7.0	3.3	244,547,642	1,119,079,862	47.7	33.3
Brass and bronze products.....	1,021	813	24	17	2.4	2.1	85,947,143	51,736,503	57.3	56.5
Bread and other bakery products.....	23,926	18,226	21	14	0.1	0.1	36,365,586	23,083,467	9.2	8.6
Butter, cheese, and condensed milk.....	8,479	8,926	9 ¹	(¹)	0.1	-----	11,933,853	(¹)	4.3	-----
Canning and preserving.....	3,767	3,168	13	4	0.3	0.1	23,468,494	5,627,911	14.9	4.3
Carriages and wagons and materials.....	5,492	5,588	13	8	0.2	0.1	23,926,135	13,967,216	15.0	9.0
Cars and general shop construction and repairs by steam-railroad companies.....	1,145	1,140	94	68	8.2	6.0	189,111,816	125,671,900	46.6	40.6
Cars, steam-railroad, not including operations of railroad companies.....	110	78	25	25	22.7	34.2	99,841,717	98,706,346	80.7	88.8
Chemicals.....	349	275	31	18	8.9	6.5	70,806,560	36,296,917	60.2	48.3
Clothing, men's, including shirts.....	6,354	5,145	84	58	1.3	1.1	167,971,252	101,330,621	29.6	24.9
Clothing, women's.....	4,558	3,351	22	11	0.5	0.3	30,612,144	14,637,712	8.0	5.7
Confectionery.....	1,944	1,348	12	5	0.6	0.4	18,998,220	7,733,842	14.1	8.9
Copper, tin, and sheet-iron products.....	4,228	2,540	27	15	0.6	0.6	44,968,549	25,267,976	22.5	21.1
Cotton goods, including cotton small wares.....	1,324	1,154	163	99	12.3	8.6	332,345,643	197,884,122	52.9	43.9
Electrical machinery, apparatus, and supplies.....	1,009	784	31	22	3.1	2.8	126,375,340	85,154,294	37.1	60.5
Flour-mill and gristmill products.....	11,691	10,051	138	87	1.2	0.9	319,047,659	202,962,454	26.1	28.5
Foundry and machine-shop products.....	13,253	10,765	180	111	1.4	1.0	856,015,899	193,749,471	29.0	22.0
Furniture and refrigerators.....	3,155	2,593	11	8	0.3	0.3	20,070,913	12,523,557	8.4	7.0
Gas, illuminating and heating.....	1,296	1,019	28	24	2.2	2.4	96,366,457	73,888,211	57.8	59.0
Hosiery and knit goods.....	1,374	1,144	26	11	1.8	1.0	37,125,550	15,618,710	18.5	11.0
Iron and steel, blast furnaces.....	208	190	86	49	41.3	25.8	335,992,623	173,321,243	85.8	74.8
Iron and steel, steel works and rolling mills.....	446	415	186	131	41.7	31.6	896,764,339	670,176,787	91.0	84.6
Leather, tanned, carried, and finished.....	919	1,049	78	48	8.5	4.6	157,911,458	91,557,225	48.2	36.2
Liquors, distilled.....	613	805	39	22	6.4	2.7	148,433,755	101,537,912	72.5	77.4
Liquors, malt.....	1,414	1,530	67	46	4.7	3.0	128,046,247	84,069,197	26.8	28.2
Lumber and timber products.....	40,671	25,153	72	126	0.2	0.1	103,756,410	35,550,164	9.0	4.0
Oil, cottonseed, and cake.....	817	715	17	9	2.1	1.3	35,974,829	21,351,063	24.3	22.1
Paint and varnish.....	791	639	26	16	3.3	2.5	44,109,139	29,873,069	35.3	32.9
Paper and wood pulp.....	777	761	50	30	6.4	3.9	93,580,398	47,301,705	35.0	25.1
Patent medicines and compounds and druggists' preparations.....	3,642	2,777	19	14	0.5	0.5	33,632,561	26,851,722	23.7	22.9
Petroleum, refining.....	147	98	35	19	23.8	19.4	208,671,648	154,549,485	88.0	88.3
Printing and publishing.....	31,445	27,793	74	143	0.2	0.2	137,062,261	82,419,052	18.6	14.9
Silk and silk goods, including throwsters.....	852	624	37	23	4.3	3.7	68,579,806	39,778,944	34.8	29.8
Slaughtering and meat packing.....	1,641	1,221	166	110	10.1	9.0	1,176,461,413	773,222,035	85.8	83.9
Smelting and refining, copper.....	38	40	32	31	84.2	77.5	375,135,093	238,328,190	99.0	99.0
Smelting and refining, lead.....	28	32	21	18	75.0	56.2	166,045,144	181,011,667	99.2	97.4
Tobacco manufactures.....	15,822	16,827	64	43	0.4	0.3	203,894,122	123,000,821	48.9	37.1
Woolen, worsted, and felt goods, and wool hats.....	985	1,074	86	63	8.7	5.9	248,343,965	135,932,861	57.0	42.6
All other industries.....	69,459	53,613	729	455	1.0	0.8	1,880,724,222	1,242,336,558	37.2	33.9

¹ The statistics for three establishments omitted, to avoid the disclosure of individual operations.
² The statistics for two establishments omitted, to avoid the disclosure of individual operations.
³ The statistics for one establishment omitted, to avoid the disclosure of individual operations.

The total value of products for each industry as a whole, from which the percentages in the last two columns are calculated, appears in Table 110. Three important industries, the manufacture of leather goods, marble and stone work, and sugar and molasses, are not shown in the table in order to avoid the disclosure of individual operations.

While the gross value of products is in some respects not the best criterion of the relative importance of different industries or of different states or sections in respect to manufacturing business, it is a fairly satisfactory standard for comparing different classes of establishments within the same industry. Table 24 shows, as might be expected, exceedingly wide variation among the different industries in respect to the proportion of large establishments, and in respect to the proportion of the total value of products which is reported by such establishments. The industry in which establishments reporting products to the value of \$1,000,000 or more constitute the largest proportion of the total number of establishments is the smelting and refining of copper, followed, in order, by the smelting and refining of lead, steel works and rolling mills, blast furnaces, the refining of petroleum, and the construction of steam-railroad cars. In each of these industries in 1909 establishments of this class constituted more than one-fifth of the total number, and in the smelting and refining of copper they constituted about five-sixths of the total. In these industries, moreover, establishments of this size reported exceptionally high proportions of the total value of products. The smelting and refining of lead and of copper ranked highest in this respect, with 99.2 and 99 per cent, respectively, of the total value of products reported by establishments with a value of products above \$1,000,000. The slaughtering and meat-packing industry, also, though its proportion of large establishments is not conspicuously high, shows a very high proportion of the total value of products, 85.8 per cent, reported from such establishments.

On the other hand, there are a number of industries in which the smaller establishments predominate and in which only a very small proportion of the total value of products is contributed by establishments manufacturing products to the value of \$1,000,000 or more. In the bakery, butter, cheese, and condensed-milk, women's clothing, furniture, and lumber industries the proportion of the total value of products reported by such establishments is less than 10 per cent, and there are several other industries of importance in which the proportion is less than 20 per cent.

In practically every industry named in the table the number of establishments manufacturing products to the value of \$1,000,000 or more increased materially

from 1904 to 1909, and constituted a larger proportion of the total number of establishments in the later year than in the earlier. In the same way the value of the products of such establishments in nearly every industry constituted a larger proportion of the total value in 1909 than in 1904, the only exceptions being in the manufacture of electrical machinery, apparatus, and supplies, the construction of railroad cars, the illuminating-gas industry, the distillery industry, and the refining of petroleum.

Relative importance of large establishments, by states: 1909 and 1904.—Table 25 presents, by states grouped according to geographic divisions, statistics showing the relative importance of the establishments having a product valued at \$1,000,000 or over for the census years 1909 and 1904. Certain states are not shown separately, as to do so would disclose individual operations.

The differences among the several states with respect to the extent to which manufacturing is carried on in large establishments are dependent in part upon the character of the industries predominant in each state. It also depends in part upon the degree to which those industries have been developed; in those states in which manufactures are extensive the large establishments are likely, other conditions being equal, to do a greater proportion of the manufacturing than in states where manufactures are relatively unimportant.

The state in which establishments manufacturing products to the value of \$1,000,000 or more represented the largest proportion of the total number of establishments in 1909 was Rhode Island, with 3.5 per cent, followed by Arizona and Massachusetts, in the order named. The proportion in New York, the leading manufacturing state, was comparatively low, 1 per cent. There are several states in which such establishments represented only a small fraction of 1 per cent of the total number.

In most of the states the large establishments contributed a very considerable proportion of the entire value of manufactured products. The state in which this proportion was the highest in 1909 is Arizona, with 84.1 per cent, followed by Nebraska, Montana, Kansas, New Jersey, Illinois, Utah, and Pennsylvania, in each of which states the products of establishments of this class represented more than one-half of the total value. The predominance of the smelting and refining of copper and lead in the Mountain states named, of the slaughtering and meat-packing industry in Kansas and Nebraska, of the slaughtering and the iron and steel industries in Illinois, of the iron and steel industry in Pennsylvania, and of the smelting and refining of copper and the refining of petroleum in New Jersey serve in a large measure to explain these high

percentages. In New York, the most important manufacturing state, 37 per cent of the total value of products was reported by establishments of the class under consideration, this comparatively low percentage being the result in part of the great magnitude in that state

of the clothing industries, which are mostly conducted in small establishments. Of the states given in the table those in which the proportion of the total value of products reported by large establishments is less than 10 per cent are Oklahoma, Arkansas, and Florida.

Table 25

STATE.	NUMBER OF ESTABLISHMENTS.						VALUE OF PRODUCTS OF ESTABLISHMENTS REPORTING PRODUCTS VALUED AT \$1,000,000 OR OVER.			
	Total.		Reporting products valued at \$1,000,000 or over.				Amount.		Per cent of total.	
			Number.		Per cent of total.					
	1909	1904	1909	1904	1909	1904	1909	1904	1909	1904
United States.....	268,481	216,180	3,060	1,900	1.1	0.9	\$9,083,580,393	\$5,623,456,171	43.3	31.8
NEW ENGLAND:										
Maine.....	3,546	3,145	25	17	0.7	0.5	57,250,905	32,815,822	32.5	22.8
New Hampshire.....	1,961	1,618	34	20	1.7	1.2	89,784,016	45,309,594	49.1	36.7
Vermont.....	1,958	1,669	4	6	0.2	0.4	7,195,281	8,475,059	10.5	13.4
Massachusetts.....	11,684	10,723	293	191	2.5	1.8	719,811,262	458,142,511	43.3	40.8
Rhode Island.....	1,951	1,617	69	41	3.5	2.5	135,285,205	80,065,916	48.3	39.6
Connecticut.....	4,251	3,477	93	65	2.2	1.9	241,562,058	157,691,418	49.3	42.7
MIDDLE ATLANTIC:										
New York.....	44,935	37,194	470	294	1.0	0.8	1,245,968,072	816,099,837	37.0	32.8
New Jersey.....	8,817	7,410	194	121	2.2	1.7	649,848,742	384,853,547	56.7	49.7
Pennsylvania.....	27,563	23,495	400	284	1.5	1.2	1,331,111,312	901,539,825	50.7	46.1
EAST NORTH CENTRAL:										
Ohio.....	15,138	13,785	245	136	1.6	1.0	666,243,771	331,726,477	46.3	34.5
Indiana.....	7,969	7,044	92	45	1.2	0.6	272,679,094	134,974,371	47.1	34.3
Illinois.....	18,026	14,921	273	168	1.5	1.1	1,078,746,101	755,157,359	56.2	53.5
Michigan.....	9,159	7,446	88	41	1.0	0.6	258,341,090	100,138,469	37.7	23.2
Wisconsin.....	9,721	8,558	86	58	0.9	0.7	228,084,707	124,948,292	38.6	30.4
WEST NORTH CENTRAL:										
Minnesota.....	5,561	4,756	65	39	1.2	0.8	198,507,729	132,541,419	43.5	41.1
Iowa.....	5,528	4,785	29	11	0.5	0.2	96,885,815	41,089,284	36.9	25.6
Missouri.....	8,375	6,464	94	68	1.1	1.1	271,696,930	189,336,754	47.2	42.1
Nebraska.....	2,500	1,819	17	9	0.7	0.5	137,133,162	110,013,498	68.9	71.9
Kansas.....	3,435	2,475	34	21	1.0	0.8	204,385,280	114,177,287	62.9	57.5
SOUTH ATLANTIC:										
Delaware.....	726	631	7	9	1.0	1.4	16,892,803	13,711,604	32.0	33.3
Maryland.....	4,837	3,852	41	34	0.8	0.9	124,586,041	95,606,842	39.5	39.3
District of Columbia.....	518	482	3	(1)	0.6	.....	5,012,734	(1)	.....	.....
Virginia.....	5,685	3,187	26	15	0.5	0.5	59,124,982	34,071,439	26.9	22.9
West Virginia.....	2,586	2,109	33	14	1.3	0.7	62,451,895	25,154,969	38.6	25.9
North Carolina.....	4,931	3,272	22	9	0.4	0.2	58,668,516	30,411,650	27.1	21.3
South Carolina.....	1,854	1,399	17	13	0.9	0.9	24,837,094	17,817,606	22.0	22.4
Georgia.....	4,792	3,219	18	10	0.4	0.3	34,054,085	20,664,194	16.8	13.7
Florida.....	2,159	1,413	4	.....	0.2	.....	4,456,669	.....	6.1	.....
EAST SOUTH CENTRAL:										
Kentucky.....	4,776	3,734	29	17	0.6	0.5	62,164,920	38,590,336	37.3	24.2
Tennessee.....	4,609	3,175	17	11	0.4	0.3	30,537,045	18,796,261	17.0	13.6
Alabama.....	3,398	1,882	22	14	0.6	0.7	42,048,999	25,070,580	28.3	23.0
WEST SOUTH CENTRAL:										
Arkansas.....	2,925	1,907	4	(1)	0.1	.....	5,443,573	(1)	7.3	.....
Louisiana.....	2,516	2,091	23	13	0.9	0.6	73,417,505	54,118,186	33.7	29.0
Oklahoma.....	2,310	1,123	4	.....	0.2	.....	4,884,270	.....	9.1	.....
Texas.....	4,588	3,158	36	17	0.8	0.5	102,054,306	39,030,054	37.4	25.9
MOUNTAIN:										
Montana.....	677	382	6	6	0.9	1.6	49,871,216	52,545,496	65.1	79.1
Colorado.....	2,034	1,606	20	16	1.0	1.0	58,645,700	50,670,463	45.1	50.6
Arizona.....	311	169	9	7	2.9	4.1	42,276,901	22,761,981	84.1	81.0
Utah.....	749	606	7	5	0.9	0.8	33,100,176	20,978,066	53.4	53.9
PACIFIC:										
Washington.....	3,674	2,751	20	13	0.5	0.5	42,879,727	28,001,570	19.2	21.7
Oregon.....	2,246	1,602	8	5	0.4	0.3	14,398,817	7,873,317	15.5	14.2
California.....	7,659	6,839	71	31	0.9	0.5	202,103,929	105,272,449	36.2	28.7
All other states ²	5,853	3,560	8	6	0.1	0.2	17,933,958	8,102,677	10.3	8.0

¹ Excluded to avoid disclosures of individual establishments, but included in the total for the United States.

² All other states embrace Idaho, Mississippi, Nevada, North Dakota, and Wyoming in 1909 and Arkansas, District of Columbia, Mississippi, and New Mexico in 1904.

In a large majority of the states, establishments manufacturing products to the value of \$1,000,000 or more represented a larger proportion of the total number of establishments in 1909 than in 1904, and reported a larger proportion of the total value of products in the later year than in the earlier. The only states where this was not true with respect to the value of products are Vermont, Delaware, South Carolina, Nebraska, Montana, Colorado, Utah, and Washington.

Establishments grouped according to number of wage earners: 1909.—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, which is shown by Table 26.

ESTABLISHMENTS EMPLOYING—	ESTABLISHMENTS, WAGE EARNERS, AND PER CENT OF TOTAL.			
	Number of establishments.	Average number of wage earners.	Per cent of total.	
			Estab-lish-ments.	Wage earners.
Total.....	268,491	6,615,046	100.0	100.0
No wage earners.....	27,712	.....	10.3	.....
1 to 5 wage earners.....	136,289	311,704	50.8	4.7
6 to 20 wage earners.....	57,198	640,793	21.3	9.7
21 to 50 wage earners.....	23,544	764,408	8.8	11.6
51 to 100 wage earners.....	10,964	782,298	4.1	11.8
101 to 250 wage earners.....	8,116	1,258,639	3.0	19.0
251 to 500 wage earners.....	2,905	1,006,457	1.1	15.2
501 to 1,000 wage earners.....	1,223	837,473	0.5	12.7
Over 1,000 wage earners.....	540	1,013,274	0.2	15.3

Of the 268,491 establishments reported for all industries, 10.3 per cent employed no wage earners; 50.8 per cent, from 1 to 5; 21.3 per cent, 6 to 20; and 8.8 per cent, 21 to 50. The most numerous single group consists of the 136,289 establishments employing from 1 to 5 wage earners, and the next of the 57,198 establishments employing from 6 to 20 wage earners. There were 4,668 establishments that reported the employment of over 250 wage earners; 540 of these employed over 1,000.

The single group having the largest number of wage earners was the group comprising the establishments employing from 101 to 250. This group employed 1,258,639 wage earners, or 19 per cent of the total number.

Table 27 shows, for 1909, for all industries combined and for 43 industries individually the number of establishments and average number of wage earners, by groups, and the percentage of wage earners in each group for these industries.

INDUSTRY.	ESTABLISHMENTS EMPLOYING—															
	Total.		No wage earners.		1 to 20 wage earners.		21 to 100 wage earners.		101 to 500 wage earners.		Over 500 wage earners.		Per cent wage earners in establishments employing specified number form of total.			
	Estab-lish-ments.	Wage earners (average number).	Estab-lish-ments.	Wage earners.	Estab-lish-ments.	Wage earners.	Estab-lish-ments.	Wage earners.	Estab-lish-ments.	Wage earners.	Estab-lish-ments.	Wage earners.	1 to 20 wage earners.	21 to 100 wage earners.	101 to 500 wage earners.	Over 500 wage earners.
All industries.....	268,491	6,615,046	27,712	193,487	952,497	34,508	1,548,706	11,021	2,265,096	1,763	1,850,747	14.4	23.4	34.2	28.0	
Agricultural implements.....	640	50,551	40	372	2,067	133	6,406	77	17,902	18	24,176	4.1	12.7	35.4	47.8	
Automobiles, including bodies and parts	743	75,721	12	393	2,716	195	9,483	108	23,768	35	39,754	3.6	12.5	31.3	52.5	
Boots and shoes, including cutstock and findings.....	1,918	198,297	49	839	6,176	538	27,268	414	97,691	78	67,162	3.1	13.8	49.2	33.9	
Brass and bronze products.....	1,021	40,618	56	717	4,421	174	7,418	61	12,422	13	16,359	10.9	18.2	30.6	40.2	
Bread and other bakery products.....	23,926	100,216	3,643	19,751	60,112	428	17,977	101	17,880	5	4,247	59.9	17.9	17.9	4.2	
Butter, cheese, and condensed milk.....	8,479	18,431	1,025	7,332	12,634	115	4,852	7	945	.....	.....	68.5	26.3	5.1	.....
Canning and preserving.....	3,767	59,968	92	3,015	17,575	571	24,519	86	15,459	3	2,415	29.3	40.9	25.8	4.0	
Carriages and wagons and materials.....	5,492	69,928	440	4,462	23,141	484	21,765	98	17,729	8	7,293	33.1	31.1	25.3	10.4	
Cars and general shop construction and repairs by steam-railroad companies..	1,145	282,174	.....	251	2,409	310	16,841	418	101,068	166	161,856	0.9	6.0	35.8	57.4
Cars, steam-railroad, not including operations of railroad companies.....	110	43,086	1	12	130	36	1,886	39	9,669	22	31,401	0.3	4.4	22.5	72.8	
Chemicals.....	349	23,714	11	203	1,432	88	4,004	36	8,626	11	9,652	6.1	16.9	36.4	40.7	
Clothing, men's, including shirts.....	6,354	239,696	191	3,713	33,185	2,045	85,702	353	70,846	52	49,963	13.8	35.7	29.5	20.8	
Clothing, women's.....	4,538	153,743	68	2,438	23,813	1,754	74,965	292	51,014	6	3,951	15.5	48.7	33.1	2.6	
Confectionery.....	1,944	44,638	136	1,376	7,194	313	14,547	115	20,145	4	2,752	16.2	32.6	45.1	6.2	
Copper, tin, and sheet-iron products.....	4,228	73,615	183	3,498	17,635	407	16,962	124	26,931	16	12,087	23.9	23.1	36.6	16.4	
Cotton goods, including cotton small wares.....	1,324	378,880	3	139	1,418	405	22,851	573	135,735	204	218,876	0.3	6.0	35.9	57.7	
Electrical machinery, apparatus, and supplies.....	1,009	87,256	22	607	3,988	243	11,357	117	23,885	20	48,026	4.5	13.0	27.4	55.0	
Flour-mill and gristmill products.....	11,691	39,453	1,849	9,587	26,023	239	9,326	13	2,124	3	1,980	65.9	23.6	5.4	5.0	
Foundry and machine-shop products.....	13,253	531,011	639	8,561	54,963	2,902	133,613	1,009	203,427	142	139,008	10.3	25.2	38.3	26.1	
Furniture and refrigerators.....	3,155	128,452	95	1,655	11,569	1,106	53,607	287	53,458	12	9,818	9.0	41.8	41.6	7.6	
Gas, illuminating and heating.....	1,296	37,215	108	939	4,811	180	8,377	68	11,529	11	12,498	12.9	22.5	31.0	33.6	
Hosiery and knit goods.....	1,374	129,275	31	466	4,386	521	26,620	323	68,059	33	30,210	3.4	20.6	52.6	23.4	
Iron and steel, blast furnaces.....	208	38,429	.....	11	125	78	5,082	105	22,454	14	10,763	0.3	13.3	58.4	28.0
Iron and steel, steel works and rolling mills.....	446	240,076	.....	26	287	94	5,683	187	49,965	139	184,141	0.1	2.4	20.8	76.7
Leather goods.....	2,375	34,907	107	1,876	9,818	333	14,390	58	10,061	1	638	28.2	41.3	28.8	1.8	
Leather, tanned, curried, and finished..	919	62,202	30	379	2,664	350	17,765	142	26,390	18	14,838	4.3	28.5	43.2	24.0	
Liquors, distilled.....	613	6,430	41	487	1,798	76	3,132	9	1,600	.....	.....	28.0	48.8	23.3	.....
Liquors, malt.....	1,414	54,579	23	752	7,078	551	24,636	80	15,034	6	7,831	12.9	45.2	27.6	14.4	
Lumber and timber products.....	40,671	695,019	909	33,902	186,140	4,559	196,704	1,214	241,234	87	70,941	26.8	28.3	34.7	10.8	
Marble and stone work.....	4,964	65,603	264	4,010	19,650	595	24,955	92	17,176	3	3,822	30.0	38.0	26.2	5.2	
Oil, cottonseed, and cake.....	817	17,071	.....	511	5,703	301	10,772	5	596	.....	.....	33.4	63.1	3.5	4.4
Paint and varnish.....	791	14,240	38	602	3,073	117	5,139	33	5,397	1	631	21.5	36.1	37.9	.....
Paper and wood pulp.....	777	75,978	.....	193	2,231	352	17,849	215	43,930	17	11,968	2.9	23.4	57.9	15.8
Patent medicines and compounds and druggists' preparations.....	3,642	22,895	1,051	2,396	8,193	165	6,757	27	4,971	3	2,974	35.8	29.5	21.7	13.0	
Petroleum, refining.....	147	13,929	.....	75	718	43	1,810	23	6,295	6	5,106	5.1	13.0	45.2	36.6
Printing and publishing.....	31,445	258,434	6,940	22,254	93,683	1,877	79,316	344	63,240	30	22,195	36.3	30.7	24.4	8.6	
Silk and silk goods, including throwsters	852	99,037	3	243	2,512	335	17,604	243	52,830	28	26,091	2.6	17.8	53.3	26.4	
Slaughtering and meat packing.....	1,641	89,728	86	1,206	6,096	247	11,404	62	13,911	40	58,317	6.8	12.8	15.5	65.0	
Smelting and refining, copper.....	38	15,623	.....	.....	.....	7	453	19	4,343	12	10,832	.....	2.9	27.8	69.3
Smelting and refining, lead.....	28	7,424	.....	5	56	3	167	16	4,940	4	2,261	0.7	2.2	66.5	30.5
Sugar and molasses.....	214	4,127	.....	160	1,463	62	2,298	2	366	.....	.....	35.4	55.7	8.9	.....
Tobacco manufactures.....	15,822	166,810	4,995	9,823	34,483	695	30,070	258	55,483	51	46,774	20.6	18.0	33.3	28.1	
Woolen, worsted, and felt goods, and wool hats.....	985	168,722	30	219	1,578	346	19,924	334	67,460	56	79,760	1.0	11.8	40.0	47.2	
All other industries.....	61,906	1,657,840	4,501	44,041	243,350	10,137	450,452	2,844	566,708	383	397,330	.....	.....	.....	.....

In 17 of the 43 industries listed separately in the table, establishments employing from 1 to 100 wage earners reported more than one-half of the total number employed in each industry. In 5 of these industries, establishments employing from 101 to 500 wage earners reported more than one-half of the total number, while 8 establishments employing over 500 wage earners reported more than one-half of the total.

The highest proportion (76.7 per cent) of wage earners employed by establishments reporting an average of more than 500 was in the steel works and rolling mill branch of the iron and steel industry.

Table 28 shows, for 1909, for geographic divisions and states, the number of establishments and average number of wage earners, by groups, and the percentage of wage earners in each group, for these divisions and states.

Table 28

DIVISION AND STATE.	ESTABLISHMENTS EMPLOYING—												Per cent wage earners in establishments employing specified number form of total.			
	TOTAL.		No wage earners.	1 to 20 wage earners.		21 to 100 wage earners.		101 to 500 wage earners.		Over 500 wage earners.		1 to 20 wage earners.	21 to 100 wage earners.	101 to 500 wage earners.	Over 500 wage earners.	
	Estab-lish-ments.	Wage earners.		Estab-lish-ments.	Wage earners.	Estab-lish-ments.	Wage earners.	Estab-lish-ments.	Wage earners.	Estab-lish-ments.	Wage earners.					
United States.....	268,491	6,615,046	27,712	193,487	952,497	34,556	1,546,706	11,021	2,265,096	1,763	1,850,747	14.4	23.4	34.2	28.6	
GEOGRAPHIC DIVISIONS:																
New England.....	25,351	1,101,290	2,132	17,116	91,068	4,012	183,104	1,699	363,839	392	463,279	8.3	16.6	33.0	42.1	
Middle Atlantic.....	81,315	2,207,747	8,915	55,764	291,378	12,427	556,007	3,632	742,393	574	617,969	13.2	25.1	33.6	28.0	
East North Central.....	60,013	1,513,764	7,274	42,252	192,201	7,411	340,201	2,647	540,596	428	449,767	12.7	22.5	35.7	29.1	
West North Central.....	27,171	374,337	3,667	20,787	78,209	2,051	90,275	574	117,981	92	87,872	20.9	24.1	31.5	23.6	
South Atlantic.....	28,088	663,015	1,669	12,271	118,935	3,854	169,759	1,135	231,455	159	142,868	18.0	25.6	34.9	23.5	
East South Central.....	15,381	261,772	911	9,670	62,682	1,710	74,579	447	89,188	43	35,323	26.9	28.5	34.0	13.5	
West South Central.....	12,339	204,520	1,023	9,645	49,180	1,262	53,546	373	74,471	31	27,323	24.1	26.2	38.5	13.3	
Mountain.....	5,254	75,435	677	4,079	16,775	1,360	16,232	119	25,988	19	16,440	22.3	21.5	34.4	21.2	
Pacific.....	13,579	213,166	1,436	10,303	52,069	1,421	63,003	395	79,186	24	18,908	24.4	29.5	37.1	5.9	
NEW ENGLAND:																
Maine.....	3,546	79,955	298	2,716	12,363	387	18,190	123	25,207	22	24,196	15.5	22.8	31.6	26.2	
New Hampshire.....	1,961	78,658	158	1,409	7,201	256	11,326	114	24,621	24	25,510	9.1	14.4	31.3	45.1	
Vermont.....	1,958	39,788	131	1,514	7,023	255	10,343	55	11,852	3	4,570	20.7	30.6	35.1	12.5	
Massachusetts.....	11,684	584,559	943	7,543	43,134	2,109	95,989	867	185,876	217	259,560	7.3	16.4	31.8	44.4	
Rhode Island.....	1,951	113,538	158	1,196	7,046	359	17,352	195	45,366	43	43,774	6.2	15.3	39.9	38.5	
Connecticut.....	4,251	210,792	444	2,733	14,301	646	29,904	345	70,917	83	95,679	6.8	14.2	33.6	45.4	
MIDDLE ATLANTIC:																
New York.....	44,935	1,003,981	4,667	31,323	169,732	7,107	307,812	1,637	321,531	201	204,906	14.9	30.7	32.1	20.4	
New Jersey.....	8,817	326,223	712	6,088	32,544	1,354	64,402	557	119,964	106	109,313	19.0	19.7	26.7	33.5	
Pennsylvania.....	27,563	877,543	3,539	18,333	89,102	3,966	133,733	1,438	300,896	267	363,750	19.1	21.0	34.2	24.6	
EAST NORTH CENTRAL:																
Ohio.....	15,138	446,934	1,521	10,483	52,358	2,162	99,146	834	168,458	138	126,972	11.7	22.2	37.7	28.4	
Indiana.....	7,969	186,984	692	5,966	26,681	956	44,434	299	60,492	56	55,377	14.3	22.8	32.3	29.6	
Illinois.....	18,026	468,764	2,518	12,361	60,101	2,287	102,846	735	149,670	125	133,647	12.9	22.0	32.1	29.0	
Michigan.....	9,159	231,499	1,200	6,297	28,054	1,154	54,516	447	91,443	61	57,496	12.1	23.6	39.5	24.9	
Wisconsin.....	9,721	182,583	1,343	7,145	25,007	852	39,759	332	70,532	49	47,285	13.7	21.7	38.6	25.9	
WEST NORTH CENTRAL:																
Minnesota.....	5,561	84,767	603	4,352	16,648	448	20,096	131	26,590	27	21,433	19.6	23.8	31.4	25.3	
Iowa.....	5,528	61,635	643	4,340	16,072	443	19,412	92	18,845	10	7,306	26.0	31.5	30.6	11.8	
Missouri.....	8,375	152,993	1,123	6,133	26,287	764	33,819	268	55,632	37	37,255	17.2	22.1	36.4	24.4	
North Dakota.....	752	2,789	125	601	1,610	24	932	2	247	-----	-----	57.7	33.4	8.9	-----	
South Dakota.....	1,020	3,602	146	850	2,291	21	827	3	484	-----	-----	63.6	23.0	13.4	-----	
Nebraska.....	2,500	24,336	481	1,869	6,295	121	5,358	23	4,989	6	7,694	25.9	22.0	20.5	31.6	
Kansas.....	3,435	44,215	546	2,592	9,006	230	9,831	55	11,194	12	14,184	20.4	22.3	25.3	32.1	
SOUTH ATLANTIC:																
Delaware.....	726	21,238	46	534	3,222	101	4,216	33	6,807	7	6,993	15.1	19.9	32.1	32.9	
Maryland.....	4,837	107,921	504	3,538	18,629	596	26,269	169	34,176	30	28,847	17.2	24.3	31.7	26.7	
District of Columbia.....	513	7,707	75	351	1,937	83	3,665	8	1,547	1	558	25.1	47.5	28.1	7.2	
Virginia.....	5,685	105,676	270	4,689	25,491	562	25,570	138	27,112	26	27,503	24.2	24.1	25.7	26.1	
West Virginia.....	2,586	63,993	200	1,920	8,726	323	25,191	18	13,793	18	13,793	13.6	23.7	41.0	21.6	
North Carolina.....	4,931	121,473	171	3,852	21,027	654	30,288	232	47,013	22	23,145	17.3	25.0	38.7	19.0	
South Carolina.....	1,854	73,046	60	1,411	7,990	209	9,394	145	33,116	29	22,546	11.0	12.9	45.3	30.9	
Georgia.....	4,792	104,638	231	3,589	22,164	779	33,430	175	34,448	18	14,546	21.2	23.0	32.9	13.9	
Florida.....	2,159	57,473	112	1,387	9,749	547	21,744	105	21,045	8	4,935	16.9	27.3	35.6	5.6	
EAST SOUTH CENTRAL:																
Kentucky.....	4,776	65,400	403	3,801	16,724	462	20,780	102	19,890	8	8,066	25.6	31.7	30.3	12.3	
Tennessee.....	4,609	73,840	306	3,679	18,617	471	21,271	143	25,348	10	7,604	25.2	28.8	35.7	10.3	
Alabama.....	3,398	72,148	131	2,714	14,877	411	17,698	127	26,505	15	13,066	20.6	24.5	35.8	13.1	
Mississippi.....	2,598	50,884	71	2,076	12,464	366	14,830	75	16,505	10	6,585	24.7	29.4	32.8	13.1	
WEST SOUTH CENTRAL:																
Arkansas.....	2,925	44,982	169	2,368	12,493	308	12,843	73	14,087	7	5,559	27.8	28.6	31.3	12.3	
Louisiana.....	2,516	76,165	118	1,799	11,797	430	18,873	157	33,497	12	11,998	15.5	24.8	44.0	15.8	
Oklahoma.....	2,310	13,143	262	1,949	7,039	83	8,462	10	1,888	1	754	53.5	26.4	14.3	5.7	
Texas.....	4,588	70,230	479	3,529	17,851	436	18,368	133	24,999	11	9,012	25.4	26.1	35.6	12.9	
MOUNTAIN:																
Montana.....	677	11,655	92	513	2,000	52	2,286	17	3,854	3	3,515	17.1	19.6	33.1	39.2	
Idaho.....	725	8,220	56	617	2,402	41	1,786	8	1,614	3	2,418	29.2	21.7	19.6	29.4	
Wyoming.....	268	2,867	40	2,511	6,603	3	164	8	1,347	1	753	21.0	5.7	47.0	26.3	
Colorado.....	2,034	28,067	325	1,511	6,859	147	6,942	48	10,887	3	3,379	24.4	24.8	38.8	12.1	
New Mexico.....	313	4,143	31	256	1,003	17	756	8	1,701	1	683	24.2	15.3	41.1	15.5	
Arizona.....	311	6,441	36	245	940	16	786	12	3,172	2	1,543	14.6	12.2	49.3	24.0	
Utah.....	749	11,735	74	532	2,473	71	2,825	17	2,970	5	3,512	21.0	24.0	25.2	29.3	
Nevada.....	177	2,257	23	139	490	13	687	1	443	1	637	21.7	30.5	19.6	28.2	
PACIFIC:																
Washington.....	3,674	69,120	322	2,713	15,858	493	21,821	153	28,931	3	2,510	22.9	31.6	41.9	3.7	
Oregon.....	2,246	28,750	232	1,759	7,685	200	8,954	52	10,279	3	1,822	26.7	31.1	35.8	6.3	
California.....	7,659	115,296	882	5,831	28,516	733	32,228	190	39,976	18	14,576	34.7	27.9	34.6	12.7	

DISTRIBUTION OF EXPENSES.

Expenses in leading industries.—As stated in the Introduction, the census does not purport to furnish figures that can be used for determining the total cost of manufacture and consequently the profits. Facts of interest can, however, be brought out concerning the relative importance of those classes of expenses which are reported. The following table shows in percentages the distribution of these expenses among the classes indicated, for all industries combined and for the 43 principal industries separately.

INDUSTRY.	PER CENT OF TOTAL EXPENSES REPORTED.			
	Salaries.	Wages.	Materials.	Miscellaneous expenses.
All industries	5.1	18.6	65.8	10.5
Agricultural implements	8.6	24.3	51.1	16.0
Automobiles, including bodies and parts	4.5	23.1	62.5	9.9
Boots and shoes, including cut stock and findings	3.9	20.6	69.6	5.9
Brass and bronze products	4.1	17.3	72.6	6.0
Bread and other bakery products	4.0	17.4	69.9	8.6
Butter, cheese, and condensed milk	1.4	4.3	91.0	3.3
Canning and preserving	5.6	13.5	72.0	9.0
Carriages and wagons and materials	5.7	27.0	58.9	8.4
Cars and general shop construction and repairs by steam-railroad companies	4.3	44.7	49.2	1.8
Cars, steam-railroad, not including operations of railroad companies	4.3	23.0	66.7	6.0
Chemicals	6.5	15.0	68.2	10.3
Clothing, men's, including shirts	5.2	20.7	57.9	16.2
Clothing, women's	6.0	23.0	61.1	9.9
Confectionery	7.6	13.1	67.9	11.4
Copper, tin, and sheet-iron products	5.8	22.4	63.7	8.1
Cotton goods, including cotton small wares	2.6	24.0	66.9	6.5
Electrical machinery, apparatus, and supplies	10.0	24.5	53.8	11.7
Flour-mill and gristmill products	1.5	2.6	92.8	3.1
Foundry and machine-shop products	8.7	29.8	50.1	11.4
Furniture and refrigerators	7.3	30.8	51.0	10.9
Gas, illuminating and heating	10.9	18.4	46.2	24.5
Hosiery and knit goods	4.4	25.5	62.7	7.4
Iron and steel, blast furnaces	1.8	6.8	88.4	3.0
Iron and steel, steel works and rolling mills	2.9	18.3	73.9	4.8
Leather goods	7.2	19.3	64.6	8.9
Leather, tanned, curried, and finished	2.2	10.5	81.2	6.1
Liquors, distilled	1.0	1.6	18.4	79.0
Liquors, malt	7.6	13.7	32.2	46.5
Lumber and timber products	4.8	32.0	51.0	12.2
Marble and stone work	6.7	44.8	39.4	9.1
Oil, cottonseed, and cake	3.1	4.3	87.7	4.9
Paint and varnish	9.3	7.4	71.1	12.2
Paper and wood pulp	4.0	17.2	69.7	9.1
Patent medicines and compounds and druggists' preparations	14.9	8.7	44.1	32.4
Petroleum, refining	1.8	4.4	89.6	4.2
Printing and publishing	16.7	26.6	32.6	24.1
Silk and silk goods, including throwsters	4.2	21.8	60.8	13.2
Slaughtering and meat packing	1.5	3.9	91.3	3.3
Smelting and refining, copper	0.7	3.8	94.4	1.1
Smelting and refining, lead	0.9	3.4	94.8	0.9
Sugar and molasses, not including beet sugar	0.9	2.8	92.6	3.7
Tobacco manufactures	4.6	19.0	48.4	28.0
Woolen, worsted, and felt goods, and wool hats	2.6	18.7	72.9	5.8
All other industries	6.4	21.1	62.1	10.5

This table shows that, for all industries combined, 65.8 per cent of the total expenses reported were incurred for materials, 23.7 per cent for services (that is, salaries and wages), and 10.5 per cent for other purposes. As would be expected, these proportions vary greatly in the different industries. The item of salaries takes on large proportions in such industries as the gas industry, the manufacture of patent medicines, and printing and publishing, which require a

large force of employees for accounting and collecting. The industries for which the highest percentages for wages are shown—in each case over 30 per cent—are marble and stone work, steam-railroad repair shops, the lumber and timber industry, and the furniture industry. The cost of materials constituted over 90 per cent of the expenses reported in the smelting and refining of copper and lead, flour and grist milling and the manufacture of sugar and molasses, slaughtering and meat packing, and the butter, cheese, and condensed-milk industry. Miscellaneous expenses, which are made up principally of rent, taxes, insurance, and advertising, are relatively largest in the distillery and brewery industries, the manufacture of patent medicines and compounds, and the tobacco-products industry, all of which are subject to internal-revenue taxes; they are also large in the gas and the printing and publishing industries.

Expenses, by states.—Table 30 shows, for each geographic division and each state, the per cent distribution in 1909 of the total expenses reported among the principal items.

The variation among the several divisions and states in the percentage of the total expenses which is represented by each class follows closely the variation in the character of the predominating industries. Thus the percentage of expenses incurred for materials is highest and that incurred for wages lowest in the West North Central division, this condition being due to the predominating importance in those states of the flour-milling and the slaughtering industries, in which materials contribute the greater part of the value of products. The proportion of expenses incurred for materials is also high in the Mountain division, on account of the influence of the smelting and refining industries. Wages represent the highest percentage of the total expenses, 23.7, in the New England division, where the textile and other highly elaborative industries predominate.

Among the individual states the highest percentage for materials is shown for Kansas and the next highest for Nebraska, while this percentage is lowest in Florida; the highest percentages for wages are shown for Wyoming, New Mexico, and Florida, in the order named. Among the great manufacturing states of the East and North there is no very great variation in the distribution of expenses among the various items. Of the 10 most important manufacturing states, Massachusetts has the highest proportion for wages and is among the lowest for miscellaneous expenses.

The exceptionally high percentage for miscellaneous expenses in Kentucky, 25.8, is due to the importance there of the distillery industry, in the miscellaneous expenses of which are included very large sums paid as internal-revenue tax.

Table 30

DIVISION AND STATE.	PER CENT OF TOTAL EXPENSES REPORTED.				DIVISION AND STATE.	PER CENT OF TOTAL EXPENSES REPORTED.			
	Salaries.	Wages.	Materials.	Miscellaneous expenses.		Salaries.	Wages.	Materials.	Miscellaneous expenses.
United States.....	5.1	18.6	65.8	10.5	SOUTH ATLANTIC:				
GEOGRAPHIC DIVISIONS:					Delaware.....	4.9	21.9	65.9	7.2
New England.....	4.8	23.7	62.6	8.9	Maryland.....	4.8	15.9	69.6	9.7
Middle Atlantic.....	5.4	18.6	65.3	10.8	District of Columbia.....	9.0	24.4	50.0	16.6
East North Central.....	5.4	17.8	65.1	11.7	Virginia.....	4.6	19.4	64.0	11.9
West North Central.....	4.2	12.4	75.1	8.3	West Virginia.....	3.9	22.8	64.2	9.0
South Atlantic.....	4.7	20.1	64.9	10.3	North Carolina.....	3.7	18.4	65.4	12.5
East South Central.....	5.2	18.3	60.2	16.2	South Carolina.....	3.9	20.9	66.1	7.1
West South Central.....	4.5	17.4	68.1	9.9	Georgia.....	5.1	19.8	66.4	8.7
Mountain.....	3.9	17.8	71.6	6.7	Florida.....	7.8	26.4	41.3	14.5
Pacific.....	4.9	20.4	65.4	9.3	EAST SOUTH CENTRAL:				
NEW ENGLAND:					Kentucky.....	4.8	13.9	55.6	25.8
Maine.....	3.7	24.3	62.7	9.2	Tennessee.....	5.8	17.8	65.4	11.0
New Hampshire.....	2.8	24.3	65.8	7.1	Alabama.....	5.1	21.1	64.6	9.2
Vermont.....	4.7	28.9	58.2	8.3	Mississippi.....	5.3	27.3	53.7	12.6
Massachusetts.....	4.8	22.8	62.9	9.5	WEST SOUTH CENTRAL:				
Rhode Island.....	4.4	22.8	65.3	7.5	Arkansas.....	5.3	29.5	53.9	11.3
Connecticut.....	6.0	25.6	59.8	8.6	Louisiana.....	4.4	16.4	66.1	13.1
MIDDLE ATLANTIC:					Oklahoma.....	4.3	15.3	72.3	8.0
New York.....	6.2	18.7	62.2	12.9	Texas.....	4.4	15.5	72.8	7.3
New Jersey.....	4.7	16.4	69.7	9.2	MOUNTAIN:				
Pennsylvania.....	4.7	19.3	67.2	8.8	Montana.....	3.1	16.3	73.6	7.0
EAST NORTH CENTRAL:					Idaho.....	5.2	29.1	52.5	13.2
Ohio.....	5.6	19.1	64.2	11.0	Wyoming.....	5.6	37.2	48.6	10.6
Indiana.....	5.0	18.2	63.7	13.1	Colorado.....	4.9	17.4	70.2	7.5
Illinois.....	5.3	15.8	67.0	12.0	New Mexico.....	5.4	36.8	46.3	11.5
Michigan.....	5.9	20.1	62.3	11.6	Arizona.....	1.9	13.4	81.7	3.0
Wisconsin.....	4.9	17.9	65.9	11.4	Utah.....	3.6	15.5	78.1	4.8
WEST NORTH CENTRAL:					Nevada.....	3.4	17.9	75.5	2.2
Minnesota.....	4.1	12.6	74.9	8.4	PACIFIC:				
Iowa.....	4.7	13.9	73.2	8.2	Washington.....	5.0	25.4	60.1	9.6
Missouri.....	5.6	15.5	67.9	11.1	Oregon.....	4.9	24.2	61.6	9.3
North Dakota.....	3.6	10.3	79.1	6.9	California.....	4.8	17.7	68.3	9.2
South Dakota.....	3.9	14.6	72.7	8.9					
Nebraska.....	3.0	7.6	82.3	7.1					
Kansas.....	2.4	8.5	84.7	4.4					

ENGINES AND POWER.

Summary for United States: 1909, 1904, and 1899.— The following table shows for all industries combined the number of engines or motors employed by manufacturing concerns and their horsepower at the censuses of 1909, 1904, and 1899. The figures for the total primary power used exclude duplications and represent the primary power of engines, water wheels, etc., owned by the manufacturing establishments

themselves plus the electric or other power rented from outside concerns. A separate presentation is made of the number and horsepower of electric motors operated by current generated within the establishments, which, of course, as it represents secondary power, is not included in the totals. This item plus the electric power rented makes up the total for electric power, which is shown separately.

Table 31

POWER.	NUMBER OF ENGINES OR MOTORS.			HORSEPOWER.			PER CENT DISTRIBUTION OF HORSEPOWER.		
	1909	1904	1899	1909	1904	1899	1909	1904	1899
Primary power, total.....	408,472	231,363	168,143	18,675,376	13,487,707	10,097,893	100.0	100.0	100.0
Owned.....	209,163	169,774	168,143	16,802,706	12,854,805	9,778,418	90.0	95.3	96.8
Steam.....	153,525	127,267	130,710	14,199,339	10,825,348	8,139,579	78.0	80.3	80.6
Gas.....	34,356	21,515	14,334	751,186	289,423	134,742	4.0	2.7	1.3
Water wheels.....	20,079	19,595	23,099	1,807,439	1,641,949	1,454,112	9.7	12.2	14.4
Water motors.....	1,263	1,397	(¹)	15,449	5,981	(¹)	0.1	(²)	(¹)
Other.....				29,233	92,154	49,965	0.2	0.7	0.5
Rented.....	199,309	61,589	(¹)	1,872,670	632,902	319,475	10.0	4.7	3.2
Electric.....	199,309	61,589	(¹)	1,749,081	441,589	182,562	9.4	3.3	1.3
Other.....				123,639	191,313	136,913	0.7	1.4	1.4
Electric motors.....	388,854	134,708	16,891	4,817,140	1,592,475	492,936	100.0	100.0	100.0
Run by current generated by establishment.....	189,545	73,119	16,891	3,068,109	1,150,886	310,374	63.7	72.3	63.0
Run by rented power.....	199,309	61,589	(¹)	1,749,081	441,589	182,562	36.3	27.7	37.0

¹ Not reported.

² Less than one-tenth of 1 per cent.

The total horsepower of manufacturing establishments was 18,675,376 in 1909, as compared with 13,487,707 in 1904 and 10,097,893 in 1899. In 1909, 90 per cent of the horsepower was that of engines or

motors owned by the manufacturing establishments themselves, and 10 per cent was rented power, mostly electric. Especially striking is the increase in the use of gas engines and of electric power, both that rented

from outside concerns and that generated by the manufacturing concerns themselves. The total horsepower of electric motors in 1899, including both those operated by purchased current and those operated by current generated in the establishment, was 492,936; in 1909 it was 4,817,140, or nearly ten times as great. The practice of renting electric power is rapidly becoming more common among small establishments and even among large establishments, while the large concerns more and more tend to use electric motors

for the purpose of applying the power which they themselves generate.

The amount of water power owned by manufacturing establishments shows only a comparatively moderate rate of increase during the decade, but not a little of the electric power rented by manufacturers is generated in the first instance by utilizing water power.

Horsepower, by leading industries.—The following table shows, for the 43 leading industries, the amount of each of the several kinds of power used in 1909:

INDUSTRY.	Total horsepower (excluding duplication).	OWNED BY ESTABLISHMENTS REPORTING—					RENTED.		ELECTRIC MOTORS.	
		Steam engines.	Gas engines.	Water wheels.	Water motors.	Other.	Electric motors.	Other.	Total. ¹	Run by current generated by establishment.
All industries.....	18,675,376	14,199,339	751,186	1,807,439	15,449	29,293	1,749,031	123,639	4,817,140	3,068,109
Agricultural implements.....	100,601	71,394	4,433	8,387	3	500	15,684	200	38,905	23,221
Automobiles, including bodies and parts.....	75,550	39,325	7,000	287	.....	.....	27,841	1,297	41,829	14,138
Boots and shoes, including cut stock and findings.....	96,302	60,772	3,532	2,798	17	.....	17,381	11,802	32,381	15,000
Brass and bronze products.....	106,120	78,101	4,890	3,370	4	.....	18,399	1,356	33,462	15,063
Bread and other bakery products.....	65,298	25,506	8,166	251	83	.....	31,160	129	39,795	8,535
Butter, cheese, and condensed milk.....	101,349	90,802	3,373	1,403	62	131	5,366	212	8,276	2,919
Canning and preserving.....	81,179	70,362	4,519	364	34	30	5,469	401	8,728	3,259
Carriages and wagons and materials.....	126,032	82,911	13,120	4,604	63	17	24,969	348	39,424	14,455
Cars and general shop construction and repairs by steam-railroad companies.....	293,361	254,942	3,140	138	312	898	33,786	145	161,288	127,502
Cars, steam-railroad, not including operations of railroad companies.....	97,797	89,123	1,148	370	.....	700	6,456	.....	61,060	54,604
Chemicals.....	208,604	103,273	1,147	10,913	153	215	92,057	846	156,699	64,642
Clothing, men's, including shirts.....	42,725	16,003	5,259	1,335	45	6	18,816	1,261	22,894	4,078
Clothing, women's.....	22,294	4,112	1,958	190	16	.....	15,175	843	16,085	919
Confectionery.....	35,870	25,090	1,408	.....	8	12	8,607	745	16,983	8,376
Copper, tin, and sheet-iron products.....	62,366	34,650	8,572	416	4	5	17,898	821	30,771	12,873
Cotton goods, including cotton small wares.....	1,296,517	869,838	2,812	302,288	736	7,363	108,512	4,968	235,902	127,390
Electrical machinery, apparatus, and supplies.....	158,763	99,853	6,753	1,078	36	14	50,445	959	164,540	114,485
Flour-mill and gristmill products.....	853,534	473,363	62,681	259,138	4,993	208	49,901	3,300	67,066	17,165
Foundry and machine-shop products.....	869,305	546,205	96,966	18,341	361	2,754	192,977	11,700	623,914	430,937
Furniture and refrigerators.....	221,451	134,425	5,830	6,743	105	612	20,420	3,316	43,252	22,832
Gas, illuminating and heating.....	128,350	115,322	7,128	2,755	59	182	2,723	171	17,336	14,613
Hosiery and knit goods.....	103,709	74,560	1,235	12,015	23	200	13,286	2,390	25,485	12,199
Iron and steel, blast furnaces.....	1,173,422	1,033,033	125,230	294	15	.....	14,850	.....	135,143	120,283
Iron and steel, steel works and rolling mills.....	2,100,978	1,955,346	79,391	5,829	.....	1,500	58,797	115	716,609	657,812
Leather goods.....	28,148	10,328	1,381	1,337	36	.....	14,946	420	16,663	1,717
Leather, tanned, curried, and finished.....	148,140	131,311	7,231	1,546	10	140	6,487	1,415	35,919	29,432
Liquors, distilled.....	46,120	44,623	321	252	.....	150	708	66	3,796	3,078
Liquors, malt.....	347,725	330,705	1,261	116	224	1,005	14,199	165	66,519	52,329
Lumber and timber products.....	2,840,082	2,587,487	38,628	139,392	1,111	836	62,200	10,428	130,707	68,507
Marble and stone work.....	187,686	132,236	10,874	9,451	.....	241	32,062	2,655	53,748	21,686
Oil, cottonseed, and cake.....	192,342	183,440	1,674	125	50	189	6,394	470	10,855	4,461
Paint and varnish.....	56,162	42,166	3,290	2,004	2	25	7,814	861	17,037	9,223
Paper and wood pulp.....	1,304,205	469,089	6,675	785,961	2,185	275	38,610	1,470	130,120	91,510
Patent medicines and compounds and druggists' preparations.....	25,659	15,938	1,712	250	14	121	6,882	742	11,175	4,283
Petroleum, refining.....	90,268	83,707	5,870	.....	.....	378	28	285	8,808	8,780
Printing and publishing.....	297,763	59,240	32,152	600	1,720	94	197,692	6,265	229,312	31,620
Silk and silk goods, including throwsters.....	97,947	72,059	1,277	8,383	.....	.....	10,354	5,874	23,758	13,404
Slaughtering and meat packing.....	208,707	190,636	2,208	30	16	30	15,047	740	78,677	63,630
Smelting and refining, copper.....	158,126	114,862	1,107	12,725	.....	19	29,413	.....	55,220	25,816
Smelting and refining, lead.....	23,954	23,090	35	.....	.....	.....	3,829	.....	12,166	8,337
Sugar and molasses, not including beet sugar.....	160,603	153,682	395	.....	.....	210	1,816	.....	18,739	17,414
Tobacco manufactures.....	23,514	21,929	795	243	2	7	5,367	171	11,203	5,836
Woolen, worsted, and felt goods, and wool hats.....	362,209	261,364	2,077	78,909	341	.....	13,783	5,735	79,223	65,440
All other industries.....	3,646,423	2,868,395	172,532	122,808	2,439	10,163	431,534	38,552	1,085,678	654,144

¹ Includes the horsepower of motors run by rented current and also of those run by current generated by the establishment.

This table shows very wide differences among the industries with respect to the relative importance of the several kinds of power. These differences are due partly to differences in the geographic location of the industries, which affect the character of power available, and partly to differences in the character of machinery used, which affect the adaptability of the different kinds of power.

The power developed by the use of gas engines represents a larger proportion of the total power employed in establishments engaged in the manu-

facture of carriages and wagons, flour mills and gristmills, foundries and machine shops, blast furnaces, steel works and rolling mills, lumber mills, and printing and publishing establishments than in any of the other industries listed. The largest absolute amount of power derived from gas engines is reported for the blast furnaces, and the next largest for the foundries and machine shops.

A very large proportion of the total power derived from water wheels is used in four industries, namely, the manufacture of cotton goods, flour mills and grist-

mills, the lumber and timber products industry, and the manufacture of paper and wood pulp. In the last-mentioned industry the horsepower developed by water wheels amounts to 785,961, about 60 per cent of the total power used in that industry.

The extent to which electric motors are utilized in applying the power employed varies considerably in the different industries. In a considerable number of industries the electric power, including that generated by the manufacturing establishments themselves and that rented from other concerns, is equal to more than one-half of the total primary power. These industries are the manufacture of automobiles, bread and other bakery products, the construction of steam-railroad cars, the repair shops of steam-railroad companies, the chemical industry, the making of men's and of women's clothing, the manufacture of electrical machinery, apparatus, and supplies, the foundry and machine-shop industry, the manufacture of leather goods, and the printing and publishing industry. In the electrical-machinery industry the horsepower of electric motors installed is greater than the total primary power; this may be accounted for by reason of the provision of motors for the operation of machinery which is not in constant use. The largest absolute amount of electric power is reported by the steel works and rolling mills, and the next largest, by the foundries and machine shops. In the former the electric power is equal to a little over one-third of the total amount of primary power and in the latter to nearly three-fourths.

Horsepower, by states: 1909.—Table 33 shows, by states grouped according to geographic divisions, the amount of each of the several kinds of power used in manufacturing industries in 1909.

The rank of the states with respect to the amount of power used in manufacturing industries is somewhat different from that with respect to value of products and other leading items in the statistics of manufactures. Although New York ranks first among the states in most of the leading items, Pennsylvania outranks it in respect to the amount of power used in manufacturing industries. New York stands second, Ohio third, Massachusetts fourth, and Illinois fifth. The relative total amount of power used is largely dependent upon the character of the industries predominant in each division or state. The relative extent to which the different kinds of power are used in the several divisions and states is also dependent in part upon the character of the industries and in part upon the situation of each state with reference to supplies of coal, petroleum, and gas, and with reference to the availability of water power.

In every division—in fact in every state, except Maine and Vermont—steam engines are the most important source of power. The proportion which power generated by gas engines represents of the total power

is larger in the East North Central division than in any other division, partly on account of the proximity of gas wells. The Middle Atlantic states rank next in the proportion of the total power which is developed by gas engines. With respect to power obtained from water wheels owned by the manufacturing establishments, New England ranks far ahead of the other divisions both in the absolute amount of power and in the proportion which water power represents of the total. More than two-fifths of the total power derived from water wheels owned by manufacturing establishments is found in New England, and more than one-fourth of the total power utilized by the factories of New England is derived from water wheels. The Middle Atlantic division ranks next in this respect. The largest absolute amounts of power utilized by means of electric motors (including both those operated by purchased current and those operated by current generated in the establishment) are reported from the Middle Atlantic division, the East North Central division, and New England, in the order named, and in these three divisions also the proportion which electric power represents of the total is unusually large, no very great difference appearing among the three divisions in this respect. The proportion of electric power is also high in the Mountain, Pacific, and West North Central divisions.

The individual states which lead in the use of gas engines to develop power are Pennsylvania, Indiana, Ohio, New York, Illinois, Kansas, and New Jersey, in the order named. The absolute amount of power of this character is greatest in Pennsylvania, and the proportion which such power represents of the total power used is greatest in Indiana. The power derived from water wheels owned by manufacturing establishments is greater in New York than in any other state, but the proportion which such power represents of the total power is greatest in Maine. Other leading states in respect to the absolute amount of such water power are Massachusetts, Wisconsin, New Hampshire, Vermont, Connecticut, Minnesota, Pennsylvania, Oregon, Virginia, North Carolina, and Michigan; the leading states in respect to the proportion which it represents of the total power are Vermont, New Hampshire, Oregon, Wisconsin, New York, Minnesota, Connecticut, Massachusetts, Virginia, and Montana.

In the absolute amount of electric power utilized for manufacturing, Pennsylvania leads and is followed by New York, Ohio, Massachusetts, Illinois, Indiana, and New Jersey, in the order named. With respect to the proportion which electric power represents of the total Nevada ranks first, and is followed by California, Utah, Illinois, New York, Montana, Arizona, Indiana, and Massachusetts in the order named. In Nevada the power of electric motors forms 54.1 per cent and in California 40.3 per cent of the total power reported for these states.

Table 33

DIVISION AND STATE.	Total horse-power (excluding duplication).	OWNED BY ESTABLISHMENTS REPORTING—					RENTED.		ELECTRIC MOTORS.	
		Steam engines.	Gas engines.	Water wheels.	Water motors.	Other.	Electric motors.	Other.	Total ¹	Run by current generated by establishment.
United States.....	18,675,376	14,199,339	751,186	1,807,439	15,449	29,293	1,749,031	123,639	4,817,140	3,068,109
GEOGRAPHIC DIVISIONS:										
New England.....	2,715,121	1,656,911	41,801	753,920	3,412	2,055	218,642	38,380	668,143	444,501
Middle Atlantic.....	5,531,502	4,151,662	274,274	466,541	3,947	11,736	568,723	54,619	1,737,236	1,168,513
East North Central.....	4,382,070	3,491,418	283,450	206,393	2,048	4,766	375,876	18,119	1,297,447	921,571
West North Central.....	1,101,990	838,988	57,434	82,791	3,539	939	115,002	3,297	266,534	151,532
South Atlantic.....	1,832,001	1,431,423	36,441	182,076	1,082	5,321	171,146	4,512	343,393	172,247
East South Central.....	1,036,560	953,511	12,270	29,040	275	1,690	38,580	1,194	108,409	69,829
West South Central.....	873,350	805,640	29,291	3,060	48	2,513	31,807	991	78,893	47,066
Mountain.....	400,766	306,786	4,188	21,345	198	224	66,956	1,069	113,984	47,028
Pacific.....	802,016	563,000	12,037	62,273	900	49	162,299	1,458	208,101	45,802
NEW ENGLAND:										
Maine.....	459,599	168,595	3,933	256,480	1,912	179	27,203	1,297	54,266	27,063
New Hampshire.....	293,991	139,128	1,238	127,490	521	30	21,209	4,375	45,351	24,142
Vermont.....	159,445	64,252	2,160	78,881	181	415	12,917	639	21,233	8,316
Massachusetts.....	1,175,071	834,701	18,326	185,996	520	895	109,996	24,637	402,492	292,406
Rhode Island.....	226,740	175,293	3,300	31,376	41	39	13,697	2,994	42,130	28,438
Connecticut.....	400,275	274,942	12,844	73,697	237	497	33,620	4,438	97,671	64,051
MIDDLE ATLANTIC:										
New York.....	1,997,662	1,080,877	99,899	394,221	1,397	3,583	389,945	27,740	689,976	300,031
New Jersey.....	612,293	529,668	20,867	18,558	1,118	180	33,157	8,745	182,475	149,318
Pennsylvania.....	2,921,547	2,541,117	153,508	53,762	1,432	7,973	145,621	18,134	864,785	719,164
EAST NORTH CENTRAL:										
Ohio.....	1,583,155	1,362,134	103,801	15,777	330	1,586	93,592	5,935	417,844	324,252
Indiana.....	633,377	448,528	109,105	7,446	447	599	65,548	1,704	233,193	167,645
Illinois.....	1,013,071	838,199	37,025	12,178	513	1,433	117,007	6,716	398,621	281,614
Michigan.....	598,288	465,520	13,988	41,442	577	16	74,270	2,475	133,064	58,794
Wisconsin.....	554,179	377,037	19,531	129,550	181	1,132	25,459	1,289	114,725	89,266
WEST NORTH CENTRAL:										
Minnesota.....	297,670	199,777	7,174	56,631	2,939	25	30,297	827	52,212	21,915
Iowa.....	155,384	121,882	8,025	6,326	85	147	18,463	456	40,736	22,273
Missouri.....	340,467	280,489	11,159	3,532	206	5	44,056	1,020	106,941	62,885
North Dakota.....	13,196	10,170	1,304	530	.....	.....	1,164	28	1,698	534
South Dakota.....	17,666	12,257	2,784	927	.....	.....	1,683	3	2,084	401
Nebraska.....	64,466	44,806	4,408	7,361	75	76	7,530	210	15,942	8,412
Kansas.....	213,141	169,607	22,580	7,484	222	686	11,809	753	46,921	35,112
SOUTH ATLANTIC:										
Delaware.....	52,779	42,266	766	5,183	12	.....	4,502	50	17,910	13,406
Maryland.....	218,244	181,326	5,736	11,953	121	1,069	17,108	931	44,921	27,813
District of Columbia.....	16,563	12,169	1,073	775	.....	43	2,433	70	4,527	2,094
Virginia.....	283,928	221,303	3,664	45,122	33	38	13,356	412	42,043	28,687
West Virginia.....	217,496	184,591	16,705	10,546	71	.....	5,330	253	28,543	23,213
North Carolina.....	378,556	271,944	2,356	41,619	307	1,035	60,044	1,251	86,002	25,958
South Carolina.....	276,378	193,052	1,264	38,422	75	2,400	41,130	35	67,620	26,490
Georgia.....	298,241	240,264	3,380	28,288	460	536	23,890	1,423	44,264	20,374
Florida.....	89,816	84,508	1,497	168	3	200	3,353	87	7,563	4,210
EAST SOUTH CENTRAL:										
Kentucky.....	230,224	207,591	4,724	5,320	57	915	11,314	303	31,268	19,954
Tennessee.....	242,277	215,338	1,853	9,670	107	4	14,666	639	29,586	14,920
Alabama.....	357,837	328,275	4,616	13,812	111	732	10,104	187	39,928	29,824
Mississippi.....	206,222	202,307	1,077	238	.....	39	2,496	65	7,627	5,131
WEST SOUTH CENTRAL:										
Arkansas.....	173,088	168,152	1,374	639	35	52	2,581	255	7,417	4,836
Louisiana.....	346,652	331,370	3,496	65	10	2,401	9,077	233	27,139	18,062
Oklahoma.....	71,139	56,643	8,676	470	2	.....	5,281	67	7,887	2,606
Texas.....	282,471	249,475	15,745	1,886	1	60	14,868	436	36,450	21,582
MOUNTAIN:										
Montana.....	90,402	49,654	223	13,583	63	.....	26,504	375	27,301	797
Idaho.....	42,804	35,529	242	2,403	4	.....	4,606	20	8,409	3,803
Wyoming.....	7,628	6,467	182	456	9	.....	514	.....	801	287
Colorado.....	154,615	135,645	1,464	1,377	49	105	15,874	101	35,944	20,070
New Mexico.....	15,465	11,781	365	74	.....	.....	3,245	.....	4,586	1,341
Arizona.....	39,140	34,193	1,285	129	.....	19	3,314	200	15,100	11,786
Utah.....	42,947	28,984	226	2,926	71	100	10,592	48	15,402	4,810
Nevada.....	7,765	4,533	201	397	2	.....	2,307	325	6,441	4,134
PACIFIC:										
Washington.....	297,897	257,230	1,494	7,842	223	19	80,951	138	43,615	12,664
Oregon.....	175,019	112,244	428	47,041	397	.....	14,811	98	20,802	5,991
California.....	329,100	193,526	10,115	7,390	280	30	116,537	1,222	143,684	27,147

¹ Includes the horsepower of motors run by rented current and also of those run by current generated by the establishment.

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 value of materials and products and other information for securing which no provision is made on the general schedule. Data of this character are here presented for a number of important industries. As far as possible the statistics are grouped according to the character of the finished products. The statistics in each table relate to the United States as a whole, not including Alaska, Hawaii, Porto Rico, or other outlying possessions.

FOOD AND KINDRED PRODUCTS.

Butter, cheese, and condensed milk.—The following table presents statistics for the butter, cheese, and condensed-milk industry. The figures cover only the manufacture of the factory products. The statistics for this class of products made on farms are not avail-

able for 1909; in 1899, however, 1,071,626,056 pounds of butter and 16,372,318 pounds of cheese were made on farms, of which 518,042,767 pounds of butter and 14,692,542 pounds of cheese were sold.

The value of the factory products of this industry more than doubled during the period 1899-1909. Condensed milk, for which the ratio of increase was highest, nearly trebled in value, while butter more than doubled. Since 1899 the increase in prices has been quite pronounced in this industry, as shown by the fact that the butter product increased 113.5 per cent in value and only 48.7 per cent in quantity, and the output of cheese 63 per cent in value and only 10.3 per cent in quantity. As shown by the note to the table, considerable quantities of butter, cheese, and condensed milk were produced by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

Table 34	1909	1904	1899		1909	1904	1899
MATERIALS.				PRODUCTS—continued.			
Total cost.....	\$235,548,064	\$142,920,277	\$108,841,200	Cheese—Continued.			
Milk:				Skimmed—			
Pounds.....	9,888,727,303	12,147,304,550	11,678,082,821	Pounds.....	7,770,812	3,459,582	(?)
Cost.....	\$118,675,613	\$99,729,745	\$91,256,436	Value.....	\$429,519	\$148,568	(?)
Cream:				Other kinds—			
Pounds.....	1,406,143,908	588,186,471	203,673,958	Pounds.....	5,441,730	74,032,656	53,196,219
Cost.....	\$95,025,507	\$28,371,040	\$8,154,068	Value.....	\$505,332	\$6,436,339	\$3,156,532
Skimmed milk:				Condensed milk:			
Pounds.....	56,974,760	36,071,335	(?)	Pounds.....	494,796,544	308,485,182	186,921,757
Cost.....	\$110,469	\$59,398	(?)	Value.....	\$33,563,129	\$20,149,282	\$11,888,732
Sugar:				Sweetened—			
Pounds.....	78,457,978	67,810,031	50,873,859	Pounds.....	214,518,210	198,355,189	(?)
Cost.....	\$3,674,174	\$3,315,892	\$2,589,087	Value.....	\$17,345,278	\$13,478,376	(?)
All other materials.....	\$18,060,301	\$11,444,202	\$6,841,009	Unsweetened—			
				Pounds.....	280,278,234	110,129,993	(?)
				Value.....	\$16,217,851	\$6,670,906	(?)
PRODUCTS.				Cream sold:			
Total value.....	\$274,557,718	\$168,162,789	\$130,783,349	Pounds.....	81,211,374	28,131,914	61,764,582
Butter:				Value.....	\$9,828,972	\$2,364,407	\$4,433,444
Pounds.....	624,764,653	531,478,141	420,126,546	Skimmed milk sold:			
Value.....	\$179,510,619	\$113,189,453	\$84,079,754	Pounds.....	352,594,574	1,161,414,457	2,258,494,156
Packed solid—				Value.....	\$629,136	\$1,368,738	\$2,531,490
Pounds.....	410,692,616	364,432,996	328,956,590	Casein dried from skimmed milk:			
Value.....	\$115,098,056	\$74,483,306	\$63,961,893	Pounds.....	13,018,298	11,581,874	12,268,405
Prints and rolls—				Value.....	\$795,544	\$554,099	\$383,581
Pounds.....	214,072,037	167,045,145	91,169,956	All other products.....	\$6,990,395	\$1,945,050	\$944,489
Value.....	\$64,412,563	\$38,706,147	\$20,117,861				
Cheese:				EQUIPMENT.			
Pounds.....	311,126,317	317,144,872	281,972,324	Cream separators, number.....	5,624	8,842	9,701
Value.....	\$43,239,924	\$28,611,760	\$26,519,829				
Full cream—							
Pounds.....	287,110,383	239,652,634	225,776,105				
Value.....	\$40,817,073	\$22,024,853	\$21,363,477				
Part cream—							
Pounds.....	10,803,392						
Value.....	\$1,188,000						

¹ Not reported separately.

² In addition, 2,331,212 pounds of butter, to the value of \$664,171; 49,413 pounds of part cream cheese, to the value of \$5,745; 401,300 pounds of condensed milk, to the value of \$24,078; and other dairy products to the value of \$25,388 were produced by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

³ In addition, 1,971,120 pounds of butter, to the value of \$448,729, and other dairy products to the value of \$71,588 were produced by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

Canning and preserving.—Table 35 includes statistics for establishments engaged in the various branches of the canning industry and also for those manufacturing pickles, preserves, and sauces. The table does not include meats and other products canned in slaughtering and meat-packing establishments (see Table 38).

The total value of all classes of products of canning and preserving establishments in 1909 was \$157,101,201 and in 1899, \$99,335,464, the increase for the decade being 58.2 per cent.

Of the two groups of products listed separately in the table, fruits and vegetables show the largest ratio of increase in value from 1899 to 1909, 88.3

per cent. Fish and oysters show an increase of 47 per cent.

The statistics for dried fruits cover the product of fruit drying and packing establishments which buy the fruit or do drying and packing for others, and of cooperative associations, but do not include fruits dried by the grower on the farm. The bulk of the product is from California, the value of the factory dried-fruit product of that state in 1909 being \$16,137,716, or 81.3 per cent of the total value of this class of products.

Table 35	PRODUCT.	1909	1904	1899
	Total value.....	\$157,101,201	\$130,465,976	\$99,335,464
	<i>Fruits and vegetables.</i>			
	Value.....	\$84,347,783	\$73,895,756	\$44,802,665
	Canned vegetables:			
	Cases.....	32,752,469	29,579,616	19,323,730
	Value.....	\$51,568,914	\$45,610,993	\$28,734,598
	Tomatoes—			
	Cases.....	12,909,986	9,411,084	8,700,538
	Value.....	\$18,747,941	\$14,020,946	\$13,666,560
	Corn—			
	Cases.....	7,451,265	11,209,597	6,336,934
	Value.....	\$10,332,136	\$15,952,386	\$8,191,383
	Peas—			
	Cases.....	5,901,703	4,694,492	2,543,722
	Value.....	\$10,247,363	\$7,928,791	\$4,465,673
	Beans—			
	Cases.....	3,392,864	2,588,015	1,493,517
	Value.....	\$6,013,098	\$4,133,810	\$2,025,123
	Asparagus—			
	Cases.....	228,559	(²)	(²)
	Value.....	\$1,975,775	(²)	(²)
	Pumpkins—			
	Cases.....	440,303	246,557	138,078
	Value.....	\$576,043	\$346,497	\$202,404
	Sweet potatoes—			
	Cases.....	347,286	192,997	83,526
	Value.....	\$531,651	\$284,385	\$124,245
	All other—			
	Cases.....	2,080,503	1,236,374	27,365
	Value.....	\$3,144,907	\$2,944,278	\$59,210
	Canned fruits:			
	Cases.....	5,501,404	4,628,241	4,467,817
	Value.....	\$12,938,474	\$11,722,979	\$11,311,062
	Peaches—			
	Cases.....	1,467,213	1,304,867	1,449,356
	Value.....	\$3,753,698	\$3,902,441	\$4,283,165
	Apples—			
	Cases.....	1,205,724	490,341	645,762
	Value.....	\$1,898,720	\$738,013	\$1,125,119
	Apricots—			
	Cases.....	630,185	539,815	531,648
	Value.....	\$1,826,311	\$1,641,919	\$1,583,252
	Pears—			
	Cases.....	637,782	789,120	672,485
	Value.....	\$1,833,214	\$2,192,910	\$2,188,201
	Berries—			
	Cases.....	815,851	489,637	600,419
	Value.....	\$1,754,927	\$1,058,659	\$1,092,975
	Cherries—			
	Cases.....	390,351	319,350	114,367
	Value.....	\$1,019,013	\$825,522	\$307,788
	All other—			
	Cases.....	354,280	695,111	453,780
	Value.....	\$853,591	\$1,363,515	\$730,562
	Dried fruits:			
	Pounds.....	400,328,767	343,579,623	85,439,406
	Value.....	\$19,840,395	\$15,664,784	\$4,757,005
	Raisins—			
	Pounds.....	111,774,767	121,409,881	14,984,221
	Value.....	\$4,837,933	\$6,349,381	\$1,062,268
	Prunes—			
	Pounds.....	138,498,490	117,808,181	25,413,763
	Value.....	\$5,130,412	\$3,299,628	\$970,927
	Apples—			
	Pounds.....	44,568,244	40,737,089	33,212,309
	Value.....	\$3,098,095	\$1,753,610	\$1,906,042
	Peaches—			
	Pounds.....	46,843,391	25,861,074	5,662,390
	Value.....	\$2,423,083	\$1,702,205	\$312,495
	Apricots—			
	Pounds.....	29,205,569	19,559,573	5,465,217
	Value.....	\$2,277,177	\$1,410,838	\$455,394
	All other—			
	Pounds.....	29,438,306	18,203,825	701,509
	Value.....	\$2,073,695	\$1,144,122	\$49,276

Table 35— Cont'd.	PRODUCT.	1909	1904	1899
	<i>Fish and oysters.</i>			
	Value.....	\$27,648,289	\$22,194,635	\$18,807,542
	Canned fish and oysters:			
	Pounds.....	235,418,713	207,077,976	131,531,786
	Value.....	\$17,573,311	\$13,531,786	\$12,868,572
	Salmon—			
	Pounds.....	99,831,528	48,128,926	62,652,792
	Value.....	\$8,723,565	\$4,251,387	\$5,679,324
	Sardines:			
	Pounds.....	90,694,284	87,224,524	44,951,244
	Value.....	\$4,931,831	\$4,380,498	\$4,212,351
	Oysters—			
	Pounds.....	28,192,392	59,249,043	(¹)
	Value.....	\$2,443,101	\$3,799,412	\$2,054,800
	All other—			
	Pounds.....	16,700,509	12,475,483	9,625,825
	Value.....	\$1,474,814	\$1,100,489	\$922,097
	Smoked fish:			
	Pounds.....	39,814,989	36,617,904	21,108,066
	Value.....	\$2,900,417	\$2,528,240	\$957,741
	Herring—			
	Pounds.....	21,369,856	19,737,537	12,576,429
	Value.....	\$931,611	\$631,592	\$330,590
	Salmon—			
	Pounds.....	6,836,099	6,833,560	1,975,647
	Value.....	\$950,540	\$831,184	\$136,331
	Finnan haddock—			
	Pounds.....	4,513,222	3,014,160	1,360,500
	Value.....	\$304,620	\$174,234	\$75,360
	All other—			
	Pounds.....	7,095,812	7,032,647	5,195,490
	Value.....	\$713,646	\$891,470	\$415,460
	Salted fish:			
	Pounds.....	128,539,299	111,728,665	117,780,031
	Value.....	\$7,174,561	\$6,134,609	\$4,981,229
	Cod—			
	Pounds.....	49,494,338	48,757,819	64,731,210
	Value.....	\$3,077,612	\$3,013,320	\$3,081,045
	Mackerel—			
	Pounds.....	9,045,469	8,326,566	10,458,313
	Value.....	\$740,513	\$678,326	\$662,008
	Herring—			
	Pounds.....	21,718,467	15,824,192	13,933,426
	Value.....	\$461,287	\$409,223	\$332,220
	Haddock—			
	Pounds.....	7,873,156	4,737,975	6,927,919
	Value.....	\$319,248	\$213,394	\$197,360
	All other—			
	Pounds.....	40,407,869	34,082,113	21,729,163
	Value.....	\$2,575,901	\$1,820,346	\$708,596
	<i>All other products, including pickles, preserves, and sauces.</i>			
	Value.....	\$45,105,129	\$35,272,585	\$35,725,257

¹ In addition, products to the value of \$5,423,199 were produced by establishments engaged primarily in the manufacture of products other than those covered by the industry designation, as follows:

	Number.	Value.
Total.....		\$5,423,199
Canned vegetables.....cases..	769,017	1,714,909
Canned fruits.....cases..	27,474	76,964
Dried fruits.....pounds..	1,007,033	53,159
Canned fish.....pounds..	531,054	19,649
Smoked fish.....pounds..	924,785	38,841
Salted fish.....pounds..	4,630,322	143,540
Pickles, preserves, and sauces.....		3,376,137

² In addition, 140,263 cases of fruits and vegetables, to the value of \$238,138; 1,847,625 pounds of fish, to the value of \$274,403; and oysters, to the value of \$12,900, were canned and preserved by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

³ Not reported separately.

⁴ Not reported.

Flour-mill and gristmill products.—Table 36 presents statistics for flour-mills and gristmills, but does not include data for establishments engaged exclusively in custom grinding (see table on p. 513). The total quantity of all kinds of grain milled in 1909 was 806,247,961 bushels, as compared with 729,061,820 bushels in 1899, an increase of 10.6 per cent. The largest increases were in wheat and corn,

the former showing a gain of about 25,000,000 bushels and the latter a gain of about 29,000,000 bushels.

The increase in the value of all products of flour mills and gristmills for the period 1899-1909 was 76.2 per cent. This gain was due mainly to advances in price, for the increases in quantity were relatively much smaller. The value of the wheat flour produced increased 64.7 per cent, but its quantity only 6 per cent, while the production of rye flour increased 54 per cent in value and only 6.2 per cent in quantity. The figures in the table indicate that higher unit values prevailed for all classes of products during 1909 than during the two prior census years. For the decade as a whole the percentage of increase in cost of materials, which constitutes by far the greater part of the value of products, was, however, even higher than that in value of products.

	1909	1904	1899
MATERIALS.			
Total cost.....	\$767,576,479	\$619,971,161	\$428,116,757
Grain ground or milled, bushels.....	806,247,961	754,945,729	729,061,820
Wheat.....	496,480,314	494,095,083	471,306,986
Corn.....	209,281,237	178,217,521	180,573,076
Rye.....	11,503,969	11,480,370	10,088,381
Buckwheat.....	7,156,062	6,531,305	5,490,156
Barley.....	24,509,770	18,628,552	10,067,348
Oats.....	50,241,598	45,381,009	47,175,766
Other.....	7,075,011	612,089	4,360,107
PRODUCTS.			
Total value.....	\$883,584,405	\$713,033,395	\$501,396,304
Wheat flour:			
Barrels.....	105,756,645	104,013,278	99,763,777
Value.....	\$550,116,254	\$480,258,514	\$333,997,686
White—			(¹)
Barrels.....	105,321,969	103,608,350	(²)
Value.....	\$548,017,654	\$478,484,601	(³)
Graham—			(¹)
Barrels.....	434,676	404,928	(²)
Value.....	\$2,098,600	\$1,773,913	(³)
Rye flour:			
Barrels.....	1,532,139	1,503,100	1,443,339
Value.....	\$6,383,538	\$5,892,108	\$4,145,565
Buckwheat flour:			
Pounds.....	176,081,891	175,354,062	143,190,724
Value.....	\$4,663,561	\$4,379,359	\$3,190,132
Barley meal:			
Pounds.....	28,550,952	68,508,655	91,275,646
Value.....	\$486,000	\$922,884	\$963,710
Corn meal and corn flour:			
Barrels.....	21,552,737	23,624,693	27,838,811
Value.....	\$66,941,095	\$56,368,556	\$52,167,739
Hominy and grits:			
Pounds.....	827,987,702	758,861,398	291,726,145
Value.....	\$12,509,493	\$8,455,420	\$2,567,084
Feed:			
Tons (2,000 pounds).....	5,132,369	3,456,786	3,993,080
Value.....	\$140,541,915	\$76,096,127	\$63,011,421
Offal:			
Tons (2,000 pounds).....	4,104,042	4,468,626	3,164,408
Value.....	\$89,814,427	\$76,105,532	\$36,679,196
All other cereal products—"breakfast foods," oatmeal, rolled oats, etc.....	\$4,720,106	(¹)	(²)
All other products.....	\$7,408,016	\$4,554,895	\$4,673,751

¹ In addition, merchant-ground products, valued at \$1,637,228, were made by establishments engaged primarily in the manufacture of products other than those covered by the industry designation. The items covered by this amount were wheat flour, 105,477 barrels, valued at \$614,952; corn meal, 32,804 barrels, valued at \$87,507; rye flour, 2,620 barrels, valued at \$12,330; feed, 33,765 tons, valued at \$907,165; and offal, 627 tons, valued at \$15,274; and in addition, "breakfast foods," to the amount of \$36,978,613, were made by establishments engaged primarily in the manufacture of food preparations. See note to table on page 513, for custom ground by-products.

² In addition, "breakfast foods," to the value of \$23,904,952, were made by establishments engaged primarily in the manufacture of food preparations.

³ Not reported separately.

Rice, cleaning and polishing.—The following table presenting statistics for the cleaning and polishing of

rice includes the quantity of rice milled, whether on a custom or exchange basis or in merchant mills. In 1909 there were 974,747,475 pounds of rice treated, as compared with 398,602,018 pounds in 1899, an increase of 144.5 per cent. The amount for 1909, however, was a little less than that for 1904. In 1909 there were only 3,873,735 pounds of foreign rough rice treated, as against 39,414,459 pounds in 1899. Attention is called to the fact that in 1909 whole rice formed 76.3 per cent of the total quantity of cleaned rice and broken rice 23.7 per cent, whereas in 1904 whole rice formed 65.9 per cent and broken rice 34.1 per cent of the cleaned-rice product.

	1909	1904	1899
MATERIALS.			
Rough rice milled, pounds.....	974,747,475	969,727,650	398,602,018
Domestic.....	970,873,740	990,473,625	389,187,569
Foreign.....	3,873,735	9,254,025	39,414,459
PRODUCTS.			
Total value.....	\$22,371,457	\$16,296,316	\$8,723,726
Clean rice:			
Pounds.....	626,069,489	623,900,245	243,681,200
Value.....	\$20,685,982	\$15,367,133	(¹)
Whole—			
Pounds.....	477,569,004	411,208,943	(²)
Value.....	\$17,398,736	\$12,677,124	(³)
Broken—			
Pounds.....	148,500,485	212,691,302	(²)
Value.....	\$3,287,246	\$3,289,009	(³)
Polish:			
Pounds.....	29,821,813	33,290,331	15,134,648
Value.....	\$367,662	\$367,647	(²)
Bran:			
Pounds.....	91,208,529	129,694,130	69,265,012
Value.....	\$726,215	\$561,193	(²)
Hulls and waste.....	\$166,147	\$116,360	(²)
All other products.....	\$421,061	\$54,582	(²)

¹ In addition, 43,150 pounds of clean rice, valued at \$1,449, were produced by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

² Not reported separately.

Slaughtering and meat packing.—Table 38 presents statistics for the wholesale slaughtering and meat-packing industry. It includes the manufacture of sausage when done in connection with slaughtering or meat packing or when carried on in independent establishments, but it does not include the rendering of lard in independent establishments or the operations of retail butchers. The cost of all materials reported for the industry was \$1,202,827,784 in 1909 and \$685,310,099 in 1899, an increase of 75.5 per cent. The total value of products increased from \$788,367,647 in 1899 to \$1,370,568,101 in 1909, or 73.8 per cent.

A portion of the dressed meat reported as material was obtained from slaughtering establishments included in the tabulation, and therefore is duplicated in the total value of products.

On account of the higher prices in 1909, the percentages of increase in value from 1899 to 1909 for the different kinds of products are somewhat greater than the percentages of increase in quantity. This is

especially marked in the case of pork, which shows an increase of only 16,421,398 pounds, or less than 1 per cent, from 1899 to 1909, while the value of the product

increased \$166,376,042, or 51.9 per cent. The quantity of lard increased 223,785,765 pounds, or 21.9 per cent, while its value increased \$73,256,353, or 119.8 per cent.

Table 38	1909	1904	1899		1909	1904	1899
MATERIALS.				PRODUCTS—continued.			
Total cost.....	\$1,202,827,784	\$811,425,562	\$685,310,099	Pork ² —Continued.			
Animals slaughtered.....	\$960,725,581	\$675,893,676	\$570,183,432	Salted—			
Beeves—				Pounds.....	952,130,557	1,558,836,256	1,371,384,591
Number.....	8,114,860	7,147,835	5,525,824	Value.....	\$95,959,048	\$116,626,710	\$88,363,626
Cost.....	\$392,127,010	\$289,040,930	\$247,146,262	Hams—			
Weight, pounds—				Pounds.....	789,861,744		
On the hoof.....	8,265,991,836	7,485,407,944	5,908,165,706	Value.....	\$101,089,390		
Dressed.....	4,409,718,922	4,066,264,877	3,222,733,617	Shoulders—			
Calves—				Pounds.....	346,294,769	1,364,015,706	1,767,313,787
Number.....	2,504,728	1,508,130	883,857	Value.....	\$33,225,458	\$132,210,611	\$148,171,168
Cost.....	\$25,030,014	\$12,665,557	\$7,252,545	Bacon and sides—			
Weight, pounds—				Pounds.....	741,345,933		
On the hoof.....	419,604,080	261,683,572	124,354,340	Value.....	\$97,856,403		
Dressed.....	262,315,076	161,049,581	79,498,483	Sausage, fresh or cured.....	\$59,564,582	\$33,179,235	\$25,982,709
Sheep—				All other fresh meat:			
Number.....	12,255,501	10,875,339	9,110,172	Pounds.....	257,809,083	124,307,681	80,387,411
Cost.....	\$59,924,931	\$44,359,804	\$36,859,832	Value.....	\$16,392,768	\$9,579,718	\$7,810,533
Weight, pounds—				Canned goods:			
On the hoof.....	987,566,521	930,168,367	764,269,802	Pounds.....	121,376,837	(1)	112,443,021
Dressed.....	496,640,869	464,872,621	389,132,646	Value.....	\$15,845,543	\$16,114,665	\$9,106,931
Hogs—				Lard:			
Number.....	33,870,616	30,977,639	30,595,522	Pounds.....	1,243,567,604	1,169,086,400	1,019,781,839
Cost.....	\$483,383,848	\$329,765,480	\$278,370,494	Value.....	\$134,396,587	\$82,540,964	\$61,140,224
Weight, pounds—				Tallow or oleo stock:			
On the hoof.....	6,856,832,417	6,586,349,782	6,676,709,331	Pounds.....	202,844,139	(1)	(1)
Dressed.....	5,201,902,778	5,048,832,850	5,203,280,487	Value.....	\$13,490,659	(1)	(1)
Goats and kids—				Oleo oil:			
Number.....	33,224	(1)	(1)	Gallons.....	19,692,172	19,454,799	19,111,120
Cost.....	\$121,230	(1)	(1)	Value.....	\$16,475,726	\$10,201,911	\$11,482,542
All other.....	\$138,548	\$61,905	\$554,299	Other oils:			
Dressed meat, purchased.....	\$93,409,286	\$53,114,957	\$54,247,986	Gallons.....	11,343,186	4,893,133	8,240,569
All other materials.....	\$148,692,917	\$82,416,929	\$60,878,681	Value.....	\$6,350,745	\$2,595,951	\$3,438,358
PRODUCTS.				Oleomargarine:			
Total value.....	\$1,370,568,101	\$922,037,528	\$788,367,647	Pounds.....	42,912,466	(1)	(1)
Beef: ¹				Value.....	\$5,963,981	(1)	(1)
Pounds.....	4,335,674,330	3,834,952,074	3,055,241,979	Stearin:			
Value.....	\$339,742,608	\$255,204,676	\$220,495,401	Pounds.....	54,957,997	(1)	(1)
Fresh—				Value.....	\$6,871,935	(1)	(1)
Pounds.....	4,209,196,668	3,748,055,377	2,917,653,476	Glue and gelatine:			
Value.....	\$327,583,456	\$247,096,724	\$210,833,647	Pounds.....	27,936,035	17,526,456	(1)
Salted or cured—				Value.....	\$1,944,338	\$1,087,719	(1)
Pounds.....	126,477,662	136,896,697	137,588,503	Fertilizers and fertilizer materials:			
Value.....	\$12,159,152	\$8,107,953	\$9,661,754	Tons (2,000 pounds).....	362,136	369,074	168,505
Veal, fresh:				Value.....	\$8,726,818	\$7,204,061	\$3,300,042
Pounds.....	252,997,078	154,212,652	84,548,128	Hides:			
Value.....	\$25,058,886	\$12,856,369	\$7,709,772	Number.....	9,560,138	8,039,204	6,249,414
Mutton, fresh:				Pounds.....	504,563,930	456,443,857	385,988,207
Pounds.....	495,457,894	460,754,244	400,812,014	Value.....	\$68,401,515	\$44,206,107	\$33,889,026
Value.....	\$50,735,116	\$36,880,455	\$32,681,457	Sheep pelts:			
Pork: ¹				Number.....	11,691,308	11,344,544	(1)
Pounds.....	4,377,127,187	4,147,834,872	4,360,705,789	Value.....	\$11,404,556	\$8,964,643	(1)
Value.....	\$486,845,161	\$340,586,644	\$320,469,119	Goat and kid skins:			
Fresh—				Number.....	33,359	(1)	(1)
Pounds.....	1,547,494,184	1,224,932,910	1,222,007,411	Value.....	\$20,679	(1)	(1)
Value.....	\$168,714,862	\$91,749,323	\$83,934,324	Wool:			
				Pounds.....	21,858,926	16,377,333	13,176,686
				Value.....	\$8,327,095	\$5,229,521	\$3,334,439
				Amount received for custom or contract work.....	\$1,329,739	\$198,825	\$141,154
				All other products.....	\$93,170,064	\$55,406,064	\$47,331,910

¹ Figures not available.

² Includes only the products specified.

Sugar.—Tables 39, 40, and 41 show the quantity and value of the products made from sugar beets and sugar cane of domestic growth, and the quantity of beets grown and the acreage devoted to this crop. They do not include statistics for maple sugar and sirup, or for sirup produced on farms from sugar and sorghum cane, or the data for establishments engaged primarily in the refining of cane sugar or molasses. The value of products of the domestic beet-sugar and cane-sugar mills amounted to \$77,991,683. In 1909 the value of products of the refineries above mentioned aggregated \$248,628,659. Of this value the cost of materials, which consist chiefly of raw sugar imported from Cuba, Porto Rico, Hawaii, and the Philippines, represented 90.9 per cent. The

combined value of products of all establishments producing raw or refined sugar was \$326,620,342 in 1909. This amount includes some duplication in the case of raw sugar produced by cane mills and used as material for the refineries.

As shown by Tables 39, 40, and 41, the total production of sugar in 1909 from beets and cane of domestic growth was 828,540 tons, of which beet sugar constituted 60.6 per cent and cane sugar 39.4 per cent. The output of beet sugar increased more than five-fold in quantity since 1899, while the production of cane sugar, for which statistics for previous censuses can not be presented in comparable form, has increased but slightly. The *ton of 2,000 pounds* is used in showing quantities.

PRODUCT.	1909	
	Tons.	Value.
Total.....		\$77,991,683
Beet-sugar industry.....		48,122,383
Cane-sugar industry.....		29,869,300
Sugar.....	828,540	72,033,302
Beet.....	501,682	45,937,629
Cane.....	326,858	26,095,673
Molasses, sirup, and all other products.....		5,958,381
Beet.....		2,184,754
Cane.....		3,773,627

The following table presents the statistics for the beet-sugar industry for the censuses of 1909, 1904, and 1899:

	1909	1904	1899
Acreage of sugar beets, total planted.	415,964	240,757	135,305
Directly by factory.....	29,459	20,484	10,239
By tenants of factory.....	18,166	20,223	13,074
On contract by others than tenants of factory.....	368,339	200,050	111,992
Beets used, tons	3,965,356	2,175,417	794,658
Grown directly by factory.....	266,768	169,839	23,241
Grown by tenants of factory.....	163,843	210,247	95,071
Grown on contract by others than tenants of factory.....	3,534,745	1,795,331	676,346
PRODUCTS.			
Total value.....	\$48,122,383	\$24,393,794	\$7,323,857
Sugar:			
Granulated—			
Tons.....	496,307	248,309	57,843
Value.....	\$45,645,810	\$23,493,373	\$5,580,527
Raw—			
Tons.....	4,875	5,612	23,886
Value.....	\$291,819	\$431,229	\$1,642,054
Molasses or sirup:			
Gallons.....	20,812,747	9,609,542	13,551,856
Value.....	\$1,129,905	\$221,097	\$25,102
Beet pulp.....	\$795,900	\$202,070	\$21,822
All other products.....	\$258,949	\$46,025	\$54,352

¹ Includes quantities for which no value could be given; also wastage.

The statistics for cane mills for 1909 are shown in detail in Table 41.

PRODUCT.	1909
Total value.....	\$39,629,788
Sugar:¹	
Tons.....	236,858
Value.....	\$26,095,673
Vacuum pan—	
Tons.....	322,180
Value.....	\$25,794,287
Brown (open-kettle process)—	
Tons.....	3,678
Value.....	\$301,386
Molasses (liquid product from which more or less sugar has been extracted):	
Gallons.....	24,567,561
Value.....	\$2,845,569
Sirup (liquid product from which no sugar has been extracted):	
Gallons.....	1,449,860
Value.....	\$365,632
All other products².....	\$1,313,874

¹ Does not include the operations of four establishments which manufacture sugar, two of which were operated in connection with penal institutions and two of which were engaged primarily in the manufacture of products other than those covered by the industry designation. The output of these establishments was 7,231 tons of sugar and 693,302 gallons of molasses.

² Cane sugar manufactured direct from cane, not including the refining of raw sugar purchased.

³ The value of sirup produced by establishments which manufacture no sugar is included under "All other products."

TEXTILES.

Statistics are presented for several branches of the textile and allied manufacturing industries, designated as follows: Carpets and rugs, other than rag; cordage and twine and jute and linen goods; cotton goods, including cotton small wares; hats, fur-felt; hosiery and knit goods; oilcloth and linoleum; shoddy; silk and silk goods, including throwsters; and woolen, worsted, and felt goods, and wool hats.

Table 42 shows the development of the textile industry since 1850. It covers all the industries mentioned above except the manufacture of fur-felt hats and of oilcloth and linoleum, for which statistics are shown in separate tables, and also includes the dyeing and finishing of textiles.

CENSUS.	Number of establishments.	NUMBER ENGAGED IN INDUSTRY. ¹		Capital.	Salaries.	Wages.	Cost of materials.	Value of products.	Value added by manufacture.
		Salaried employees.	Wage earners (average number).						
1909 (census of 1910).....	5,352	31,208	881,128	\$1,841,242,131	\$49,123,634	\$335,398,736	\$992,635,299	\$1,684,636,499	\$695,001,200
1904 (census of 1905).....	4,737	24,372	742,529	1,351,451,715	32,862,121	250,514,233	753,174,981	1,225,686,444	472,511,463
1899 (census of 1900).....	4,521	17,024	664,429	1,049,636,201	23,532,773	210,069,411	527,209,771	940,052,688	412,842,917
1889 (census of 1890).....	4,420	² 10,851	520,196	772,673,605	³ 12,749,405	169,422,053	454,272,469	768,357,254	314,064,755
1879 (census of 1880).....	4,143	(*)	387,557	414,179,946	(*)	105,642,824	306,496,799	538,401,222	231,905,423
1869 (census of 1870).....	4,855	(*)	275,655	298,611,518	(*)	86,784,211	354,452,813	522,312,413	167,859,600
1859 (census of 1860).....	3,058	(*)	194,394	150,205,852	(*)	40,410,946	113,082,036	215,166,444	102,064,403
1849 (census of 1850).....	3,025	(*)	146,877	112,513,947	(*)	(*)	76,715,959	128,769,971	52,054,012

¹ Not including proprietors and firm members.

² Includes proprietors and firm members with their salaries.

³ Not reported separately.

⁴ Includes 2,115 officers and clerks whose salaries were not reported.

⁵ Not reported fully.

The combined products of the industry in 1909 were valued at \$1,684,636,499, an increase of \$744,583,811, or 79.2 per cent, over the total for 1899. The total includes considerable duplication of values, but probably no more, relatively, than at previous censuses.

The percentage of increase since 1899 is the highest for any decade since that from 1859-1869. In 1909

cotton goods contributed 37.3 per cent of the value of all products represented in the total; the products of the woolen industries, including carpets and rugs, 30.1 per cent; hosiery and knit goods, 11.9 per cent; silk goods, 11.7 per cent; cordage and twine and jute and linen goods, 3.6 per cent; shoddy, four-tenths of 1 per cent; and the dyeing and finishing of textiles by independent establishments, 5 per cent.

The following table gives the number of producing spindles in active textile mills at the time of each census from 1869 to 1909, inclusive. It does not include spindles in establishments engaged primarily in the manufacture of products other than textiles, nor spindles employed on flax, hemp, jute, and allied fibers, of which latter class 142,169 were returned in 1909.

CENSUS.	NUMBER OF SPINDLES.				
	Total.	Cotton.	Silk.	Woolen.	Worsted.
1909 (census of 1910) ..	33,866,479	28,178,862	1,777,962	2,156,849	1,752,806
1904 (census of 1905) ..	28,721,742	23,672,064	1,394,020	2,456,389	1,199,269
1899 (census of 1900) ..	23,901,557	19,463,984	1,213,493	2,229,181	994,899
1889 (census of 1890) ..	18,092,133	14,384,180	718,360	2,332,269	657,324
1879 (census of 1880) ..	13,170,743	10,653,435	262,312	1,915,070	339,926
1869 (census of 1870) ..	9,338,953	7,280,800	12,040	1,845,496	200,617

¹ Includes some accessory spindles, except for silk.

The percentage of increase in the total number of spindles was greater from 1899 to 1909 than for any other decade shown. In 1909 cotton spindles formed 83.2 per cent of the total number, silk spindles 5.2 per cent, and woolen and worsted spindles combined 11.5 per cent. In 1909 cotton spindles represented a slightly larger proportion of all spindles than in 1904 and 1899 and woolen and worsted spindles a slightly smaller proportion.

The loom equipment of active establishments at the time of the several censuses, beginning with that of 1869, is presented in the following table. It does not include looms in establishments engaged primarily in the manufacture of products other than textiles, nor looms employed on flax, hemp, jute, and similar fibers. Cotton looms operated by power formed 80.6 per cent of the total number of power looms in 1909; silk looms, 9.1 per cent; and those employed in the woolen industry, which includes the manufacture of woolen and worsted goods and carpets and rugs, 10.2 per cent. In 1899 the corresponding percentages were 79.5 for cotton looms, 7.7 for silk, and 12.8 for those in the woolen industries.

CLASS OF LOOMS AND CENSUS.	NUMBER OF LOOMS.					
	Total.	Used in the manufacture of—				
		Cotton goods.	Silk goods.	Woolen goods.	Worsted goods.	Carpets and rugs.
Power:						
1909 (census of 1910) ..	825,478	665,652	75,406	33,148	39,476	11,796
1904 (census of 1905) ..	696,735	559,781	59,775	33,104	28,123	11,002
1899 (census of 1900) ..	573,214	455,752	44,257	36,734	26,630	9,841
1889 (census of 1890) ..	412,441	324,866	20,822	38,523	19,929	8,301
1879 (census of 1880) ..	285,494	227,383	5,321	32,955	11,703	8,132
1869 (census of 1870) ..	200,791	157,748	1,281	34,183	6,128	1,451
Hand:						
1909 (census of 1910) ..	248	(¹)	(²)	41		207
1904 (census of 1905) ..	1,039	(¹)	283	65		690
1899 (census of 1900) ..	1,311	(¹)	173	83		1,055
1889 (census of 1890) ..	4,823	(¹)	1,747	448		2,628
1879 (census of 1880) ..	7,929	(¹)	3,153	781		3,995
1869 (census of 1870) ..	4,163	(¹)	188	(¹)		3,975

¹ Not reported.

² Included with power looms.

Carpets and rugs.—The following table presents statistics for the manufacture of carpets and rugs, exclusive of rag and grass carpets and rugs.

	1909	1904	1899
MATERIALS.			
Total cost.....	\$39,563,004	\$37,947,954	\$27,228,719
Wool, in condition purchased:			
Pounds.....	64,135,020	51,320,521	51,871,334
Cost.....	\$11,752,396	\$10,431,146	\$8,104,107
Equivalent of above in scoured condition, pounds.....	51,474,353	31,551,895	37,560,231
Animal hair:			
Pounds.....	5,400,944	6,805,802	6,189,757
Cost.....	\$474,057	\$593,588	\$549,610
Cotton:			
Pounds.....	5,147,130	1,997,369	1,943,942
Cost.....	\$533,302	\$251,112	\$129,449
Partly manufactured materials not made in mill reporting:			
Waste and noils—			
Pounds.....	2,732,034	2,172,481	2,325,054
Cost.....	\$513,392	\$341,309	\$305,733
Yarns—			
Woolen—			
Pounds.....	25,718,747	32,431,400	32,996,316
Cost.....	\$5,036,118	\$6,645,001	\$5,080,654
Worsted—			
Pounds.....	11,292,749	11,355,993	9,218,267
Cost.....	\$5,588,915	\$5,405,072	\$3,544,800
Cotton—			
Pounds.....	26,166,241	27,421,831	19,823,561
Cost.....	\$4,772,594	\$4,757,850	\$2,744,928
Linen—			
Pounds.....	8,792,876	8,228,200	8,388,211
Cost.....	\$1,606,009	\$1,355,892	\$1,104,826
Jute, ramie, and other vegetable fiber—			
Pounds.....	55,592,343	49,119,558	38,846,413
Cost.....	\$3,926,694	\$3,404,616	\$2,476,029
Chemicals and dyestuffs.....	\$1,729,492	\$1,467,476	\$1,151,726
All other materials.....	\$3,630,035	\$3,291,992	\$2,026,797
PRODUCTS.			
Total value.....	\$71,188,152	\$61,586,433	\$48,192,861
Carpets:			
Square yards.....	57,176,729	66,426,033	64,238,761
Value.....	\$48,475,839	\$43,991,123	\$35,405,926
Axminster and Moquette—			
Square yards.....	12,507,261	6,413,686	5,026,778
Value.....	\$13,680,806	\$6,368,757	\$4,762,269
Wilton—			
Square yards.....	4,576,368	1,297,872	2,387,126
Value.....	\$8,737,768	\$2,726,667	\$4,030,842
Brussels—			
Square yards.....	3,960,626	3,024,162	2,686,493
Value.....	\$5,216,607	\$3,893,675	\$2,979,867
Tapestry velvet—			
Square yards.....	16,927,198	18,033,288	4,280,066
Value.....	\$5,514,130	\$7,754,681	\$3,743,353
Tapestry Brussels—			
Square yards.....	11,405,514	14,099,074	8,737,449
Value.....	\$8,576,908	\$9,955,043	\$5,520,666
Ingrain—			
Square yards.....	17,799,762	33,557,951	39,920,849
Value.....	\$6,749,672	\$13,287,302	\$14,368,930
Rugs, woven whole:			
Square yards.....	24,042,152	16,244,810	12,171,299
Value.....	\$18,490,449	\$12,870,650	\$8,145,232
Axminster and Moquette—			
Square yards.....	3,184,097	1,767,920	327,596
Value.....	\$3,691,900	\$2,107,383	\$342,262
Wilton—			
Square yards.....	767,248	1,097,186	339,784
Value.....	\$1,381,562	\$1,983,777	\$545,967
Brussels—			
Square yards.....	475,831	(¹)	(¹)
Value.....	\$333,582	(¹)	(¹)
Tapestry velvet—			
Square yards.....	3,732,972	(¹)	(¹)
Value.....	\$3,513,063	(¹)	(¹)
Tapestry Brussels—			
Square yards.....	5,672,962	2,009,834	18,750
Value.....	\$4,422,427	\$1,509,673	\$9,000
Ingrain art squares—			
Square yards.....	6,131,862	7,135,546	2,722,323
Value.....	\$2,408,960	\$2,785,457	\$1,175,951
Smyrna—			
Square yards.....	1,400,233	3,828,282	3,651,661
Value.....	\$1,660,322	\$4,134,500	\$3,680,618
Other—			
Square yards.....	2,676,947	406,042	5,111,173
Value.....	\$1,078,633	\$349,860	\$2,391,434
All other products.....	\$4,221,814	\$4,724,658	\$4,641,193
MACHINERY.			
Sets of cards.....	745	686	468
Woolen.....	456	389	.....
Worsted.....	180	238	.....
Cotton.....	109	59	.....
Spindles.....	252,096	255,847	209,206
Producing.....	211,472	211,331	167,123
Doubling and twisting.....	40,624	44,016	42,083
Looms, all classes.....	12,271	13,853	12,511

¹ In addition, in 1909 carpets and rugs, to the value of \$479,161, and in 1904, to the value of \$70,000, were made by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

² Includes Wilton velvet.

³ Not reported separately.

⁴ Not reported fully.

The aggregate production of carpets and rugs increased from 76,410,050 square yards in 1899 to 81,218,881 square yards in 1909, or only 6.3 per cent, but the value of the output increased from \$43,551,158 in 1899 to \$66,966,338 in 1909, or 53.8 per cent. The increase has been in all classes of rugs except Smyrna and "other rugs" and in all classes of carpets except ingrain. The cost of materials used increased at a rate almost equal to that of the value of products. The total carpet product decreased 11 per cent in quantity during the decade, but increased 36.9 per cent in value. The output of pile carpets increased 61.9 per cent in quantity and 98.3 per cent in value, while that of woven ply or ingrain carpets decreased 55.4 per cent in quantity and 53 per cent in value. The production of rugs woven whole increased 97.5 per cent in quantity and 127 per cent in value. More than two-thirds of the fiber material used in the manufacture of carpets is yarn purchased, and to the extent that this yarn is manufactured by carpet mills there is a duplication in the products.

Cordage and twine and jute and linen goods.—Table 46 presents statistics for the manufacture of cordage and twine and jute and linen goods, including nets and seines, but does not include the figures for these classes of goods produced in penal institutions or in establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

The principal products manufactured in this country from flax, hemp, and jute fibers are twine, rope, and thread, and yarns for sale to establishments using chiefly cotton, wool, and silk fibers.

The production of linen toweling and other linen woven goods increased decidedly between 1899 and 1909, but this item is not shown separately in the table, because a very large proportion of the total product is manufactured by one establishment.

The output of gunny bagging decreased from 74,090,760 square yards in 1899 to 69,311,288 square yards in 1909, while its value increased from \$3,462,479 to \$3,507,482. The aggregate rope and twine product in 1909 was 504,020,697 pounds, valued at \$42,864,658, as compared with 343,656,384 pounds, valued at \$31,250,468, in 1899. In 1899 cotton rope and twine formed 3 per cent of the total output of the cordage and twine industry, and in 1909, 7.4 per cent. This class of products increased 260.6 per cent in quantity and 372.9 per cent in value during the decade, while rope and twine of all other fiber increased 40 per cent in quantity and 21.6 per cent in value. In addition to the cotton rope and twine product included in the figures given above, 21,319,678 pounds, valued at \$3,581,917, were made in 1909 in mills engaged primarily in the manufacture of cotton goods.

Table 46	1909	1899
MATERIALS.		
Total cost.....	\$40,914,810	\$33,063,733
Hard fibers:		
Sisal and manila hemp—		
Pounds.....	335,460,574	269,394,673
Cost.....	\$19,314,306	\$17,743,624
Other kinds—		
Pounds.....	17,222,996	6,344,371
Cost.....	\$707,802	\$332,326
Soft fibers:		
Jute—		
Pounds.....	121,302,427	57,443,201
Cost.....	\$4,134,265	\$2,431,429
Jute butts—		
Pounds.....	138,364,122	118,806,625
Cost.....	\$2,083,176	\$1,795,653
Flax and flax tow—		
Pounds.....	26,954,785	16,980,646
Cost.....	\$3,174,609	\$2,089,862
Hemp and hemp tow—		
Pounds.....	19,724,070	25,568,715
Cost.....	\$1,496,125	\$1,404,633
Cotton:		
Pounds.....	27,624,490	13,022,755
Cost.....	\$2,922,933	\$849,426
Yarns purchased:		
Cotton—		
Pounds.....	7,077,959	4,373,866
Cost.....	\$1,261,596	\$709,899
Flax, hemp, jute, and ramie—		
Pounds.....	2,676,367	1,798,179
Cost.....	\$445,375	\$262,156
All other materials.....	\$5,394,617	\$3,433,573
PRODUCTS.		
Total value.....	\$61,919,986	\$43,077,629
Rope and binder twine.....	\$33,930,306	\$26,909,027
Sisal—		
Pounds.....	225,736,526	172,238,261
Value.....	\$15,960,280	\$14,006,506
Manila—		
Pounds.....	150,169,022	123,554,261
Value.....	\$12,892,347	\$12,192,798
Cotton rope—		
Pounds.....	16,760,763	1,615,824
Value.....	\$3,011,613	\$247,350
Jute rope—		
Pounds.....	27,749,512	19,012,165
Value.....	\$1,566,160	\$463,413
All other—		
Pounds.....	7,767,561	(*)
Value.....	\$499,906	(*)
Twine, not including binder.....	\$8,034,352	\$4,341,441
Cotton—		
Pounds.....	20,412,631	8,691,707
Value.....	\$3,518,036	\$1,133,640
Jute—		
Pounds.....	35,516,217	1,679,127
Value.....	\$2,557,744	\$117,539
Hemp—		
Pounds.....	8,013,340	9,065,024
Value.....	\$1,091,291	\$1,019,590
Flax—		
Pounds.....	2,967,053	3,945,975
Value.....	\$630,969	\$909,469
Flax or hemp mixed with jute—		
Pounds.....	8,907,403	12,924,067
Value.....	\$936,312	\$1,101,203
Yarns for sale.....	\$5,434,037	\$4,455,734
Jute—		
Pounds.....	62,512,247	54,271,860
Value.....	\$4,361,560	\$3,230,935
Flax and hemp—		
Pounds.....	5,486,891	8,259,653
Value.....	\$962,742	\$1,125,971
Other—		
Pounds.....	732,130	946,557
Value.....	\$69,745	\$98,926
Linen thread:		
Pounds.....	6,530,563	4,021,044
Value.....	\$3,407,008	\$2,332,267
Gunny bagging:		
Square yards.....	69,311,288	74,090,760
Value.....	\$3,507,482	\$3,462,479
Jute carpets and rugs:		
Square yards.....	2,206,114	2,963,656
Value.....	\$549,221	\$357,566
All other products.....	\$5,257,580	\$7,219,093

* In addition, cordage and twine and jute and linen goods to the value of \$30,629 were made by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

† Not reported.

Cotton goods, including cotton small wares.—Table 47 presents the statistics for cotton manufactures, not including cotton hosiery and knit goods.

The aggregate value of cotton woven goods manufactured, exclusive of narrow weaves, such as tape and webbing, was \$456,089,401 in 1909, compared with \$243,253,155 in 1899, an increase of 87.5 per cent for the decade. The rate of increase, however, in quantity was very much less, 6,348,568,593 square yards of woven goods being reported in 1909, compared with

4,523,430,616 in 1899, an increase of 40.3 per cent. The output of almost every class of woven goods increased during the decade.

The total production of yarn in cotton mills in 1909 was 2,040,290,743 pounds, of which 470,370,995 pounds, valued at \$109,314,953, were made for sale. Part of this yarn was sold to other cotton mills, thus involving duplication in the total value of products for the industry. Some of it was sold to woolen and silk mills and a large quantity to knitting mills.

Table 47	1909	1904	1899		1909	1904	1899
MATERIALS.				PRODUCTS—continued.			
Total cost.....	\$371,009,470	\$286,255,303	\$176,551,527	Woven goods—Continued.			
Cotton:				Napped fabrics—			
Pounds.....	2,335,344,906	1,876,437,150	1,817,643,390	Square yards.....			
Cost.....	\$274,724,210	\$222,212,749	\$125,169,616	305,655,864	330,808,140	268,852,716	
Domestic—				Value.....			
Pounds.....	2,259,312,974	1,832,736,744	1,761,798,458	\$25,695,367	\$26,108,315	\$18,231,044	
Cost.....	\$261,547,820	\$214,615,844	\$119,098,443	Corduroy, cotton, velvet, and plush—			
Foreign—				Square yards.....			
Pounds.....	76,031,932	43,700,406	55,844,932	19,706,438	16,014,556	7,961,522	
Cost.....	\$13,176,390	\$7,596,905	\$6,071,173	Value.....			
Cotton yarn:				\$6,965,634	\$4,790,573	\$2,682,017	
Pounds.....	126,707,003	105,411,516	94,692,864	Mosquito and other netting—			
Cost.....	\$34,384,791	\$24,611,200	\$17,622,568	Square yards.....			
Cotton waste:				59,100,819	36,232,918	41,825,022	
Pounds.....	80,044,061	76,678,645	41,234,900	Value.....			
Cost.....	\$4,225,790	\$3,814,290	\$1,515,591	\$2,103,560	\$794,963	\$375,868	
Starch:				Upholstering goods—			
Pounds.....	71,774,574	54,489,534	53,800,734	Square yards.....			
Cost.....	\$2,114,756	\$1,506,804	\$1,227,010	94,840,051	65,592,212	51,314,600	
Chemicals and dyestuffs.....	\$4,886,514	\$4,573,375	\$5,718,107	Value.....			
All other materials.....	\$50,673,409	\$29,536,885	\$25,298,635	\$14,882,842	\$12,111,698	\$8,705,394	
PRODUCTS.				Tapestries (piece goods and curtains)—			
Total value.....	\$628,391,813	\$450,467,704	\$339,200,320	Square yards.....			
Woven goods:				10,657,385	9,605,006	10,166,538	
Square yards.....	6,348,568,593	5,110,308,812	4,523,430,616	Value.....			
Value.....	\$456,089,401	\$324,747,837	\$243,253,155	\$4,723,907	\$4,242,506	\$4,158,600	
Plain cloths for printing or converting—				Lace and lace curtains—			
Square yards.....	2,224,677,848	1,818,216,172	1,581,613,827	Square yards.....			
Value.....	\$111,097,889	\$80,311,612	\$57,780,940	81,007,314	53,511,222	37,825,198	
Brown or bleached sheetings and shirtings—				Value.....			
Square yards.....	1,484,353,529	1,172,309,182	1,212,403,048	\$8,922,082	\$7,208,211	\$3,585,138	
Value.....	\$88,802,985	\$61,253,376	\$55,513,032	Other—			
Twills and sateens—				Square yards.....			
Square yards.....	388,314,961	366,142,513	235,860,518	3,175,352	2,475,984	3,322,873	
Value.....	\$34,274,107	\$23,701,305	\$14,301,302	Value.....			
Fancy woven fabrics—				\$1,236,853	\$660,981	\$661,646	
Square yards.....	426,710,359	306,254,685	237,841,603	Bags and bagging—			
Value.....	\$47,498,713	\$28,486,342	\$21,066,310	Square yards.....			
Ginghams—				63,107,568	57,067,663	32,730,616	
Square yards.....	537,430,463	302,316,132	278,392,708	Value.....			
Value.....	\$37,939,040	\$22,471,867	\$16,179,200	\$4,862,451	\$3,953,732	\$2,554,192	
Duck—				Cotton towels and toweling—			
Square yards.....	162,476,322	122,601,212	129,234,076	Square yards.....			
Value.....	\$27,485,892	\$17,005,982	\$14,263,008	52,778,170	40,280,292	(?)	
Drills—				Value.....			
Square yards.....	238,869,407	194,735,303	237,206,549	\$6,037,075	\$4,365,470	(?)	
Value.....	\$17,750,151	\$12,596,063	\$11,862,794	Tape and webbing.....			
Ticks, denims, and stripes—				Pounds.....			
Square yards.....	264,870,508	256,375,486	181,800,853	\$5,531,674	\$4,060,488	\$2,521,402	
Value.....	\$27,350,162	\$23,797,578	\$16,440,633	Value.....			
Cottonades—				\$109,314,953	\$79,939,687	\$55,216,066	
Square yards.....	25,676,286	25,362,346	26,323,947	Thread:			
Value.....	\$3,343,533	\$2,998,971	\$2,791,431	Pounds.....			
				23,700,957	17,163,741	15,907,058	
				Value.....			
				\$20,516,269	\$15,043,043	\$11,908,671	
				Twine:			
				Pounds.....			
				13,715,771	7,301,589	11,642,718	
				Value.....			
				\$2,417,391	\$1,428,994	\$1,546,611	
				Cordage and rope:			
				Pounds.....			
				7,603,907	(?)	(?)	
				Value.....			
				\$1,164,526	(?)	(?)	
				Cotton waste for sale:			
				Pounds.....			
				310,513,348	247,649,640	270,822,613	
				Value.....			
				\$10,874,386	\$10,062,057	\$5,563,576	
				All other products.....			
				\$22,483,213	\$15,185,598	\$19,190,845	
				MACHINERY.			
				Producing spindles, number.....			
				27,425,608	23,195,143	19,050,952	
				Looms, all classes, number.....			
				605,049	559,290	455,752	

¹ In addition, cotton goods to the value of \$2,224,096 were made by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

² Not reported separately.

Felt goods.—Table 48 covers the statistics for all establishments engaged primarily in the manufacture of felt goods except those making hats. The aggregate value of products of the three felting industries—the manufacture of felt goods, fur-felt hats, and wool-felt hats—was \$64,099,667 in 1909, \$48,035,213 in 1904, and \$37,864,818 in 1899, the increase in value from 1899 to 1909 being 69.3 per cent.

The value of products for the felt-goods industry, exclusive of the making of felt hats, was \$11,852,626 in 1909 and \$6,461,691 in 1899, an increase for the decade of 83.4 per cent.

The increase in the production of endless belts during the decade was particularly large, amounting to 191 per cent in quantity and 215.1 per cent in value.

	1909	1904	1899
MATERIALS.			
Total cost.....	\$6,967,206	\$5,754,026	\$3,801,038
Wool, in condition purchased:			
Pounds.....	12,409,826	11,868,238	9,606,263
Cost.....	\$3,927,393	\$3,388,588	\$2,196,440
Equivalent of above in scoured condition, pounds.....	9,308,172	8,131,082	6,468,097
Animal hair, etc.:			
Pounds.....	8,144,011	6,974,634	2,819,521
Cost.....	\$230,244	\$373,797	\$125,803
Cotton:			
Pounds.....	1,375,670	1,982,624	1,225,850
Cost.....	\$155,815	\$217,200	\$77,683
Shoddy, mungo, and wool extract:			
Pounds.....	2,536,243	1,532,127	712,373
Cost.....	\$261,878	\$157,031	\$80,737
Waste and noils:			
Pounds.....	4,874,712	1,948,969	2,653,590
Cost.....	\$1,220,110	\$452,509	\$552,992
Chemicals and dyestuffs.....	\$219,891	\$189,750	\$128,296
All other materials.....	\$942,875	\$975,151	\$639,077
PRODUCTS.			
Total value.....	\$11,852,626	\$8,948,594	\$6,461,691
Felt cloths:			
Square yards.....	3,764,468	3,689,610	2,056,002
Value.....	\$1,381,854	\$1,830,627	\$548,543
Trimming and lining felts, felt skirts, etc.:			
Square yards.....	5,953,410		
Value.....	\$1,329,686		
Saddle felts:			
Pounds.....	1,650,991	5,145,340	2,480,830
Value.....	\$575,849	\$1,188,908	\$796,718
Endless belts:			
Pounds.....	3,243,084	1,770,124	1,114,357
Value.....	\$3,417,822	\$1,707,216	\$1,084,835
Boot and shoe linings:			
Square yards.....	1,661,090	2,823,137	1,052,538
Value.....	\$514,456	\$781,450	\$540,110
Hair felting:			
Square yards.....	1,159,999	605,214	125,000
Value.....	\$531,045	\$191,998	\$56,950
All other felts.....	\$3,549,876	\$2,592,894	\$2,261,918
All other products.....	\$552,038	\$655,501	\$1,172,617
MACHINERY.			
Sets of cards.....	473	463	1302
Woolen.....	472	451	
Cotton.....	1	12	
Spindles.....	30,353	17,817	24,286
Producing.....	29,463	17,457	23,235
Doubling and twisting.....	890	360	1,051
Looms, all classes.....	408	265	284

¹ Not fully reported.

Hats, fur-felt and wool-felt.—The total output in 1909 of establishments engaged primarily in the manufacture of fur-felt or wool-felt hats was 42,962,508 hats of all varieties, valued at \$47,089,253; in 1904 it was 36,695,952 hats, valued at \$36,604,304; and in 1899, 32,325,564 hats, valued at \$28,546,867. Fur-felt hats, generally known as felt hats, formed 83.5 per cent of the total number in 1909 and 69.9 per cent in 1899, while wool-felt hats, generally known as wool hats, formed 16.5 per cent of the total in 1909 and 30.1 per cent in 1899.

There is some duplication in value of products, due to the use of felt hat bodies and hats in the rough made at one establishment as material at another.

The following table gives the quantity and value of the materials and products of the fur-felt hat industry in 1909, 1904, and 1899. The products increased in value 72.1 per cent during the decade, and the number of finished hats increased 58.8 per cent.

	1909	1904	1899
MATERIALS.			
Total cost.....	\$22,109,231	\$15,975,206	\$13,513,668
Hatters' fur:			
Pounds.....	8,645,576	6,718,359	6,166,269
Cost.....	\$9,278,922	\$6,743,926	\$6,376,991
Fur-felt hat bodies and hats in the rough:			
Dozens.....	406,447	211,760	146,212
Cost.....	\$2,575,248	\$1,351,372	\$582,686
Chemicals and dyestuffs.....	\$843,587	\$1,140,281	\$656,794
All other materials.....	\$9,411,474	\$6,739,617	\$5,596,897
PRODUCTS.			
Total value.....	\$47,864,630	\$36,629,358	\$27,811,187
Fur-felt hats:			
Dozens.....	2,969,252	2,611,875	1,882,372
Value.....	\$43,442,466	\$34,314,234	\$25,368,596
Fur-felt hat bodies and hats in the rough:			
Dozens.....	366,370	88,966	165,610
Value.....	\$2,703,738	\$660,650	\$992,730
All other products.....	\$1,164,872	\$1,093,361	\$941,032
Work on materials for others.....	\$553,554	\$560,799	\$491,919

¹ In addition, in 1909, fur-felt hats, to the value of \$906,001, and in 1904, to the value of \$333,441, were made by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

The statistics for the manufacture of wool-felt hats are given in the following table. The increase in the total value of all products for the decade was 22.1 per cent. The output of finished wool hats in 1909, though greater than in 1904, showed a decrease of 27.2 per cent as compared with 1899.

	1909	1904	1899
MATERIALS.			
Total cost.....	\$2,472,263	\$1,268,810	\$2,042,268
Wool, in condition purchased:			
Pounds.....	1,208,498	1,633,535	2,713,374
Cost.....	\$404,127	\$486,594	\$728,573
Equivalent of above in scoured condition, pounds.....	989,110	1,231,576	1,886,666
Wool waste and noils:			
Pounds.....	1,281,764	257,363	862,982
Cost.....	\$661,172	\$119,467	\$376,792
Wool-felt hat bodies and hats in the rough:			
Dozens.....	21,864	12,069	4,939
Cost.....	\$32,020	\$25,997	\$13,920
Chemicals and dyestuffs.....	\$104,503	\$63,905	\$108,502
All other materials.....	\$1,219,441	\$664,907	\$760,615
PRODUCTS.			
Total value.....	\$4,322,411	\$2,457,966	\$3,561,946
Wool-felt hats:			
Dozens.....	590,957	446,121	811,425
Value.....	\$3,646,787	\$2,280,670	\$3,161,561
Wool-felt hat bodies and hats in the rough:			
Dozens.....	53,896	18,587	55,006
Value.....	\$309,492	\$100,491	\$120,223
All other products.....	\$426,122	\$66,795	\$310,317

¹ In addition, wool-felt hats, to the value of \$904,643, were made by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

Hosiery and knit goods.—Table 51, presenting the statistics for hosiery and knit goods, includes hand-knit as well as machine-knit goods.

The total cost of materials in the hosiery and knit-goods industry was \$110,241,053 in 1909, \$76,789,348 in 1904, and \$51,195,330 in 1899. The cost of cotton and cotton yarn represented 51.7 per cent of the total cost of material used in 1909, 52.4 per cent in 1904, and 50.3 per cent in 1899. A portion of the yarn reported as material was purchased from other establish-

ments included in this classification and is therefore duplicated in the value of products. The increase in the total cost of materials in 1909 over the cost for 1899 was 115.3 per cent, and the increase in the total value of products was 108.8 per cent. Of the total value of the products, shirts and drawers contributed 34.8 per cent in 1909 and 47.7 per cent in 1899, while hosiery contributed 34.3 per cent in 1909 and 28.6 per cent in 1899. The hosiery product increased in value from

\$27,420,029 in 1899 to \$68,721,825 in 1909, or 150.6 per cent, and shirts and drawers from \$45,675,594 to \$69,592,817, or 52.4 per cent. Sweaters, cardigan jackets, etc., show the largest relative increase in value for the decade, and combination suits the next largest, the value of the former increasing from \$3,498,837 to \$22,430,817, or more than fivefold, and that of the latter from \$3,691,847 to \$14,853,536, or about threefold.

Table 51	1909	1904	1899		1909	1904	1899
MATERIALS.				PRODUCTS—continued.			
Total cost.....	\$110,241,053	\$76,789,348	\$51,195,330	Hosiery—Continued.			
Cotton:				Silk—			
Pounds.....	75,416,023	50,586,760	49,451,301	Dozen pairs.....	434,414	42,065	12,572
Cost.....	\$8,803,509	\$5,869,317	\$3,561,592	Value.....	\$3,600,416	\$522,303	\$186,413
Wool, in condition purchased:				Shirts and drawers:			
Pounds.....	7,068,788	17,300,616	17,953,907	Dozens.....	25,337,779	19,723,141	15,873,700
Cost.....	\$2,919,055	\$6,153,858	\$5,262,135	Value.....	\$69,592,817	\$56,643,860	\$45,675,594
Equivalent of above in scoured condition, pounds.....	5,582,839	13,909,144	13,031,308	All cotton—			
Shoddy, purchased:				Dozens.....	22,567,121	17,107,958	12,058,431
Pounds.....	7,482,553	7,489,358	3,770,626	Value.....	\$50,007,598	\$39,658,762	\$26,882,902
Cost.....	\$919,970	\$923,719	\$488,792	Merino or mixed—			
Wool waste and noils, purchased:				Dozens.....	2,536,473	2,113,810	2,075,418
Pounds.....	8,586,261	6,020,459	5,276,454	Value.....	\$17,055,624	\$13,031,754	\$13,293,829
Cost.....	\$2,813,129	\$1,711,669	\$1,487,907	All wool—			
Yarns, purchased:				Dozens.....	178,163	485,328	1,085,048
Cotton—				Value.....	\$1,820,521	\$3,647,934	\$4,980,818
Pounds.....	216,987,611	161,500,466	131,820,068	Silk and silk mixed—			
Cost.....	\$48,165,749	\$34,372,910	\$22,204,918	Dozens.....	56,022	16,045	54,807
Worsted—				Value.....	\$709,074	\$305,410	\$518,045
Pounds.....	10,370,004	8,789,570	5,823,215	Combination suits:			
Cost.....	\$10,116,325	\$7,457,690	\$4,865,304	Dozens.....	2,473,103	1,440,420	986,855
Woolen—				Value.....	\$14,853,536	\$6,793,947	\$3,691,847
Pounds.....	6,140,265	4,839,343	2,621,893	All cotton—			
Cost.....	\$3,834,094	\$2,798,454	\$1,257,587	Dozens.....	2,047,637	1,260,301	824,632
Merino—				Value.....	\$9,713,597	\$4,478,664	\$2,240,566
Pounds.....	4,014,609	2,568,890	1,981,484	Merino or mixed—			
Cost.....	\$2,667,051	\$1,118,999	\$642,535	Dozens.....	364,387	105,242	139,994
Silk and spun silk—				Value.....	\$4,217,432	\$1,199,949	\$1,133,328
Pounds.....	982,753	320,671	266,247	All wool—			
Cost.....	\$3,606,599	\$1,200,259	\$946,801	Dozens.....	50,102	68,067	9,501
Chemicals and dyestuffs.....	\$2,541,939	\$1,677,252	\$1,023,161	Value.....	\$683,289	\$965,132	\$201,667
All other materials.....	\$23,853,633	\$13,505,221	\$9,454,598	Dozens.....	10,977	6,810	12,728
Yarns made in mill for use therein.				Value.....	\$239,218	\$150,202	\$116,286
Cotton, pounds.....	69,171,277	39,954,890	40,845,889	Sweaters, cardigan jackets, etc.:			
Woolen, pounds.....	8,316,349	(1)	(1)	Dozens.....	2,221,410	811,629	594,090
Worsted, pounds.....	223,404	(1)	(1)	Value.....	\$22,430,817	\$8,345,369	\$3,498,837
Merino, pounds.....	20,856,989	(1)	(1)	Gloves and mittens:			
Total value.....	\$200,143,527	\$137,076,454	\$95,833,692	Dozen pairs.....	2,527,889	2,260,508	1,898,587
Hosiery:				Value.....	\$7,296,887	\$5,556,260	\$4,244,046
Dozen pairs.....	62,825,069	44,186,063	29,903,899	Hoods, scarfs, nubias, etc.:			
Value.....	\$68,721,825	\$44,113,260	\$27,420,029	Dozens.....	888,223	589,315	343,429
Cotton, merino, and woolen—				Value.....	\$3,217,985	\$1,774,862	\$1,002,392
Hose—				Shawls:			
Dozen pairs.....	34,499,562	25,999,813	16,641,769	Dozens.....	218,923	435,306	157,622
Value.....	\$37,903,011	\$26,152,048	\$16,203,372	Value.....	\$916,294	\$1,293,348	\$328,720
Cotton—				Boot and shoe linings:			
Dozen pairs.....	32,499,104	24,169,804	15,028,173	Square yards.....	9,726,770	11,768,961	10,406,440
Value.....	\$34,078,622	\$22,764,799	\$13,275,732	Value.....	\$1,209,404	\$1,249,401	\$2,205,008
Merino or mixed—				Yarns for sale.....	\$1,785,531	\$1,000,083	\$498,790
Dozen pairs.....	834,029	746,226	436,891	Cotton—			
Value.....	\$1,466,283	\$1,182,164	\$659,959	Pounds.....	7,457,412	3,304,615	2,419,282
Woolen or worsted—				Value.....	\$1,568,417	\$654,234	\$422,100
Dozen pairs.....	1,166,429	1,083,783	1,176,705	Woolen, worsted, and merino—			
Value.....	\$2,358,106	\$2,205,080	\$2,207,681	Pounds.....	488,322	491,559	134,529
Half hose.....				Value.....	\$217,114	\$345,849	\$76,690
Dozen pairs.....	27,891,093	18,144,185	13,249,558	All other products.....	\$10,118,371	\$10,306,064	\$7,268,484
Value.....	\$27,218,398	\$17,438,914	\$11,030,244	MACHINERY.			
Cotton—				Sets of cards.....	2,681	2,001	1,161
Dozen pairs.....	24,805,917	15,223,243	11,352,081	Cotton.....	1,827	1,000	(1)
Value.....	\$21,831,865	\$11,821,830	\$7,906,945	Woolen.....	844	977	1,161
Merino or mixed—				Worsted.....	10	24	(1)
Dozen pairs.....	2,023,641	1,611,066	957,520	Spindles.....	736,774	603,180	521,871
Value.....	\$3,299,912	\$2,214,678	\$1,384,764	Producing.....	729,935	596,362	510,172
Woolen or worsted—				Doubling and twisting.....	6,839	6,818	11,699
Dozen pairs.....	1,061,535	1,309,876	939,957	Knitting machines, all classes.....	115,019	88,374	89,947
Value.....	\$2,087,121	\$3,402,406	\$1,738,535	Sewing machines, all classes.....	43,885	30,410	24,536

¹ Not reported.

² In addition, in 1909, hosiery and knit goods, to the value of \$2,975,749, and in 1904, to the value of \$1,579,633, were made by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

Oilcloth and linoleum.—Table 52 presents the statistics of the production of oilcloth, linoleum, and artificial leather. Artificial leather, which at former censuses was included under upholstering materials, was reported separately for the first time at the census of 1909. At the census of 1899 oilcloth and linoleum were not reported in detail, but the total value of these products was \$11,402,620. This had

increased to \$13,977,137 in 1904 and to \$22,525,940 in 1909. The production of oilcloth in 1909 was in the aggregate 96,862,068 square yards and in 1904 71,057,684 square yards, an increase for the five years of 36.3 per cent. The linoleum product increased relatively much more; it amounted to 30,676,254 square yards in 1909 and 16,891,462 square yards in 1904, an increase of 81.6 per cent.

Table 52

PRODUCT.	1909	1904
Total value.....	\$26,253,786	\$14,792,246
Oilcloth.....	\$11,681,012	\$3,648,337
Floor—		
Square yards.....	18,354,851	21,456,615
Value.....	\$3,776,660	\$3,565,689
Enameled—		
Square yards.....	17,338,440	11,574,986
Value.....	\$2,265,146	\$1,542,467
Table—		
Square yards.....	61,168,777	38,026,083
Value.....	\$5,639,206	\$3,540,181
Linoleum.....	\$10,844,928	\$5,328,800
Linoleum, including cork carpet—		
Square yards.....	26,215,979	14,765,284
Value.....	\$7,850,437	\$4,223,992
Inlaid linoleum—		
Square yards.....	4,460,275	2,126,178
Value.....	\$2,994,491	\$1,104,808
Artificial leather:		
Square yards.....	11,869,875	(¹)
Value.....	\$3,448,617	(²)
All other products.....	\$279,239	\$815,109

¹ In addition, products to the value of \$33,328 were reported by establishments engaged primarily in the manufacture of products other than those covered by the industry designation. The production of artificial leather is included under "upholstering materials" in Table 110.
² Figures not available.

Shoddy.—The statistics given in the following table relate only to establishments primarily engaged in the manufacture of shoddy, mungo, and wool extract, and do not include those for spinning and weaving mills and hosiery and knit-goods factories which manufacture shoddy for their own use or for sale. Mills engaged in the cutting of flocks and the cleaning and garnetting of waste are included, as in previous censuses. The total cost of materials used was \$5,000,706 in 1909, and the total value of the products was \$7,446,364, both of these amounts being somewhat larger than in 1899 but smaller than in 1904. The total output of the products specifically classified was 57,888,999 pounds in 1909, 63,787,770 pounds in 1904, and 47,684,714 pounds in 1899.

Table 53

	1909	1904	1899
MATERIALS.			
Total cost.....	\$5,000,706	\$6,055,731	\$4,875,192
Tailors' clippings, rags, etc.:			
Pounds.....	64,561,713	68,921,097	79,623,312
Cost.....	\$3,051,045	\$4,295,641	\$3,558,706
Waste and noils of wool, mohair, camel's hair, etc.:			
Pounds.....	7,567,579	8,177,846	4,236,028
Cost.....	\$917,976	\$909,754	\$693,972
Wool, in condition purchased:			
Pounds.....	237,097	597,492	422,349
Cost.....	\$98,032	\$127,927	\$127,099
Equivalent of above in scoured condition, pounds.....	196,097	421,492	242,997
Chemicals and dyestuffs.....	\$138,241	\$142,455	\$111,095
All other materials.....	\$795,412	\$579,954	\$384,320
PRODUCTS.			
Total value.....	\$7,446,364	\$8,406,425	\$6,730,974
Shoddy and mungo:			
Pounds.....	48,375,724	54,401,295	39,014,661
Value.....	\$5,699,260	\$6,831,689	\$5,388,378
Wool extract:			
Pounds.....	5,637,514	6,375,768	4,980,825
Value.....	\$365,528	\$727,912	\$620,504
Waste:			
Pounds.....	2,237,743	42,504	1,608,470
Value.....	\$275,545	\$1,544	\$148,043
Flocks:			
Pounds.....	1,638,013	2,968,203	2,080,758
Value.....	\$107,697	\$143,536	\$131,894
All other products.....	\$268,708	\$365,805	\$151,494
Work on materials for others.....	\$229,626	\$335,939	\$290,661
MACHINERY.			
Pickers, number.....	346	317	(¹)
Garnett machines, number.....	158	116	(²)

¹ In addition, shoddy to the value of \$367,278 was made for sale by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.
² Not reported.

Silk and silk goods.—The following table, which presents statistics for the manufacture of silk and silk goods, includes data for establishments that make a specialty of throwing and winding silk:

Table 54

	1909	1904	1899
MATERIALS.			
Total cost.....	\$107,766,916	\$75,861,188	\$62,406,685
Silk:			
Raw—			
Pounds.....	17,472,204	11,572,783	9,760,770
Cost.....	\$67,787,037	\$45,318,416	\$40,721,877
Spun—			
Pounds.....	2,212,972	1,951,201	1,550,261
Cost.....	\$4,845,789	\$4,310,061	\$3,406,059
Artificial—			
Pounds.....	914,494	496,151	6,066
Cost.....	\$1,926,894	\$1,623,473	\$10,380
Organzine and tram, purchased—			
Pounds.....	3,377,972	3,236,744	2,328,404
Cost.....	\$14,679,719	\$14,562,426	\$10,539,622
Fringe and floss, including waste, noils, etc., purchased—			
Pounds.....	2,402,960	149,811	1,735,179
Cost.....	\$1,637,187	\$187,159	\$1,008,947
Yarns, other than silk:			
Cotton, including mercerized—			
Pounds.....	14,111,878	9,018,296	6,664,000
Cost.....	\$5,611,582	\$3,957,989	\$1,996,233
Woolen or worsted—			
Pounds.....	610,588	443,155	229,461
Cost.....	\$785,989	\$409,867	\$107,779
Mohair—			
Pounds.....	710,108	138,389	194,810
Cost.....	\$640,529	\$137,097	\$107,365
All other—			
Pounds.....	253,780	130,690	108,388
Cost.....	\$456,597	\$106,841	\$134,966
Chemicals and dyestuffs.....	\$1,062,313	\$666,982	(¹)
All other materials.....	\$8,150,280	\$5,488,868	\$4,313,418
PRODUCTS.			
Total value.....	\$196,911,697	\$132,983,072	\$107,254,258
Broad silks:			
Yards.....	185,707,316	124,871,215	87,636,883
Value.....	\$107,881,146	\$66,917,752	\$52,182,516
Plain and fancy—			
All silk—			
Yards.....	81,934,158	68,293,042	53,578,488
Value.....	\$53,282,704	\$40,741,490	\$33,832,111
Silk mixed—			
Yards.....	24,742,556	9,061,025	8,962,315
Value.....	\$14,207,861	\$5,343,472	\$5,450,710
Jacquard—			
All silk—			
Yards.....	12,249,090	8,143,091	7,532,229
Value.....	\$9,839,345	\$5,927,063	\$5,379,061
Silk mixed—			
Yards.....	6,043,656	2,338,120	1,677,466
Value.....	\$3,473,799	\$1,229,648	\$1,260,321
Piece-dyed—			
All silk—			
Yards.....	19,693,293	21,334,584	7,331,861
Value.....	\$11,353,242	\$9,278,445	\$3,342,167
Silk mixed—			
Yards.....	40,044,433	15,608,353	8,545,884
Value.....	\$15,728,195	\$4,399,684	\$2,868,506
Velvets:			
Yards.....	10,093,583	7,292,315	5,122,249
Value.....	\$4,767,990	\$3,161,206	\$2,479,903
Pinches:			
Yards.....	2,759,411	2,547,367	3,548,654
Value.....	\$2,104,768	\$1,946,815	\$2,480,068
Tapestries and upholstery:			
Yards.....	236,717	1,766,210	1,333,119
Value.....	\$382,820	\$1,559,982	\$1,008,835
Ribbons.....	\$32,744,873	\$21,890,604	\$18,467,179
Laces, nets, veils, veiling, etc.....	\$1,350,850	\$745,480	\$803,194
Embroideries.....	\$485,322	\$112,362	\$67,625
Fringes and gimps.....	\$834,527	\$1,016,964	\$444,787
Braids and bindings.....	\$4,482,248	\$3,493,977	\$1,522,565
Trimnings.....	\$3,580,448	\$3,107,697	\$2,084,076
Machine twist:			
Pounds.....	1,088,780	962,996	987,917
Value.....	\$6,341,719	\$5,521,055	\$5,997,974
Sewing, embroidery, wash, fringe, and floss silks:			
Pounds.....	747,245	811,711	739,301
Value.....	\$4,179,355	\$4,625,016	\$4,248,216
Organzine and tram, for sale:			
Pounds.....	2,740,319	2,025,645	2,468,387
Value.....	\$12,550,510	\$9,190,650	\$11,167,191
Spun silk, for sale:			
Pounds.....	779,462	570,529	437,459
Value.....	\$2,104,066	\$1,660,547	\$1,626,227
All other products.....	\$4,495,675	\$5,227,800	\$1,027,472
Work done on materials for others.....	\$8,364,350	\$3,716,056	\$2,337,220

¹ Does not include waste, noils, etc.
² Not reported separately.
³ In addition, silk and silk goods to the value of \$1,218,101 were made by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

The increase in the cost of materials and in the value of products for the period 1899-1909 was 72.7 and 83.6 per cent, respectively. Considerable duplication occurs in the total cost of materials and in the total value of products shown in the preceding table. To eliminate this duplication the following method may be used: (1) organzine and tram, reported as material and product, is deducted from both materials and products, respectively; (2) spun silk, reported as a product, is deducted from both materials and products; (3) fringe and floss, reported as material, is deducted from both materials and products; and (4) amount received for contract work, reported as product, is deducted from products.

The total production of broad weaves in 1909 was 198,787,027 running yards, single width, valued at \$115,136,724, compared with 97,940,935 yards, valued at \$58,122,622, in 1899, the increase in quantity being 103 per cent and that in value 98.1 per cent. Broad silks formed over nine-tenths of all broad weaves in 1909, the increase in the output between 1899 and 1909 being 111.9 per cent. The increase in the output of all other broad weaves combined—velvets, plushes, tapestries, and upholsteries—was only 26.9 per cent.

In 1899 all-silk goods constituted 78.1 per cent of the broad-silk product, and silk-mixed goods 21.9 per cent, whereas in 1909 the proportion for the latter had risen to 38.1 per cent and that for the former had fallen to 61.9 per cent. The change was due to an increase during the decade of 268.9 per cent in the output of silk-mixed broad silks, while that for all-silk was only 67.9 per cent.

Between 1899 and 1909 the rate of increase in the

output of broad woven silk goods was much greater than that for either broad woven cotton or broad woven woolen goods, the increases for the three classes being 103, 40.3, and 33.8 per cent, respectively.

Woolen and worsted goods.—The following table presents statistics for establishments engaged primarily in the manufacture of woolen and worsted goods. The total value of products for the industry involves considerable duplication, due to the use of partly finished products of some establishments as material for others. In 1909 the establishments in this industry produced 570,743,797 square yards of woven goods, exclusive of upholstery goods and sundries, compared with 505,821,956 square yards in 1904 and 426,572,856 in 1899, the increase for the decade being 33.8 per cent. The value of these goods was \$296,447,594 in 1909, \$234,737,036 in 1904, and \$183,306,664 in 1899, an increase for the decade of 61.7 per cent. The highest rate of increase was reported for the all-wool woven group, the output of which increased 49.3 per cent in quantity. The output of unions decreased decidedly, while that of cotton-warp woven goods increased 37.6 per cent in quantity. The all-wool yardage constituted 56.6 per cent of the total in 1909 and 50.7 per cent in 1899, while the union yardage constituted 6.6 per cent of the total in 1909, as compared with 13.4 per cent in 1899. Cotton-warp fabrics formed about the same proportion of the total in both years—somewhat over one-third. There has thus been a considerable shift during the decade from the manufacture of cotton-mixed to that of all-wool goods.

Table 55	1909	1904	1899		1909	1904	1899
MATERIALS.				MATERIALS—continued.			
Total cost.....	\$278,438,570	\$197,489,306	\$148,087,178	Yarns purchased:			
Wool:				Woolen—			
In condition purchased—				Pounds.....	931,222	5,750,088	5,906,862
Pounds.....	474,755,366	418,703,811	330,178,552	Cost.....	\$558,270	\$2,622,882	\$2,676,143
Cost.....	\$136,666,917	\$105,433,451	\$78,803,830	Worsted—			
Domestic—				Pounds.....	59,148,771	31,047,516	25,110,939
Pounds.....	310,602,279	319,800,490	250,393,205	Cost.....	\$56,093,701	\$24,904,511	\$19,495,251
Cost.....	\$85,018,238	\$78,673,136	\$59,046,158	Merino—			
Foreign—				Pounds.....	1,971,709	2,458,085	3,634,679
Pounds.....	164,153,087	98,903,321	79,785,347	Cost.....	\$318,456	\$581,107	\$664,527
Cost.....	\$51,648,679	\$26,760,315	\$19,757,672	Cotton—			
Equivalent in scoured condition,				Pounds.....	39,169,388	32,598,072	35,342,726
pounds.....	290,706,970	241,280,065	192,705,519	Cost.....	\$10,492,185	\$8,032,773	\$6,814,279
Mohair, camel, alpaca, and vicuna				Silk and spun silk—			
hair:				Pounds.....	282,536	412,307	131,915
Pounds.....	7,805,422	6,507,631	5,003,966	Cost.....	\$1,142,663	\$1,679,883	\$529,789
Cost.....	\$2,399,123	\$1,957,581	\$1,857,707	All other—			
Cow and other animal hair:				Pounds.....	1,046,735	411,779	1,127,926
Pounds.....	17,356,100	22,987,332	20,535,079	Cost.....	\$40,739	\$21,118	\$65,434
Cost.....	\$932,911	\$1,369,776	\$1,170,756	Chemicals and dyestuffs.....	\$8,320,928	\$7,456,550	\$6,595,160
Cotton:				All other materials.....	\$25,464,278	\$18,086,162	\$15,307,551
Pounds.....	20,024,061	32,613,408	40,244,710				
Cost.....	\$2,515,409	\$4,072,907	\$3,280,000	PRODUCTS.			
Tailor's clippings, rags, etc.:				Total value.....	\$419,743,521	\$307,941,710	\$238,744,608
Pounds.....	40,402,460	79,367,290	(¹)	All-wool woven goods:			
Cost.....	\$2,856,966	\$5,668,634	(¹)	Square yards.....	322,944,365	260,567,488	216,359,702
Shoddy, mungo, and wool extract				Value.....	\$219,853,767	\$158,390,336	\$117,757,169
purchased:				Wool cloths, doeskins, cassi-			
Pounds.....	21,454,187	31,919,456	33,036,767	meres, chevliots, etc.—			
Cost.....	\$3,058,214	\$4,472,666	\$4,070,836	Square yards.....	40,843,979	42,487,566	34,298,426
Waste and noils of wool, mohair,				Value.....	\$29,291,059	\$29,556,252	\$22,645,969
camel's hair, etc., purchased:				Worsted coatings, serges, and			
Pounds.....	26,473,311	26,032,838	15,714,171	suitings—			
Cost.....	\$7,523,283	\$6,056,227	\$3,891,369	Square yards.....	119,655,069	59,592,811	54,033,679
Tops purchased:				Value.....	\$101,903,153	\$59,731,196	\$43,003,550
Pounds.....	20,828,245	9,150,929	5,566,108				
Cost.....	\$14,614,527	\$5,073,078	\$2,863,546				

¹ Not reported separately.

² In addition, in 1909, woolen and worsted goods, to the value of \$1,281,282, and in 1904, to the value of \$362,966, were made by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

Table 55—Continued.	1909	1904	1899	PRODUCTS—continued.	1909	1904	1899
PRODUCTS—continued.				PRODUCTS—continued.			
All-wool woven goods—Continued.				Cotton-warp woven goods—Contd.			
Woolen overcoatings, cloakings, kerseys, etc.—				Worsted filling dress goods, cashmeres, serges, mohairs, etc.—			
Square yards.....	14,697,770	22,411,530	18,729,194	Square yards.....	65,112,981	49,300,369	45,784,011
Value.....	\$11,230,856	\$16,934,112	\$16,131,709	Value.....	\$14,798,965	\$12,711,554	\$10,425,206
Worsted overcoatings and cloakings—				Wool filling dress goods, and repellents—			
Square yards.....	654,404	1,057,668	877,133	Square yards.....	12,916,060	12,139,080	7,496,898
Value.....	\$821,688	\$546,170	\$567,390	Value.....	\$2,741,516	\$3,230,561	\$1,890,488
Wool dress goods, sackings, tricots, etc., and opera and similar flannels—				Domest flannels and shirtings—			
Square yards.....	29,099,956	48,874,396	33,594,212	Square yards.....	4,571,765	4,285,838	4,555,013
Value.....	\$16,385,498	\$19,826,017	\$12,976,489	Value.....	\$911,967	\$769,476	\$976,465
Worsted dress goods, cashmeres, serges, bunting, etc.—				Linings, Italian cloths, and lastings—			
Square yards.....	105,801,349	66,428,825	57,712,086	Square yards.....	28,928,148	17,619,325	10,157,039
Value.....	\$54,030,376	\$27,802,181	\$16,316,392	Value.....	\$9,008,799	\$4,505,927	\$2,228,494
Carriage cloths—				Blankets—			
Square yards.....	1,782,855	1,741,765	1,220,408	Square yards.....	9,746,841	9,267,144	11,107,104
Value.....	\$947,862	\$964,557	\$696,969	Value.....	\$2,684,919	\$2,218,243	\$2,241,342
Flannels for underwear—				Horse blankets—			
Square yards.....	3,856,353	8,710,121	9,324,720	Square yards.....	4,210,098	6,307,836	5,792,315
Value.....	\$1,257,271	\$2,045,858	\$2,344,559	Value.....	\$1,676,942	\$1,063,154	\$1,252,824
Blankets—				Carriage robes—			
Square yards.....	5,137,903	7,316,179	5,454,173	Square yards.....	2,989,444	1,309,166	1,250,233
Value.....	\$3,228,797	\$2,751,029	\$2,316,968	Value.....	\$1,396,595	\$1,139,217	\$615,233
Horse blankets—				All other—			
Square yards.....	247,995	740,237	514,952	Square yards.....	327,664		32,576
Value.....	\$185,430	\$418,219	\$256,211	Value.....	\$245,369		\$14,150
Woven shawls—				Upholstering goods and sundries.....	\$1,988,330	\$1,625,233	\$3,259,727
Square yards.....	704,153	895,777	600,104	Woolen and worsted—			
Value.....	\$404,583	\$557,370	\$500,523	Square yards.....	1,176,542	1,060,739	447,568
All other—				Value.....	\$1,528,648	\$908,937	\$742,121
Square yards.....	463,179	310,603	615	All other.....	\$457,082	\$716,296	\$2,517,906
Value.....	\$167,194	\$257,375	\$510	Partially manufactured products for sale.....	\$115,032,455	\$96,496,672	\$47,589,422
Union, or cotton mixed, woven goods: Square yards.....	37,453,351	63,197,407	57,334,570	Yarns:			
Value.....	\$14,327,973	\$26,288,407	\$23,111,696	Woolen—			
Unions, tweeds, chevots, cassimeres, etc.—				Pounds.....	28,520,493	42,878,320	32,699,851
Square yards.....	18,917,478	35,103,110	30,767,915	Value.....	\$7,505,412	\$9,993,594	\$6,864,626
Value.....	\$7,780,854	\$15,050,726	\$13,965,830	Worsted—			
Overcoatings and cloakings—				Pounds.....	88,323,953	55,475,235	143,003,843
Square yards.....	4,281,739	5,373,053	6,087,366	Value.....	\$90,395,543	\$49,142,077	\$39,581,425
Value.....	\$2,363,381	\$3,353,758	\$3,518,613	Woolen, union or merino—			
Sackings, tricots, dress goods, and opera and similar flannels—				Pounds.....	10,249,625	8,824,064	
Square yards.....	4,319,539	11,690,740	11,176,752	Value.....	\$2,143,416	\$2,526,018	15,974,567
Value.....	\$1,776,721	\$4,926,596	\$3,669,584	Worsted, union or merino—			
Flannels for underwear—				Pounds.....	3,761,737	3,314,549	\$4,668,125
Square yards.....	7,063,572	7,273,761	6,217,094	Value.....	\$3,522,812	\$2,490,558	
Value.....	\$1,308,369	\$1,528,928	\$1,284,578	All other—			
Blankets—				Pounds.....	3,195,553	2,799,960	4,536,105
Square yards.....	1,717,758	3,114,110	1,530,696	Value.....	\$974,579	\$1,162,795	\$1,451,090
Value.....	\$650,714	\$1,198,706	\$561,649	Worsted tops and stubbing—			
All other—				Pounds.....	11,321,279	4,772,582	(1)
Square yards.....	1,153,265	642,633	1,554,747	Value.....	\$8,027,231	\$2,555,171	(2)
Value.....	\$447,934	\$229,693	\$381,442	Noils—			
Cotton-warp woven goods:				Pounds.....	27,479,293	15,379,600	12,176,943
Square yards.....	210,346,081	182,057,061	152,878,584	Value.....	\$9,938,589	\$4,865,976	\$3,354,187
Value.....	\$62,265,854	\$50,058,293	\$42,437,799	Waste—			
Wool filling cassimeres, doeskins, jeans, tweeds, coatings, etc.—				Pounds.....	24,057,580	17,946,676	8,163,294
Square yards.....	45,244,866	34,602,165	37,160,449	Value.....	\$3,524,912	\$2,443,183	\$1,229,669
Value.....	\$12,107,320	\$10,877,081	\$11,024,538	All other products.....	\$3,250,557	\$3,394,232	\$3,019,906
Worsted filling cassimeres, doeskins, jeans, tweeds, coatings, etc.—				Work on materials for others.....	\$3,026,255	\$1,188,587	\$1,568,753
Square yards.....	29,220,252	16,688,620	12,663,719				
Value.....	\$15,009,081	\$6,969,402	\$7,267,508	MACHINERY.			
Wool filling overcoatings and cloakings—				Sets of cards.....	6,315	6,990	15,695
Square yards.....	2,075,502	8,198,406	3,917,498	Woolen.....	4,500	5,178	
Value.....	\$771,879	\$2,478,878	\$1,430,430	Worsted.....	1,581	1,367	
Satinets and linseys—				Cotton.....	234	425	
Square yards.....	5,102,460	22,339,112	13,051,729	Spindles.....	4,287,640	3,747,394	3,277,607
Value.....	\$912,182	\$4,074,800	\$2,873,181	Producing.....	3,553,194	3,228,423	2,873,838
				Doubling and twisting.....	734,446	519,511	404,679
				Looms, all classes.....	72,532	63,867	61,995
				Wool-combing machines.....	1,978	1,440	1,317

¹ Worsted tops and stubbing included with worsted yarn.

² Cards not fully reported.

IRON AND STEEL.

Tables 56 to 61, inclusive, present statistics for blast furnaces, steel works and rolling mills, tin and terne plate plants, and wire mills. In many establishments other industries are carried on in connection with the operations of steel works and rolling mills. In these cases a separation of the data for the industries as defined by the Census Bureau was secured by taking separate reports for the different departments of the respective establishments. In this way the statistics for blast furnaces operated in connection with steel

works were segregated and combined with those for furnaces independently operated, and the statistics for the tin and terne plate dipping departments of establishments which also roll the black plate were separated and combined with those for establishments which dip only purchased plate. Statistics for the finished wire products of mills which roll wire rods as well as draw wire and manufacture wire nails, fencing, etc., were secured and are given in combination with those for wire mills which manufacture only from purchased wire rods. The finished wire products manu-

factured in rolling mills are, however, included in the products of these mills, so that the statistics for wire mills and rolling mills to this extent duplicate each other. It should also be explained that the rolling-mill departments of tin and terne plate establishments are credited with their entire output of black plate, as if it were produced for sale instead of for further treatment at the same establishment.

Blast furnaces.—The statistics for the blast-furnace industry are given in the following table.

In 1909, 25,651,798 tons of pig iron, valued at \$387,830,443, were produced and in 1899, 14,447,791 tons, valued at \$206,512,755, the increase in quantity during the decade being 77.5 per cent and that in value 87.8 per cent. Since 1904 was a year of par-

tial depression in the iron and steel industry and the pig-iron product was less in that year than in 1903 or 1902, neither the small increases shown in quantity and value for 1904 as compared with 1899 nor the large increases shown for 1909 as compared with 1904 are representative of the normal rate of growth for the industry. Features in the development of the industry are the increase in the proportion of pig iron produced for consumption in other departments of the works of the producing company and the increase in the proportion of the product passed on in a molten condition to undergo further processes without being cast into pigs. The *ton of 2,240 pounds* is used in showing quantities except when otherwise stated.

Table 56	1909	1904 ¹	1899 ¹		1909	1904 ¹	1899 ¹
MATERIALS.				PRODUCTS—continued.			
Total cost.....	\$320,637,889	\$178,941,918	\$131,503,655	<i>Pig iron, classified according to disposition—Continued.</i>			
Iron ore:				Produced for sale—			
Tons.....	48,353,677	30,032,862	25,366,894	Tons.....			
Cost.....	\$187,264,601	\$100,945,369	\$65,902,022	9,793,595	6,697,080	(⁶)	
Domestic—				Value.....			
Tons.....	46,005,930	29,202,944	24,612,511	\$148,443,426	\$90,043,530	(⁶)	
Cost.....	\$177,589,789	\$96,206,240	\$61,795,473	<i>Pig iron, classified by grades (tons):</i>			
Foreign—				Bessemer, (0.04 to 0.10 per cent			
Tons.....	1,747,747	829,918	754,383	in phosphorus).....			
Cost.....	\$9,674,812	\$4,739,123	\$4,107,449	10,147,052	8,894,584	8,475,530	
Mill cinder, scrap, etc.:				Low phosphorus (below 0.04 per			
Tons.....	1,982,530	1,865,385	1,600,313	cent in phosphorus).....			
Cost.....	\$5,544,859	\$3,830,961	\$3,772,385	248,720	192,795	(⁶)	
Fluxes:				Basic.....			
Tons.....	13,570,845	8,325,209	7,324,743	7,741,759	2,553,940	937,439	
Cost.....	\$12,239,493	\$6,888,647	\$5,054,725	Foundry.....			
Fuel, ²				5,539,410	3,675,310	3,510,300	
Coke—				Forge or mill.....			
Tons (2,000 pounds).....	31,436,536	19,739,671	16,461,533	586,685	601,677	1,057,616	
Cost.....	\$102,134,423	\$57,126,997	\$38,976,770	Malleable Bessemer.....			
Charcoal—				934,211	316,964	(⁶)	
Bushels.....	38,032,618	³ 37,273,569	30,677,585	White, mottled, and miscellane-			
Cost.....	\$2,787,026	³ \$2,521,887	\$1,823,881	ous.....			
Anthracite coal ² —				Direct castings.....			
Tons.....	265,401	560,637	886,564	110,810	98,627	208,323	
Cost.....	\$904,102	\$1,812,779	\$2,297,419	16,181	9,469	7,123	
Bituminous coal ² —				Ferrous alloys.....			
Tons.....	102,833	801,640	832,235	326,970	280,259	251,460	
Cost.....	\$163,561	\$1,340,997	\$1,101,312	142,223	169,630	163,672	
All other materials.....	\$9,594,824	\$4,474,281	\$12,574,241	Spiegeleisen.....			
				82,208	57,072	51,878	
				Ferromanganese.....			
				Ferrosilicon, including Besse-			
				mer ferrosilicon (7 per cent			
				or over in silicon) and ferro-			
				phosphorus.....			
				102,539	53,557	35,916	
				<i>Pig iron, classified by method of delivery</i>			
				<i>or casting (tons):</i>			
				Delivered in molten condition...			
				12,197,686	5,898,744	(⁶)	
				Sand cast.....			
				7,655,568	6,078,844	(⁶)	
				Machine cast.....			
				5,096,797	4,307,108	(⁶)	
				Chill cast.....			
				685,566	329,400	(⁶)	
				Direct castings.....			
				16,181	9,469	7,123	
				EQUIPMENT.			
				Furnaces in active establishments:			
				Completed stacks at end of year—			
				Number.....			
				388	343	343	
				Daily capacity, tons.....			
				101,447	78,180	54,425	
				Active during the year—			
				Number.....			
				370	317	325	
				Daily capacity, tons.....			
				98,973	73,884	(⁶)	
				In course of construction at end			
				of year—			
				Number.....			
				10	4	16	
				Daily capacity, tons.....			
				4,100	1,375	7,275	
				Pig-casting machines, number.....			
				104	(⁶)	(⁶)	
				Granulated slag pits:			
				Number.....			
				85	47	(⁶)	
				Annual capacity, tons.....			
				5,699,259	3,338,200	(⁶)	
				Gas engines operated with blast-fur-			
				nace gas:			
				Number.....			
				85	(⁶)	(⁶)	
				Horsepower.....			
				198,040	(⁶)	(⁶)	

¹ Not including the statistics for a blast furnace operated by a penal institution.
² The figures for 1909 cover fuel for smelting only; those for 1904 and 1899 include fuel for steam raising.
³ Not including 2,486,700 bushels of charcoal and its value, the cost of stumpage and labor being reported as expense.
⁴ Coal and coke mixed, 86,420 tons; balance coke.
⁵ Includes 52,992 tons of mixed charcoal and coke pig iron.
⁶ Not reported.

Steel works and rolling mills.—Table 57 presents comparative statistics of steel works and rolling mills, including those of forges and bloomeries. Section I of the table deals with materials. The second section deals with products. It shows separately each of the products properly designated as rolled and forged steel

and iron, but contains also a miscellaneous item, which includes the value added to such products in their conversion into more highly manufactured articles by the same establishment, so that the total includes the entire value of output of the establishments in the industry. This total and also the separate total for

rolled and forged products alone include no duplication of quantity or value of products within any given establishment itself, but there is considerable duplication due to the use of the product of one establishment as raw material for another establishment, whether the latter be owned by a separate concern or by the same company.

Section III of the table, headed "Steel," gives the entire quantity of crude steel produced by the steel works, including that subjected to further processes of manufacture whether by the establishment in which produced or by other establishments. The value of this steel appears, therefore, distributed among various items under Section II. Section IV of the table gives in detail the quantity and value of the more highly elaborated products made by the rolling mills themselves from the rolling-mill products specified in Section II. The entire value of these products appears in Section II, either as part of the various items of rolled products or in the miscellaneous item of value added to rolling-mill products by further manufacture. The fifth section of the table deals with products sold for export by rolling-mill concerns; it includes only the products so sold directly by the establishments producing them and not such as may be sent abroad by others who purchase from the manufacturer. The sixth section deals with equipment.

In 1909 the rolled, forged, and cast-steel products specifically classified aggregated 26,723,274 tons, valued at \$863,342,711, and in 1899, 15,055,626 tons, valued at \$510,906,040, the increase in tonnage being 77.5 per cent and in value 69 per cent. The *ton of 2,240 pounds* is used in showing quantities except when otherwise stated.

	1909	1904	1899
I. MATERIALS.			
Total cost.....	\$657,500,856	\$441,204,432	\$390,895,277
Iron and steel: ¹			
For furnaces and hot rolls—			
Tons.....	30,388,755	22,235,682	18,414,717
Cost.....	\$515,769,588	\$349,971,512	\$315,726,885
Pig iron and ferroalloys—			
Tons.....	19,076,889	12,191,228	10,411,281
Cost.....	\$297,471,122	\$172,101,436	\$151,064,348
Pig iron—			
Tons.....	18,712,304	(²)	(²)
Cost.....	\$282,663,740	(²)	(²)
Ferroalloys—spiegeleisen, ferromanganese, etc.—			
Tons.....	364,585	(²)	(²)
Cost.....	\$14,807,382	(²)	(²)
Scrap, including old rails not intended for rerolling—			
Tons.....	4,803,617	5,124,277	4,128,980
Cost.....	\$72,722,831	\$67,601,248	\$66,852,621
Ingots, blooms, billets, slabs, muck and scrap bar, rerolling rails, and sheet and tin-plate bars—			
Tons.....	6,508,249	4,920,177	3,876,456
Cost.....	\$145,575,635	\$110,268,828	\$97,809,926
Roller forms for further manufacture—			
Skelp—			
Tons.....	176,717	259,643	(²)
Cost.....	\$5,704,856	\$7,331,935	(²)
Wire rods—			
Tons.....	146,425	161,914	136,725
Cost.....	\$4,252,695	\$4,774,383	\$5,419,617
Iron ore:			
Tons.....	835,338	549,995	346,310
Cost.....	\$4,292,963	\$2,396,792	\$1,348,809
All other materials.....	\$127,480,754	\$76,729,810	\$68,399,956

	1909	1904	1899
II. PRODUCTS.			
Total value.....	\$985,722,534	\$673,965,026	\$597,211,716
Rolled, forged, and other classified products, steel and iron:			
Tons.....	26,723,274	18,218,233	15,055,626
Value.....	\$863,342,711	\$583,288,243	\$510,906,040
Rails—			
Tons.....	2,856,599	4,214,605	4,221,337
Value.....	\$81,128,295	\$58,256,750	\$46,533,159
Bessemer steel—			
Tons.....	1,643,527	2,065,024	
Value.....	\$44,727,515	\$54,627,498	
Open-hearth steel, basic—			
Tons.....	1,215,072	128,661	2,250,457
Value.....	\$36,400,780	\$3,608,562	\$49,501,979
Rerolled or renewed rails—			
Tons.....	106,352	99,530	(³)
Value.....	\$2,683,017	\$2,450,328	(³)
Rail fastenings (splice bars, tie-plates, fishplates, etc.)—			
Tons.....	396,911	174,055	(³)
Value.....	\$14,488,412	\$5,663,082	(³)
Structural shapes, not including plates used for making girders—			
Tons.....	2,123,630	954,537	556,983
Value.....	\$65,564,595	\$32,730,991	\$29,361,522
Steel—			
Tons.....	2,102,300	850,062	829,892
Value.....	\$64,553,466	\$32,585,701	\$28,309,966
Open-hearth—			
Tons.....	1,934,230	618,391	566,092
Value.....	\$39,739,948	\$21,496,631	\$19,528,249
Bessemer—			
Tons.....	168,070	331,671	263,800
Value.....	\$5,663,518	\$11,089,170	\$8,781,717
Iron—			
Tons.....	21,320	4,475	27,991
Value.....	\$711,127	\$145,260	\$1,021,556
Bars and rods, including merchant, shovel, finger and horse-shoe bars, spike, chain bolt, and nut rods, etc. (but not including wire rods, sheet and tin-plate bars, splice bars, and bars for reinforced concrete):			
Tons.....	3,784,248		
Value.....	\$121,458,423		
Bars for reinforced concrete:			
Tons.....	191,358	2,442,810	2,493,159
Value.....	\$5,588,923	\$24,069,122	\$169,597,221
Wire rods:			
Tons.....	2,296,279	1,792,704	916,587
Value.....	\$61,947,956	\$32,966,081	\$35,529,529
Plates and sheets, not including black plates or sheets for tinning, nail and tack plates, tie-plates, fishplates or armor plates:			
Tons.....	3,322,783	1,856,469	1,498,066
Value.....	\$183,272,393	\$77,802,001	\$68,106,223
Black plates, or sheets, for tinning:			
Tons.....	631,435	504,025	394,014
Value.....	\$30,955,967	\$26,297,079	\$20,967,806
Skelp, flue and pipe:			
Tons.....	2,084,286	1,557,690	
Value.....	\$64,514,728	\$46,780,202	
Hoops, bands, and cotton ties:			
Tons.....	341,043	337,223	1,125,189
Value.....	\$10,429,681	\$12,760,019	\$43,159,747
Nail and tack plates:			
Tons.....	68,557	86,601	97,664
Value.....	\$2,540,022	\$2,462,076	\$3,118,558
Axles, car, locomotive, automobile, wagon, carriage, etc., rolled or forged:			
Tons.....	102,348	83,585	102,606
Value.....	\$3,831,344	\$2,875,829	\$4,482,567
Armor plates, gun forgings, and ordnance:			
Tons.....	26,845	24,433	15,362
Value.....	\$10,649,079	\$10,549,620	\$7,526,479
Blooms, billets, and slabs, produced for sale or for transfer to other works of same company:			
Tons.....	4,887,796		
Value.....	\$108,514,747		
Rolled forging blooms and billets produced for sale or for transfer to other works of same company:			
Tons.....	84,388	4,823,555	4,172,266
Value.....	\$2,247,133	\$109,611,164	\$96,321,867
Sheet and tin-plate bars produced for sale or for transfer to other works of same company:			
Tons.....	1,652,761		
Value.....	\$37,745,269		
Muck and scrap bar produced for sale or for transfer to other works of same company:			
Tons.....	174,496	150,926	303,681
Value.....	\$4,966,211	\$3,940,996	\$5,940,587
All other rolled steel or iron:			
Tons.....	568,627	377,665	506,890
Value.....	\$39,570,061	\$16,743,727	\$19,202,606

For footnotes, see page 490.

Table 57—Continued.	1909	1904	1899	1909	1904	1899	
II. PRODUCTS—continued.				IV. MANUFACTURES FROM ROLLING-MILL PRODUCTS—continued.			
Rolled, forged, and other classified products, steel and iron—Continued.							
Ingots produced for sale or for transfer to other works of same company:							
Tons.....	142,745	196,404	103,707	Horse and mule shoes:			
Value.....	\$3,593,726	\$3,985,310	\$2,781,145	Kegs (200 pounds).....	996,383	(?)	
Direct steel castings:				Value.....	\$7,202,897	(?)	
Tons.....	504,856	287,325	177,156	Springs, car, furniture, and all other, not including wire springs:			
Value.....	\$38,862,448	\$20,600,136	\$14,609,893	Tons.....	6,191	(?)	
All other forged steel and iron, not including remanufactures of rolling-mill products:				Value.....	\$374,924	(?)	
Tons.....	365,986	274,061	81,009	Switches, frogs, crossings, etc.:			
Value.....	\$18,740,241	\$15,684,967	\$6,665,741	Tons.....	28,608	(?)	
All other products.....	\$122,379,823	\$88,676,786	\$86,305,676	Value.....	\$2,471,008	(?)	
Miscellaneous steel and iron products not rolled, including value added to iron and steel rolling-mill products by further manufacture				Galvanized plates or sheets:			
Scrap steel or iron produced for sale or for transfer to other works of same company:				Tons.....	431,658	(?)	
Tons.....	1,238,554	877,177	(?)	Value.....	\$25,912,056	(?)	
Value.....	\$18,163,624	\$11,079,831	(?)	Stamped ware:			
All products other than steel and iron.....	\$17,681,830	\$15,619,668	(?)	Tons.....	24,612	(?)	
				Value.....	\$2,206,707	(?)	
III. STEEL.				Shovels, spades, scoops, etc.....	\$540,321	(?)	
Total production:				V. PRODUCTS SOLD FOR EXPORT.			
Tons.....	23,473,718	13,666,408	10,655,000	(By establishments producing.)			
Value (included above).....	\$478,736,988	\$260,884,712	\$212,538,875	Total tons.....	867,646	(?)	
Classified according to process:				Rails.....	317,455	(?)	
Open-hearth—				Rail fastenings.....	20,118	(?)	
Tons.....	14,192,378	5,817,957	3,044,356	Pipes and tubes, wrought welded.....	89,877	(?)	
Value.....	\$203,528,201	\$120,322,707	\$71,855,172	Sheet and tin-plate bars.....	85,123	(?)	
Basic—				Plates and sheets.....	80,706	(?)	
Tons.....	13,210,419	5,062,152	2,153,835	Galvanized plates or sheets.....	79,246	(?)	
Value.....	\$262,529,822	\$94,390,927	\$43,509,506	Structural shapes.....	69,764	(?)	
Acid—				Bars and rods.....	48,938	(?)	
Tons.....	981,859	755,805	890,521	Wire rods.....	18,738	(?)	
Value.....	\$30,998,379	\$25,931,780	\$28,345,666	Blooms, billets, and slabs.....	18,021	(?)	
Bessemer—				Skeip.....	10,703	(?)	
Tons.....	9,174,067	7,768,141	7,532,028	Miscellaneous.....	29,457	(?)	
Value.....	\$177,064,776	\$134,549,580	\$132,113,984	VI. EQUIPMENT.			
Crucible and miscellaneous—				Steel plants: Daily capacity of steel furnaces and converters, tons of steel, double turn.....	108,716	76,482	53,745
Tons.....	107,373	80,310	108,616	Open-hearth furnaces—			
Value.....	\$8,144,011	\$6,012,425	\$8,569,719	Number.....	687	481	307
Classified according to form:				Daily capacity, tons of steel, double turn.....	61,601	34,243	18,245
Ingots—				Basic—			
Tons.....	22,968,862	13,379,083	10,507,844	Number.....	549	339	168
Value.....	\$439,874,540	\$240,284,576	\$197,928,982	Daily capacity, tons of steel, double turn.....	55,273	26,902	12,151
Castings—				Acid—			
Tons.....	504,856	287,325	177,156	Number.....	138	142	139
Value.....	\$38,862,448	\$20,600,136	\$14,609,893	Daily capacity, tons of steel, double turn.....	6,328	7,341	6,094
Duplex process—open-hearth steel partly purified in Bessemer converters before finishing in open-hearth furnaces (included above), tons.....	522,682	(?)	(?)	Converters, Bessemer or modified Bessemer—			
Alloyed steels, nickel, tungsten, titanium, chrome, vanadium, etc. (included above), tons.....	158,216	(?)	(?)	Number.....	101	81	70
Classified according to process:				Daily capacity, tons of steel, double turn.....	48,823	41,448	34,925
Open-hearth.....	100,335	(?)	(?)	Crucible furnaces—			
Basic.....	86,242	(?)	(?)	Number.....	257	146	159
Acid.....	14,093	(?)	(?)	Number of pots that can be used at a heat.....	3,840	2,457	2,528
Bessemer.....	45,324	(?)	(?)	Daily capacity, tons of steel, double turn.....	840	693	575
Crucible and miscellaneous.....	12,557	(?)	(?)	All other steel furnaces—			
Classified according to form:				Number.....	16	36	(?)
Ingots.....	151,300	(?)	(?)	Daily capacity, tons of steel, double turn.....	292	98	66
Castings.....	6,916	(?)	(?)	Metal mixers—			
				Number.....	59	(?)	(?)
IV. MANUFACTURES FROM ROLLING-MILL PRODUCTS.				Capacity, tons.....	14,343	(?)	(?)
(Made in mill producing, value previously included.)				Rolling mills: Daily capacity of rolled steel and iron, double turn, tons.....	150,403	105,591	86,964
Wire and wire products:				<p>¹ Includes materials purchased or transferred to the establishment reporting from other works of the company.</p> <p>² Not reported separately.</p> <p>³ In addition, steel castings and rolled steel valued at \$6,627,039 in 1909 and \$347,264 in 1904 were produced by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.</p> <p>⁴ Includes 900 tons of iron rails, valued at \$20,700, in 1904, and 880 tons, valued at \$31,180, in 1899.</p> <p>⁵ Includes 149,688 tons of steel, valued at \$4,537,625, not distributable by kind into open-hearth or Bessemer.</p> <p>⁶ In addition, 49,481 tons of steel, valued at \$4,140,344, in 1909, and 4,184 tons, valued at \$347,264, in 1904, distributed as to tonnage as indicated below, were produced by establishments engaged primarily in the manufacture of products other than those covered by the industry designation:</p>			
Tons (2,000 pounds).....	1,634,855	1,416,494	879,296		1909	1904	
Value.....	\$71,624,024	\$67,551,443	\$47,728,784	Tons of steel.....	49,481	4,184	
Pipes and tubes:				Classified according to process:			
Wrought welded—				Open-hearth.....	36,099	2,440	
Tons.....	1,314,771	849,047	(?)	Bessemer.....	6,066	774	
Value.....	\$68,471,573	\$43,985,728	(?)	Crucible and miscellaneous.....	7,316	970	
Seamless, hot-rolled or drawn—				Classified according to form:			
Tons.....	54,273	20,636	(?)	Ingots.....	5,102	.....
Value.....	\$5,650,739	\$2,290,234	(?)	Castings.....	44,379	4,184	
All other, including clinched, riveted, etc., but not including cast:				<p>⁷ Not reported.</p>			
Tons.....	17,561						
Value.....	\$986,699						
Bolts, nuts, rivets, forged spikes, washers, etc.:							
Kegs (200 pounds).....	4,471,985	3,105,827	(?)				
Value.....	\$20,538,858	\$13,854,635	(?)				
Cut nails and spikes:							
Kegs (100 pounds).....	1,009,319	1,311,549	1,658,443				
Value.....	\$2,218,207	\$2,394,108	\$3,292,063				

The following table gives, for 1909, statistics of materials consumed, classified as purchased or as produced by the establishment consuming, and statistics of products, classified as sold or as consumed by the establishment producing. This information was not secured at former censuses. Eighty per cent of the pig iron used was made in blast furnaces operated by the consumer. The difference between the 15,252,736 tons of pig-iron material reported as produced by the consumer and the 15,858,203 tons reported in the table for blast furnaces as made for consumption in works of the producer—a little over 600,000 tons—represents the consumption in foundries and other shops owned by the producing companies but not covered by the preceding table.

MATERIAL.	QUANTITY (TONS).			
	Total.	Produced by the company reporting—		Purchased.
		In the works where consumed.	Transferred from other works of the company.	
<i>Produced and purchased.</i>				
Pig iron and ferroalloys.....	19,076,889	15,252,736	3,824,153	
Pig iron.....	18,712,304	15,108,244	3,604,060	
Ferroalloys—spiegeleisen, ferromanganese, etc.....	364,585	144,492	220,093	
Scrap.....	9,929,710	5,126,093	4,803,774	
Ingot, blooms, billets, slabs, muck and scrap bar, rerolling rails, and sheet and tin-plate bars, not produced in the works.....	6,508,249	3,080,672	3,427,577	
Skelp.....	1,578,290	1,401,573	141,496	
Wire rods.....	1,465,221	1,318,796	128,291	
<i>Consumed and sold.</i>				
Steel ingots.....	22,826,862	112,301	30,444	
Open-hearth.....	13,726,783	72,433	27,109	
Basic.....	12,952,840	69,815	18,511	
Acid.....	772,943	2,618	8,588	
Bessemer.....	9,145,542	39,726	2,000	
Crucible and miscellaneous.....	97,537	142	1,335	
Blooms, billets, and slabs.....	16,263,418	3,045,977	1,841,819	
Rolled forging blooms and billets.....	160,997	76,614	84,383	
Muck and scrap bar.....	1,366,324	20,065	154,431	
Sheet and tin-plate bars.....	2,094,398	441,637	1,625,408	
Bars and rods.....	3,784,248	632,679	3,151,569	
Wire rods.....	2,295,279	485,161	611,322	
Plates and sheets.....	2,295,279	1,318,796	2,807,114	
Black plates and sheets.....	3,332,733	463,665	56,275	
Skelp.....	631,435	575,160	580,686	
Nail and tack plates.....	2,084,286	1,401,573	25,867	
Miscellaneous rolled iron or steel.....	68,557	42,690	393,377	
Miscellaneous forged iron or steel.....	462,071	66,581	301,438	
Scrap.....	365,986	64,548	840,118	
	6,364,647	5,126,093	398,436	

Tin and terne plate.—The statistics for the tin and terne plate industry are given in the following table. Nearly 98 per cent of the black plates dipped were rolled by the establishment reporting. The value of all products was \$47,969,645 in 1909 as compared with \$31,892,011 in 1899, an increase of 50.4 per cent. The development of the tin and terne plate

industry has taken place almost entirely within the last 20 years, the production in 1891 being only about 2,236,000 pounds, or less than one five-hundredth of the 1909 output.

	1909	1904	1899
MATERIALS.			
Total cost.....	\$41,889,434	\$31,375,714	\$26,732,150
Black plates or sheets:			
Pounds.....	1,321,071,691	1,019,608,657	827,915,599
Cost.....	\$28,961,151	\$22,962,006	\$20,668,848
Produced by the establishment reporting:			
Pounds.....	1,291,045,169	943,796,533	(¹)
Cost.....	\$28,245,234	\$21,154,388	(¹)
Purchased:			
Pounds.....	30,026,522	75,810,074	(¹)
Cost.....	\$735,917	\$1,837,618	(¹)
Coating metals:			
Pounds.....	40,927,759	32,445,104	27,154,258
Cost.....	\$9,670,087	\$7,075,722	\$4,927,000
Tin, including tin contents of terne mixture purchased—			
Pounds.....	31,077,651	24,243,551	20,282,778
Cost.....	\$9,235,718	\$6,709,164	\$4,529,473
Lead, including lead contents of terne mixture purchased—			
Pounds.....	9,550,108	8,201,263	6,871,480
Cost.....	\$434,319	\$366,558	\$398,617
In condition purchased—			
Pig tin—			
Pounds.....	28,586,267	(¹)	(¹)
Cost.....	\$8,430,794		
Pig lead—			
Pounds.....	2,708,496	(¹)	(¹)
Cost.....	\$117,656		
Terne mixture—			
Pounds.....	9,632,996	(¹)	(¹)
Cost.....	\$1,061,587		
All other materials.....	\$3,238,246	\$1,807,996	\$1,132,212
PRODUCTS.			
Total value.....	\$47,969,645	\$35,282,260	\$31,892,011
Tin and terne plates:			
Pounds.....	1,315,313,132	1,026,384,851	849,004,022
Value.....	\$45,515,146	\$34,549,543	\$31,284,145
Tin plates—			
Pounds.....	1,123,928,875	867,526,965	707,718,239
Value.....	\$38,259,856	\$28,429,971	\$25,553,061
Terne plates—			
Pounds.....	191,344,257	158,857,886	141,285,783
Value.....	\$7,555,261	\$6,119,572	\$5,731,124
Other sheet iron or sheet steel tinned or terne-plated, taggers tin, etc.:			
Pounds.....	19,400,934	6,555,555	1,660,473
Value.....	\$320,465	\$217,476	\$66,492
All other products.....	\$1,634,034	\$516,341	\$321,374
EQUIPMENT.			
Tin or terne sets at end of year:			
Completed—			
Number.....	563	598	555
Usually employed on tin plates.....	450	478	(¹)
Usually employed on terne plates.....	113	120	(¹)
Daily capacity, single turn, Pounds.....	2,795,972	2,261,298	2,732,961
Tin plates.....	2,055,915	2,604,115	2,003,538
Terne plates.....	740,057	557,183	729,363
Daily capacity as operated, whether on single, double, or triple turn, pounds.....	7,016,283	7,121,359	(¹)
Building, number.....	49	(¹)	53
Black-plate department of establishments making their black plates:			
Hot black-plate mills at end of year—			
Completed—			
Number.....	335	315	333
Annual capacity on triple turn, long tons.....	1,042,068	707,405	641,450
Building—			
Number.....	20	(¹)	23
Annual capacity on triple turn, long tons.....	36,600	(¹)	51,375
Cold mills, completed, number.....	268	272	508

¹ Domestic; no foreign plates reported; includes 8,726,538 pounds of iron plates; balance steel, not distributable by kind of steel.

² Includes \$3,900 pounds of foreign plates, costing \$3,769; the domestic plates reported were distributed by kind as follows: Bessemer steel, 211,663,989 pounds; open-hearth steel, 106,911,401 pounds; iron, 949,267 pounds.

³ Includes 2,358,607 pounds of foreign plates, costing \$78,282.

⁴ Not reported.
⁵ Consumption of establishments not equipped for the manufacture of black plates.

⁶ Terne mixture purchased not reported separately; contents reported as tin and lead.

⁷ In addition 8,399,200 pounds of tin and terne plate and taggers tin, valued at \$398,143, were made by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

⁸ Includes idle establishments.

Wire.—The following table presents the statistics for wire manufactures in 1909. Comparable statistics in detail for 1904 and 1899 are not available for the total wire production, as special reports were not secured prior to the present census from wire mills drawing wire from purchased rods. The total value of the steel and iron wire product more than doubled from 1899 to 1909. The total value of all wire and manufactures of wire reported in 1909 was \$173,349,614, of

which 69.6 per cent represents the value of products made from steel and iron, 27.2 per cent that of products made from copper, and 3.2 per cent that of products made from other metal, chiefly brass. Establishments rolling wire from rods manufactured by them reported 54.3 per cent of the wire products in value, and mills drawing wire from purchased rods produced 45.7 per cent. The *ton of 2,000 pounds* is used in showing quantities.

Table 60				Table 60			
	Total.	Wire mills (wire rods purchased).	Wire departments of rolling mills ¹ (wire rods rolled).		Total.	Wire mills (wire rods purchased).	Wire departments of rolling mills ¹ (wire rods rolled).
PRINCIPAL MATERIALS.				PRODUCTS—continued.			
Metal used, cost.....	\$115,655,427	\$51,240,373	\$64,415,054	Wire and manufactures of wire—Contd. Steel and iron—Continued.			
Wire rods.....	\$112,799,516	\$50,810,983	\$61,988,533	Barb wire—			
Steel—				Tons.....	323,565	76,268	247,297
Tons.....	2,514,504	850,729	1,663,775	Value.....	\$13,881,517	\$3,343,856	\$10,537,661
Cost.....	\$67,439,887	\$23,021,867	\$44,418,020	Woven wire, fencing, and poultry netting—			
Open-hearth—				Tons.....	422,127	115,889	306,238
Tons.....	1,359,256	285,961	1,073,295	Value.....	\$21,419,170	\$6,724,077	\$14,695,093
Cost.....	\$38,532,177	\$8,536,361	\$29,995,816	Wire rope and strand—			
Basic—				Tons.....	45,303	34,140	11,163
Tons.....	1,255,747	233,105	1,022,642	Value.....	\$6,683,771	\$5,450,064	\$1,233,707
Cost.....	\$35,046,106	\$6,695,310	\$28,350,796	Other manufactures—springs, bale ties, cold-rolled flat wire, etc.—			
Acid—				Tons.....	129,945	71,906	58,039
Tons.....	103,509	52,856	50,653	Value.....	\$10,856,154	\$6,130,901	\$4,725,253
Cost.....	\$3,486,071	\$1,841,051	\$1,645,020	Copper—			
Bessemer—				Tons.....	154,231	102,604	51,627
Tons.....	1,148,353	558,048	590,305	Value.....	\$47,184,164	\$30,831,646	\$16,352,518
Cost.....	\$28,340,445	\$13,936,178	\$14,404,267	Wire drawn for sale—			
Crucible and other steel—				Tons.....	139,482	102,418	37,064
Tons.....	6,895	6,720	175	Value.....	\$42,336,274	\$30,736,728	\$11,599,546
Cost.....	\$567,265	\$549,328	\$17,937	Manufactures of wire—			
Iron—				Tons.....	14,749	186	14,563
Tons.....	4,849	1,055	3,794	Value.....	\$4,847,890	\$94,918	\$4,752,972
Cost.....	\$207,846	\$62,203	\$145,643	Other metal ² —			
Copper—				Tons.....	17,407	1,048	16,359
Tons.....	151,951	102,394	49,557	Value.....	\$5,579,813	\$484,019	\$5,095,794
Cost.....	\$40,916,084	\$27,462,312	\$13,453,772	Wire drawn for sale—			
Other metal ² —				Tons.....	15,583	1,008	14,575
Tons.....	17,944	935	17,009	Value.....	\$4,993,376	\$459,583	\$4,533,793
Cost.....	\$4,235,699	\$264,601	\$3,971,098	Manufactures of wire—			
Purchased wire, plain or coated:				Tons.....	1,824	40	1,784
Tons.....	57,922	8,943	48,979	Value.....	\$586,437	\$24,436	\$562,001
Cost.....	\$2,855,911	\$429,390	\$2,426,521	All other products.....	\$6,733,908	\$5,236,649	\$1,497,259
PRODUCTS.				EQUIPMENT.			
Total value.....	\$180,083,522	\$84,486,518	\$95,597,004	Wire-drawing blocks:			
Wire, and manufactures of wire.....	\$173,349,614	\$79,249,869	\$94,099,745	Number ³	43,697	28,119	15,578
Steel and iron—				Annual capacity, tons.....	3,213,574	1,065,250	2,148,324
Tons.....	2,471,858	821,929	1,649,929	Wire-nail machines:			
Value.....	\$120,585,637	\$47,934,204	\$72,651,433	Number.....	4,428	1,207	3,221
Wire drawn for sale—				Annual capacity (kegs of 100 pounds).....	18,756,995	4,693,513	14,063,482
Tons.....	826,451	343,905	482,546	Woven-wire fence machines:			
Value.....	\$38,845,081	\$18,823,035	\$20,022,046	Number.....	446	198	248
Plain—				Annual capacity, tons.....	481,373	134,803	346,570
Tons.....	472,046	188,846	283,200				
Value.....	\$22,632,230	\$11,349,868	\$11,282,362				
Coated—							
Tons.....	354,405	155,059	199,346				
Value.....	\$16,212,851	\$7,473,167	\$8,739,684				
Wire nails and spikes—							
Kegs (100 pounds).....	13,926,861	3,449,753	10,477,108				
Value.....	\$27,575,774	\$7,142,047	\$20,433,727				
Wire brads, tacks, and staples—							
Tons.....	28,125	7,334	20,791				
Value.....	\$1,324,170	\$320,224	\$1,003,946				

¹ Includes the wire departments of iron and steel, copper, and brass rolling mills.

² Brass, bronze, German silver, zinc, etc., chiefly brass.

³ Includes rod, redrawing, and fine wire blocks.

The comparative statistics for steel and iron wire products, 1909, 1904, and 1899, are as follows:

Table 61	PRODUCT.	1909	1904	1899
	Total value.....	\$120,585,637	\$83,353,956	\$52,871,387
	Wire mills.....	\$47,934,204	\$15,802,513	\$5,142,603
	Wire departments of rolling mills:			
	Tons.....	1,649,929	1,416,494	879,296
	Value.....	\$72,651,433	\$67,551,443	\$47,728,784

LEATHER AND ITS PRODUCTS.

The primary or underlying industry of this group is the converting of hides and skins into leather by the various processes of tanning, tawing, currying, and finishing. The designation employed for this industry is "leather, tanned, curried, and finished." The group also includes the manufacture of boots and shoes and the manufacture of leather gloves and mittens.

Leather.—The following table gives the statistics of the leather industry in detail for 1909, 1904, and 1899. The number of hides and skins treated, including those treated as custom work for others not tanners, curriers, or finishers, as well as those used in further manufacture by the establishments treating them, was 146,328,586 in 1909 and 131,011,956 in 1904. Comparative figures for this aggregate for 1899 are not available. Exclusive of custom work, 116,040,986 hides and skins, costing \$195,058,557, were treated by tanneries in 1909, and 99,709,343, costing \$123,545,969, in 1899, the increase in number being 16.4 per cent and that in cost 57.9 per cent. The increase for the decade in the number of hides used was 15.9 per cent;

that in calf and kip skins, 120.6 per cent; that in sheepskins, 6.4 per cent; and that in goatskins, less than 1 per cent.

The cost of purchased rough leather used increased 43.4 per cent and that of all other materials, which include tanning and finishing materials, 76.1 per cent.

The value of leather manufactured in 1909 was \$306,476,720, as compared with \$194,202,063 in 1899, an increase of 57.8 per cent, which is practically the same as the percentage of increase in the cost of hides and skins treated. There is considerable duplication in the value of products, due to the sale of leather in the rough as product of one establishment and its use as material in another.

	1909	1904	1899		1909	1904	1899
MATERIALS.				PRODUCTS—continued.			
Total cost.....	\$248,278,933	\$191,179,073	\$155,000,004	Leather—Continued.			
Hides ¹ (all kinds):				Upper—Continued.			
Number.....	18,360,415	17,581,613	15,838,862	Finished splits—			
Cost.....	\$119,410,767	\$89,126,593	\$77,784,700	Number.....	8,134,229	6,205,050	8,790,382
Skins: ¹				Value.....	\$7,410,740	\$5,993,221	\$6,740,542
Number.....	97,680,571	90,625,044	83,870,481	Patent and enameled shoe—			
Cost.....	\$75,647,790	\$56,341,332	\$45,761,209	Sides.....	2,705,291	1,356,777	296,943
Calf and kip—				Value.....	\$8,341,727	\$3,553,552	\$1,092,534
Number.....	19,732,638	12,481,221	8,944,454	Horsehides and coltskins—			
Cost.....	\$31,790,572	\$15,725,616	\$10,792,465	Number.....	1,342,938	1,529,395	223,378
Goat—				Value.....	\$4,953,145	\$4,596,065	\$843,115
Number.....	48,077,664	47,665,003	48,046,897	Calf and kip skins, tanned and finished—			
Cost.....	\$27,833,214	\$26,756,012	\$24,950,223	Number.....	19,012,064	12,014,223	8,264,272
Sheep—				Value.....	\$42,412,266	\$22,508,335	\$14,619,180
Number.....	26,082,060	27,492,359	24,507,642	Grain finished—			
Cost.....	\$12,231,618	\$10,547,883	\$8,457,995	Number.....	17,516,910	19,211,885	7,112,859
All other—				Value.....	\$39,982,447	\$18,996,561	\$12,127,439
Number.....	3,738,209	2,985,881	2,371,488	Flesh finished—			
Cost.....	\$3,792,386	\$3,311,821	\$1,560,506	Number.....	1,465,154	1,802,338	1,151,413
Rough leather purchased.....	\$9,556,257	\$10,852,655	\$6,663,395	Value.....	\$2,429,809	\$3,511,754	\$2,491,711
Whole sides—				Goatskins, tanned and finished—			
Number.....	1,468,213	2,414,102	1,086,592	Number.....	47,907,211	45,691,492	47,043,932
Cost.....	\$4,967,781	\$8,136,661	\$3,534,097	Value.....	\$40,582,640	\$37,987,349	\$36,972,981
Grains—				Black—			
Sides.....	525,786	342,332	165,938	Number.....	40,351,182	40,619,614	38,178,816
Cost.....	\$1,201,842	\$980,260	\$467,125	Value.....	\$33,949,575	\$32,822,282	\$29,050,986
Splits.....	\$1,442,505	\$1,108,243	\$1,320,589	Colored—			
All other.....	\$1,944,129	\$627,491	\$1,341,584	Number.....	7,556,019	5,671,878	8,867,116
All other materials.....	\$43,664,119	\$34,858,493	\$24,790,640	Value.....	\$6,933,065	\$3,065,067	\$6,022,096
PRODUCTS.				Sheepskins, tanned and finished—			
Total value.....	\$327,874,187	\$252,630,986	\$204,038,127	Number.....	19,665,155	20,597,598	20,290,985
Leather.....	\$306,476,720	\$236,765,803	\$194,202,063	Value.....	\$12,236,687	\$11,163,829	\$8,332,755
Sole.....	\$88,331,713	\$69,205,600	\$55,481,625	Belting—			
Hemlock—				Sides.....	1,042,070	859,564	1,472,016
Sides.....	7,963,728	9,929,964	9,810,996	Value.....	\$6,995,133	\$4,754,456	\$7,082,778
Value.....	\$32,237,151	\$32,676,015	\$29,305,561	Harness—			
Oak—				Sides.....	3,946,235	4,369,661	3,444,616
Sides.....	3,805,861	3,607,963	2,562,814	Value.....	\$24,802,734	\$20,274,188	\$16,732,056
Value.....	\$26,083,793	\$19,157,805	\$13,359,836	Carriage, automobile, and furniture—			
Union—				Hides.....	1,398,842	827,164	619,741
Sides.....	5,758,227	4,400,011	3,096,162	Value.....	\$14,266,742	\$7,780,904	\$5,746,287
Value.....	\$28,375,815	\$17,371,780	\$12,807,282	Trunk, bag, and pocketbook.....	\$8,198,544	\$4,920,750	\$2,611,326
Chrome—				Bookbinder's.....	\$4,913,543	\$3,844,614	\$1,686,413
Sides.....	279,436	(⁵)	2,100	Glove.....	\$6,235,599	\$10,180,949	\$6,964,345
Value.....	\$1,634,954	(⁵)	\$8,966	Sold in rough.....	\$11,746,369	\$13,044,268	\$10,117,454
Upper, other than calf or kip skins	\$39,951,460	\$24,815,835	\$25,311,838	All other.....	\$3,632,689	\$7,665,223	\$5,514,395
Grain, satin, pebble, etc. (side leather)—				Work on materials for others.....	\$12,764,773	\$8,189,960	\$4,321,069
Sides.....	7,946,769	6,850,469	8,141,093				
Value.....	\$24,198,993	\$15,487,252	\$17,478,802				

¹ In addition, in 1909, 1,903,278 hides and 27,936,887 skins and in 1904, 961,431 hides and 21,792,110 skins, were treated for others, not tanners, curriers, or finishers; and in 1909, 252,639 hides and 194,796 skins and in 1904, 12,453 hides and 39,285 skins were treated by establishments using the leather for further manufacture.
² Cattle hides only.
³ Includes horsehides.
⁴ In addition, in 1909, leather to the value of \$6,231,374, and in 1904 to the value of \$154,932, was tanned, curried, or finished and consumed by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.
⁵ Not reported separately.

Boots and shoes.—The full designation for this industry is "boots and shoes, including cut stock and findings." The total value of products was \$512,797,642 in 1909, as compared with \$357,688,160

in 1904 and \$290,047,087 in 1899, an increase for the decade of \$222,750,555, or 76.8 per cent. In addition, in 1909 there were boot and shoe products to the value of \$1,439,280, and in 1904 to the value of \$89,000,

made by establishments engaged primarily in the manufacture of products other than those covered by the industry designation. The schedule employed did not call for segregation of value of products. The following table shows the number of pairs of the different kinds of shoes and slippers reported at each of the last three censuses.

KIND.	NUMBER OF PAIRS.		
	1909	1904	1899
Boots and shoes.....	247,643,197	216,039,401	195,589,173
Men's.....	93,888,892	83,434,322	67,742,839
Boys' and youths'.....	23,838,626	21,717,236	21,030,479
Women's.....	86,595,314	69,470,876	64,972,653
Misses' and children's.....	43,320,365	41,416,967	41,843,202
Slippers.....	17,507,834	17,518,291	17,092,841
Men's, boys', and youths'.....	4,802,841	4,403,097	4,446,965
Women's, misses', and children's.....	12,704,993	13,115,194	12,645,876
Infants' shoes and slippers.....	15,000,721	(¹)	(¹)
All other.....	4,865,429	8,552,343	5,283,405

¹ Not reported separately.

There were 247,643,197 pairs of boots and shoes manufactured in 1909, 216,039,401 pairs in 1904, and

195,589,173 pairs in 1899, the increase being 26.6 per cent for the decade and 14.6 per cent for the 1904-1909 period. In 1909 men's boots and shoes formed 37.9 per cent of the total number of boots and shoes; women's, 35 per cent; misses' and children's, 17.5 per cent; and boys' and youths', 9.6 per cent.

The total output of slippers reported for 1909 was 17,507,834 pairs, practically the same as at each of the two preceding censuses. The figures indicate a considerable decrease since 1904 in women's, misses', and children's slippers, but it is probable that infants' shoes and slippers, reported separately in 1909, were to some extent included with children's slippers in 1904.

The number of pairs of the different kinds of boots, shoes, and slippers manufactured by the various methods was reported for the first time in 1909, and is shown in the next table. Of the total number manufactured, 43.2 per cent were of the McKay type, 35.3 per cent machine or hand welt, 10.6 per cent turned, 8.8 per cent wire-screw or metal-fastened, and 2.1 per cent wooden-pegged.

KIND.	NUMBER OF PAIRS.					
	Total.	Machine or hand welt.	Turned.	McKay.	Wooden-pegged.	Wire-screw or metal-fastened.
Boots and shoes.....	247,643,197	87,391,763	26,317,990	107,063,644	5,226,161	21,643,639
Men's.....	93,888,892	53,212,450	989,240	20,438,585	3,021,652	15,326,965
Boys' and youths'.....	23,838,626	4,423,934	50,377	15,016,611	537,939	3,779,765
Women's.....	86,595,314	25,871,899	14,281,764	44,518,966	533,579	1,389,106
Misses' and children's.....	43,320,365	3,883,480	10,996,609	27,089,482	202,991	1,147,803
Slippers.....	17,507,834	1,318,995	7,611,748	8,396,874	28,918	151,299
Men's, boys', and youths'.....	4,802,841	648,007	1,733,742	2,286,652	16,851	117,589
Women's, misses', and children's.....	12,704,993	670,988	5,878,006	6,110,222	12,067	33,710
Infants' shoes and slippers.....	15,000,721	1,979,593	11,447,508	1,520,072	41,731	11,817
All other.....	4,865,429	1,429,249	1,189,742	1,280,281	321,082	639,075

Gloves and mittens, leather.—The quantity and value of the different kinds of products reported for this branch of the leather industry for 1909, 1904, and 1899 are shown in the following table:

PRODUCT.	1909	1904	1899
Total value.....	\$23,630,598	\$17,740,385	\$16,926,156
Gloves, mittens, and gauntlets:			
Dozen pairs.....	3,368,655	3,370,146	² 2,895,661
Value.....	\$22,525,861	\$17,122,772	² \$16,039,168
Men's—			
Dozen pairs.....	2,585,977	2,915,415	2,267,327
Value.....	\$17,060,797	\$14,515,770	\$12,418,258
Lined—			
Dozen pairs.....	921,259	1,317,083	952,820
Value.....	\$5,222,174	\$6,333,081	\$4,969,902
Unlined—			
Dozen pairs.....	1,664,718	1,598,332	1,314,507
Value.....	\$11,838,623	\$8,182,689	\$7,458,350
Women's and children's:			
Dozen pairs.....	782,678	454,731	604,330
Value.....	\$5,465,064	\$2,607,002	\$3,470,258
Lined—			
Dozen pairs.....	365,477	241,361	267,149
Value.....	\$1,718,198	\$1,030,843	\$1,247,916
Unlined—			
Dozen pairs.....	417,201	213,370	337,181
Value.....	\$3,746,866	\$1,576,159	\$2,222,342
All other products.....	\$1,104,737	\$617,613	\$886,988

¹ In addition, in 1909, 36,944 dozen pairs of gloves, mittens, and gauntlets, to the value of \$264,961; in 1904, gloves, mittens, and gauntlets, to the value of \$166,164; and in 1899, gloves, mittens, and gauntlets, to the value of \$217,157, were made by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

² Includes 24,004 dozen pairs of gauntlets, valued at \$150,652, not distributed by kinds.

The greater increase in value was due to the higher prices paid for hides and skins, and an increased production of the better grades of gloves.

The number of men's gloves manufactured largely outnumbered that of women's and children's at each census, but importations of kid gloves for women probably greatly reduce the demand for American makes. The number of men's gloves increased during the decade 14.1 per cent, and the number of women's and children's 29.5 per cent.

CHEMICALS AND ALLIED PRODUCTS.

The industries in this group comprise those which produce chemicals as products or which employ to a large extent chemical processes in manufacture. The grouping is necessarily somewhat arbitrary. Separate tables present the statistics for each of the following industries:

Chemicals.	Oil, essential.
Coke.	Paint and varnish.
Dyestuffs and extracts.	Petroleum, refining.
Explosives.	Salt.
Fertilizers.	Soap.
Gas, illuminating and heating.	Sulphuric, nitric, and mixed acids.
Glucose and starch.	Turpentine and rosin.
Oil, cottonseed, and cake.	

Chemicals.—Table 66 presents the statistics for the general chemical industry as classified by the Bureau of the Census, but reference should be made to the groups and items specified in the table for information as to the products included under this head. It does not include products listed independently in the preceding paragraph, nor does it include the products of wood distillation or chemicals made by establishments engaged in the manufacture of pharmaceutical preparations.

The value of all products of the "chemical" industry, including the same commodities made by establishments engaged primarily in the manufacture of other products, was \$126,794,345 in 1909 and \$78,285,646 in 1904. The products of establishments classified as chemical factories proper were valued at \$117,688,887 in 1909 and \$48,039,595 in 1899, an increase for the decade of \$69,649,292, or 145 per cent. Some of the groups show very large gains, notably products made with the aid of electricity, many of which can not be shown separately without disclosing individual operations. The value of these products increased from \$1,305,368 in 1899 to \$17,968,277 in 1909 and the value of the output of sodas, the leading group of products in this respect, increased from \$11,596,915 to \$21,417,982.

The value of the sulphuric, nitric, and mixed acid product, shown in Table 80, should be added to the value of the acids given in the following table in order to ascertain the total production of the principal acids. Including these acids, the value of the acid product (not including acids consumed by establishments making the same or those produced as by-products of other industries) was \$19,493,663 in 1909, \$14,538,137 in 1904, and \$9,371,615 in 1899, the increase for the decade being 108 per cent. The *ton of 2,000 pounds* is used in showing quantities.

Table 66	PRODUCT.	1909	1904	1899
	Total value	\$117,688,887	\$75,222,249	\$48,039,595
Acids	.....	\$11,926,389	\$7,583,059	\$3,161,743
Acetic—	.....	51,963,788	27,001,322	24,945,558
Pounds.....		\$1,136,134	\$537,542	\$396,323
Value.....		5,554,414	6,956,896	2,684,935
Boric—	.....	2,265,631	()	()
Pounds.....		\$777,200	\$598,718	()
Value.....		4,790,963	2,932,358	698,000
Hydrofluoric—	.....	\$214,657	\$151,218	\$34,800
Pounds.....		128,394,736	127,502,682	116,675,109
Value.....		\$1,171,082	\$1,180,910	\$1,015,915
Muriatic—	.....	13,337,717	()	()
Pounds.....		\$680,015	()	()
Value.....		25,702,606	991,050	()
Phosphoric—	.....	\$905,791	\$68,541	()
Pounds.....		\$7,145,771	\$4,518,940	\$1,516,403
Value.....		\$21,417,982	\$16,858,929	\$11,596,915
Sodas	.....	646,007	518,789	386,361
Soda ash—	.....	\$10,361,756	\$8,202,292	\$4,768,383
Tons.....		76,285	56,870	63,231
Value.....		\$977,712	\$792,248	\$779,166
Sal soda—	.....	82,800	68,867	68,185
Tons.....		\$1,515,081	\$1,135,610	\$1,324,843
Value.....		112,152	80,159	78,779
Bicarbonate of soda—	.....	\$4,230,954	\$2,924,182	\$2,917,955
Tons.....				
Value.....				
Caustic soda ^s—	.....		
Tons.....				
Value.....				

Table 66— Contd.	PRODUCT.	1909	1904	1899
Sodas—Continued.				
Borax—				
Tons.....	20,154	20,882	5,637	
Value.....	\$1,766,910	\$2,122,898	\$502,489	
Other.....	\$2,565,619	\$1,681,789	\$1,394,668	
Potashes—				
Pounds.....	1,866,570	5,113,796	3,764,806	
Value.....	\$88,940	\$508,489	\$174,476	
Alums.....	\$2,578,842	\$2,126,612	\$2,013,667	
Alum cake—				
Pounds.....	26,854,880	()	()	
Value.....	\$273,711	()	()	
Potash alum—				
Pounds.....	7,939,702	()	()	
Value.....	\$128,623	()	()	
All other.....	\$2,176,568	()	()	
Coal-tar products.....	\$2,675,327	\$844,817	\$1,322,094	
Coal-tar distillery products.....	\$2,462,330	\$340,641	\$619,830	
Chemicals made from coal-tar distillery products.....	\$212,997	\$504,176	\$702,264	
Cyanides.....	\$1,941,893	\$1,179,104	\$1,584,923	
Yellow prussiate of potash—				
Pounds.....	3,510,206	5,027,264	6,140,406	
Value.....	\$463,563	\$683,277	\$998,514	
All other.....	\$1,477,910	\$495,827	\$586,409	
Bleaching materials.....	\$1,635,046	\$777,750	\$462,686	
Hydrogen peroxide—				
Pounds.....	9,403,717	()	()	
Value.....	\$650,417	()	()	
Bisulphites—				
Tons.....	14,538	()	()	
Value.....	\$202,504	()	()	
All other.....	\$682,125	\$777,750	\$462,686	
Chemical substances produced by the aid of electricity.....	\$17,968,277	\$5,896,632	\$1,305,368	
Calcium carbide—				
Pounds.....	121,946,967	()	()	
Value.....	\$2,984,601	()	()	
Caustic soda—				
Tons.....	19,428	()	()	
Value.....	\$1,032,647	()	()	
Chlorates—				
Pounds.....	11,568,915	()	()	
Value.....	\$904,525	()	()	
Hypochlorites—				
Tons.....	68,616	()	()	
Value.....	\$1,506,831	()	()	
All other.....	\$11,540,273	\$5,896,632	()	
Plastics.....	\$7,186,172	\$4,755,761	\$2,699,499	
Pyroxylin plastics.....	\$6,989,639	\$2,867,993	\$1,970,267	
All other—				
Pounds.....	10,294,928	()	()	
Value.....	\$1,796,353	\$1,888,668	\$129,633	
Compressed or liquefied gases.....	\$4,969,805	\$2,787,689	\$1,215,011	
Anhydrous ammonia—				
Pounds.....	11,862,676	()	()	
Value.....	\$2,508,315	\$1,173,184	\$448,157	
Carbon dioxide—				
Pounds.....	47,238,267	35,991,627	()	
Value.....	\$2,317,808	\$1,343,966	\$656,164	
Laughing gas—				
Pounds.....	72,675	()	()	
Value.....	\$33,689	()	()	
Oxygen—				
Gallons.....	4,777,977	()	()	
Value.....	\$98,150	()	()	
All other—				
Pounds.....	364,614	()	()	
Value.....	\$16,843	\$270,539	\$70,690	
Fine chemicals.....	\$19,956,666	\$9,145,853	\$4,220,339	
Alkaloids—				
Ounces.....	3,482,482	4,949,535	3,387,522	
Value.....	\$3,188,691	\$2,926,789	\$1,743,264	
Gold salts—				
Ounces.....	42,544	59,969	8,594	
Value.....	\$430,944	\$449,864	\$60,145	
Silver salts—				
Ounces.....	2,627,719	1,743,582	1,252,604	
Value.....	\$726,222	\$683,761	\$469,345	
Platinum salts—				
Ounces.....	1,561	19,068	7,312	
Value.....	\$19,123	\$175,682	\$54,600	
Chloroform—				
Pounds.....	1,661,435	616,670	396,540	
Value.....	\$472,759	\$165,604	\$98,670	
Ether—				
Pounds.....	1,177,886	690,783	263,238	
Value.....	\$199,448	\$334,935	\$129,576	
Acetone—				
Pounds.....	6,927,886	1,300,395	1,638,715	
Value.....	\$719,895	\$161,330	\$178,666	
All other.....	\$5,199,584	\$4,248,998	\$1,426,372	
Chemicals not elsewhere specified:				
Glycerin—				
Pounds.....	23,986,974	18,791,997	15,383,798	
Value.....	\$4,838,826	\$2,345,266	\$2,612,556	
Epsom salts—				
Pounds.....	47,785,318	15,936,837	6,672,369	
Value.....	\$367,728	\$145,801	\$45,966	
Blue vitriol—				
Pounds.....	810,958	50,100	7,500,000	
Value.....	\$37,636	\$2,500	\$375,000	

For footnotes, see page 496.

PRODUCT.	1909	1904	1899
Chemicals not elsewhere specified— Continued.			
Copperas—			
Pounds.....	24,199,526	8,815,059	14,097,905
Value.....	\$71,081	\$28,061	\$58,581
Phosphates of soda—			
Pounds.....	35,178,354	12,018,815	3,478,350
Value.....	\$634,292	\$243,822	\$104,554
Tin salts—			
Pounds.....	12,992,233	9,573,719	4,677,471
Value.....	\$1,194,546	\$904,679	\$470,159
Zinc salts—			
Pounds.....	43,204,652	(⁴)	(⁴)
Value.....	\$1,477,486	(⁴)	(⁴)
Other chemicals.....	\$21,207,939	\$13,289,416	\$15,786,497
By-products and residues sold to other industries.....	\$4,530,024	\$5,743,070	

¹ In addition, products to the value of \$9,105,453 were produced by establishments engaged primarily in the manufacture of products other than those covered by the industry designation, including the following:

	Pounds.	Value.		Pounds.	Value.
Acids:			Pyroxylin plastics.....		\$282,560
Acetic.....	4,959,985	\$200,740	Compressed or liq- uified gases:		
Hydrofluoric.....	2,051,951	79,722	Anhydrous am- moniac.....	167,710	40,923
Muriatic.....	74,805,743	587,253	Carbon dioxide.....	454,354	19,262
Oleic.....	2,959,346	165,091	Laughing gas.....	24,500	4,900
Stearic.....	5,094,774	399,386	Oxygen....gas.....	23,826,325	79,319
Other ^a		49,530	Other.....		9,072
Sodas:			Chloroform.....	8,250	4,779
Sal soda....tons..	10,822	184,297	Acetone.....	2,007,560	210,287
Other ^b....tons..	75,902	1,835,202	Glycerin ^d	1,022,920	123,472
Potashes.....	14,293,552	525,054	Blue vitriol.....	37,185,585	1,496,645
Alums.....	49,450,260	443,513	Copperas.....	3,031,566	53,372
Coal-tar distillery products.....		1,610,792	Phosphates of soda.....	310,588	27,034
Bleaching materials:			Zinc salts.....	4,312,988	103,503
Hydrogen per- oxide.....	521,851	20,124	Other chemicals.....		505,183
Bisulphite.....	3,062,000	23,650			
Other.....		20,703			

^a Not including acids reported by manufacturers of explosives and fertilizers.
^b Including sodas reported by manufacturers of paints and varnishes and fertilizers.

^c Not including 4,871,014 pounds, value \$448,455, reported by manufacturers of coke.

^d Not including 52,518,919 pounds, value \$6,790,264, reported by manufacturers of soap.

^e In addition, products to the value of \$3,063,397 were produced by establishments engaged primarily in the manufacture of products other than those covered by the industry designation, including the following:

	Pounds.	Value.		Pounds.	Value.
Acids:			Bleaching materials:		
Muriatic.....	47,018,080	\$431,938	Bisulphite....tons..	536	\$11,937
Stearic.....	1,750,000	140,000	Glycerin.....	520,000	53,000
Hydrofluoric.....	1,217,578	71,668	Ether.....	193,623	92,466
Other.....		146,716	Epsom salts.....	1,350,000	13,500
Sodas:			Blue vitriol.....	107,160	5,994
Sal soda....tons..	1,763	29,561	Copperas.....	81,816	586
Caustic....tons..	14	663	Tin salts.....	1,103,222	188,301
Other....tons..	14,200	363,765	Other chemicals.....		742,467
Alums.....	33,074,349	532,185			
Coal-tar distillery products.....		238,645			

³ See Table 80 for sulphuric, nitric, and mixed acids.

⁴ Not reported separately.

⁵ See chemical substances produced by the aid of electricity for additional product.

⁶ Not reported.

Coke.—Table 67, which presents the statistics for the manufacture of coke, does not include those for gas-house coke, which are shown in Table 71. The total production of coke, including gas-house coke sold and that made and consumed in gas manufacture, was 41,947,949 tons in 1909 as compared with 27,857,441 tons in 1904, an increase of 50.6 per cent. The gas-house coke included in these figures formed 6.3 per cent of the total product in 1909 and 9.9 per cent in 1904.

The value of all products of the coke industry proper was \$98,078,383 in 1909, \$51,728,647 in 1904, and \$35,585,445 in 1899, an increase for the decade of 175.6 per cent. A marked feature of the industry is the increasing use of retort ovens. Although the

retort coke product was not reported separately in 1899, the by-products of this branch of the industry were given and aggregated \$952,027 in value. In 1909 the value of the retort by-products was \$8,112,900. The value of the coke and by-products made by retort ovens constituted 29.1 per cent of the total value of all products of the industry in 1909. Of the total value of the products made by retort ovens, two-fifths is contributed by the by-products. The ton of 2,000 pounds is used in showing quantities.

	1909	1904	1899
MATERIALS.			
Total cost.....	\$65,388,124	\$29,884,532	\$19,665,532
Coal charged into ovens:			
Tons.....	159,354,937	36,781,006	30,157,829
Run of mine—			
Unwashed.....	40,594,842	24,872,731	20,844,637
Washed.....	6,007,760	2,649,251	1,457,961
Slack—			
Unwashed.....	6,926,484	4,414,326	5,036,675
Washed.....	5,825,851	4,844,698	2,318,556
Cost.....	\$62,203,382	\$28,360,121	\$18,355,252
All other materials.....	\$3,184,742	\$1,524,411	\$1,310,280
PRODUCTS.			
Total value.....	\$98,078,383	\$51,728,647	\$35,585,445
Coke: ³			
Tons.....	39,315,065	24,733,063	19,640,798
Value.....	\$39,965,483	\$49,002,051	\$34,633,418
Made in beehive ovens—			
Tons.....	33,060,421	22,516,280	(⁴)
Value.....	\$69,530,794	\$42,885,773	(⁴)
Made in retort or by-product ovens—			
Tons.....	6,254,644	2,216,783	(⁴)
Value.....	\$20,434,689	\$6,116,278	(⁴)
By-products obtained from retort or by- product ovens—			
Gas made, cubic feet (thousands) ..	76,590,763	18,761,101	(⁴)
Used in process or wasted, cubic feet (thousands).....	60,799,543	14,878,301	(⁴)
Sold—			
Cubic feet (thousands).....	15,791,220	3,882,800	1,171,943
Value.....	\$2,609,211	\$684,464	\$225,022
Tar—			
Gallons.....	60,126,006	23,074,225	10,468,733
Value.....	\$1,408,611	\$651,836	\$207,952
Ammonia, sulphate or reduced to equivalent in sulphate—			
Pounds.....	123,111,197	26,050,713	11,984,931
Value.....	\$3,227,316	\$681,427	\$330,921
Anhydrous ammonia—			
Pounds.....	4,871,014	(⁴)	(⁴)
Value.....	\$448,455	(⁴)	(⁴)
Ammonia liquor—			
Gallons.....	(⁵)	4,339,679	1,572,325
Value.....	(⁵)	\$697,044	\$180,642
All other.....	\$419,307	\$111,225	\$7,490
EQUIPMENT.			
Ovens, number in existence at end of year.....	103,982	76,099	47,142
Building at end of year.....	2,950	2,127	(⁴)
Abandoned during the year.....	201	178	(⁴)

¹ Includes coal and coking products produced by establishments engaged primarily in the manufacture of products other than those covered by the industry designation, viz: Coal used, unwashed, 566,539 tons, cost, \$1,363,597; products valued at \$2,381,761, comprising retort coke, 415,472 tons, valued at \$1,464,162; tar, 4,398,576 gallons, valued at \$87,639; ammonium sulphate, 9,952,744 pounds, valued at \$235,605; gas sold, 2,160,915 thousand cubic feet, valued at \$534,075; and other products, \$60,280.

² In addition, 410,225 tons of coke, valued at \$1,302,572, were produced by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

³ The statement for coke made in gas establishments will be found in detail under the classification "Gas, illuminating and heating."

⁴ Not reported.

⁵ Reported in part as anhydrous ammonia and in part as ammonium sulphate or reduced equivalents.

Dyestuffs and extracts.—The statistics for dyestuffs and extracts given in Table 68 cover the products of establishments manufacturing the same for sale, and do not include those made by dye and print works or tanneries and consumed by the same in further processes of manufacture.

The total value of products was \$15,954,574 in 1909 and \$7,350,748 in 1899, an increase of 117 per cent. The chief products were oak and chestnut extract,

which together increased almost ninefold in quantity and even more in value during the decade. Artificial dyestuffs nearly doubled in quantity and in value, but the production of natural dyestuffs (included under "All other products") has fallen off greatly, the value of the product being \$1,035,711 in 1899 and only \$233,935 in 1904. It was materially less in 1909, but can not be shown separately without disclosing individual operations. The census report on Forest Products for 1909 gives 386,817,895 pounds as the total consumption of tanning extracts in that year, which quantity exceeds the quantity of oak, chestnut, hemlock, and sumac extracts here reported by over 83,000,000 pounds. This difference can be taken as representing approximately the amount of tanning extract imported or made and consumed in tanning establishments.

PRODUCT.	1909	1904	1899
Total value.....	\$15,954,574	\$10,893,113	\$7,350,748
Artificial dyestuffs:			
Pounds.....	12,267,399	4,600,462	6,581,850
Value.....	\$3,462,436	\$1,764,454	\$1,806,730
Extracts:			
Hemlock—			
Pounds.....	12,588,078	18,833,450	26,011,714
Value.....	\$280,487	\$406,619	\$563,591
Logwood—			
Pounds.....	22,317,248	29,799,606	39,252,743
Value.....	\$991,974	\$1,472,047	\$1,485,971
Oak and chestnut—			
Pounds.....	287,908,285	156,520,123	28,983,036
Value.....	\$6,061,162	\$2,411,184	\$529,670
Sumac—			
Pounds.....	3,148,790	4,093,619	4,349,742
Value.....	\$107,456	\$95,958	\$103,085
Ground sumac:			
Pounds.....	554,032	5,061,333	9,284,000
Value.....	\$24,531	\$65,190	\$114,660
Ground bark:			
Pounds.....	25,142,076	38,001,017	27,028,000
Value.....	\$176,510	\$249,101	\$149,365
Ground and chipped wood:			
Pounds.....	15,046,954	9,999,906	12,690,037
Value.....	\$143,720	\$95,237	\$201,931
Gums and dextrans:			
Pounds.....	16,148,931	6,651,731	(¹)
Value.....	\$610,999	\$231,708	(²)
Iron liquors:			
Pounds.....	3,079,418	1,860,744	954,240
Value.....	\$30,282	\$30,757	\$7,525
Mordants:			
Pounds.....	1,735,887	733,245	734,000
Value.....	\$69,515	\$64,656	\$85,466
Sizes:			
Pounds.....	54,054,711	7,812,433	101,920
Value.....	\$1,735,600	\$217,859	\$2,548
Tannic acid:			
Pounds.....	5,085,748	5,165,500	1,326,515
Value.....	\$249,297	\$200,136	\$149,662
Turkey-red oil:			
Pounds.....	1,048,719	3,022,470	2,210,000
Value.....	\$72,053	\$159,666	\$14,757
Other tanning liquors:			
Pounds.....	9,285,048	44,418,929	16,144,292
Value.....	\$365,304	\$1,704,243	\$405,659
All other products ³	\$1,573,248	\$1,724,298	\$1,730,128

¹ In addition, dyestuffs and extracts, to the value of \$334,102, in 1909 and \$19,111 in 1904, were produced by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

² Not reported separately.

³ Including a small production of natural dyestuffs in 1909, a production in 1904 valued at \$233,935, and a production in 1899 valued at \$1,035,711.

NOTE.—The following products were made and consumed in establishments where produced:

	1909	1904
Ground and chipped wood.....pounds..	936,578,482	524,505,744
Ground bark.....pounds.....	293,062,168	40,390,640
Ground leaves.....pounds.....	1,955,040	3,586,171

Explosives.—Table 69 presents the statistics for the explosives industry. The value of all products was \$40,139,661 in 1909 as compared with \$17,125,418 in 1899, an increase of 134.4 per cent.

The production of explosives in the industry proper was 469,481,252 pounds in 1909, 360,980,734 pounds in 1904, and 215,980,720 pounds in 1899, an increase for the decade of 117.4 per cent. If the explosives made by establishments operated by the Federal Government and by establishments engaged primarily in the manufacture of other products be added, the total production in 1909 was 471,181,650 pounds. The output of dynamite formed about three-eighths of the total output of explosives, and its value approximately one-half of the total value of explosives reported. The most important product in respect to quantity of output was blasting powder, including "permissible explosives." Permissible explosives, known in Pennsylvania as safety explosives, were reported separately for the first time in 1909. They are specially designed for use in dusty and gaseous coal mines. The ton of 2,000 pounds is used in showing quantities.

	1909	1904	1899
MATERIALS.			
Total cost.....	\$22,811,548	\$17,203,667	\$10,334,974
Nitrate of soda:			
Tons.....	188,889	133,034	88,324
Cost.....	\$7,932,336	\$5,608,557	\$2,992,866
Acids:			
Mixed—			
Pounds.....	51,764,694	105,552,494	66,906,146
Cost.....	\$1,512,626	\$3,993,429	\$1,505,754
Nitric—			
Pounds.....	7,591,756	2,699,599	467,587
Cost.....	\$541,314	\$122,947	\$17,171
Sulphuric—			
Tons.....	22,501	18,298	7,954
Cost.....	\$406,204	\$247,301	\$139,699
Sulphur or brimstone:			
Tons.....	17,389	19,874	12,742
Cost.....	\$367,866	\$507,469	\$317,383
All other materials.....	\$12,091,202	\$7,624,864	\$5,461,191
PRODUCTS.			
Total value.....	\$40,139,661	\$29,802,384	\$17,125,418
Dynamite:			
Pounds.....	177,155,851	130,920,829	85,846,456
Value.....	\$18,699,746	\$12,900,193	\$8,247,223
Nitroglycerin, sold as such:			
Pounds.....	28,913,253	7,965,936	3,618,692
Value.....	\$3,162,434	\$1,620,117	\$793,299
Blasting powder:			
Kegs (25 pounds).....	9,339,087	8,217,448	3,907,912
Value.....	\$9,608,265	\$7,377,977	\$3,857,974
Permissible explosives:			
Pounds.....	9,607,448	(¹)	(²)
Value.....	\$863,209	(³)	(⁴)
Gunpowder:			
Pounds.....	12,862,700	10,333,944	25,638,804
Value.....	\$1,736,427	\$1,541,483	\$1,452,377
Other explosives: ⁴			
Pounds.....	7,464,825	6,308,825	3,201,468
Value.....	\$3,913,787	\$4,256,193	\$2,610,193
All other products.....	\$2,155,793	\$1,906,921	\$174,442

¹ In addition, 1,431,042 pounds, to the value of \$502,948, were made by Federal establishments, and 219,356 pounds, to the value of \$135,979, by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

² In addition, 1,104,532 pounds, to the value of \$990,632, were made by Federal establishments and by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

³ Not reported separately.

⁴ Includes smokeless powder and gun-cotton or pyroxylin, to avoid disclosing operations of individual establishments.

NOTE.—The following products were made and consumed in the establishments where produced:

	1909	1904
Salt-peter.....pounds.....	12,050,225	3,559,376
Nitroglycerin.....pounds.....	70,289,667	44,677,828
Sulphuric acid.....tons.....	42,555	39,994
Nitric acid.....tons.....	31,484	18,988
Charcoal.....bushels.....	737,884	1,156,918
Cellulose nitrates.....pounds.....	5,000,226	.....
Nitrate of ammonia.....pounds.....	10,994,319	6,299,317

Fertilizers.—The following table giving statistics for the fertilizer industry does not include the product of establishments engaged primarily in the manufacture of products other than fertilizers, chief of which are slaughtering and meat-packing establishments and cottonseed-oil mills. The value of all products of the industry proper, which includes some that are not fertilizers, was \$103,960,213 in 1909, as compared with \$44,657,385 in 1899, an increase of 132.8 per cent. Including the fertilizer by-products of other indus-

tries, the total production of fertilizers in 1909 was 5,618,234 tons, valued at \$100,089,971. During the period 1899–1909 the tonnage of the fertilizer products of the establishments engaged primarily in the manufacture of fertilizers increased 87.5 per cent. Some of the materials, such as sulphuric acid, are the products of establishments engaged in this industry, and therefore are duplicated in the total value of products. The *ton of 2,000 pounds* is used in showing quantities.

Table 70	1909	1904	1899		1909	1904	1899
MATERIALS.				PRODUCTS.			
Total cost.....	\$69,521,920	\$39,287,914	\$28,958,473	Total value.....	\$103,960,213	\$56,541,253	\$44,657,385
Ammoniates:				Fertilizers:			
Tons.....	778,639			Tons.....	5,240,164	3,207,777	2,794,705
Cost.....	\$16,065,978	\$9,915,648	\$9,934,145	Value.....	\$92,369,631	\$50,460,694	\$40,545,661
Ammonium sulphate:				Superphosphates from minerals, bones, etc.—			
Tons.....	63,381	10,540	4,120	Value.....	1,201,354	766,338	923,198
Cost.....	\$3,640,592	\$600,856	\$186,609	Ammoniated—	\$13,318,529	\$7,515,257	\$8,471,943
Kainit:				Tons.....	472,757	775,987	142,898
Tons.....	322,720	190,493	54,700	Value.....	\$10,061,193	\$12,901,057	\$2,449,388
Cost.....	\$2,783,658	\$1,891,073	\$520,833	Concentrated phosphate—			
Nitrate of soda:				Tons.....	313,888	(²)	(²)
Tons.....	85,714	42,213	19,518	Value.....	\$3,038,210	(²)	(²)
Cost.....	\$3,730,070	\$1,760,432	\$709,841	Complete—			
Phosphate rock:				Tons.....	2,717,797	1,329,149	1,436,682
Tons.....	1,529,124	888,571	787,927	Value.....	\$57,243,899	\$25,673,511	\$25,446,046
Cost.....	\$8,621,094	\$4,244,554	\$3,554,174	Other—			
Potash salts:				Tons.....	534,368	394,703	291,927
Tons.....	257,766	122,107	(²)	Value.....	\$8,107,800	\$4,370,869	\$4,178,284
Cost.....	\$7,327,549	\$3,606,701	\$3,098,400	Sulphuric acid (reduced to 50° Baumé):			
Pyrites:				Tons.....	153,057	24,502	71,176
Tons.....	456,574	342,962	288,778	Value.....	\$923,492	\$194,578	\$437,925
Cost.....	\$2,831,994	\$2,020,759	\$1,466,285	Other acids—			
Sulphuric acid:				Tons.....	30,651	45,689	(²)
Tons.....	603,672	197,865	231,527	Value.....	\$611,288	\$241,506	\$17,872
Cost.....	\$3,312,687	\$1,084,304	\$1,355,382	All other products.....	\$10,055,802	\$5,644,475	\$3,655,927
Sulphur or brimstone:							
Tons.....	4,236	4,210	12,728				
Cost.....	\$68,924	\$92,234	\$268,670				
Superphosphates:							
Tons.....	415,656	320,559	286,898				
Cost.....	\$3,946,440	\$2,912,010	\$2,176,245				
Fish.....	\$3,031,437	\$847,142	\$183,542				
All other materials.....	\$14,161,497	\$10,312,201	\$5,504,347				

¹ Includes for 1904, 125,888 tons of ammoniates classified as such, valued at \$2,445,051; cottonseed meal, valued at \$2,376,443; and bones, tankage, and offal, valued at \$5,094,149; and for 1899, cottonseed meal, valued at \$167,410; and bones, tankage, and offal, valued at \$9,766,735.

² Not reported.

³ In addition, in 1909, 231,287 tons of complete fertilizer, valued at \$4,806,832; 49,632 tons of ammoniated fertilizer, valued at \$943,197; 22,615 tons of superphosphates, valued at \$426,302; 63,581 tons of "other" fertilizer, valued at \$1,365,931; 10,955 tons of concentrated phosphate, valued at \$178,078; and other products to the value of \$190,928; and in 1904, fertilizers, to the value of \$2,069,714, were made by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

NOTE.—The following products were made and consumed in establishments where produced:

	1909	1904
Acid phosphate..... tons..	1,838,865	884,211
Sulphuric acid..... tons..	841,935	692,904

Gas, illuminating and heating.—The statistics for the gas industry presented in Table 71 include only those establishments which made gas as their main product. The total production of gas made for sale by such establishments and by retort coke ovens combined—but not including the by-products of establishments outside these two industries—was in 1909, 166,627,013 thousand cubic feet, valued at \$141,224,520; in 1904, 116,432,779 thousand cubic feet, valued at \$113,347,032; and in 1899, 68,265,496 thousand cubic feet, valued at \$69,657,604. The increase in quantity for the period 1899–1909 was thus 144.1 per cent, and that in value 102.7 per cent. In addition to the product above reported for 1909, 1,730,563 thousand cubic feet were made and con-

sumed in gas plants and 60,799,543 thousand cubic feet were made and consumed or wasted by retort coking establishments. There is also a large consumption of producer gas and blast-furnace gas by establishments in other industries which produced the gas themselves.

The value of products of the illuminating-gas industry proper aggregated \$166,814,371 in 1909 as compared with \$75,716,693 in 1899, an increase of 120.3 per cent. Only about four-fifths of this value represents that of the gas itself. The industry shows a progressive decrease from census to census in unit values for all kinds of gas with the exception of acetylene gas. The *ton of 2,000 pounds* is used for showing quantities.

	1909	1904	1899
MATERIALS.			
Total cost	\$52,427,844	\$37,180,066	\$20,605,356
Coal:			
Tons.....	4,940,598	4,431,774	2,487,287
Cost.....	\$16,304,832	\$14,607,485	\$7,164,472
Oil:			
Gallons.....	579,657,152	410,989,564	194,857,296
Cost.....	\$17,345,750	\$15,015,602	\$8,168,657
Coke:			
Tons.....	591,919	435,534	217,354
Cost.....	\$2,667,700	\$1,602,762	\$726,736
All other materials.....	\$16,109,556	\$5,954,217	\$4,545,491
PRODUCTS.			
Total value	\$166,814,371	\$125,144,945	\$75,716,693
Gas: ³			
Cubic feet (thousands).....	150,835,793	112,549,979	67,093,553
Value.....	\$138,615,309	\$112,662,568	\$60,432,582
Straight coal—			
Cubic feet (thousands).....	19,985,253	12,693,034	(4)
Value.....	\$18,065,841	\$12,868,604	(4)
Straight water—			
Cubic feet (thousands).....	1,726,082	715,550	(4)
Value.....	\$1,289,031	\$832,440	(4)
Carburetted water—			
Cubic feet (thousands).....	79,418,486	54,687,418	(4)
Value.....	\$69,513,749	\$48,071,180	(4)
Mixed coal and water—			
Cubic feet (thousands).....	40,775,283	40,980,414	(4)
Value.....	\$36,953,543	\$45,605,263	(4)
Oil—			
Cubic feet (thousands).....	8,688,860	3,441,352	(4)
Value.....	\$12,111,458	\$5,141,460	(4)
Acetylene—			
Cubic feet (thousands).....	25,186	7,881	(4)
Value.....	\$361,348	\$104,267	(4)
All other—			
Cubic feet (thousands).....	216,643	24,330	(4)
Value.....	\$320,339	\$39,354	(4)
Coke:			
Bushels.....	82,049,683	89,146,434	
Value.....	\$5,723,215	\$5,195,461	
Tar:			
Gallons.....	78,339,880	67,515,421	\$4,283,204
Value.....	\$1,875,549	\$2,064,343	
All other products.....	\$13,556,908	\$972,992	
Receipts from rents and sales of lamps and appliances.....	\$7,043,390	\$4,249,581	\$2,000,907

¹ Does not include \$4,013,885 paid for lamps and appliances.

² In addition, products of gas manufacture to the value of \$261,802 were produced by establishments engaged primarily in the manufacture of products other than those covered by the industry designation. The items covered by these products were 27,558 (thousands) cubic feet of coal gas, valued at \$29,419; 13,070 (thousands) cubic feet of acetylene gas, valued at \$224,618; 44,347 bushels of coke, valued at \$3,399; 38,370 gallons of tar, valued at \$1,372; and receipts from sale of lamps and appliances to the amount of \$2,994.

³ Statistics of the gas made in coke establishments are shown in detail under the classification "Coke."

⁴ Not reported separately.

⁵ In addition, there were 13,813,058 gallons for which no value was reported.

⁶ Includes 49,720,220 gallons of ammonia liquor, valued at \$725,702, and 1,154,319 pounds of hydrocarbons, valued at \$44,509.

NOTE.—The following products were made and consumed in establishments where produced:

	1909	1904
Coke..... bushels.....	49,550,153	46,561,185
Tar..... gallons.....	31,590,178	14,772,878
Gas, cubic feet..... thousands.....	1,730,563	1,363,757
Benzene or benzol.....	302,994	

Glucose and starch.—Statistics are presented in Table 72 for the glucose and starch industry for the years 1909 and 1904.

Corn is the principal material used. The value of all products of the industry was \$48,799,311 in 1909 and \$32,649,836 in 1904, the increase for the five-year period being 49.5 per cent. The starch product (gross, including duplication), increased in quantity 89.9 per cent and in value 60.3 per cent, the entire gain being in cornstarch. The percentages of increase in the value of glucose, grape sugar, and corn oil are large, notably that for corn oil. In 1899 the production of starch (in part estimated) was 543,040,000 pounds, greatly exceeding the figures for 1904. The decrease in production from 1899 to 1904 was due in

large measure to the decrease in the export trade of this commodity.

Some establishments included in the industry are engaged primarily in reprocessing starch, resulting in a duplication of products. In 1909 105,299,010 pounds of cornstarch were used as material by such factories, 104,597,648 pounds of cornstarch being obtained as products. The deduction of this duplication from the total gives the quantity of marketable cornstarch produced in 1909 as 534,227,718 pounds.

	1909	1904
MATERIALS.		
Total cost	\$36,898,771	\$25,512,576
Corn:		
Pounds.....	2,240,506,915	(1)
Cost.....	\$26,674,779	\$19,074,728
Wheat and roots:		
Pounds.....	1,540,000	(2)
Cost.....	\$21,435	(2)
Potatoes:		
Pounds.....	210,006,127	209,372,549
Cost.....	\$541,359	\$563,651
Cornstarch:		
Pounds.....	105,299,010	(2)
Cost.....	\$1,763,173	(2)
Wheat flour:		
Pounds.....	19,545,824	(2)
Cost.....	\$482,263	(2)
All other materials.....	\$7,415,762	\$5,880,497
PRODUCTS.		
Total value	\$48,799,311	\$32,649,836
Starch:		
Pounds.....	677,535,647	356,695,335
Value.....	\$17,514,823	\$10,927,538
Corn—		
Pounds.....	658,825,366	311,140,314
Value.....	\$15,962,916	\$5,878,450
Wheat and root—		
Pounds.....	12,127,686	17,845,121
Value.....	\$626,337	\$1,124,612
Potato—		
Pounds.....	26,582,595	27,709,490
Value.....	\$926,579	\$924,476
Glucose, including all sirups:		
Pounds.....	769,060,210	(1)
Value.....	\$17,922,514	\$12,352,616
Grape sugar:		
Pounds.....	159,060,478	(1)
Value.....	\$3,620,816	\$2,264,745
Corn oil:		
Gallons.....	8,164,175	(1)
Value.....	\$2,592,798	\$1,164,466
Stock food.....	\$6,013,968	\$4,446,479
All other products.....	\$924,422	\$1,569,592

¹ Not reported.

² Not reported separately.

³ In addition, 1,379,691 pounds of cornstarch, valued at \$48,059, were made by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

Cottonseed, oil and cake.—The following table presents the statistics for cottonseed products:

	1909 ¹	1904 ²	1899
Cotton seed crushed tons..	3,798,549	3,308,930	2,479,386
PRODUCTS.			
Total value	\$147,867,894	\$96,467,621	\$53,726,623
Primary products manufactured, whether for sale or for further use:			
Oil..... gallons.....	157,115,689	132,651,901	93,325,729
Meal and cake..... tons.....	1,661,734	1,343,977	894,391
Hulls..... tons.....	1,258,612	1,201,079	1,109,286
Linters..... pounds.....	174,620,099	116,707,298	57,272,653

¹ In addition, products to the value of \$2,017,065 were produced by establishments engaged primarily in the manufacture of products other than those covered by the industry designation; these establishments crushed 28,752 tons of seed and produced 1,212,832 gallons of crude oil, 12,811 tons of meal and cake, 8,326 tons of hulls, and 1,152,978 pounds of linters.

² In addition, establishments engaged primarily in the manufacture of products other than those covered by the industry designation crushed 136,440 tons of seed and produced 1,765,971 gallons of crude oil, 16,195 tons of meal and cake, 12,265 tons of hulls, and 1,085,671 pounds of linters.

The amount of seed crushed in mills engaged primarily in the industry increased from 2,479,386 tons in 1899 to 3,798,549 tons in 1909, or 53.2 per cent, while the value

of all products, including fertilizer, ice, feed, etc., where carried on in connection with the manufacture of cottonseed products, increased from \$58,726,632 to \$147,867,894, or 151.8 per cent. A marked feature of the industry is the progressive increase in quantity of oil, meal, and linters, and decrease in quantity of hulls per ton of seed crushed. The *ton of 2,000 pounds* is used for showing quantities.

Oil, essential.—The products of the essential-oil industry, given in the following table, increased in value from \$813,495 in 1899 to \$1,737,234 in 1909, or 113.6 per cent. The output of natural oils increased in value 58.2 per cent, and of witch-hazel over sevenfold.

PRODUCT.	1909	1904	1899
Total value.....	\$1,737,234	\$1,464,662	\$813,495
Natural oils.....	\$1,108,603	\$1,023,937	\$700,709
Peppermint—			
Pounds.....	305,781	130,022	202,550
Value.....	\$519,079	\$470,037	\$183,559
Black birch—			
Pounds.....	67,053	(2)	(2)
Value.....	\$102,045	(2)	(2)
Spearmint—			
Pounds.....	33,400	(2)	(2)
Value.....	\$33,283	(2)	(2)
Wintergreen—			
Pounds.....	22,281	4,737	2,166
Value.....	\$68,983	\$15,579	\$3,638
Other—			
Pounds.....	(3)	327,908	638,024
Value.....	\$335,213	\$538,321	\$508,512
Witch-hazel:			
Gallons.....	679,190	797,700	110,260
Value.....	\$412,322	\$367,873	\$54,649
All other products.....	\$216,309	\$72,852	\$58,137

¹ In addition, essential oils to the value of \$117,489 in 1909 and \$14,500 in 1904 were produced by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

² Not reported separately.

³ The products classified under this head include 49,327 pounds, valued at \$44,494; quantities not reported for the remainder.

Paint and varnish.—The inquiry at the present census in regard to specific materials used in the manufacture of paints and varnishes was confined to pig lead and alcohol, the comparative statistics for which, including establishments engaged primarily in the manufacture of products other than those covered by the industry designation, are as follows:

MATERIAL.	1909	1904	1899
Pig lead:			
Tons (2,000 pounds).....	145,917	129,629	99,052
Cost.....	\$12,014,859	\$11,214,961	\$8,585,688
Alcohol:			
Gallons.....	1,683,382	1,416,746	388,368
Cost.....	\$920,086	\$928,946	\$461,417
Wood—			
Gallons.....	1,327,157	1,357,682	310,059
Cost.....	\$693,362	\$790,243	\$285,510
Grain—			
Gallons.....	356,225	59,064	78,309
Cost.....	\$226,724	\$138,703	\$175,907

The statistics for paint and varnish products are given in the following table, which does not include the pigments ground in establishments classified as engaged in the manufacture of kaolin and ground earths, the blacks made by establishments classified as engaged in the manufacture of bone, carbon, and lamp black, nor lead or zinc oxide made by lead and zinc smelters. During the period 1899 to 1909 the value of all products increased from \$69,562,235 to \$124,889,422, or 79.5 per cent. Paints in oil constitute

the most important group. The output of pigments, including white lead in oil, increased 141.9 per cent, and that of varnishes and japans 69 per cent in value.

PRODUCT.	1909	1904	1899
Total value.....	\$124,889,422	\$90,839,609	\$69,562,235
Pigments.....	\$16,985,588	\$11,965,806	\$13,319,487
White lead, dry—			
Pounds.....	85,234,414	62,395,868	116,102,316
Value.....	\$3,921,303	\$2,877,109	\$4,211,181
Oxides of lead—			
Pounds.....	63,404,846	49,734,330	50,759,623
Value.....	\$3,662,002	\$2,591,772	\$2,550,340
Lampblack and other blacks—			
Pounds.....	1,810,445	757,244	1,065,000
Value.....	\$105,063	\$49,869	\$60,250
Iron oxides and other earth colors—			
Pounds.....	111,674,675	48,345,978	33,453,896
Value.....	\$876,331	\$331,416	\$318,242
Other dry colors—			
Pounds.....	162,409,565	98,194,081	
Value.....	\$6,874,333	\$5,006,083	
Barytes—			
Pounds.....	49,496,025	22,299,980	167,479,090
Value.....	\$268,757	\$134,174	\$5,317,943
Pulp colors, sold moist—			
Pounds.....	28,435,722	25,351,515	20,060,635
Value.....	\$1,277,239	\$915,383	\$861,531
Paints in oil.....	\$56,763,296	\$40,390,059	
White lead in oil—			
Pounds.....	246,567,570	216,496,450	(2)
Value.....	\$15,234,411	\$11,228,889	(2)
Paste—			
Pounds.....	162,356,330	131,940,404	306,410,398
Value.....	\$11,279,459	\$8,713,183	\$17,601,459
Already mixed for use—			
Gallons.....	33,272,033	22,379,020	16,879,595
Value.....	\$30,249,426	\$20,447,987	\$14,864,126
Varnishes and japans.....	\$31,262,535	\$22,871,486	\$18,502,219
Oleo-resinous varnishes—			
Gallons.....	18,476,523		
Value.....	\$17,350,113		
Damar and similar turpentine and benzine varnishes—			
Gallons.....	3,481,231		
Value.....	\$2,836,341		
Spirit varnishes not turpentine—			
Gallons.....	1,181,746	1,553,562	549,811
Value.....	\$1,408,048	\$2,180,713	\$965,223
Pyroxylin varnishes—			
Gallons.....	1,880,141	148,320	160,127
Value.....	\$2,351,425	\$162,163	\$178,826
Dryers, japans and lacquers—			
Gallons.....	9,474,939	(4)	(4)
Value.....	\$5,094,973	\$3,346,355	\$3,084,610
All other.....	\$2,221,635	\$1,479,258	(2)
Fillers.....	\$3,126,271	\$2,344,636	(2)
Liquid—			
Gallons.....	1,159,569	1,051,148	(2)
Value.....	\$323,043	\$785,617	(2)
Paste—			
Pounds.....	14,050,329		
Value.....	\$387,948		
Dry—			
Pounds.....	50,983,472	68,761,174	(2)
Value.....	\$295,728	\$1,559,019	(2)
Putty—			
Pounds.....	63,502,048		
Value.....	\$1,119,532		
Water paints and kalsomine:			
Dry or in paste—			
Pounds.....	47,465,265	27,932,447	(2)
Value.....	\$1,917,038	\$924,807	(2)
Already mixed for use—			
Gallons.....	522,283	123,400	(2)
Value.....	\$61,969	\$9,230	(2)
Linseed oil:			
Gallons.....	3,477,004	(2)	(2)
Value.....	\$1,912,594	(2)	(2)
Bleached shellac:			
Pounds.....	3,014,195	(2)	(2)
Value.....	\$578,650	(2)	(2)
All other products.....	\$12,281,481	\$12,333,585	\$5,274,944

¹ In addition, paints and varnishes, to the value of \$2,583,397 in 1909 and \$1,221,338 in 1904, were made by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

² Includes white lead in oil. ³ Not reported separately. ⁴ Not reported.

NOTE.—The following products were made and consumed in establishments where produced:

	1909	1904
White lead, dry.....	pounds.. 162,702,089	122,288,484
Lead oxides.....	pounds.. 4,526,425	13,589,147
Varnishes.....	gallons.. 4,407,312	1,202,674
Drying japans and dryers.....	gallons.. 3,090,756	988,979
Collodion and other cellulose nitrate solutions.....	gallons.. 20,600	1,576,442
Pyroxylin and other cellulose nitrates.....	pounds.. 24,750	12,000
Copperas.....	pounds.. 11,531,006	

Petroleum refining.—The products of the petroleum-refining industry, statistics for which are presented in the following table, aggregated \$236,997,659 in value in 1909 as compared with \$123,929,384 in 1899, the increase during the decade being 91.2 per cent. This conforms closely to the increase in the cost of crude petroleum used, which was 89.4 per cent. The crude petroleum used increased in quantity from 52,011,005 barrels of 42 gallons in 1899 to 120,775,439 barrels in 1909, or 132.2 per cent, and the refined-oil products aggregated 40,290,985 barrels of 50 gallons in 1899, 46,454,062 barrels in 1904, and 89,082,810 barrels in 1909, an increase for the decade of 136.2 per cent.

	1909	1904	1899
Crude petroleum used:			
Barrels (42 gallons).....	120,775,439	66,982,862	52,011,005
Cost	\$152,307,040	\$107,487,091	\$80,424,207
PRODUCTS.¹			
Total value.....	\$236,997,659	\$175,005,320	\$123,929,384
Oils:			
Illuminating—			
Barrels (50 gallons).....	33,495,798	27,135,094	25,171,280
Value	\$94,547,010	\$91,366,434	\$74,694,297
Fuel (including gas oils)—			
Barrels	34,034,577	7,209,428	6,095,224
Value	\$36,462,883	\$9,205,391	\$7,550,664
Lubricating—			
Barrels	10,745,885	6,298,251	3,408,918
Value	\$38,884,236	\$23,553,091	\$10,897,214
Naphtha and gasoline (including gas naphtha)—			
Barrels	10,806,550	5,811,289	5,615,554
Value	\$39,771,959	\$21,314,837	\$15,991,742
Paraffin wax—			
Barrels	946,830	794,068	774,924
Value	\$9,388,812	\$10,007,274	\$7,791,149
Oil asphaltum—			
Tons (2,000 pounds).....	233,328	(²)	(²)
Value	\$2,724,752	(²)	(²)
Residuum or tar—			
Barrels	1,787,008	3,187,921	596,615
Value	\$2,215,623	\$3,138,361	\$688,455
Greases (lubricating, etc.)—			
Barrels	138,302	202,439	572,140
Value	\$1,567,647	\$1,394,130	\$2,454,617
Coke and black naphtha—			
Value	\$507,695	\$140,653	\$176,281
Sludge acid—			
Tons (2,000 pounds).....	133,215	165,104	(²)
Value	\$402,295	\$400,480	(²)
All other products.....	\$10,524,747	\$14,475,669	\$3,684,965
EQUIPMENT.			
Stills, number.....	2,395	1,907	1,774
Heated by steam—			
Number.....	451	282	290
Capacity (barrels 42 gallons).....	424,564	(²)	(²)
Heated by superheated steam—			
Number.....	16	15	26
Capacity (barrels 42 gallons).....	6,200	(²)	(²)
Heated by fire—			
Number.....	1,928	1,610	1,458
Capacity (barrels 42 gallons).....	1,656,534	(²)	(²)
Agitators, number.....	529	374	327
Chilling houses for paraffin, number.....	79	67	48
Hydraulic or other presses, number.....	357	311	510
Storage tanks for crude petroleum:			
Number.....	678	304	257
Capacity, gallons.....	242,590,505	245,760,493	(²)
Storage tanks for refined petroleum:			
Number.....	6,476	3,575	2,809
Capacity, gallons.....	1,041,627,444	576,458,825	(²)
Cooper shops, number.....	53	64	48
Tin shops, number.....	14	17	13

¹ In 1909, 48,580 tons of sulphuric acid, and in 1904, 49,379 tons, were made and consumed in establishments where produced.

² Not reported separately.

³ Not reported.

The largest gain was that in the output of fuel oils, which increased from 7,209,428 barrels in 1904 to 34,034,577 barrels in 1909, as the result of the increase in the refining of low-grade crude oils. The output

of lubricating oils and naphtha also increased very rapidly. The decrease in the value of "all other products" in 1909 as compared with 1904 is due in part to the fact that the products of the box, cooperage, tinware, and paint shops operated by the refineries were included in 1904, but when possible separate reports were obtained for these departments in 1909 and the statistics for them were included with those for other industries at this census.

Salt.—The statistics for the salt industry are given in the following table.¹ The value of all products increased from \$7,966,897 in 1899 to \$11,327,834 in 1909, or 42.2 per cent. The production of salt increased from 15,187,819 barrels in 1899 to 29,933,060 barrels in 1909, or 97.1 per cent, while the value of the product increased from \$5,869,362 to \$8,311,729, or 41.6 per cent, the average value per barrel decreasing from 39 cents in 1899 to 28 cents in 1909 on account of the greatly increased proportion of the lower grades of salt manufactured. * The barrel of 280 pounds is used in showing quantities.

PRODUCT.	1909	1904	1899
Total value.....	\$11,327,834	\$9,437,662	\$7,966,897
Salt:			
Barrels.....	29,933,060	17,128,572	15,187,819
Value.....	\$8,311,729	\$6,955,734	\$5,869,362
Bromine:			
Pounds.....	* 728,875	261,065	279,437
Value.....	\$92,735	\$72,584	\$64,921
All other products.....	\$2,923,370	\$2,409,344	\$2,032,614
Salt, classified by grade (barrels).			
Table and dairy.....	3,042,824	3,119,091	1,866,658
Common fine.....	7,745,204	6,254,289	6,896,126
Common coarse.....	2,543,363	1,578,666	2,635,282
Packers.....	385,862	498,943	182,630
Coarse solar.....	1,109,396	1,677,182	610,974
Rock salt, mined.....	5,938,721	3,416,835	2,543,679
Milling, other grades, and brine.....	8,867,720	283,562	182,770
Process employed.			
Total number of establishments.....	124	146	159
Number reporting:			
Solar.....	46	63	(²)
Kettle.....	1	7	(²)
Grainer.....	59	70	(²)
Open pan.....	11	12	(²)
Vacuum pan.....	21	20	(²)

¹ In addition, 25,043 barrels of salt, to the value of \$8,415, were produced by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

² Includes potassium bromide.

³ Not reported.

Soap.—The statistics for the soap industry given in Table 79 for 1909 and 1904 include those for the soap factories operated by the owners of slaughtering and meat-packing establishments as well as for establishments engaged primarily in the manufacture of soap. In 1899 the manufacture of soap and of candles was reported as one industry, the value of products being \$53,231,017. In 1904 the value of the combined products of these industries was \$72,164,062 and in 1909, \$114,488,298.

The cost of the materials used in the soap industry was \$72,179,418 in 1909 and \$43,625,608 in 1904, the

¹ The statistics differ from those published by the United States Geological Survey, which include Hawaii and Porto Rico.

increase for the five-year period being 65.5 per cent. The value of all products was \$111,357,777 in 1909 and \$68,274,700 in 1904, the increase for the five-year period being 63.1 per cent. With the addition of the by-products from establishments in other industries the total value of soap products was \$115,455,172 in 1909. The chief soap product was hard soap, which, including that made in establishments engaged primarily in the manufacture of products other than soap, aggregated 883,583 net tons in 1909. Glycerin is an important product of the soap industry. Reference should be made to Table 66 for the glycerin product of chemical establishments.

Table 79	1909	1904
MATERIALS.		
Total cost.....	\$72,179,418	\$43,625,608
Tallow, grease, and other fats:		
Pounds.....	413,909,787	475,613,277
Cost.....	\$23,341,905	\$19,723,311
Cocconut and palm-kernel oil:		
Gallons.....	11,856,837	6,833,132
Cost.....	\$5,875,294	\$2,692,034
Cottonseed oil:		
Gallons.....	24,221,712	13,276,006
Cost.....	\$9,718,988	\$3,882,987
Rosin:		
Pounds.....	207,296,447	168,107,246
Cost.....	\$4,362,412	\$2,734,848
Foots:		
Pounds.....	94,050,892	59,781,740
Cost.....	\$2,453,609	\$1,222,982
Caustic soda:		
Tons (2,000 pounds).....	52,172	71,551
Cost.....	\$2,212,232	\$2,843,988
Soda ash:		
Tons (2,000 pounds).....	121,016	53,777
Cost.....	\$2,281,787	\$1,011,094
All other materials.....	\$21,933,191	\$9,513,764
PRODUCTS.		
Total value.....	\$111,357,777	\$68,274,700
Hard soap:		
Pounds.....	1,736,740,466	1,355,358,649
Value.....	\$83,550,830	\$56,878,486
Soft soap:		
Pounds.....	44,052,615	33,613,416
Value.....	\$943,676	\$667,064
Glycerin:		
Pounds.....	² 39,689,300	27,660,661
Value.....	\$5,713,558	\$2,953,115
Special soap articles.....	\$731,823	\$554,881
All other products.....	\$15,417,890	\$7,216,154

¹ In addition, the following products were made by establishments engaged primarily in the manufacture of products other than those covered by the industry designation:

	1909	1904
Soap:		
Hard—		
Pounds.....	30,424,855	31,251,795
Value.....	\$1,279,004	\$1,148,920
Soft—		
Pounds.....	15,984,055	10,285,839
Value.....	\$325,511	\$94,017
Glycerin:		
Pounds.....	³ 7,206,721	565,000
Value.....	\$1,076,706	\$45,200
All other products.....	\$1,416,174	\$148,981

² In addition, 5,597,519 pounds were reported with no value.

³ In addition, 25,319 pounds were reported with no value.

NOTE.—The following products were made and consumed in establishments where produced:

	1909	1904
Red oil..... gallons..	3,175,795	1,149,346
Tallow..... pounds..	17,709,219	10,613,271
Cottonseed oil..... gallons..	2,422,843	920,410
Caustic lye, 30° Baumé..... gallons..	15,931,639	9,568,522
Sodium silicate..... pounds..	37,466,245	1,697,886
Glycerin..... pounds..	5,816,279	3,433,359
Framed soap..... pounds..	527,370,128	114,452,424

Sulphuric, nitric, and mixed acids.—Comparative statistics for the products of establishments engaged primarily in the manufacture of sulphuric, nitric, and mixed acids are given in the following table. The total value of products was \$9,884,057 in 1909, as compared with \$8,596,390 in 1899, an increase of 15 per cent. This increase was chiefly in sulphuric acid, the output of which increased in quantity (on the basis of 50° acid) 88.8 per cent and in value 38.3 per cent. The ton of 2,000 pounds is used in showing quantities.

Table 80	PRODUCT.	1909	1904	1899
Total value.....		¹ \$9,884,057	¹ \$9,052,646	\$8,596,390
Acids.....		\$7,567,274	\$6,955,078	\$6,209,872
Sulphuric:				
Tons, reduced to 50° Baumé.....	855,191	467,614	452,942	
Tons.....	703,185	364,374	324,365	
Value.....	\$5,029,496	\$4,286,312	\$4,071,848	
66° Baumé—				
Tons.....	267,476	199,663	250,928	
Value.....	\$3,158,097	\$2,886,179	\$3,244,586	
60° Baumé—				
Tons.....	73,073	13,634	13,650	
Value.....	\$401,734	\$121,432	\$199,380	
50° Baumé—				
Tons.....	² 362,036	³ 151,077	60,387	
Value.....	\$2,069,665	\$1,278,701	\$627,882	
Nitric:				
Pounds.....	8,396,326	30,306,555	20,402,570	
Value.....	\$499,303	\$1,446,471	\$1,028,266	
Mixed:				
Pounds.....	45,361,626	42,812,894	42,301,319	
Value.....	\$1,438,475	\$1,222,295	\$1,109,758	
All other products.....	\$2,316,783	\$2,097,568	\$2,386,518	

¹ In addition, the following products were made by establishments engaged primarily in the manufacture of products other than those covered by the industry designation:

	1909	1904
Acids:		
Sulphuric (50°)—		
Tons.....	621,801	433,377
Value.....	\$4,455,263	\$3,655,899
Nitric—		
Pounds.....	18,929,620	15,957,526
Value.....	\$857,795	\$804,473
Mixed—		
Pounds.....	11,820,542	22,518,433
Value.....	\$422,312	\$735,061
All other products.....	\$511,532	.....

² Includes the equivalent of 27,602 tons of oleum.

³ Includes the equivalent of 13,268 tons of oleum.

NOTE.—In 1909, 1,271,535 tons of sulphuric acid (50°) and 110,760,619 pounds of nitric acid, and in 1904, 968,455 tons of sulphuric acid (50°) and 62,116,306 pounds of nitric acid were made and consumed in establishments where produced.

Including by-products from establishments engaged primarily in the manufacture of products other than those covered by the industry designation, the total production of these acids for sale in 1909 and 1904 was as follows:

Table 81	KIND.	1909	1904
Sulphuric acid (50°):			
Tons.....	1,476,992	900,991	
Value.....	\$10,084,759	\$7,942,211	
Nitric acid:			
Pounds.....	27,325,946	46,264,081	
Value.....	\$1,357,098	\$2,250,944	
Mixed acids:			
Pounds.....	57,182,168	65,331,327	
Value.....	\$1,860,787	\$1,957,356	

A large amount of sulphuric acid made and consumed in the establishments where manufactured, particularly in fertilizer factories, must be taken into

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account in considering the total production. The following table gives the total production for the three census years:

Table 82	SULPHURIC ACID.	1909	1904	1899
Total, reduced to 50° Baumé acid.....	tons..	2,748,527	1,869,437	1,548,123
For sale.....		1,476,992	900,992	733,768
For consumption.....		1,271,535	968,445	764,355

Turpentine and rosin.—The products of the turpentine and rosin industry for which statistics are presented in the following table increased in value from \$20,344,888 in 1899 to \$25,295,017 in 1909, or 24.3 per cent, but the gain was due wholly to the great increase in the price of rosin. The turpentine product decreased in both quantity and value during the decade. The output of rosin also decreased 24.9 per cent, but its value increased 145.2 per cent. The average value of rosin per barrel increased from \$1.18 in 1899 to \$3.85 in 1909.

Table 83	PRODUCT.	1909	1904	1899
Total value.....		\$25,295,017	\$23,937,024	\$20,344,888
Turpentine:				
Gallons.....		28,988,954	30,687,051	38,488,170
Value.....		\$12,654,228	\$15,170,499	\$14,960,235
Rosin:				
Barrels (280 pounds).....		3,263,857	3,508,247	4,348,094
Value.....		\$12,576,721	\$3,725,619	\$5,129,268
Dross and other products.....		\$64,068	\$40,906	\$255,385

¹ In addition, 682,702 gallons of turpentine, valued at \$243,491, was produced by wood distillation.

CLAY, GLASS, AND STONE PRODUCTS.

Under this general head are assembled the industries using clay, sand, and stone as basic materials, namely, the manufacture of brick, tile, pottery, terra-cotta, and fire-clay products, and that of cement, glass, and lime.

The statistics for all these industries, except glass manufacture, were collected in 1909 in cooperation with the United States Geological Survey, and the tables include, except as otherwise stated, the respective products made by establishments engaged primarily in the manufacture of other products as well as those establishments making such products as their principal business.

Brick and tile, and pottery, terra-cotta, and fire-clay products.¹—Table 84 summarizes the statistics in regard to the products of the brick and tile, pottery, and terra-cotta and fire-clay products industries. The total value of these classes of products was \$168,895,365 in 1909 and \$95,533,862 in 1899, the increase during the decade being 76.8 per cent. Of the total value of products in 1909, that of brick formed 57.5 per cent, that of tile and allied products 23.2 per cent, and that of pottery 18.4 per cent. The percentages were practically the same in 1904 and 1899. Some of the classes show large ratios of in-

¹ The statistics differ from those published by the United States Geological Survey, which include Porto Rico.

crease, notably porcelain electrical supplies and building terra cotta, including architectural terra cotta, fireproofing, and tiling.

Table 84	PRODUCT.	1909	1904	1899
Total value.....		\$168,895,365	\$135,352,854	\$95,533,862
Brick and tile, terra-cotta, and fire-clay products.....		\$136,387,846	\$109,003,306	\$76,551,645
Brick.....		\$97,137,844	\$78,728,083	\$58,640,228
Common—				
Thousand.....		9,787,671	8,683,897	7,654,528
Value.....		\$57,216,789	\$51,289,871	\$39,674,749
Fire—				
Thousand.....		838,157	678,362	800,862
Value.....		\$16,620,695	\$11,752,625	\$8,636,542
Vitrified paving, etc.—				
Thousand.....		1,023,654	715,559	599,720
Value.....		\$11,299,586	\$7,256,088	\$4,828,456
Front, including fancy colored and fancy or ornamental—				
Thousand.....		821,641	626,142	451,420
Value.....		\$9,886,292	\$7,335,511	\$5,179,492
Sand lime.....		\$1,150,580	\$498,003	(¹)
Enameled.....		\$993,902	\$445,965	\$329,969
Drain tile.....		\$9,788,978	\$5,822,198	\$3,662,184
Sewer pipe.....		\$10,322,324	\$8,416,009	\$4,569,394
Architectural terra cotta.....		\$6,251,625	\$3,792,763	\$2,027,522
Fireproofing, terra-cotta lumber and hollow building tile, or blocks.....		\$4,466,706	\$4,317,312	\$1,666,081
Tile, not drain.....		\$5,291,963	\$2,735,717	\$1,276,390
Stove lining.....		\$423,583	(¹)	\$416,285
Other.....		\$2,694,821	\$5,801,224	\$4,203,801
Pottery.....		\$31,048,341	\$25,834,513	\$17,222,049
White ware, including C. C. ware, white granite, semiporcelain ware, and semivitreous porcelain ware.....		\$13,728,316	\$9,195,703	\$6,376,351
Sanitary ware.....		\$5,989,295	\$3,932,506	\$2,211,877
Stoneware and yellow and Rockingham ware.....		\$3,993,859	\$3,481,521	\$2,130,263
Porcelain electrical supplies.....		\$3,047,499	\$1,500,283	\$479,355
China, bone china, Delft and Bel-leek ware.....		\$1,766,766	\$3,478,627	\$1,297,978
Red earthenware.....		\$804,896	\$821,695	\$762,298
Other.....		\$1,717,800	\$3,424,178	\$3,972,956
All other products.....		\$1,459,178	\$515,035	\$1,769,177

¹ Not reported separately.

² Product of Ohio included in "other" pottery.

Cement.—The statistics of products for the cement industry for 1909 and 1904, given in the following table, show a total value of \$63,205,455 in 1909 as compared with \$29,873,122 in 1904, the rate of increase for the five-year period being 111.6 per cent. In 1899 the statistics for the lime and cement industries were combined, the products aggregating \$28,673,735 in value. The value of the combined lime and cement product in 1909 was \$81,157,442, the increase for the decade being 183 per cent.

During the period 1904–1909 the output of cement increased 110.5 per cent in quantity, all of the increase being in Portland cement, while the output of natural cement and of puzzolan cement decreased greatly. Portland cement formed 97.5 per cent of the total in 1909, as compared with 83.7 per cent in 1904.

Table 85	PRODUCT.	1909	1904
Total value.....		\$63,205,455	\$29,873,122
Cement:			
Barrels.....		66,699,715	31,675,257
Value.....		\$53,810,563	\$26,081,920
Portland—			
Barrels.....		64,991,431	26,595,881
Value.....		\$52,858,354	\$23,355,119
Natural—			
Barrels.....		1,537,638	4,866,331
Value.....		\$652,756	\$2,459,130
Puzzolan—			
Barrels.....		160,646	308,045
Value.....		\$99,453	\$226,651
All other products.....		\$9,594,892	\$3,541,262

Glass.—The following table presents comparative statistics for the glass industry, giving the total cost of materials and the total value of products, together with the quantities of the principal materials and products, for the years 1909, 1904, and 1899. There was an increase of 62.9 per cent in the value of all

products for 1909 as compared with 1899. The increase in the value of building glass amounted to 53.9 per cent; that in the value of pressed and blown glass to 60.4 per cent; and that in the value of bottles and jars to 66.2 per cent. The *ton of 2,000 pounds* is used in showing quantities.

Table 86			1909	1904	1899				1909	1904	1899
PRINCIPAL MATERIALS.						PRODUCTS—continued.					
Total cost						\$32,119,499	\$26,145,522	\$16,731,009	Building glass—Continued.		
Glass sand, tons.....						1,004,086	769,792	581,720	Skylight—		
Soda ash (carbonate of soda), tons.....						373,764	215,462	157,779	Square feet.....		
Salt cake (sulphate of soda), tons.....						76,540	53,905	53,257	Value.....		
Nitrate of soda, tons.....						19,676	11,915	10,770	All other.....		
Limestone, tons.....						156,377	115,655	91,015	\$27,398,445	\$21,956,158	\$17,076,125
Lime, bushels.....						1,256,117	1,169,342	993,349	Pressed and blown glass.....		
Arsenic, pounds.....						3,140,720	2,676,050	2,349,261	Tableware, 100 pieces.....		
Carbon, tons.....						5,480	3,750	4,155	Jellies, tumblers, and goblets, dozen.....		
Manganese, pounds.....						3,882,465	3,099,939	1,493,538	Lamps, dozen.....		
Litharge and red lead, pounds.....						11,653,149	9,613,649	8,386,106	Chimneys, dozen.....		
Potash or pearlash, pounds.....						6,938,355	5,446,338	4,406,211	Lantern globes, dozen.....		
Grinding sand, tons.....						706,689	410,556	265,438	Globes and other electrical goods, dozen.....		
Rouge, pounds.....						1,383,182	1,098,566	837,536	Shades, globes, and other gas goods, dozen.....		
PRODUCTS.						Blown tumblers, stem ware, and bar goods, dozen.....					
Total value						\$92,095,208	\$79,607,998	\$56,539,712	Opal ware, dozen.....		
Building glass.....						\$26,308,438	\$21,697,861	\$17,096,234	Cut ware, dozen.....		
Window—						Bottles and jars.....					
50-foot boxes.....						6,921,611	4,852,315	4,341,282	Prescriptions, vials, and druggists' wares, gross.....		
Value.....						\$11,742,959	\$11,610,851	\$10,879,355	Beer, soda, and mineral, gross.....		
Plate—						Liquors and flasks, gross.....					
Total cast, square feet.....						60,105,694	34,804,986	21,172,129	Milk jars, gross.....		
Polished—						Fruit jars, gross.....					
Square feet.....						47,370,254	27,293,138	16,883,578	Battery jars and other electrical goods, gross.....		
Value.....						\$12,204,875	\$7,978,253	\$5,158,598	Patent and proprietary, gross.....		
Rough, made for sale—						Packers and preservers, gross.....					
Square feet.....						205,690	17,784	628,684	Demijohns and carboys, dozen.....		
Value.....						\$37,431	\$3,529	\$75,887	All other products.....		
Cathedral—											
Square feet.....						7,405,980	6,615,093	8,846,361	\$2,369,987	\$2,322,916	\$690,562
Value.....						\$569,848	\$293,623	\$567,252			

¹ In addition, 42,639 gross of bottles and jars, valued at \$90,490, were made by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

² In addition, glassware to the value of \$9,663 was made by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

³ Not reported.

Lime.—The total value of the lime reported as manufactured in 1909 was \$13,763,604 as compared with \$9,951,456 in 1904, an increase for the five-year period of 38.3 per cent. The quantity reported in 1909 was 3,467,523 tons (2,000 pounds), of which 1,904,202 tons was used for building or structural purposes; 591,792 tons for fertilizing; and the remainder in various manufacturing establishments, such as paper mills, tanneries, sugar factories, and alkali works. The value of all products reported by establishments engaged primarily in the manufacture of lime was \$17,951,987 in 1909 and \$14,751,170 in 1904.

VEHICLES FOR LAND TRANSPORTATION.

Under the above heading are given statistics for the manufacture of automobiles, bicycles, motorcycles, and carriages and wagons, and the construction of steam and electric railroad cars, and also for the operations of the construction and repair shops of railroads.

Automobiles.—The statistics for automobiles are presented in Table 87. Under "all other products" are included the products of establishments engaged

¹ The statistics differ from those published by the United States Geological Survey, which include Hawaii and Porto Rico.

in the manufacture of automobile bodies and parts, which are sold largely to automobile manufacturers, as well as the value of bodies and parts made and sold separately by automobile manufacturers. The total value of products for the industry thus involves considerable duplication. The growth of the automobile industry has been phenomenal. In 1899 the general statistics for the industry were included with those for carriage and wagon manufacture, and only 3,897 automobiles were reported. In 1904 the total number, including automobiles made by concerns classified under other industries, was 22,830, while in 1909 the number was 127,287, or nearly thirty-three times the number reported in 1899.

The value of all products of the industry proper was \$249,202,075 in 1909 and \$30,033,536 in 1904. Gasoline machines formed 95.1 per cent of the total number made in 1909 and 86.2 per cent in 1904. Of the total number manufactured in 1909, 3,226, or 2.5 per cent, were rated at 50 horsepower or more; 51,218, or 40.5 per cent, at from 30 to 49 horsepower; 35,257, or 27.8 per cent, at from 20 to 29 horsepower; 29,353, or 23.2 per cent, at from 10 to 19 horsepower; and 7,539, or 6 per cent, at less than 10 horsepower. Passenger vehicles constituted 97.4 per cent of the total number and business vehicles 2.6 per cent.

Table 87

PRODUCT.	1909		1904	
	Number.	Value.	Number.	Value.
Total value.....		\$249,202,075		\$30,033,538
Automobiles.....	126,593	164,269,324	21,602	23,751,234
Gasoline.....	120,393	153,529,653	18,699	19,566,941
Electric.....	3,826	7,259,430	1,425	2,490,255
Steam.....	2,374	3,480,241	1,568	1,688,038
Passenger vehicles (pleasure, family, and public conveyances).....	123,338	159,039,301	21,281	22,804,287
Gasoline.....	117,633	149,530,232	18,504	19,300,654
Electric.....	3,331	6,028,828	1,211	1,819,595
Steam.....	2,374	3,480,241	1,566	1,684,038
Buggies.....	4,582	2,391,250	(²)	(²)
Gasoline.....	4,314	2,039,129	(²)	(²)
Electric.....	268	352,121	(²)	(²)
Runabouts.....	36,204	28,030,479	12,131	8,831,504
Gasoline.....	35,347	27,116,901	10,999	7,976,821
Electric.....	496	648,630	455	453,304
Steam.....	361	264,948	677	401,379
Touring cars.....	76,114	113,403,188	7,220	11,781,521
Gasoline.....	73,883	109,844,295	6,444	10,576,023
Electric.....	243	387,526	39	55,038
Steam.....	1,988	3,171,367	737	1,150,460
Closed (limousine, cabs, etc.).....	5,205	12,729,304	(²)	(²)
Gasoline.....	3,290	8,762,768	(²)	(²)
Electric.....	1,915	3,966,536	(²)	(²)
All other (omnibuses, sight-seeing wagons, ambulances, patrol wagons, etc.).....	1,233	2,485,080	1,930	2,191,262
Gasoline.....	799	1,767,139	1,061	747,810
Electric.....	409	674,015	717	1,311,253
Steam.....	25	43,926	152	132,199
Business vehicles (merchandise).....	3,255	5,230,023	411	946,947
Gasoline.....	2,760	3,999,421	195	266,287
Electric.....	495	1,230,602	214	676,660
Steam.....			2	4,000
Delivery wagons.....	1,862	1,918,856	251	455,457
Gasoline.....	1,645	1,474,063	140	215,897
Electric.....	217	444,793	109	235,560
Steam.....			2	4,000
Trucks.....	1,366	3,165,512	160	491,490
Gasoline.....	1,090	2,384,703	55	50,390
Electric.....	276	780,809	105	441,100
All other.....	27	145,655	(¹)	(¹)
Gasoline.....	25	140,655	(¹)	(¹)
Electric.....	2	5,000	(¹)	(¹)
All other products, including bodies and parts.....		\$78,584,753		5,431,249
Amount received for custom work and repairing.....		6,317,998		851,053

¹ In addition, 694 automobiles, valued at \$830,080, and bodies and parts valued at \$4,415,266, were made by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

² In addition, 1,138 automobiles, valued at \$879,205, were made by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

³ Not reported separately.

⁴ None reported.

⁵ Includes custom work and repairing by establishments manufacturing bodies and parts.

Bicycles and motorcycles, and parts.—The following table presents the comparative statistics of products for the bicycle and motorcycle industry. It does not include children's bicycles and tricycles. A marked feature is the decline in the manufacture of bicycles and tricycles and the increase in the manufacture of motorcycles.

Table 88

PRODUCT.	1909	1904	1899
Total value.....	\$10,698,567	\$1,518,240	\$31,915,908
Bicycles:			
Number.....	168,824	225,309	1,112,880
Value.....	\$2,436,996	\$3,203,505	\$22,127,310
Tricycles:			
Number.....	(²)	32	328
Value.....		\$3,350	\$17,261
Motorcycles:			
Number.....	18,628	2,300	160
Value.....	\$3,015,938	\$354,980	\$33,674
All other products, including parts.....	\$5,245,583	\$1,591,495	\$9,737,663

¹ In addition, the following products were made by establishments engaged primarily in the manufacture of products other than those covered by the industry designation: In 1909, 64,883 bicycles, valued at \$791,193, and other products, including parts, etc., valued at \$579,927; in 1904, 23,178 bicycles, valued at \$537,418; 28 motorcycles, valued at \$4,200; and other products, including parts, valued at \$34,341; and in 1899, 69,811 bicycles, valued at \$1,529,177, and other products valued at \$24,000.

² None reported.

The total value of products of the industry decreased from \$31,915,908 in 1899 to \$5,153,240 in 1904, but by 1909 it had risen again to \$10,698,567, or more than double the figures for 1904.

Carriages and wagons and materials.—The following table presents statistics for the manufacture of carriages and wagons, including under "All other products" the products of establishments engaged in the manufacture of carriage and wagon materials, but not including children's carriages and sleds. The total value of products increased from \$138,261,763 in 1899 to \$159,892,547 in 1909, or 15.6 per cent. The value of wagons increased \$8,852,172, or 28.5 per cent, though the number manufactured was very little larger in 1909 than in 1899. The carriages reported were both fewer in number and lower in value in 1909 than in 1899. Public conveyances also show a decrease in value, but a slight increase in number. In each of these three classes the decreases that appear for the decade as a whole have taken place entirely since 1904, in which year the numbers and values reported exceeded those for 1899. The decreases are presumably due to the growth of the automobile industry.

Table 89

PRODUCT.	1909	1904	1899
Total value.....	\$159,892,547	\$155,868,649	\$138,261,763
Carriages (family and pleasure):			
Number.....	828,411	937,499	904,639
Value.....	\$47,756,118	\$56,750,276	\$91,266,293
Wagons:			
Number.....	567,665	643,735	579,428
Value.....	\$39,682,919	\$37,196,290	\$31,980,736
Business:			
Number.....	154,031	133,422	(²)
Value.....	\$16,440,816	(²)	(²)
Farm:			
Number.....	429,952	505,025	(²)
Value.....	\$22,615,875	(²)	(²)
Government, municipal, etc.:			
Number.....	3,162	5,306	(²)
Value.....	\$876,219	(²)	(²)
Public conveyances (cabs, hacks, hansoms, hotel coaches, omnibuses, etc.):			
Number.....	2,243	2,711	3,218
Value.....	\$939,267	\$1,314,952	\$1,114,090
Sleighs and sleds:			
Number.....	199,899	127,455	117,906
Value.....	\$2,066,850	\$2,694,560	\$2,200,903
Automobiles: ¹			
Number.....	544	199	174
Value.....	\$569,119	\$235,675	\$129,053
All other products, including parts, and amount received for repair work.....	\$68,629,263	\$58,678,156	\$32,351,586

¹ In addition, 14,908 carriages, valued at \$1,078,935; 42,112 wagons, valued at \$2,093,288; 104 public conveyances, valued at \$5,615; 8,209 sleighs and sleds, valued at \$165,917; and parts and materials, valued at \$1,154,256, were made by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

² In addition, carriages and wagons, valued at \$612,173, were made by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

³ Not reported separately.

⁴ Automobiles manufactured in establishments devoted primarily to the manufacture of carriages and wagons.

Cars and general shop construction and repairs by steam-railroad companies.—Table 90 presents statistics of the work done by construction and repair shops operated by steam-railroad companies, not including roundhouses where running repairs are made. The total value of such work was \$405,600,727 in 1909 and \$218,238,277 in 1899, the rate of increase

for the decade being 85.9 per cent. Most of the value represents that of repairs, comparatively little representing new construction.

Table 90 CLASS OF WORK.	1909	1904	1899 ¹
Total value	\$405,600,727	\$309,775,089	\$218,238,277
Motive power and machinery department.....	\$184,971,870	\$149,643,953	\$94,447,260
Locomotives built:			
Number.....	215	148	272
Value.....	\$3,289,140	\$1,853,939	\$3,276,393
Repairs to locomotives, motors, etc.....	\$127,928,773	\$101,326,805	\$57,383,143
Work for other corporations.....	\$4,735,004	\$5,681,307	\$3,338,589
All other products or work.....	\$49,018,953	\$40,781,902	\$30,449,135
Car department.....	\$199,768,939	\$149,748,820	\$118,376,552
Cars built.....	\$13,326,171	\$12,990,011	\$16,521,352
Passenger—			
Number.....	218	414	390
Value.....	\$1,291,354	\$2,337,977	\$1,441,733
Freight—			
Number.....	13,972	14,742	26,543
Value.....	\$11,787,664	\$10,006,642	\$15,079,619
Other—			
Number.....	359	2,000	(²)
Value.....	\$267,153	\$645,392	(²)
Repairs to cars of all kinds.....	\$147,194,065	\$105,319,032	\$74,665,500
Work for other corporations.....	\$3,784,239	\$6,946,990	\$7,084,857
All other products or work.....	\$30,464,464	\$24,492,787	\$20,104,843
Bridge and building departments (shopwork).....	\$2,799,898	\$5,096,141	\$5,414,465
Repairs and renewals.....	\$1,906,737	\$4,351,487	\$3,937,170
Work for other corporations.....	\$46,496	\$40,581	\$241,626
All other products or work.....	\$846,665	\$704,073	\$1,235,669
All other products and work, not classified.....	\$18,060,020	\$5,286,175	(²)

¹ Includes Alaska.

² None reported.

Cars and general shop construction and repairs by street-railroad companies.—The following table presents statistics of the operations of the construction and repair shops of street-railroad companies, including all electric systems and interurban electric lines—all railroads, in fact, except steam roads. The work done, which consists almost wholly of repairs, was not reported in detail in 1899, but its aggregate value in that year was \$9,370,811, as compared with \$13,437,121 in 1904 and \$31,962,561 in 1909, an increase for the decade of 241.1 per cent.

Table 91 CLASS OF WORK.	1909	1904
Total value	\$31,962,561	\$13,437,121
Motive power and machinery department.....	\$4,510,332	\$510,946
Repairs to motors, etc.....	\$4,004,336	.....
Work for other corporations.....	\$88,070	\$2,626
All other products or work.....	¹ \$417,926	\$508,320
Car department.....	\$25,835,463	\$12,581,365
Cars built.....	\$626,752	\$605,144
Passenger—		
Number.....	129	288
Value.....	\$498,709	\$580,669
Freight—		
Number.....	63	13
Value.....	\$59,102	\$11,366
Other—		
Number.....	51	9
Value.....	\$68,941	\$13,109
Repairs to cars of all kinds.....	\$22,869,777	\$11,254,505
Work for other corporations.....	\$624,805	\$36,714
All other products or work.....	\$1,714,129	\$685,002
Bridge and building department (shopwork).....	\$330,948	\$327,855
Repairs and renewals.....	\$273,581	\$253,133
Work for other corporations.....	\$5,093	.....
All other products or work.....	\$52,274	\$74,722
All other products and work not classified.....	\$1,285,818	\$16,955

¹ Includes value of three electric locomotives.

Cars, steam-railroad.—The statistics of establishments constructing steam-railroad cars given in the

following table do not include the work of steam-railroad companies in their repair shops or that of concerns primarily engaged in the construction of street cars. The total value of products of this industry was \$123,729,627 in 1909, as compared with \$90,510,180 in 1899, an increase for the decade of 36.7 per cent. The freight cars made in 1909 were fewer in number and lower in aggregate value than those made in either 1904 or 1899, and the cars for passenger service made in 1909 were fewer in number and lower in aggregate value than those made in 1904. In fact, while there are a number of classes of products, such as passenger cars (day coaches) and ore cars, which show an increase in number and value for the five-year period 1904-1909, the increase in value for the total is more than covered by the increase in the value of "all other products."

Table 92 PRODUCT.	1909	1904	1899
Total value	¹ \$123,729,627	² \$111,175,310	\$90,510,180
Steam-railroad cars:			
Passenger service—			
Total number.....	1,601	2,030	979
Value.....	\$13,829,607	\$18,140,293	\$7,368,299
Baggage and express—			
Number.....	216	199	72
Value.....	\$1,105,779	\$896,185	\$238,554
Mail—			
Number.....	95	95	42
Value.....	\$600,912	\$576,230	\$197,465
Passenger—			
Number.....	957	428	331
Value.....	\$7,209,425	\$2,955,517	\$1,975,469
Chair, dining and buffet, parlor, sleeping, and all other—			
Number.....	333	1,308	534
Value.....	\$4,913,491	\$13,712,361	\$4,956,811
Freight service—			
Total number.....	73,177	100,616	116,590
Value.....	\$61,691,825	\$69,148,955	\$62,161,033
Box—			
Number.....	29,728	38,184	47,838
Value.....	\$23,982,446	\$28,508,632	\$26,562,893
Coal and coke—			
Number.....	11,473	27,998	28,857
Value.....	\$9,419,655	\$21,367,218	\$18,414,718
Flat—			
Number.....	3,232	5,412	4,525
Value.....	\$2,033,801	\$2,893,154	\$1,923,525
Fruit—			
Number.....	900	2,840	1,620
Value.....	\$784,476	\$1,727,771	\$665,354
Furniture—			
Number.....	90	801	1,717
Value.....	\$70,515	\$505,000	\$1,148,265
Gondola or ore—			
Number.....	19,007	9,518	11,821
Value.....	\$18,128,186	\$5,518,084	\$6,873,145
Refrigerator—			
Number.....	2,618	3,353	2,354
Value.....	\$2,747,957	\$3,042,835	\$1,956,097
Stock—			
Number.....	2,349	4,235	2,760
Value.....	\$1,586,008	\$2,453,123	\$1,426,800
Caboose—			
Number.....	537	160	193
Value.....	\$525,605	\$150,977	\$184,865
Other—			
Number.....	2,643	8,115	14,905
Value.....	\$2,413,176	\$2,982,161	\$3,005,351
Street-railroad cars:			
Number.....	603	418	935
Value.....	\$2,023,922	\$994,654	\$1,080,854
Passenger—			
Number.....	558	331	902
Value.....	\$1,903,317	\$930,791	\$1,062,172
Other—			
Number.....	45	87	33
Value.....	\$120,605	\$63,863	\$28,682
All other products.....	\$46,134,273	\$22,891,408	\$19,890,014

¹ In addition, 8,977 cars, valued at \$5,924,871, and parts and repairs to the value of \$210,487, were reported by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

² In addition, 2,541 cars, valued at \$1,012,820, and parts and repairs to the value of \$101,073, were reported by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

Cars, street-railroad.—The following table presenting comparative statistics of products for establishments constructing street or electric railroad cars does not include cars made in the shops of railroad companies or by concerns primarily engaged in making steam-railroad cars. In 1899 the value of all products was \$7,305,368 and in 1909 only \$7,809,866, a slight increase thus being shown for the decade. The value of products in 1904, however, exceeded that in 1899. The decrease in the construction of open cars since 1904 is especially marked.

PRODUCT. ¹	1909	1904	1899
Total value.....	\$7,809,866	\$10,844,196	
Electric-railroad cars:			
Number.....	1,922	3,966	
Value.....	\$4,602,435	\$8,302,512	
Closed—			
Number.....	1,323	2,621	
Value.....	\$3,500,781	\$5,777,257	
Combination—			
Number.....	369	502	
Value.....	\$704,309	\$1,240,864	
Open—			
Number.....	95	554	
Value.....	\$141,008	\$860,349	
Freight, express, and mail—			
Number.....	92	16	
Value.....	\$179,293	\$24,022	
Other varieties—			
Number.....	43	4273	
Value.....	\$77,044	\$400,020	
Steam-railroad cars:			
Freight service, all classes—			
Number.....	167	136	
Value.....	\$111,813	\$59,663	
All other products.....	\$3,095,618	\$2,482,021	

¹ Products were not shown in detail for 1899; the total value was \$7,305,368.
² In addition, 607 cars, valued at \$2,033,922, were made by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.
³ In addition, 418 cars, valued at \$994,654, were made by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.
⁴ Includes 33 horse cars, valued at \$29,182.

Summary for railroad cars.—The following table assembles the statistics of all railroad cars constructed, including those made in establishments not engaged primarily in the construction of railroad cars:

PRODUCT.	1909	1904	1899
Total value.....	\$102,137,396	\$110,249,222	
Steam-railroad cars.....	\$94,874,287	\$100,346,912	\$86,050,664
Passenger service—			
Number.....	1,819	2,446	1,369
Value.....	\$15,120,961	\$20,496,260	\$8,810,032
Freight service ¹ —			
Number.....	96,648	117,494	143,133
Value.....	\$79,753,326	\$79,860,652	\$77,240,632
Street-railroad cars: ²			
Number.....	2,772	4,694	(³)
Value.....	\$7,263,109	\$9,902,310	(³)

¹ Including all service not passenger. ² Chiefly electric.
³ Not reported separately; the total value of products of establishments engaged primarily in the construction of street-railroad cars amounted to \$7,305,368.

MISCELLANEOUS INDUSTRIES.

Statistics for all industries that can not properly be classified with any of the groups before presented, on account of the character either of the products or of the raw materials used, are given under the above head.

Agricultural implements.—Table 95 presents comparative statistics of the production of agricultural implements. The value of all products increased from \$101,207,428 in 1899 to \$146,329,268 in 1909, or 44.6

per cent. This includes the value of miscellaneous agricultural implements and parts not classifiable under either of the four groups shown separately and of a large number of products not distinctively agricultural, but made by manufacturers of agricultural implements, such as windmills, carriages and wagons, engines, presses, castings, lawn swings, etc. In 1909 the aggregate value of the four groups of agricultural implements—seeders and planters, implements of cultivation, harvesting implements, and separators—was \$94,524,494, compared with \$79,335,400 in 1904, an increase of 19.1 per cent.

PRODUCT.	1909	1904	1899
Total value.....	\$146,329,268	\$112,007,344	\$101,207,428
Implements of cultivation.....	\$35,246,030	\$30,607,900	
Seeders and planters.....	\$13,679,321	\$11,225,122	
Harvesting implements.....	\$34,566,131	\$30,862,435	\$38,010,505
Seed separators.....	\$11,030,412	\$6,639,883	
All other products.....	\$26,090,082	\$30,708,648	
Amount received for repair work.....	\$3,114,632	\$1,908,290	\$3,196,622
<i>Principal kind of implements, by number.</i>			
Implements of cultivation:			
Cultivators—			
Beet.....	3,172	3,459	2,008
Small.....	499,696	239,173	267,171
Wheeled.....	435,429	513,088	295,796
Cotton scrapers.....	29,189	22,519	15,230
Harrow—			
Disk.....	193,900	104,323	67,261
Spring-tooth.....	112,832	86,493	390,259
Spike-tooth.....	394,968	262,442	
Plows—			
Disk.....	22,132	39,146	17,345
Gang.....	91,686	(¹)	(¹)
Shovel.....	254,737	121,699	102,320
Steam.....	2,535	1,599	267
Saiky or wheel.....	134,896	138,859	136,135
Walking.....	1,119,996	956,898	819,622
Seeders and planters:			
Seeders—			
Broadcast.....	38,067	33,546	36,862
Combination.....	29,963		
Corn planters—			
Hand.....	96,465	96,553	129,515
Horse.....	122,780	90,929	78,135
Listers.....	44,840	23,012	28,965
Cotton planters.....	79,271	127,052	45,875
Potato planters.....	23,062	35,756	25,338
Drills—			
Corn.....	20,137	28,226	21,940
Disk.....	21,292	(²)	(²)
Grain.....	68,611	76,929	61,635
All other.....	32,507	606	5,362
Seed sowers.....	7,847	59,919	83,283
Harvesting implements:			
Grain cradles.....	22,635	30,656	36,153
Harvesters—			
Bean.....	1,409	695	1,425
Corn.....	19,693	6,924	20,707
Grain.....	129,274	108,810	232,542
Harvesters and thrashers combined.....	543	(²)	(²)
Other.....	1,707	3,161	6,283
Hay carriers.....	45,064	85,121	54,303
Hayforks, horse.....	43,675	62,801	51,770
Hay loaders.....	34,705	27,174	7,273
Hayrakes, horse.....	268,260	228,297	216,345
Haystackers.....	17,212	8,670	12,669
Hay tedders.....	34,396	35,745	14,510
Mowers.....	359,264	273,385	398,616
Potato diggers, horse.....	25,632	11,703	(²)
Reapers.....	58,294	60,996	35,945
Seed separators:			
Clover hullers.....	437	351	661
Corn huskers.....	372	1,327	10,726
Corn huskers and shredders.....	1,240		
Corn shellers—			
Hand.....	74,223	47,189	104,381
Power.....	9,649	6,082	8,185
Fanning mills.....	33,805	22,994	30,369
Thrashers—			
Horsepower.....	922	2,257	1,314
Steam power.....	23,565	7,560	3,661

¹ In addition, agricultural implements, to the value of \$2,989,276, in 1909, and to the value of \$1,349,679, in 1904, were made by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.
² Not reported separately.

Electrical machinery, apparatus, and supplies.—Table 96 summarizes the statistics of the output of electrical machinery, apparatus, and supplies, and

includes figures for such products made by establishments engaged primarily in the manufacture of other products, as well as for all products of establishments engaged primarily in the manufacture of electrical machinery, apparatus, and supplies. The value of all products was \$243,965,093 in 1909, as compared with \$105,831,865 in 1899, an increase for the decade of 130.5 per cent. Among the leading groups the highest rate of increase is for incandescent lamps, the value of which was \$3,515,118 in 1899 and \$15,714,809 in 1909.

Table 96 PRODUCT.	1909	1904	1899
Total value	\$243,965,093	\$159,551,402	\$105,831,865
Dynamos:			
Number.....	16,791	15,080	10,527
Kilowatt capacity.....	1,405,950	996,182	578,124
Value.....	\$13,081,048	\$11,084,234	\$10,472,576
Dynamotors, motor generators, boosters, rotary converters, and double current generators.....	\$3,154,733	\$1,740,534	\$379,747
Transformers.....	\$8,801,019	\$4,468,567	\$2,962,871
Switchboards, panel boards, and cut-out cabinets.....	\$5,971,804	\$3,766,044	\$1,846,624
Motors:			
Total number.....	504,030	206,343	159,780
Horsepower.....	2,733,418	1,493,012	1,221,482
Value.....	\$32,087,482	\$22,370,626	\$19,505,504
For power—			
Number.....	243,423	79,877	35,604
Horsepower.....	1,683,677	678,910	515,705
Value.....	\$18,306,451	\$13,120,948	\$7,551,480
For automobiles—			
Number.....	2,796	1,819	3,017
Horsepower.....	12,471	19,907	8,220
Value.....	\$294,152	\$152,685	\$192,030
For fans—			
Number.....	199,113	102,535	97,577
Horsepower.....	178,033	30,796	12,766
Value.....	\$2,450,739	\$1,168,254	\$1,055,369
For elevators—			
Number.....	4,988	1,333	385
Horsepower.....	63,585	13,398	6,730
Value.....	\$1,188,653	\$638,473	\$2,523,901
For railways, and miscellaneous services, including value of parts and supplies—			
Number.....	53,710	20,779	23,197
Horsepower.....	795,652	750,001	678,061
Value.....	\$9,847,487	\$7,290,266	\$8,182,724
Storage batteries, including value of parts and supplies:			
Weight of plates in pounds.....	23,119,331	16,113,073	(¹)
Value.....	\$4,678,209	\$2,645,749	\$2,559,601
Primary batteries, including value of parts and supplies:			
Number.....	34,333,531	6,623,162	2,654,765
Value.....	\$5,934,261	\$1,598,144	\$1,119,444
Arc lamps:			
Number.....	123,985	195,157	158,187
Value.....	\$1,706,959	\$1,574,422	\$1,827,771
Searchlights, projectors, and focusing lamps.....	\$935,874	\$114,795	\$225,635
Incandescent lamps.....	\$15,714,809	\$6,953,205	\$3,515,118
Carbon filament.....	\$6,157,066		
Tungsten.....	\$6,241,133	\$6,703,454	\$3,442,183
Gem, tantalum, glower, and vacuum and vapor lamps.....	\$2,715,991		
Decorative and miniature lamps, X-ray bulbs, vacuum tubes, etc.....	\$600,619	\$249,751	\$72,935
Sockets, receptacles, bases, etc.....	\$4,521,729	\$2,010,860	\$593,929
Electric-lighting fixtures of all kinds.....	\$6,128,282	\$3,294,606	\$3,750,670
Telegraph apparatus.....	\$1,957,432	\$1,111,194	\$1,642,266
Telephone apparatus.....	\$14,259,357	\$15,863,698	\$10,512,412
Insulated wires and cables.....	\$51,624,737	\$34,519,699	\$21,292,001
Electric conduits.....	\$5,098,264	\$2,416,245	\$1,066,163
Annunciators—domestic, hotel, and office.....	\$235,567	\$185,870	\$224,895
Electric clocks and time mechanisms.....	\$352,513	\$373,926	\$132,149
Fuses.....	\$1,001,719	\$868,079	
Lightning arresters.....	\$940,171	\$587,124	\$595,497
Rheostats and resistances.....	\$2,674,963	\$932,925	
Heating, cooking, and welding apparatus.....	\$1,003,038		\$1,186,878
Electric batteries.....	\$951,074	\$395,827	
Electric measuring instruments.....	\$7,800,010	\$5,004,763	\$1,842,135
Electrical therapeutic apparatus.....	\$1,107,858	\$1,036,962	(²)
Magneto-ignition apparatus, sparks, coils, etc.....	\$6,092,343	\$678,077	(²)
Electric switches, signals, and attachments.....	\$5,377,843	\$1,451,337	\$1,129,891
Circuit fittings of all kinds.....	\$1,080,287	\$3,525,446	(²)
All other products.....	\$39,691,708	\$28,978,444	\$17,448,098

¹ Includes values of electrical machinery, apparatus, and supplies made by establishments engaged primarily in the manufacture of products other than those covered by the industry designation, as follows: 1909, \$22,656,530; 1904, \$18,742,033; and 1899, \$13,307,430.

² Not reported separately.

Ice, manufactured.—Table 97 includes the product of all establishments engaged primarily in manufacturing ice for sale, but does not include establishments making ice for their own use. Ice made for sale by establishments engaged chiefly in some other business, such as breweries, is reported in a footnote.

The value of all products of the industry proper increased from \$13,874,513 in 1899 to \$42,953,055 in 1909, or 209.6 per cent. The quantity of ice produced increased at about the same rate, and amounted to 12,647,949 tons in 1909.

Table 97	1909	1904	1899
MATERIALS.			
Ammonia used.....	\$1,021,013	\$613,138	\$359,549
Compressor system—			
Anhydrous.....			
Pounds.....	3,097,191	¹ 1,944,266	946,666
Cost.....	\$826,222	¹ \$493,524	\$249,838
Absorption system—			
Anhydrous.....			
Pounds.....	369,093	136,604	109,869
Cost.....	\$100,283	\$37,506	\$29,842
Aqua.....			
Pounds.....	1,670,698	1,347,561	1,323,454
Cost.....	\$95,408	\$82,108	\$79,869
PRODUCTS.			
Ice:	Total value.....	\$42,953,055	\$23,790,045
			\$13,874,513
Tons (2,000 pounds).....	12,647,949	7,199,448	4,294,439
Value (2,000 pounds).....	\$39,889,263	\$22,450,503	\$13,303,874
Can—			
Tons (2,000 pounds).....	11,671,547	6,695,789	4,139,764
Value (2,000 pounds).....	\$37,085,533	\$21,020,547	\$12,863,160
Plate—			
Tons (2,000 pounds).....	976,402	503,659	154,675
Value (2,000 pounds).....	\$2,803,730	\$1,429,956	\$440,714
All other products.....	\$3,063,792	\$1,339,542	\$570,639

¹ Includes 148,373 pounds of aqua ammonia, costing \$8,755.

² In addition, in 1909, 1,582,259 tons of ice, valued at \$4,249,790, and in 1904, 814,689 tons, valued at \$1,899,912, were produced by establishments engaged primarily in the manufacture of products other than ice.

³ Includes, for purposes of comparison, products valued at \$93,535, not included in the general tables for this industry at census of 1900.

Lumber and timber products.—Beginning with 1906 an annual canvass of forest products has been made by the Bureau of the Census in cooperation with the Forest Service of the Department of Agriculture. The statistics for the year 1909 given in the following table are compiled from this annual report; those for 1904 and 1899 are from the regular census reports.

The totals for 1909 include statistics for some small neighborhood mills sawing chiefly or exclusively for local consumption, also a relatively small number of establishments using logs or bolts as material and engaged primarily in the manufacture of products other than those covered by the classified lumber and timber products industry, which classes are not represented in the totals for the other two years. Detailed statistics for the lumber and other forest-products industries will be found in the several annual reports published by the Bureau of the Census. The figures given in Table 98 can not be compared with those given in Table 110 because in the latter table the statistics cover not only the products of the sawmills, shingle and lath mills, but also the products of planing mills operated independently of sawmills, logging camps, veneer mills, and box factories.

Table 98	PRODUCT.	1909	1904	1899
	Total value.....	\$724,705,760	\$465,153,682	\$414,058,487
Lumber:	Total quantity (M feet, board measure).....	44,509,761	34,135,139	135,084,166
	Total value.....	\$684,479,859	\$435,708,084	\$390,489,873
Softwoods—	Quantity.....	33,896,959	27,353,312	26,153,063
	Value.....	\$477,345,046	\$319,835,746	\$268,481,112
Yellow pine—	Quantity.....	16,277,185	11,521,781	9,658,548
	Value.....	\$206,505,297	\$114,780,600	\$81,740,300
Western pine—	Quantity.....	1,499,985	1,290,526	944,560
	Value.....	\$23,077,854	\$14,586,149	\$9,163,256
White pine—	Quantity.....	3,900,034	5,332,704	7,742,391
	Value.....	\$70,830,131	\$79,594,717	\$98,002,555
Douglas fir—	Quantity.....	4,856,378	2,928,409	1,736,507
	Value.....	\$60,435,793	\$27,862,228	\$15,050,633
Hemlock—	Quantity.....	3,051,399	3,268,787	3,420,673
	Value.....	\$42,580,800	\$38,938,154	\$34,136,892
Spruce—	Quantity.....	1,748,547	1,303,886	1,448,091
	Value.....	\$29,561,315	\$18,289,327	\$16,322,666
Cypress—	Quantity.....	955,635	749,592	495,836
	Value.....	\$19,549,741	\$13,115,339	\$6,604,495
Redwood—	Quantity.....	521,630	519,267	360,167
	Value.....	\$7,720,124	\$6,661,499	\$3,645,608
Cedar—	Quantity.....	346,008	223,035	232,978
	Value.....	\$6,901,948	\$3,201,331	\$2,542,818
All other—	Quantity.....	740,158	215,325	113,812
	Value.....	\$10,182,043	\$2,806,402	\$1,271,584
Hardwoods—	Quantity.....	10,612,802	6,781,827	8,634,021
	Value.....	\$207,134,813	\$115,872,338	\$116,817,192
Oak—	Quantity.....	4,414,457	2,902,855	4,438,027
	Value.....	\$90,512,069	\$50,832,303	\$61,174,129
Maple—	Quantity.....	1,106,604	587,558	633,466
	Value.....	\$17,447,814	\$8,780,727	\$7,495,052
Red gum—	Quantity.....	706,945	523,990	285,417
	Value.....	\$9,334,268	\$5,693,555	\$2,747,680
Chestnut—	Quantity.....	663,891	243,537	206,688
	Value.....	\$10,703,130	\$3,356,054	\$2,764,069
Birch—	Quantity.....	452,370	224,009	132,601
	Value.....	\$7,666,186	\$3,459,501	\$1,657,621
Basswood—	Quantity.....	399,151	228,041	308,069
	Value.....	\$7,781,563	\$3,845,885	\$3,954,625
Elm—	Quantity.....	347,456	258,330	456,731
	Value.....	\$6,088,098	\$3,732,609	\$5,240,530
Cottonwood—	Quantity.....	265,600	321,574	415,124
	Value.....	\$4,794,424	\$4,797,779	\$4,303,544
Ash—	Quantity.....	291,209	169,178	269,120
	Value.....	\$7,116,089	\$3,174,861	\$4,263,599
Hickory—	Quantity.....	333,929	106,824	96,636
	Value.....	\$10,283,776	\$2,557,601	\$1,814,500
Walnut—	Quantity.....	46,108	31,455	38,681
	Value.....	\$1,972,835	\$1,435,509	\$1,411,611
Sycamore—	Quantity.....	56,511	18,002	29,715
	Value.....	\$834,612	\$236,856	\$327,933
All other—	Quantity.....	1,528,571	1,166,474	1,323,746
	Value.....	\$32,599,949	\$23,969,098	\$19,682,279
Lath:	Quantity (thousands).....	3,703,195	2,647,847	2,523,998
	Value.....	\$9,963,439	\$5,435,968	\$4,698,909
Shingles:	Quantity (thousands).....	14,907,371	14,547,477	12,102,017
	Value.....	\$30,262,462	\$24,009,610	\$18,809,705

¹ Includes 297,082 M feet of lumber, board measure, valued at \$5,191,569, reported as "other sawed products," and not by kinds of wood.

Pianos and organs and materials.—Table 99 includes the statistics for pianos and organs, and materials therefor, but does not include the products of establishments engaged primarily in the manufacture of other musical instruments. The value of all products increased from \$41,024,244 in 1899 to \$89,789,544 in 1909, or 118.9 per cent, the increase being almost

wholly in the value of pianos and player attachments for pianos. A marked feature is the gain in the number of pianos with player attachments manufactured, the output of which increased during the period 1904 to 1909 from 1,868 to 34,495, or seventeen fold. A large decrease occurred between 1904 and 1909 in the number of reed organs made.

Table 99	PRODUCT.	1909	1904	1899
	Total value.....	\$89,789,544	\$66,022,630	\$41,024,244
Pianos:	Number.....	374,154	261,197	171,911
	Value.....	\$59,501,225	\$41,476,479	\$27,062,852
Upright—	Number.....	365,413	253,825	166,760
	Value.....	\$55,462,556	\$37,815,056	\$25,301,432
Without player attachment—	Number.....	330,918	251,967	166,536
	Value.....	\$46,187,555	\$37,397,674	\$25,256,987
For or with player attachment—	Number.....	34,495	1,868	224
	Value.....	\$9,275,001	\$417,382	\$44,745
Grand—	Number.....	1,671	7,372	4,251
	Value.....	\$4,038,669	\$3,961,423	\$1,701,420
Player attachments made separate from pianos:	Number.....	10,808	20,391	6,158
	Value.....	\$1,474,630	\$2,064,266	\$607,873
Organs:	Number.....	65,335	113,966	107,258
	Value.....	\$5,309,016	\$8,152,082	\$6,217,261
Pipe—	Number.....	1,224	901	564
	Value.....	\$2,713,587	\$1,989,979	\$1,177,021
Reed—	Number.....	64,111	113,065	106,694
	Value.....	\$2,595,429	\$4,162,653	\$4,040,240
Parts and materials.....		\$20,417,762	\$12,626,892	\$8,196,258
All other products.....		\$3,086,911	\$3,832,961	

¹ In addition, in 1909, parts and materials to the value of \$699,199; in 1904, 1,695 organs, valued at \$149,114; and in 1899, 250 pianos, valued at \$37,619; and 1,144 organs, valued at \$59,508, were made by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

² Includes a few pianos with player attachments.

Paper and wood pulp.—Table 100 includes statistics for all establishments engaged in the manufacture of wood pulp and in the manufacture of paper, either separately or in conjunction. The total production of wood pulp in 1909 was 2,495,523 tons; in 1904, 1,921,768 tons; and in 1899, 1,179,535 tons. The percentage of increase for the decade was 111.6. Sulphite fiber shows the highest rate of increase, 144.6 per cent. An increasing proportion of the wood pulp is made by establishments which themselves consume it in making paper; in 1909, 63.5 per cent was so consumed by the establishments making it.

The value of all products, which includes some duplication, increased from \$127,326,162 in 1899 to \$267,656,964 in 1909, or 110.2 per cent. The output of paper products increased from 2,167,593 tons in 1899 to 4,216,708 tons in 1909, or 94.5 per cent, and their value from \$107,909,046 to \$232,741,049, or 115.7 per cent. Paper stock used for which quantities are reported aggregated 4,588,160 tons in 1909, of which wood pulp formed 61.6 per cent; old and waste paper, 21.4 per cent; rags, 7.8 per cent; straw, 6.6 per cent; and manila stock, 2.6 per cent. The ton of 2,000 pounds is used for showing quantities.

Table 100	1909	1904	1899		1909	1904	1899
MATERIALS.					PRODUCTS—continued.		
Total cost.....	\$165,442,341	\$111,251,478	\$70,530,236		Wrapping paper—Continued.		
Pulp wood.....	\$33,772,475	\$20,800,871	\$9,837,516		Bogus or wood manilla, all grades—		
Wood pulp, purchased:					Tons..... 367,932		
Tons.....	1,241,914	877,702	644,006		Value..... \$19,777,707		
Cost.....	\$43,861,357	\$27,033,164	\$18,369,464		All other—		
Ground—					Tons..... 179,855		
Tons.....	452,849	317,286	261,962		Value..... \$10,202,035		
Cost.....	\$9,487,508	\$5,754,259	\$4,361,211		Boards:		
Soda fiber—					Wood pulp—		
Tons.....	154,026	120,978	94,042		Tons..... 71,036		
Cost.....	\$6,862,864	\$5,047,105	\$3,430,809		Value..... \$2,639,496		
Sulphite fiber—					Straw—		
Tons.....	626,029	433,160	273,194		Tons..... 171,789		
Cost.....	\$27,184,226	\$16,567,122	\$10,112,189		Value..... \$3,750,851		
Other chemical fiber—					News—		
Tons.....	8,410	6,278	14,808		Tons..... 74,606		
Cost.....	\$326,259	\$264,678	\$466,255		Value..... \$2,215,469		
Rags, including cotton and flax waste and sweepings:					All other—		
Tons.....	357,470	294,552	234,514		Tons..... 514,208		
Cost.....	\$10,721,550	\$8,864,007	\$6,595,427		Value..... \$17,539,768		
Old and waste paper:					Other paper products:		
Tons.....	983,882	588,543	356,193		Tissues—		
Cost.....	\$13,691,120	\$7,430,335	\$4,869,409		Tons..... 77,745		
Manila stock, including jute bagging, rope, waste, threads, etc.:					Value..... \$8,553,654		
Tons.....	117,080	107,029	99,301		Blotting—		
Cost.....	\$3,560,033	\$2,502,332	\$2,437,256		Tons..... 9,577		
Straw:					Value..... \$1,186,180		
Tons.....	303,137	304,585	367,305		Building, roofing, asbestos, and sheathing—		
Cost.....	\$1,460,282	\$1,502,886	\$1,395,659		Tons..... 225,824		
All other materials.....	\$58,375,515	\$42,517,283	\$27,025,505		Value..... \$9,251,368		
PRODUCTS.					Hanging—		
Total value.....	\$267,656,964	\$188,715,189	\$127,326,162		Tons..... 92,158		
News paper:					Value..... \$4,431,514		
In rolls for printing—					Miscellaneous—		
Tons.....	1,091,017	840,802	454,572		Tons..... 96,577		
Value.....	\$42,807,064	\$32,763,308	\$15,754,992		Value..... \$6,869,169		
In sheets for printing—					Wood pulp made for sale or for consumption in mills other than where produced:		
Tons.....	84,537	72,020	114,640		Ground—		
Value.....	\$4,048,496	\$3,143,152	\$4,336,882		Tons..... 310,747		
Book paper:					Value..... \$5,649,466		
Book—					Soda fiber—		
Tons.....	575,016	434,500	282,093		Tons..... 155,844		
Value.....	\$42,846,674	\$31,156,728	\$19,466,504		Value..... \$6,572,152		
Coated—					Sulphite fiber—		
Tons.....	95,213	(²)	(²)		Tons..... 444,255		
Value.....	\$9,413,961	(²)	(²)		Value..... \$17,955,748		
Plate, lithograph, map, wood-cut, etc.—					All other products.....		
Tons.....	6,498	19,837	22,366		Value..... \$4,738,549		
Value.....	\$555,352	\$1,458,343	\$2,015,958		Wood pulp.		
Cover—					Quantity produced (including that used in mills where manufactured), total tons.....		
Tons.....	17,578	22,150	18,749		Ground, tons..... 2,495,523		
Value.....	\$1,982,853	\$2,023,986	\$1,665,376		Soda fiber, tons..... 1,179,266		
Cardboard, bristol board, card middles, tickets, etc.—					Sulphite fiber, tons..... 1,017,631		
Tons.....	51,449	39,060	28,494		EQUIPMENT.		
Value.....	\$3,352,151	\$2,704,444	\$1,719,813		Paper machines:		
Fine paper:					Total number..... 1,480		
Writing—					Capacity, yearly, tons..... 5,293,397		
Tons.....	169,125	131,934	60,204		Fourdrinier—		
Value.....	\$24,966,102	\$19,321,045	\$12,222,870		Number..... 804		
All other—					Capacity per 24 hours, tons.. 10,508		
Tons.....	29,088	14,898	22,503		Cylinder—		
Value.....	\$4,110,536	\$2,928,125	\$3,673,104		Number..... 676		
Wrapping paper:					Capacity per 24 hours, tons.. 6,316		
Manila (rope, jute, tag, etc.)—					Pulp:		
Tons.....	73,731	86,826	89,419		Grinders, number..... 1,435		
Value.....	\$6,989,436	\$6,136,080	\$5,929,764		Digesters, total number..... 542		
Heavy (mill wrappers, etc.)—					Sulphite fiber, number..... 348		
Tons.....	108,561	96,992	82,875		Soda fiber, number..... 194		
Value.....	\$4,380,794	\$4,035,588	\$4,143,240		Capacity, yearly, tons of pulp... 3,405,621		
Straw—					Ground, tons..... 1,809,685		
Tons.....	32,988	54,232	61,794		Sulphite, tons..... 1,250,983		
Value.....	\$870,419	\$1,389,348	\$2,027,518		Soda, tons..... 344,953		
					244,573		

¹ In addition, paper and wood pulp to the value of \$2,567,267 was made by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

² Not reported separately.

³ Not reported.

Phonographs and graphophones.—The following table gives comparative statistics for the manufacture of phonographs and graphophones. The value of all products increased from \$2,246,274 in 1899 to \$11,725,996 in 1909, or over fivefold, the bulk of the increase being in the first half of the decade. An important feature of the industry is the manufacture of records and blanks, the value of which formed 42.7 per cent of the total value of products in 1909, 45.7 per cent in 1904, and 24 per cent in 1899.

Table 101	PRODUCT.	1909	1904	1899
	Total value.....	\$11,725,996	\$10,237,075	\$2,246,274
	Phonographs and graphophones:			
	Number.....	344,681	(²)	(²)
	Value.....	\$5,406,684	\$2,966,343	\$1,240,503
	Records and blanks:			
	Number.....	27,183,959	(²)	(²)
	Value.....	\$5,007,104	\$4,678,547	\$539,370
	All other products.....	\$1,312,208	\$2,592,185	\$466,401

¹ In addition, records and parts to the value of \$31,889 were made by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

² Not reported.

Printing and publishing.—The statistics for printing and publishing given in the following table include book and job printing and publishing; the printing and publishing of music; newspapers and periodicals; bookbinding and blank-book making; engraving, including plate printing; and lithographing.

Under the head of job printing is included the job printing done by newspaper, periodical, and other establishments, as well as that of regular job-printing establishments. The value of products reported for the bookbinding and blank-book industry includes the value of all products of concerns engaged primarily in these branches, as well as the value of bookbinding and blank books reported by printing and publishing establishments. In like manner there is included under electrotyping, engraving, and lithographing the value of all products of establishments engaged primarily in these branches.

The value of all products was \$737,876,087 in 1909,

\$552,473,353 in 1904, and \$395,186,629 in 1899, the rate of increase for the period 1899–1909 being 86.7 per cent. The income of newspapers and periodicals from subscriptions, sales, and advertising was \$337,596,288 in 1909, as compared with \$175,789,610 in 1899, the rate of increase for the decade being 92 per cent. Of the total income from these sources, that from advertising formed 60 per cent in 1909 and 54.5 per cent in 1899, having increased much faster than that from subscriptions and sales.

Newspapers and periodicals increased in number from 18,793 in 1899 to 22,141 in 1909, or 17.8 per cent, and their aggregate circulation increased 53.9 per cent. The average circulation per issue was 7,428 in 1909, as compared with 6,866 in 1904 and 5,688 in 1899. The greatest relative increases in circulation during the decade were reported for dailies and monthlies. In the circulation of the latter, however, there was a decrease between 1904 and 1909.

Table 102	PRODUCT.	1909	1904	1899	PRODUCT.	1909	1904	1899
	Total value	\$737,876,087	\$552,473,353	\$395,186,629	NEWSPAPERS AND PERIODICALS—			
	Publications:				continued.			
	Newspapers and periodicals.....	\$337,596,288	\$256,816,282	\$175,789,610	<i>By character—Continued.</i>			
	Subscriptions and sales..	\$135,063,043	\$111,298,691	\$79,928,483	Commerce, finance, insurance, railroads, etc.—			
	Advertising.....	\$202,533,245	\$145,517,591	\$95,861,127	Number.....	264	364	190
	Newspapers.....	\$232,993,094	(¹)	(¹)	Aggregate circulation.....	1,411,736	2,470,832	(²)
	Subscriptions and sales.....	\$84,438,702			Trade journals generally—			
	Advertising.....	\$148,554,392			Number.....	685	627	520
	Periodicals.....	\$104,603,194	(¹)	(¹)	Aggregate circulation.....	3,572,441	3,425,596	(²)
	Subscriptions and sales.....	\$50,624,341			General literature, including monthly and quarterly magazines—			
	Advertising.....	\$53,978,853			Number.....	340	328	230
	Ready prints, patent insides and outsides.....	\$2,293,077	(¹)		Aggregate circulation.....	31,322,635	30,615,577	(²)
	Books and pamphlets—				Medicine and surgery—			
	Published, or printed and published.....	\$62,930,394	\$53,312,492		Number.....	197	192	111
	Printed for publication by others.....	\$10,209,509	(¹)		Aggregate circulation.....	931,584	1,054,948	(²)
	Sheet music and books of music—				Law—			
	Published, or printed and published.....	\$5,510,698	\$4,673,685	\$219,397,019	Number.....	56	81	62
	Printed for publication by others.....	\$1,000,966	(¹)		Aggregate circulation.....	151,346	194,085	(²)
	Products for sale and in execution of orders:				Science and mechanics—			
	Job printing.....	\$207,940,227	\$149,262,070		Number.....	139	82	66
	Book binding and blank books.....	\$50,552,808	\$40,788,768		Aggregate circulation.....	1,421,955	325,523	(²)
	Electrotyping, engraving, and lithographing.....	\$47,956,979	\$35,018,234		Fraternal organizations—			
	All other products.....	\$11,885,141	\$12,601,822		Number.....	419	450	200
					Aggregate circulation.....	6,982,235	5,356,427	(²)
					Education and history—			
					Number.....	202	173	120
					Aggregate circulation.....	1,879,383	2,119,797	(²)
					Society, art, music, fashions, etc.—			
					Number.....	164	155	88
					Aggregate circulation.....	13,445,661	15,289,431	(²)
					College and school periodicals—			
					Number.....	271	178	130
					Aggregate circulation.....	330,765	248,240	(²)
					Miscellaneous—			
					Number.....	139	538	298
					Aggregate circulation.....	1,087,937	4,860,518	(²)
					<i>By language:</i>			
					English—			
					Number.....	20,744	20,599	17,761
					Aggregate circulation.....	155,432,243	142,441,068	(²)
					Foreign (including foreign and English)—			
					Number.....	1,397	1,249	1,082
					Aggregate circulation.....	9,680,787	7,568,655	(²)
					French—			
					Number.....	39	46	31
					Aggregate circulation.....	446,736	252,135	(²)
					German—			
					Number.....	692	700	633
					Aggregate circulation.....	4,494,146	3,922,277	(²)
					Italian—			
					Number.....	104	63	35
					Aggregate circulation.....	500,475	319,450	(²)
					Scandinavian—			
					Number.....	161	162	115
					Aggregate circulation.....	1,118,601	1,149,619	(²)
					Letto Slavic—			
					Number.....	169	128	75
					Aggregate circulation.....	917,649	665,967	(²)
					All other—			
					Number.....	232	150	143
					Aggregate circulation.....	1,613,187	1,319,237	(²)

¹ Not reported separately.

² Included with circulation of dailies.

³ Not reported.

The statistics in regard to the number of books and pamphlets published in 1909, classified by character, are given below. Comparative statistics for earlier censuses are not available.

Table 103 BOOKS AND PAMPHLETS.	Titles or editions.	Volumes.	Copies.
Total number published.....	46,739	54,620	161,361,844
Biography, correspondence.....	554	616	657,464
Description, geography, travel.....	847	952	4,540,647
Domestic and rural.....	330	336	2,023,193
Education.....	10,390	12,159	41,636,847
Fiction.....	14,606	15,772	46,942,399
Fine arts, illustrated gift books.....	541	587	2,849,371
History.....	613	954	2,923,187
Humor and satire.....	208	211	885,262
Juvenile.....	4,167	4,202	10,184,030
Law.....	535	862	1,496,194
Literature and collected works.....	2,047	3,841	5,037,972
Medical, hygiene.....	681	738	1,519,480
Philosophy.....	222	252	265,077
Physical and mathematical science.....	291	307	356,413
Poetry and the drama.....	1,387	1,574	1,980,824
Political and social science.....	658	689	1,862,429
Scientific and similar associations.....	1,082	1,141	1,258,562
Sports and amusements.....	412	423	2,430,074
Theology and religion.....	5,096	6,539	23,608,230
Useful arts.....	512	538	1,104,599
Works of reference.....	1,560	1,927	7,799,590

Shipbuilding, including boat building.—The following table shows the value of work done on the different classes of water craft during the several census years, not including that done in Government establishments, and also the value of repair work and all other products of the shipbuilding industry. The total value of products was lower in 1909 than in 1904 or 1899.

Table 104 PRODUCT. ¹	1909	1904	1899
Total value.....	\$73,360,315	\$82,769,239	\$74,532,277
Work done during the year on vessels and boats.....	42,310,925	56,121,227	37,719,308
Vessels of 5 gross tons and over.....	37,718,018	53,119,935	35,750,473
Boats of less than 5 gross tons.....	4,592,907	3,001,292	1,968,835
Steam.....	20,800		
Motor, gasoline, electric, and other.....	3,155,375	1,879,288	1,059,365
Sailboats, rowboats, canoes, scows, etc.....	1,416,732	1,122,004	909,470
Repair work.....	26,678,643	22,829,040	23,134,436
All other products.....	4,370,747	3,818,972	13,678,533

¹ Not including work done in Government shipyards, valued in 1909 at \$25,872,033; in 1904, at \$17,265,469; and in 1899, at \$11,022,312.

² In addition, the following items were reported by establishments engaged primarily in the manufacture of products other than those covered by the industry designation: Work done on vessels of 5 tons and over, launched, \$418,905; vessels building but not launched, \$30,184; boats of under 5 tons, \$145,155; and other boat products and repairs, \$182,462; or a total of \$776,706.

³ In addition, the following items were reported by establishments engaged primarily in the manufacture of products other than those covered by the industry designation: Work done on vessels of 5 tons and over, launched, \$469,018; boats of under 5 tons, \$147,542; and other boat products and repairs, \$46,782; or a total of \$663,342.

The value of the products of governmental shipyards in 1909 was \$25,872,033; in 1904, \$17,265,469; and in 1899, \$11,022,312. Thus the total value of products reported for all establishments, governmental and private, was \$99,232,348 in 1909, \$100,034,708 in 1904, and \$85,554,589 in 1899. The increase of \$13,677,759, or 16 per cent, shown for the period 1899–1909, was due entirely to work of governmental establishments.

The following table shows the number of vessels of each class launched during the census years 1909, 1904, and 1899. These figures are not strictly comparable with those giving values presented in the preceding table, since the former cover all work done during the year, both on vessels launched during the year and on those not yet launched at its close. The number of vessels of nearly every class was less in 1909 than at the two preceding censuses, but the number of boats increased greatly, the number made by all establishments aggregating 8,577, of which number 97.3 per cent were gasoline motor boats.

Table 105 CLASS OF VESSELS.	1909	1904	1899
Vessels of 5 gross tons and over launched during the year: ¹			
Number.....	2 1,584	3 2,114	2,081
Gross tons.....	467,219	504,020	687,159
Net tons.....	381,108	424,708	542,324
Steel vessels—			
Number.....	158	155	134
Gross tons.....	254,986	154,314	262,516
Net tons.....	193,144	106,826	186,509
Steam—			
Number.....	90	122	123
Gross tons.....	219,617	140,047	237,379
Net tons.....	159,297	93,365	164,313
Motor—			
Number.....	15		
Gross tons.....	2,466		
Net tons.....	2,078		
Sail, with and without auxiliary—			
Number.....	3	8	6
Gross tons.....	2,046	4,779	21,085
Net tons.....	1,735	4,591	18,348
Unrigged—			
Number.....	44	25	5
Gross tons.....	30,857	9,488	4,052
Net tons.....	30,034	8,870	3,848
Wooden vessels—			
Number.....	1,426	1,959	1,947
Gross tons.....	212,233	349,706	424,643
Net tons.....	188,054	317,882	355,315
Steam—			
Number.....	85	186	386
Gross tons.....	15,016	35,048	48,932
Net tons.....	9,662	23,365	32,845
Motor—			
Number.....	430	307	
Gross tons.....	6,923	3,157	
Net tons.....	5,146	2,333	
Sail, with and without auxiliary—			
Number.....	116	341	642
Gross tons.....	15,413	59,836	59,209
Net tons.....	12,955	50,483	51,772
Unrigged—			
Number.....	795	1,125	909
Gross tons.....	174,881	251,665	316,502
Net tons.....	160,291	241,701	271,198
Boats of less than 5 gross tons, number: ⁴	6 8,577	6 3,499	1,687
Steam.....	8		
Motor.....	8,569	3,499	1,687
Gasoline.....	8,342	(?)	(?)
Electric.....	12	(?)	(?)
Other.....	215	(?)	(?)

¹ Not including vessels launched in Government shipyards as follows: In 1909, 3 steel and 23 wooden vessels, the steel vessels having a total of 350 gross tons and the wooden a total of 1,709 gross tons, and in 1904, 17 steel and 14 wooden vessels, the steel vessels having a total of 23,850 gross tons and the wooden a total of 3,402 gross tons.

² In addition, there were built by establishments engaged primarily in the manufacture of products other than those covered by the industry designation, 8 steel and 14 wooden vessels, the steel vessels having a total of 5,429 gross tons and the wooden a total of 7,106 gross tons.

³ In addition, there were built by establishments engaged primarily in the manufacture of products other than those covered by the industry designation, 3 steel and 131 wooden vessels, the steel vessels having a total of 408 gross tons and the wooden a total of 21,919 gross tons.

⁴ Not including 53 boats built in Government shipyards in 1909 and 52 in 1904.

⁵ In addition, 412 boats were built by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

⁶ In addition, 365 boats were built by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

⁷ Not reported separately.

Laundries.—Steam laundries are not generally considered as manufacturing establishments, and therefore statistics for them have been excluded from prior censuses. Since the industry has, however, developed so rapidly, large amounts of capital now being invested, and many wage earners being employed, it should no longer be omitted from the industrial census. The establishments are conducted according to factory methods, and therefore the statistics are associated with those for the manufacturing industries of the Thirteenth Census. They are not included, however, in the general tables or in the totals for manufacturing industries.

During the year 1909 there were in the United States 5,186 laundries operated by the use of mechanical power. The capital reported by these establishments as invested in the industry amounted to \$68,935,000. In addition, such establishments rent a great deal of property, the annual rental paid by laundries for plant and equipment amounting in 1909 to \$2,277,000. The value of the work done was \$104,680,086.

In addition to ascertaining the average number of wage earners employed during the entire year, the census calls for the actual number of wage earners, by sex and age periods, employed on December 15, 1909, or the nearest representative day. On that date there were employed 112,064 wage earners, of whom 31,947, or 28.5 per cent, were men; 79,152, or 70.6 per cent, women; and 965, or 0.9 per cent, children under 16 years of age.

The following statement summarizes the statistics:

Number of establishments.....	5,186
Capital invested.....	\$68,935,000
Cost of materials used.....	\$17,696,000
Salaries and wages, total.....	\$53,007,747
Salaries.....	\$3,180,769
Wages.....	\$44,826,978
Miscellaneous expenses.....	\$14,483,497
Value of products or amount received for work done..	\$104,680,086

Employees:

Number of salaried officials and clerks.....	9,170
Average number of wage earners employed during the year.....	109,484
Actual number of wage earners employed on Dec. 15, 1909, or nearest representative day..	112,064
Men 16 years and over.....	31,947
Women 16 years and over.....	79,152
Children under 16 years—	
Male.....	274
Female.....	691
Primary power used, horsepower.....	123,477

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

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MONTH.	WAGE EARNERS.		MONTH.	WAGE EARNERS.	
	Number.	Per cent of maximum.		Number.	Per cent of maximum.
January.....	103,746	90.6	July.....	114,211	99.7
February.....	103,937	90.7	August.....	114,539	100.0
March.....	104,970	91.6	September.....	113,728	99.3
April.....	106,422	92.9	October.....	111,500	97.3
May.....	108,149	94.4	November.....	110,479	96.5
June.....	111,313	97.2	December.....	110,805	96.7

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

KIND.	Number of engines or motors.	Horsepower.
Primary power, total.....		123,477
Owned.....	4,527	106,879
Steam.....	4,119	106,272
Gas.....	379	4,073
Water wheels.....	18	456
Water motors.....	11	69
Rented.....		13,607
Electric.....	2,401	11,157
Other.....		2,450

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

KIND.	Unit.	Quantity.
Anthracite coal.....	Tons (2,240 lbs.) ..	178,840
Bituminous coal.....	Tons (2,000 lbs.) ..	596,794
Coke.....	Tons (2,000 lbs.) ..	14,725
Wood.....	Cords.....	94,723
Oil.....	Barrels.....	372,586
Gas.....	1,000 feet.....	2,725,324

Small custom sawmills and gristmills.—Statistics for small 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. The cost of materials and value of products for gristmills include an estimate of the grain ground, but it was impossible to estimate the value of the lumber sawed in the custom sawmills.

	Small custom sawmills.	Small custom gristmills.
Number of establishments.....	4,133	11,961
Persons engaged in industry.....	12,836	22,536
Proprietors and firm members.....	5,702	15,425
Salaried employees.....	44	147
Wage earners (average number).....	7,090	7,014
Primary horsepower.....	93,280	272,763
Capital.....	\$5,655,145	\$21,258,519
Expenses.....	2,169,271	48,119,565
Services.....	1,696,152	1,186,540
Materials.....	97,574	146,314,908
Miscellaneous.....	366,545	609,137
Value of products.....	4,515,861	255,115,553

¹ Includes estimated value of all grain ground.

² Includes estimate of value of products from all grain ground. In addition, custom ground products, valued at \$1,170,751, were made by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

COMPARATIVE SUMMARY FOR THE UNITED STATES, BY SPECIFIED INDUSTRIES: 1909, 1904, AND 1899.

NOTES.—The figures for some industries do not represent the total production, because important establishments that manufacture the same class of products may be included in other industries. (See Introduction.)

Primary horsepower includes power generated in manufacturing establishments plus electric and other power rented from outside sources; it does not include electric power generated by primary units of the establishments reporting.

In the statistics of power for 1899 there is a difference of 154,723 horsepower between the total and the sum of the figures for the various industries. This is due to the impossibility of making correct revision of the figures for each industry for comparison with 1904 and 1909.

[A minus sign (-) denotes decrease.]

INDUSTRY.	Census.	PERSONS ENGAGED IN INDUSTRY.				Primary horsepower.	Capital.	Salaries.	Wages.	Cost of materials.	Value of products.	Value added by manufacture (value of products less cost of materials).	PER CENT OF INCREASE.			
		Number of establishments.	Total.	Proprietors and firm members.	Salaried employees.								Wage earners (average number).	Wage earners (average number).	Value of products.	Value of products.
All industries.....	1909	268,491	7,678,578	273,265	790,267	6,615,046	18,675,376	\$18,428,270	\$938,575	\$3,427,038	\$12,142,761	\$20,672,052	\$8,529,261	21.0	39.7	
	1904	216,180	6,213,612	225,673	519,556	5,468,383	13,487,707	12,675,581	574,439	2,610,445	8,500,208	14,793,903	6,293,695	16.0	29.7	
	1899	207,514	.....	.....	364,120	4,712,763	10,097,893	8,975,256	380,771	2,008,361	6,575,851	11,406,927	4,831,076	.....	.....
Agricultural implements.	1909	640	60,229	465	9,213	50,551	100,601	256,281	10,140	28,609	60,307	146,329	86,022	6.7	30.6	
	1904	648	55,089	496	7,199	47,394	89,738	196,741	7,573	25,003	48,281	112,007	63,726	1.7	10.7	
	1899	715	.....	.....	10,046	46,582	70,646	157,708	8,363	22,451	43,945	101,207	57,262	.....	.....
Artificial flowers and feathers and plumes.	1909	412	11,583	520	1,047	10,016	334	9,693	1,160	3,974	13,627	23,981	10,354	130.6	357.0	
	1904	213	4,913	289	281	4,343	184	2,568	232	1,397	2,014	5,247	3,233	-18.5	-16.6	
	1899	224	.....	.....	285	5,331	113	3,633	291	1,561	2,763	6,293	3,530	.....	.....
Artificial stone ¹	1909	3,439	15,202	4,208	1,037	9,957	12,185	16,010	785	5,342	7,043	18,596	11,553	297.3	350.5	
	1904	477	3,417	571	340	2,506	2,776	3,310	261	1,403	1,430	4,128	2,698	.....	.....
	1899	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Artists' materials.....	1909	46	865	25	182	658	1,028	1,730	202	307	1,360	2,340	980	140.1	105.4	
	1904	28	372	30	68	274	568	876	67	137	687	1,139	452	37.0	129.2	
	1899	21	.....	.....	32	200	289	377	38	79	249	497	248	.....	.....
Automobiles, including bodies and parts.	1909	743	85,359	405	9,233	75,721	75,550	173,37	9,479	48,094	131,646	249,202	117,556	528.4	729.7	
	1904	178	13,333	103	1,181	12,049	10,109	23,334	1,257	7,159	13,151	30,034	16,883	437.7	532.6	
	1899	57	.....	.....	268	2,241	.....	5,769	295	1,321	1,804	4,748	2,944	.....	.....
Awnings, tents, and sails.	1909	621	5,747	648	357	4,242	2,022	7,865	809	2,188	8,377	14,499	6,122	23.6	28.7	
	1904	390	4,406	442	532	3,432	1,105	4,793	507	1,757	6,670	11,269	4,599	2.9	23.2	
	1899	340	.....	.....	416	3,335	921	3,537	325	1,569	5,228	9,144	3,916	.....	.....
Axle grease.....	1909	38	334	13	145	176	492	935	155	88	828	1,481	653	47.9	68.5	
	1904	25	196	22	55	119	210	608	55	62	368	879	511	-6.3	22.4	
	1899	29	.....	.....	85	127	181	577	83	55	360	718	358	.....	.....
Babbitt metal and solder.	1909	109	1,491	66	528	897	2,293	7,418	739	561	16,270	19,768	3,498	57.6	50.9	
	1904	75	882	70	243	560	1,138	4,129	265	338	10,864	13,100	2,236	6.4	42.5	
	1899	51	.....	.....	145	535	999	3,116	172	295	7,998	9,191	1,193	.....	.....
Bags, other than paper...	1909	109	8,838	72	798	7,968	6,855	24,625	1,068	2,942	46,364	54,882	8,518	39.3	46.7	
	1904	79	6,308	54	532	5,722	4,522	12,387	602	1,820	30,758	37,399	6,641	45.9	90.3	
	1899	73	.....	.....	336	3,922	1,755	7,418	379	1,102	16,439	19,652	3,213	.....	.....
Bags, paper.....	1909	74	3,683	42	429	3,212	3,885	10,780	714	1,306	10,355	15,698	5,343	29.9	55.6	
	1904	62	2,886	53	360	2,473	2,927	11,441	405	930	6,696	10,087	3,492	24.3	48.4	
	1899	63	.....	.....	340	1,989	2,148	6,917	399	628	4,499	6,799	2,300	.....	.....
Baking powders and yeast.	1909	144	3,531	110	1,266	2,155	3,335	33,647	1,710	1,046	9,338	20,775	11,437	-12.0	9.1	
	1904	164	3,355	150	756	2,449	2,965	13,233	939	1,042	8,940	19,043	10,103	26.4	30.7	
	1899	191	.....	.....	749	1,938	2,446	8,338	835	717	7,127	14,568	7,441	.....	.....
Baskets, and rattan and willow ware.	1909	456	5,419	476	279	4,664	7,196	4,199	244	1,747	2,335	5,695	3,360	-8.7	9.8	
	1904	486	5,867	525	236	5,106	6,252	3,600	203	1,731	1,805	5,187	3,384	21.1	42.7	
	1899	454	.....	.....	182	4,217	5,997	2,844	140	1,213	1,833	3,636	2,301	.....	.....
Beet sugar.....	1909	58	8,389	1	1,184	7,204	57,202	129,629	1,769	4,808	27,265	48,122	20,857	81.8	97.3	
	1904	51	4,726	.....	763	3,963	35,490	55,923	1,005	2,487	14,487	24,394	9,907	101.2	233.1
	1899	30	.....	.....	350	1,970	14,460	20,142	357	1,092	4,804	7,324	2,520	.....	.....
Belting and hose, leather.	1909	139	4,370	100	1,264	3,006	5,638	17,457	1,502	1,861	15,623	23,692	8,069	43.7	66.6	
	1904	117	2,800	94	614	2,092	3,220	10,785	787	1,165	9,317	14,220	4,903	25.5	33.9	
	1899	104	.....	.....	443	1,667	2,162	7,408	485	914	7,500	10,623	3,123	.....	.....
Belting and hose, woven and rubber.	1909	46	7,304	11	974	6,319	20,547	24,260	1,384	2,956	14,505	24,729	10,224	43.9	39.0	
	1904	39	5,019	15	614	4,390	13,491	15,009	984	2,057	10,787	17,791	7,004	116.8	138.4	
	1899	25	.....	.....	231	2,025	5,612	6,020	380	982	4,523	6,886	2,358	.....	.....
Bicycles, motorcycles, and parts.	1909	95	5,017	78	502	4,437	5,932	9,780	582	2,908	5,083	10,699	5,616	33.7	107.6	
	1904	101	3,761	81	361	3,319	5,730	5,883	351	1,971	2,628	5,153	2,525	-81.1	-83.9	
	1899	312	.....	.....	2,034	17,525	19,847	29,784	1,753	8,190	16,792	31,916	15,124	.....	.....
Billiard tables and materials.	1909	54	1,776	48	233	1,495	2,642	4,705	352	1,011	3,369	5,878	2,509	87.8	164.4	
	1904	48	964	52	116	796	631	1,618	151	501	937	2,223	1,286	75.7	34.9	
	1899	74	.....	.....	88	453	277	884	105	278	729	1,648	919	.....	.....
Blackening and cleansing and polishing preparations.	1909	501	4,407	434	1,556	2,417	3,977	7,557	1,780	1,146	6,962	14,679	7,717	35.6	69.7	
	1904	294	2,786	281	723	1,782	2,708	4,560	774	738	4,383	8,651	4,268	1.4	28.2	
	1899	275	.....	.....	686	1,758	1,873	3,662	713	634	3,152	6,698	3,546	.....	.....
Bluing.....	1909	82	545	94	138	313	242	556	112	114	494	1,074	580	51.9	53.2	
	1904	56	306	53	47	206	284	570	45	77	266	679	413	-6.4	17.9	
	1899	65	.....	.....	54	220	116	415	41	79	245	576	331	.....	.....
Bone, carbon, and lamp black.	1909	27	302	7	67	228	1,023	1,842	78	149	445	1,093	648	14.0	68.7	
	1904	25	258	11	47	200	1,085	1,663	48	105	203	645	445	135.3	80.0	
	1899	15	.....	.....	21	85	365	782	24	46	106	360	254	.....	.....
Boots and shoes, including cut stock and findings.	1909	1,918	215,923	1,838	15,788	198,297	96,302	222,324	18,629	98,463	332,738	512,798	180,060	23.7	43.4	
	1904	1,895	171,940	2,128	9,518	160,294	63,968	136,802	9,412	73,072	225,288	357,688	132,400	6.0	23.3	
	1899	2,253	.....	.....	8,348	151,231	55,489	110,363	8,159	61,924	191,456	290,047	98,591	.....	.....

¹ Included in "marble and stone" in 1899.

STATES, CITIES, AND INDUSTRIES.

COMPARATIVE SUMMARY FOR THE UNITED STATES, BY SPECIFIED INDUSTRIES: 1909, 1904, AND 1899—Continued.

[See explanatory notes on the first page of this table.]

INDUSTRY.	Cen- sus.	Num- ber of estab- lish- ments.	PERSONS ENGAGED IN INDUSTRY.				Primary horse-power.	Capital.	Sala- ries.	Wages.	Cost of materials.	Value of products.	Value added by manu- facture (value of products less cost of mate- rials).	PER CENT OF INCREASE.	
			Total.	Pro- pri- etors and firm mem- bers.	Salaried em- ployees.	Wage earners (average number).								Wage earners (aver- age num- ber).	Value of prod- ucts.
Boots and shoes, rubber.	1909	22	18,899	2	1,287	17,612	25,903	\$43,905	\$1,415	\$8,544	\$29,577	\$49,721	\$20,144	-7.3	-26.0
	1904	22	19,815	2	822	18,991	26,084	39,442	874	8,867	32,000	70,065	38,065	32.0	70.5
	1899	22	19,815	2	483	14,391	25,017	33,668	597	6,427	22,633	41,090	18,407		
Boxes, cigar.	1909	274	6,852	301	436	6,115	6,049	5,403	471	2,234	4,313	8,491	4,178	-2.7	9.1
	1904	297	7,036	384	370	6,282	6,548	4,457	333	2,120	3,810	3,376	3,786	36.3	32.9
	1899	315	7,036	384	216	4,609	4,274	3,288	172	1,440	3,061	5,857	2,796		
Boxes, fancy and paper.	1909	949	43,568	815	3,239	39,514	23,823	35,475	3,709	14,015	25,716	54,450	28,734	23.2	47.7
	1904	796	35,194	780	2,326	32,082	15,117	22,691	2,313	10,208	16,686	36,907	20,181	16.0	35.0
	1899	729	35,194	780	1,368	27,653	9,286	14,979	1,299	8,152	11,765	27,316	15,551		
Brass and bronze prod- ucts.	1909	1,021	45,441	828	3,995	40,618	106,120	109,319	5,540	23,677	99,228	149,969	50,781	22.5	46.5
	1904	813	36,952	784	3,000	33,108	69,494	77,438	3,778	17,666	65,653	102,407	36,754	22.1	15.5
	1899	695	36,952	784	1,813	27,106	47,257	51,120	2,297	13,599	61,189	88,654	27,466		
Bread and other bakery products.	1909	23,926	144,322	26,982	17,124	100,216	65,298	212,910	13,764	59,351	238,034	396,905	158,831	28.3	47.2
	1904	18,226	109,673	20,037	8,358	81,278	37,241	122,353	6,273	43,172	155,969	269,563	113,594	35.0	53.7
	1899	14,836	109,673	20,037	9,197	60,192	22,472	80,902	6,063	27,864	95,062	175,369	80,317		
Brick and tile.	1909	4,215	85,764	4,285	4,951	76,528	341,169	174,673	5,439	37,139	23,736	92,776	69,490	15.9	30.4
	1904	4,634	75,006	5,295	3,690	66,021	255,362	119,957	3,530	25,646	16,317	71,152	54,835	6.5	38.8
	1899	5,423	75,006	5,295	2,426	61,979	170,700	82,086	2,025	21,883	11,006	51,270	40,264		
Brooms and brushes ¹ .	1909	1,282	15,143	1,451	1,539	12,153	8,900	18,982	1,661	5,404	15,578	29,126	13,548	6.4	38.0
	1904	1,316	13,958	1,551	982	11,425	6,441	12,052	925	4,380	10,999	21,164	18,105	10.4	14.2
	1899	1,523	13,958	1,551	900	10,346	4,482	9,616	758	3,788	9,544	18,494	8,940		
Butter, cheese, and con- densed milk.	1909	8,479	31,506	8,019	5,056	18,421	101,349	71,264	3,591	11,061	225,546	274,558	39,012	18.5	63.2
	1904	8,926	25,805	6,801	3,507	15,557	93,845	47,256	1,376	8,413	142,920	168,183	25,263	21.5	28.6
	1899	9,242	25,805	6,801	2,818	12,799	88,062	36,303	912	6,146	108,841	130,783	21,942		
Butter, reworking.	1909	24	418	10	112	295	1,471	3,543	128	186	7,424	8,200	776	-27.0	12.8
	1904	35	526	32	90	404	1,664	1,719	85	252	6,247	7,271	1,094	173.0	243.8
	1899	10	526	32	29	148	631	256	30	68	1,345	2,115	770		
Buttons.	1909	444	18,004	519	1,058	16,427	12,831	15,640	1,299	6,789	9,541	22,788	13,167	55.5	104.0
	1904	275	11,637	302	768	10,567	6,982	7,784	711	3,680	4,144	11,134	6,990	21.7	44.7
	1899	298	11,637	302	339	8,685	4,165	4,213	296	2,826	2,808	7,696	4,893		
Calcium lights.	1909	10	26	7	4	15	53	55	4	11	24	52	28	-62.4	-61.5
	1904	22	85	28	16	41	132	144	12	24	35	195	100	-26.5	13.4
	1899	19	85	28	6	55	80	95	6	24	35	119	84		
Candles ² .	1909	16	640	7	103	539	799	2,959	161	246	2,176	3,130	954	-33.9	-19.5
	1904	17	930	25	89	816	931	3,004	135	294	2,911	3,889	978		
Canning and preserving.	1909	3,767	71,972	4,244	7,760	59,968	81,179	119,207	7,864	19,062	101,822	157,161	55,278	5.3	20.4
	1904	3,168	66,022	3,450	5,628	56,944	60,831	79,246	5,231	16,338	83,147	130,466	47,319	-0.1	21.3
	1899	2,570	66,022	3,450	4,199	57,012	38,624	55,481	3,479	13,705	63,668	99,235	35,667		
Card cutting and design- ing.	1909	68	702	79	98	525	269	684	93	238	374	1,031	657	-24.6	-4.8
	1904	60	834	72	66	696	222	488	52	261	478	1,083	605	114.2	75.2
	1899	43	834	72	25	325	219	338	22	135	313	618	365		
Carpets and rugs, other than rag.	1909	139	34,706	134	1,265	33,307	38,553	75,627	2,209	15,536	29,563	71,188	31,625	0.3	15.6
	1904	139	34,393	149	1,023	33,221	33,945	56,781	1,997	13,724	37,948	61,586	23,638	16.9	27.8
	1899	133	34,393	149	687	28,411	26,740	44,449	881	11,121	27,229	48,192	20,963		
Carpets, rag.	1909	428	2,688	489	217	1,982	2,651	1,546	182	860	689	2,568	1,879	14.2	33.9
	1904	363	2,331	458	137	1,736	1,667	1,100	87	675	489	1,918	1,429	31.7	9.3
	1899	805	2,331	458	57	1,318	599	867	30	443	622	1,755	1,133		
Carriages and sleds, chil- dren's.	1909	84	5,769	50	419	5,300	5,281	6,883	490	2,217	4,129	8,505	4,676	32.4	38.2
	1904	78	4,379	52	324	4,003	3,633	4,336	341	1,783	2,840	6,371	3,531	46.8	48.5
	1899	77	4,379	52	172	2,726	2,462	2,907	159	1,090	1,996	4,280	2,294		
Carriages and wagons and materials.	1909	5,492	82,944	6,213	6,803	69,928	126,032	175,474	7,960	37,565	81,951	159,893	77,942	-10.2	2.6
	1904	5,588	90,751	6,575	6,294	77,882	106,159	152,345	6,581	38,363	77,528	155,869	78,341	5.5	12.7
	1899	6,792	90,751	6,575	5,026	73,812	83,771	128,962	4,759	33,565	66,772	138,262	71,490		
Cars and general shop con- struction and repairs by steam-railroad com- panies.	1909	1,145	301,273	2	19,097	282,174	293,361	238,317	17,339	181,344	199,413	405,601	206,188	19.1	30.9
	1904	1,140	250,199		13,329	236,870	167,973	146,886	11,920	142,153	151,105	309,775	158,670	36.4	42.0
	1899	1,292	250,199		7,094	173,595	95,087	119,473	6,208	96,007	109,473	218,114	108,642		
Cars and general shop con- struction and repairs by street-railroad com- panies.	1909	541	23,699		1,281	22,418	35,794	38,899	1,204	14,486	15,168	31,963	16,796	102.8	137.9
	1904	86	11,551		499	11,052	3,154	7,013	543	7,013	5,463	13,457	7,974	57.3	43.4
	1899	108	11,551		201	7,025	6,443	10,782	194	4,406	4,337	9,371	5,094		
Cars, steam-railroad, not including operations of railroad companies.	1909	110	47,094	7	4,001	43,068	97,797	139,805	5,138	27,135	78,753	123,730	44,977	26.5	11.3
	1904	73	36,367	6	2,303	34,055	55,994	88,179	2,855	20,248	75,657	111,175	35,518	1.8	22.8
	1899	65	36,367	6	1,366	33,453	33,395	88,324	1,538	16,987	61,743	90,510	28,767		
Cars, street-railroad, not including operations of railroad companies.	1909	14	4,005	1	421	3,583	15,161	14,168	594	2,177	4,280	7,810	3,550	-24.2	-26.0
	1904	14	4,997	3	264	4,730	4,730	12,976	398	2,840	5,341	10,844	5,503	31.9	48.4
	1899	20	4,997	3	144	3,585	4,865	7,615	235	1,951	3,967	7,305	3,338		
Cash registers and calcul- ating machines.	1909	50	9,249	7	1,777	7,465	6,944	27,224	2,736	5,312	3,552	23,708	20,156	83.0	140.1
	1904	32	5,012	10	923	4,079	4,139	7,588	1,109	2,442	1,516	9,875	8,359	97.3	74.0
	1899	18	5,012	10	327	2,067	1,340	5,242	329	1,250	921	5,675	4,754		
Cement ³ .	1909	135	29,511	17	2,719	26,778	371,799	187,398	3,653	15,320	29,344	63,205	33,861	53.2	111.6
	1904	129	18,887	26	1,383	17,475	149,60								

COMPARATIVE SUMMARY FOR THE UNITED STATES, BY SPECIFIED INDUSTRIES: 1909, 1904, AND 1899—Continued.

[See explanatory notes on the first page of this table.]

INDUSTRY.	Cen- sus.	Number of estab- lish- ments.	PERSONS ENGAGED IN INDUSTRY.					Primary horse- power.	Capital.	Sala- ries.	Wages.	Cost of materials.	Value of products.	Value added by manu- facture (value of products less cost of mate- rials).	PER CENT OF INCREASE.	
			Total.	Pro- pri- etors and firm mem- bers.	Salaried em- ployees.	Wage earners (average number).	Wage earners (aver- age num- ber).								Wage earners (aver- age num- ber).	Value of prod- ucts.
Chemicals ¹	1909	349	27,791	154	3,923	23,714	208,604	\$155,144	\$6,137	\$14,085	\$64,122	\$117,689	\$53,567	19.7	56.5	
	1904	275	22,707	123	2,778	19,805	132,262	96,621	4,048	10,790	42,063	75,222	33,159	4.1	20.1	
	1899	433	.....	.....	2,123	19,020	90,349	89,099	2,923	9,393	34,546	62,637	28,091	.....	.....
China decorating.....	1909	40	436	45	63	323	18	559	80	191	311	786	475	45.8	140.4	
	1904	28	273	30	18	225	6	261	16	225	108	327	219	-24.5	-32.6	
	1899	49	.....	.....	31	298	.....	269	21	122	207	485	278	.....	.....
Chocolate and cocoa products.	1909	27	3,404	10	568	2,826	10,593	13,685	970	1,269	15,523	22,390	6,867	35.2	55.6	
	1904	25	2,396	15	291	2,090	5,217	8,379	463	822	9,723	14,390	4,667	59.1	48.9	
	1899	24	.....	.....	289	1,314	2,756	6,891	371	526	6,877	9,666	2,789	.....	.....
Clocks and watches, in- cluding cases and mate- rials.	1909	120	25,439	53	1,529	23,857	14,957	57,500	2,181	12,944	11,131	35,197	24,066	5.7	18.2	
	1904	97	23,891	63	1,249	22,579	10,731	42,189	1,638	11,892	9,872	29,790	19,918	31.6	34.7	
	1899	109	.....	.....	676	17,155	7,251	31,514	957	8,315	8,819	22,110	13,291	.....	.....
Cloth, sponging and re- finishing.	1909	57	1,167	67	125	975	704	629	127	651	85	1,544	1,459	22.6	46.6	
	1904	55	922	68	59	795	322	401	62	504	39	1,053	1,014	48.9	86.0	
	1899	46	.....	.....	39	534	109	289	35	268	17	566	549	.....	.....
Clothing, horse.....	1909	33	1,830	40	142	1,648	1,454	3,279	171	492	2,773	4,185	1,362	55.0	93.2	
	1904	29	1,168	32	73	1,063	656	1,499	72	342	1,329	2,140	811	84.9	64.0	
	1899	26	.....	.....	55	575	271	654	47	177	848	1,305	457	.....	.....
Clothing, men's, button- holes.	1909	146	1,031	181	20	830	176	225	12	389	105	781	676	-8.1	11.8	
	1904	141	1,075	164	8	903	187	262	5	380	95	700	605	-4.3	2.8	
	1899	149	.....	.....	11	944	113	247	6	332	98	681	583	.....	.....
Clothing, men's, includ- ing shirts.	1909	6,354	271,437	8,502	23,239	239,696	42,725	275,320	26,723	106,277	297,515	568,077	270,562	38.0	39.7	
	1904	5,145	196,366	7,006	15,671	173,689	29,829	176,557	15,740	68,459	211,433	406,768	195,335	10.2	25.6	
	1899	6,419	.....	.....	11,906	157,549	20,457	140,191	12,032	56,391	168,169	323,839	155,670	.....	.....
Clothing, women's.....	1909	4,558	179,021	6,482	18,796	153,743	22,294	129,301	20,418	78,568	208,788	384,752	175,964	32.9	55.4	
	1904	3,351	131,538	4,913	10,920	115,705	14,916	73,948	9,976	51,180	130,720	247,662	110,942	38.2	55.4	
	1899	2,701	.....	.....	6,715	83,739	9,962	48,432	6,574	32,586	84,705	159,340	74,685	.....	.....
Coffee and spice, roasting and grinding. ²	1909	607	13,516	497	5,529	7,490	22,334	46,042	6,596	3,676	83,205	110,533	27,328	25.7	31.3	
	1904	421	9,245	442	2,844	5,959	15,703	33,735	3,216	2,830	65,847	84,188	18,341	-5.7	21.1	
	1899	458	.....	.....	2,749	6,337	16,270	28,437	2,951	2,487	55,112	69,527	14,415	.....	.....
Coffins, burial cases, and undertakers' goods.	1909	284	11,448	161	1,948	9,339	16,490	25,843	2,411	4,633	11,964	24,526	12,562	10.3	21.0	
	1904	239	9,797	168	1,161	8,468	13,178	18,532	1,345	4,120	9,501	20,266	10,765	23.8	45.3	
	1899	217	.....	.....	948	6,840	8,927	13,585	1,023	3,077	6,945	13,952	7,007	.....	.....
Coke.....	1909	315	31,226	101	1,852	29,273	62,602	152,321	2,072	15,454	64,025	95,697	31,672	54.2	85.0	
	1904	278	20,440	73	1,386	18,981	66,669	90,713	1,247	9,304	29,885	51,729	21,844	11.7	45.4	
	1899	241	.....	.....	915	16,999	34,767	36,503	797	7,086	19,666	35,585	15,919	.....	.....
Confectionery.....	1909	1,944	54,854	1,832	8,384	44,638	35,870	68,326	9,137	15,615	81,151	134,796	53,045	23.2	54.8	
	1904	1,348	42,729	1,366	5,124	36,239	24,292	43,125	4,840	11,699	48,810	87,087	38,277	34.9	43.6	
	1899	962	.....	.....	4,304	26,866	19,410	26,319	3,525	3,020	35,354	60,044	25,290	.....	.....
Cooperage and wooden goods, not elsewhere specified.	1909	1,693	29,717	1,760	1,688	26,269	65,108	50,342	2,047	11,715	36,928	60,248	23,320	-5.3	4.0	
	1904	1,719	31,133	1,853	1,537	27,743	56,988	36,756	1,752	11,843	34,971	57,956	22,985	7.6	37.9	
	1899	1,798	.....	.....	969	25,323	38,462	25,602	963	9,860	23,619	42,025	18,406	.....	.....
Copper, tin, and sheet- iron products.	1909	4,228	86,934	4,423	8,896	73,615	62,366	217,532	10,288	39,501	112,582	199,824	87,242	38.8	66.6	
	1904	2,540	60,713	2,851	4,827	53,035	30,229	147,608	6,070	26,269	63,921	119,933	56,012	38.4	53.1	
	1899	1,985	.....	.....	2,924	38,317	28,829	49,079	2,810	16,294	42,602	78,359	35,757	.....	.....
Cordage and twine and jute and linen goods.	1909	164	27,214	80	1,314	25,820	78,549	76,029	1,863	9,133	40,915	61,020	20,105	1.9	-5.6	
	1904	145	26,442	60	1,050	25,332	66,244	56,467	1,597	8,324	46,031	64,664	18,633	17.0	31.8	
	1899	160	.....	.....	682	21,651	47,999	43,153	1,021	6,554	33,604	49,078	16,014	.....	.....
Cordials and sirups.....	1909	117	1,638	94	449	1,095	1,154	4,804	627	503	5,341	9,662	4,321	65.9	175.3	
	1904	63	899	68	171	660	782	1,666	242	235	2,149	3,510	1,361	82.3	66.6	
	1899	39	.....	.....	112	362	573	1,153	121	117	1,505	2,107	602	.....	.....
Cork, cutting.....	1909	62	3,376	49	185	3,142	3,746	5,327	267	1,098	3,435	5,940	2,505	8.5	32.3	
	1904	50	3,080	49	136	2,895	2,589	4,009	198	888	2,450	4,491	2,032	23.7	2.3	
	1899	62	.....	.....	136	2,340	1,563	2,684	195	688	2,404	4,392	1,988	.....	.....
Corsets.....	1909	138	19,611	91	1,956	17,564	4,581	18,033	2,871	6,464	15,640	33,257	17,617	60.0	123.8	
	1904	109	11,948	96	877	10,975	3,284	9,589	1,010	3,600	6,135	14,862	8,727	-10.8	2.8	
	1899	138	.....	.....	815	12,297	3,638	7,290	966	3,645	6,357	14,451	8,094	.....	.....
Cotton goods, including cotton small wares.	1909	1,324	387,771	377	8,514	378,880	1,296,517	822,238	14,412	132,859	371,090	628,392	257,383	19.9	39.5	
	1904	1,154	323,287	432	6,981	315,874	988,604	613,111	10,238	96,206	286,255	450,468	164,213	4.3	32.8	
	1899	1,055	.....	.....	4,902	302,861	795,834	467,240	7,350	86,690	176,552	339,200	162,648	.....	.....
Crucibles.....	1909	12	398	4	59	335	816	2,051	130	180	1,089	1,849	760	19.6	37.7	
	1904	11	340	3	57	280	627	1,877	116	159	762	1,343	581	-58.3	-48.5	
	1899	11	.....	.....	89	671	760	1,844	154	251	1,673	2,607	934	.....	.....
Cutlery and tools, not elsewhere specified.	1909	959	37,161	814	3,351	32,906	68,294	67,380	4,182	17,581	18,279	53,266	34,987	26.0	36.5	
	1904	838	29,004	827	1,989	26,188	54,397	43,729	2,333	13,125	13,278	39,022	25,744	33.3	38.6	
	1899	721	.....	.....	1,464	19,642	38,283	30,152	1,606	9,434	9,748	28,146	18,398	.....	.....
Dairymen's, poulterers', and apiarists' supplies. ³	1909	233	6,431	206	1,354	4,871	6,898	15,188	1,416	2,671	6,089	15,468	9,374	86.8	136.3	
	1904	176	3,273	165	500	2,801	3,994	5,030	359	1,167	3,203	6,545	3,342	.....	.....
Dentists' materials.....	1909	87	1,982	69	340	1,673	865	6,258	545	744	8,101	10,836	2,735	-18.2	33.7	
	1904	80														

STATES, CITIES, AND INDUSTRIES.

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COMPARATIVE SUMMARY FOR THE UNITED STATES, BY SPECIFIED INDUSTRIES: 1909, 1904, AND 1899—Continued.

[See explanatory notes on the first page of this table.]

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 of products less cost of materials.	PER CENT OF INCREASE.			
			Total.	Proprietors and firm members.	Salaried employees.	Wage earners (average number).								Wage earners (average number).	Wage earners (average number).	Value of products.	Value of products.
Expressed in thousands.																	
Drug grinding.....	1909	25	1,152	16	214	922	3,322	\$5,187	\$268	\$464	\$3,454	\$6,007	\$2,553	-5.0	16.7		
	1904	27	1,111	23	107	981	2,866	4,991	155	483	3,024	5,146	2,122	52.3	19.5		
	1899	26	.....	.....	102	644	4,697	2,838	127	292	3,315	4,308	993	.....	.....
Dyeing and finishing textiles.....	1909	426	47,303	318	2,939	44,046	107,746	114,093	5,035	21,227	35,261	83,556	48,295	23.8	64.3		
	1904	360	38,071	310	2,196	35,565	84,868	88,709	3,407	15,409	19,621	50,550	31,229	19.4	13.1		
	1899	298	.....	.....	1,318	29,776	69,235	60,643	2,267	12,726	17,958	44,963	27,005	.....	.....
Dyestuffs and extracts.....	1909	107	3,015	65	553	2,397	22,213	17,935	942	1,291	9,684	15,955	6,271	-11.5	46.5		
	1904	98	3,150	82	361	2,707	17,671	14,904	609	1,264	6,829	10,893	4,064	64.4	48.2		
	1899	77	.....	.....	229	1,647	11,409	7,839	312	788	4,746	7,351	2,605	.....	.....
Electrical machinery, apparatus, and supplies.....	1909	1,009	105,600	439	17,905	87,256	158,768	267,844	20,193	49,381	108,566	221,309	112,743	44.3	57.2		
	1904	784	71,485	400	10,619	60,466	105,376	174,066	11,091	31,842	66,837	140,809	73,972	43.9	52.3		
	1899	581	.....	.....	5,067	42,013	43,674	83,660	4,632	20,579	49,458	92,434	42,976	.....	.....
Electroplating.....	1909	461	3,558	554	287	2,717	4,461	2,324	243	1,652	1,206	4,510	3,305	39.8	52.1		
	1904	312	2,458	371	144	1,943	2,588	1,287	132	1,093	747	2,965	2,218	-6.9	9.0		
	1899	302	.....	.....	115	2,086	2,933	1,322	93	949	784	2,730	1,936	.....	.....
Emery and other abrasive wheels.....	1909	51	2,446	20	483	1,943	4,005	6,231	657	1,156	2,651	6,711	4,960	142.6	225.5		
	1904	34	1,000	11	188	801	1,965	2,249	217	451	705	2,062	1,357	46.7	49.2		
	1899	34	.....	.....	125	546	1,044	1,490	127	303	509	1,382	873	.....	.....
Enameling and japanning. ¹	1909	108	2,418	105	188	2,125	1,695	2,880	204	922	1,496	3,316	1,820	-78.7	-79.7		
	1904	124	10,657	99	595	9,963	7,856	15,571	814	3,530	7,394	16,316	8,322	27.2	69.1		
	1899	167	.....	.....	307	7,835	3,052	9,302	309	2,334	5,522	10,194	4,672	.....	.....
Engravers' materials.....	1909	18	189	13	47	129	549	393	68	96	609	921	312	163.3	438.6		
	1904	10	68	13	6	49	135	98	11	31	96	171	75	-35.5	-39.4		
	1899	11	.....	.....	13	76	105	101	22	45	142	262	149	.....	.....
Engraving and diesinking.....	1909	253	1,782	300	174	1,308	768	1,449	168	821	351	2,250	1,899	-16.8	-7.1		
	1904	305	2,100	352	175	1,573	1,032	1,211	160	1,032	376	2,422	2,046	69.2	65.0		
	1899	277	.....	.....	75	964	616	720	63	543	203	1,468	1,265	.....	.....
Engraving, wood.....	1909	82	480	89	73	318	39	193	82	259	126	711	585	-5.9	9.7		
	1904	114	505	129	38	338	45	185	42	245	60	648	588	9.6	5.5		
	1899	144	.....	.....	22	336	47	231	23	206	63	614	551	.....	.....
Explosives.....	1909	86	7,058	21	763	6,274	28,601	50,168	1,134	4,304	22,812	46,140	17,326	8.2	35.6		
	1904	124	7,113	24	1,289	5,800	29,665	42,307	1,797	3,309	17,294	29,603	12,399	28.8	72.9		
	1899	97	.....	.....	768	4,502	19,195	19,466	914	2,384	10,335	17,125	6,790	.....	.....
Fancy articles, not elsewhere specified.....	1909	494	14,194	477	1,526	12,191	8,310	15,768	1,728	5,096	10,361	22,632	12,271	19.5	26.6		
	1904	435	11,748	483	1,066	10,199	5,886	9,501	1,037	4,060	7,537	17,594	10,957	20.7	36.4		
	1899	496	.....	.....	875	4,386	6,854	6,854	739	3,022	5,943	12,896	6,953	.....	.....
Fertilizers.....	1909	550	21,950	323	3,317	18,310	64,711	121,537	4,406	7,477	60,522	103,960	34,436	29.1	83.9		
	1904	399	16,091	294	1,613	14,184	47,989	68,917	1,934	5,127	39,285	56,541	17,253	22.5	26.6		
	1899	422	.....	.....	1,712	11,581	38,680	60,686	2,125	4,155	28,958	44,657	15,090	.....	.....
Files.....	1909	57	4,521	47	316	4,158	7,383	10,413	338	1,978	1,596	5,691	4,065	26.9	29.6		
	1904	62	3,450	65	109	3,276	5,697	5,896	170	1,514	4,362	4,362	3,061	3.7	29.0		
	1899	86	.....	.....	127	3,160	4,835	3,858	154	1,277	1,166	3,494	2,238	.....	.....
Firearms and ammunition.....	1909	66	16,042	30	1,297	14,715	17,840	39,377	1,920	8,427	17,021	34,112	17,091	7.9	20.9		
	1904	62	14,400	38	728	13,634	21,408	22,493	1,100	7,755	12,339	28,206	15,967	40.4	52.7		
	1899	65	.....	.....	432	9,713	7,470	13,635	614	5,103	8,742	18,472	9,730	.....	.....
Fire extinguishers, chemical.....	1909	31	300	10	95	195	215	527	134	127	305	754	449	9.6	26.6		
	1904	35	267	23	66	178	140	338	59	108	229	582	353	178.1	167.0		
	1899	17	.....	.....	47	64	26	137	39	33	71	218	147	.....	.....
Fireworks.....	1909	42	1,567	22	142	1,403	517	2,209	217	579	896	2,269	1,373	-5.2	14.2		
	1904	34	1,637	25	132	1,480	347	1,543	141	536	769	1,987	1,215	-9.6	11.3		
	1899	46	.....	.....	136	1,638	219	1,086	146	507	628	1,785	1,157	.....	.....
Flags, banners, regalia, society badges, and emblems.....	1909	211	4,522	207	743	3,572	1,173	5,781	710	1,489	3,810	8,114	4,304	24.4	44.7		
	1904	171	3,517	169	476	2,872	949	3,016	482	1,128	2,506	5,608	3,102	28.2	37.2		
	1899	145	.....	.....	306	2,078	435	2,406	259	620	2,144	4,088	1,944	.....	.....
Flavoring extracts.....	1909	420	2,634	377	1,028	1,229	1,060	5,341	1,082	558	4,458	8,828	4,370	-20.4	13.6		
	1904	377	2,599	384	672	1,543	873	4,405	698	653	7,772	3,836	3,506	23.3	23.2		
	1899	350	.....	.....	594	1,251	704	3,314	654	478	3,291	6,308	3,017	.....	.....
Flax and hemp, dressed.....	1909	16	216	22	30	164	1,147	785	29	64	336	467	131	-23.4	34.6		
	1904	17	246	17	15	214	600	239	9	9	235	347	114	1.4	115.2		
	1899	4	.....	.....	12	211	187	72	7	46	91	159	68	.....	.....
Flour-mill and gristmill products.....	1909	11,691	66,054	14,570	12,031	39,453	853,584	349,152	12,517	21,464	767,576	883,584	116,008	0.9	23.9		
	1904	10,051	59,623	13,098	7,415	39,110	775,318	265,117	7,352	19,822	619,971	713,033	93,062	21.4	42.2		
	1899	9,476	.....	.....	5,522	32,226	670,719	189,261	5,258	16,285	426,117	501,396	73,279	.....	.....
Food preparations.....	1909	1,213	20,965	1,131	4,866	14,968	55,166	64,685	5,865	7,043	83,942	125,331	41,399	32.1	104.9		
	1904	766	14,739	749	2,657	11,333	28,162	51,784	2,999	4,388	37,668	61,180	23,512	35.0	53.6		
	1899	645	.....	.....	1,538	8,214	15,485	21,401	1,495	3,099	24,777	39,837	15,060	.....	.....
Foundry and machine-shop products. ²	1909	13,253	615,485	9,851	74,623	531,011	869,305	1,514,332	93,795	321,521	540,011	1,228,475	688,464	19.8	39.5		
	1904	10,765	502,185	9,370	49,406	443,409	606,165	1,034,135	59,703	246,573	367,412	880,514	513,162	3.8	10.3		
	1899	11,046	.....	.....	34,286	426,985	443,085	790,741	39,318	219,870	363,036	798,454	435,418	.....	.....
Foundry supplies.....	1909	49	710	27	219	464	4,995	2,688	255	276	1,272	2,296	1,026	47.3	117.0		
	1904	34	414	22	77	315	3,543	1,516	73	156	625	1,059	494	13.3	-6.2		
	1899	30	75	278	3,505	982	79	136	628	1,129	531		
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COMPARATIVE SUMMARY FOR THE UNITED STATES, BY SPECIFIED INDUSTRIES: 1909, 1904, AND 1899—Continued.

[See explanatory notes on the first page of this table.]

INDUSTRY.	en- sus.	Number of estab- lish- ments.	PERSONS ENGAGED IN INDUSTRY.					Primary horse- power.	Capital.	Sala- ries.	Wages.	Cost of materials.	Value of products.	Value added by manu- facture (value of products less cost of mate- rials).	PER CENT OF INCREASE.										
			Total.	Pro- pri- etors and firm mem- bers.	Salaried em- ployees.	Wage earners (average number).	Wage earners (average number).								Wage earners (average number).	Value of products.									
Fur goods.....	1909	1,241	16,152	1,717	2,508	11,927	2,120	\$29,249	\$2,553	\$7,788	\$31,777	\$55,938	\$24,161	27.3	50.7										
	1904	867	11,787	1,245	1,172	9,370	1,994	17,990	1,229	5,123	21,202	37,119	15,917	20.8	43.3										
	1899	734			1,141	7,758	907	12,484	1,006	3,927	14,281	25,899	11,618												
Furnishing goods, men's.	1909	900	43,935	1,022	4,431	38,482	12,116	49,009	5,210	15,093	49,125	87,710	38,585	41.6	78.9										
	1904	547	30,476	694	2,597	27,185	5,421	28,044	2,158	8,700	26,565	49,032	22,467	-10.3	10.6										
	1899	457			2,149	30,322		20,576	2,188	9,730	23,670	44,346	20,676												
Furniture and refriger- ators.	1909	3,155	144,140	2,657	13,031	128,452	221,451	227,134	15,561	65,618	108,775	239,886	131,111	12.5	34.9										
	1904	2,593	125,093	2,286	8,642	114,165	109,774	153,986	9,524	51,788	76,892	177,795	100,903	26.0	36.1										
	1899	1,909			6,751	90,591	119,608	109,267	6,692	36,920	57,406	130,634	73,228												
Furs, dressed.....	1909	93	1,472	115	116	1,241	2,103	1,672	135	806	811	2,391	1,580	12.3	-25.7										
	1904	85	1,324	109	110	1,105	1,260	1,296	110	765	1,642	3,216	1,574	32.3	129.7										
	1899	92			46	835	1,063	798	49	478	520	1,400	880												
Galvanizing.....	1909	46	1,689	26	216	1,447	1,367	4,197	257	787	5,719	7,338	1,619	15.2	14.3										
	1904	36	1,457	34	167	1,256	1,603	2,690	192	620	4,745	6,419	1,674	134.8	159.8										
	1899	28			52	535	409	1,776	47	229	1,678	2,471	793												
Gas and electric fixtures and lamps and reflect- ors.	1909	619	22,906	431	3,614	18,861	15,862	36,835	4,340	10,393	20,467	45,057	24,590	50.0	69.6										
	1904	405	14,653	334	1,749	12,570	8,444	28,002	2,198	6,408	11,078	26,560	15,482	11.9	34.0										
	1899	377			1,294	11,238	6,991	15,855	1,492	5,188	7,962	19,821	11,859												
Gas, illuminating and heating.	1909	1,296	51,007	277	13,515	37,215	128,350	915,537	12,385	20,931	52,423	166,814	114,386	21.8	33.3										
	1904	1,019	40,043	71	9,406	30,566	73,101	725,035	8,464	17,058	37,180	125,145	87,965	36.1	65.3										
	1899	877			5,904	22,459	31,797	567,001	5,273	12,436	20,605	75,717	55,112												
Glass.....	1909	363	72,573	87	3,575	68,911	123,132	129,288	4,994	39,300	32,119	92,095	59,976	7.7	15.7										
	1904	399	67,105	96	3,040	63,969	91,476	89,389	3,940	37,288	26,146	79,608	53,462	21.1	40.8										
	1899	355			2,268	52,818	52,943	61,424	2,792	27,085	16,731	56,540	39,809												
Glass, cutting, staining, and ornamenting.	1909	583	11,090	617	1,111	9,362	4,897	10,296	1,295	5,249	6,246	16,101	9,855	11.7	22.6										
	1904	453	9,626	504	743	8,379	3,973	7,365	776	4,359	4,845	13,138	8,293	70.5	50.1										
	1899	411			475	4,914	2,098	4,001	487	2,394	3,535	8,750	5,215												
Gloves and mittens, leather.	1909	377	12,950	458	1,138	11,354	2,889	16,909	1,256	4,764	13,208	23,631	10,423	6.7	33.2										
	1904	339	11,712	427	640	10,645	2,725	10,706	585	3,840	10,001	17,740	7,739	-25.8	4.8										
	1899	394			659	14,345	2,165	9,090	547	4,183	9,483	16,926	7,443												
Glucose and starch.....	1909	118	5,827	86	968	4,773	23,257	38,866	1,413	2,666	36,899	48,799	11,900	2.0	49.5										
	1904	140	5,409	111	619	4,679	35,986	24,053	655	2,641	25,519	32,650	7,131	-21.3	5.6										
	1899	132			553	5,943	26,642	52,683	732	2,855	21,580	30,927	9,347												
Glue.....	1909	65	3,840	45	530	3,265	15,596	14,289	747	1,571	7,525	13,718	6,193	14.0	36.7										
	1904	58	3,258	42	352	2,864	14,280	10,673	465	1,529	6,186	10,035	3,849	77.0	86.2										
	1899	61			159	1,618	6,806	6,144	192	685	3,767	5,389	1,622												
Gold and silver, leaf and foil.	1909	88	1,553	108	62	1,383	259	1,184	78	637	1,518	2,630	1,112	-1.4	-2.4										
	1904	83	1,594	106	86	1,402	278	1,072	85	663	1,476	2,695	1,219	20.6	1.1										
	1899	93			35	1,163	149	1,087	36	499	1,604	2,666	1,062												
Gold and silver, reducing and refining, not from the ore.	1909	62	690	61	173	456	1,735	3,894	249	346	21,984	23,612	1,628	58.9	26.1										
	1904	41	439	57	95	287	1,068	2,326	127	206	17,538	18,724	1,186	31.0	58.5										
	1899	57			76	219	765	1,944	83	141	10,932	11,812	880												
Graphite and graphite re- fining.	1909	9	262	4	96	162	1,472	1,786	115	89	405	1,140	735	-25.7	233.3										
	1904	11	257	6	33	218	922	478	30	108	117	342	225	59.1	-20.3										
	1899	11			16	137	805	411	21	64	217	429	212												
Grease and tallow.....	1909	353	5,504	364	783	4,357	14,613	16,676	991	2,629	15,543	23,419	7,876	20.1	24.5										
	1904	300	4,415	306	481	3,628	11,738	10,284	583	2,114	12,369	18,815	6,446	77.8	57.4										
	1899	287			256	2,040	8,031	7,071	266	1,067	8,752	11,953	3,201												
Grindstones.....	1909	14	1,485	6	85	1,394	5,700	4,939	159	638	468	1,688	1,220	91.4	114.2										
	1904	23	766	10	50	706	2,602	1,869	81	275	264	738	524	-39.5	-27.6										
	1899	25			60	1,167	2,677	903	58	407	264	1,089	825												
Haircloth ¹	1909	14	621	11	72	538	995	2,281	72	252	1,614	2,230	616												
Hair work.....	1909	250	4,383	298	551	3,534	218	4,716	434	1,610	6,081	11,216	5,135	309.5	529.4										
	1904	125	1,137	148	126	863	62	1,132	98	335	728	1,782	1,054	5.2	26.7										
	1899	158			44	820	23	760	33	287	496	1,406	910												
Hammocks.....	1909	15	325	14	39	272	157	344	34	95	311	578	267	0.4	29.3										
	1904	14	316	19	26	271	171	290	27	91	190	447	257	-20.1	-6.9										
	1899	13			21	339	113	308	16	102	243	480	237												
Hand stamps and stencils and brands.	1909	361	2,539	375	513	1,651	903	2,439	433	952	1,127	3,673	2,546	9.6	30.7										
	1904	327	2,149	363	280	1,506	721	1,915	224	797	737	2,811	2,074	2.4	7.7										
	1899	360			171	1,470	462	1,736	141	696	663	2,611	1,948												
Hat and cap materials...	1909	74	2,618	63	188	2,367	2,922	6,183	231	947	5,380	8,236	2,856	-1.9	27.9										
	1904	65	2,615	87	114	2,414	2,239	4,265	127	849	4,217	6,440	2,223	76.1	67.3										
	1899	70			50	1,371	1,770	1,744	60	434	2,798	3,849	1,051												
Hats and caps, other than felt, straw, and wool. ²	1909	494	7,609	688	720	6,201	990	5,275	783	3,421	6,690	13,689	6,999	-6.0	5.7										
	1904	415	7,617	605	418	6,594	797	4,185	436	3,354	6,308	12,956	6,648	-47.4	-39.4										
	1899	644			643	12,544	3,252	8,394	675	5,025	10,907	21,393	10,486												
Hats, fur-felt.....	1909	273	27,091	264	1,763	25,644	19,245	35,734	2,097	14,223	22,109	47,865	25,756	13.7	30.7										
	1904	216	23,666	252	1,367	22,047	16,630	23,258	1,488	11,282	15,975	36,629	20,654	16.8	31.7										
	1899	171			726	18,880	11,843	16,701	944	9,119	13,514	27,811	14,297												
Hats, straw ³	1909	98	9,704	91	799	8,814	3,482	11,538	1,427	4,471	11,468	21,424	9,956	58.3	106.9										
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COMPARATIVE SUMMARY FOR THE UNITED STATES, BY SPECIFIED INDUSTRIES: 1909, 1904, AND 1899—Continued.

[See explanatory notes on the first page of this table.]

INDUSTRY.	Cen- sus.	Number of estab- lish- ments.	PERSONS ENGAGED IN INDUSTRY.					Primary horse- power.	Capital.	Sala- ries.	Wages.	Cost of materials.	Value of products.	Value added by manu- facture (value of products less cost of mate- rials).	PER CENT OF INCREASE.	
			Total.	Pro- pri- etors and firm mem- bers.	Salaried em- ployees.	Wage earn- ers (average number).	Wage earn- ers (average num- ber).								Wage earn- ers (average num- ber).	Wage earn- ers (average num- ber).
Hones and whetstones...	1909	18	173	13	8	152	677	\$382	\$6	\$72	\$110	\$268	\$158	-30.9	-13.0	
	1904	17	251	12	19	220	684	423	20	94	103	308	205	16.4	57.1	
	1899	17	189	19	19	189	593	217	6	73	64	196	132			
Horseshoes, not made in steel works or rolling mills.	1909	19	360	7	60	293	1,045	1,396	99	166	356	1,015	659	26.3	-27.0	
	1904	8	273	1	40	232	1,014	1,227	54	127	256	799	543	0.4	60.4	
	1899	7	18	18	231	231	545	463	36	117	211	498	287			
Hosiery and knit goods...	1909	1,374	136,130	1,134	5,721	129,275	103,709	163,641	7,691	44,740	110,241	200,143	89,902	24.2	48.0	
	1904	1,144	109,489	1,067	4,330	104,092	78,769	106,943	4,455	31,615	76,789	137,076	60,287	24.4	43.0	
	1899	1,006	2,831	2,831	83,691	83,691	57,346	82,006	3,138	24,434	51,195	95,834	44,639			
House-furnishing goods, not elsewhere specified.	1909	260	5,916	236	773	4,907	9,328	12,784	1,007	2,035	12,371	18,509	6,138	2.7	23.3	
	1904	237	5,555	234	543	4,778	8,748	9,872	582	1,880	9,627	15,011	5,384	-8.3	5.1	
	1899	209	584	584	5,212	5,212	8,531	10,634	628	1,838	9,198	14,278	5,080			
Ice, manufactured.....	1909	2,004	21,107	1,066	3,927	16,114	317,789	118,641	3,868	9,779	11,317	42,953	31,636	59.5	90.6	
	1904	1,320	13,179	746	2,332	10,101	191,660	66,592	2,001	5,549	6,011	23,790	17,779	46.8	72.6	
	1899	775	1,531	1,531	6,880	6,880	100,421	38,020	1,226	3,403	3,312	13,781	10,499			
Ink, printing.....	1909	71	1,854	38	695	1,121	5,857	7,144	1,092	773	4,175	8,865	4,690	57.7	53.5	
	1904	60	1,117	45	361	711	3,384	4,610	530	475	5,774	3,161	3,161	41.4	87.5	
	1899	60	253	253	503	503	1,895	2,945	345	298	1,536	3,080	1,544			
Ink, writing.....	1909	47	824	37	282	505	169	2,114	376	203	1,078	2,505	1,427	17.4	33.2	
	1904	42	607	36	141	430	224	1,287	191	170	858	1,881	1,023	50.9	45.5	
	1899	44	148	148	285	285	359	877	134	114	573	1,293	730			
Instruments, professional and scientific.	1909	263	6,175	222	1,136	4,817	4,856	11,724	1,233	2,925	2,918	10,504	7,586	40.2	95.3	
	1904	225	4,145	200	608	3,437	2,110	5,383	532	1,823	1,350	5,378	4,028	23.9	10.8	
	1899	261	389	389	2,775	2,775	2,471	4,476	402	1,429	1,363	3,493	3,490			
Iron and steel, blast fur- naces.	1909	208	43,061	48	4,584	38,429	1,173,422	487,581	6,525	24,607	320,638	391,429	79,791	9.6	65.8	
	1904	190	37,335	26	2,231	35,078	773,278	236,146	2,891	18,935	178,942	231,823	52,891	-10.6	12.1	
	1899	223	1,757	1,757	39,241	497,272	1,100,801	143,159	2,304	18,484	131,504	206,787	75,263			
Iron and steel, steel works and rolling mills.	1909	446	260,762	47	20,639	240,076	2,100,978	1,004,735	26,191	163,201	657,501	985,723	328,222	15.7	46.3	
	1904	415	221,956	64	14,330	207,562	1,649,299	700,182	17,860	122,492	441,204	673,965	232,791	13.3	12.9	
	1899	445	7,454	7,454	183,249	1,100,801	1,100,801	430,232	9,433	102,336	390,895	597,212	296,317			
Iron and steel, bolts, nuts, washers, and rivets, not made in steel works or rolling mills.	1909	108	12,395	38	1,012	11,345	22,113	30,250	1,373	5,793	12,804	24,455	11,661	40.2	66.7	
	1904	88	8,771	49	632	8,090	13,825	18,913	912	3,642	7,807	14,687	6,890	5.6	5.1	
	1899	72	420	420	7,660	9,165	9,165	10,800	571	2,992	8,071	13,978	5,967			
Iron and steel, doors and shutters.	1909	29	1,816	18	197	1,601	1,997	3,045	224	874	1,283	3,006	1,723	129.0	193.5	
	1904	24	811	19	93	699	969	1,120	117	407	602	1,477	875	497.4	361.6	
	1899	13	20	20	117	117	223	262	19	86	116	320	294			
Iron and steel forgings....	1909	172	9,193	90	935	8,168	27,803	27,755	1,300	5,003	10,240	20,293	10,953	44.2	67.6	
	1904	138	6,347	77	605	5,665	16,089	28,246	824	3,428	5,752	12,110	6,358	29.8	16.0	
	1899	90	322	322	4,688	7,697	7,697	9,676	411	2,559	5,213	10,438	5,225			
Iron and steel, nails and spikes, cut and wrought, including wire nails, not made in steel works or rolling mills.	1909	57	3,239	42	432	2,765	7,723	8,898	562	1,353	3,972	8,192	4,220	-24.9	-8.2	
	1904	76	4,147	60	406	3,681	10,533	8,742	454	1,684	4,668	8,923	4,237	-17.8	-39.6	
	1899	102	431	431	4,477	12,853	12,853	10,751	444	2,042	8,562	14,777	6,215			
Iron and steel pipe, wrought.	1909	28	7,309	17	475	6,817	20,656	22,266	657	3,963	22,942	30,886	7,944	25.9	77.5	
	1904	27	5,723	11	296	5,416	15,094	13,053	360	2,473	12,747	17,401	4,664	-2.2	-18.3	
	1899	19	5,536	5,536	11,717	11,717	11,717	18,344	266	2,496	15,524	21,292	5,768			
Jewelry.....	1909	1,537	36,992	1,846	4,799	30,347	11,204	63,811	5,838	18,358	36,675	80,350	43,675	37.4	51.0	
	1904	1,023	26,119	1,436	2,603	22,080	7,872	39,679	2,939	12,598	24,177	53,226	29,049	7.9	15.4	
	1899	851	1,806	1,806	20,468	6,656	6,656	27,872	1,842	10,644	22,235	46,129	23,894			
Jewelry and instrument cases.	1909	120	2,441	139	232	2,070	527	1,841	232	954	1,221	3,116	1,895	22.5	36.0	
	1904	97	1,923	126	121	1,676	359	1,438	107	624	843	2,292	1,449	104.6	98.1	
	1899	63	52	52	819	208	208	548	35	323	1,157	1,157	721			
Kaolin and ground earths	1909	119	2,351	53	308	1,990	20,920	13,226	417	897	2,042	4,661	2,639	-7.7	5.5	
	1904	131	2,501	91	253	2,157	17,325	10,196	329	899	1,869	4,439	2,570	3.0	19.3	
	1899	145	232	232	2,094	18,404	18,404	12,212	257	821	1,651	3,722	2,671			
Labels and tags.....	1909	96	2,880	85	432	2,313	1,589	3,857	541	1,123	1,910	4,670	2,760	71.6	89.7	
	1904	67	1,610	65	197	1,348	919	2,118	258	609	967	2,462	1,505	78.8	122.8	
	1899	47	96	96	754	392	392	848	120	289	1,105	1,105	717			
Lapidary work.....	1909	77	886	90	169	627	679	4,808	195	889	6,560	9,173	2,613	23.7	20.6	
	1904	54	681	72	102	507	554	2,384	109	657	6,224	7,647	1,423	1.8	22.2	
	1899	60	43	43	498	212	212	3,087	51	499	4,656	5,786	1,130			
Lard, refined, not made in slaughtered and meat- packing establishments.	1909	7	515	6	110	399	723	1,434	108	180	9,631	10,336	695	-9.5	68.5	
	1904	9	528	10	77	441	598	1,163	108	219	5,640	6,129	489	-11.6	-29.0	
	1899	19	54	54	499	714	714	1,336	80	238	7,497	8,631	1,134			
Lasts.....	1909	60	2,029	47	254	1,728	3,386	3,061	412	1,203	1,324	4,159	2,835	43.0	65.0	
	1904	55	1,453	59	188	1,208	2,865	2,009	223	798	768	2,520	1,752	6.8	34.0	
	1899	65	97	97	1,131	1,131	1,951	1,485	108	650	527	1,880	1,353			
Lead, bar, pipe, and sheet.	1909	33	1,044	8	234	802	3,179	20,587	360	510	7,412	9,145	1,733	24.3	-1.4	
	1904	32	834	11	177	646	2,487	5,015	239	405	7,910	9,277	1,367	6.8	24.1	
	1899	34	151	151	605	605	2,007	3,949	202	322	6,280	7,478	1,198			
Leather goods.....	1909	2,375	43,525	2,552	6,066	34,907	28,148	69,814	6,701	17,921	60,027	104,719	44,692	2.1	27.5	
	1904	1,918	40,508	2,148	4,171	34,189	16,257	50,919								

COMPARATIVE SUMMARY FOR THE UNITED STATES, BY SPECIFIED INDUSTRIES: 1909, 1904, AND 1899—Continued.

[See explanatory notes on the first page of this table.]

INDUSTRY.	Cen- sus.	Num- ber of estab- lish- ments.	PERSONS ENGAGED IN INDUSTRY.					Primary horse- power.	Capital.	Sala- ries.	Wages.	Cost of materials.	Value of products.	Value added by manu- facture (value of products less cost of mate- rials).	PER CENT OF INCREASE.	
			Total.	Pro- pri- etors and firm mem- bers.	Salaried em- ployees.	Wage earners (average number).	Wage earners (aver- age num- ber).								Wage earners (aver- age num- ber).	Value of prod- ucts.
Expressed in thousands.																
Leather, tanned, curried, and finished.	1909 1904 1899	919 1,049 1,306	67,100 61,602	784 1,112	4,114 3,251 2,442	62,202 57,239 52,109	148,140 117,450 88,860	\$332,727 242,584 173,977	\$6,744 4,452 3,159	\$32,103 27,049 22,591	\$248,279 191,179 155,000	\$327,874 252,621 204,038	\$79,595 61,442 49,038	8.7 9.8	29.8 23.8	
Lime ¹	1909 1904 1899	853 526 998	15,659 12,383	794 500	968 731 1,406	13,897 11,152 19,085	27,671 18,198 22,596	32,520 22,596 48,787	1,080 703 1,416	5,980 4,597 7,741	6,731 5,437 11,040	17,952 14,751 28,674	11,221 9,314 17,634	24.6 -41.6	21.7 -48.6	
Liquors, distilled.....	1909 1904 1899	613 805 965	8,328 7,229	563 794	1,335 1,080 661	6,430 5,355 3,720	46,120 42,349 31,427	72,450 50,101 32,540	1,988 1,393 890	3,074 2,657 1,733	35,977 25,626 15,145	204,699 131,270 96,794	168,722 108,744 81,649	20.1 44.0	55.9 35.6	
Liquors, malt.....	1909 1904 1899	1,414 1,530 1,507	66,725 58,068	639 876	11,507 9,055 7,146	54,579 48,137 39,459	347,726 266,159 197,901	671,158 515,630 413,767	22,804 17,316 13,038	41,206 34,541 25,776	96,596 74,907 51,598	374,730 238,346 236,915	278,134 223,439 188,317	13.4 22.0	25.6 25.9	
Liquors, vinous.....	1909 1904 1899	290 435 359	2,726 2,801	236 396	579 492 344	1,911 1,913 1,163	6,771 6,713 3,416	27,908 17,775 9,838	863 573 365	972 1,002 446	6,626 11,098 3,689	13,121 5,405 6,547	6,495 5,405 2,858	-0.1 64.5	18.2 69.5	
Locomotives, not made by railroad companies. ²	1909 1904	16 15	16,945 25,979	7 9	2,029 1,164	14,909 24,806	35,102 29,806	52,060 38,421	2,297 1,675	8,914 15,798	15,060 27,703	31,582 59,552	16,522 31,849	-39.9	-47.0	
Looking-glass and pic- ture frames.	1902 1904 1899	437 442 362	7,470 8,076	431 467	1,018 984 884	6,021 6,625 6,029	5,390 4,625 3,357	9,058 7,684 5,500	1,119 855 789	3,261 3,315 2,550	5,525 4,975 4,729	13,475 13,270 10,847	7,950 8,295 6,118	-9.1 9.9	1.5 22.3	
Lumber and timber prod- ucts.	1909 1904 1899	40,671 25,153 28,133	784,989 593,342	48,825 30,738	41,145 30,038 20,940	695,019 532,566 508,766	2,840,082 1,886,624 1,658,594	1,176,675 733,708 541,595	47,428 31,737 18,715	318,739 245,834 188,395	508,118 360,325 364,964	1,156,129 884,267 760,992	648,011 523,942 396,023	30.5 4.7	30.7 16.2	
Malt.....	1909 1904 1899	114 141 146	2,237 2,594	52 96	425 444 290	1,760 2,054 1,990	26,441 20,288 13,834	60,286 47,934 39,288	884 747 471	1,348 1,457 1,183	30,464 23,621 14,817	38,252 30,289 19,374	7,788 6,668 4,557	-14.3 3.2	26.3 56.3	
Marble and stone work ³ .	1909 1904 1899	4,964 2,608 2,952	77,275 57,866	6,026 3,300	5,646 3,456 2,606	65,603 51,110 41,686	187,686 102,887 83,119	114,842 79,170 52,982	6,386 4,000 2,440	42,546 31,899 22,843	37,397 26,569 21,546	113,093 84,844 84,667	75,696 58,275 42,121	28.4 22.6	33.3 33.3	
Matches.....	1909 1904 1899	26 23 22	4,220 3,368	46 7	543 176 66	3,631 3,185 2,047	6,224 3,539 2,666	11,953 5,334 3,893	723 178 87	1,390 1,101 613	4,599 3,285 3,421	11,353 5,647 6,006	6,754 5,047 2,585	14.0 55.6	101.0 -6.0	
Mats and matting.....	1909 1904 1899	12 12 9	1,040 696	18 13	85 58 42	937 625 1,197	1,433 1,524 1,733	4,051 839 994	95 67 31	385 249 237	1,067 574 516	2,432 1,243 1,165	1,365 669 649	49.9 -47.8	95.7 6.7	
Mattresses and spring beds	1909 1904 1899	930 716 539	14,109 12,438	869 757	1,918 1,254 851	11,322 10,427 7,649	17,689 13,220 7,980	23,735 14,514 7,999	2,039 1,253 770	5,771 4,816 3,102	20,483 15,326 10,227	35,783 27,755 17,956	15,300 12,429 7,729	8.6 36.3	28.9 54.6	
Millinery and lace goods..	1909 1904 1899	1,579 860 591	46,301 31,417	1,934 1,163	5,166 2,754 1,592	39,201 27,500 16,871	7,918 4,737 1,852	35,705 17,850 10,765	5,381 2,296 1,393	16,308 10,307 5,818	45,040 26,259 15,654	85,894 24,519 20,478	40,854 24,519 13,815	42.5 63.0	69.2 72.3	
Mineral and soda waters..	1909 1904 1899	4,916 3,468 2,763	22,060 16,554	5,743 4,099	3,170 1,576 1,423	13,147 10,879 8,788	19,392 12,214 8,037	42,305 28,098 19,727	2,846 1,393 1,161	6,902 5,488 4,080	16,466 10,002 8,565	43,508 30,251 23,269	27,042 20,249 14,704	20.8 23.8	43.8 30.0	
Mirrors.....	1909 1904 1899	148 119 103	3,509 3,068	131 117	334 302 269	2,994 2,649 2,555	3,862 2,795 2,333	4,890 3,859 3,184	450 332 277	1,763 1,375 1,232	5,905 4,587 4,996	9,571 7,005 8,004	3,666 3,018 3,008	13.0 3.7	25.9 -5.0	
Models and patterns, not including paper pat- terns.	1909 1904 1899	709 547 530	5,450 3,678	840 656	439 242 118	4,171 2,780 2,607	5,486 4,358 3,021	5,576 2,896 2,250	490 238 113	2,929 1,788 1,565	2,876 922 825	8,868 4,545 3,804	5,992 3,623 3,009	50.0 6.6	95.1 18.5	
Moving pictures.....	1909	16	718	5	207	506	486	19,428	396	335	2,192	4,206	2,014	.....	.....
Mucilage and paste.....	1909 1904 1899	127 111 116	901 728	108 100	255 158 166	538 470 458	2,335 1,505 1,426	2,717 2,430 1,220	353 166 155	286 237 193	3,283 2,301 1,613	4,918 3,556 2,556	1,635 1,255 943	14.5 2.6	38.3 39.1	
Musical instruments and materials, not specified.	1909 1904 1899	187 181 229	2,269 2,554	187 190	260 225 158	1,822 2,139 2,405	1,423 1,603 1,403	3,298 3,743 3,896	343 252 142	992 1,162 1,232	890 1,130 3,395	3,228 3,482 2,190	2,338 2,352 2,190	-14.8 -11.1	-7.3 2.6	
Musical instruments, pianos and organs and materials.	1909 1904 1899	507 444 390	41,882 36,106	297 303	3,565 2,722 1,518	38,020 33,081 21,309	41,623 30,134 20,789	103,234 68,482 43,810	5,552 3,728 2,015	22,762 18,527 11,543	43,765 27,987 17,371	89,790 60,093 41,024	46,025 38,106 23,653	14.9 55.2	35.9 61.1	
Needles, pins, and hooks and eyes.	1909 1904 1899	49 46 52	4,978 4,196	27 31	313 200 135	4,638 3,965 2,653	4,542 2,440 2,103	6,705 5,332 4,618	393 253 147	2,064 1,596 1,067	3,229 1,584 1,228	4,694 4,751 3,238	4,365 3,167 2,010	17.0 49.5	40.9 46.7	
Oakum.....	1909 1904 1899	6 6 7	129 158	7 5	9 11 10	113 142 171	289 367 375	842 488 416	14 14 17	42 49 51	232 241 284	338 361 440	106 120 156	-20.4 -17.0	-6.4 -18.0	
Oil, castor.....	1909 1904 1899	4 4 3	70 57	4	12 43 12	54 49 48	385 500 260	1,038 625 539	27 27 17	32 28 29	661 487 293	905 643 395	244 156 102	25.6 -12.2	40.7 62.8	
Oil, cottonseed, and cake.	1909 1904 1899	817 715 369	21,273 18,832	110 63	4,092 3,220 1,569	17,071 15,540 11,007	192,342 150,246 73,071	91,086 73,770 34,451	4,295 3,062 1,579	5,835 4,838 3,143	119,833 80,030 45,166	147,868 96,408 58,727	28,035 16,373 13,561	9.9 41.2	53.4 64.2	

¹ Includes "cement" and "wall plaster" in 1899.² Included in "foundry and machine-shop products" in 1899.³ Includes "artificial stone" in 1899.

STATES, CITIES, AND INDUSTRIES.

COMPARATIVE SUMMARY FOR THE UNITED STATES, BY SPECIFIED INDUSTRIES: 1909, 1904, AND 1899—Continued.

[See explanatory notes on the first page of this table.]

Table 110—Contd.

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 (value of products less cost of materials).	PER CENT OF INCREASE.		
			Total.	Proprietors and firm members.	Salaried employees.	Wage earners (average number).								Wage earners (average number).	Wage earners (average number).	Value of products.
Expressed in thousands.																
Oil, essential.....	1909	68	408	73	45	290	1,218	\$1,365	\$61	\$123	\$1,255	\$1,737	\$482	119.7	18.6	
	1904	52	237	68	37	132	849	723	40	70	1,111	1,465	354	-21.4	80.2	
	1899	47	237	68	37	132	849	723	40	70	1,111	1,465	354	-21.4	80.2	
Oil, linseed.....	1909	29	1,753	9	292	1,452	13,211	18,932	740	893	31,035	36,739	5,704	7.6	33.2	
	1904	30	1,518	13	156	1,349	9,473	9,850	423	786	23,153	27,577	4,424	1.6	1.4	
	1899	48	1,518	13	156	1,349	9,473	9,850	423	786	23,153	27,577	4,424	1.6	1.4	
Oil, not elsewhere specified.	1909	189	3,144	118	1,311	1,715	5,772	18,441	1,923	1,060	21,407	39,865	9,458	31.4	34.6	
	1904	186	2,116	148	663	1,305	5,207	11,229	882	752	14,438	22,923	8,485	-19.4	23.2	
	1899	201	2,116	148	663	1,305	5,207	11,229	882	752	14,438	22,923	8,485	-19.4	23.2	
Oilcloth and linoleum.....	1909	31	5,557	11	345	5,201	16,125	19,634	649	2,826	15,550	23,330	7,786	33.9	57.8	
	1904	27	4,112	12	217	3,883	10,112	13,803	1,944	1,944	10,650	14,792	4,142	20.2	28.7	
	1899	27	4,112	12	217	3,883	10,112	13,803	1,944	1,944	10,650	14,792	4,142	20.2	28.7	
Oleomargarine.....	1909	12	773	1	166	606	2,408	3,558	276	413	6,497	8,148	1,651	16.1	46.2	
	1904	14	730	2	206	522	1,560	1,551	253	316	4,395	5,574	1,176	-51.8	-55.4	
	1899	24	730	2	206	522	1,560	1,551	253	316	4,395	5,574	1,176	-51.8	-55.4	
Optical goods.....	1909	217	7,809	163	1,248	6,398	5,725	10,147	1,157	3,394	4,187	11,735	7,548	47.8	91.8	
	1904	122	4,742	96	316	4,330	3,410	5,381	427	1,923	2,320	6,117	3,797	16.6	17.4	
	1899	91	4,742	96	316	4,330	3,410	5,381	427	1,923	2,320	6,117	3,797	16.6	17.4	
Paint and varnish.....	1909	791	21,896	456	7,200	14,240	56,162	103,995	10,378	8,271	79,016	124,889	45,873	22.4	37.5	
	1904	639	16,480	439	4,408	11,633	41,288	75,486	5,677	6,264	59,827	90,840	31,013	20.0	30.6	
	1899	600	16,480	439	4,408	11,633	41,288	75,486	5,677	6,264	59,827	90,840	31,013	20.0	30.6	
Paper and wood pulp.....	1909	777	81,473	250	5,245	75,978	1,304,285	409,348	9,510	40,805	165,442	267,657	102,215	15.2	41.8	
	1904	761	70,051	309	3,778	65,994	1,093,708	277,444	6,097	32,019	111,262	188,715	77,463	32.9	43.2	
	1899	763	70,051	309	3,778	65,994	1,093,708	277,444	6,097	32,019	111,262	188,715	77,463	32.9	43.2	
Paper goods, not elsewhere specified.	1909	403	22,385	228	2,946	19,211	27,067	48,662	3,701	8,169	31,249	55,171	23,922	30.5	62.5	
	1904	308	16,696	236	1,734	14,726	16,226	27,345	1,993	5,577	19,645	33,946	14,301	51.4	29.4	
	1899	246	16,696	236	1,734	14,726	16,226	27,345	1,993	5,577	19,645	33,946	14,301	51.4	29.4	
Paper patterns.....	1909	27	1,755	22	812	921	751	4,578	675	407	646	2,611	1,965	-14.9	15.3	
	1904	26	1,700	15	693	1,082	38	2,237	490	445	337	2,265	1,928	29.6	303.0	
	1899	15	1,700	15	693	1,082	38	2,237	490	445	337	2,265	1,928	29.6	303.0	
Patent medicines and compounds and druggists' preparations.	1909	3,642	41,101	2,802	15,404	22,895	25,659	99,942	17,007	9,897	59,376	141,942	91,566	11.8	20.9	
	1904	2,777	32,248	2,293	9,483	20,472	17,008	75,007	9,975	7,913	39,494	117,436	77,942	7.6	32.3	
	1899	2,154	32,248	2,293	9,483	20,472	17,008	75,007	9,975	7,913	39,494	117,436	77,942	7.6	32.3	
Paving materials.....	1909	49	1,731	31	281	1,410	5,757	11,410	373	750	3,478	6,229	2,751	-26.1	23.5	
	1904	54	2,106	30	157	1,919	5,156	5,218	197	953	2,666	5,033	2,367	-21.2	27.9	
	1899	99	2,106	30	157	1,919	5,156	5,218	197	953	2,666	5,033	2,367	-21.2	27.9	
Peanuts, grading, roasting, cleaning, and shelling. ¹	1909	46	2,177	35	193	1,949	2,827	3,646	209	351	8,612	9,737	1,125	43.7	34.1	
	1904	30	1,490	18	116	1,356	1,602	1,169	122	205	6,324	7,261	937			
Pencils, lead.....	1909	11	4,513	4	375	4,134	3,448	7,867	667	1,712	3,596	7,379	3,783	34.9	64.7	
	1904	8	3,351	3	283	3,065	2,625	4,981	396	1,059	1,894	4,426	2,622	41.8	99.2	
	1899	7	3,351	3	283	3,065	2,625	4,981	396	1,059	1,894	4,426	2,622	41.8	99.2	
Pens, fountain, stylographic, and gold.	1909	65	1,820	51	544	1,225	569	3,121	554	712	2,246	4,739	2,498	31.3	70.8	
	1904	49	1,196	39	224	933	349	1,545	198	533	1,166	2,774	1,608	34.1	62.6	
	1899	45	1,196	39	224	933	349	1,545	198	533	1,166	2,774	1,608	34.1	62.6	
Pens, steel.....	1909	5	755	56	699	244	804	86	86	95	577	482	5.4	21.7		
	1904	5	736	1	72	663	294	576	60	205	103	474	371	40.2	61.2	
	1899	3	736	1	72	663	294	576	60	205	103	474	371	40.2	61.2	
Petroleum, refining.....	1909	147	16,640	42	2,669	13,929	90,268	181,916	3,929	9,830	199,273	236,968	37,725	-16.9	35.4	
	1904	98	18,768	24	1,974	16,770	46,019	136,281	2,724	9,989	139,387	175,005	35,618	37.4	41.2	
	1899	67	18,768	24	1,974	16,770	46,019	136,281	2,724	9,989	139,387	175,005	35,618	37.4	41.2	
Phonographs and graphophones.	1909	18	5,928	2	727	5,199	6,371	14,363	945	2,841	3,099	11,736	8,627	53.0	14.5	
	1904	14	3,940	6	537	3,397	2,522	8,741	666	1,684	4,161	10,237	6,076	168.1	355.8	
	1899	11	3,940	6	537	3,397	2,522	8,741	666	1,684	4,161	10,237	6,076	168.1	355.8	
Photographic apparatus and materials.	1909	103	6,596	59	1,342	5,195	8,637	18,918	1,462	3,037	6,708	22,561	15,853	36.3	73.2	
	1904	130	5,041	74	1,155	3,812	5,061	7,720	1,109	1,796	4,162	13,623	8,861	10.7	67.0	
	1899	153	5,041	74	1,155	3,812	5,061	7,720	1,109	1,796	4,162	13,623	8,861	10.7	67.0	
Photo-engraving.....	1909	313	7,277	233	1,701	5,343	2,638	5,474	1,849	4,750	2,124	11,624	9,490	37.5	59.9	
	1904	223	5,071	227	968	3,876	1,925	4,071	934	2,916	1,303	7,268	5,965	44.0	73.5	
	1899	203	5,071	227	968	3,876	1,925	4,071	934	2,916	1,303	7,268	5,965	44.0	73.5	
Pipes, tobacco.....	1909	62	3,090	70	245	2,775	1,506	3,528	283	1,255	2,459	5,212	2,853	42.5	87.4	
	1904	68	2,111	82	82	1,947	1,058	1,256	81	831	1,354	2,834	1,490	22.8	14.6	
	1899	98	2,111	82	82	1,947	1,058	1,256	81	831	1,354	2,834	1,490	22.8	14.6	
Pottery, terra-cotta, and fire-clay products.	1909	822	61,022	452	4,402	56,168	110,017	141,350	5,812	29,753	21,911	76,119	54,208	7.1	18.6	
	1904	873	56,730	550	3,752	52,428	104,918	110,926	4,628	25,178	16,561	64,201	47,610	19.9	45.9	
	1899	1,000	56,730	550	3,752	52,428	104,918	110,926	4,628	25,178	16,561	64,201	47,610	19.9	45.9	
Printing and publishing..	1909	31,445	338,466	30,424	99,608	258,434	297,763	588,346	103,458	164,828	201,775	737,876	536,101	18.0	33.6	
	1904	27,793	316,047	28,368	68,592	219,087	166,380	432,854	67,748	127,196	142,514	552,473	409,969	12.2	39.8	
	1899	23,814	316,047	28,368	68,592	219,087	166,380	432,854	67,748	127,196	142,514	552,473	409,969	12.2	39.8	
Pulp goods.....	1909	14	882	1	98	783	3,125	2,680	124	377	971	1,770	799	12.5	29.7	
	1904	17	759	7	56	696	2,368									

COMPARATIVE SUMMARY FOR THE UNITED STATES, BY SPECIFIED INDUSTRIES: 1909, 1904, AND 1899—Continued.

[See explanatory notes on the first page of this table.]

INDUSTRY.	Cen- sus.	Number of estab- lish- ments.	PERSONS ENGAGED IN INDUSTRY.					Primary horse- power.	Capital.	Salaries.	Wages.	Cost of materials.	Value of products.	Value added by manu- facture (value of products less cost of materials).	PER CENT OF INCREASE.									
			Total.	Propri- etors and firm mem- bers.	Salaried em- ployees.	Wage earners (average number).	Wage earners (average number).								Wage earners (average number).	Value of products.								
Pumps, not including steam pumps.	1909	102	2,623	87	400	2,136	4,214	\$6,018	\$420	\$1,258	\$2,487	\$5,583	\$3,096	52.1	95.7									
	1904	115	1,721	113	204	1,404	2,569	3,230	215	719	1,193	2,853	1,660	122.2	112.6									
	1899	130			95	632	1,261	1,261	84	247	638	1,342	704											
Rice, cleaning and polishing.	1909	71	1,777	38	500	1,230	19,519	13,347	613	564	19,501	22,371	2,870	-17.0	37.3									
	1904	74	1,961	33	436	1,492	15,866	8,821	549	641	13,315	16,297	2,982	129.2	86.8									
	1899	80			169	651	7,546	2,601	182	266	7,576	8,724	1,148											
Roofing materials.....	1909	117	3,530	46	1,019	2,465	9,431	15,349	1,381	1,339	12,458	19,204	6,746	-72.0	-3.4									
	1904	307	10,162	314	1,029	8,819	23,022	16,925	1,162	4,008	10,842	19,871	9,029	16.1	45.1									
	1899	267			695	7,593	18,217	10,814	663	3,072	6,886	13,691	6,805											
Rubber goods, not elsewhere specified.	1909	227	31,284	102	4,661	26,521	79,062	98,507	5,406	14,120	82,192	128,436	46,244	25.2	103.9									
	1904	224	23,651	103	2,364	21,184	48,381	46,298	2,857	9,412	38,912	62,996	24,084	3.8	19.7									
	1899	261			1,825	20,404	40,835	39,302	2,216	8,082	33,482	52,622	19,140											
Rules, ivory and wood...	1909	9	127	9	9	109	167	104	11	51	31	144	113	-26.8	-42.2									
	1904	13	177	13	15	149	318	253	15	55	55	249	194	-30.0	19.7									
	1899	11			14	213	303	203	12	67	73	208	135											
Safes and vaults.....	1909	42	4,060	8	709	3,343	5,546	8,944	1,058	2,072	3,443	8,491	5,048	-4.2	8.0									
	1904	31	3,918	15	415	3,488	4,090	7,326	723	2,162	3,211	7,861	4,650	71.6	100.1									
	1899	35			272	2,033	2,209	5,480	283	1,017	1,689	3,928	2,239											
Salt.....	1909	124	5,580	74	570	4,936	27,263	29,012	719	2,531	5,203	11,328	6,125	5.8	20.0									
	1904	146	5,171	87	418	4,666	19,434	25,586	487	2,066	4,166	9,438	5,272	-2.3	18.5									
	1899	159			406	4,774	23,895	27,123	500	1,911	3,336	7,967	4,631											
Sand and emery paper and cloth.	1909	10	779	9	159	611	3,351	4,400	210	370	2,382	4,358	1,976	100.3	195.1									
	1904	8	356	11	40	305	1,133	1,206	78	133	1,055	1,477	422	11.3	25.6									
	1899	9			63	274	898	1,372	98	144	681	1,176	495											
Saws.....	1909	96	5,757	84	841	4,832	11,852	14,855	966	2,856	4,912	11,536	6,624	3.9	17.5									
	1904	83	5,301	75	576	4,650	7,491	11,288	623	2,707	4,036	9,820	5,784	44.6	52.4									
	1899	96			312	3,215	5,493	8,509	329	1,693	2,600	6,444	3,844											
Scales and balances.....	1909	87	4,275	44	672	3,559	6,183	10,183	815	2,186	2,704	8,786	6,082	13.6	46.4									
	1904	85	3,641	77	431	3,133	3,251	8,513	477	1,755	1,633	6,003	4,370	12.9	14.6									
	1899	86			305	2,775	2,466	6,308	297	1,437	1,533	5,240	3,707											
Screws, machine.....	1909	43	1,863	32	164	1,667	3,319	3,728	199	970	1,160	3,014	1,854	-15.2	11.1									
	1904	26	2,189	15	209	1,965	3,201	4,133	244	942	951	2,712	1,761	26.2	31.7									
	1899	25			108	1,557	1,407	2,467	126	708	797	2,059	1,262											
Screws, wood.....	1909	11	3,758	1	293	3,464	5,618	9,570	375	1,454	2,309	6,199	3,890	132.8	190.5									
	1904	7	1,647	1	158	1,488	3,715	5,969	193	556	732	2,134	1,405	-24.5	-17.9									
	1899	8			139	1,970	3,490	5,465	169	721	923	2,600	1,677											
Sewing machines, cases, and attachments.	1909	47	20,556	14	1,246	19,296	19,426	33,104	1,423	11,102	11,455	28,262	16,807	12.7	8.1									
	1904	54	18,064	19	924	17,121	17,162	32,583	1,152	9,493	10,701	26,142	15,441	28.1	23.7									
	1899	64			704	13,365	10,069	20,844	933	7,331	9,458	21,125	11,667											
Shipbuilding, including boat building.	1909	1,353	44,949	1,463	2,980	40,506	88,063	126,118	4,035	25,268	31,214	73,360	42,146	-20.2	-11.4									
	1904	1,097	54,424	1,190	2,480	50,754	78,127	121,624	3,340	29,241	37,463	82,769	45,306	8.6	11.1									
	1899	1,107			1,405	46,747	61,797	77,341	2,007	24,825	33,475	74,532	41,057											
Shoddy.....	1909	88	2,320	83	196	2,041	13,820	6,887	290	907	5,001	7,446	2,445	-2.3	-11.4									
	1904	97	2,371	110	172	2,089	12,244	5,804	245	835	6,056	8,406	2,350	8.5	24.9									
	1899	105			139	1,926	11,455	5,273	167	749	4,875	6,731	1,856											
Show cases.....	1909	149	3,943	154	399	3,390	4,746	5,369	505	2,017	3,140	7,167	4,027	10.0	25.3									
	1904	141	3,522	135	305	3,082	4,087	3,143	330	1,661	2,374	5,722	3,348	126.1	131.8									
	1899	102			106	1,363	1,232	1,153	88	708	1,058	2,468	1,410											
Signs and advertising novelties. ¹	1909	288	7,277	211	1,526	5,540	3,790	9,647	1,476	3,105	4,709	13,546	8,837											
Silk and silk goods, including throwsters.	1909	852	105,238	664	5,537	99,037	97,947	152,158	7,527	38,570	107,767	196,912	89,145	24.4	47.7									
	1904	624	84,153	525	4,027	79,601	71,760	109,557	4,742	26,768	75,861	133,288	57,427	21.7	24.3									
	1899	483			2,657	65,416	57,397	81,082	3,134	20,982	62,407	107,256	44,849											
Silverware and plated ware.	1909	183	18,774	114	2,050	16,610	15,183	46,759	2,745	10,282	18,332	42,229	23,897	11.8	28.6									
	1904	158	16,305	120	1,324	14,861	12,873	37,732	1,730	8,625	14,459	32,840	18,381	21.8	25.8									
	1899	169			1,129	12,205	8,486	30,628	1,457	6,531	11,659	26,114	14,455											
Slaughtering and meat packing.	1909	1,641	108,716	1,659	17,329	89,728	208,707	383,249	20,054	51,645	1,202,828	1,370,568	167,740	19.0	48.6									
	1904	1,221	88,819	1,324	12,096	75,399	119,311	240,419	13,453	41,067	811,426	922,038	110,612	8.9	17.0									
	1899	1,080			10,317	69,264	87,060	190,209	10,211	33,846	685,510	788,368	103,058											
Smelting and refining, copper.	1909	38	16,832	7	1,197	15,628	158,126	111,443	2,419	13,396	333,532	378,806	45,274	22.6	57.3									
	1904	40	13,562	1	809	12,752	76,524	76,825	1,527	10,827	196,737	240,780	44,043	12.6	45.8									
	1899	47			488	11,324	61,630	53,063	955	8,529	122,174	165,132	42,958											
Smelting and refining, lead.	1909	28	8,059		635	7,424	26,954	132,310	1,476	5,431	151,963	167,406	15,443	-2.0	-9.9									
	1904	32	8,102	5	524	7,573	25,667	63,823	888	5,375	168,958	185,827	16,869	-9.0	5.9									
	1899	39			425	8,319	16,342	72,149	755	5,089	144,195	175,466	31,271											
Smelting and refining, zinc.	1909	29	7,156	3	498	6,655	21,457	27,760	993	4,210	25,230	34,206	8,976	1.9	38.0									
	1904	31	6,884	2	354	6,528	18,404	23,702	581	3,856	17,028	24,791	7,763	34.1	36.3									
	1899	31			208	4,869	11,145	14,142	440	2,356	13,286	18,188	4,902											
Smelting and refining, not from the ore.	1909	89	2,596	73	376	2,147	10,705	13,834	570	1,281	23,162	28,072	4,910	25.4	61.3									
	1904	65	1,994	57	225	1,712	17,111	9,807	354	995	13,760	17,403	3,643	74.2	123.5									
	1899	61			203	983	8,633	5,201	229	532	8,900	7,785	1,885											

¹ Included in other classifications in 1904 and 1899.

STATES, CITIES, AND INDUSTRIES.

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COMPARATIVE SUMMARY FOR THE UNITED STATES, BY SPECIFIED INDUSTRIES: 1909, 1904, AND 1899—Continued.

[See explanatory notes on the first page of this table.]

INDUSTRY.	Cen- sus.	Number of estab- lish- ments.	PERSONS ENGAGED IN INDUSTRY.				Primary horse- power.	Capital.	Sala- ries.	Wages.	Cost of materials.	Value of products.	Value added by manu- facture (value of products less cost of mate- rials).	PER CENT OF INCREASE.		
			Total.	Pro- pri- etors and firm mem- bers.	Salaried em- ployees.	Wage earners (average number).								Wage earners (aver- age num- ber).	Wage earners (aver- age num- ber).	Value of prod- ucts.
Soap ¹	1909	420	18,393	329	5,065	12,999	28,360	\$71,951	\$5,506	\$6,227	\$72,179	\$111,358	\$39,179	17.7	68.1	
	1904	436	14,501	399	3,058	11,044	20,228	54,816	3,503	4,763	45,626	68,275	24,649	16.4	28.3	
	1899	558	.....	.....	2,738	9,487	17,514	38,068	2,777	3,755	33,143	53,231	20,068	.....	.....
Soda-water apparatus....	1909	63	2,399	40	562	1,797	2,894	8,589	624	1,239	2,443	6,556	4,111	22.3	41.5	
	1904	37	1,829	27	333	1,469	1,533	3,415	296	4,634	1,824	4,634	2,710	32.5	53.7	
	1899	30	.....	.....	227	963	1,183	4,202	244	530	997	3,015	2,018	.....	.....
Sporting and athletic goods.	1909	180	5,993	155	517	5,321	3,243	6,617	617	2,165	5,565	11,052	5,487	24.9	57.2	
	1904	152	4,757	136	361	4,280	2,995	4,249	319	1,641	2,993	7,032	4,069	91.5	93.8	
	1899	143	.....	.....	168	2,225	1,133	2,015	167	810	1,802	3,628	1,826	.....	.....
Springs, steel, car and carriage.	1909	54	3,573	24	353	3,196	7,349	8,784	590	1,553	4,727	9,065	4,278	29.1	56.9	
	1904	52	2,774	28	270	2,476	5,510	4,016	353	1,243	2,742	5,741	2,999	17.8	6.9	
	1899	48	.....	.....	166	2,102	3,185	4,684	275	1,061	3,025	5,690	2,665	.....	.....
Stationery goods, not elsewhere specified.	1909	153	7,938	103	1,629	6,206	6,842	13,508	1,897	2,736	7,744	16,647	8,903	44.5	87.7	
	1904	143	5,095	115	685	4,295	3,396	6,929	751	1,500	3,920	8,867	4,947	41.7	75.0	
	1899	113	.....	.....	453	3,032	1,706	4,495	412	958	2,128	5,066	2,898	.....	.....
Statuary and art goods ²	1909	194	2,172	275	198	1,699	462	1,339	225	1,339	680	3,442	2,762	12.7	42.4	
	1904	185	1,812	191	114	1,507	466	1,669	127	1,030	392	2,417	2,025	.....	.....
	1899	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Steam packing.....	1909	153	4,968	82	1,238	3,648	11,129	14,126	1,356	1,811	6,650	12,160	5,510	32.4	35.8	
	1904	106	3,240	56	450	2,734	8,846	12,253	594	1,273	3,896	8,952	5,056	128.4	156.2	
	1899	97	.....	.....	290	1,147	4,488	2,691	326	525	1,546	3,494	1,943	.....	.....
Stereotyping and electro- typing.	1909	174	3,661	133	678	2,850	4,076	3,826	900	2,312	1,765	6,364	4,619	6.4	27.6	
	1904	146	3,301	132	490	2,679	2,873	3,298	517	1,993	1,082	5,066	3,973	11.3	32.7	
	1899	140	.....	.....	330	2,408	1,470	2,389	312	1,459	767	3,772	3,005	.....	.....
Stoves and furnaces, in- cluding gas and oil stoves. ³	1909	576	42,921	244	5,547	37,130	45,524	86,944	6,975	22,944	29,338	78,953	49,515	11.2	26.9	
	1904	494	37,392	306	3,582	33,404	32,617	62,963	4,499	19,770	22,271	62,133	39,862	.....	.....
	1899	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sugar and molasses, not including beet sugar. ⁴	1909	233	15,658	204	1,928	13,526	160,603	153,167	2,392	7,484	247,583	279,249	31,666	-0.2	6.7	
	1904	344	15,799	364	1,886	13,549	140,569	165,468	2,154	7,576	244,753	277,265	32,532	-4.1	15.7	
	1899	657	.....	.....	1,867	14,129	152,569	184,033	1,682	6,918	221,385	239,711	18,326	.....	.....
Sulphuric, nitric, and mixed acids. ⁵	1909	42	2,582	.....	330	2,252	6,494	18,726	551	1,495	5,386	9,884	4,498	-8.0	9.2
	1904	32	2,757	2	308	2,447	5,416	12,762	556	1,505	4,973	9,053	4,080	.....	.....
	1899	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Surgical appliances and artificial limbs.	1909	324	5,805	316	1,248	4,241	5,752	11,045	1,488	2,129	5,372	12,299	7,027	34.5	76.6	
	1904	284	4,049	289	607	3,153	3,214	5,825	594	1,376	2,866	7,269	4,403	76.3	55.3	
	1899	306	.....	.....	440	1,788	1,254	2,778	414	767	1,418	4,682	3,264	.....	.....
Tin plate and terneplate.	1909	31	5,846	4	490	5,352	8,154	10,995	620	3,315	41,889	47,970	6,081	10.4	26.0	
	1904	36	5,132	1	284	4,847	8,990	10,813	310	2,383	31,376	35,283	3,907	32.0	10.6	
	1899	57	.....	.....	333	3,671	3,515	6,650	291	1,890	26,728	31,892	5,164	.....	.....
Tin foil.....	1909	10	762	8	71	683	1,699	2,505	92	304	2,277	3,419	1,142	-10.8	22.3	
	1904	14	847	11	70	766	1,388	1,918	86	303	1,888	2,795	907	31.6	75.5	
	1899	15	.....	.....	45	582	854	2,094	59	228	1,074	1,593	519	.....	.....
Tobacco manufactures....	1909	15,822	197,637	17,634	13,193	166,810	28,514	245,660	16,779	69,355	177,186	416,695	239,599	4.6	25.8	
	1904	16,827	187,652	19,011	9,235	159,406	24,604	323,982	8,800	62,639	126,086	331,111	205,025	20.3	25.6	
	1899	14,959	.....	.....	7,836	132,526	22,296	111,517	8,593	47,975	92,867	263,713	170,846	.....	.....
Toys and games.....	1909	226	6,072	185	582	5,305	5,323	6,541	661	2,227	3,554	8,264	4,710	22.5	48.2	
	1904	161	4,792	133	329	4,330	4,757	4,831	366	1,615	3,289	5,578	3,289	30.6	39.1	
	1899	169	.....	.....	204	3,316	3,155	3,279	184	1,119	1,665	4,010	2,345	.....	.....
Turpentine and rosin....	1909	1,585	44,524	2,567	2,446	39,511	4,129	12,401	1,655	9,363	4,911	25,295	20,384	18.4	5.7	
	1904	1,287	37,526	1,997	2,147	33,382	1,175	6,961	1,152	8,383	3,775	23,937	20,162	-20.3	17.7	
	1899	1,503	.....	.....	1,889	41,864	866	11,848	779	8,394	6,186	20,345	14,159	.....	.....
Type founding and print- ing materials.	1909	122	2,597	78	493	2,026	1,948	6,793	560	1,191	1,772	4,703	2,931	12.4	19.5	
	1904	98	2,255	84	368	1,803	1,497	5,926	387	1,123	1,119	3,935	2,816	-9.1	0.1	
	1899	92	.....	.....	247	1,984	1,331	3,175	274	1,036	1,270	3,931	2,661	.....	.....
Typewriters and supplies	1909	89	12,101	34	2,489	9,578	6,845	26,309	2,707	6,221	4,077	19,719	15,642	53.7	85.3	
	1904	66	7,509	29	1,248	6,232	4,455	16,642	1,246	3,469	1,870	10,640	8,770	43.3	53.5	
	1899	47	.....	.....	532	4,340	2,272	8,400	480	2,404	1,402	6,992	5,530	.....	.....
Umbrellas and canes....	1909	256	6,505	299	734	5,472	2,413	9,556	915	2,253	10,056	15,864	5,808	1.6	19.3	
	1904	204	6,155	242	527	5,386	2,122	8,951	474	1,826	8,250	13,296	5,046	-4.5	-2.7	
	1899	202	.....	.....	587	5,640	1,457	4,605	504	1,809	8,381	13,669	5,288	.....	.....
Upholstering materials...	1909	230	4,777	214	496	4,067	17,456	10,297	587	1,689	8,069	13,054	4,965	-13.7	3.0	
	1904	236	5,405	244	449	4,712	15,604	9,293	1,967	1,867	7,977	12,678	9,701	-7.6	26.2	
	1899	270	.....	.....	358	5,098	11,351	7,594	364	1,715	5,882	10,448	4,166	.....	.....
Vault lights and ventila- tors.	1909	37	453	27	99	327	234	607	109	228	338	967	47.3	97.7		
	1904	24	278	28	28	222	174	241	31	154	161	454	323	60.9	43.2	
	1899	14	.....	.....	11	138	103	121	13	81	141	338	197	.....	.....
Vinegar and cider.....	1909	963	3,073	1,050	481	1,542	16,681	10,879	539	723	4,964	8,445	3,484	0.9	16.3	
	1904	568	2,514	645	341	1,528	10,556	7,520	359	725	3,832	7,265	3,413	-1.9	22.5	
	1899	613	.....	.....	451	1,557	16,849	5,630	391	632	3,134	5,932	2,798	.....	.....
Wall paper.....	1909	45	4,746	10	699	4,037	5,680	14,153	1,054	2,039	7,622	14,449	6,826	3.2	14.3	
	1904	44	4,425	15	497	3,913	4,867	12,354	692	1,808	6,658	12,637	5,979	-6.2	13.5	
	1899	51	.....	.....	512	4,172	4,573	8,890	817	2,074	6,073	10,663			

COMPARATIVE SUMMARY FOR THE UNITED STATES, BY SPECIFIED INDUSTRIES: 1909, 1904, AND 1899—Continued.

[See explanatory notes on the first page of this table.]

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 (value of products less cost of materials).	PER CENT OF INCREASE.				
			Total.	Proprietors and firm members.	Salaried employees.	Wage earners (average number).								Wage earners (average number).	Wage earners (average number).	Value of products.	Wage earners (average number).	Value of product.
Wall plaster ¹	1909	198	5,624	60	773	4,791	25,892	\$16,885	\$1,049	\$2,391	\$6,007	\$12,804	\$6,797	27.5	26.0			
	1904	176	4,459	72	629	3,758	20,054	13,204	620	1,890	4,726	10,164	5,438					
Washing machines and clothes wringers.	1909	100	2,294	76	383	1,835	3,351	5,318	466	904	2,837	5,825	2,988	13.1	51.7			
	1904	92	1,861	68	171	1,622	3,564	2,952	148	684	2,213	3,839	1,626	7.5	2.8			
	1899	118			104	1,509	2,732	2,405	104	549	2,175	3,735	1,560					
Waste.....	1909	53	2,129	41	191	1,897	4,286	6,125	290	716	8,837	11,398	2,561	21.7	36.6			
	1904	41	1,716	41	116	1,559	3,863	3,586	164	495	6,825	8,343	1,518	42.9	71.0			
	1899	25			58	1,091	2,193	2,437	85	327	4,000	4,880	880					
Wheelbarrows.....	1909	24	775	17	94	664	1,486	1,510	81	321	715	1,025	910	13.7	37.9			
	1904	26	665	12	69	584	1,282	1,045	76	296	494	1,178	684	81.9	159.5			
	1899	15			31	321	762	514	27	127	180	454	274					
Whips.....	1909	57	1,946	90	310	1,546	1,321	3,900	323	704	1,585	3,949	2,364	-0.5	25.5			
	1904	58	1,771	43	174	1,554	1,068	3,368	184	603	1,253	3,147	1,894	20.7	15.1			
	1899	60			228	1,287	818	1,894	246	478	1,278	2,734	1,456					
Windmills.....	1909	34	2,742	18	387	2,337	3,301	5,636	479	1,403	3,331	6,677	3,346	21.2	39.2			
	1904	53	2,341	25	387	1,929	3,694	5,337	392	969	2,308	4,795	2,487	-5.7	10.1			
	1899	68			281	2,045	2,214	4,809	250	940	2,172	4,354	2,182					
Window shades and fixtures.	1909	219	4,770	194	646	3,930	5,737	10,334	807	1,918	12,653	18,571	5,918	49.8	107.9			
	1904	144	3,165	132	409	2,624	2,705	5,977	480	1,086	5,947	8,931	2,984	45.7	10.6			
	1899	96			292	1,801	1,927	5,184	323	752	5,575	8,072	2,497					
Wire.....	1909	56	19,945	15	1,846	18,084	71,959	60,157	2,199	10,316	60,543	84,486	23,943	281.8	122.8			
	1904	25	5,325	7	581	4,737	25,856	14,899	793	2,859	30,063	37,914	7,851	195.5	302.4			
	1899	29			94	1,603	9,979	4,242	136	860	7,014	9,421	2,407					
Wirework, including wire rope and cable.	1909	611	14,994	484	2,162	12,348	20,131	34,970	2,674	6,331	24,394	41,938	17,544	-7.7	26.9			
	1904	649	15,967	652	1,936	13,379	18,280	26,894	2,117	6,100	17,856	33,038	15,182	46.3	66.5			
	1899	596			995	9,142	12,772	16,345	940	3,894	10,813	19,840	9,027					
Wood carpet.....	1909	10	221	9	28	184	269	423	33	138	228	490	262	-50.7	-38.8			
	1904	20	445	22	50	373	473	330	45	269	351	801	450	-38.7	-24.2			
	1899	31			49	608	534	412	35	362	418	1,057	639					
Wood distillation, not including turpentine and rosin. ²	1909	120	3,095	56	318	2,721	9,854	13,017	355	1,463	5,876	9,737	3,861	19.8	24.6			
	1904	141	2,655	82	301	2,272	4,620	10,507	298	1,067	4,848	7,813	2,965					
Wood preserving.....	1909	53	2,875	1	471	2,403	10,647	12,408	517	1,066	9,328	14,099	4,771	226.1	318.6			
	1904	26	859	7	115	737	3,439	2,935	158	315	2,463	3,368	905	54.2	40.6			
	1899	21			54	478	1,007	1,230	57	205	1,825	2,396	571					
Wood, turned and carved.	1909	1,050	16,243	1,097	1,007	14,139	48,447	18,334	1,045	6,213	9,744	22,199	12,455	-3.7	10.1			
	1904	1,097	16,837	1,226	924	14,687	47,595	16,842	829	6,031	8,578	20,169	11,591	27.1	40.9			
	1899	1,166			565	11,558	31,133	10,280	488	4,371	5,830	14,318	8,438					
Wool pulling.....	1909	37	759	37	91	631	1,366	3,248	132	387	4,103	5,181	1,078	-7.3	487.4			
	1904	34	780	40	65	681	1,324	2,534	74	365	104	882	778	43.4	66.1			
	1899	34			35	475	820	945	35	248	54	531	477					
Wool scouring.....	1909	28	1,262	18	102	1,142	6,782	3,258	143	558	2,122	3,289	1,167	46.6	212.3			
	1904	27	852	18	55	779	3,478	1,183	78	398	215	1,053	838	8.2	18.3			
	1899	25			45	720	2,900	1,061	72	339	194	890	696					
Woolen, worsted, and felt goods, and wool hats.	1909	985	175,176	732	5,722	168,722	362,209	430,579	10,097	72,427	282,878	435,979	153,101	15.0	36.5			
	1904	1,074	152,306	958	4,593	146,755	288,969	314,081	6,781	57,073	204,613	319,348	114,735	12.3	28.4			
	1899	1,281			3,808	130,697	244,825	265,730	5,574	46,812	153,930	248,798	94,808					
All other industries ³	1909	8	132	11	25	96	136	254	39	67	115	390	275	-78.0	-63.1			
	1904	15	494	8	50	436	1,767	3,800	59	263	386	1,058	672	-64.1	-60.1			
	1899	17			97	1,215	2,354	4,078	113	687	988	2,650	1,662					

¹ Included in "lime and cement" in 1899.² Included in "chemicals" in 1899.³ All other industries embrace "Millstones," 1 establishment; "ordnance and accessories," 2; "pulp, from fiber other than wood," 2; "straw goods, not elsewhere specified," 2; and "whalebone cutting," 1, in 1909. "Millstones," 2; "ordnance and accessories," 4; "pulp, from fiber other than wood," 1; "straw goods, not elsewhere specified," 6; "whalebone cutting," 2, in 1904. "Millstones," 3; "ordnance and accessories," 4; "pulp, from fiber other than wood," 3; "straw goods, not elsewhere specified," 4; "whalebone cutting," 3, in 1899.

STATES, CITIES, AND INDUSTRIES.

COMPARATIVE SUMMARY FOR THE UNITED STATES, BY STATES: 1909, 1904, AND 1899.

NOTE.—Primary horsepower includes power generated in manufacturing establishments plus electric and other power rented from outside sources; it does not include electric power generated by primary units of the establishments reporting.

[A minus sign (—) denotes decrease.]

DIVISION AND STATE.	Census.	Number of establishments.	PERSONS ENGAGED IN INDUSTRY.				Primary horsepower.	Capital.	Salaries.	Wages.	Cost of materials.	Value of products.	Value added by manufacture (value of products less cost of materials).	PER CENT OF INCREASE.		
			Total.	Proprietors and firm members.	Salaried employees.	Wage earners (average number).								Wage earners (average number).	Value of products.	Value of products.
Expressed in thousands.																
United States....	1909	268,491	7,678,578	273,265	790,267	6,615,046	18,675,376	\$18,428,276	\$938,575	\$3,427,038	\$12,142,791	\$20,672,052	\$8,529,261	31.0	39.7	
	1904	216,180	6,213,612	225,673	519,556	5,468,383	13,487,707	12,675,581	574,439	2,610,445	8,506,206	14,793,903	6,293,695	18.6	29.7	
	1899	207,514			364,120	4,712,763	10,097,893	8,975,256	380,771	2,068,351	6,575,851	11,466,927	4,831,676			
GEOGRAPHIC DIVISIONS:																
New England.....	1909	25,351	1,212,153	24,171	86,697	1,101,290	2,715,121	2,503,854	112,284	557,631	1,476,297	2,670,065	1,193,766	17.1	31.8	
	1904	22,279	1,023,708	22,098	60,258	940,752	2,125,815	1,870,995	72,799	439,050	1,116,273	2,025,999	909,726	19.4	22.0	
	1899	22,576			45,402	851,903	1,792,342	1,507,630	53,396	367,674	904,037	1,660,348	756,311			
Middle Atlantic....	1909	81,315	2,576,677	85,516	283,414	2,207,747	5,531,502	6,505,675	345,266	1,182,568	4,159,496	7,141,761	2,982,263	17.0	26.9	
	1904	67,699	2,148,379	74,525	187,289	1,886,565	4,255,264	4,742,357	213,371	926,145	2,961,995	5,218,266	2,256,274	17.6	28.1	
	1899	65,834			127,326	1,604,844	3,139,128	3,450,619	141,943	729,365	2,311,404	4,074,719	1,763,315			
East North Central.	1909	60,013	1,786,808	57,271	215,773	1,513,764	4,382,070	4,547,225	250,508	827,152	3,034,472	5,211,792	2,177,230	23.6	44.6	
	1904	51,754	1,415,888	50,531	140,829	1,224,528	3,120,369	2,895,446	151,992	615,643	2,045,537	3,605,368	1,559,831	14.1	26.4	
	1899	50,521			103,350	1,073,322	2,401,808	2,056,117	101,500	473,040	1,647,577	2,853,056	1,205,479			
West North Central.	1909	27,171	464,460	26,683	63,440	374,337	1,101,990	1,171,572	69,504	204,792	1,241,855	1,803,899	562,044	19.8	40.4	
	1904	21,492	374,787	21,394	41,032	312,361	753,700	1,221,040	41,303	157,843	862,011	1,284,446	422,435	17.4	32.9	
	1899	20,732			30,606	266,051	605,098	577,453	29,127	117,209	647,565	972,969	325,404			
South Atlantic....	1909	28,088	745,830	30,783	52,032	663,015	1,832,001	1,368,475	57,272	244,378	790,005	1,381,196	591,181	26.9	41.8	
	1904	19,564	578,989	21,745	34,633	522,611	1,221,040	930,420	34,201	175,461	550,102	974,028	423,926	14.0	36.8	
	1899	19,144			24,368	458,344	851,050	583,328	22,408	130,864	365,686	711,800	316,114			
East South Central.	1909	15,381	305,465	17,208	26,485	261,772	1,036,560	586,276	29,008	102,191	336,163	630,488	294,325	18.3	35.8	
	1904	10,311	249,892	11,449	17,214	221,229	753,928	405,361	17,417	83,942	252,156	464,336	212,180	24.8	42.8	
	1899	10,058			11,204	177,208	513,425	234,014	10,385	56,003	176,506	325,086	148,580			
West South Central.	1909	12,339	240,902	12,944	23,438	204,520	873,350	547,739	25,382	97,646	382,131	625,442	243,312	42.6	50.6	
	1904	8,279	166,640	8,299	14,871	143,470	555,717	328,906	15,190	67,128	246,832	415,232	168,400	28.5	64.6	
	1899	7,174			8,255	113,388	397,471	193,969	7,334	42,715	153,510	282,314	88,804			
Mountain.....	1909	5,254	89,862	4,849	9,578	75,485	400,766	348,977	12,522	56,870	228,692	363,996	135,304	42.9	52.8	
	1904	3,610	61,812	3,302	5,720	52,790	241,825	200,569	7,541	39,046	152,813	254,063	101,850	18.6	32.8	
	1899	3,146			3,486	44,497	123,012	126,724	3,897	27,714	115,606	191,825	76,219			
Pacific.....	1909	13,579	256,416	13,840	29,410	213,166	802,061	848,477	36,829	153,510	493,678	843,512	349,834	28.9	52.9	
	1904	11,192	191,517	11,730	17,710	164,077	460,049	423,623	20,625	106,187	312,489	551,565	239,676	33.2	51.2	
	1899	8,329			10,123	123,206	274,559	245,402	10,781	63,777	223,960	364,810	140,850			
NEW ENGLAND:																
Maine.....	1909	3,546	88,476	3,661	4,860	79,955	459,599	202,260	5,797	37,632	97,101	176,029	78,928	6.7	22.2	
	1904	3,145	82,109	3,379	3,772	74,958	343,627	143,708	3,989	32,692	80,042	144,020	63,978	7.2	27.5	
	1899	2,878			3,103	69,914	259,232	114,008	3,051	25,731	61,210	112,959	51,749			
New Hampshire...	1909	1,961	84,191	2,014	3,519	78,658	293,991	139,990	4,191	36,200	98,157	164,581	66,424	28.3	32.1	
	1904	1,618	69,758	1,726	2,666	65,366	218,344	109,495	2,972	27,693	73,216	123,611	59,395	-3.4	14.9	
	1899	1,771			2,068	67,646	200,975	92,146	2,200	25,850	60,163	107,591	47,428			
Vermont.....	1909	1,958	38,580	2,113	2,679	33,788	159,445	73,470	2,803	17,272	34,823	68,310	33,487	2.1	8.3	
	1904	1,699	37,015	1,856	2,053	33,106	140,616	62,659	2,103	15,221	32,430	63,084	30,654	17.5	22.5	
	1899	1,938			1,695	28,179	126,124	43,500	1,610	11,426	26,385	51,515	25,180			
Massachusetts....	1909	11,684	644,399	11,194	48,646	584,559	1,175,071	1,279,687	63,279	301,174	830,765	1,490,529	659,764	19.7	32.6	
	1904	10,723	532,481	11,258	32,824	488,399	938,007	965,949	39,654	124,992	626,411	1,124,092	497,061	11.4	28.8	
	1899	10,929			25,256	438,234	796,061	781,868	29,480	195,278	498,655	907,627	408,972			
Rhode Island....	1909	1,951	122,641	1,721	7,382	113,538	226,740	290,901	10,577	55,234	158,192	280,944	122,152	16.7	28.7	
	1904	1,617	104,299	1,561	5,420	97,318	181,017	215,901	7,041	43,113	112,572	202,110	89,258	10.3	22.1	
	1899	1,678			4,022	88,197	153,619	176,901	5,300	35,995	87,932	165,550	77,598			
Connecticut.....	1909	4,251	233,871	3,468	19,611	210,792	400,275	517,546	25,637	110,119	257,259	490,272	233,013	16.1	32.8	
	1904	3,477	193,046	2,918	18,523	181,605	304,204	373,283	17,040	87,942	191,302	369,082	177,780	13.7	17.1	
	1899	3,382			9,258	159,733	256,331	299,207	11,755	73,394	169,672	315,106	145,494			
MIDDLE ATLANTIC:																
New York.....	1909	44,935	1,203,241	47,569	151,691	1,003,981	1,997,662	2,779,497	186,032	557,231	1,856,904	3,369,490	1,512,536	17.2	35.4	
	1904	37,194	996,725	41,766	98,012	856,947	1,516,592	2,031,460	111,145	430,015	1,348,608	2,483,346	1,139,743	17.9	32.9	
	1899	35,957			68,030	726,909	1,099,931	1,523,503	76,740	337,324	1,018,377	1,871,891	833,454			
New Jersey.....	1909	8,817	371,265	8,204	36,838	326,223	612,293	977,172	48,337	169,710	720,034	1,145,529	425,495	22.5	47.9	
	1904	7,010	296,262	6,730	23,196	266,336	436,274	715,600	28,957	128,169	470,449	774,368	303,920	24.5	40.0	
	1899	6,415			15,361	213,975	322,503	477,301	19,058	95,165	334,726	553,906	218,250			
Pennsylvania....	1909	27,563	1,002,171	29,743	94,885	877,543	2,921,547	2,749,006	110,897	455,627	1,582,590	2,626,742	1,044,182	15.0	34.3	
	1904	23,495	855,392	26,029	66,081	763,282	2,302,398	1,995,837	73,269	367,961	1,142,943	1,955,551	812,608	15.0	18.5	
	1899	23,462			43,935	663,960	1,716,694	1,449,815	46,145	296,876	958,301	1,649,882	691,581			
EAST NORTH CENTRAL:																
Ohio.....	1909	15,138	523,004	14,719	61,351	446,934	1,583,155	1,300,733	72,147	245,450	824,202	1,437,936	613,734	22.7	49.7	
	1904	13,785	417,946	13,657	39,991	364,298	1,116,932	856,989	43,435	182,429	527,637	960,812	433,175	18.2	28.3	
	1899	13,868			28,109	308,109	783,665	570,909	28,151	136,428	409,308	748,671	339,368			
Indiana.....	1909	7,969	218,263	7,674	23,605	186,984	633,377	508,717	26,305	95,510	334,375	544,700	213,3	21.3	47.0	
	1904	7,044	176,227	7,191	14,862	154,174	380,758	312,071								

COMPARATIVE SUMMARY FOR THE UNITED STATES, BY STATES: 1909, 1904, AND 1899—Continued.

[See explanatory note on the first page of this table.]

Table 1.11—Contd.	DIVISION AND STATE.	Census.	Number of establishments.	PERSONS ENGAGED IN INDUSTRY.				Primary horse-power.	Capital.	Salaries.	Wages.	Cost of materials.	Value of products.	Value added by manufacture (value of products less cost of materials).	PER CENT OF INCREASE.	
				Total.	Proprietors and firm members.	Salaried employees.	Wage earners (average number).								Wage earners (average number).	Wage earners (average number).
Expressed in thousands.																
EAST NORTH CENTRAL—Continued.																
	Michigan.....	1909	9,159	271,071	8,905	30,607	231,499	598,288	\$583,947	\$34,870	\$118,968	\$368,612	\$655,109	\$316,497	32.1	59.7
		1904	7,446	200,196	7,732	17,235	175,229	440,890	337,894	17,470	81,279	230,081	429,120	199,039	12.5	34.2
		1899	7,310	.....	.....	13,350	155,800	368,497	246,996	12,336	62,532	175,966	319,692	143,726	.....	.....
	Wisconsin.....	1909	9,721	213,426	8,556	22,287	182,583	554,179	605,657	25,737	93,905	346,356	590,305	243,949	20.6	43.6
		1904	8,558	173,572	7,961	14,220	151,391	440,234	412,647	15,498	71,472	227,255	411,140	183,885	10.1	25.8
		1899	7,841	.....	.....	10,480	137,525	364,380	286,061	10,493	55,696	185,695	326,753	141,058	.....	.....
WEST NORTH CENTRAL:																
	Minnesota.....	1909	5,561	104,406	5,376	14,263	84,767	297,670	275,416	15,451	47,471	281,622	409,420	127,798	21.7	33.0
		1904	4,756	83,301	4,524	9,141	69,636	220,934	184,903	9,033	35,843	210,554	307,858	97,304	7.9	37.6
		1899	4,096	.....	.....	6,625	64,557	180,124	133,077	6,064	29,029	150,299	223,693	73,394	.....	.....
	Iowa.....	1909	5,528	78,360	5,323	11,402	61,635	155,384	171,219	10,972	32,542	170,707	259,238	88,531	24.6	61.4
		1904	4,785	61,361	4,758	7,122	49,481	118,065	111,428	5,948	22,997	102,844	160,572	57,728	11.4	20.8
		1899	4,828	.....	.....	5,159	44,420	106,664	85,668	4,233	18,021	85,779	132,871	47,092	.....	.....
	Missouri.....	1909	8,375	185,705	8,226	24,486	152,993	340,467	444,343	28,994	80,843	354,411	574,111	219,700	14.9	30.6
		1904	6,464	156,585	6,299	17,119	133,167	247,861	379,369	19,002	66,644	252,258	439,549	187,291	23.6	39.0
		1899	6,853	.....	.....	12,474	107,704	189,117	223,781	13,295	46,714	184,189	316,304	132,115	.....	.....
	North Dakota.....	1909	752	4,148	723	636	2,789	13,196	11,585	629	1,787	13,674	19,137	5,463	58.9	87.3
		1904	507	2,545	494	296	1,755	9,873	5,704	258	1,032	7,096	10,218	3,122	29.2	63.2
		1899	337	.....	.....	152	1,358	7,351	3,512	130	671	4,151	6,280	2,109	.....	.....
	South Dakota.....	1909	1,020	5,226	942	682	3,602	17,666	13,018	616	2,297	11,476	17,870	6,394	44.5	36.6
		1904	686	3,582	649	441	2,492	11,154	7,535	294	1,422	8,697	13,086	4,389	12.0	37.3
		1899	624	.....	.....	288	2,224	11,775	6,051	175	1,130	6,484	9,530	3,046	.....	.....
	Nebraska.....	1909	2,500	31,966	2,522	5,108	24,336	64,466	99,901	5,491	13,948	151,081	199,019	47,938	20.1	28.5
		1904	1,819	25,356	1,904	3,192	20,260	46,372	80,235	3,075	11,022	124,052	164,918	30,866	8.5	18.9
		1899	1,695	.....	.....	2,296	18,669	41,825	65,906	2,107	8,842	95,925	130,302	34,377	.....	.....
	Kansas.....	1909	3,435	54,649	3,571	6,863	44,215	213,141	156,090	7,351	25,904	258,884	325,104	66,220	24.3	64.0
		1904	2,475	42,057	2,766	3,721	35,570	99,441	88,680	3,693	18,883	156,510	198,245	41,735	31.2	28.7
		1899	2,299	.....	.....	3,612	27,119	68,242	59,458	3,123	12,802	120,738	154,009	33,271	.....	.....
SOUTH ATLANTIC:																
	Delaware.....	1909	726	23,984	722	2,024	21,238	52,779	60,906	2,322	10,296	30,938	52,840	21,902	15.0	28.4
		1904	631	20,567	641	1,451	15,475	49,490	50,926	1,629	8,158	24,884	41,160	16,276	-10.2	-0.4
		1899	633	.....	.....	1,189	20,562	40,134	38,791	1,337	8,457	24,725	41,321	16,596	.....	.....
	Maryland.....	1909	4,837	125,489	5,376	12,192	107,921	218,244	251,227	13,617	45,436	199,040	315,669	116,620	14.6	29.7
		1904	3,852	107,303	4,505	8,624	94,174	165,449	201,878	8,844	36,144	150,024	243,376	93,352	(¹)	15.3
		1899	3,586	.....	.....	6,741	94,170	132,052	149,155	6,845	32,414	129,355	211,076	81,721	.....	.....
	District of Columbia.....	1909	518	9,753	475	1,576	7,707	16,593	30,553	1,846	4,989	10,247	25,289	15,042	22.4	37.7
		1904	482	7,773	473	1,006	6,299	12,592	20,200	1,207	3,659	7,732	18,359	10,627	2.3	11.8
		1899	491	.....	.....	957	6,155	10,255	17,961	872	3,023	7,475	16,426	8,951	.....	.....
	Virginia.....	1909	5,685	120,797	6,570	8,551	105,676	283,928	216,392	9,101	38,154	125,583	219,794	94,211	31.6	47.7
		1904	3,187	83,898	3,643	4,970	80,285	176,998	147,959	4,875	27,943	83,649	148,857	65,208	21.2	37.0
		1899	3,186	.....	.....	3,828	66,223	136,096	92,300	3,630	20,274	59,300	109,644	49,284	.....	.....
	West Virginia.....	1909	2,586	71,463	2,599	4,971	63,893	217,496	150,922	5,710	33,000	92,878	161,949	69,071	46.0	63.5
		1904	2,109	48,880	2,230	2,892	43,758	138,578	86,821	2,899	21,153	54,419	99,041	44,622	32.3	47.8
		1899	1,824	.....	.....	1,744	33,080	91,894	49,103	1,519	12,640	37,228	67,007	29,777	.....	.....
	North Carolina.....	1909	4,931	133,453	5,451	6,529	121,473	378,556	217,185	6,903	34,355	121,861	216,650	94,795	42.3	52.0
		1904	3,272	93,142	3,731	4,072	85,339	216,622	141,001	3,795	21,375	79,268	142,521	63,253	18.0	67.1
		1899	3,465	.....	.....	2,894	72,322	154,467	68,283	2,395	14,052	44,854	85,274	40,420	.....	.....
	South Carolina.....	1909	1,854	78,040	1,737	3,257	73,046	276,378	173,221	3,756	20,361	66,351	113,236	46,885	22.9	42.7
		1904	1,399	63,071	1,241	2,389	59,441	197,479	113,422	2,355	13,869	49,969	79,376	29,407	26.4	48.8
		1899	1,809	.....	.....	1,419	47,025	112,697	62,760	1,307	9,130	30,486	22,850	22,850	.....	.....
	Georgia.....	1909	4,792	118,036	5,141	8,307	104,588	298,241	202,778	9,062	34,805	116,970	202,863	85,893	12.8	34.3
		1904	3,219	102,365	3,512	6,104	92,749	220,419	135,211	5,927	27,393	83,625	151,040	67,415	11.3	59.8
		1899	3,015	.....	.....	3,815	83,336	136,499	79,303	3,204	19,958	49,356	94,532	45,176	.....	.....
	Florida.....	1909	2,159	64,810	2,712	4,625	57,473	89,816	65,291	4,955	22,982	26,128	72,890	46,762	36.5	44.9
		1904	1,413	46,985	1,769	3,125	42,091	43,413	32,972	2,670	15,767	16,532	50,298	33,766	18.7	47.1
		1899	1,275	.....	.....	1,781	35,471	36,356	25,682	1,299	10,916	12,847	34,184	21,337	.....	.....
EAST SOUTH CENTRAL:																
	Kentucky.....	1909	4,776	79,060	5,050	8,610	65,400	230,224	172,779	9,603	27,888	111,779	223,754	111,975	9.4	40.1
		1904	3,734	69,755	4,108	5,853	59,794	174,625	147,282	5,871	24,439	86,545	159,754	73,209	15.6	26.3
		1899	3,648	.....	.....	4,356	51,735	144,161	87,996	4,185	18,454	67,406	126,509	59,103	.....	.....
	Tennessee.....	1909	4,609	87,672	5,415	8,417	73,840	242,277	167,924	9,186	28,251	104,016	180,217	76,201	21.9	30.6
		1904	3,175	69,287	3,805	4,910	60,572	175,730	102,440	5,081	22,806	79,352	137,961	58,609	81.8	48.7
		1899	3,116	.....	.....	3,329	45,968	130,318	63,140	3,048	14,727	54,559	92,749	38,190	.....	.....
	Alabama.....	1909	3,398	81,972	3,769	6,055	72,148	357,837	173,180	6,565	27,284	83,442	145,962	62,520	16.0	33.7
		1904	1,882	67,884	1,948	3,763	62,173	293,185	105,383	3,807	21,878	60,458	109,170	48,712	18.0	51.4
		1899	2,000	.....	.....	2,259	52,711	173,208	60,166	2,059	14,912	37,998	72,110	34,112	.....	.....
	Mississippi.....	1909	2,598	56,761	2,974	3,403	50,384	206,222	72,393	3,654	18,768	36,926	80,555	43,629	3	

STATES, CITIES, AND INDUSTRIES.

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COMPARATIVE SUMMARY FOR THE UNITED STATES, BY STATES: 1909, 1904, AND 1899—Continued.

[See explanatory note on the first page of this table.]

Table 111—Contd.		DIVISION AND STATE.	Cen- sus.	Number of estab- lish- ments.	PERSONS ENGAGED IN INDUSTRY.				Primary horse- power.	Capital.	Sala- ries.	Wages.	Cost of materials.	Value of products.	Value added by manu- facture (value of products less cost of materials).	PER CENT OF INCREASE.	
					Total.	Pro- pri- etors and firm mem- bers.	Salaried em- ployees.	Wage earn- ers (aver- age number).								Wage earn- ers (aver- age num- ber).	Value of prod- ucts.
Expressed in thousands.																	
WEST SOUTH CENTRAL:																	
Arkansas.....	1909	2,925	51,730	3,455	3,293	44,982	173,068	\$70.174	\$3.461	\$19.113	\$34.935	\$74.916	\$39.381	35.9	39.1		
	1904	1,907	37,557	2,140	2,328	33,089	109,509	46,306	2,310	14,544	21,799	53,865	32,066	5.0	35.0		
	1899	1,746	.....	.....	1,549	31,525	79,560	25,385	1,262	10,184	18,288	39,888	21,600	.....	.....
Louisiana.....	1909	2,516	86,563	2,295	8,103	76,165	346,652	221,816	9,008	33,386	134,565	223,949	89,054	36.4	20.2		
	1904	2,091	63,735	1,899	5,977	55,859	251,963	150,811	6,044	23,316	117,033	186,380	69,345	36.6	67.3		
	1899	1,826	.....	.....	3,576	40,878	190,182	100,875	2,934	14,725	75,404	111,398	35,994	.....	.....
Oklahoma.....	1909	2,310	18,034	2,668	2,193	13,143	71,139	38,873	2,045	7,240	34,153	53,652	19,529	140.9	119.5		
	1904	1,123	7,456	1,187	813	5,456	29,608	16,124	718	2,799	16,394	24,459	8,065	129.1	300.7		
	1899	495	.....	.....	269	2,381	11,572	4,054	219	894	5,430	8,134	2,704	.....	.....
Texas.....	1909	4,588	84,575	4,496	9,849	70,230	282,471	216,876	10,868	37,907	178,178	272,896	94,718	43.1	81.3		
	1904	3,158	57,892	3,073	5,753	49,066	164,637	115,665	6,118	24,469	91,604	159,528	58,924	27.1	62.9		
	1899	3,107	.....	.....	2,861	35,604	116,157	63,655	2,919	16,912	54,388	92,894	38,506	.....	.....
MOUNTAIN:																	
Montana.....	1909	677	13,694	659	1,380	11,655	90,402	44,588	2,054	10,901	49,190	73,272	24,092	30.1	19.3		
	1904	382	10,196	334	905	8,957	46,736	52,590	1,506	8,652	40,930	66,415	25,485	-9.1	25.9		
	1899	395	.....	.....	508	9,854	43,679	38,225	786	7,377	30,068	52,745	22,677	.....	.....
Idaho.....	1909	725	9,909	831	858	8,220	42,804	32,477	984	5,498	9,920	22,400	12,450	108.5	155.4		
	1904	364	3,791	371	359	3,061	16,987	9,689	379	2,059	4,069	8,769	4,700	97.2	192.2		
	1899	287	.....	.....	92	1,552	5,649	2,130	66	818	1,439	3,091	1,562	.....	.....
Wyoming.....	1909	268	3,393	263	263	2,867	7,628	6,195	311	2,061	2,606	6,249	3,641	56.3	77.4		
	1904	169	2,163	150	179	1,834	3,604	2,696	208	1,261	1,301	3,523	2,222	-11.0	7.8		
	1899	139	.....	.....	87	2,060	3,820	2,048	91	1,209	1,370	3,288	1,898	.....	.....
Colorado.....	1909	2,034	34,115	1,722	4,326	28,067	154,615	162,668	5,648	19,912	80,491	130,644	49,553	26.7	29.9		
	1904	1,606	25,888	1,398	2,677	21,813	124,907	107,664	3,549	15,100	63,114	100,144	37,030	11.9	12.4		
	1899	1,323	.....	.....	1,870	19,498	43,434	58,173	2,059	11,708	60,751	89,068	28,317	.....	.....
New Mexico.....	1909	313	4,766	288	335	4,143	15,465	7,743	383	2,591	3,261	7,898	4,637	19.1	38.4		
	1904	199	3,891	189	224	3,478	5,948	4,638	264	2,153	2,226	5,706	3,470	39.7	40.5		
	1899	174	.....	.....	88	2,490	3,658	2,161	91	1,199	1,999	4,061	2,062	.....	.....
Arizona.....	1909	311	7,202	261	500	6,441	39,140	32,873	798	5,505	23,600	50,257	16,657	34.4	78.0		
	1904	169	5,217	133	291	4,793	21,412	14,396	472	3,969	14,595	28,088	13,498	53.3	37.4		
	1899	154	.....	.....	205	3,126	8,537	9,517	269	2,287	7,877	20,439	12,562	.....	.....
Utah.....	1909	749	14,133	688	1,660	11,785	42,947	52,627	1,966	8,400	41,266	61,989	20,723	46.4	39.2		
	1904	606	9,650	619	979	8,052	19,397	26,004	1,039	5,158	24,940	38,927	13,987	48.8	116.5		
	1899	575	.....	.....	599	5,413	12,674	13,219	501	2,763	11,440	17,982	6,542	.....	.....
Nevada.....	1909	177	2,650	137	256	2,257	7,765	9,806	378	1,982	8,366	11,887	3,521	181.4	283.9		
	1904	115	1,016	108	106	802	2,834	2,892	126	694	1,628	3,096	1,468	39.1	145.5		
	1899	99	.....	.....	37	504	1,561	1,251	34	353	662	1,261	599	.....	.....
PACIFIC:																	
Washington.....	1909	3,674	80,118	3,264	7,734	69,120	297,897	222,261	9,827	49,766	117,888	220,746	102,558	52.9	71.4		
	1904	2,751	51,459	2,602	3,658	45,199	168,342	96,953	4,093	30,087	66,166	128,822	62,656	43.4	81.9		
	1899	1,926	.....	.....	2,103	31,523	87,601	41,575	2,064	17,065	38,277	70,831	32,554	.....	.....
Oregon.....	1909	2,246	34,722	2,499	3,473	28,750	175,019	89,082	4,047	19,902	50,552	93,005	42,453	55.2	67.5		
	1904	1,602	22,018	1,726	1,769	18,523	81,348	44,023	2,133	11,443	30,597	55,525	24,928	28.1	51.7		
	1899	1,406	.....	.....	1,143	14,459	60,005	28,359	1,222	6,822	20,789	36,593	15,804	.....	.....
California.....	1909	7,659	141,576	8,077	18,203	115,296	329,100	537,134	22,955	84,142	325,238	528,761	204,523	14.9	44.3		
	1904	6,839	120,040	7,402	12,283	100,355	210,359	282,647	14,399	64,657	215,726	367,218	151,492	30.0	42.7		
	1899	4,997	.....	.....	6,877	77,224	126,953	175,468	7,495	39,890	164,894	257,386	92,492	.....	.....

1 Includes Indian Territory.

COMPARATIVE SUMMARY FOR THE 25 PRINCIPAL CITIES: 1909, 1904, AND 1899.

NOTE.—The figures for some cities 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.

[A minus sign (—) denotes decrease.]

CITY.	Cen- sus.	Number of estab- lish- ments.	PERSONS ENGAGED IN INDUSTRY.				Primary horse- power.	Capital.	Sala- ries.	Wages.	Cost of materials.	Value of products.	Value added by manu- facture (value of products less cost of materials).	PER CENT OF INCREASE.	
			Total.	Pro- pri- etors and firm mem- bers.	Salaried em- ployees.	Wage earners (average number).								Wage earners (aver- age number).	Value of prod- ucts.
New York, N. Y.	1909	25,938	680,510	29,055	97,453	554,002	429,003	\$1,364,353	\$122,074	\$323,698	\$1,092,155	\$2,029,693	\$937,538	19.2	33.0
	1904	20,839	552,952	24,650	63,586	464,716	.....	1,042,946	73,028	243,128	818,029	1,526,523	708,494	19.6	30.2
	1899	19,243	.....	.....	43,783	388,586	.....	853,238	51,656	196,656	634,210	1,172,870	538,660	.....	.....
Chicago, Ill.	1909	9,656	356,954	8,156	54,821	293,977	525,236	971,841	65,925	174,112	793,470	1,281,171	487,701	21.5	34.1
	1904	8,159	289,529	7,269	40,276	241,984	.....	637,743	45,601	136,405	589,914	955,036	365,122	9.4	19.7
	1899	7,668	.....	.....	32,406	221,191	.....	511,249	32,068	108,727	502,222	797,879	295,657	.....	.....
Philadelphia, Pa.	1909	8,379	294,498	9,162	33,452	251,884	365,950	691,397	39,446	126,381	429,092	746,076	316,984	10.0	26.2
	1904	7,087	259,378	8,140	22,829	228,895	.....	520,179	25,396	107,640	333,352	591,388	258,036	6.6	13.7
	1899	7,503	.....	.....	17,498	214,775	.....	445,725	18,931	94,737	295,175	519,982	224,807	.....	.....
St. Louis, Mo.	1909	2,667	104,587	1,869	15,347	87,371	163,615	269,392	19,671	48,535	188,189	328,495	140,306	5.6	22.9
	1904	2,482	95,962	1,883	11,381	82,098	.....	265,937	13,475	42,642	137,740	267,307	129,567	27.6	38.0
	1899	2,646	.....	.....	8,867	64,832	.....	180,526	10,079	29,145	101,838	193,733	91,895	.....	.....
Cleveland, Ohio.	1909	2,148	98,686	1,718	12,240	84,728	199,898	227,397	15,506	48,053	154,915	271,961	117,046	32.3	58.2
	1904	1,618	72,362	1,445	6,876	64,041	.....	156,321	8,299	33,450	97,578	171,924	74,346	15.7	23.4
	1899	1,350	.....	.....	5,064	55,341	.....	101,243	5,453	26,518	76,465	139,356	62,891	.....	.....
Detroit, Mich.	1909	2,036	95,841	1,804	13,026	81,011	114,190	190,125	15,260	43,007	130,218	252,992	122,774	67.1	97.3
	1904	1,362	55,718	1,312	5,923	48,483	.....	91,038	6,126	22,558	66,581	128,247	61,606	26.3	45.1
	1899	1,259	.....	.....	4,947	38,373	.....	67,224	4,726	15,317	47,007	88,366	41,359	.....	.....
Pittsburgh, Pa.	1909	1,659	79,625	1,553	10,598	67,474	307,666	283,139	12,683	39,973	148,527	243,454	94,927	-5.8	15.2
	1904	1,562	81,407	1,563	8,273	71,618	.....	260,765	9,753	39,805	124,581	211,259	86,678	-0.2	-3.2
	1899	1,301	.....	.....	5,850	71,794	.....	211,774	6,351	37,635	128,458	218,198	89,740	.....	.....
Boston, Mass.	1909	3,155	85,158	2,873	12,648	69,637	68,419	175,182	15,641	39,910	124,577	237,457	112,880	17.7	28.8
	1904	2,747	71,421	2,833	9,428	59,160	.....	131,563	10,464	31,873	98,160	184,351	89,748	11.9	13.3
	1899	2,878	.....	.....	7,691	52,853	.....	130,143	8,180	28,209	82,295	162,765	80,470	.....	.....
Buffalo, N. Y.	1909	1,753	61,246	1,489	8,345	51,412	121,791	193,041	9,347	28,727	136,538	218,804	82,266	18.0	48.5
	1904	1,538	50,390	1,559	5,264	43,567	.....	137,023	5,542	21,622	86,367	147,378	59,011	27.1	39.5
	1899	1,478	.....	.....	3,767	34,275	.....	95,740	3,429	15,678	65,939	105,627	39,688	.....	.....
Milwaukee, Wis.	1909	1,764	68,933	1,472	7,959	59,502	94,254	219,391	9,405	31,437	120,621	208,324	87,703	37.2	51.0
	1904	1,527	49,843	1,393	5,084	43,366	.....	161,494	5,837	20,809	71,103	137,995	66,892	5.2	24.5
	1899	1,419	.....	.....	4,077	41,220	.....	105,504	4,305	17,102	59,694	110,854	51,160	.....	.....
Newark, N. J.	1909	1,858	69,966	1,704	8,327	59,955	78,263	154,233	11,777	33,076	114,679	202,511	87,832	18.3	35.0
	1904	1,600	57,463	1,681	5,135	50,697	.....	119,026	6,685	25,622	83,258	150,055	69,366	18.2	33.1
	1899	1,573	.....	.....	4,146	42,878	.....	97,182	5,256	20,365	60,772	112,728	51,966	.....	.....
Cincinnati, Ohio.	1909	2,184	72,488	2,015	10,281	60,192	88,597	150,254	12,759	31,101	101,932	194,516	92,584	6.6	17.2
	1904	2,171	68,954	2,180	8,190	58,584	.....	130,272	9,077	27,390	82,568	166,059	82,801	.....	.....
	1899	2,454	.....	.....	6,104	54,942	.....	103,464	-6,437	23,104	71,391	141,678	70,287	.....	.....
Baltimore, Md.	1909	2,502	83,473	2,660	9,369	71,444	76,764	164,437	10,571	31,171	107,024	186,978	79,954	9.8	24.5
	1904	2,158	74,234	2,432	6,752	65,050	.....	146,961	6,997	25,507	80,555	150,171	69,616	-2.3	11.1
	1899	2,274	.....	.....	5,501	66,571	.....	107,217	5,871	23,493	75,223	135,108	59,885	.....	.....
Minneapolis, Minn.	1909	1,102	33,923	1,012	5,949	26,962	89,247	90,382	6,277	15,638	119,993	165,405	45,412	24.4	36.5
	1904	876	26,045	847	3,527	21,671	.....	66,135	3,536	11,418	88,882	121,163	32,281	10.5	28.3
	1899	789	.....	.....	2,158	19,620	.....	50,177	2,113	9,383	68,910	94,408	25,498	.....	.....
Kansas City, Kans.	1909	165	14,333	142	1,897	12,294	31,885	42,817	2,138	7,027	144,390	164,081	19,691	16.8	70.1
	1904	100	11,761	82	1,150	10,529	.....	27,773	1,216	5,449	83,883	96,473	12,590	11.0	20.6
	1899	114	.....	.....	2,063	9,483	.....	18,236	1,911	4,259	68,875	80,023	11,148	.....	.....
San Francisco, Cal.	1909	1,796	36,910	2,544	6,122	28,244	49,934	133,824	8,086	22,381	76,217	133,041	56,824	-26.5	-3.4
	1904	2,251	46,666	3,047	5,190	38,429	.....	102,362	6,630	25,015	75,946	137,788	61,842	18.0	28.7
	1899	1,748	.....	.....	3,413	32,555	.....	69,643	3,929	17,259	65,535	107,024	41,489	.....	.....
Jersey City, N. J.	1909	745	30,239	614	4,171	25,454	35,917	79,794	5,049	13,216	89,317	128,775	39,458	25.1	70.0
	1904	628	23,312	580	2,379	20,353	.....	82,395	2,990	10,021	48,799	75,741	26,942	17.0	3.9
	1899	536	.....	.....	1,614	17,391	.....	78,612	2,039	7,965	50,266	72,930	22,664	.....	.....
Indianapolis, Ind.	1909	855	37,929	631	5,483	31,815	50,872	76,497	6,494	16,557	84,151	126,522	42,371	19.0	53.9
	1904	810	31,431	591	4,115	26,725	.....	53,420	4,096	12,620	51,763	82,228	30,465	27.4	38.6
	1899	697	.....	.....	2,325	20,985	.....	34,736	2,248	8,844	38,287	59,322	21,035	.....	.....
Providence, R. I.	1909	1,080	51,667	1,017	4,269	46,381	56,410	118,512	5,650	24,449	64,770	120,241	55,471	16.5	30.7
	1904	881	43,748	893	3,051	39,804	.....	95,666	3,819	19,555	49,973	91,981	42,008	3.7	16.9
	1899	929	.....	.....	2,493	33,368	.....	79,686	3,053	16,931	42,651	78,657	36,106	.....	.....
Rochester, N. Y.	1909	1,203	46,617	1,042	6,467	39,108	39,277	95,708	7,734	21,518	56,674	112,676	62,002	23.1	38.9
	1904	1,109	37,128	1,084	4,265	31,779	.....	69,807	4,529	14,702	37,913	81,109	43,191	13.3	35.9
	1899	1,221	.....	.....	3,061	28,049	.....	45,210	3,131	11,366	28,245	59,669	31,424	.....	.....
Louisville, Ky.	1909	903	32,397	669	4,705	27,023	49,926	79,437	5,533	12,400	54,128	101,284	47,156	8.2	21.7
	1904	842	28,317	706	3,126	24,985	.....	79,999	3,367	10,812	45,682	83,204	37,522	8.3	25.9
	1899	800	.....	.....	2,491	23,062	.....	44,016	2,595	8,436	34,876	66,110	31,234	.....	.....
South Omaha, Nebr.	1909	71	7,659	63	1,290	6,306	11,859	19,877	1,559	3,544	77,673	92,436	14,763	11.4	37.1
	1904	41	6,571	34	875	5,662	.....	20,564	950	3,210	59,193	67,415	8,222	-10.5	-3.0
	1899	41	.....	.....	769	6,327	.....	16,382	736	3,115	61,018	69,509	8,491	.....	.....
Youngstown, Ohio.	1909	115	11,851	94	1,259	10,498	140,907	87,160	1,593	7,335	62,292	81,271	18,979	29.7	73.5
	1904	113	8,903	86	722	8,095									

STATES, CITIES, AND INDUSTRIES.

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CITIES OF 10,000 INHABITANTS OR OVER—NUMBER OF ESTABLISHMENTS, AVERAGE NUMBER OF WAGE EARNERS, VALUE OF PRODUCTS, AND VALUE ADDED BY MANUFACTURE: 1909, 1904, AND 1899.

NOTE.—The figures for some cities 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. Figures for 1904 and 1899 are available for cities which had between 8,000 and 10,000 inhabitants in 1900 and are included, but for cities having less than 8,000 inhabitants in 1900 comparative data are not available.

Table 113.

CITY.	NUMBER OF ESTABLISHMENTS.			AVERAGE NUMBER OF WAGE EARNERS.			VALUE OF PRODUCTS.			VALUE ADDED BY MANUFACTURE (VALUE OF PRODUCTS LESS COST OF MATERIALS).		
	Expressed in thousands.											
	1909	1904	1899	1909	1904	1899	1909	1904	1899	1909	1904	1899
ALABAMA:												
Anniston.....	39	35	25	2,167	2,005	1,445	\$4,333	\$3,327	\$1,863	\$1,509	\$1,449	\$894
Bessemer.....	31			1,816			6,106			1,867		
Birmingham.....	248	122	109	8,999	3,987	3,490	24,128	7,593	8,599	10,118	3,044	4,619
Gadsden.....	27			786			1,525			621		
Mobile.....	126	139	113	2,362	2,496	2,371	5,429	4,942	3,456	2,496	2,620	1,944
Montgomery.....	73	59	52	2,284	1,940	1,528	5,443	3,378	2,944	2,420	1,689	1,226
Selma.....	35	26	32	813	668	699	2,382	1,139	1,419	787	512	567
ARIZONA:												
Phoenix.....	57			304			1,467			603		
Tucson.....	35			555			2,037			767		
ARKANSAS:												
Argenta.....	18			2,157			4,842			2,157		
Fort Smith.....	83	63	66	1,455	1,049	677	3,739	2,329	1,401	1,733	1,216	759
Hot Springs.....	71	22	21	335	239	94	844	597	191	541	309	186
Little Rock.....	125	104	62	2,017	1,971	1,367	6,832	4,690	3,379	2,896	2,131	1,600
Pine Bluff.....	42	34	37	1,118	1,425	990	2,387	2,500	1,541	1,033	1,079	732
CALIFORNIA:												
Alameda.....	51	30	23	915	279	372	2,554	697	1,336	1,625	464	547
Bakersfield.....	27			746			2,819			1,119		
Berkeley.....	84	44	22	1,084	338	211	4,435	1,474	661	1,745	682	239
Eureka.....	48			946			3,012			1,518		
Fresno.....	76	80	62	1,938	1,915	819	11,090	9,754	2,732	3,096	2,926	1,048
Long Beach.....	51			277			927			429		
Los Angeles.....	1,325	814	534	17,327	10,424	5,173	68,586	34,814	15,134	29,673	16,125	7,945
Oakland.....	441	248	195	6,905	3,353	2,476	22,343	9,015	5,368	10,496	4,708	2,664
Pasadena.....	88	46	28	499	318	177	1,724	967	331	870	546	204
Pomona.....	30			224			560			330		
Redlands.....	37			147			518			279		
Riverside.....	53			267			1,178			511		
Sacramento.....	211	156	111	4,514	4,203	3,686	13,977	10,073	9,486	7,063	4,929	4,139
San Bernardino.....	41			729			1,660			897		
San Diego.....	117	89	57	1,071	541	255	4,741	1,974	670	2,074	532	369
San Francisco.....	1,796	2,251	1,748	23,244	38,429	32,556	123,041	137,788	107,024	56,324	61,942	41,489
San Jose.....	153	153	124	1,430	1,260	1,221	5,611	4,298	3,292	2,368	1,756	1,442
Santa Barbara.....	51			265			1,169			473		
Santa Cruz.....	34			274			1,161			493		
Stockton.....	144	110	91	1,594	1,333	1,185	11,849	8,030	5,525	3,529	2,180	1,558
Vallejo.....	23			203			1,896			492		
COLORADO:												
Colorado Springs.....	59	49	34	516	410	409	1,733	1,101	845	910	690	469
Cripple Creek.....		22	35		51	167		223	441		147	293
Denver.....	766	722	574	12,058	9,672	8,500	51,538	36,660	37,906	20,611	15,660	13,494
Leadville.....		32	34		861	1,227		5,446	5,883		1,562	1,043
Pueblo.....	94	80	69	1,320	941	790	3,345	2,197	1,440	1,848	1,256	798
Trinidad.....	30			220			814			503		
CONNECTICUT:												
Ansonia.....	53	49	49	4,127	3,394	3,288	20,083	19,132	13,515	5,477	3,324	2,559
Bridgeport.....	367	306	286	25,775	19,492	17,038	65,609	44,586	33,536	27,062	22,252	16,249
Danbury.....	131	103	104	4,810	4,515	3,939	10,318	8,066	6,827	5,439	4,371	3,269
Hartford.....	396	340	322	14,627	11,221	10,677	40,680	25,974	23,829	22,817	14,487	13,409
Meriden.....	120	97	92	7,845	7,281	6,689	16,317	13,764	11,751	9,374	8,129	6,646
Middletown.....	53	65	60	2,434	2,318	2,495	4,955	4,351	4,132	2,012	1,733	1,799
Naugatuck borough.....	24	22	22	3,464	3,623	3,160	11,033	11,010	8,887	4,704	3,750	2,815
New Britain.....	111	95	82	13,513	10,073	8,019	22,021	14,990	11,096	13,693	9,292	6,809
New Haven.....	590	490	497	23,547	21,437	17,594	51,071	39,666	34,900	26,732	21,145	13,764
New London.....	70	37	34	2,225	2,554	1,963	4,483	4,710	4,221	1,962	2,133	1,959
Norwich.....	91	87	89	4,470	3,706	3,172	9,389	6,022	5,935	4,687	2,979	2,989
Stamford.....	86	62	49	3,984	3,341	2,445	8,739	5,890	3,920	5,036	3,560	2,229
Torrington borough.....	54	43	37	4,488	4,025	3,161	12,550	9,674	9,178	5,087	3,759	2,917
Waterbury.....	169	143	124	20,170	15,406	13,225	50,350	32,367	30,330	21,634	14,327	12,128
Willimantic.....	47	35	30	3,020	2,852	2,268	6,733	4,902	3,023	3,539	2,332	1,663
DELAWARE:												
Wilmington.....	261	245	262	14,663	13,508	14,498	33,069	30,285	30,587	16,093	12,154	12,711
DISTRICT OF COLUMBIA:												
Washington.....	518	482	491	7,707	6,299	6,155	25,289	18,359	16,436	15,042	10,027	8,951
FLORIDA:												
Jacksonville.....	114	125	74	1,988	2,650	1,238	6,722	5,340	1,799	2,725	2,550	993
Key West.....	56	73	53	2,431	2,466	1,809	3,965	4,254	3,088	2,322	2,448	1,867
Pensacola.....	60	39	32	961	1,206	578	1,963	1,337	1,063	1,063	1,117	551
Tampa.....	215	141	70	8,996	5,831	3,919	17,653	11,264	7,083	10,280	6,712	3,717
GEORGIA:												
Athens.....	37	28	27	962	509	589	2,112	1,153	673	753	405	294
Atlanta.....	433	294	196	12,302	11,891	7,966	33,038	25,746	14,419	16,620	12,305	6,975
Augusta.....	71	64	80	5,073	4,839	5,563	10,456	8,829	7,984	3,554	2,876	2,537
Brunswick.....	23	20	25	385	254	351	672	407	703	414	220	304
Columbus.....	89	52	58	4,661	4,434	4,110	8,552	7,080	5,061	2,990	2,796	2,156
Macon.....	36	61	66	3,729	3,661	2,994	10,703	7,297	5,452	3,833	3,181	2,301
Rome.....	137			1,014			1,864			786		
Savannah.....	137	122	82	2,727	3,230	2,249	6,734	6,340	3,750	3,385	3,086	1,942
Waycross.....	21			1,130			1,203			591		
IDAHO:												
Boise.....	50			411			1,661			766		

CITIES OF 10,000 INHABITANTS OR OVER—NUMBER OF ESTABLISHMENTS, AVERAGE NUMBER OF WAGE EARNERS, VALUE OF PRODUCTS, AND VALUE ADDED BY MANUFACTURE: 1909, 1904, AND 1899—Continued.

[See explanatory note on the first page of this table.]

CITY.	NUMBER OF ESTABLISHMENTS.			AVERAGE NUMBER OF WAGE EARNERS.			VALUE OF PRODUCTS.			VALUE ADDED BY MANUFACTURE (VALUE OF PRODUCTS LESS COST OF MATERIALS).		
							Expressed in thousands.					
	1909	1904	1899	1909	1904	1899	1909	1904	1899	1909	1904	1899
ILLINOIS:												
Alton	69	62	59	2,429	3,069	2,174	\$10,096	\$8,097	\$4,250	\$2,834	\$3,274	\$1,778
Aurora	165	103	97	5,095	4,078	3,949	10,954	7,329	5,638	5,373	3,791	3,046
Belleleville	119	96	89	1,872	1,765	1,335	4,615	4,357	2,872	2,291	2,570	1,939
Bloomington	107	81	68	2,077	2,275	1,671	4,868	5,777	3,012	2,341	2,285	1,417
Cairo	56	57	53	1,237	1,435	1,501	4,440	4,382	3,116	1,483	1,544	1,216
Canton	33			1,262			2,942			1,759		
Champaign	42	36	33	734	289	245	846	486	354	427	328	222
Chicago	9,656	8,159	7,668	293,977	241,984	221,191	1,281,171	955,036	797,879	487,701	365,122	295,657
Chicago Heights	79			3,963			10,839			5,227		
Cicero town ¹	7			658			1,461			728		
Danville	76	70	72	1,744	1,884	957	3,351	3,304	1,914	1,921	1,639	867
Decatur	157	116	108	2,699	2,340	1,920	9,768	8,667	5,134	3,850	3,074	1,775
East St. Louis	139	81	58	5,252	4,505	3,106	18,228	10,586	6,241	6,788	4,890	2,563
Elgin	115	76	80	6,094	4,885	4,376	11,129	9,349	6,386	6,582	5,259	3,772
Evanston	60	33	27	837	738	400	3,778	2,551	830	1,428	968	468
Freeport	69	61	51	2,853	1,516	1,333	7,811	3,109	2,708	3,394	1,686	1,394
Galesburg	62	58	39	1,465	1,447	1,070	2,819	2,218	1,450	1,503	1,282	830
Jacksonville	57	55	55	947	1,066	1,982	2,299	1,982	1,684	992	880	534
Joliet	137	104	135	6,353	5,792	5,792	38,817	32,897	26,132	11,059	11,638	8,939
Kankakee	55	49	36	1,349	1,038	377	2,723	2,089	649	1,230	1,063	360
La Salle	29	24	26	1,293	1,197	917	5,308	3,153	3,309	2,380	1,280	912
Lincoln	40	39	36	220	236	188	570	784	375	280	409	219
Mattoon	35	34	39	948	1,022	632	1,434	1,309	764	768	787	418
Moline	66	62	55	5,449	3,987	4,138	20,892	13,158	9,302	9,703	6,263	4,704
Oak Park village	23			282			1,118			727		
Ottawa		54	57		1,127	1,020		2,078	1,738		1,305	967
Peoria	283	263	291	5,981	5,834	5,996	63,061	60,420	44,569	45,288	44,585	31,584
Quincy	235	234	198	4,032	4,602	3,815	11,436	10,748	7,919	5,644	5,560	3,568
Rock Island	74	72	66	1,754	1,703	1,885	5,387	5,333	4,622	2,569	2,753	1,999
Rockford	205	180	159	9,309	7,239	5,851	22,266	15,276	11,022	11,684	7,210	4,820
Springfield	171	122	106	3,652	3,071	2,199	8,497	5,797	3,467	4,293	3,307	2,055
Streator	45	24	42	1,275	1,544	1,283	2,137	1,889	1,245	1,320	1,305	883
Waukegan	59	41	32	3,090	825	495	19,984	3,962	733	5,820	1,004	395
INDIANA:²												
Anderson	116	102	96	4,393	3,079	3,537	13,765	8,181	8,296	5,638	3,321	3,856
East Chicago	16			2,370			5,483			2,423		
Elkhart	69	58	57	3,010	2,265	2,123	6,932	4,345	3,933	3,911	2,329	2,061
Elwood	37	32	46	2,073	1,779	2,745	8,408	6,111	9,433	2,159	1,714	2,678
Evansville	299	268	273	8,997	7,758	6,284	22,929	18,091	12,168	10,135	7,969	5,623
Fort Wayne	230	193	178	10,298	7,729	6,519	23,687	14,011	11,263	12,272	6,992	5,231
Hammond	49	38	21	3,841	1,548	2,683	15,580	7,671	25,070	8,929	5,126	4,868
Huntington	33	36	30	1,376	1,811	1,246	2,228	2,081	1,725	1,098	985	758
Indianapolis	855	810	697	31,815	26,725	20,985	126,522	82,228	59,322	42,371	30,465	21,035
Jeffersonville	35	33	34	766	1,492	1,516	1,916	4,526	3,772	833	1,699	1,336
Kokomo	72	61	62	2,051	1,917	1,355	5,451	3,651	3,772	2,469	2,067	1,052
Lafayette	69	80	85	1,660	1,786	1,343	5,542	4,631	3,514	2,096	1,928	1,524
Laporte	41			1,674			3,972			2,158		
Logansport	68	61	68	2,169	1,720	1,316	4,201	2,956	2,100	2,219	1,394	1,074
Marion	89	96	81	2,269	2,219	2,843	4,442	4,034	4,296	2,118	2,296	2,394
Michigan City	48	52	41	2,887	3,140	2,912	8,290	6,314	6,032	2,925	2,334	2,071
Mishawaka	42			3,445			10,883			5,613		
Muncie	102	97	90	4,033	2,855	3,848	9,684	5,891	7,042	4,210	2,571	3,194
New Albany	95	93	95	1,910	2,240	2,137	3,493	3,835	3,638	1,607	1,794	1,522
Peru	31	43	39	619	912	1,136	1,097	1,343	1,338	615	718	667
Richmond	107	98	88	3,621	2,970	2,688	10,374	6,732	4,754	5,256	3,731	2,523
South Bend	218	156	131	11,789	8,997	7,678	27,854	15,180	12,960	12,601	7,010	6,119
Terre Haute	170	178	143	4,359	4,044	4,679	21,793	18,008	26,296	13,136	10,361	18,927
Vincennes	84	62	48	1,233	1,354	906	4,234	3,029	1,979	1,818	1,288	1,038
IOWA:												
Boone	34	34	35	330	367	485	682	714	629	399	415	315
Burlington	128	109	125	4,190	2,915	2,054	8,443	5,779	4,450	3,798	3,073	2,008
Cedar Rapids	153	134	89	3,565	3,259	2,374	24,824	16,280	11,136	6,174	4,000	2,973
Clinton	69	83	81	2,414	2,153	2,502	7,480	4,906	6,203	2,850	2,260	2,293
Council Bluffs	101	71	74	1,434	1,001	788	3,769	1,924	1,692	1,812	994	968
Davenport	232	173	163	4,231	3,840	3,403	18,802	13,606	9,872	7,231	4,857	3,815
Des Moines	387	291	218	5,383	4,155	3,479	23,585	15,085	8,397	10,020	6,441	4,259
Dubuque	156	156	161	5,168	4,274	4,658	15,376	9,279	9,651	6,266	4,573	4,293
Fort Dodge	44	42	30	1,115	961	390	2,975	3,026	1,006	1,163	1,324	827
Iowa City	44			282			805			465		
Keokuk	91	80	88	1,541	1,533	1,302	7,399	4,226	3,049	2,715	1,992	1,458
Marshalltown	49	44	44	1,365	888	1,112	4,822	3,090	3,957	1,648	950	1,161
Mason City	49			807			2,881			1,085		
Muscatine	113	107	105	3,496	2,763	2,589	6,166	5,040	5,220	3,428	2,025	1,705
Ottumwa	93	62	61	2,650	2,304	1,829	14,838	10,374	8,683	2,672	1,841	1,783
Sioux City	136	106	123	3,750	2,299	2,463	37,425	14,771	14,227	7,037	3,385	4,097
Waterloo	108	90	55	3,124	1,674	804	8,999	4,694	2,088	4,357	1,945	745
KANSAS:												
Atchison	68	60	39	824	798	583	4,405	3,829	2,093	1,268	873	591
Coffeyville	47			1,069			4,752			1,260		
Fort Scott	36	46	32	266	244	389	1,010	786	714	340	323	335
Galena		15	19		130	114		797	421		109	165
Hutchinson	67	44	42	667	510	536	3,614	2,031	1,541	941	644	503
Independence	31			252			757			365		
Kansas City	165	100	114	12,294	10,529	9,483	164,081	96,473	80,023	19,691	12,590	11,148
Lawrence	49	39	39	422	402	461	1,653	658	1,239	498	341	347
Leavenworth	79	89	89	1,311	1,321	1,141	4,875	4,152	3,251	1,677	1,564	1,270
Parsons	25			1,130			1,626			891		
Pittsburg	49	34	33	972	919	882	1,817	1,494	1,434	1,093	848	528
Topeka	202	154	145	4,244	3,953	2,874	17,821	14,449	8,357	5,562	4,216	3,079
Wichita	225	110	103	2,783	1,262	863	23,564	7,390	3,329	5,579	1,963	973

¹ While the population for 1900 was in excess of 10,000, statistics for that census are not available.

² Does not include statistics for Gary.

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CITIES OF 10,000 INHABITANTS OR OVER—NUMBER OF ESTABLISHMENTS, AVERAGE NUMBER OF WAGE EARNERS, VALUE OF PRODUCTS, AND VALUE ADDED BY MANUFACTURE: 1909, 1904, AND 1899—Continued.

[See explanatory note on the first page of this table.]

Table 113—Continued.

CITY.	NUMBER OF ESTABLISHMENTS.			AVERAGE NUMBER OF WAGE EARNERS.			VALUE OF PRODUCTS.			VALUE ADDED BY MANUFACTURE (VALUE OF PRODUCTS LESS COST OF MATERIALS).		
	1909	1904	1899	1909	1904	1899	Expressed in thousands.					
							1909	1904	1899	1909	1904	1899
KENTUCKY:												
Covington.....	196	199	204	3,942	3,703	3,212	\$8,712	\$6,100	\$5,479	\$4,241	\$3,490	\$2,962
Frankfort.....	31	30	34	537	525	281	3,063	1,747	1,327	1,115	614	496
Henderson.....	43	34	26	1,088	1,032	552	2,932	1,365	1,032	1,210	603	451
Lexington.....	85	84	88	1,032	1,114	797	2,851	2,775	1,889	1,602	1,389	908
Louisville.....	903	842	860	27,023	24,985	23,062	101,284	83,204	66,116	47,156	37,522	31,234
Newport.....	144	105	134	2,632	1,858	1,955	6,491	5,231	3,548	3,125	2,259	2,075
Owensboro.....	69	60	51	1,064	1,392	890	3,506	3,319	1,740	1,253	1,504	825
Paducah.....	91	84	70	2,613	2,841	2,061	4,967	4,443	2,977	2,619	2,598	1,642
LOUISIANA:												
Alexandria.....	30			513			1,279			681		
Baton Rouge.....	33	37	13	357	620	329	658	1,383	718	322	735	331
Lake Charles.....	33			736			2,251			982		
Monroe.....	23			681			1,255			710		
New Orleans.....	848	690	688	17,186	17,468	16,185	78,794	61,411	57,446	30,062	22,533	17,061
Shreveport.....	61	63	46	1,114	1,162	736	3,643	2,538	1,556	1,554	1,554	635
MAINE:												
Auburn.....	83	72	67	3,452	2,652	2,749	8,843	6,407	5,905	3,033	1,990	1,978
Augusta.....	40	44	52	2,096	1,880	2,018	4,662	3,887	3,313	2,175	2,006	2,101
Bangor.....	122	87	101	1,327	1,496	1,511	3,346	3,408	3,336	1,499	1,671	1,421
Bath.....		46	54	1,496	1,980	2,097		3,654	3,697		1,672	1,759
Biddeford.....	43	33	39	5,076	4,764	4,875	9,012	6,949	5,472	4,114	2,813	2,506
Lewiston.....	83	81	84	6,788	6,167	6,677	10,475	8,528	7,779	4,200	3,811	4,061
Portland.....	271	243	234	4,902	4,345	3,763	11,950	9,132	7,324	5,941	4,778	3,731
Waterville.....	33	40	29	1,812	2,011	1,928	3,179	3,066	2,284	1,408	1,296	1,238
MARYLAND:												
Baltimore.....	2,502	2,158	2,274	71,444	65,050	66,571	186,978	150,171	125,108	79,954	69,616	59,855
Cumberland.....	71	72	56	1,636	2,276	1,645	4,534	4,598	2,900	1,858	1,917	1,226
Frederick.....	55	56	54	1,026	1,032	939	2,911	1,938	1,428	836	715	519
Hagerstown.....	76	67	80	1,718	2,210	1,515	3,197	3,027	1,820	1,399	1,376	721
MASSACHUSETTS:												
Adams town.....	31	23	26	3,991	3,994	3,182	6,410	5,492	3,894	3,324	2,804	2,181
Arlington town.....	19	18	12	209	209	122	685	495	256	264	257	144
Attleborough town.....	128	108	108	6,429	5,044	4,811	15,160	10,650	8,751	3,347	5,399	4,633
Beverly.....	63	71	73	4,487	2,083	2,275	8,653	4,301	3,781	5,932	1,778	1,622
Boston.....	3,155	2,747	2,878	69,637	59,180	52,853	237,457	184,351	162,765	112,650	89,748	80,479
Brockton.....	198	201	186	14,737	13,889	10,296	45,972	37,791	24,855	17,497	15,233	9,822
Brookline town.....	16	13	8	840	465	324	733	733	455	336	422	236
Cambridge.....	275	262	243	15,280	14,586	11,070	44,227	42,407	20,062	20,061	17,299	12,319
Chelsea.....	110	130	120	5,854	4,939	2,959	17,003	13,579	9,519	6,434	5,372	4,036
Chilcopee.....	58	40	45	7,260	4,670	4,085	19,219	7,716	5,389	3,257	3,386	2,639
Clinton town.....	39	35	22	4,123	3,482	3,836	7,845	5,458	5,043	3,629	2,650	2,328
Everett.....	62	51	52	2,080	3,186	1,877	7,847	6,136	4,327	4,241	2,613	1,949
Fall River.....	288	234	240	37,139	26,836	30,548	64,146	45,473	39,103	26,622	17,377	21,623
Fitchburg.....	122	107	115	8,497	6,498	5,218	23,252	15,201	13,068	8,310	5,970	5,528
Framingham town.....	27	36	34	3,069	2,484	2,207	6,917	4,174	3,007	3,506	1,657	1,315
Gardner town.....	52	50	46	3,617	3,168	2,896	6,485	5,619	4,356	3,652	2,449	2,132
Gloucester.....	102	132	137	2,181	1,763	2,367	7,753	6,921	6,298	2,933	2,299	2,061
Greenfield town.....	47			1,251			2,801			1,767		
Haverhill.....	346	320	390	11,689	9,574	9,761	35,377	24,447	23,419	15,691	10,190	8,425
Holyoke.....	187	179	158	16,513	14,685	12,519	40,067	30,731	24,093	17,796	13,387	11,387
Hyde Park town.....	40	40	33	4,320	3,991	2,463	7,236	6,739	4,384	3,955	3,155	1,977
Lawrence.....	162	187	167	30,542	21,910	20,899	79,993	48,637	41,742	24,555	16,621	15,900
Leominster town.....	94	65	70	5,601	4,127	3,412	10,581	7,502	5,897	4,955	3,538	2,628
Lowell.....	320	256	286	32,575	29,303	23,254	60,271	46,879	41,203	27,440	19,908	20,924
Lynn.....	431	431	423	27,868	21,540	16,377	71,503	55,003	39,347	30,142	22,387	14,576
Malden.....	86	59	53	2,900	2,954	2,416	8,206	11,236	6,602	3,815	2,731	2,518
Marlborough.....	59	46	50	4,265	3,479	2,524	10,382	7,469	4,498	4,007	2,853	1,664
Medford.....	40	37	36	560	454	2,575	2,045	872	1,122	795	486	322
Melrose.....	25	24	16	1,088	1,571	1,180	2,825	9,451	3,415	1,235	6,536	1,270
Methuen town.....	19			1,572			3,476			1,230		
Millford town.....	53	44	50	1,801	1,782	1,357	4,442	3,390	2,552	2,053	1,614	1,086
New Bedford.....	207	176	171	26,566	17,855	15,263	53,238	29,469	23,297	24,674	13,378	11,614
Newburyport.....	74	69	64	3,215	2,955	2,801	6,931	6,810	5,141	3,156	2,548	2,090
Newton.....	46	48	45	2,174	1,823	1,823	6,279	4,141	3,679	2,896	1,899	1,735
North Adams.....	60	58	68	5,414	5,502	6,312	10,315	8,036	10,741	4,729	4,025	5,694
Northampton.....	71	77	86	3,150	2,932	2,635	6,990	5,756	4,767	3,826	2,714	2,187
Peabody town.....	74	76	86	4,850	3,853	2,661	15,549	10,237	6,944	5,357	3,489	1,870
Pittsfield.....	71	44	69	4,453	2,300	1,511	11,618	11,116	5,530	3,143	2,545	1,996
Plymouth town.....	32	35	27	2,912	2,371	2,128	10,505	8,982	3,012	6,661	5,278	2,338
Quincy.....	183	161	153	5,492	5,371	87	407	355	156	115	106	105
Revere town.....	14	12	17	1,011	5,945	5,625	14,576	12,202	10,711	5,996	4,281	4,127
Salem.....	155	143	162	6,338	5,474	3,528	38,687	22,955	20,065	6,704	3,779	3,344
Somerville.....	114	78	85	5,280	3,222	2,687	6,269	4,202	3,512	3,144	1,822	1,750
Southbridge town.....	36	32	32	4,037	10,523	8,152	31,773	25,880	18,155	17,410	13,490	9,263
Springfield.....	346	296	278	11,855	10,523	6,500	15,380	13,645	11,544	7,605	5,958	6,004
Taunton.....	146	127	114	7,407	6,608	6,500	5,527	4,808	2,647	2,622	1,970	1,293
Wakefield town.....	23	22	25	2,230	1,804	1,436	7,814	7,814	5,890	5,370	5,083	4,061
Waltham.....	80	60	74	6,037	6,203	1,935	11,546	15,525	5,330	5,083	9,996	1,831
Watertown town.....	25	20	27	4,535	3,107	1,935	11,296	5,868	4,008	2,476	1,927	1,545
Webster town.....	23	16	20	3,409	2,634	2,370	7,362	5,318	4,441	4,494	3,567	2,356
Westfield town.....	91	86	97	3,060	1,841	1,922	6,627	4,922	5,389	2,423	1,924	2,211
Weymouth town.....	7	46	51	1,991			42			17		
Winthrop town.....	41			1,482		1,356	5,408	4,654	4,003	2,294	1,846	1,124
Woburn.....	59	52	47	1,653			77,148			34,547		
Worcester.....	580	470	465	28,221	22,796	22,563					25,134	23,823

ABSTRACT OF THE CENSUS—MANUFACTURES.

CITIES OF 10,000 INHABITANTS OR OVER—NUMBER OF ESTABLISHMENTS, AVERAGE NUMBER OF WAGE EARNERS, VALUE OF PRODUCTS, AND VALUE ADDED BY MANUFACTURE: 1909, 1904, AND 1899—Continued.

[See explanatory note on the first page of this table.]

CITY.	NUMBER OF ESTABLISHMENTS.			AVERAGE NUMBER OF WAGE EARNERS.			VALUE OF PRODUCTS.			VALUE ADDED BY MANUFACTURE (VALUE OF PRODUCTS LESS COST OF MATERIALS).		
	Expressed in thousands.											
	1909	1904	1899	1909	1904	1899	1909	1904	1899	1909	1904	1899
MICHIGAN:												
Adrian.....	80	65	63	1,059	1,502	1,030	\$6,085	\$4,897	\$2,125	\$1,935	\$2,068	\$1,227
Alpena.....	58	57	46	1,432	1,245	1,202	3,964	2,905	2,273	1,663	1,220	997
Ann Arbor.....	63	65	71	573	549	623	1,866	1,386	1,377	856	612	592
Battle Creek.....	105	120	75	4,175	3,389	2,051	20,174	12,298	6,301	13,106	8,314	4,201
Bay City.....	182	173	177	4,737	4,456	4,309	10,294	8,809	9,011	4,647	3,861	3,776
Detroit.....	2,036	1,362	1,259	81,011	48,483	38,373	252,992	128,247	88,366	122,774	61,666	41,359
Escanaba.....	39	34	26	720	949	520	1,074	1,333	610	710	929	360
Flint.....	104	70	63	7,088	2,161	1,960	24,118	6,177	4,713	10,147	2,408	1,959
Grand Rapids.....	524	388	382	17,590	15,514	12,929	42,231	30,690	22,229	22,495	16,268	11,108
Holland.....	59	14	14	1,940	201	87	4,622	202	145	176	124	90
Ironwood.....	19	15	14	66	73	80	377	132	195	80	105	100
Ishpeming.....	169	147	117	4,797	3,967	3,715	14,006	8,348	6,710	5,838	4,076	2,902
Jackson.....	193	157	129	6,272	5,666	3,870	17,904	13,142	7,186	8,399	6,246	3,283
Kalamazoo.....	169	98	74	5,285	2,982	1,425	16,567	6,887	2,942	7,765	3,414	1,310
Lansing.....	64	47	56	2,125	2,084	2,103	3,344	3,257	3,625	2,055	1,983	2,249
Manistee.....	34	31	29	498	738	836	1,254	2,364	1,585	698	972	772
Marquette.....	52	45	38	1,700	1,489	1,703	3,728	2,974	4,076	2,071	1,601	2,239
Menominee.....	101	70	67	4,522	3,078	3,078	9,648	6,319	4,528	4,710	2,793	2,259
Muskegon.....	42	47	47	1,739	1,296	1,092	5,894	3,047	2,471	2,654	1,312	869
Pontiac.....	82	74	78	1,580	2,136	2,026	3,588	3,715	3,627	1,639	1,968	1,875
Port Huron.....	203	179	184	5,990	4,445	4,205	18,833	10,079	8,653	8,424	4,712	3,569
Saginaw.....	47	38	33	1,005	895	317	4,619	2,412	728	1,496	985	449
Sault Ste. Marie.....	61	46	36	1,220	1,108	909	2,289	2,177	1,201	1,106	1,079	686
Traverse City.....												
MINNESOTA:												
Duluth.....	194	103	126	6,083	3,987	3,658	17,180	10,139	7,811	8,336	5,505	4,152
Mankato.....	63	54	47	807	724	520	3,723	3,422	1,887	995	893	532
Minneapolis.....	1,102	876	789	26,962	21,671	19,620	165,405	121,163	94,408	45,412	32,281	25,498
St. Cloud.....	69	39	30	626	414	507	2,299	1,800	1,561	957	583	484
St. Paul.....	719	614	537	19,339	14,363	13,019	58,990	38,319	30,056	28,690	18,831	14,144
Stillwater.....	38	36	32	688	955	829	2,686	2,784	1,801	1,038	1,300	751
Virginia.....	21			188			519			357		
Winona.....	99	86	72	2,032	1,953	1,965	11,199	7,850	6,013	3,869	2,576	2,012
MISSISSIPPI:												
Hattiesburg.....	29			648			1,251			626		
Jackson.....	45			799			3,113			1,145		
Meridian.....	54	53	42	1,524	1,346	894	4,238	3,267	1,924	1,764	1,215	809
Natchez.....	27	24	16	428	316	648	1,114	820	1,115	425	317	534
Vicksburg.....	47	32	24	1,202	1,031	987	2,229	1,888	1,368	1,081	895	632
MISSOURI:												
Hannibal.....	66	58	66	2,445	1,811	1,238	6,195	3,564	2,699	1,879	1,408	964
Jefferson City.....	35	45	41	1,336	262	299	6,446	3,927	3,061	1,794	1,440	930
Joplin.....	77	56	45	830	680	682	4,136	3,076	2,325	1,778	1,046	769
Kansas City.....	902	612	585	14,643	11,039	9,699	54,704	35,573	23,588	23,742	16,948	11,057
Moberly.....	31	28	32	999	496	656	1,984	801	792	892	402	432
St. Joseph.....	261	219	184	5,390	4,663	5,095	17,626	11,574	11,362	6,573	4,754	4,420
St. Louis.....	2,667	2,482	2,646	87,371	82,698	64,832	328,495	267,307	193,733	140,306	129,567	91,895
Sedalia.....	75	50	57	935	974	909	2,333	1,692	1,283	1,117	867	608
Springfield.....	108	82	79	2,131	2,158	1,710	5,382	5,293	3,434	2,334	1,901	1,443
Webb City.....	25	19	12	170	138	126	777	638	354	264	243	140
MONTANA:												
Anaconda.....	13			97			591			434		
Billings.....	37			226			1,243			478		
Butte.....	66	54	56	662	478	411	2,464	1,760	1,517	1,544	1,192	739
Helena.....	44	34	27	420	349	264	1,303	1,163	776	810	735	440
Missoula.....	26			428			1,171			769		
NEBRASKA:												
Grand Island.....	44			616			1,837			826		
Lincoln.....	167	128	81	2,140	1,617	1,104	7,010	5,222	2,764	3,146	2,531	1,108
Omaha.....	432	318	307	8,023	5,822	5,276	60,854	54,004	38,074	17,439	11,111	18,146
South Omaha.....	71	41	41	6,306	5,662	6,327	92,436	67,415	69,509	14,763	8,222	8,491
NEVADA:												
Reno.....	40			310			1,862			691		
NEW HAMPSHIRE:												
Berlin.....	20	17	17	1,790	2,282	2,810	5,897	5,989	5,985	2,243	2,324	2,874
Concord.....	111	80	86	2,693	2,654	2,432	6,477	5,374	4,211	2,643	2,543	2,123
Dover.....	51	42	40	3,030	2,859	2,797	6,370	6,043	5,440	3,134	2,173	1,687
Keene.....	64	50	57	1,769	1,685	1,576	3,483	2,691	2,580	1,646	1,314	1,138
Laconia.....	43	55	53	2,146	1,957	1,535	3,818	3,097	2,152	1,805	1,377	958
Manchester.....	175	155	166	24,735	17,579	17,862	46,812	30,697	24,628	16,315	11,990	10,825
Nashua.....	104	78	72	7,312	6,159	5,777	17,326	12,858	10,096	6,947	4,375	3,970
Portsmouth.....	36	27	38	992	638	1,323	2,871	2,602	3,961	1,510	1,714	2,066
NEW JERSEY:												
Asbury Park.....	27			264			602			308		
Atlantic City.....	97	62	36	726	381	305	2,260	975	608	1,124	610	327
Bayonne.....	97	58	63	7,519	7,057	4,670	73,641	60,634	38,601	14,709	13,650	4,807
Bloomfield town.....	45	33	39	2,957	1,893	1,612	5,895	4,645	3,371	3,594	2,895	1,665
Bridgeton.....	74	61	62	2,387	2,276	2,182	4,070	2,964	2,259	2,073	1,725	1,216
Camden.....	365	298	322	16,527	12,061	7,742	49,138	33,587	17,970	21,754	13,164	7,528
East Orange.....	42	17	22	1,386	854	600	3,725	2,327	2,087	1,957	1,219	1,176
Elizabeth.....	163	124	141	12,737	12,335	9,498	29,147	29,301	22,861	12,718	12,320	9,948
Garfield borough.....	25			2,530			8,894			2,919		
Hackensack town.....	46	23	21	738	812	487	1,978	1,488	782	1,079	801	411
Harrison town.....	54	41	41	6,500	4,040	2,859	13,142	8,409	6,087	7,729	4,780	2,885
Hoboken.....	54	279	194	8,100	7,227	5,712	20,413	14,077	10,483	10,944	7,497	5,457
Irvington town.....	51			540			3,018			675		

1 Does not include statistics for Great Falls.

CITIES OF 10,000 INHABITANTS OR OVER—NUMBER OF ESTABLISHMENTS, AVERAGE NUMBER OF WAGE EARNERS, VALUE OF PRODUCTS, AND VALUE ADDED BY MANUFACTURE: 1909, 1904, AND 1899—Continued.

[See explanatory note on the first page of this table.]

CITY.	NUMBER OF ESTABLISHMENTS.			AVERAGE NUMBER OF WAGE EARNERS.			VALUE OF PRODUCTS.			VALUE ADDED BY MANUFACTURE (VALUE OF PRODUCTS LESS COST OF MATERIALS).		
	1909	1904	1899	1909	1904	1899	Expressed in thousands.			1909	1904	1899
							1909	1904	1899			
NEW JERSEY—Continued.												
Jersey City.....	745	628	536	25,454	20,353	17,391	\$128,775	\$75,741	\$72,930	\$39,458	\$26,942	\$22,664
Kearny town.....	18	11	16	2,820	1,303	986	8,306	4,428	1,607	3,043	923	623
Long Branch.....	34	28	11	415	294	96	1,117	577	281	533	370	172
Millville.....	39	35	18	2,761	2,767	2,239	4,182	3,719	2,514	2,335	2,335	1,595
Montclair town.....	23	19	23	252	151	169	1,026	621	664	357	262	278
Morristown town.....	31	26	22	201	307	252	724	705	596	355	426	286
New Brunswick.....	93	71	72	5,264	4,590	3,836	10,005	8,917	5,791	5,456	4,759	2,797
Newark.....	1,858	1,600	1,573	59,955	50,697	42,878	202,511	156,055	112,728	87,832	69,306	51,936
Orange.....	85	66	74	4,883	2,450	1,640	9,176	6,161	2,996	5,488	3,509	1,436
Passaic.....	169	95	70	15,086	11,000	6,999	41,729	22,783	12,805	17,394	9,673	5,387
Paterson.....	702	513	487	32,004	28,509	28,542	69,584	54,673	48,502	34,856	27,232	23,447
Perth Amboy.....	80	53	47	5,886	3,980	2,005	73,093	34,800	14,061	9,161	4,484	2,714
Phillipsburg town.....	39	32	34	3,432	3,148	2,216	9,150	6,684	4,585	4,390	3,118	1,783
Plainfield.....	60	49	32	1,758	1,986	1,384	3,649	3,572	2,437	2,119	2,418	1,624
Trenton.....	340	311	246	18,543	14,130	13,138	49,009	32,360	28,458	21,336	14,809	11,877
Union town.....	83	77	57	2,894	1,856	1,376	7,941	5,812	3,493	4,482	2,120	1,995
West Hoboken town.....	137	95	65	2,782	3,562	2,733	5,577	5,947	4,769	3,689	2,826	2,240
West New York town.....	66			1,508			9,274			1,866		
West Orange town.....	10			476			748			349		
NEW MEXICO:												
Albuquerque.....	31			587			1,288			704		
NEW YORK:¹												
Albany.....	395	490	511	9,861	8,976	8,106	22,826	20,209	17,269	12,305	10,822	9,762
Amsterdam.....	97	89	98	10,284	7,993	6,261	22,449	15,007	10,643	9,254	6,154	4,685
Auburn.....	140	111	120	6,497	6,660	5,895	15,961	13,421	9,575	7,024	5,176	4,263
Batavia village.....	59	51	54	2,007	1,603	1,573	4,401	3,589	2,573	2,626	1,635	1,327
Binghamton.....	266	241	219	6,823	5,636	5,011	17,114	13,307	10,339	8,386	7,486	5,177
Buffalo.....	1,753	1,538	1,478	51,412	43,567	34,275	218,804	147,378	106,627	62,266	55,611	29,686
Cohoes.....	103	98	112	8,209	6,910	8,273	14,831	10,290	11,031	6,655	4,966	5,128
Corning.....	45	57	49	2,074	2,355	1,600	3,050	3,084	2,273	2,186	2,029	1,233
Cortland.....	51	53	46	2,356	2,282	1,412	6,395	4,574	3,084	2,321	1,976	1,268
Dunkirk.....	57	38	41	2,756	3,395	2,533	6,576	9,308	5,226	3,368	5,160	2,211
Elmira.....	154	142	144	3,647	3,208	3,570	8,067	6,308	6,597	4,477	3,307	2,695
Fulton.....	45			2,799			7,897			3,610		
Geneva.....	56	54	49	1,526	1,580	1,180	5,154	4,852	2,716	1,263	1,056	1,066
Glens Falls.....	68	49	57	2,774	2,052	3,101	4,877	2,825	3,694	2,566	1,539	2,135
Gloversville.....	187	180	183	5,741	5,048	7,813	14,171	9,341	9,070	6,109	4,989	3,816
Hornell.....	45	45	48	2,183	2,200	1,549	3,648	3,163	2,431	1,770	1,696	1,122
Hudson.....	45	48	45	1,302	1,824	1,132	3,506	4,116	2,604	1,442	2,008	1,270
Ithaca.....	81	67	62	873	873	861	1,920	2,060	1,591	1,680	1,261	845
Jamestown.....	156	149	108	6,789	5,287	4,528	14,720	10,350	7,731	7,326	6,099	3,927
Johnstown.....	138	100	115	2,589	2,426	3,685	6,574	4,543	5,123	2,649	1,983	2,128
Kingston.....	99	96	109	3,281	2,636	2,042	5,986	4,812	3,932	3,494	2,700	2,049
Little Falls.....	55	49	52	4,211	2,621	2,859	8,460	4,471	4,071	2,537	1,296	1,828
Lockport.....	109	109	124	2,138	2,323	2,359	8,168	5,808	5,353	2,818	2,492	2,266
Middletown.....	59	50	51	1,733	1,596	1,395	4,658	3,356	2,155	1,753	1,400	830
Mount Vernon.....	90	54	37	1,207	670	1,438	3,376	1,877	910	2,690	1,692	582
Newburgh.....	104	79	93	4,344	4,013	3,074	9,928	7,036	5,358	5,085	3,760	2,719
New Rochelle.....	42	28	25	735	517	508	1,669	1,103	641	555	290	290
New York.....	25,938	20,839	19,243	554,002	464,716	388,586	2,026,693	1,526,523	1,172,870	837,538	708,494	528,680
Niagara Falls.....	156	85	93	6,089	4,574	2,840	28,652	16,916	8,540	14,261	7,724	3,622
North Tonawanda.....	81	38	34	2,824	2,025	1,656	9,600	6,499	6,294	3,211	1,962	2,050
Ogdensburg.....	75	55	74	1,259	929	1,909	4,948	3,057	2,261	1,440	794	760
Olean.....	54	41	47	2,259	1,175	1,738	10,005	4,677	6,230	2,277	1,280	1,395
Ossining village.....	34			356			1,329			893		
Oswego.....	81	77	75	3,817	3,746	3,457	10,413	7,592	7,487	4,310	2,875	3,175
Peekskill village.....	52	46	37	2,055	1,987	1,281	7,888	7,252	4,946	4,970	1,622	1,622
Plattsburg.....	41	39	39	1,049	750	621	3,137	1,057	1,043	1,392	547	519
Port Chester village.....	34			2,122			6,243			1,680		
Poughkeepsie.....	111	108	118	3,299	3,775	2,810	9,151	7,207	5,576	5,284	3,674	2,895
Rensselaer.....	33			763			2,296			1,130		
Rochester.....	1,203	1,109	1,221	39,108	31,779	28,049	112,676	81,109	59,669	62,002	43,191	31,424
Rome.....	119	89	87	3,633	3,209	2,274	14,423	8,631	5,549	4,219	2,987	2,087
Saratoga Springs village.....	39	35	44	833	580	602	2,337	1,709	1,304	1,454	1,067	656
Schenectady.....	134	103	83	14,931	14,316	8,494	38,165	33,064	17,605	16,213	16,587	7,880
Syracuse.....	738	637	630	18,148	14,554	11,809	49,435	34,667	25,546	27,689	18,906	13,998
Troy.....	363	311	327	20,020	19,114	22,933	37,980	31,861	25,739	22,354	18,115	17,277
Utica.....	317	333	311	13,153	10,882	8,898	31,199	22,880	16,479	14,553	10,106	8,265
Watertown.....	107	85	91	3,291	3,020	3,223	8,527	7,251	6,888	4,706	3,909	3,180
Watervliet.....	36	36	41	753	1,111	1,000	1,669	1,738	1,507	853	899	774
White Plains village.....	33			249			816			444		
Yonkers.....	158	106	107	12,711	9,779	7,555	59,334	33,549	17,304	16,122	10,219	7,702
NORTH CAROLINA:												
Asheville.....	52	45	37	964	792	804	3,250	1,918	1,300	955	671	479
Charlotte.....	108	73	57	4,199	2,234	2,787	10,480	4,850	4,187	3,629	1,961	1,583
Durham.....	61			3,718			23,271			13,461		418
Greensboro.....	61	63	43	952	1,096	677	2,081	1,744	926	925	786	514
Raleigh.....	55	42	39	1,023	585	549	2,376	1,067	947	1,100	675	861
Wilmington.....	64	53	50	1,213	1,594	1,553	3,005	2,904	2,283	1,162	1,189	861
Winston.....	52	47	30	6,708	4,850	2,894	16,778	11,353	4,888	9,862	7,510	3,255
NORTH DAKOTA:												
Fargo.....	61	47	36	510	386	307	2,477	1,161	1,231	1,067	606	448
Grand Forks.....	38			350			1,910			659		

¹ Does not include statistics for Lackawanna.

ABSTRACT OF THE CENSUS—MANUFACTURES.

CITIES OF 10,000 INHABITANTS OR OVER—NUMBER OF ESTABLISHMENTS, AVERAGE NUMBER OF WAGE EARNERS, VALUE OF PRODUCTS, AND VALUE ADDED BY MANUFACTURE: 1909, 1904, AND 1899—Continued.

[See explanatory note on the first page of this table.]

CITY.	NUMBER OF ESTABLISHMENTS.			AVERAGE NUMBER OF WAGE EARNERS.			VALUE OF PRODUCTS.			VALUE ADDED BY MANUFACTURE (VALUE OF PRODUCTS LESS COST OF MATERIALS).		
	1909	1904	1899	1909	1904	1899	Expressed in thousands.					
							1909	1904	1899	1909	1904	1899
OHIO:												
Akron.....	246	186	178	15,831	9,626	8,259	\$73,158	\$33,559	\$22,016	\$30,087	\$13,149	\$9,296
Alliance.....	44	40	39	2,524	1,442	1,486	6,135	3,547	3,203	3,282	1,646	1,555
Ashtabula.....	44	36	29	1,471	846	373	3,459	1,895	884	1,375	899	357
Bellaire.....	36	37	30	2,597	2,183	1,928	10,091	10,712	8,538	2,982	3,396	2,851
Cambridge.....	32	34	28	1,280	814	768	4,291	2,441	2,202	1,406	821	885
Canton.....	204	158	164	9,964	5,938	5,149	28,583	10,591	9,575	13,939	5,997	5,226
Chillicothe.....	57	64	46	1,674	1,553	1,112	4,345	3,147	1,616	1,307	1,219	738
Cincinnati.....	2,184	2,171	2,454	60,192	58,584	54,942	194,516	166,059	141,678	92,584	82,801	70,287
Cleveland.....	2,148	1,616	1,350	84,728	64,041	55,341	271,961	171,924	139,356	117,046	74,346	62,891
Columbus.....	586	459	408	16,428	14,350	13,787	49,032	39,530	34,748	23,828	20,286	16,496
Dayton.....	513	431	425	21,549	17,093	14,406	60,378	39,697	31,015	32,850	21,092	16,685
East Liverpool.....	82	81	75	4,873	5,228	4,171	6,229	6,437	4,749	4,108	4,330	3,286
Elyria.....	58	50	32	2,673	1,144	638	8,065	2,933	1,221	3,570	1,338	481
Findlay.....	74	71	80	1,376	1,343	1,107	3,487	2,925	1,686	1,398	1,346	935
Hamilton.....	125	113	97	6,895	6,107	5,147	18,184	13,811	10,656	8,544	7,427	5,653
Ironton.....	63	57	53	1,920	1,800	1,577	7,118	4,755	5,411	2,124	1,352	2,266
Lancaster.....	42	42	36	1,532	1,695	1,069	4,074	3,848	6,223	1,023	1,347	846
Lima.....	85	77	76	3,607	2,733	1,980	7,754	4,828	6,223	3,885	2,573	2,287
Lorain.....	57	43	26	6,697	3,102	2,233	38,987	14,491	9,481	14,765	4,783	2,996
Mansfield.....	121	109	95	3,204	3,021	2,622	8,173	7,354	6,076	1,427	1,233	1,248
Marietta.....	66	73	77	1,288	1,814	1,511	3,214	2,599	2,398	3,090	1,876	1,460
Marion.....	55	47	34	2,619	1,721	1,171	5,867	3,228	2,496	2,498	2,125	1,486
Massillon.....	56	52	49	1,934	1,995	1,474	4,788	3,707	2,749	8,567	4,846	3,327
Middletown.....	41	47	41	2,576	1,814	1,578	16,517	8,538	5,800	3,869	3,180	1,699
Newark.....	72	78	69	3,913	3,627	2,075	7,851	5,613	2,879	5,663	3,079	2,128
Norwood.....	49	76	68	3,907	2,044	1,985	6,931	4,036	5,552	3,383	3,125	3,254
Piqua.....	82	81	100	2,683	2,072	4,153	7,277	6,645	6,659	3,112	2,743	1,627
Portsmouth.....	75	81	81	3,728	2,118	1,453	5,947	4,879	2,834	10,327	7,620	6,827
Sandusky.....	91	93	81	2,118	2,323	6,299	19,246	13,382	12,116	6,744	4,127	2,141
Springfield.....	195	167	164	7,405	6,258	6,299	21,187	12,370	4,547	2,002	1,434	1,064
Staubenville.....	55	72	54	1,632	1,645	1,238	3,254	2,434	1,902	27,146	19,035	12,579
Tiffin.....	75	87	75	1,692	1,505	1,832	61,230	44,501	31,976	2,924	2,366	2,042
Toledo.....	760	597	445	18,878	15,697	12,747	81,271	46,853	33,908	18,979	11,670	10,775
Warren.....	68	63	44	1,798	8,095	8,679	9,145	6,347	5,708	3,641	3,056	2,622
Youngstown.....	115	113	103	10,498	8,095	8,679	81,271	46,853	33,908	18,979	11,670	10,775
Zanesville.....	109	99	115	3,150	3,098	3,405	9,145	6,347	5,708	3,641	3,056	2,622
OKLAHOMA:												
Chickasha.....	30			364			1,867			582		
Enid.....	65			303			2,453			646		
Guthrie.....	34	34	33	282	333	241	1,443	1,200	649	496	499	312
McAlester.....	29			180			451			256		
Muskogee.....	64			381			2,279			801		
Oklahoma City.....	171	89	86	1,398	720	220	7,868	3,671	845	2,722	1,309	328
Shawnee.....	40			1,014			2,081			918		
Tulsa.....	53			462			1,563			689		
OREGON:												
Portland.....	649	437	408	12,214	8,171	5,380	46,861	28,651	16,904	20,785	11,627	6,727
Salem.....	62			597			2,208			1,031		
PENNSYLVANIA:												
Allentown.....	274	257	216	11,481	8,984	7,355	26,268	16,841	14,990	10,682	6,968	6,013
Altoona.....	44	73	57	8,409	9,540	6,573	16,763	14,350	11,273	7,629	7,102	4,390
Beaver Falls borough.....	44	42	47	2,180	2,232	2,174	6,400	4,908	6,229	3,385	2,666	2,370
Bethlehem borough ¹	49			1,583			3,712			1,382		
Bradock borough.....	41	38	30	1,040	1,225	815	5,094	4,125	4,091	1,747	1,387	1,526
Bradford.....	82	80	65	1,318	1,490	1,200	3,887	3,192	3,125	1,445	1,599	1,490
Butler borough.....	61	48	41	2,823	2,093	792	11,058	6,832	1,403	3,464	2,172	883
Carbondale.....	34	32	26	1,503	1,475	1,023	2,523	2,316	1,146	1,270	1,203	676
Carlisle borough.....	50	48	39	1,334	1,340	1,121	2,496	1,996	1,708	1,065	857	661
Carnegie borough.....	19			422			3,099			1,658		
Chambersburg borough.....	57	47	44	1,364	843	612	2,456	1,085	815	1,286	516	337
Chester.....	128	131	121	6,986	7,061	6,972	19,373	16,645	14,940	7,797	6,223	6,369
Columbia borough.....	47	44	53	2,773	3,034	2,519	4,807	3,887	4,214	2,136	1,434	1,642
Connellsville borough.....	39			1,035			1,971			1,154		
Dubois borough.....	37	34	24	1,015	1,057	817	1,890	2,607	1,768	1,964	882	615
Dunmore borough.....	18	15	18	1,308	1,133	614	1,851	1,460	1,132	1,181	910	642
Easton.....	126	97	106	3,388	2,720	3,202	6,915	5,059	5,425	3,401	2,375	2,233
Erie.....	391	261	260	9,796	8,415	8,032	24,226	18,639	10,493	12,162	9,212	8,285
Greensburg borough.....	47			310			726			396		
Harrisburg.....	199	175	175	9,743	7,955	6,489	22,725	16,571	14,990	8,642	6,244	5,991
Hazleton.....	77	62	45	2,682	1,406	822	4,707	2,186	999	2,005	1,055	706
Homestead borough.....	26	27	15	171	307	164	659	713	396	937	448	165
Johnstown.....	97	82	66	10,574	6,914	5,600	48,106	28,892	21,365	15,758	9,137	7,457
Lancaster.....	366	300	284	7,957	8,693	7,504	15,970	14,448	12,750	7,138	7,050	6,297
Lebanon.....	109	103	97	5,591	4,387	4,475	11,429	6,978	7,658	4,651	3,699	2,913
McKeesport.....	68	75	67	8,246	8,848	7,213	42,486	23,064	30,088	15,199	10,744	14,223
McKees Rooks borough.....	31			3,591			9,787			4,880		
Mahanoy City borough.....	33	29	29	590	238	301	868	431	401	485	298	288
Meadville.....	62	52	46	2,048	1,300	1,201	3,559	2,075	1,668	1,843	1,111	779
Mount Carmel borough.....	20	19	9	600	197	109	785	620	393	369	193	133
Nanticoke borough.....	17	12	17	348	229	140	423	358	310	243	198	128
New Castle.....	82	71	71	5,339	5,433	4,529	38,038	28,923	20,016	7,064	7,711	6,870
Norristown borough.....	111	84	77	3,818	3,517	2,944	7,413	5,925	4,107	4,139	3,058	1,948
Oil City.....	34	36	42	1,338	1,557	1,683	4,122	3,082	5,164	1,822	1,748	1,470
Philadelphia.....	8,379	7,087	7,503	251,584	228,899	214,775	746,076	591,388	519,982	316,984	258,036	224,807
Phoenixville borough.....	31	31	32	2,699	2,888	2,249	5,376	5,500	3,322	2,159	2,477	1,475
Pittsburgh.....	1,659	1,562	1,301	67,474	71,618	71,794	243,454	211,257	218,198	94,927	86,673	89,740
Pittston.....	40	40	27	792	880	357	1,969	1,475	998	902	747	375

¹ Does not include statistics for Lakewood.² While the population for 1900 was in excess of 10,000, statistics for that census are not available.

STATES, CITIES, AND INDUSTRIES.

CITIES OF 10,000 INHABITANTS OR OVER—NUMBER OF ESTABLISHMENTS, AVERAGE NUMBER OF WAGE EARNERS, VALUE OF PRODUCTS, AND VALUE ADDED BY MANUFACTURE: 1909, 1904, AND 1899—Continued.

[See explanatory note on the first page of this table.]

CITY.	NUMBER OF ESTABLISHMENTS.			AVERAGE NUMBER OF WAGE EARNERS.			VALUE OF PRODUCTS.			VALUE ADDED BY MANUFACTURE (VALUE OF PRODUCTS LESS COST OF MATERIALS).		
	1909	1904	1899	1909	1904	1899	Expressed in thousands.					
							1909	1904	1899	1909	1904	1899
PENNSYLVANIA—Continued.												
Plymouth borough.....	23	23	24	908	827	756	\$1,179	\$860	\$533	\$475	\$412	\$292
Pottstown borough.....	78	77	65	3,650	3,457	2,681	12,505	8,145	7,357	3,596	2,707	2,512
Pottsville borough.....	91	79	77	2,872	1,904	1,699	9,138	5,806	4,830	3,211	1,781	1,406
Reading.....	482	402	403	24,145	18,053	16,892	51,135	30,491	22,682	21,287	13,782	15,686
Scranton.....	293	258	247	12,851	10,912	11,139	26,385	20,453	24,742	12,083	9,290	7,822
Shamokin borough.....	39	48	46	1,623	897	782	3,544	1,444	1,147	1,415	418	447
Sharon borough.....	45	37	35	3,316	1,812	1,827	9,881	5,671	3,765	3,198	1,880	1,561
Shenandoah borough.....	29	30	22	242	170	107	888	595	302	582	414	268
South Bethlehem borough.....	49	46	38	7,935	5,754	4,645	26,417	15,275	9,964	10,450	8,014	5,102
Steelton borough ¹	18	18	18	4,656	4,762	4,762	15,746	15,746	14,034	4,996	4,996	4,098
Sunbury borough.....	39	32	29	2,069	1,467	968	4,450	2,593	1,868	2,222	891	719
Uniontown borough.....	41	.....	.....	335	.....	.....	1,347	.....	.....	968	.....	.....
Warren borough.....	72	63	43	1,489	1,174	1,050	5,744	4,666	3,681	2,068	1,947	1,827
Washington borough.....	75	.....	.....	2,126	.....	.....	4,837	.....	.....	2,399	.....	.....
West Chester borough.....	35	35	35	916	849	497	2,145	2,121	859	1,479	1,447	543
Wilkes-Barre.....	170	129	138	7,553	5,920	4,749	13,526	11,009	8,617	7,993	5,735	4,306
Wilkesburg borough.....	24	30	16	185	184	100	538	472	246	276	257	136
Williamsport.....	159	115	142	5,641	5,296	4,717	12,348	11,367	9,726	6,288	5,361	4,126
York.....	218	228	241	10,492	7,952	6,851	18,622	13,333	10,569	9,756	6,653	5,100
All other cities ²	99	.....	.....	18,283	.....	.....	108,298	.....	.....	28,528	.....	.....
RHODE ISLAND:												
Central Falls.....	43	33	36	2,475	2,443	2,372	5,471	5,091	4,511	2,090	1,761	1,785
Cranston.....	28	13	13	1,711	537	493	5,625	1,639	1,403	2,738	1,943	796
Cumberland town.....	29	19	10	5,369	4,574	1,500	9,527	5,965	1,756	5,209	2,583	1,184
East Providence town.....	26	21	15	2,041	1,331	836	7,146	5,544	5,247	2,886	1,290	1,059
Newport.....	54	46	43	726	849	851	1,379	1,375	1,375	899	791	622
Pawtucket.....	217	186	191	15,275	12,054	10,712	37,696	25,847	19,272	16,156	11,735	9,295
Providence.....	1,080	881	929	46,381	39,804	38,368	120,241	91,981	78,657	55,471	42,008	38,196
Warwick town.....	49	37	27	6,471	6,153	5,465	10,839	7,062	6,620	5,195	3,294	3,579
Woonsocket.....	130	103	104	10,703	8,672	7,591	28,218	19,261	14,745	11,456	8,682	7,576
SOUTH CAROLINA:												
Charleston.....	116	108	104	2,874	3,450	3,187	6,951	6,007	5,713	2,722	2,289	2,266
Columbia.....	55	41	41	2,522	2,393	2,081	5,872	4,677	3,134	2,294	2,005	1,266
Greenville.....	41	36	22	1,182	1,204	770	2,142	1,677	967	914	576	249
Spartanburg.....	36	.....	.....	1,773	1,650	1,361	3,276	2,127	1,591	1,191	583	685
SOUTH DAKOTA:												
Aberdeen.....	37	.....	.....	295	.....	.....	1,575	.....	.....	564	.....	.....
Sioux Falls.....	83	61	46	677	455	311	2,889	1,898	884	1,260	832	562
TENNESSEE:												
Chattanooga.....	185	177	149	6,410	6,420	4,729	16,036	14,261	10,518	7,602	6,787	4,097
Jackson.....	42	42	33	1,405	1,268	1,018	2,710	2,318	1,577	1,496	1,135	864
Knoxville.....	159	138	102	2,773	2,999	4,203	8,149	6,699	6,202	3,048	2,588	2,660
Memphis.....	329	239	223	7,927	7,374	6,626	30,242	20,043	14,233	12,391	8,704	6,354
Nashville.....	384	257	237	9,721	8,632	6,726	29,650	21,567	15,301	12,194	9,085	6,374
TEXAS:												
Austin.....	108	62	84	754	641	495	2,846	1,569	765	1,213	798	308
Beaumont.....	56	40	30	863	732	1,005	4,831	2,610	1,913	1,387	1,068	816
Brownsville.....	9	.....	.....	51	.....	.....	121	.....	.....	75	.....	.....
Cleburne.....	24	.....	.....	825	.....	.....	1,577	.....	.....	718	.....	.....
Dallas.....	305	247	177	4,882	3,445	2,842	26,959	15,628	9,488	9,993	6,421	4,090
Denison.....	29	25	20	833	725	668	1,314	1,235	840	721	644	461
El Paso.....	88	54	38	1,752	1,158	716	3,637	2,378	1,213	2,141	1,347	674
Fort Worth.....	147	102	83	2,059	1,423	943	8,661	5,668	3,488	3,395	2,479	1,341
Galveston.....	81	67	100	1,094	761	1,422	6,308	2,997	3,675	2,041	1,398	1,690
Houston.....	249	209	145	5,338	5,056	3,188	23,015	13,564	7,492	8,694	5,947	3,297
Laredo.....	23	18	14	213	515	372	221	464	331	147	258	192
Marshall.....	22	.....	.....	977	.....	.....	1,787	.....	.....	964	.....	.....
Palestine.....	20	17	19	745	544	481	1,313	735	704	691	430	355
Paris.....	26	29	27	541	210	263	1,430	855	743	568	327	262
San Angelo.....	45	.....	.....	115	.....	.....	218	.....	.....	185	.....	.....
San Antonio.....	194	141	113	3,105	2,457	2,683	13,435	7,402	5,989	6,483	3,661	2,088
Sherman.....	36	39	31	273	307	314	4,676	2,641	1,461	629	492	391
Temple.....	37	.....	.....	366	.....	.....	1,346	.....	.....	512	.....	.....
Tyler.....	23	21	16	484	368	431	996	629	682	459	315	230
Waco.....	92	76	80	1,033	947	1,004	4,769	2,980	2,294	1,804	1,291	968
UTAH:												
Ogden.....	68	63	51	1,323	1,013	678	3,713	2,507	1,242	1,648	1,109	563
Salt Lake City.....	245	192	154	4,287	2,776	2,154	13,351	7,544	4,379	6,736	4,029	2,302
VERMONT:												
Barre.....	139	105	146	2,340	2,198	1,875	3,852	3,373	2,761	2,744	2,464	1,678
Burlington.....	82	67	73	2,371	2,300	2,232	6,800	6,356	6,066	2,477	2,552	2,772
Rutland.....	63	58	61	1,636	1,803	1,496	2,680	2,523	1,969	1,473	1,361	1,134
VIRGINIA:³												
Alexandria.....	54	51	57	1,470	1,291	859	4,420	2,187	1,539	1,689	1,195	890
Danville.....	52	34	46	3,076	2,018	2,963	5,389	4,775	3,694	2,153	2,009	1,527
Lynchburg.....	82	55	61	4,026	2,534	1,487	10,188	4,968	2,964	3,720	2,092	1,469
Norfolk.....	215	121	140	4,749	2,935	2,638	10,341	5,739	4,662	4,569	2,587	2,180
Petersburg.....	72	72	77	3,887	3,288	3,608	8,896	5,891	5,293	3,137	2,097	2,178
Portsmouth.....	31	28	22	842	551	471	1,528	945	960	752	459	345
Richmond.....	380	300	276	14,849	12,444	13,715	47,358	27,745	24,689	23,106	13,982	13,184
Roanoke.....	62	54	38	3,544	3,089	2,431	7,261	5,545	5,398	3,217	2,313	1,595
Staunton.....	44	.....	.....	339	.....	.....	1,223	.....	.....	327	.....	.....

¹ Included in "all other cities" for 1909.
² Includes: Coatesville, Duquesne, Monessen, North Braddock, Old Forge, South Sharon, and Steelton boroughs, to avoid disclosure of individual operations.
³ Does not include statistics for Newport News.

ABSTRACT OF THE CENSUS—MANUFACTURES.

CITIES OF 10,000 INHABITANTS OR OVER—NUMBER OF ESTABLISHMENTS, AVERAGE NUMBER OF WAGE EARNERS, VALUE OF PRODUCTS, AND VALUE ADDED BY MANUFACTURE: 1909, 1904, AND 1899—Continued.

[See explanatory note on the first page of this table.]

CITY.	NUMBER OF ESTABLISHMENTS.			AVERAGE NUMBER OF WAGE EARNERS.			VALUE OF PRODUCTS.			VALUE ADDED BY MANUFACTURE (VALUE OF PRODUCTS LESS COST OF MATERIALS).		
	Expressed in thousands.											
	1909	1904	1899	1909	1904	1899	1909	1904	1899	1909	1904	1899
WASHINGTON:												
Aberdeen.....	43			1,509			\$3,590			\$1,418		
Bellingham.....	96	73	47	1,566	1,314	1,502	4,600	\$3,294	\$2,629	2,178	\$1,643	\$1,076
Everett.....	94			2,375			7,423			3,564		
North Yakima.....	36			602			2,175			1,225		
Seattle.....	751	467	352	11,331	6,390	4,440	50,569	25,406	15,323	21,884	11,048	6,459
Spokane.....	286	188	84	3,989	2,428	1,060	18,880	8,831	3,756	8,637	4,131	1,723
Tacoma.....	276	236	174	5,765	4,457	3,552	22,450	14,264	10,301	8,734	6,107	3,960
Walla Walla.....	48	33	34	388	242	213	2,317	1,486	964	932	557	343
WEST VIRGINIA:												
Bluefield.....	15			670			1,465			576		
Charleston.....	63	54	48	951	887	686	3,235	2,101	1,262	1,098	1,103	603
Huntington.....	67	44	29	3,156	2,229	1,717	6,511	4,407	3,642	3,129	1,731	1,144
Martinsburg.....	39			1,420			2,516			1,239		
Parkersburg.....	75	68	72	1,495	1,444	1,237	5,499	3,778	3,101	1,939	1,290	1,215
Wheeling.....	176	195	178	7,809	7,127	6,190	27,077	21,797	15,074	11,052	9,308	6,668
WISCONSIN:												
Appleton.....	97	108	88	2,125	2,486	1,561	6,734	6,673	3,861	2,477	2,647	1,504
Ashland.....	35	37	41	1,116	1,361	1,812	2,748	4,210	3,600	1,262	2,018	2,084
Beloit.....	51	44	43	2,986	2,471	1,845	5,886	4,485	2,800	3,447	2,650	1,462
Eau Claire.....	75	73	64	2,524	1,985	1,758	5,855	3,602	3,876	2,881	1,803	1,764
Fond du Lac.....	97	85	74	2,707	2,566	1,520	8,227	5,600	2,861	3,153	2,289	1,226
Green Bay.....	102	103	79	2,579	2,111	1,427	6,235	4,873	2,709	2,842	2,177	1,346
Janesville.....	78	73	72	1,451	1,348	1,398	5,156	3,846	3,184	2,279	1,790	1,415
Kenosha.....	62	45	38	6,449	4,354	3,090	23,182	12,363	7,334	8,409	4,971	2,311
La Crosse.....	151	150	131	3,329	2,644	2,763	14,103	8,139	7,677	6,306	3,414	3,032
Madison.....	116	84	69	1,792	1,476	1,365	5,467	3,291	2,689	3,130	1,998	1,551
Manitowoc.....	80	76	62	1,525	1,321	975	5,939	4,428	1,935	1,976	1,488	1,099
Marinette.....	43	37	45	1,491	1,645	2,485	3,309	3,633	4,411	1,606	2,052	2,697
Milwaukee.....	1,764	1,527	1,419	59,502	43,366	41,220	208,324	137,995	110,854	87,703	66,892	51,160
Oshkosh.....	159	134	129	5,778	4,840	4,226	14,739	8,652	8,081	7,658	4,220	3,799
Racine.....	142	148	135	8,381	6,504	6,138	24,673	16,459	11,676	13,161	9,316	5,750
Sheboygan.....	109	96	80	5,988	5,903	4,992	11,299	9,751	6,907	5,210	4,198	3,195
Superior.....	99	72	75	1,847	1,343	1,765	6,574	6,357	6,836	2,302	1,709	1,810
Wausau.....	67	58	56	2,082	1,945	1,716	6,287	4,645	3,381	2,982	2,096	1,473
WYOMING:												
Cheyenne.....	22	18	17	853	552	423	1,577	925	722	970	617	433
All other cities ¹	142	54	71	16,331	8,401	6,892	82,537	22,346	15,272	22,218	11,389	6,666

¹ Includes Gary, Ind., Great Falls, Mont., Lackawanna, N. Y., Lakewood, Ohio, and Newport News, Va., in 1909, and Great Falls, Mont., and Newport News, Va. in 1904 and 1899.