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.

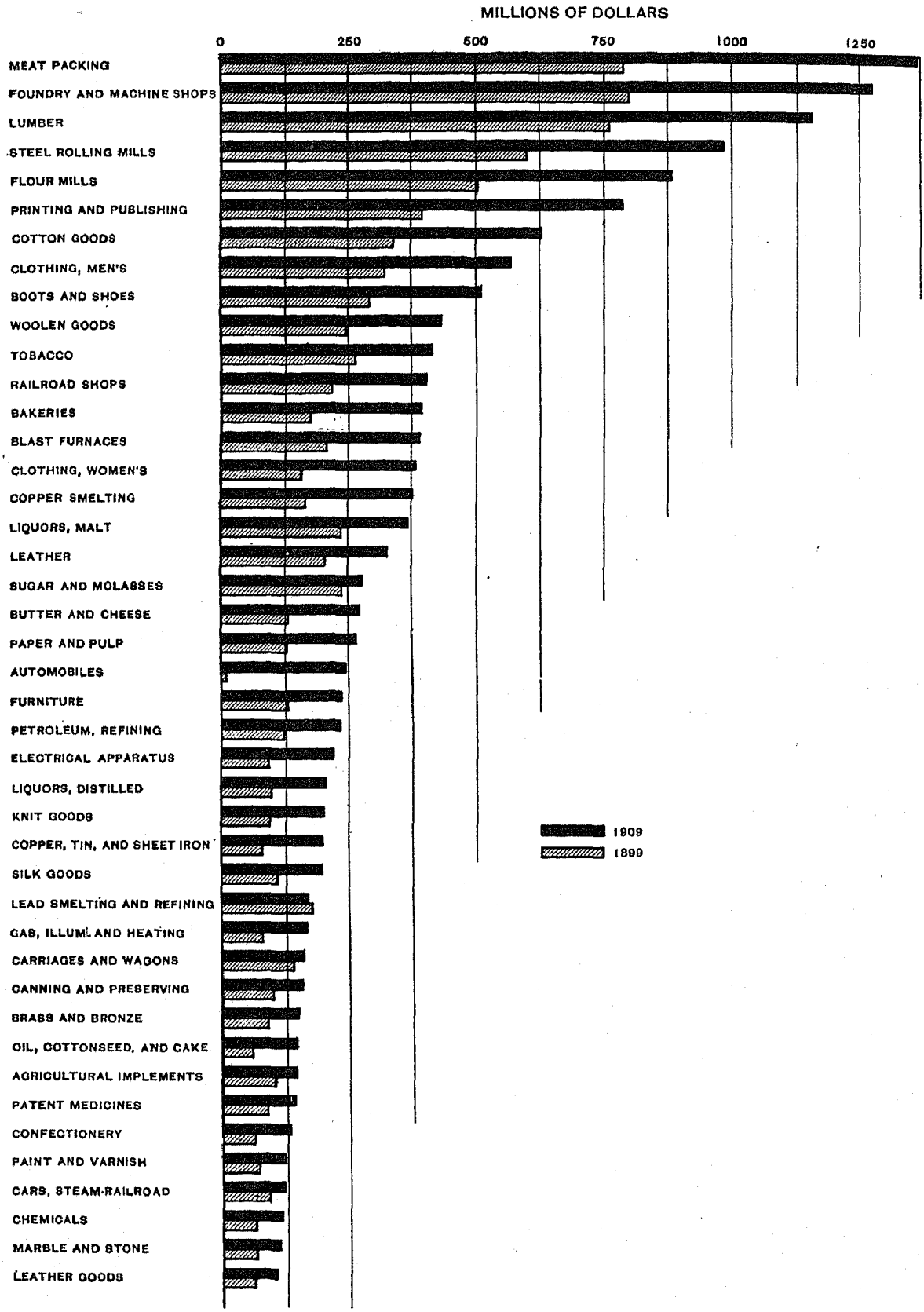
If the plants constituting an establishment as thus defined were not all located within the same city or state, separate reports were secured in order that the separate totals might be included in the statistics for each city or state. In some instances separate reports were secured for different industries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

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 nonmanufacturing 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	$463,983,000
1859 (census of 1860)	140,433	1,009,856,000	1,311,246	378,879,000	1,031,606,000	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	3,285,860,000	1,395,118,000
Per cent of increase, 1859 to 1869	79.6	67.8	56.6	63.8	93.0	79.5	63.3
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	7,343,628,000	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	5,468,383	2,610,445,000	8,500,208,000	14,793,903,000	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	20,672,052,000	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 representing 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.

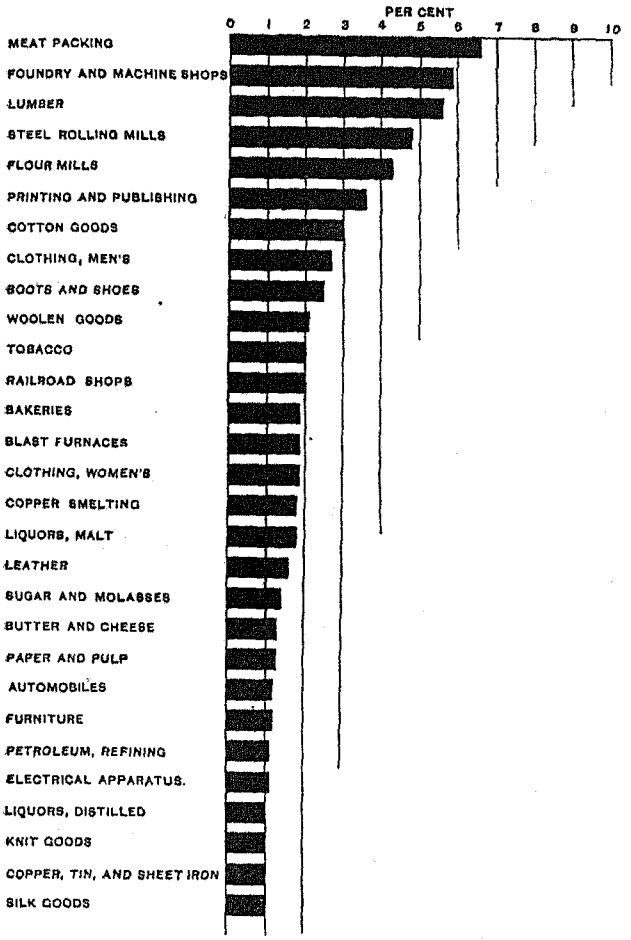
Table 4

INDUSTRY.	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
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**	**30.3**
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	19	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	39	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	26.0	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	196,912	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	−0.9	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	59,968	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	46,618	29	0.6	149,989	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	9.0	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

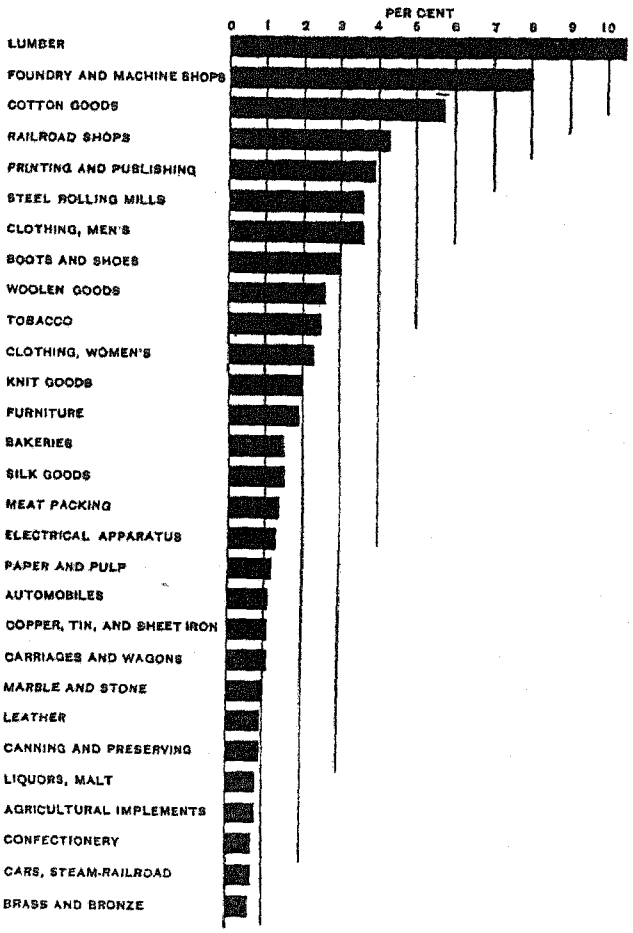
[1] Per cent of increase is based on figures in Table 110. A minus sign (−) denotes decrease.

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 includes 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.

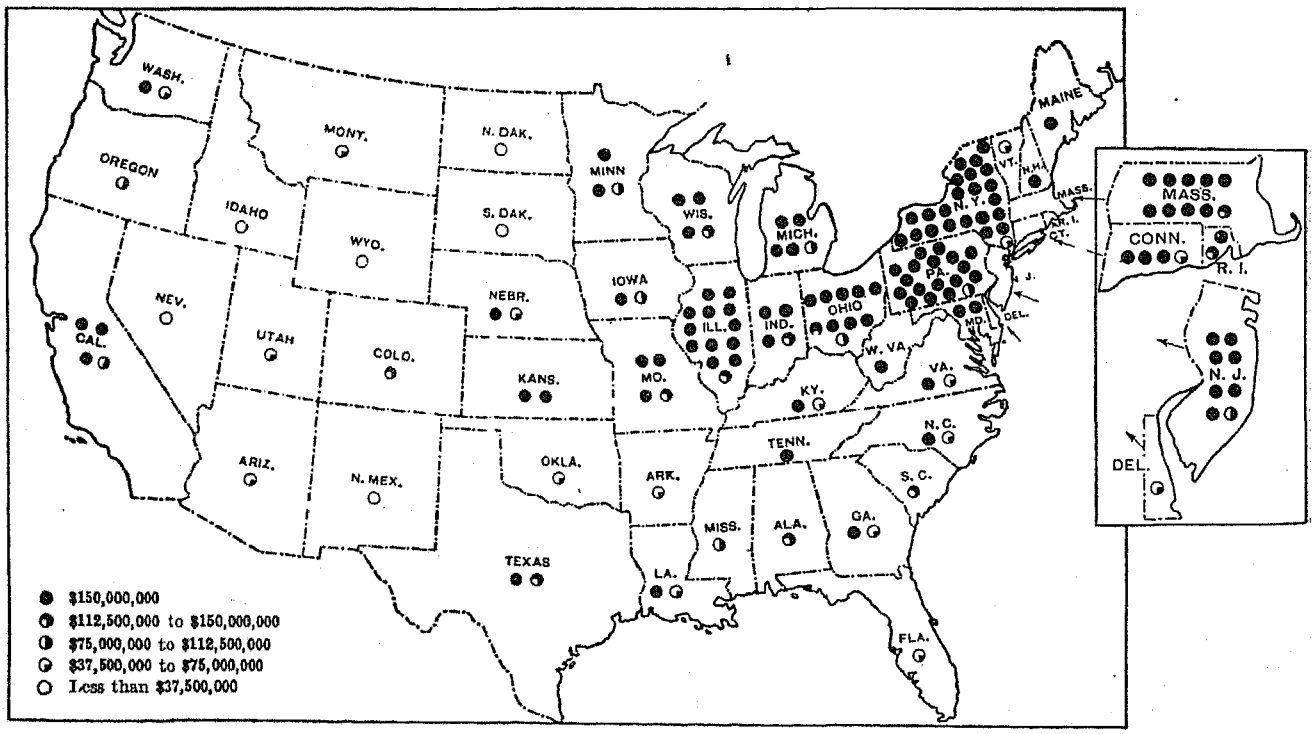
In considering the relative importance of the industries shown in Table 110 and not included in Table 4, it should be noted that there are several industries listed the figures given for which fall far short of being a complete presentation of the statistics for that branch of manufactures covered by 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**	**39.7**	**29.7**	**35.5**	**30.3**
New York	9,113,614	44,935	1,003,981	1	15.2	3,369,490	1	16.3	1,512,586	1	17.7	17.2	17.9	35.4	22.9	32.7	33.5
Pennsylvania	7,665,111	27,563	877,543	2	13.3	2,626,742	2	12.7	1,044,182	2	12.2	15.0	15.0	34.3	18.5	28.5	17.5
Illinois	5,638,591	18,026	465,764	4	7.0	1,919,277	3	9.3	758,350	3	8.9	22.8	14.0	36.1	25.8	33.0	29.8
Massachusetts	3,366,416	11,684	584,559	3	8.8	1,490,529	4	7.2	659,764	4	7.7	19.7	11.4	32.6	23.8	32.6	21.7
Ohio	4,767,121	15,138	446,934	5	6.8	1,437,936	5	7.0	613,734	5	7.2	22.7	18.2	49.7	28.3	41.7	27.6
New Jersey	2,537,167	8,817	326,223	6	4.9	1,145,529	6	5.5	425,496	6	5.0	22.5	24.5	47.9	40.0	40.0	39.2
Michigan	2,810,173	9,159	231,499	7	3.5	685,109	7	3.3	316,497	7	3.7	32.1	12.5	59.7	34.2	59.0	38.5
Wisconsin	2,333,860	9,721	182,583	10	2.8	590,306	8	2.9	243,949	9	2.9	20.6	10.1	43.6	25.8	32.7	30.4
Indiana	2,700,876	7,960	186,984	9	2.8	579,075	9	2.8	244,700	8	2.9	21.3	10.9	47.0	16.9	41.1	22.2
Missouri	3,293,335	8,375	152,993	11	2.3	574,111	10	2.8	219,700	11	2.6	14.9	23.6	30.6	39.0	17.3	41.8
California	2,377,549	7,659	115,296	13	1.7	529,761	11	2.6	204,523	12	2.4	14.9	30.0	44.3	42.7	35.0	63.8
Connecticut	1,114,756	4,251	210,792	8	3.2	490,272	12	2.4	233,013	10	2.7	16.1	13.7	32.8	17.1	31.1	22.2
Minnesota	2,075,708	5,561	84,767	18	1.3	409,420	13	2.0	127,798	13	1.5	21.7	7.9	33.0	37.6	31.3	32.6
Kansas	1,690,949	3,435	44,215	33	0.7	325,104	14	1.6	66,220	28	0.8	24.3	31.2	64.0	28.7	58.7	25.4
Maryland	1,295,346	4,837	107,921	15	1.6	315,669	15	1.5	116,620	15	1.4	14.6	(2)	29.7	15.3	24.9	14.2
Rhode Island	542,610	1,951	113,538	14	1.7	280,344	16	1.4	122,152	14	1.4	16.7	10.3	38.7	22.1	36.9	15.0
Texas	3,896,542	4,588	70,230	25	1.1	272,896	17	1.3	94,717	19	1.1	43.1	27.1	81.3	62.0	00.7	53.0
Iowa	2,224,771	5,528	61,635	29	0.9	259,238	18	1.2	88,531	22	1.0	24.6	11.4	61.4	20.8	53.4	22.6
Louisiana	1,656,388	2,516	76,165	21	1.2	223,949	19	1.1	89,084	21	1.0	36.4	36.6	20.2	67.3	28.5	92.7
Kentucky	2,289,905	4,776	65,400	27	1.0	223,754	20	1.1	111,975	16	1.3	9.4	15.6	40.1	26.3	53.0	23.9
Washington	1,141,990	3,674	69,120	26	1.0	220,746	21	1.1	102,858	17	1.2	52.9	43.4	71.4	81.9	64.2	92.5
Virginia	2,061,612	5,685	105,676	16	1.6	219,794	22	1.1	94,211	20	1.1	31.6	21.2	47.7	37.0	44.5	32.3
North Carolina	2,206,287	4,931	121,473	12	1.8	216,656	23	1.0	94,794	18	1.1	42.3	18.0	52.0	67.1	49.9	56.5
Georgia	2,609,121	4,792	104,588	17	1.6	202,863	24	1.0	85,893	23	1.0	12.8	11.3	34.3	59.8	27.4	49.2
Nebraska	1,192,214	2,500	24,336	37	0.4	199,019	25	1.0	47,938	31	0.6	20.1	8.5	28.5	18.9	55.3	−10.2
Tennessee	2,184,789	4,609	73,840	22	1.1	180,217	26	0.9	76,201	25	0.9	21.9	31.8	30.6	48.7	30.0	53.5
Maine	742,371	3,546	79,955	19	1.2	176,029	27	0.8	78,928	24	0.9	6.7	7.2	22.2	27.5	23.4	23.6
New Hampshire	430,572	1,961	78,658	20	1.2	164,581	28	0.8	66,424	27	0.8	20.3	−3.4	33.1	14.9	31.8	6.3
West Virginia	1,221,119	2,586	63,893	28	1.0	161,950	29	0.8	69,072	26	0.8	46.0	32.3	63.5	47.8	54.8	49.8
Alabama	2,138,093	3,398	72,148	24	1.1	145,962	30	0.7	62,519	29	0.7	16.0	18.0	33.7	51.4	28.3	42.8
Colorado	799,024	2,034	28,067	36	0.4	130,044	31	0.6	49,553	30	0.6	28.7	11.9	29.9	12.4	33.8	30.8
South Carolina	1,515,400	1,854	73,046	23	1.1	113,236	32	0.5	46,885	32	0.6	22.9	26.4	42.7	48.8	59.4	28.7
Oregon	672,765	2,246	28,750	35	0.4	93,005	33	0.4	42,453	35	0.5	55.2	28.1	67.5	51.7	74.3	57.7
Mississippi	1,797,114	2,598	50,384	31	0.8	80,555	34	0.4	43,629	34	0.5	30.2	44.4	40.2	70.4	37.8	84.3
Arkansas	1,574,449	2,925	44,982	32	0.7	74,916	35	0.4	39,981	36	0.5	35.9	5.0	39.1	35.0	24.7	48.5
Montana	376,053	677	11,655	41	0.2	73,272	36	0.4	24,092	38	0.3	30.1	−9.1	10.3	25.9	−5.5	12.4
Florida	752,619	2,159	57,473	30	0.9	72,890	37	0.4	46,762	33	0.6	36.5	18.7	44.9	47.1	38.5	58.3
Vermont	355,956	1,958	33,788	34	0.5	68,310	38	0.3	33,487	37	0.4	2.1	17.5	8.3	22.5	9.2	22.0
Utah	373,351	749	11,785	40	0.2	61,989	39	0.3	20,723	40	0.2	46.4	48.8	59.2	116.5	48.2	113.8
Oklahoma	1,657,155	2,310	13,143	39	0.2	53,682	40	0.3	19,529	41	0.2	140.9	129.1	119.5	200.7	142.1	198.3
Delaware	202,322	726	21,238	38	0.3	52,840	41	0.3	21,902	39	0.3	15.0	−10.2	28.4	−0.4	34.6	−1.9
Arizona	204,354	311	6,441	44	0.1	50,257	42	0.2	16,657	42	0.2	34.4	53.3	79.0	37.4	23.5	7.4
District of Columbia	331,069	518	7,707	43	0.1	25,289	43	0.1	15,042	43	0.2	22.4	2.3	37.7	11.8	41.5	18.7
Idaho	325,594	725	8,220	42	0.1	22,400	44	0.1	12,480	44	0.1	168.5	97.2	155.4	192.2	165.5	200.9
North Dakota	577,056	752	2,789	48	(2)	19,138	45	0.1	5,464	46	0.1	58.9	29.2	87.3	63.2	75.0	48.0
South Dakota	583,888	1,020	3,602	46	0.1	17,870	46	0.1	6,394	45	0.1	44.5	12.0	36.6	37.3	45.7	44.1
Nevada	81,875	177	2,257	49	(2)	11,887	47	0.1	3,521	49	(2)	181.4	59.1	283.9	145.5	139.8	145.1
New Mexico	327,301	313	4,143	45	0.1	7,898	48	(2)	4,637	47	0.1	19.1	39.7	38.4	40.5	33.[illegible]	68.3
Wyoming	145,965	268	2,867	47	(2)	6,249	49	(2)	3,641	48	(2)	56.3	−11.0	77.4	7.8	63.9	17.1

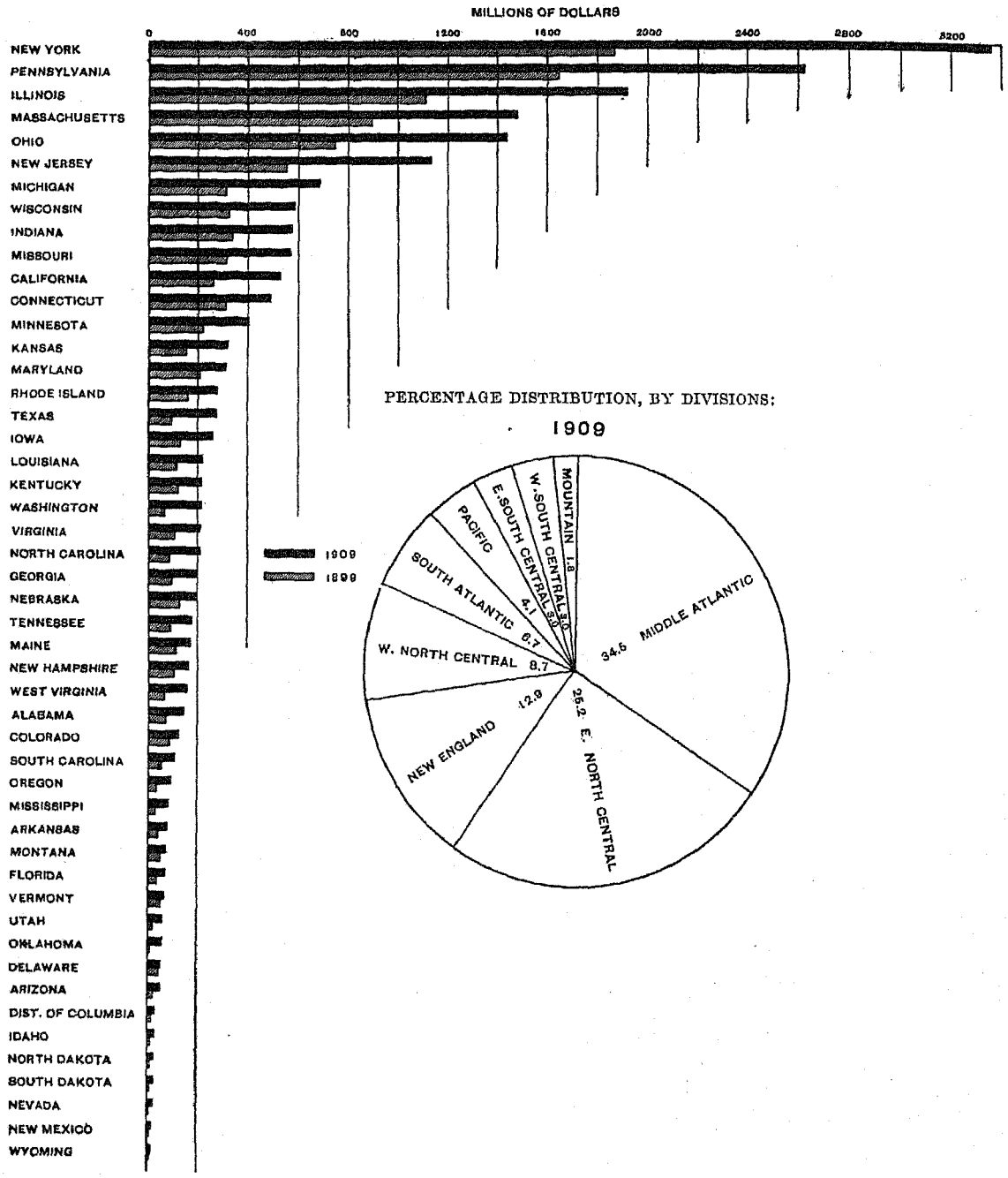
[1] Per cent of increase is based on figures in Table 111. A minus sign (−) denotes decrease.

[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.

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



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

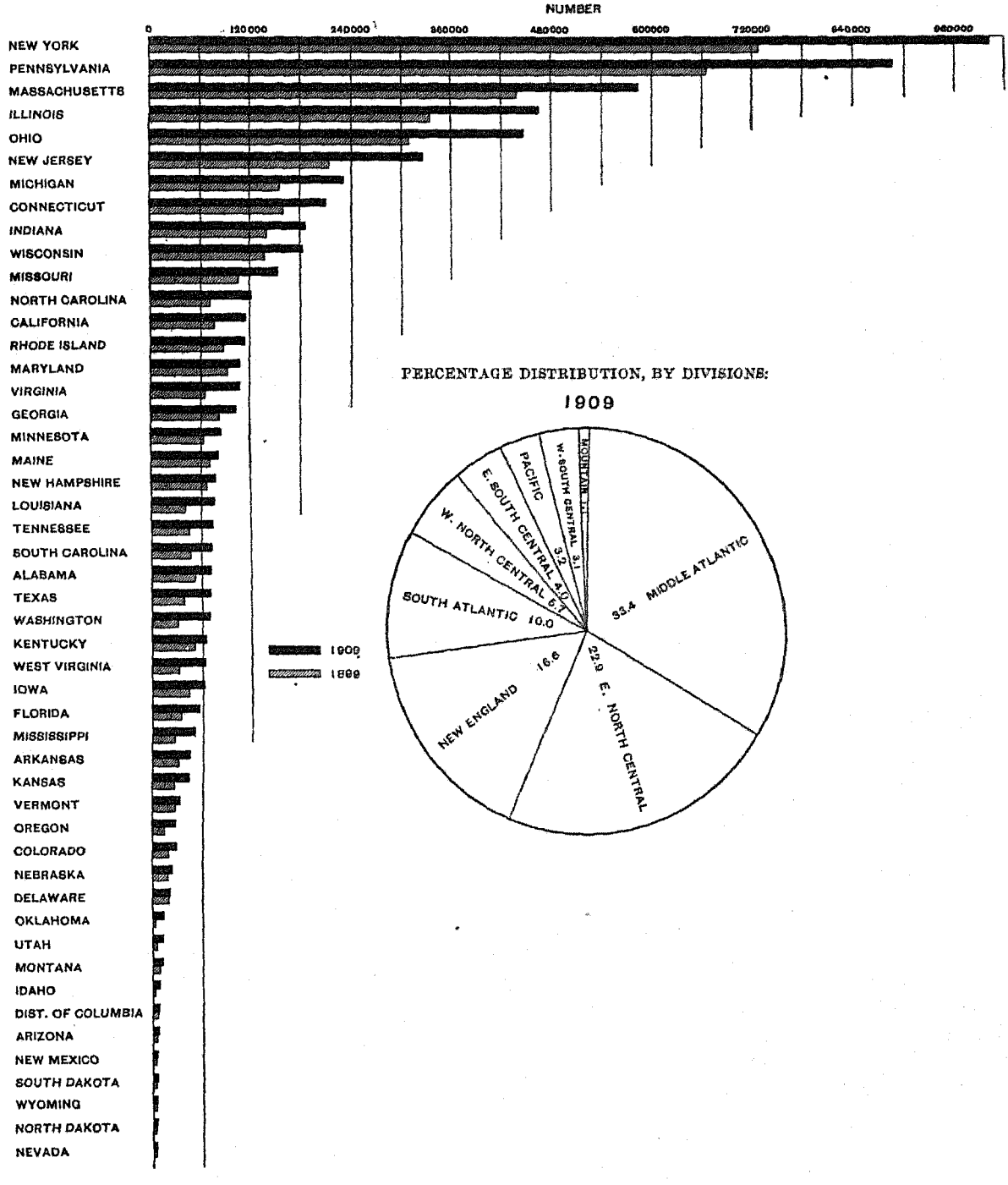


Table 6 DIVISION.	Population.	Number of establishments.	WAGE EARNERS. Average number.	Rank.	Per cent distribution.	VALUE OF PRODUCTS. Amount (expressed in thousands).	Rank.	Per cent distribution.	VALUE ADDED BY MANUFACTURE. Amount (expressed in thousands).	Rank.	Per cent distribution.	PER CENT OF INCREASE. Wage earners (average number). 1904-1909	1899-1904	Value of products. 1904-1909	1899-1904	Value added by manufacture. 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**	**30.3**
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	29.8
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	625,443	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.

Table 7

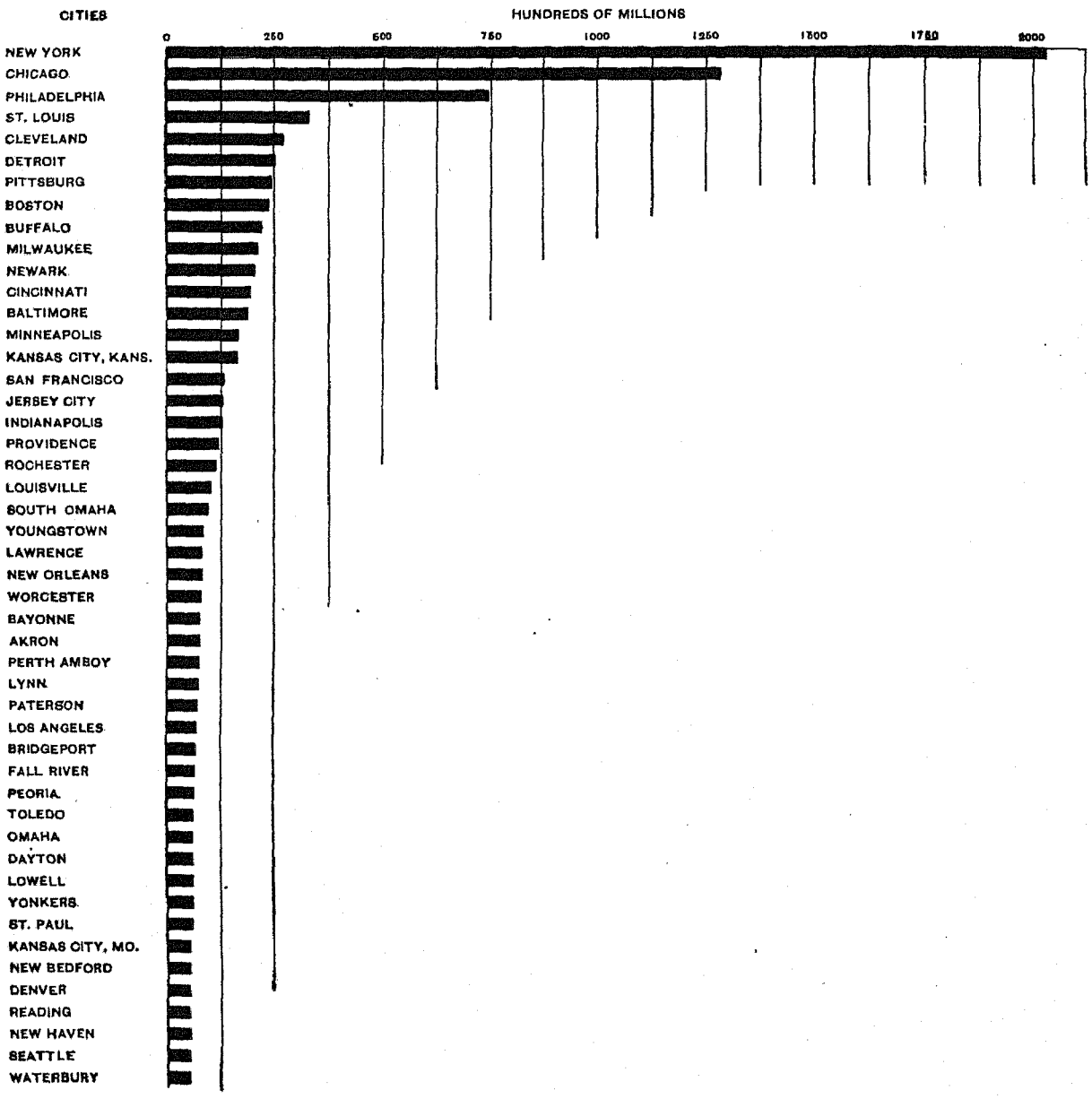
City.	Population.	Number of establishments.	Wage earners. Average number.	Rank.	Value of products. Amount (expressed in thousands).	Rank.	Value added by manufacture. Amount (expressed in thousands).	Rank.	Per cent of increase.[1] Wage earners (average number). 1904–1909	1899–1904	Value of products. 1904–1909	1899–1904	Value added by manufacture. 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	251,884	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	149,306	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	26.3	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	9.5	−3.4
Boston, Mass.	670,585	3,155	69,637	8	237,457	8	112,880	7	17.7	11.9	28.8	13.3	25.8	11.5
Buffalo, N. Y.	423,715	1,753	51,412	13	218,804	9	82,266	12	18.0	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	18.2	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	79,954	13	9.8	−2.3	24.5	11.1	14.9	16.2
Minneapolis, Minn.	301,408	1,102	26,962	25	165,405	14	45,412	18	24.4	10.5	36.5	28.3	40.7	26.6
Kansas City, Kans.	82,331	165	12,294	42	164,081	15	19,691	44	16.8	11.0	70.1	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.	267,779	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	39.1	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	−3.0	79.6	−3.2
Youngstown, Ohio	79,066	115	10,498	45	81,271	23	18,979	45	29.7	−6.7	73.5	38.2	62.6	8.3
Lawrence, Mass.	85,892	162	30,542	20	79,993	24	34,555	23	39.4	4.8	66.5	15.1	85.6	10.2
New Orleans, La.	339,075	848	17,186	37	78,794	25	30,062	28	−1.6	7.9	−3.2	41.7	33.1	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	51.1	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	52.4	128.8	41.4
Perth Amboy, N. J.	32,121	89	5,866	50	73,093	29	9,161	50	48.5	97.0	110.0	147.5	104.3	65.2
Lynn, Mass.	89,336	431	27,368	23	71,503	30	30,142	26	27.1	31.5	30.0	39.8	34.6	50.5
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	16.1
Los Angeles, Cal.	319,198	1,325	17,327	36	68,586	32	29,673	29	66.2	101.5	97.0	130.0	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	36.9
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	10.3	12.7	41.8	57.0	−38.8
Dayton, Ohio	116,577	513	21,549	31	60,378	38	32,850	24	26.1	18.6	52.5	27.7	55.7	26.4
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	76.9	93.9	57.9	31.7
St. Paul, Minn.	214,744	719	19,339	33	58,990	41	28,690	30	34.6	10.3	53.9	27.5	52.4	33.1
Kansas City, Mo.	248,381	902	14,643	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	48.8	17.0	80.7	26.0	84.4	15.2
Denver, Colo.	213,381	766	12,058	43	51,538	44	20,611	43	24.7	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	9.8	21.8	28.8	13.7	26.5	12.7
Seattle, Wash.	237,194	751	11,331	44	50,569	47	21,884	39	77.3	43.9	99.0	65.8	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	30.7	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.

Table 8

	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	.....	593	.....	365	.....	178	.....	50	.....	.....	.....
	1900	.....	436	.....	277	.....	122	.....	37	.....	.....	.....
Population	1910	91,972,266	34,002,692	37.0	5,495,594	6.0	8,204,960	8.9	20,302,138	22.1	57,969,574	63.0
	1900	75,994,575	24,052,670	31.7	4,297,118	5.7	5,547,205	7.3	14,208,347	18.7	51,941,905	68.3
Number of establishments	1909	268,491	135,772	50.6	18,936	7.1	27,061	10.1	89,775	33.4	132,719	49.4
	1899	207,514	102,918	49.6	15,463	7.5	20,147	9.7	67,308	32.4	104,596	50.4
Average number of wage earners.	1909	6,615,046	4,316,642	65.3	678,467	10.3	1,126,253	17.0	2,511,922	38.0	2,298,404	34.7
	1899	4,712,763	3,044,439	64.6	524,900	11.1	767,293	16.3	1,752,246	37.2	1,668,324	35.4
Value of products	1909	$20,672,051,870	$14,264,878,807	69.0	$1,946,703,215	9.4	$3,582,403,574	17.3	$8,735,772,018	42.3	$6,407,173,063	31.0
	1899	11,406,926,701	7,864,564,177	68.9	1,052,639,594	9.2	1,843,124,795	16.1	4,968,799,788	43.6	3,542,362,524	31.1
Value added by manufacture	1909	8,529,260,992	6,003,005,285	70.4	801,766,297	9.4	1,431,652,146	16.8	3,769,586,842	44.2	2,526,255,707	29.6
	1899	4,831,075,210	3,377,477,927	69.9	458,679,363	9.5	773,117,708	16.0	2,145,680,856	44.4	1,453,597,283	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:

Table 9

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	263,673	9,592
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**	**487,173**	**273,265**	**80,735**	**133,173**	**576,359**	**6,615,046**	**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	405	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	198,297	2.7	5.5	91.8
Brass and bronze products	45,441	2,160	828	584	748	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	18,431	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
Carriages 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	1,089	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	6,854	44,638	6.1	12.5	81.4
Copper, tin, and sheet-iron products	86,934	7,209	4,423	1,288	1,558	6,650	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	997	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	7,838	39,453	28.4	11.9	59.7
Foundry and machine-shop products	615,485	31,605	9,851	9,348	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	10,806	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	260,762	4,286	47	779	3,460	16,400	240,076	1.6	6.3	92.1
Leather goods	43,525	4,209	2,552	760	897	4,409	34,907	9.7	10.1	80.2
Leather, tanned, curried, and finished	67,100	2,331	784	629	918	2,567	62,202	3.5	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	639	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	695,019	8.7	2.8	88.5
Marble and stone work	77,275	8,453	6,026	867	1,560	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	250	773	1,275	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	30.6	55.7
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	11,643	80,700	258,434	12.7	20.8	66.5
Silk and silk goods, including throwsters	105,238	2,236	664	480	1,092	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	89,728	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	17,634	809	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	1,916,361	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.

Table 11

CLASS.	PERSONS ENGAGED IN MANUFACTURES.				
	1909		1904		Per cent of increase, 1904–1909.
	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	97,250	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	33.3	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	1,468	112	91.8	7.6	0.1
Canning and preserving	59,968	155,847	67,219	77,593	11,035	43.1	49.8	7.0
Carriages and wagons and materials	69,928	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	58,046	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	103,063	1,480	35.8	63.3	0.9
Confectionery	44,638	52,421	18,836	30,453	3,132	35.9	58.1	6.0
Copper, tin, and sheet-iron products	73,615	78,909	66,797	9,716	2,396	84.6	12.3	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	87,256	102,950	78,605	23,398	947	76.4	22.7	0.9
Flour-mill and gristmill products	39,453	42,495	41,787	565	143	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	138,829	132,176	3,677	2,976	95.2	2.6	2.1
Gas, illuminating and heating	37,215	37,396	37,308	71	17	99.8	0.2	(2)
Hosiery and knit goods	129,275	136,713	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	64,065	2,230	482	95.9	3.3	0.7
Liquors, distilled	6,430	8,130	7,008	1,111	11	86.2	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	234	99.5	0.2	0.3
Oil, cottonseed, and cake	17,071	29,691	29,551	49	91	99.5	0.2	0.3
Paint and varnish	14,240	14,426	13,207	1,137	82	91.5	7.9	0.6
Paper and wood pulp	75,978	78,672	68,497	9,909	266	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	0.3
Printing and publishing	258,434	272,027	204,388	60,973	6,666	75.1	22.4	2.4
Silk and silk goods, including throwsters	99,037	102,369	35,785	58,441	8,143	35.0	57.1	8.0
Slaughtering and meat packing	89,728	94,854	88,352	5,960	542	93.1	6.3	0.6
Smelting and refining, copper	15,628	16,029	16,013	.....	16	99.9	.....	0.1
Smelting and refining, lead	7,424	8,002	8,001	1	.....	99.9	(2)	.....
Sugar and molasses, not including beet sugar	13,526	25,134	24,626	376	132	98.0	1.5	0.5
Tobacco manufactures	166,810	181,036	90,417	84,193	6,426	49.9	46.5	3.6
Woolen, worsted, and felt goods, and wool hats	168,722	175,171	92,830	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 13

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	7,908	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	17,564	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	6,641	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	1,239	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	2,313	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	2,113	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	228,788	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	4.1
Connecticut	210,792	154,724	50,647	5,421	73.4	24.0	2.6
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	231,499	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	13,863	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	86,082	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	80.3	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	70,230	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	8,035	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	3,995	82	66	96.4	2.0	1.6
Arizona	6,441	6,366	38	37	98.8	0.6	0.6
Utah	11,785	10,470	1,205	110	88.8	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 representative 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**	**5,468,383**	**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	159,885	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	8.0
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	5.4
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	8.1
Cork, cutting	54.2	45.1	43.8	40.4	46.7	48.2	5.3	8.3	8.0
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	8.6
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	2.0
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	1.8
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
East South Central	87.4	85.9	86.2	9.5	9.7	9.0	3.1	4.3	4.8
West 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	78.5	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	98.8	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 England 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	5,330,471	89.9	93.9
March	6,423,517	5,459,736	91.7	96.0
April	6,437,633	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	96.2
July	6,486,676	5,323,966	92.6	93.8
August	6,656,933	5,420,618	95.0	95.5
September	6,898,765	5,608,412	98.5	98.8
October	6,997,090	5,676,920	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.

Table 19

INDUSTRY.	WAGE EARNERS.					
	Average number.	Maximum number.		Minimum number.		
		Month.	Number.	Month.	Number.	Per cent of maximum.
Principal industries.						
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
Industries showing large variation.						
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, December. 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.

Table 20 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**	**5,468,383**	**14,793,902,563**	**6,293,694,753**
Average per establishment—				
1909	.....	**25**	**76,993**	**31,767**
1904	.....	**25**	**68,433**	**29,113**
Individual:				
1909	140,605	804,883	2,042,061,500	968,824,072
1904	113,946	755,923	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	951,383,741
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	3,351	583	319	12.8	9.5	90,696,932	46,168,946	23.6	18.6
Confectionery	1,944	1,348	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	98.9
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	98.9
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	536,795,071	68.7	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	134,495,867	92,403,120	68.3	69.3
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.							
			Number.		Per cent of total.		Amount.		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**	**$16,841,116,634**	**$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	2,913,060,832	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	19,564	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	695,018,111	423,992,759	82.4	76.9
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	62.4	57.7
Massachusetts	11,684	10,723	3,483	2,555	29.8	23.8	1,182,935,652	810,543,002	79.4	72.1
Rhode Island	1,951	1,617	659	512	33.8	31.7	243,426,998	158,322,601	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	56.1
New Jersey	8,817	7,010	2,560	1,834	29.0	26.2	971,904,531	617,236,276	84.8	79.7
Pennsylvania	27,563	23,495	5,880	4,540	21.3	19.3	2,053,458,538	1,403,081,857	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	317,481,228	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	83.6
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	116,246,585	73.0	72.4
Missouri	8,375	6,464	2,447	1,847	29.2	28.6	508,761,173	379,405,293	88.6	86.3
North Dakota	752	507	133	81	17.7	16.0	13,586,608	5,146,817	71.0	50.4
South Dakota	1,020	686	216	112	21.2	16.3	9,870,131	6,003,547	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	[1] 160	27.8	25.0	36,071,988	[1] 28,921,912	68.3	70.3
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	114,976,572	81.4	76.1
Florida	2,159	1,413	501	[1] 308	23.2	21.7	45,815,852	[1] 27,239,766	62.9	54.2
EAST SOUTH CENTRAL:										
Kentucky	4,776	3,734	1,147	862	24.0	23.1	178,650,245	117,046,726	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	2,598	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	55,585,992	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	[1] 17,491,144	73.4	71.1
Texas	4,588	3,158	1,352	839	29.5	26.6	231,059,361	120,133,146	84.7	79.8
MOUNTAIN:										
Montana	677	382	203	118	30.0	30.9	68,458,197	63,369,703	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	[1] 68	[1] 55	25.0	32.0	[1] 4,664,800	[1] 2,751,358	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	[1] 96	[1] 53	30.4	25.6	[1] 6,253,689	[1] 4,645,600	79.2	81.4
Arizona	311	169	[1] 122	71	38.6	42.0	[1] 48,305,675	27,135,784	96.1	96.6
Utah	749	606	294	203	39.3	33.5	56,234,329	34,765,530	90.7	89.3
Nevada	177	115	[1] 70	34	37.3	29.6	[1] 10,761,784	2,220,209	90.5	71.7
PACIFIC:										
Washington	3,674	2,751	1,444	926	39.3	33.7	185,171,875	103,215,882	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**	**$8,529,360,992**
1904	**216,180**	**5,468,383**	**14,793,902,563**	**6,293,694,759**
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	86,088	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	2,515,004	6,109,012,538	2,782,641,883
$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	18.8	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**	**$9,053,580,393**	**$5,628,456,171**	**43.8**	**38.0**
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	170,386,862	13,995,669	68.4	46.6
Boots and shoes, including cut stock and findings	1,918	1,895	135	[1] 62	7.0	3.3	244,547,642	[1] 119,079,802	47.7	33.3
Brass and bronze products	1,021	813	24	[2] 17	2.4	2.1	85,947,143	[2] 51,736,503	57.3	50.5
Bread and other bakery products	23,926	18,226	21	14	0.1	0.1	36,385,586	23,083,467	9.2	8.6
Butter, cheese, and condensed milk	8,479	8,926	9	(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	13,957,216	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	73	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	101,380,521	29.6	24.9
Clothing, women's	4,558	3,351	22	11	0.5	0.3	30,612,144	14,037,712	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	44,988,549	25,257,976	22.5	21.1
Cotton goods, including cotton small wares	1,324	1,154	163	99	12.3	8.6	332,345,643	197,884,132	52.9	43.9
Electrical machinery, apparatus, and supplies	1,009	784	31	22	3.1	2.8	126,375,340	85,154,294	57.1	60.5
Flour-mill and gristmill products	11,691	10,051	138	87	1.2	0.9	319,047,659	202,952,454	36.1	28.5
Foundry and machine-shop products	13,253	10,765	180	111	1.4	1.0	356,015,899	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	96,395,457	73,898,211	57.8	59.0
Hosiery and knit goods	1,374	1,144	25	11	1.8	1.0	37,125,550	15,018,710	18.5	11.0
Iron and steel, blast furnaces	208	190	86	49	41.3	25.8	335,992,823	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	570,175,787	91.0	84.6
Leather, tanned, curried, 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	138,046,347	84,069,197	36.8	28.2
Lumber and timber products	40,671	25,153	72	[3] 26	0.2	0.1	103,756,410	[3] 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	29,873,089	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	[3] 14	0.5	0.5	33,632,561	[3] 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	[3] 43	0.2	0.2	137,082,261	[3] 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	[3] 110	10.1	9.0	1,176,461,413	[3] 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	248,343,985	135,993,881	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	**268,491**	**216,180**	**3,060**	**1,900**	**1.1**	**0.9**	**$9,053,580,393**	**$5,628,456,171**	**43.8**	**38.0**
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	80,784,016	45,369,594	49.1	36.7
Vermont	1,958	1,699	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	719,811,362	458,142,511	48.3	40.8
Rhode Island	1,951	1,617	69	41	3.5	2.5	135,285,205	80,055,916	48.3	39.6
Connecticut	4,251	3,477	93	65	2.2	1.9	241,562,658	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	7,010	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	901,539,525	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	272,679,004	134,974,371	47.1	34.3
Illinois	18,026	14,921	273	168	1.5	1.1	1,078,746,101	755,157,389	56.2	53.5
Michigan	9,159	7,446	88	41	1.0	0.6	258,341,090	100,138,469	37.7	23.3
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	48.5	43.1
Iowa	5,528	4,785	29	11	0.5	0.2	95,585,315	41,089,284	36.9	25.6
Missouri	8,375	6,464	94	68	1.1	1.1	271,595,930	189,336,754	47.3	43.1
Nebraska	2,500	1,819	17	9	0.7	0.5	137,133,162	110,013,438	68.9	71.0
Kansas	3,435	2,475	34	21	1.0	0.8	204,385,280	114,177,287	62.9	57.6
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)	19.8	.....
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	62,481,895	25,154,989	38.6	25.4
North Carolina	4,931	3,272	22	9	0.4	0.3	58,668,316	30,411,650	27.1	21.3
South Carolina	1,854	1,399	17	13	0.9	0.9	24,887,694	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	27.8	24.2
Tennessee	4,609	3,175	17	11	0.4	0.3	30,567,045	18,796,261	17.0	13.6
Alabama	3,398	1,882	22	14	0.6	0.7	42,048,999	25,070,580	28.8	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	75,417,505	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	52,545,498	68.1	79.1
Colorado	2,034	1,606	20	16	1.0	1.0	58,645,700	50,670,403	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	42,379,727	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	38.2	28.7
All other states [2]	5,853	3,560	8	6	0.1	0.2	17,938,958	8,162,677	10.8	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.

Table 26

ESTABLISHMENTS EMPLOYING—	ESTABLISHMENTS, WAGE EARNERS, AND PER CENT OF TOTAL.			
	Number of establishments.	Average number of wage earners.	Per cent of total.	
			Establishments.	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.

Table 27

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.			
	Establishments.	Wage earners (average number).	Establishments.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	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**	**1,546,706**	**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 cut stock 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	7,416	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	426	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	4,558	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	58	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	14,883	4.3	28.5	43.2	24.0
Liquors, distilled	613	6,430	41	487	1,798	76	3,132	9	1,500	.....	.....	28.0	48.8	23.3	.....
Liquors, malt	1,414	54,579	23	752	7,078	551	24,636	80	15,034	8	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	195,704	1,214	241,234	87	70,941	26.8	28.3	34.7	10.2
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	5.8
Oil, cottonseed, and cake	817	17,071	.....	511	5,703	301	10,772	5	596	.....	.....	33.4	63.1	3.5	.....
Paint and varnish	791	14,240	38	602	3,073	117	5,139	33	5,397	1	631	21.5	36.1	37.9	4.4
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	15,628	.....	.....	.....	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	.....	150	1,403	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— 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.			
	Establishments.	Wage earners.	Establishments.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	1 to 20 wage earners.	21 to 100 wage earners.	101 to 500 wage earners.	Over 500 wage earners.
United States	**268,491**	**6,615,046**	**27,712**	**193,487**	**952,497**	**34,508**	**1,546,706**	**11,021**	**2,265,096**	**1,763**	**1,850,747**	**14.4**	**23.4**	**34.2**	**28.0**
GEOGRAPHIC DIVISIONS:															
New England	25,351	1,101,290	2,132	17,116	91,068	4,012	183,104	1,699	362,839	392	463,279	8.3	16.6	33.0	42.1
Middle Atlantic	81,315	2,207,747	8,918	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	540,595	429	440,767	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	23.5
South Atlantic	28,088	663,015	1,669	21,271	118,935	3,854	169,759	1,135	231,455	159	142,866	18.0	25.6	34.9	21.5
East South Central	15,381	261,772	911	12,270	62,682	1,710	74,579	447	89,188	43	35,323	23.9	28.5	34.0	13.5
West South Central	12,339	204,520	1,028	9,645	49,189	1,262	53,546	373	74,471	31	27,323	24.1	26.2	36.5	13.3
Mountain	5,254	75,435	677	4,079	16,775	360	16,232	119	25,988	19	16,440	22.3	21.5	34.4	21.8
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	8.9
NEW ENGLAND:															
Maine	3,546	79,955	298	2,716	12,363	387	18,190	123	25,207	22	24,195	15.5	22.8	31.6	30.2
New Hampshire	1,961	78,658	158	1,409	7,201	256	11,326	114	24,621	24	35,510	9.1	14.4	31.3	45.1
Vermont	1,958	33,788	131	1,514	7,023	255	10,343	55	11,852	3	4,570	20.7	30.6	35.1	13.5
Massachusetts	11,684	584,559	943	7,548	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	95,670	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	16.9	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	10.0	19.7	36.7	33.5
Pennsylvania	27,563	877,543	3,539	18,353	89,102	3,966	183,793	1,438	300,898	267	303,750	10.1	21.0	34.2	34.6
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	23.8	32.3	29.6
Illinois	18,026	465,764	2,518	12,361	60,101	2,287	102,346	735	149,670	125	153,647	12.9	22.0	32.1	33.0
Michigan	9,159	231,499	1,200	6,297	28,054	1,154	54,516	447	91,443	61	57,486	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	6,183	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	38	6,807	7	6,993	15.1	19.9	32.1	32.9
Maryland	4,837	107,921	504	3,538	18,629	596	26,209	169	34,176	30	28,847	17.2	24.3	31.7	26.7
District of Columbia	518	7,707	75	351	1,937	83	3,665	8	1,547	1	558	25.1	47.5	20.1	7.2
Virginia	5,085	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	63,893	200	1,920	8,726	323	15,183	125	26,191	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	104,588	231	3,589	22,164	779	33,430	175	34,448	18	14,546	21.2	32.0	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	37.8	36.6	8.6
EAST SOUTH CENTRAL:															
Kentucky	4,776	65,400	403	3,801	16,724	462	20,780	102	19,830	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	26,348	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	13,068	20.6	24.5	36.8	18.1
Mississippi	2,598	50,384	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	88	3,462	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	30.2
Idaho	725	8,220	56	617	2,402	41	1,786	8	1,614	3	2,418	29.3	21.7	19.6	29.4
Wyoming	268	2,867	40	216	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	18.3	41.1	16.5
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	11,785	74	582	2,478	71	2,825	17	2,970	5	3,512	21.0	24.0	25.2	29.8
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	483	21,821	153	28,931	3	2,510	22.9	31.6	41.9	3.7
Oregon	2,246	28,750	232	1,759	7,695	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	738	32,228	190	39,976	18	14,576	24.7	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.

Table 29

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.			
	Salaries.	Wages.	Materials.	Miscellaneous expenses.
United States	**5.1**	**18.6**	**65.8**	**10.5**
GEOGRAPHIC DIVISIONS:				
New England	4.8	23.7	62.6	8.9
Middle Atlantic	5.4	18.6	65.3	10.8
East North Central	5.4	17.8	65.1	11.7
West North Central	4.2	12.4	75.1	8.3
South Atlantic	4.7	20.1	64.9	10.3
East South Central	5.2	18.3	60.2	16.2
West South Central	4.5	17.4	68.1	9.9
Mountain	3.9	17.8	71.6	6.7
Pacific	4.9	20.4	65.4	9.3
NEW ENGLAND:				
Maine	3.7	24.3	62.7	9.2
New Hampshire	2.8	24.3	65.8	7.1
Vermont	4.7	28.9	58.2	8.3
Massachusetts	4.8	22.8	62.9	9.5
Rhode Island	4.4	22.8	65.3	7.5
Connecticut	6.0	25.6	59.8	8.6
MIDDLE ATLANTIC:				
New York	6.2	18.7	62.2	12.9
New Jersey	4.7	16.4	69.7	9.2
Pennsylvania	4.7	19.3	67.2	8.8
EAST NORTH CENTRAL:				
Ohio	5.6	19.1	64.2	11.0
Indiana	5.0	18.2	63.7	13.1
Illinois	5.3	15.8	67.0	12.0
Michigan	5.9	20.1	62.3	11.6
Wisconsin	4.9	17.9	65.9	11.4
WEST NORTH CENTRAL:				
Minnesota	4.1	12.6	74.9	8.4
Iowa	4.7	13.9	73.2	8.2
Missouri	5.6	15.5	67.9	11.1
North Dakota	3.6	10.3	79.1	6.9
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
SOUTH ATLANTIC:				
Delaware	4.9	21.9	65.9	7.2
Maryland	4.8	15.9	69.6	9.7
District of Columbia	9.0	24.4	50.0	16.6
Virginia	4.6	19.4	64.0	11.9
West Virginia	3.9	22.8	64.2	9.0
North Carolina	3.7	18.4	65.4	12.5
South Carolina	3.9	20.9	68.1	7.1
Georgia	5.1	19.8	66.4	8.7
Florida	7.8	36.4	41.3	14.5
EAST SOUTH CENTRAL:				
Kentucky	4.8	13.9	55.6	25.8
Tennessee	5.8	17.8	65.4	11.0
Alabama	5.1	21.1	64.6	9.2
Mississippi	5.3	27.3	53.7	13.6
WEST SOUTH CENTRAL:				
Arkansas	5.3	29.5	53.9	11.3
Louisiana	4.4	16.4	66.1	13.1
Oklahoma	4.3	15.3	72.3	8.0
Texas	4.4	15.5	72.8	7.3
MOUNTAIN:				
Montana	3.1	16.3	73.6	7.0
Idaho	5.2	29.1	52.5	13.2
Wyoming	5.6	37.2	46.6	10.6
Colorado	4.9	17.4	70.2	7.5
New Mexico	5.4	36.8	46.3	11.5
Arizona	1.9	13.4	81.7	3.0
Utah	3.6	15.5	76.1	4.8
Nevada	3.4	17.9	75.5	3.2
PACIFIC:				
Washington	5.0	25.4	60.1	9.6
Oregon	4.9	24.2	61.6	9.3
California	4.8	17.7	68.3	9.2

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	76.0	80.3	80.6
Gas	34,356	21,515	14,334	751,186	289,423	134,742	4.0	2.1	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	1,203	1,397	(1)	15,449	5,931	(1)	0.1	(2)	(1)
Other	.....	.....	.....	29,293	92,154	49,985	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)	1,749,031	441,589	182,562	9.4	3.3	1.8
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)	1,749,031	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:

Table 32

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	.....	.....	27,641	1,297	41,829	14,188
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	3	31,160	129	39,795	8,635
Butter, cheese, and condensed milk	101,349	90,802	3,373	1,403	62	131	5,366	212	8,276	2,910
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	910
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	158,768	99,883	6,753	1,078	36	14	50,045	959	164,540	114,495
Flour-mill and gristmill products	853,584	473,363	62,681	259,138	4,993	208	49,901	3,300	67,066	17,165
Foundry and machine-shop products	809,305	546,206	96,966	18,341	361	2,754	192,977	11,700	623,914	430,937
Furniture and refrigerators	221,451	184,425	5,830	6,743	105	612	20,420	3,316	43,252	22,832
Gas, illuminating and heating	128,350	115,332	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	120,293
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	10,028	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	3,786	3,078
Liquors, malt	347,726	330,705	1,261	116	224	1,065	14,190	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	167	241	32,062	2,655	53,748	21,686
Oil, cottonseed, and cake	192,342	183,440	1,674	125	50	180	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	1,304,265	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	4,293
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	.....	55,229	25,816
Smelting and refining, lead	26,954	23,090	35	.....	.....	.....	3,829	.....	12,166	8,337
Sugar and molasses, not including beet sugar	160,603	158,682	395	.....	.....	210	1,316	.....	18,730	17,414
Tobacco manufactures	28,514	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 manufacture 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 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.
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	1,650,911	41,801	753,920	3,412	2,055	218,642	38,380	663,143	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	47,086
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	24,037	402,492	292,496
Rhode Island	226,740	175,293	3,300	31,376	41	39	13,697	2,994	42,130	28,433
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	12	.....	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	13,408
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	30,951	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 available 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
MATERIALS.			
Total cost	$235,546,064	$142,920,277	$108,841,200
Milk:			
Pounds	9,888,727,303	12,147,304,550	11,678,082,821
Cost	$118,675,613	$99,729,745	$91,256,436
Cream:			
Pounds	1,406,143,908	588,186,471	203,673,958
Cost	$95,025,507	$28,371,040	$8,154,068
Skimmed milk:			
Pounds	56,974,760	36,071,335	(1)
Cost	$110,469	$59,398	(1)
Sugar:			
Pounds	78,457,978	67,810,031	50,873,859
Cost	$3,674,174	$3,315,892	$2,589,687
All other materials	$18,060,301	$11,444,202	$6,841,009
PRODUCTS.			
Total value	[2] $274,557,718	[3] $168,182,789	$130,783,349
Butter:			
Pounds	624,764,653	531,478,141	420,126,546
Value	$179,510,619	$113,189,453	$84,079,754
Packed solid—			
Pounds	410,692,616	364,432,996	328,956,590
Value	$115,098,056	$74,483,306	$63,961,893
Prints and rolls—			
Pounds	214,072,037	167,045,145	91,169,956
Value	$64,412,563	$38,706,147	$20,117,861
Cheese:			
Pounds	311,126,317	317,144,872	281,972,324
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		
PRODUCTS—continued.			
Cheese—Continued.			
Skimmed—			
Pounds	7,770,812	3,459,582	(1)
Value	$429,519	$148,568	(1)
Other kinds—			
Pounds	5,441,730	74,032,656	56,196,219
Value	$805,332	$6,438,339	$5,156,352
Condensed milk:			
Pounds	494,796,544	308,485,182	186,921,787
Value	$33,563,129	$20,149,282	$11,888,792
Sweetened—			
Pounds	214,518,310	198,355,189	(1)
Value	$17,345,278	$13,478,376	(1)
Unsweetened—			
Pounds	280,278,234	110,129,993	(1)
Value	$16,217,851	$6,670,906	(1)
Cream sold:			
Pounds	81,211,374	28,131,914	61,764,552
Value	$9,828,972	$2,364,407	$4,435,444
Skimmed milk sold:			
Pounds	352,594,574	1,161,414,457	2,253,494,156
Value	$629,135	$1,368,738	$2,531,460
Casein dried from skimmed milk:			
Pounds	13,018,298	11,581,874	12,298,405
Value	$795,544	$554,099	$383,581
All other products	$6,990,395	$1,945,050	$944,489
EQUIPMENT.			
Cream separators, number	5,624	8,842	9,701

[1] Not reported separately.
[2] In addition, 2,381,212 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	[1] $157,101,201	[2] $130,465,976	$99,335,464
Fruits and vegetables.			
Value	$84,347,783	$72,998,756	$44,802,665
Canned vegetables:			
Cases	32,752,469	29,579,616	19,323,730
Value	$51,568,914	$45,010,993	$28,734,598
Tomatoes—			
Cases	12,909,986	9,411,084	8,700,538
Value	$18,747,941	$14,020,846	$13,666,560
Corn—			
Cases	7,451,265	11,209,597	6,336,984
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	(3)	(3)
Value	$1,975,775	(3)	(3)
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	1,236,874	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	$1,825,311	$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	$1,758,610	$1,906,642
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
Fish and oysters.			
Value	$27,648,289	$22,194,635	$18,807,542
Canned fish and oysters:			
Pounds	235,418,713	207,077,976	.....
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	(4)
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	$631,352	$330,590
Salmon—			
Pounds	6,836,099	6,833,560	1,975,647
Value	$950,540	$831,184	$136,331
Finnan haddie—			
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
All other products, including pickles, preserves, and sauces.			
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	4,030,322	143,540
Pickles, preserves, and sauces	.....	3,376,137

[2] In addition, 140,263 cases of fruits and vegetables, to the value of $288,138; 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.

Table 36	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	178,217,321	189,573,076
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	**[1] $883,584,405**	**[2] $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—			
Barrels	105,321,969	103,608,350	(3)
Value	$548,017,654	$478,484,601	(3)
Graham—			
Barrels	434,676	404,928	(3)
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	$3,190,152
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	756,861,398	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	(3)	(3)
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 value 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.

Table 37	1909	1904	1899
MATERIALS.			
Rough rice milled, pounds	**974,747,475**	**999,727,650**	**398,602,018**
Domestic	970,873,740	990,473,625	359,187,559
Foreign	3,873,735	9,254,025	39,414,459
PRODUCTS.			
Total value	**[1] $22,371,457**	**$16,296,916**	**$8,723,726**
Clean rice:			
Pounds	626,089,489	623,900,245	243,031,200
Value	$20,685,982	$15,357,133	(2)
Whole—			
Pounds	477,589,004	411,208,943	(2)
Value	$17,398,736	$12,077,124	(2)
Broken—			
Pounds	148,500,485	212,691,302	(2)
Value	$3,287,246	$3,280,009	(2)
Polish:			
Pounds	29,821,813	33,290,331	15,134,648
Value	$362,052	$267,647	(2)
Bran:			
Pounds	91,208,529	120,694,130	69,265,012
Value	$736,215	$501,193	(2)
Hulls and waste	$166,147	$116,360	(2)
All other products	$421,061	$54,583	(2)

[1] In addition, 48,150 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
MATERIALS.			
Total cost	**$1,202,827,784**	**$811,425,562**	**$685,310,099**
Animals slaughtered	$960,725,581	$675,893,676	$570,183,432
Beeves—			
Number	8,114,860	7,147,835	5,525,824
Cost	$392,127,010	$289,040,930	$247,146,262
Weight, pounds—			
On the hoof	8,265,991,836	7,485,407,944	5,908,165,706
Dressed	4,409,718,922	4,066,264,877	3,222,733,017
Calves—			
Number	2,504,728	1,568,130	883,857
Cost	$25,030,014	$12,665,557	$7,252,545
Weight, pounds—			
On the hoof	419,604,080	261,683,572	124,354,340
Dressed	262,315,076	161,049,581	79,498,483
Sheep—			
Number	12,255,501	10,875,339	9,110,172
Cost	$59,924,931	$44,359,804	$36,859,832
Weight, pounds—			
On the hoof	987,566,521	930,168,367	764,269,802
Dressed	496,640,869	464,872,621	389,132,646
Hogs—			
Number	33,870,616	30,977,639	30,595,522
Cost	$483,383,848	$329,765,480	$278,370,494
Weight, pounds—			
On the hoof	6,856,832,417	6,586,349,782	6,676,709,331
Dressed	5,201,902,778	5,048,832,850	5,203,280,487
Goats and kids—			
Number	33,224	(1)	(1)
Cost	$121,230	(1)	(1)
All other	$138,548	$61,905	$554,299
Dressed meat, purchased	$93,409,286	$53,114,957	$54,247,986
All other materials	$148,692,917	$82,416,929	$60,878,681
PRODUCTS.			
Total value	**$1,370,568,101**	**$922,037,528**	**$788,367,647**
Beef:[2]			
Pounds	4,335,674,330	3,884,952,074	3,055,241,979
Value	$339,742,608	$255,204,676	$220,495,401
Fresh—			
Pounds	4,209,196,668	3,748,055,377	2,917,653,476
Value	$327,583,456	$247,096,724	$210,833,647
Salted or cured—			
Pounds	126,477,662	136,896,697	137,588,503
Value	$12,159,152	$8,107,952	$9,661,754
Veal, fresh:			
Pounds	252,997,078	154,212,652	84,548,128
Value	$25,058,886	$12,856,369	$7,709,772
Mutton, fresh:			
Pounds	495,457,894	400,754,244	400,812,014
Value	$50,735,116	$36,880,455	$32,681,457
Pork:[2]			
Pounds	4,377,127,187	4,147,834,872	4,360,705,789
Value	$486,845,161	$340,586,644	$320,469,119
Fresh—			
Pounds	1,547,494,184	1,224,932,910	1,222,007,411
Value	$158,714,862	$91,749,323	$83,934,324

	1909	1904	1899
PRODUCTS—continued.			
Pork[2]—Continued.			
Salted—			
Pounds	952,130,557	1,558,886,256	1,371,384,591
Value	$95,959,048	$116,626,710	$88,363,029
Hams—			
Pounds	789,861,744		
Value	$101,089,390		
Shoulders—			
Pounds	346,294,769	1,364,015,706	1,767,313,787
Value	$33,225,458	$132,210,611	$148,171,166
Bacon and sides—			
Pounds	741,345,933		
Value	$97,856,403		
Sausage, fresh or cured	$59,564,582	$33,179,235	$25,982,709
All other fresh meat:			
Pounds	257,809,083	124,307,081	80,387,411
Value	$16,392,768	$9,579,718	$7,810,553
Canned goods:			
Pounds	121,376,837	(1)	112,443,021
Value	$15,345,543	$16,114,665	$9,166,931
Lard:			
Pounds	1,243,567,604	1,169,086,400	1,019,781,839
Value	$134,396,587	$82,540,964	$61,140,234
Tallow or oleo stock:			
Pounds	202,844,139	(1)	(1)
Value	$13,499,659	(1)	(1)
Oleo oil:			
Gallons	19,692,172	19,454,799	19,111,120
Value	$16,475,726	$10,201,911	$11,482,542
Other oils:			
Gallons	11,343,186	4,893,133	8,240,569
Value	$6,350,745	$2,595,951	$3,438,358
Oleomargarine:			
Pounds	42,912,466	(1)	(1)
Value	$5,963,981	(1)	(1)
Stearin:			
Pounds	54,957,997	(1)	(1)
Value	$6,871,935	(1)	(1)
Glue and gelatine:			
Pounds	27,936,035	17,526,456	(1)
Value	$1,944,338	$1,087,719	(1)
Fertilizers and fertilizer materials:			
Tons (2,000 pounds)	362,136	369,074	168,505
Value	$8,726,818	$7,204,061	$3,300,042
Hides:			
Number	9,560,138	8,039,204	6,249,414
Pounds	504,563,930	456,443,857	335,968,207
Value	$68,401,515	$44,206,107	$33,883,026
Sheep pelts:			
Number	11,691,308	11,344,544	(1)
Value	$11,404,556	$8,964,643	(1)
Goat and kid skins:			
Number	33,359	(1)	(1)
Value	$20,679	(1)	(1)
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 fivefold 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.

Table 39 PRODUCT.	1909 Tons.	1909 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:

Table 40	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	496,807	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	[1] 3,551,856
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.

Table 41 PRODUCT.	1909
Total value	[1] **$30,620,738**
Sugar: [2]	
Tons	326,858
Value	$26,095,673
Vacuum pan—	
Tons	323,180
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	24,587,581
Value	$2,845,559
Sirup (liquid product from which no sugar has been extracted):	
Gallons	1,449,860
Value [3]	$365,632
All other products [3]	$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 7,281 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.

Table 42 CENSUS.	Number of establishments.	Number engaged in industry.[1] Salaried employees.	Number engaged in industry.[1] Wage earners (average number).	Capital.	Salaries.	Wages.	Cost of materials.	Value of products.	Value added by manufacture.
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	[2] 12,743,405	169,422,053	454,272,489	768,357,254	314,084,765
1879 (census of 1880)	4,143	([3])	[4] 387,557	414,179,946	([3])	105,642,824	306,495,799	538,401,222	231,905,423
1869 (census of 1870)	4,855	([3])	275,655	298,611,518	([3])	86,784,211	354,452,813	522,312,413	167,859,600
1859 (census of 1860)	3,058	([3])	194,394	150,205,852	([3])	40,410,946	113,082,036	215,166,444	102,084,408
1849 (census of 1850)	3,025	([3])	146,877	112,513,947	([3])	([5])	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.

Table 43

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)	[1] 18,092,133	14,384,180	718,360	2,332,269	657,324
1879 (census of 1880)	[1] 13,170,743	10,653,435	262,312	1,915,070	339,926
1869 (census of 1870)	[1] 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.

Table 44

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)	696,785	559,781	59,775	38,104	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	66		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.

Table 45	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	$6,648,001	$5,030,654
Worsted—			
Pounds	11,292,749	11,355,993	9,218,267
Cost	$5,588,915	$5,405,072	$3,544,860
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	$1,164,826
Jute, ramie, and other vegetable fiber—			
Pounds	55,592,343	49,119,558	38,846,413
Cost	$3,926,694	$3,404,516	$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	[1] $71,188,152	[1] $61,586,433	$48,192,351
Carpets:			
Square yards	57,176,729	66,426,033	64,238,761
Value	$48,475,889	$43,991,125	$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] 3,587,126
Value	$8,737,768	$2,726,667	[2] $4,030,842
Brussels—			
Square yards	3,960,626	3,024,162	2,686,493
Value	$5,216,607	$3,898,675	$2,979,867
Tapestry velvet—			
Square yards	[2] 6,927,198	[2] 8,033,288	4,280,066
Value	[2] $5,514,130	[2] $7,754,681	$3,743,353
Tapestry Brussels—			
Square yards	11,405,514	14,099,074	8,737,449
Value	$8,576,906	$9,955,043	$5,520,665
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	12,171,289
Value	$18,490,449	$12,870,650	$8,145,232
Axminster and Moquette—			
Square yards	3,184,097	1,767,920	327,598
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	(3)	(3)
Value	$333,582	(3)	(3)
Tapestry velvet—			
Square yards	3,732,972	(3)	(3)
Value	$3,513,063	(3)	(3)
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	[4] 468
Woolen	456	389	.....
Worsted	180	238	.....
Cotton	109	59	.....
Spindles	252,096	255,347	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**	**$33,063,793**
Hard fibers:		
Sisal and manila hemp—		
Pounds	335,460,574	269,594,673
Cost	$19,314,306	$17,743,624
Other kinds—		
Pounds	17,222,998	6,344,371
Cost	$707,802	$352,528
Soft fibers:		
Jute—		
Pounds	121,992,427	87,443,201
Cost	$4,134,265	$2,431,429
Jute butts—		
Pounds	138,364,122	118,806,625
Cost	$2,033,176	$1,795,653
Flax and flax tow—		
Pounds	26,954,785	16,980,646
Cost	$3,174,609	$2,080,862
Hemp and hemp tow—		
Pounds	19,724,070	25,588,715
Cost	$1,496,125	$1,404,653
Cotton:		
Pounds	27,624,490	13,022,755
Cost	$2,922,933	$849,426
Yarns, purchased:		
Cotton—		
Pounds	7,077,959	4,973,080
Cost	$1,291,599	$709,889
Flax hemp, jute, and ramie—		
Pounds	2,676,367	1,788,170
Cost	$445,378	$262,156
All other materials	$5,394,617	$5,433,573
PRODUCTS.		
Total value	**[1] $61,019,986**	**$49,077,629**
Rope and binder twine	$33,930,306	$26,909,027
Sisal—		
Pounds	225,756,526	172,238,291
Value	$15,960,280	$14,005,566
Manila—		
Pounds	150,169,682	123,584,201
Value	$12,892,347	$12,192,798
Cotton rope—		
Pounds	16,760,763	1,615,824
Value	$3,011,613	$247,250
Jute rope—		
Pounds	27,749,512	10,012,165
Value	$1,566,160	$463,413
All other—		
Pounds	7,767,561	(2)
Value	$499,906	(2)
Twine, not including binder	$8,934,352	$4,341,441
Cotton—		
Pounds	20,412,631	8,091,707
Value	$3,518,036	$1,133,640
Jute—		
Pounds	35,516,217	1,679,127
Value	$2,557,744	$117,539
Hemp—		
Pounds	8,013,349	9,065,024
Value	$1,091,291	$1,019,590
Flax—		
Pounds	2,967,053	3,845,978
Value	$830,969	$969,469
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	$4,361,550	$3,230,835
Flax and hemp—		
Pounds	5,486,891	8,259,653
Value	$982,742	$1,125,971
Other—		
Pounds	732,120	946,567
Value	$89,745	$98,928
Linen thread:		
Pounds	6,530,503	4,021,044
Value	$3,407,008	$2,332,287
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	2,953,658
Value	$549,221	$357,568
All other products	$5,257,580	$7,219,093

[1] In addition, cordage and twine and jute and linen goods to the value of $890,629 were made by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.
[2] 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
MATERIALS.			
Total cost	**$371,009,470**	**$286,255,303**	**$176,551,527**
Cotton:			
Pounds	2,335,344,906	1,876,437,150	1,817,643,390
Cost	$274,724,210	$222,212,749	$125,169,616
Domestic—			
Pounds	2,259,312,974	1,832,736,744	1,761,798,458
Cost	$261,547,820	$214,615,844	$119,098,443
Foreign—			
Pounds	76,031,932	43,700,406	55,844,932
Cost	$13,176,390	$7,596,905	$6,071,173
Cotton yarn:			
Pounds	126,707,003	105,411,516	94,692,864
Cost	$34,384,791	$24,611,200	$17,622,568
Cotton waste:			
Pounds	80,044,061	76,678,645	41,234,900
Cost	$4,225,790	$3,814,290	$1,515,591
Starch:			
Pounds	71,774,574	54,489,534	53,800,734
Cost	$2,114,756	$1,506,804	$1,227,010
Chemicals and dyestuffs	$4,886,514	$4,573,375	$5,718,107
All other materials	$50,673,409	$20,536,885	$25,298,635
PRODUCTS.			
Total value	**[1] $628,391,813**	**$450,467,704**	**$339,200,320**
Woven goods:			
Square yards	6,348,568,593	5,110,308,812	4,523,430,616
Value	$456,089,401	$324,747,837	$243,253,155
Plain cloths for printing or converting—			
Square yards	2,224,677,848	1,818,216,172	1,581,613,827
Value	$111,097,889	$80,311,612	$57,780,940
Brown or bleached sheetings and shirtings—			
Square yards	1,484,353,529	1,172,309,182	1,212,403,048
Value	$88,802,985	$61,253,376	$55,513,032
Twills and sateens—			
Square yards	388,314,961	366,142,513	235,860,518
Value	$34,274,107	$23,701,305	$14,301,302
Fancy woven fabrics—			
Square yards	426,710,359	306,254,685	237,841,603
Value	$47,498,713	$28,486,342	$21,066,310
Ginghams—			
Square yards	537,430,463	302,316,132	278,302,708
Value	$37,939,040	$22,471,867	$16,179,200
Duck—			
Square yards	162,476,322	122,601,212	129,234,076
Value	$27,485,892	$17,005,982	$14,263,008
Drills—			
Square yards	238,869,407	194,735,303	237,206,549
Value	$17,750,151	$12,596,063	$11,862,794
Ticks, denims, and stripes—			
Square yards	264,870,508	256,375,486	181,800,853
Value	$27,350,162	$23,797,578	$16,446,633
Cottonades—			
Square yards	25,676,286	25,362,340	26,323,947
Value	$3,343,533	$2,998,971	$2,791,431
PRODUCTS—continued.			
Woven goods—Continued.			
Napped fabrics—			
Square yards	305,655,864	330,808,140	268,852,716
Value	$25,695,367	$26,108,315	$18,231,044
Corduroy, cotton, velvet, and plush—			
Square yards	19,706,438	16,014,556	7,961,523
Value	$6,965,634	$4,790,573	$2,682,017
Mosquito and other netting—			
Square yards	59,100,819	36,232,918	41,885,023
Value	$2,103,560	$794,953	$875,868
Upholstering goods—			
Square yards	94,840,051	65,592,212	51,314,609
Value	$14,882,842	$12,111,698	$8,705,384
Tapestries (piece goods and curtains)—			
Square yards	10,657,385	9,605,006	10,166,538
Value	$4,723,907	$4,242,506	$4,158,600
Lace and lace curtains—			
Square yards	81,007,314	53,511,222	37,825,198
Value	$8,922,082	$7,208,211	$3,585,138
Other—			
Square yards	3,175,352	2,475,984	3,322,873
Value	$1,236,853	$660,981	$961,646
Bags and bagging—			
Square yards	63,107,568	57,067,663	32,739,616
Value	$4,862,451	$3,953,732	$2,554,192
Cotton towels and toweling—			
Square yards	52,778,170	40,280,292	(2)
Value	$6,037,075	$4,365,470	(2)
Tape and webbing	$5,531,674	$4,060,488	$2,521,402
Yarns for sale:			
Pounds	470,370,995	364,634,753	332,302,621
Value	$109,314,953	$79,939,687	$55,216,066
Thread:			
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	(2)	(2)
Value	$1,164,526	(2)	(2)
Cotton waste for sale:			
Pounds	310,513,348	247,649,640	270,862,613
Value	$10,874,386	$10,062,057	$5,563,570
All other products	$22,483,213	$15,185,598	$10,190,845
MACHINERY.			
Producing spindles, number	27,425,608	23,195,143	19,050,952
Looms, all classes, number	665,049	559,296	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.

Table 48	1909	1904	1899
MATERIALS.			
Total cost	**$6,967,206**	**$5,754,026**	**$3,801,028**
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	$239,244	$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	5,145,340	2,469,830
Value	$1,329,686	$1,188,908	$796,718
Saddle felts:			
Pounds	1,050,991		
Value	$575,849		
Endless belts:			
Pounds	3,243,034	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	$655,601	$1,172,617
MACHINERY.			
Sets of cards	473	463	[1] 302
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.

Table 49	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	$6,743,936	$6,376,991
Fur-felt hat bodies and hats in the rough:			
Dozens	406,447	211,760	148,212
Cost	$2,575,248	$1,351,372	$382,986
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	**[1] $47,864,630**	**[1] $36,629,353**	**$27,811,187**
Fur-felt hats:			
Dozens	2,989,252	2,611,875	1,882,372
Value	$43,442,466	$34,314,234	$25,385,506
Fur-felt hat bodies and hats in the rough:			
Dozens	366,370	88,986	165,010
Value	$2,703,738	$660,959	$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 $806,601, 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.

Table 50	1909	1904	1899
MATERIALS.			
Total cost	**$2,472,263**	**$1,369,810**	**$2,042,202**
Wool, in condition purchased:			
Pounds	1,203,498	1,633,525	2,713,374
Cost	$404,127	$495,594	$788,973
Equivalent of above in scoured condition, pounds	989,110	1,231,576	1,898,605
Wool waste and noils:			
Pounds	1,281,764	287,363	862,982
Cost	$661,172	$119,407	$370,792
Wool-felt hat bodies and hats in the rough:			
Dozens	21,864	12,089	4,939
Cost	$83,020	$25,997	$13,920
Chemicals and dyestuffs	$104,503	$63,905	$108,502
All other materials	$1,219,441	$664,907	$760,015
PRODUCTS.			
Total value	**[1] $4,352,411**	**$2,457,266**	**$3,591,940**
Wool-felt hats:			
Dozens	590,957	446,121	811,425
Value	$3,646,787	$2,290,070	$3,161,361
Wool-felt hat bodies and hats in the rough:			
Dozens	53,896	18,587	56,006
Value	$309,492	$100,491	$120,262
All other products	$426,132	$66,705	$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
MATERIALS.			
Total cost	$110,241,053	$76,789,348	$51,195,330
Cotton:			
Pounds	75,416,023	50,586,760	49,451,301
Cost	$8,803,509	$5,869,317	$3,561,592
Wool, in condition purchased:			
Pounds	7,068,788	17,300,616	17,953,907
Cost	$2,919,055	$6,153,858	$5,262,135
Equivalent of above in scoured condition, pounds	5,582,839	13,909,144	13,031,308
Shoddy, purchased:			
Pounds	7,482,553	7,489,358	3,770,626
Cost	$919,970	$923,719	$488,792
Wool waste and noils, purchased:			
Pounds	8,586,261	6,020,459	5,276,454
Cost	$2,813,129	$1,711,669	$1,487,907
Yarns, purchased:			
Cotton—			
Pounds	216,987,611	161,500,466	131,820,068
Cost	$48,165,749	$34,372,910	$22,204,918
Worsted—			
Pounds	10,370,004	8,789,570	5,823,215
Cost	$10,116,325	$7,457,690	$4,865,304
Woolen—			
Pounds	6,140,265	4,839,343	2,621,893
Cost	$3,834,094	$2,798,454	$1,257,587
Merino—			
Pounds	4,014,609	2,568,890	1,981,484
Cost	$2,667,051	$1,118,999	$642,535
Silk and spun silk—			
Pounds	982,753	320,671	266,247
Cost	$3,606,599	$1,200,259	$946,801
Chemicals and dyestuffs	$2,541,939	$1,677,252	$1,023,161
All other materials	$23,853,633	$13,505,221	$9,454,598
Yarns made in mill for use therein.			
Cotton, pounds	69,171,277	39,954,890	40,845,889
Woolen, pounds	8,316,349	(1)	(1)
Worsted, pounds	223,404	(1)	(1)
Merino, pounds	20,856,989	(1)	(1)
PRODUCTS.			
Total value	[2] $200,143,527	[2] $137,076,454	$95,833,692
Hosiery:			
Dozen pairs	62,825,069	44,186,063	29,903,899
Value	$68,721,825	$44,113,260	$27,420,029
Cotton, merino, and woolen—			
Hose—			
Dozen pairs	34,499,562	25,999,813	16,641,769
Value	$37,903,011	$26,152,043	$16,203,372
Cotton—			
Dozen pairs	32,499,104	24,169,804	15,028,173
Value	$34,078,622	$22,764,799	$13,275,732
Merino or mixed—			
Dozen pairs	834,029	746,226	436,891
Value	$1,466,283	$1,182,164	$659,959
Woolen or worsted—			
Dozen pairs	1,166,429	1,083,783	1,176,705
Value	$2,358,106	$2,205,080	$2,267,681
Half hose—			
Dozen pairs	27,891,093	18,144,185	13,249,558
Value	$27,218,398	$17,438,914	$11,030,244
Cotton—			
Dozen pairs	24,805,917	15,223,243	11,352,081
Value	$21,831,365	$11,821,830	$7,906,945
Merino or mixed—			
Dozen pairs	2,023,641	1,611,066	957,520
Value	$3,299,912	$2,214,678	$1,384,764
Woolen or worsted—			
Dozen pairs	1,061,535	1,309,876	939,957
Value	$2,087,121	$3,402,406	$1,738,535
PRODUCTS—continued.			
Hosiery—Continued.			
Silk—			
Dozen pairs	434,414	42,065	12,572
Value	$3,600,416	$522,303	$186,413
Shirts and drawers:			
Dozens	25,337,779	19,723,141	15,873,700
Value	$69,592,817	$56,643,860	$45,675,594
All cotton—			
Dozens	22,567,121	17,107,958	12,058,431
Value	$50,007,598	$39,658,762	$26,882,902
Merino or mixed—			
Dozens	2,536,473	2,113,810	2,675,416
Value	$17,055,624	$13,031,754	$13,293,829
All wool—			
Dozens	178,163	485,328	1,085,046
Value	$1,820,521	$3,647,934	$4,980,818
Silk and silk mixed—			
Dozens	56,022	16,045	54,807
Value	$709,074	$305,410	$518,045
Combination suits:			
Dozens	2,473,103	1,440,420	986,855
Value	$14,853,536	$6,793,947	$3,691,847
All cotton—			
Dozens	2,047,637	1,260,301	824,632
Value	$9,713,597	$4,478,664	$2,240,566
Merino or mixed—			
Dozens	364,387	105,242	139,994
Value	$4,217,432	$1,199,949	$1,133,328
All wool—			
Dozens	50,102	68,067	9,501
Value	$683,289	$965,132	$201,667
Silk or silk mixed—			
Dozens	10,977	6,810	12,728
Value	$239,218	$150,202	$116,286
Sweaters, cardigan jackets, etc.:			
Dozens	2,221,410	811,629	594,090
Value	$22,430,817	$8,345,369	$3,498,837
Gloves and mittens:			
Dozen pairs	2,527,889	2,260,508	1,898,587
Value	$7,296,887	$5,556,260	$4,244,046
Hoods, scarfs, nubias, etc.:			
Dozens	888,223	589,315	343,429
Value	$3,217,985	$1,774,862	$1,002,392
Shawls:			
Dozens	218,923	435,306	157,622
Value	$916,294	$1,293,348	$328,720
Boot and shoe linings:			
Square yards	9,726,770	11,768,961	10,406,440
Value	$1,209,464	$1,249,401	$2,205,003
Yarns for sale	$1,785,531	$1,000,083	$498,790
Cotton—			
Pounds	7,457,412	3,304,615	2,419,282
Value	$1,568,417	$654,234	$422,100
Woolen, worsted, and merino—			
Pounds	488,322	491,559	134,529
Value	$217,114	$345,849	$76,690
All other products	$10,118,371	$10,306,064	$7,268,434
MACHINERY.			
Sets of cards	2,681	2,001	1,161
Cotton	1,827	1,000	(1)
Woolen	844	977	1,161
Worsted	10	24	(1)
Spindles	736,774	603,180	521,871
Producing	729,935	596,362	510,172
Doubling and twisting	6,839	6,818	11,699
Knitting machines, all classes	115,019	88,374	89,047
Sewing machines, all classes	43,885	30,410	24,535

[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	[1] $26,253,796	$14,792,246
Oilcloth	$11,681,012	$8,648,337
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	(2)
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	[1] $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	$865,528	$727,912	$620,504
Waste:			
Pounds	2,237,748	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	(2)
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	$62,406,665
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	1,550,291
Cost	$4,848,789	$4,310,061	$3,406,059
Artificial—			
Pounds	914,494	466,151	6,056
Cost	$1,926,894	$1,623,473	$10,380
Organzine and tram, purchased—			
Pounds	3,377,972	3,236,744	2,338,464
Cost	$14,679,719	$14,552,425	$10,539,632
Fringe and floss, including waste, noils, etc., purchased—			
Pounds	2,402,960	[1] 49,811	1,735,179
Cost	$1,637,187	[1] $187,159	$1,006,947
Yarns, other than silk:			
Cotton, including mercerized—			
Pounds	14,111,878	9,018,295	6,664,069
Cost	$5,811,582	$3,057,989	$1,996,233
Woolen or worsted—			
Pounds	610,588	443,155	239,461
Cost	$765,989	$409,867	$167,770
Mohair—			
Pounds	710,108	138,389	104,810
Cost	$640,529	$137,097	$107,365
All other—			
Pounds	353,780	130,930	108,398
Cost	$456,597	$108,841	$134,986
Chemicals and dyestuffs	$1,062,313	$666,992	(2)
All other materials	$8,150,280	$5,488,868	$4,313,416
PRODUCTS.			
Total value	[3] $196,911,667	$133,288,072	$107,256,258
Broad silks:			
Yards	185,707,316	124,871,215	87,636,883
Value	$107,881,146	$66,917,762	$52,152,816
Plain and fancies—			
All silk—			
Yards	81,934,158	68,393,042	53,573,488
Value	$53,282,704	$40,741,480	$33,852,111
Silk mixed—			
Yards	24,742,556	9,061,025	8,963,315
Value	$14,207,861	$6,343,472	$5,450,710
Jacquard—			
All silk—			
Yards	13,249,090	8,143,091	7,532,229
Value	$9,835,345	$5,927,063	$5,379,001
Silk mixed—			
Yards	6,043,686	2,336,120	1,677,466
Value	$3,473,799	$1,229,648	$1,260,321
Piece-dyed—			
All silk—			
Yards	19,693,393	21,334,584	7,331,501
Value	$11,353,242	$9,276,445	$3,342,167
Silk mixed—			
Yards	40,044,433	15,603,353	8,558,884
Value	$15,728,195	$4,399,654	$2,808,506
Velvets:			
Yards	10,093,583	7,262,315	5,122,249
Value	$4,767,999	$3,161,206	$2,479,903
Plushes:			
Yards	2,759,411	2,547,367	3,848,684
Value	$2,104,768	$1,340,815	$2,480,068
Tapestries and upholstery:			
Yards	226,717	1,766,210	1,333,119
Value	$382,820	$1,559,982	$1,009,835
Ribbons	$32,744,873	$21,890,604	$18,467,179
Laces, nets, veils, veiling, etc.	$1,350,850	$745,489	$803,104
Embroideries	$485,322	$112,362	$57,625
Fringes and gimps	$824,527	$1,016,954	$444,787
Braids and bindings	$4,483,248	$3,493,977	$1,522,565
Trimmings	$3,850,448	$3,107,697	$2,034,076
Machine twist:			
Pounds	1,088,780	932,998	987,917
Value	$6,341,719	$5,521,055	$5,997,974
Sewing, embroidery, wash, fringe, and floss silks:			
Pounds	747,246	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	$1,660,647	$1,026,227
All other products	$4,495,675	$5,227,800	$1,027,472
Work done on materials for others	$3,364,350	$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
MATERIALS.			
Total cost	$273,438,570	$197,489,306	$148,087,178
Wool:			
In condition purchased—			
Pounds	474,755,366	418,703,811	330,178,552
Cost	$136,666,917	$105,433,451	$78,803,830
Domestic—			
Pounds	310,602,279	319,800,490	250,393,205
Cost	$85,018,238	$78,673,136	$59,046,158
Foreign—			
Pounds	164,153,087	98,903,321	79,785,347
Cost	$51,648,679	$26,760,315	$19,757,672
Equivalent in scoured condition, pounds	290,706,970	241,280,065	192,705,519
Mohair, camel, alpaca, and vicuna hair:			
Pounds	7,805,422	6,507,631	5,003,966
Cost	$2,399,123	$1,957,581	$1,857,707
Cow and other animal hair:			
Pounds	17,356,100	22,987,332	20,535,079
Cost	$932,911	$1,369,776	$1,170,756
Cotton:			
Pounds	20,024,061	32,613,408	40,244,710
Cost	$2,515,409	$4,072,907	$3,280,000
Tailor's clippings, rags, etc.:			
Pounds	40,402,460	79,367,290	(1)
Cost	$2,856,966	$5,668,634	(1)
Shoddy, mungo, and wool extract purchased:			
Pounds	21,454,187	31,919,456	33,036,767
Cost	$3,058,214	$4,472,666	$4,070,836
Waste and noils of wool, mohair, camel's hair, etc., purchased:			
Pounds	26,473,311	26,032,838	15,714,171
Cost	$7,523,283	$6,056,227	$3,891,369
Tops purchased:			
Pounds	20,828,245	9,160,929	5,566,108
Cost	$14,614,527	$5,073,078	$2,865,546
MATERIALS—continued.			
Yarns purchased:			
Woolen—			
Pounds	931,222	5,750,088	5,906,862
Cost	$558,270	$2,622,882	$2,675,143
Worsted—			
Pounds	59,148,771	31,047,516	25,110,939
Cost	$56,033,701	$24,904,511	$19,495,251
Merino—			
Pounds	1,971,709	2,458,085	3,634,679
Cost	$318,456	$581,107	$664,527
Cotton—			
Pounds	39,169,388	32,598,072	35,342,726
Cost	$10,492,185	$8,032,773	$6,814,279
Silk and spun silk—			
Pounds	282,536	412,307	131,915
Cost	$1,142,663	$1,679,883	$529,789
All other—			
Pounds	1,046,735	411,779	1,127,926
Cost	$40,739	$21,118	$65,434
Chemicals and dyestuffs	$8,820,928	$7,456,550	$6,595,160
All other materials	$25,464,278	$18,086,162	$15,307,551
PRODUCTS.			
Total value	[2] $419,743,521	[2] $307,941,710	$238,744,502
All-wool woven goods:			
Square yards	322,944,365	260,567,488	216,359,702
Value	$219,853,767	$158,390,336	$117,757,169
Wool cloths, doeskins, cassimeres, cheviots, etc.—			
Square yards	40,843,979	42,487,566	34,298,426
Value	$29,291,059	$29,556,252	$22,645,869
Worsted coatings, serges, and suitings—			
Square yards	119,055,069	59,592,811	54,033,679
Value	$101,903,153	$56,731,196	$43,003,550

[1] Not reported separately.

[2] In addition, in 1909, woolen and worsted goods, to the value of $1,281,292, 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.			
All-wool woven goods—Continued.			
Woolen overcoatings, cloakings, kerseys, etc.—			
Square yards	14,697,770	22,411,530	18,729,194
Value	$11,230,856	$16,934,112	$16,131,709
Worsted overcoatings and cloakings—			
Square yards	654,404	1,057,668	877,133
Value	$821,688	$546,170	$567,390
Wool dress goods, sackings, tricots, etc., and opera and similar flannels—			
Square yards	29,099,956	48,874,396	33,594,212
Value	$16,385,498	$19,826,017	$12,976,489
Worsted dress goods, cashmeres, serges, bunting, etc.—			
Square yards	105,801,349	66,428,825	57,712,086
Value	$54,030,376	$27,802,181	$16,316,392
Carriage cloths—			
Square yards	1,782,855	1,741,765	1,220,408
Value	$947,862	$964,557	$696,999
Flannels for underwear—			
Square yards	3,856,353	8,710,131	9,324,720
Value	$1,257,271	$2,045,858	$2,344,559
Blankets—			
Square yards	5,137,903	7,316,179	5,454,173
Value	$3,228,797	$2,751,029	$2,316,968
Horse blankets—			
Square yards	247,395	740,237	514,952
Value	$185,430	$418,219	$256,211
Woven shawls—			
Square yards	704,153	895,777	600,104
Value	$404,583	$557,370	$500,523
All other—			
Square yards	463,179	310,603	615
Value	$167,194	$257,375	$510
Union, or cotton mixed, woven goods:			
Square yards	37,453,351	63,197,407	57,334,570
Value	$14,327,973	$26,288,407	$23,111,696
Unions, tweeds, cheviots, cassimeres, etc.—			
Square yards	18,917,478	35,103,110	30,767,915
Value	$7,780,854	$15,050,726	$13,695,830
Overcoatings and cloakings—			
Square yards	4,281,739	5,373,053	6,087,366
Value	$2,363,381	$3,353,758	$3,518,613
Sackings, tricots, dress goods, and opera and similar flannels—			
Square yards	4,319,539	11,690,740	11,176,752
Value	$1,776,721	$4,926,596	$3,669,584
Flannels for underwear—			
Square yards	7,063,572	7,273,761	6,217,094
Value	$1,308,369	$1,528,928	$1,284,578
Blankets—			
Square yards	1,717,758	3,114,110	1,530,696
Value	$650,714	$1,198,706	$561,649
All other—			
Square yards	1,153,265	642,633	1,554,747
Value	$447,934	$229,693	$381,442
Cotton-warp woven goods:			
Square yards	210,346,081	182,057,061	152,878,584
Value	$62,265,854	$50,058,293	$42,437,799
Wool filling cassimeres, doeskins, jeans, tweeds, coatings, etc.—			
Square yards	45,244,866	34,602,165	37,160,449
Value	$12,107,320	$10,877,081	$11,024,538
Worsted filling cassimeres, doeskins, jeans, tweeds, coatings, etc.—			
Square yards	29,220,252	16,688,620	12,663,719
Value	$15,009,081	$6,969,402	$7,267,508
Wool filling overcoatings and cloakings—			
Square yards	2,075,502	8,198,406	3,917,498
Value	$771,879	$2,478,878	$1,430,430
Satinets and linseys—			
Square yards	5,102,460	22,339,112	13,051,729
Value	$912,182	$4,074,800	$2,873,181
PRODUCTS—continued.			
Cotton-warp woven goods—Contd.			
Worsted filling dress goods, cashmeres, serges, mohairs, etc.—			
Square yards	65,112,981	49,300,369	45,784,011
Value	$14,798,965	$12,711,554	$10,423,206
Wool filling dress goods, and repellents—			
Square yards	12,916,060	12,139,080	7,496,898
Value	$2,741,816	$3,230,561	$1,890,488
Domett flannels and shirtings—			
Square yards	4,571,765	4,285,838	4,555,013
Value	$911,967	$769,476	$976,465
Linings, Italian cloths, and lastings—			
Square yards	28,928,148	17,619,325	10,157,039
Value	$9,008,799	$4,505,927	$2,228,434
Blankets—			
Square yards	9,746,841	9,267,144	11,107,104
Value	$2,684,919	$2,218,243	$2,241,342
Horse blankets—			
Square yards	4,210,098	6,307,836	5,702,315
Value	$1,676,942	$1,083,154	$1,252,824
Carriage robes—			
Square yards	2,889,444	1,309,166	1,250,233
Value	$1,396,595	$1,139,217	$815,233
All other—			
Square yards	327,664	.....	32,576
Value	$245,389	.....	$14,159
Upholstering goods and sundries	$1,986,330	$1,625,233	$3,259,727
Woolen and worsted—			
Square yards	1,176,542	1,060,739	447,568
Value	$1,528,648	$908,937	$742,121
All other	$457,682	$716,296	$2,517,606
Partially manufactured products for sale	$115,032,485	$66,466,672	$47,589,422
Yarns:			
Woolen—			
Pounds	28,520,493	42,878,320	32,099,851
Value	$7,505,412	$9,993,894	$6,804,626
Worsted—			
Pounds	88,323,953	55,475,235	[1] 43,003,343
Value	$80,395,543	$40,142,077	[1] $30,081,425
Woolen, union or merino—			
Pounds	10,249,625	8,824,064	15,974,567
Value	$2,143,416	$2,538,018	$4,668,125
Worsted, union or merino—			
Pounds	3,761,737	3,314,549	
Value	$3,522,812	$2,460,558	
All other—			
Pounds	3,195,553	2,799,060	4,536,105
Value	$974,570	$1,162,795	$1,451,390
Worsted tops and slubbing—			
Pounds	11,321,279	4,772,582	(1)
Value	$8,027,231	$2,855,171	(1)
Noils—			
Pounds	27,479,293	15,379,600	12,176,843
Value	$8,938,589	$4,865,976	$3,354,187
Waste—			
Pounds	24,057,580	17,946,076	8,163,294
Value	$3,524,912	$2,448,183	$1,229,669
All other products	$3,250,857	$3,924,232	$3,019,906
Work on materials for others	$3,026,255	$1,188,537	$1,568,783
MACHINERY.			
Sets of cards	6,315	6,990	[2] 5,695
Woolen	4,500	5,178	.....
Worsted	1,581	1,387	.....
Cotton	234	425	.....
Spindles	4,287,640	3,747,934	3,277,607
Producing	3,553,194	3,228,423	2,873,528
Doubling and twisting	734,446	519,511	404,079
Looms, all classes	72,532	63,867	61,395
Wool-combing machines	1,978	1,440	1,317

[1] Worsted tops and slubbing 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 partial 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]
MATERIALS.			
Total cost	**$320,637,889**	**$178,941,918**	**$131,503,655**
Iron ore:			
Tons	48,353,677	30,032,862	25,366,894
Cost	$187,264,601	$100,945,369	$65,902,922
Domestic—			
Tons	46,605,930	29,202,944	24,612,511
Cost	$177,589,789	$96,206,246	$61,795,473
Foreign—			
Tons	1,747,747	829,918	754,383
Cost	$9,674,812	$4,739,123	$4,107,449
Mill cinder, scrap, etc.:			
Tons	1,982,530	1,865,385	1,600,313
Cost	$5,544,859	$3,830,961	$3,772,385
Fluxes:			
Tons	13,570,845	8,325,209	7,324,743
Cost	$12,239,493	$6,888,647	$5,054,725
Fuel, [2]	$105,994,112	$62,802,060	$44,199,382
Coke—			
Tons (2,000 pounds)	31,430,536	19,739,671	16,461,533
Cost	$102,134,423	$57,126,997	$38,976,770
Charcoal—			
Bushels	38,032,618	[3] 37,273,569	30,677,585
Cost	$2,787,026	[3] $2,521,887	$1,823,881
Anthracite coal [2]—			
Tons	265,401	560,037	886,564
Cost	$904,102	$1,812,779	$2,297,419
Bituminous coal [2]—			
Tons	102,833	801,640	832,235
Cost	$168,561	$1,340,997	$1,101,312
All other materials	$9,594,824	$4,474,281	$12,574,241
PRODUCTS.			
Total value	**$391,429,283**	**$231,822,707**	**$206,756,557**
Pig iron:			
Tons	25,651,798	16,623,625	14,447,791
Value	$387,830,443	$228,911,116	$206,512,755
All other products	$3,598,840	$2,911,591	$243,802
Pig iron, classified according to fuel used:			
Bituminous, chiefly coke—			
Tons	[4] 24,608,572	14,909,029	12,253,818
Value	$369,684,636	$203,814,049	$173,763,091
Anthracite coal and coke mixed and anthracite alone—			
Tons	670,991	1,305,094	1,841,857
Value	$10,962,150	$18,103,982	$26,678,705
Charcoal—			
Tons	372,235	409,502	[5] 352,116
Value	$7,183,057	$6,993,085	$6,070,959
Pig iron, classified according to disposition:			
Produced for consumption in works of company reporting—			
Tons	15,858,203	9,926,545	([6])
Value	$239,387,017	$138,867,586	([6])
PRODUCTS—continued.			
Pig iron, classified according to disposition—Continued.			
Produced for sale—			
Tons	9,793,595	6,697,080	([6])
Value	$148,443,426	$90,043,530	([6])
Pig iron, classified by grades (tons):			
Bessemer, (0.04 to 0.10 per cent in phosphorus)	10,147,052	8,894,584	8,475,530
Low phosphorus (below 0.04 per cent in phosphorus)	248,720	192,795	([6])
Basic	7,741,759	2,553,940	937,439
Foundry	5,539,410	3,675,310	3,510,300
Forge or mill	586,685	601,677	1,057,616
Malleable Bessemer	934,211	316,904	([6])
White, mottled, and miscellaneous	110,810	98,627	208,323
Direct castings	16,181	9,469	7,123
Ferroalloys	326,970	280,259	251,460
Spiegeleisen	142,223	169,630	163,672
Ferromanganese	82,208	57,072	51,878
Ferrosilicon, including Bessemer ferrosilicon (7 per cent or over in silicon) and ferrophosphorus	102,539	53,557	35,910
Pig iron, classified by method of delivery or casting (tons):			
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	329,460	([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-furnace 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.

Table 57	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	$315,726,895
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	4,126,980
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
Rolled 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

Table 57—Continued.	1909	1904	1899
II. PRODUCTS.			
Total value	**[3] $985,722,534**	**[3] $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	$585,288,243	$510,906,040
Rails—			
Tons	2,858,599	[4] 2,194,605	[4] 2,251,337
Value	$81,128,295	$58,256,750	$46,533,159
Bessemer steel—			
Tons	1,643,527	2,065,024	2,250,457
Value	$44,727,515	$54,627,488	$46,501,979
Open-hearth steel, basic—			
Tons	1,215,072	128,681	
Value	$36,400,780	$3,608,562	
Rerolled or renewed rails—			
Tons	106,352	99,530	(2)
Value	$2,683,017	$2,480,328	(2)
Rail fastenings (splice bars, tie-plates, fishplates, etc.)—			
Tons	396,911	174,055	(2)
Value	$14,488,412	$5,663,052	(2)
Structural shapes, not including plates used for making girders—			
Tons	2,123,630	954,537	856,983
Value	$65,564,593	$32,730,901	$29,361,522
Steel—			
Tons	2,102,300	950,062	829,892
Value	$64,853,466	$32,585,701	$28,309,966
Open-hearth—			
Tons	[5] 1,934,230	618,391	566,092
Value	$59,789,948	$21,496,531	$19,928,249
Bessemer—			
Tons	168,070	331,671	263,800
Value	$5,063,518	$11,089,170	$8,381,717
Iron—			
Tons	21,330	4,475	27,091
Value	$711,127	$145,200	$1,051,556
Bars and rods, including merchant, shovel, finger, and horseshoe bars, spike, chain bolt, and nut rods, etc. (but not including wire rods, sheet and tin-plate bars, splice bars, and bars for reenforced concrete):			
Tons	3,784,248	2,442,810	2,493,159
Value	$121,488,423	$84,069,122	$100,597,221
Bars for reenforced concrete:			
Tons	191,358		
Value	$5,588,963		
Wire rods:			
Tons	2,295,279	1,792,704	916,587
Value	$61,947,958	$52,995,031	$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	3,332,733	1,856,469	1,488,066
Value	$133,272,393	$77,802,001	$68,109,223
Black plates, or sheets, for tinning:			
Tons	631,435	504,025	394,014
Value	$30,955,967	$25,297,079	$20,967,806
Skelp, flue and pipe:			
Tons	2,084,286	1,557,690	1,195,189
Value	$64,514,728	$46,780,202	$49,159,747
Hoops, bands, and cotton ties:			
Tons	341,043	337,223	
Value	$10,429,681	$12,760,010	
Nail and tack plates:			
Tons	68,557	86,601	97,664
Value	$2,540,022	$2,462,076	$3,116,558
Axles, car, locomotive, automobile, wagon, carriage, etc., rolled or forged:			
Tons	102,348	83,585	102,606
Value	$3,831,344	$2,875,829	$4,482,937
Armor plates, gun forgings, and ordnance:			
Tons	26,845	24,433	15,302
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	84,383	4,823,585	4,172,286
Value	$2,247,133	$109,611,104	$96,321,887
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	203,681
Value	$4,986,211	$3,940,998	$5,940,587
All other rolled steel or iron:			
Tons	566,627	377,665	506,880
Value	$39,570,061	$16,743,727	$19,202,606

For footnotes, see page 490.

Table 57—Continued.	1909	1904	1899
II. 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	195,404	103,707
Value	$3,593,726	$3,685,310	$2,781,145
Direct steel castings:			
Tons	504,856	287,325	177,156
Value	$38,862,448	$20,600,136	$14,609,893
All other forged steel and iron, not including remanufactures of rolling-mill products:			
Tons	365,986	274,061	81,009
Value	$18,740,241	$15,684,967	$6,665,741
All other products	$122,379,823	$88,676,783	$86,305,676
Miscellaneous steel and iron products not rolled, including value added to iron and steel rolling-mill products by further manufacture	$86,534,369	$61,977,284	(2)
Scrap steel or iron produced for sale or for transfer to other works of same company:			
Tons	1,238,554	877,177	(2)
Value	$18,163,624	$11,079,831	(2)
All products other than steel and iron	$17,681,830	$15,619,668	(2)
III. STEEL.			
Total production:			
Tons	[6] 23,473,713	[6] 13,666,403	10,685,000
Value (included above)	$478,736,938	$260,884,712	$212,538,875
Classified according to process:			
Open-hearth—			
Tons	14,192,278	5,817,957	3,044,356
Value	$293,528,201	$120,322,707	$71,855,172
Basic—			
Tons	13,210,419	5,062,152	2,153,835
Value	$262,529,822	$94,390,927	$43,509,506
Acid—			
Tons	981,859	755,805	890,521
Value	$30,998,379	$25,931,780	$28,345,666
Bessemer—			
Tons	9,174,067	7,768,141	7,532,028
Value	$177,064,776	$134,549,580	$132,113,984
Crucible and miscellaneous—			
Tons	107,373	80,310	108,016
Value	$8,144,011	$6,012,425	$8,569,719
Classified according to form:			
Ingots—			
Tons	22,968,862	13,379,083	10,507,844
Value	$439,874,540	$240,284,576	$197,928,982
Castings—			
Tons	504,856	287,325	177,156
Value	$38,862,448	$20,600,136	$14,609,893
Duplex process—open-hearth steel partly purified in Bessemer converters before finishing in open-hearth furnaces (included above), tons	522,682	(7)	(7)
Alloyed steels, nickel, tungsten, titanium, chrome, vanadium, etc. (included above), tons	158,216	(7)	(7)
Classified according to process:			
Open-hearth	100,335	(7)	(7)
Basic	86,242	(7)	(7)
Acid	14,093	(7)	(7)
Bessemer	45,324	(7)	(7)
Crucible and miscellaneous	12,557	(7)	(7)
Classified according to form:			
Ingots	151,300	(7)	(7)
Castings	6,916	(7)	(7)
IV. MANUFACTURES FROM ROLLING-MILL PRODUCTS. (Made in mill producing, value previously included.)			
Wire and wire products:			
Tons (2,000 pounds)	1,634,855	1,416,494	879,296
Value	$71,624,024	$67,551,443	$47,728,784
Pipes and tubes:			
Wrought welded—			
Tons	1,314,771	849,047	(7)
Value	$68,471,573	$43,985,728	(7)
Seamless, hot-rolled or drawn—			
Tons	54,273		
Value	$5,650,739		
All other, including clinched, riveted, etc., but not including cast:			
Tons	17,561	20,636	(7)
Value	$986,699	$2,290,234	(7)
Bolts, nuts, rivets, forged spikes, washers, etc.:			
Kegs (200 pounds)	4,471,985	3,105,827	(7)
Value	$20,538,858	$13,854,635	(7)
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
IV. MANUFACTURES FROM ROLLING-MILL PRODUCTS—continued.			
Horse and mule shoes:			
Kegs (200 pounds)	996,383	768,253	(7)
Value	$7,202,897	$5,483,137	(7)
Springs, car, furniture, and all other, not including wire springs:			
Tons	6,191	22,022	(7)
Value	$374,924	$1,708,632	(7)
Switches, frogs, crossings, etc.:			
Tons	28,608	(7)	(7)
Value	$2,471,008	(7)	(7)
Galvanized plates or sheets:			
Tons	431,658	(7)	(7)
Value	$25,912,056	(7)	(7)
Stamped ware:			
Tons	24,612	(7)	(7)
Value	$2,296,707	$292,923	(7)
Shovels, spades, scoops, etc.	$540,321	$410,500	(7)
V. PRODUCTS SOLD FOR EXPORT. (By establishments producing.)			
Total tons	867,646	(7)	(7)
Rails	317,455	(7)	(7)
Rail fastenings	20,118	(7)	(7)
Pipes and tubes, wrought welded	89,377	(7)	(7)
Sheet and tin-plate bars	85,123	(7)	(7)
Plates and sheets	80,706	(7)	(7)
Galvanized plates or sheets	79,246	(7)	(7)
Structural shapes	69,764	(7)	(7)
Bars and rods	48,938	(7)	(7)
Wire rods	18,738	(7)	(7)
Blooms, billets, and slabs	18,021	(7)	(7)
Skelp	10,703	(7)	(7)
Miscellaneous	29,457	(7)	(7)
VI. EQUIPMENT.			
Steel plants: Daily capacity of steel furnaces and converters, tons of steel, double turn	108,716	76,482	53,745
Open-hearth furnaces—			
Number	687	481	307
Daily capacity, tons of steel, double turn	61,601	34,243	18,245
Basic—			
Number	549	339	168
Daily capacity, tons of steel, double turn	55,273	26,902	12,151
Acid—			
Number	138	142	139
Daily capacity, tons of steel, double turn	6,328	7,341	6,094
Converters, Bessemer or modified Bessemer—			
Number	101	81	70
Daily capacity, tons of steel, double turn	48,823	41,448	34,925
Crucible furnaces—			
Number	257	146	159
Number of pots that can be used at a heat	3,840	2,457	2,528
Daily capacity, tons of steel, double turn	840	693	575
All other steel furnaces—			
Number	16	36	(7)
Daily capacity, tons of steel, double turn	292	98	53
Metal mixers—			
Number	59	(7)	(7)
Capacity, tons	14,343	(7)	(7)
Rolling mills: Daily capacity of rolled steel and iron, double turn, tons	150,403	105,591	86,964

[1] Includes materials purchased or transferred to the establishment reporting from other works of the company.

[2] Not reported separately.

[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.

[4] Includes 900 tons of iron rails, valued at $20,700, in 1904, and 880 tons, valued at $31,180, in 1899.

[5] Includes 149,688 tons of steel, valued at $4,537,625, not distributable by kind into open-hearth or Bessemer.

[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:

	1909	1904
Tons of steel	49,481	4,184
Classified according to process:		
Open-hearth	36,099	2,440
Bessemer	6,066	774
Crucible and miscellaneous	7,316	970
Classified according to form:		
Ingots	5,102	.....
Castings	44,379	4,184

[7] Not reported.

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.

Table 58	QUANTITY (TONS).			
MATERIAL.	Total.	Produced by the company reporting— In the works where consumed.	Produced by the company reporting— Transferred from other works of the company.	Purchased.
Produced and purchased.				
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	773,843	4,029,774
Ingots, 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	1,578,299	1,401,573	35,221	141,496
Wire rods	1,465,221	1,318,796	128,291	18,134

PRODUCT.	QUANTITY (TONS). Total.	For consumption— In the works producing.	For consumption— Transferred to other works of the company	For sale.
Consumed and sold.				
Steel ingots	22,968,862	22,826,117	112,301	30,444
Open-hearth	13,725,783	13,626,241	72,433	27,109
Basic	12,952,840	12,864,514	69,815	18,511
Acid	772,943	761,727	2,618	8,598
Bessemer	9,145,542	9,103,816	39,726	2,000
Crucible and miscellaneous	97,537	96,060	142	1,335
Blooms, billets, and slabs	16,263,418	11,375,622	3,045,977	1,841,819
Rolled forging blooms and billets	160,997	76,614	.....	84,383
Muck and scrap bar	1,366,324	1,191,828	20,065	154,431
Sheet and tin-plate bars	2,094,398	441,637	27,353	1,625,408
Bars and rods	3,784,248	632,679	.....	3,151,569
Wire rods	2,295,279	1,318,796	465,161	511,322
Plates and sheets	3,332,733	463,665	61,954	2,807,114
Black plates and sheets	631,435	.....	575,160	56,275
Skelp	2,084,286	1,401,573	102,027	580,686
Nail and tack plates	68,557	42,690	.....	25,867
Miscellaneous rolled iron or steel	462,071	66,581	2,113	393,377
Miscellaneous forged iron or steel	365,986	64,548	.....	301,438
Scrap	6,364,647	5,126,093	398,436	840,118

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.

Table 59	1909	1904	1899
MATERIALS.			
Total cost	**$41,889,434**	**$31,375,714**	**$26,728,150**
Black plates or sheets:			
Pounds	[1] 1,321,071,691	[2] 1,019,608,657	[3] 827,915,599
Cost	$28,981,151	$22,992,006	$20,668,848
Produced by the establishment reporting:			
Pounds	1,291,048,109	943,798,583	(4)
Cost	$28,245,234	$21,154,388	(4)
Purchased:			
Pounds	30,023,582	[5] 75,810,074	(4)
Cost	$735,917	$1,837,618	(4)
Coating metals:			
Pounds	40,927,759	32,445,104	27,154,258
Cost	$9,670,037	$7,075,722	$4,927,090
Tin, including tin contents of terne mixture purchased—			
Pounds	31,077,651	24,243,851	20,282,778
Cost	$9,235,718	$6,709,164	$4,528,473
Lead, including lead contents of terne mixture purchased—			
Pounds	9,850,108	8,201,253	6,871,480
Cost	$434,319	$366,558	$398,617
In condition purchased—			
Pig tin—			
Pounds	28,586,267	(6)	(6)
Cost	$8,490,794	.....	.....
Pig lead—			
Pounds	2,708,496	(6)	(6)
Cost	$117,656	.....	.....
Terne mixture—			
Pounds	9,632,996	(6)	(6)
Cost	$1,061,587	.....	.....
All other materials	$3,238,246	$1,307,986	$1,132,212
PRODUCTS.			
Total value	**[7] $47,969,645**	**$35,283,360**	**$31,892,011**
Tin and terne plates:			
Pounds	1,315,313,132	1,026,384,851	849,004,022
Value	$45,815,146	$34,549,543	$31,284,145
Tin plates—			
Pounds	1,123,968,875	867,526,985	707,718,239
Value	$38,259,885	$28,429,971	$25,553,021
Terne plates—			
Pounds	191,344,257	158,857,866	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	6,555,855	1,000,473
Value	$520,465	$217,476	$86,492
All other products	$1,634,034	$516,341	$521,374
EQUIPMENT.			
Tin or terne sets at end of year:			
Completed—			
Number	563	598	[8] 585
Usually employed on tin plates	450	478	(4)
Usually employed on terne plates	113	120	(4)
Daily capacity, single turn, pounds	2,795,972	3,261,298	2,732,901
Tin plates	2,055,915	2,694,115	2,003,538
Terne plates	740,057	567,183	729,363
Daily capacity as operated, whether on single, double, or triple turn, pounds	7,016,293	7,121,350	(4)
Building, number	49	(4)	[8] 53
Black-plate department of establishments making their black plates:			
Hot black-plate mills at end of year—			
Completed—			
Number	335	315	[8] 332
Annual capacity on triple turn, long tons	1,042,088	707,405	641,450
Building—			
Number	20	(4)	[8] 23
Annual capacity on triple turn, long tons	36,600	(4)	51,275
Cold mills, completed, number	268	272	[8] 308

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

[2] Includes 83,900 pounds of foreign plates, costing $3,769; the domestic plates reported were distributed by kind as follows: Bessemer steel, 911,663,989 pounds; open-hearth steel, 106,911,401 pounds; iron, 949,367 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 8,389,200 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	Total.	Wire mills (wire rods purchased).	Wire departments of rolling mills[1] (wire rods rolled).
PRINCIPAL MATERIALS.			
Metal used, cost	**$115,655,427**	**$51,240,373**	**$64,415,054**
Wire rods	$112,799,516	$50,810,983	$61,988,533
Steel—			
Tons	2,514,504	850,729	1,663,775
Cost	$67,439,887	$23,021,867	$44,418,020
Open-hearth—			
Tons	1,359,256	285,961	1,073,295
Cost	$38,532,177	$8,536,361	$29,995,816
Basic—			
Tons	1,255,747	233,105	1,022,642
Cost	$35,046,106	$6,695,310	$28,350,796
Acid—			
Tons	103,509	52,856	50,653
Cost	$3,486,071	$1,841,051	$1,645,020
Bessemer—			
Tons	1,148,353	558,048	590,305
Cost	$28,340,445	$13,936,178	$14,404,267
Crucible and other steel—			
Tons	6,895	6,720	175
Cost	$567,265	$549,328	$17,937
Iron—			
Tons	4,849	1,055	3,794
Cost	$207,846	$62,203	$145,643
Copper—			
Tons	151,951	102,394	49,557
Cost	$40,916,084	$27,462,312	$13,453,772
Other metal—[2]			
Tons	17,944	935	17,009
Cost	$4,235,699	$264,601	$3,971,098
Purchased wire, plain or coated:			
Tons	57,922	8,943	48,979
Cost	$2,855,911	$429,390	$2,426,521
PRODUCTS.			
Total value	**$180,083,522**	**$84,486,518**	**$95,597,004**
Wire, and manufactures of wire	$173,349,614	$79,249,869	$94,099,745
Steel and iron—			
Tons	2,471,858	821,929	1,649,929
Value	$120,585,637	$47,934,204	$72,651,433
Wire drawn for sale—			
Tons	826,451	343,905	482,546
Value	$38,845,081	$18,823,035	$20,022,046
Plain—			
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
PRODUCTS—continued.			
Wire and manufactures of wire—Contd.			
Steel and iron—Continued.			
Barb wire—			
Tons	323,565	76,268	247,297
Value	$13,881,517	$3,343,856	$10,537,661
Woven wire, fencing, and poultry netting—			
Tons	422,127	115,889	306,238
Value	$21,419,170	$6,724,077	$14,695,093
Wire rope and strand—			
Tons	45,303	34,140	11,163
Value	$6,683,771	$5,450,064	$1,233,707
Other manufactures—springs, bale ties, cold-rolled flat wire, etc.—			
Tons	129,945	71,906	58,039
Value	$10,856,154	$6,130,901	$4,725,253
Copper—			
Tons	154,231	102,604	51,627
Value	$47,184,164	$30,831,646	$16,352,518
Wire drawn for sale—			
Tons	139,482	102,418	37,064
Value	$42,336,274	$30,736,728	$11,599,546
Manufactures of wire—			
Tons	14,749	186	14,563
Value	$4,847,890	$94,918	$4,752,972
Other metal—[2]			
Tons	17,407	1,048	16,359
Value	$5,579,813	$484,019	$5,095,794
Wire drawn for sale—			
Tons	15,583	1,008	14,575
Value	$4,993,376	$459,583	$4,533,793
Manufactures of wire—			
Tons	1,824	40	1,784
Value	$586,437	$24,436	$562,001
All other products	$6,733,908	$5,236,649	$1,497,259
Wire drawn, whether for consumption or for sale, tons:			
Steel and iron	2,389,136	787,322	1,601,814
Copper	147,156	101,890	45,266
Other metal[2]	17,411	1,051	16,360
EQUIPMENT.			
Wire-drawing blocks:			
Number[3]	43,697	28,119	15,578
Annual capacity, tons	3,213,574	1,065,250	2,148,324
Wire-nail machines:			
Number	4,428	1,207	3,221
Annual capacity (kegs of 100 pounds)	18,756,995	4,693,513	14,063,482
Woven-wire fence machines:			
Number	446	198	248
Annual capacity, tons	481,373	134,803	346,570

[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.

Table 62	1909	1904	1899
MATERIALS.			
Total cost	$248,278,933	$191,179,073	$155,000,004
Hides[1] (all kinds):			
Number	[2] 18,360,415	17,581,613	15,838,862
Cost	$119,410,767	$89,126,593	$77,784,760
Skins:[1]			
Number	97,680,571	90,625,064	83,870,481
Cost	$75,647,790	$56,341,332	$45,761,209
Calf and kip—			
Number	19,732,638	12,481,221	8,944,454
Cost	$31,790,572	$15,725,616	$10,792,485
Goat—			
Number	48,077,664	47,665,603	48,046,897
Cost	$27,833,214	$26,756,012	$24,950,223
Sheep—			
Number	26,082,060	27,492,359	24,507,642
Cost	$12,231,618	$10,547,883	$8,457,995
All other—			
Number	[3] 3,788,209	2,985,881	2,371,488
Cost	$3,792,386	$3,311,821	$1,560,506
Rough leather purchased	$9,556,257	$10,852,655	$6,663,395
Whole sides—			
Number	1,468,213	2,414,102	1,086,592
Cost	$4,967,781	$8,136,661	$3,534,097
Grains—			
Sides	525,786	342,332	165,938
Cost	$1,201,842	$980,260	$467,125
Splits	$1,442,505	$1,108,243	$1,320,589
All other	$1,944,129	$627,491	$1,341,584
All other materials	$43,664,119	$34,858,493	$24,790,640
PRODUCTS.			
Total value	[4] $327,874,187	[4] $252,620,986	$204,038,127
Leather	$306,476,720	$236,765,803	$194,202,063
Sole	$88,331,713	$69,205,600	$55,481,625
Hemlock—			
Sides	7,963,728	9,929,964	9,810,996
Value	$32,237,151	$32,676,015	$29,305,561
Oak—			
Sides	3,805,861	3,607,963	2,562,814
Value	$26,083,793	$19,157,805	$13,359,836
Union—			
Sides	5,756,227	4,400,011	3,096,162
Value	$28,375,815	$17,371,780	$12,807,262
Chrome—			
Sides	279,436	(5)	2,100
Value	$1,634,954	(5)	$8,966
Upper, other than calf or kip skins	$39,951,460	$24,815,835	$25,311,838
Grain, satin, pebble, etc. (side leather)—			
Sides	7,946,769	6,850,469	8,141,093
Values	$24,198,993	$15,487,252	$17,478,802
PRODUCTS—continued.			
Leather—Continued.			
Upper—Continued.			
Finished splits—			
Number	8,134,229	6,205,050	8,790,382
Value	$7,410,740	$5,993,231	$6,740,502
Patent and enameled shoe—			
Sides	2,705,291	1,356,777	236,943
Value	$8,341,727	$3,335,352	$1,092,534
Horsehides and coltskins—			
Number	1,342,938	1,529,395	223,378
Value	$4,953,145	$4,596,065	$843,118
Calf and kip skins, tanned and finished—			
Number	19,012,064	12,014,223	8,264,272
Value	$42,412,256	$22,508,335	$14,619,150
Grain finished—			
Number	17,516,910	10,211,885	7,112,859
Value	$39,982,447	$18,996,551	$12,127,439
Flesh finished—			
Number	1,495,154	1,802,338	1,151,413
Value	$2,429,809	$3,511,784	$2,491,711
Goatskins, tanned and finished—			
Number	47,907,211	45,691,492	47,043,932
Value	$40,882,640	$37,887,349	$35,672,981
Black—			
Number	40,351,192	40,019,614	38,176,816
Value	$33,949,575	$32,822,282	$29,050,886
Colored—			
Number	7,556,019	5,671,878	8,867,116
Value	$6,933,065	$5,065,067	$6,622,095
Sheepskins, tanned and finished—			
Number	19,665,155	20,597,598	20,290,985
Value	$12,236,687	$11,168,829	$8,353,755
Belting—			
Sides	1,042,070	859,564	1,472,016
Value	$6,995,133	$4,754,456	$7,092,778
Harness—			
Sides	3,946,235	4,369,561	3,444,616
Value	$24,802,734	$20,274,188	$16,712,056
Carriage, automobile, and furniture—			
Hides	1,398,842	827,104	619,741
Value	$14,266,742	$7,780,804	$5,748,387
Trunk, bag, and pocketbook	$6,198,544	$4,920,750	$2,611,326
Bookbinder's	$2,450,155	$2,283,761	$1,688,413
Glove	$4,913,543	$3,344,614	$3,084,837
Sold in rough	$6,335,599	$10,180,949	$6,864,345
All other	$11,746,369	$13,044,268	$10,117,454
All other products	$8,632,689	$7,665,223	$5,514,395
Work on materials for others	$12,764,778	$8,189,960	$4,321,669

[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.

Table 63 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	21,717,256	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.

Table 64 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	3,921,652	15,326,965
Boys' and youths'	23,838,626	4,423,934	50,377	15,016,611	567,939	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	648,067	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	1,286,281	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:

Table 65 PRODUCT.	1909	1904	1899
Total value	[1] $23,630,598	[1] $17,740,385	[1] $16,926,156
Gloves, mittens, and gauntlets:			
Dozen pairs	3,368,655	3,370,146	[2] 2,895,661
Value	$22,525,864	$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	$4,959,902
Unlined—			
Dozen pairs	1,664,718	1,598,332	1,314,507
Value	$11,838,623	$8,182,689	$7,458,356
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.
- Coke.
- Dyestuffs and extracts.
- Explosives.
- Fertilizers.
- Gas, illuminating and heating.
- Glucose and starch.
- Oil, cottonseed, and cake.
- Oil, essential.
- Paint and varnish.
- Petroleum, refining.
- Salt.
- Soap.
- Sulphuric, nitric, and mixed acids.
- Turpentine and rosin.

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 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	[1] $117,688,887	[2] $75,222,249	$48,039,595
Acids [3]	$11,926,389	$7,583,059	$3,161,743
Acetic—			
Pounds	51,963,788	27,001,322	24,945,558
Value	$1,136,134	$537,542	$396,323
Boric—			
Pounds	5,554,414	6,956,896	2,684,935
Value	$295,739	$527,190	$198,212
Citric—			
Pounds	2,102,206	2,265,631	(4)
Value	$777,200	$598,718	(4)
Hydrofluoric—			
Pounds	4,790,963	2,932,358	698,000
Value	$214,657	$151,218	$34,890
Muriatic—			
Pounds	128,394,736	127,502,682	116,675,109
Value	$1,171,082	$1,180,910	$1,015,915
Oleic—			
Pounds	13,337,717	(4)	(4)
Value	$680,015	(4)	(4)
Phosphoric—			
Pounds	25,702,606	991,050	(4)
Value	$505,791	$68,541	(4)
Other	$7,145,771	$4,518,940	$1,516,403
Sodas	$21,417,982	$16,858,929	$11,596,915
Soda ash—			
Tons	646,007	518,789	286,361
Value	$10,361,756	$8,202,292	$4,768,383
Sal soda—			
Tons	76,285	56,870	63,231
Value	$977,712	$792,248	$779,166
Bicarbonate of soda—			
Tons	82,800	68,867	68,185
Value	$1,515,031	$1,135,610	$1,324,843
Caustic soda [5]—			
Tons	112,152	80,159	78,779
Value	$4,230,954	$2,924,182	$2,917,955

Table 66— Contd. PRODUCT.	1909	1904	1899
Sodas—Continued.			
Borax—			
Tons	20,154	20,882	5,637
Value	$1,766,910	$2,122,808	$502,480
Other	$2,565,619	$1,681,789	$1,304,088
Potashes—			
Pounds	1,866,570	5,113,706	3,764,809
Value	$88,940	$563,489	$174,476
Alums	$2,578,842	$2,126,612	$2,013,607
Alum cake—			
Pounds	26,884,889	(4)	(4)
Value	$273,711	(4)	(4)
Potash alum—			
Pounds	7,939,702	(4)	(4)
Value	$128,623	(4)	(4)
All other	$2,176,508	(6)	(6)
Coal-tar products	$2,675,327	$844,817	$1,322,094
Coal-tar distillery products	$2,462,330	$340,641	$809,830
Chemicals made from coal-tar distillery products	$212,997	$504,176	$512,264
Cyanides	$1,941,893	$1,179,104	$1,584,923
Yellow prussiate of potash—			
Pounds	3,510,208	5,027,264	6,140,406
Value	$463,983	$683,277	$993,514
All other	$1,477,910	$495,827	$591,409
Bleaching materials	$1,635,046	$777,750	$492,086
Hydrogen peroxide—			
Pounds	9,403,717	(4)	(4)
Value	$850,417	(4)	(4)
Bisulphites—			
Tons	14,528	(4)	(4)
Value	$202,504	(4)	(4)
All other	$582,125	$777,750	$492,086
Chemical substances produced by the aid of electricity	$17,968,277	$5,896,632	$1,305,368
Calcium carbide—			
Pounds	121,946,967	(4)	(4)
Value	$2,984,001	(4)	(4)
Caustic soda—			
Tons	19,428	(4)	(4)
Value	$1,032,647	(4)	(4)
Chlorates—			
Pounds	11,568,915	(4)	(4)
Value	$904,525	(4)	(4)
Hypochlorites—			
Tons	68,016	(4)	(4)
Value	$1,506,831	(4)	(4)
All other	$11,540,273	$5,896,632	(6)
Plastics	$7,180,172	$4,755,761	$2,099,400
Pyroxylin plastics	$5,389,819	$2,857,093	$1,970,387
All other—			
Pounds	10,234,928	(6)	(6)
Value	$1,790,353	$1,898,668	$129,013
Compressed or liquefied gases	$4,969,805	$2,787,689	$1,215,011
Anhydrous ammonia—			
Pounds	11,802,076	(6)	(6)
Value	$2,503,315	$1,173,184	$448,157
Carbon dioxide—			
Pounds	47,238,267	35,991,627	(6)
Value	$2,317,808	$1,343,966	$696,164
Laughing gas—			
Pounds	72,675	(4)	(4)
Value	$33,689	(4)	(4)
Oxygen—			
Gallons	4,777,977	(4)	(4)
Value	$93,150	(4)	(4)
All other—			
Pounds	364,014	(6)	(6)
Value	$16,843	$270,539	$70,690
Fine chemicals	$10,956,666	$9,145,853	$4,220,339
Alkaloids—			
Ounces	3,482,492	4,949,525	3,387,522
Value	$3,188,691	$2,925,789	$1,743,264
Gold salts—			
Ounces	42,544	59,969	8,594
Value	$430,944	$449,864	$90,145
Silver salts—			
Ounces	2,027,719	1,743,882	1,252,604
Value	$726,222	$683,761	$499,345
Platinum salts—			
Ounces	1,561	19,068	7,312
Value	$19,123	$175,682	$54,600
Chloroform—			
Pounds	1,861,435	616,670	396,540
Value	$472,759	$165,604	$98,070
Ether—			
Pounds	1,177,886	660,783	263,238
Value	$199,448	$334,935	$129,876
Acetone—			
Pounds	6,927,886	1,300,395	1,638,715
Value	$719,895	$161,320	$178,666
All other	$5,199,584	$4,248,898	$1,426,373
Chemicals not elsewhere specified:			
Glycerin—			
Pounds	33,986,974	18,791,997	15,383,798
Value	$4,838,826	$2,345,205	$2,012,886
Epsom salts—			
Pounds	47,785,318	15,935,837	6,072,309
Value	$357,728	$145,801	$45,966
Blue vitriol—			
Pounds	810,958	50,100	7,500,000
Value	$37,626	$2,500	$375,000

For footnotes, see page 496.

Table 66—Contd. 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 $9,105,458 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 liquefied gases:		
Hydrofluoric	2,051,951	79,722	Anhydrous ammonia	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	1,835,292	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 peroxide	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.
[2] 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	193,628	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	668	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.

Table 67	1909	1904	1899
MATERIALS.			
Total cost	[1] **$65,388,124**	**$29,884,532**	**$19,665,532**
Coal charged into ovens:			
Tons	[1] 59,354,937	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	2,818,556
Cost	[1] $62,203,382	$28,360,121	$18,355,252
All other materials	$3,184,742	$1,524,411	$1,310,280
PRODUCTS.			
Total value	[1] **$98,078,383**	[2] **$51,728,647**	**$35,585,445**
Coke: [3]			
Tons	39,315,065	24,733,063	19,640,798
Value	$89,965,483	$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	$551,836	$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)	$697,644	$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.

Table 68 PRODUCT.	1909	1904	1899
Total value	[1] $15,954,574	[1] $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	22,317,243	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 dextrins:			
Pounds	16,148,931	6,651,731	(2)
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 $834,102, 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.

Table 69	1909	1904	1899
MATERIALS.			
Total cost	$22,811,548	$17,203,667	$10,334,974
Nitrate of soda:			
Tons	188,889	133,634	88,524
Cost	$7,892,336	$5,608,557	$2,902,806
Acids:			
Mixed—			
Pounds	51,764,694	195,552,404	66,906,146
Cost	$1,512,626	$3,093,429	$1,505,754
Nitric—			
Pounds	7,591,756	2,699,500	467,587
Cost	$541,314	$122,047	$17,171
Sulphuric—			
Tons	22,501	18,298	7,864
Cost	$406,204	$247,301	$130,699
Sulphur or brimstone:			
Tons	17,389	19,574	12,742
Cost	$367,866	$507,469	$317,383
All other materials	$12,091,202	$7,624,864	$5,461,101
PRODUCTS.			
Total value	[1] $40,139,661	[2] $29,602,884	$17,125,418
Dynamite:			
Pounds	177,155,851	130,920,829	85,846,456
Value	$18,699,746	$12,906,193	$8,247,223
Nitroglycerin, sold as such:			
Pounds	28,913,253	7,935,936	3,618,692
Value	$3,162,434	$1,620,117	$783,299
Blasting powder:			
Kegs (25 pounds)	9,339,087	8,217,448	3,907,012
Value	$9,608,265	$7,377,977	$3,857,974
Permissible explosives:			
Pounds	9,607,448	(3)	(3)
Value	$863,209	(3)	(3)
Gunpowder:			
Pounds	12,802,700	10,383,944	25,638,804
Value	$1,736,427	$1,541,423	$1,452,377
Other explosives:[4]			
Pounds	7,464,825	6,303,825	3,201,468
Value	$3,913,787	$4,256,193	$2,610,103
All other products	$2,155,793	$1,906,921	$174,442

[1] In addition, 1,481,042 pounds, to the value of $802,948, 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 $690,032, 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 guncotton or pyroxylin, to avoid disclosing operations of individual establishments.

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

	1909	1904
Saltpeter.....pounds..	12,050,225	3,559,376
Nitroglycerin.....pounds..	70,289,667	44,077,828
Sulphuric acid.....tons..	42,555	30,994
Nitric acid.....tons..	31,484	18,988
Charcoal.....bushels..	737,884	1,156,918
Cellulose nitrates.....pounds..	5,000,226	.....
Nitrate of ammonia.....pounds..	10,904,319	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 industries, 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
MATERIALS.			
Total cost	$69,521,920	$39,287,914	$28,958,473
Ammoniates:			
Tons	778,639	.....	.....
Cost	$16,065,978	[1] $9,915,648	[1] $9,934,145
Ammonium sulphate:			
Tons	63,381	10,540	4,120
Cost	$3,640,592	$600,856	$186,609
Kainit:			
Tons	322,720	190,493	54,700
Cost	$2,783,658	$1,891,073	$520,833
Nitrate of soda:			
Tons	85,714	42,213	19,518
Cost	$3,730,070	$1,760,432	$709,841
Phosphate rock:			
Tons	1,529,124	888,571	787,927
Cost	$8,621,094	$4,244,554	$3,554,174
Potash salts:			
Tons	257,766	122,107	(2)
Cost	$7,327,549	$3,606,701	$3,098,400
Pyrites:			
Tons	456,574	342,962	288,778
Cost	$2,831,994	$2,020,759	$1,466,285
Sulphuric acid:			
Tons	603,672	197,865	231,527
Cost	$3,312,687	$1,084,304	$1,355,382
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

	1909	1904	1899
PRODUCTS.			
Total value	[3] $103,960,213	[3] $56,541,253	$44,657,385
Fertilizers:			
Tons	5,240,164	3,267,777	2,794,705
Value	$92,369,631	$50,460,694	$40,545,661
Superphosphates from minerals, bones, etc.—			
Tons	1,201,354	766,338	923,198
Value	$13,318,529	$7,515,257	$8,471,943
Ammoniated—			
Tons	472,757	775,987	142,898
Value	$10,061,193	$12,901,057	$2,449,388
Concentrated phosphate—			
Tons	313,888	(2)	(2)
Value	$3,638,210	(2)	(2)
Complete—			
Tons	2,717,797	1,329,149	1,436,682
Value	$57,243,899	$25,673,511	$25,446,046
Other—			
Tons	534,368	394,703	291,927
Value	$8,107,800	$4,370,869	$4,178,284
Sulphuric acid (reduced to 50° Baumé):			
Tons	153,057	24,502	71,176
Value	$923,492	$194,578	$437,925
Other acids—			
Tons	30,051	45,689	(2)
Value	$611,288	$241,506	$17,872
All other products	$10,055,802	$5,644,475	$3,655,927

[1] Includes for 1904, 125,888 tons of ammoniates classified as such, valued at $2,445,051; cottonseed meal, valued at $2,376,448; 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 consumed 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.

Table 71	1909	1904	1899
MATERIALS.			
Total cost	**$52,427,844**	[1] **$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	$2,667,706	$1,602,762	$726,736
All other materials	$16,109,556	$5,954,217	$4,545,491
PRODUCTS.			
Total value	[2] **$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	$69,432,582
Straight coal—			
Cubic feet (thousands)	19,985,253	12,693,034	(4)
Value	$18,065,841	$12,808,604	(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	[5] 78,339,880	67,515,421	$4,283,204
Value	$1,875,549	$2,064,343	
All other products	[6] $13,550,908	$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 $44,609.

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.

Table 72	1909	1904
MATERIALS.		
Total cost	**$36,898,771**	**$25,518,876**
Corn:		
Pounds	2,240,508,915	(1)
Cost	$26,674,779	$19,074,728
Wheat and roots:		
Pounds	1,940,000	(2)
Cost	$21,435	(2)
Potatoes:		
Pounds	210,608,127	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**	[3] **$32,649,836**
Starch:		
Pounds	677,535,647	356,695,335
Value	$17,514,823	$10,927,538
Corn—		
Pounds	638,825,366	311,140,814
Value	$15,962,916	$8,878,450
Wheat and root—		
Pounds	12,127,686	17,845,121
Value	$626,337	$1,124,612
Potato—		
Pounds	26,582,595	27,709,400
Value	$925,570	$924,476
Glucose, including all sirups:		
Pounds	769,660,210	(1)
Value	$17,922,514	$12,352,616
Grape sugar:		
Pounds	159,060,478	(1)
Value	$3,620,816	$2,254,745
Corn oil:		
Gallons	8,164,175	(1)
Value	$2,802,768	$1,164,466
Stock food	$6,013,968	$4,446,479
All other products	$924,422	$1,503,992

[1] Not reported.
[2] Not reported separately.
[3] In addition, 1,349,691 pounds of cornstarch, valued at $48,659, 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:

Table 73	1909 [1]	1904 [2]	1899
Cotton seed crushed ... tons	**3,798,549**	**3,308,930**	**2,479,386**
PRODUCTS.			
Total value	**$147,867,894**	**$96,407,631**	**$58,726,632**
Primary products manufactured, whether for sale or for further use:			
Oil ... gallons	157,115,689	132,051,801	93,325,729
Meal and cake ... tons	1,661,734	1,343,977	884,391
Hulls ... tons	1,258,612	1,201,079	1,169,286
Linters ... pounds	174,620,099	116,707,298	57,272,053

[1] In addition, products to the value of $2,617,765 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 1,212,852 gallons of crude oil, 12,811 tons of meal and cake, 8,926 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 36,440 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.

Table 74 PRODUCT.	1909	1904	1899
Total value	[1] $1,737,234	[1] $1,464,663	$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	$188,559
Black birch—			
Pounds	67,053	(2)	(2)
Value	$102,045	(2)	(2)
Spearmint—			
Pounds	33,400	(2)	(2)
Value	$83,283	(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:

Table 75 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	59,004	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.

Table 76 PRODUCT.	1909	1904	1899
Total value	[1] $124,889,422	[1] $90,839,609	$69,562,235
Pigments	$16,985,588	$11,965,806	[2] $13,319,487
White lead, dry—			
Pounds	85,234,414	62,395,868	[2] 116,102,316
Value	$3,921,803	$2,877,109	$4,211,181
Oxides of lead—			
Pounds	63,404,846	49,734,330	50,759,623
Value	$3,662,062	$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	167,479,090
Value	$6,874,333	$5,066,083	$5,317,943
Barytes—			
Pounds	49,496,025	22,299,980	
Value	$268,757	$134,174	
Pulp colors, sold moist—			
Pounds	28,435,722	25,351,515	20,060,935
Value	$1,277,239	$915,383	$861,531
Paints in oil	$56,763,296	$40,300,059	.....
White lead in oil—			
Pounds	246,567,570	216,496,450	(3)
Value	$15,234,411	$11,228,889	(3)
Paste—			
Pounds	162,356,330	131,940,464	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
Oleoresinous varnishes—			
Gallons	18,476,523	17,162,719	14,282,851
Value	$17,350,113	$15,702,997	$14,333,554
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	$905,229
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	(3)
Fillers	$3,126,271	$2,344,636	(3)
Liquid—			
Gallons	1,159,569	1,051,148	(3)
Value	$823,063	$785,617	(3)
Paste—			
Pounds	14,050,329	68,761,174	(3)
Value	$887,948	$1,559,019	(3)
Dry—			
Pounds	50,983,472		
Value	$295,728		
Putty—			
Pounds	63,502,048		
Value	$1,119,532		
Water paints and kalsomine:			
Dry or in paste—			
Pounds	47,465,265	27,932,447	(3)
Value	$1,917,038	$924,807	(3)
Already mixed for use—			
Gallons	522,283	123,400	(3)
Value	$61,969	$9,230	(3)
Linseed oil:			
Gallons	3,477,004	(4)	(4)
Value	$1,912,594	(3)	(3)
Bleached shellac:			
Pounds	3,014,195	(3)	(3)
Value	$578,650	(3)	(3)
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.

Table 77	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	25,171,289
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	$1,394,180	$2,454,617
Coke and black naphtha—			
Value	$507,695	$149,653	$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	(3)	(3)
Heated by superheated steam—			
Number	16	15	26
Capacity (barrels 42 gallons)	6,200	(3)	(3)
Heated by fire—			
Number	1,928	1,610	1,458
Capacity (barrels 42 gallons)	1,656,534	(3)	(3)
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	(3)
Storage tanks for refined petroleum:			
Number	6,476	3,575	2,869
Capacity, gallons	1,041,627,444	576,458,825	(3)
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.

Table 78 PRODUCT.	1909	1904	1899
Total value	$11,327,834	[1] $9,437,662	$7,966,897
Salt:			
Barrels	29,953,060	17,128,572	15,187,819
Value	$8,311,729	$6,955,734	$5,869,362
Bromine:			
Pounds	[2] 728,875	261,665	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	1,866,058
Common fine	7,745,204	6,254,293	6,866,126
Common coarse	2,843,393	1,878,666	2,635,282
Packers	385,802	498,943	182,930
Coarse solar	1,109,396	1,677,182	910,974
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	(3)
Kettle	1	7	(3)
Grainer	50	70	(3)
Open pan	11	12	(3)
Vacuum pan	21	20	(3)

[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	413,960,787	475,018,277
Cost	$23,341,905	$19,723,311
Cocoanut 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	59,761,740
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	$1,011,694
All other materials	$21,933,191	$9,513,764
PRODUCTS.		
Total value	**[1] $111,357,777**	**[1] $68,274,700**
Hard soap:		
Pounds	1,736,740,466	1,355,358,649
Value	$88,550,830	$56,878,486
Soft soap:		
Pounds	44,052,615	33,613,416
Value	$943,676	$607,064
Glycerin:		
Pounds	[2] 39,689,300	27,660,661
Value	$5,713,558	$2,958,115
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	37,466,246	1,597,886
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	$5,629,496	$4,286,312	$4,071,848
66° Baumé—			
Tons	267,476	199,663	250,328
Value	$3,158,097	$2,886,179	$3,244,586
60° Baumé—			
Tons	73,073	13,634	13,650
Value	$401,734	$121,432	$190,380
50° Baumé—			
Tons	[2] 362,636	[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	$1,222,205	$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

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	783,768
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	[1] $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	3,508,347	4,348,094
Value	$12,576,721	$8,725,619	$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 increase, notably porcelain electrical supplies and building terra cotta, including architectural terra cotta, fireproofing, and tiling.

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

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	$51,239,871	$39,674,749
Fire—			
Thousand	838,167	678,362	800,862
Value	$16,620,695	$11,752,625	$8,636,562
Vitrified, paving, etc.—			
Thousand	1,023,654	715,559	590,720
Value	$11,269,586	$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	$5,170,492
Sand lime	$1,150,580	$698,003	(1)
Enameled	$993,902	$445,985	$329,969
Drain tile	$9,798,978	$5,522,198	$3,662,184
Sewer pipe	$10,322,224	$8,416,009	$4,560,334
Architectural terra cotta	$6,251,625	$3,792,763	$2,027,532
Fireproofing, terra-cotta lumber and hollow building tile, or blocks	$4,466,708	$4,317,312	$1,665,031
Tile, not drain	$5,291,963	$2,725,717	$1 276,300
Stove lining	$423,583	(1)	$416,235
Other	$2,694,821	$5,501,224	$4,303,801
Pottery	$31,048,341	$25,834,513	$17,222,040
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	$470,355
China, bone china, Delft and Belleek ware	[2] $1,766,766	$3,478,627	$1,297,978
Red earthenware	$804,806	$821,695	$762,260
Other	$1,717,800	$3,424,178	$3,972,956
All other products	$1,459,178	$515,035	$1,700,177

[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	66,689,715	31,675,257
Value	$53,610,563	$26,031,920
Portland—		
Barrels	64,991,431	26,505,881
Value	$52,858,354	$23,355,119
Natural—		
Barrels	1,537,638	4,866,331
Value	$652,756	$2,450,150
Puzzolan—		
Barrels	160,646	303,045
Value	$99,453	$226,651
All other products	$9,594,892	$3,841,202

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
PRINCIPAL MATERIALS.			
Total cost	$32,119,499	$26,145,522	$16,731,009
Glass sand, tons	1,004,086	769,792	581,720
Soda ash (carbonate of soda), tons	373,764	215,462	157,779
Salt cake (sulphate of soda), tons	76,540	53,905	53,257
Nitrate of soda, tons	19,676	11,915	10,770
Limestone, tons	156,377	115,655	91,015
Lime, bushels	1,256,117	1,166,342	993,349
Arsenic, pounds	3,140,720	2,676,650	2,349,261
Carbon, tons	5,480	3,750	4,155
Manganese, pounds	3,882,465	3,096,939	1,493,538
Litharge and red lead, pounds	11,653,149	9,613,649	8,386,106
Potash or pearlash, pounds	6,938,355	5,446,338	4,406,211
Grinding sand, tons	706,689	410,856	265,438
Rouge, pounds	1,383,182	1,098,566	837,536
PRODUCTS.			
Total value	[1] $92,095,203	[2] $79,607,998	$56,539,712
Building glass	$26,308,438	$21,697,861	$17,096,234
Window—			
50-foot boxes	6,921,611	4,852,315	4,341,282
Value	$11,742,959	$11,610,851	$10,879,355
Plate—			
Total cast, square feet	60,105,694	34,804,986	21,172,129
Polished—			
Square feet	47,370,254	27,293,138	16,883,578
Value	$12,204,875	$7,978,253	$5,158,598
Rough, made for sale—			
Square feet	205,690	17,784	628,684
Value	$37,431	$3,529	$75,887
Cathedral—			
Square feet	7,405,980	6,615,093	8,846,361
Value	$569,848	$293,623	$567,252
PRODUCTS—continued.			
Building glass—Continued.			
Skylight—			
Square feet	15,409,966	15,255,541	3,679,694
Value	$788,726	$678,391	$165,086
All other	$964,599	$1,133,214	$250,056
Pressed and blown glass	$27,398,445	$21,956,158	$17,076,126
Tableware, 100 pieces	1,286,056	1,283,974	655,141
Jellies, tumblers, and goblets, dozen	11,687,036	7,346,214	8,544,050
Lamps, dozen	322,482	487,017	807,765
Chimneys, dozen	6,652,967	7,039,756	6,901,192
Lantern globes, dozen	952,620	1,765,247	1,044,816
Globes and other electrical goods, dozen	11,738,798	1,901,415	(3)
Shades, globes, and other gas goods, dozen	1,541,449	878,244	2,673,854
Blown tumblers, stem ware, and bar goods, dozen	9,182,060	6,282,606	6,127,367
Opal ware, dozen	3,095,666	1,091,208	3,750,443
Cut ware, dozen	206,336	83,736	134,726
Bottles and jars	$36,018,333	$33,631,063	$21,676,791
Prescriptions, vials, and druggists' wares, gross	3,624,022	3,202,586	2,423,932
Beer, soda, and mineral, gross	2,345,204	2,351,852	1,351,118
Liquors and flasks, gross	1,887,344	2,157,801	985,374
Milk jars, gross	440,302	253,651	146,142
Fruit jars, gross	1,124,485	1,061,829	789,298
Battery jars and other electrical goods, gross	9,981	19,974	(3)
Patent and proprietary, gross	1,637,798	1,057,372	1,296,131
Packers and preservers, gross	1,237,175	1,237,065	784,588
Demijohns and carboys, dozen	122,570	64,450	83,243
All other products	$2,369,987	$2,322,916	$690,562

[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.[1]—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 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.

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

Table 87 PRODUCT.	1909 Number.	1909 Value.	1904 Number.	1904 Value.
Total value		[1] $249,202,075		[2] $30,033,536
Automobiles	126,593	164,269,324	21,692	23,751,234
Gasoline	120,393	153,529,653	18,699	19,566,941
Electric	3,826	7,259,430	1,425	2,496,255
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	(3)	
Gasoline	4,314	2,039,129	(3)	
Electric	268	352,121	(3)	
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	(3)	
Gasoline	3,290	8,762,768	(3)	
Electric	1,915	3,966,536	(3)	
All other (omnibuses, sightseeing 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	(4)	
Gasoline	25	140,655	(4)	
Electric	2	5,000	(4)	
All other products, including bodies and parts		[5] 78,584,753		5,431,249
Amount received for custom work and repairing		6,347,998		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	[1] $10,698,567	[1] $5,153,240	[1] $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	$3,015,988	$354,980	$33,674
All other products, including parts	$5,245,583	$1,591,405	$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, 25,178 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	[1] $159,892,547	[2] $155,868,849	$138,261,763
Carriages (family and pleasure):			
Number	828,411	937,409	904,639
Value	$47,756,118	$55,750,276	$51,295,393
Wagons:			
Number	587,685	643,755	570,428
Value	$39,932,910	$37,195,230	$31,080,738
Business—			
Number	154,631	133,422	(3)
Value	$16,440,816	(3)	(3)
Farm—			
Number	429,952	505,025	(3)
Value	$22,615,875	(3)	(3)
Government, municipal, etc.—			
Number	3,102	5,308	(3)
Value	$876,219	(3)	(3)
Public conveyances (cabs, hacks, hansoms, hotel coaches, omnibuses, etc.):			
Number	2,243	2,711	2,218
Value	$939,267	$1,314,952	$1,114,090
Sleighs and sleds:			
Number	100,899	127,455	117,006
Value	$2,065,850	$2,694,560	$2,290,903
Automobiles:[4]			
Number	544	199	174
Value	$569,119	$235,675	$129,053
All other products, including parts, and amount received for repair work	$68,629,283	$58,678,156	$52,351,586

[1] In addition, 14,908 carriages, valued at $1,078,035; 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 $1,184,256, 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	$11,767,664	$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	$8,784,239	$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	$62,161,013
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	19,607	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	$1,090,854
Passenger—			
Number	558	331	902
Value	$1,903,317	$930,791	$1,002,172
Other—			
Number	45	87	33
Value	$120,605	$63,863	$28,682
All other products	$46,184,273	$22,801,408	$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 1909. The decrease in the construction of open cars since 1904 is especially marked.

Table 93 PRODUCT.[1]	1909	1904
Total value	[2] $7,809,866	[3] $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	[4] 273
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 38 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:

Table 94 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	$20,486,260	$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.

Table 95 PRODUCT.	1909	1904	1899
Total value	[1] $146,329,268	[1] $112,007,344	$101,207,428
Implements of cultivation	$35,246,030	$30,607,960	
Seeders and planters	$13,679,921	$11,225,122	
Harvesting implements	$34,508,131	$30,862,435	$98,010,506
Seed separators	$11,030,412	$6,639,883	
All other products	$48,690,082	$30,703,648	
Amount received for repair work	$3,114,692	$1,968,296	$3,196,922
Principal kind of implements, by number.			
Implements of cultivation:			
Cultivators—			
Beet	3,172	3,459	2,008
Small	469,696	239,173	207,171
Wheeled	435,429	313,088	295,799
Cotton scrapers	20,180	22,519	15,230
Harrows—			
Disk	193,000	104,323	97,261
Spring-tooth	112,832	86,408	380,259
Spike-tooth	394,988	262,442	
Plows—			
Disk	22,132	39,146	17,345
Gang	91,686	([2])	([2])
Shovel	254,737	121,899	102,320
Steam	2,355	1,599	207
Sulky or wheel	134,936	138,899	136,105
Walking	1,110,006	956,898	819,022
Seeders and planters:			
Seeders—			
Broadcast	38,007	33,546	36,862
Combination	23,963		
Corn planters—			
Hand	96,465	86,553	129,515
Horse	122,780	90,929	78,335
Listers	44,840	23,012	26,995
Cotton planters	79,271	127,052	45,575
Potato planters	23,092	35,756	25,338
Drills—			
Corn	20,137	28,228	21,940
Disk	21,292	([2])	([2])
Grain	68,611	76,929	91,635
All other	32,507	606	5,302
Seed sowers	7,847	59,910	83,283
Harvesting implements:			
Grain cradles	22,635	30,056	36,163
Harvesters—			
Bean	1,409	665	1,425
Corn	19,693	6,924	20,707
Grain	129,274	108,810	233,542
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	266,260	236,297	216,345
Haystackers	17,212	8,670	12,069
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	106,381
Power	9,049	6,082	8,185
Fanning mills	33,805	22,994	30,369
Thrashers—			
Horsepower	822	2,237	1,314
Steam power	23,586	7,950	3,651

[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	[1] $243,965,093	[1] $159,551,402	[1] $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	(2)
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	$6,703,454	$3,442,183
Tungsten	$6,241,133		
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	$3,204,606	$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	$224,885
Electric clocks and time mechanisms	$352,513	$373,926	$132,149
Fuses	$1,001,719	$868,079	$595,497
Lightning arresters	$940,171	$587,124	
Rheostats and resistances	$2,674,963	$932,925	$1,186,878
Heating, cooking, and welding apparatus	$1,003,038	$395,827	
Electric flatirons	$951,074		
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, $13,397,430.

[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	$1,021,913	$613,138	$359,549
Compressor system—			
Anhydrous—			
Pounds	3,097,191	[1] 1,944,266	946,606
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.			
Total value	[2] $42,953,055	[2] $23,790,045	[3] $13,874,513
Ice:			
Tons (2,000 pounds)	12,647,949	7,199,448	4,294,439
Value (2,000 pouds)	$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 smal 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**	**$465,153,662**	**$414,058,487**
Lumber:			
Total quantity (M feet, board measure)	44,509,761	34,135,139	[1] 35,084,166
Total value	$684,479,859	$435,708,084	[1] $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	$15,050,638
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	113,312
Value	$10,182,043	$2,806,402	$1,271,884
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	$2,764,089
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	40,108	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	$19,662,279
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	$18,869,705

[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	[1] **$89,789,544**	[1] **$66,092,630**	[1] **$41,024,244**
Pianos:			
Number	374,154	261,197	171,011
Value	$59,501,225	$41,476,479	$27,002,852
Upright—			
Number	365,413	253,825	166,760
Value	$55,462,556	$37,815,956	$25,301,432
Without player attachment—			
Number	330,918	251,957	166,536
Value	$46,187,555	$37,397,674	$25,256,687
For or with player attachment—			
Number	34,495	1,868	224
Value	$9,275,001	$417,382	$44,745
Grand—			
Number	[2] 8,741	7,372	4,251
Value	$4,038,669	$5,661,423	$1,701,420
Player attachments made separate from pianos:			
Number	10,898	20,391	6,158
Value	$1,474,630	$2,004,266	$607,873
Organs:			
Number	65,335	113,966	107,258
Value	$5,309,016	$6,152,032	$5,217,261
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	$4,162,053	$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 $680,188; in 1904, 1,695 organs, valued at $149,114; and in 1899, 250 pianos, valued at $37,610; 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
MATERIALS.			
Total cost	**$165,442,341**	**$111,251,478**	**$70,530,236**
Pulp wood	$33,772,475	$20,800,871	$9,837,516
Wood pulp, purchased:			
Tons	1,241,914	877,702	644,006
Cost	$43,861,357	$27,633,164	$18,369,464
Ground—			
Tons	452,849	317,286	261,962
Cost	$9,487,508	$5,754,259	$4,361,211
Soda fiber—			
Tons	154,626	120,978	94,042
Cost	$6,862,864	$5,047,105	$3,430,809
Sulphite fiber—			
Tons	626,029	433,160	273,194
Cost	$27,184,726	$16,567,122	$10,112,189
Other chemical fiber—			
Tons	8,410	6,278	14,808
Cost	$326,259	$264,678	$465,255
Rags, including cotton and flax waste and sweepings:			
Tons	357,470	294,552	234,514
Cost	$10,721,559	$8,864,607	$6,595,427
Old and waste paper:			
Tons	983,882	588,543	356,193
Cost	$13,691,120	$7,430,335	$4,869,409
Manila stock, including jute bagging, rope, waste, threads, etc.:			
Tons	117,080	107,029	99,301
Cost	$3,560,033	$2,502,332	$2,437,256
Straw:			
Tons	303,137	304,585	367,305
Cost	$1,460,282	$1,502,886	$1,395,659
All other materials	$58,375,515	$42,517,283	$27,025,505
PRODUCTS.			
Total value	**[1] $267,656,964**	**$188,715,189**	**$127,326,162**
News paper:			
In rolls for printing—			
Tons	1,091,017	840,802	454,572
Value	$42,807,064	$32,763,308	$15,754,992
In sheets for printing—			
Tons	84,537	72,020	114,640
Value	$4,048,496	$3,143,152	$4,336,882
Book paper:			
Book—			
Tons	575,016	434,500	282,093
Value	$42,846,674	$31,156,728	$19,466,504
Coated—			
Tons	95,213	(2)	(2)
Value	$9,413,961	(2)	(2)
Plate, lithograph, map, wood-cut, etc.—			
Tons	6,498	19,837	22,366
Value	$555,352	$1,458,343	$2,018,958
Cover—			
Tons	17,578	22,150	18,749
Value	$1,982,853	$2,023,986	$1,665,376
Cardboard, bristol board, card middles, tickets, etc.—			
Tons	51,449	39,060	28,494
Value	$3,352,151	$2,764,444	$1,719,813
Fine paper:			
Writing—			
Tons	169,125	131,934	90,204
Value	$24,966,102	$19,321,045	$12,222,870
All other—			
Tons	29,088	14,898	22,503
Value	$4,110,536	$2,928,125	$3,673,104
Wrapping paper:			
Manila (rope, jute, tag, etc.)—			
Tons	73,731	86,826	89,419
Value	$6,989,436	$6,136,080	$5,929,764
Heavy (mill wrappers, etc.)—			
Tons	108,561	96,992	82,875
Value	$4,380,794	$4,035,588	$4,143,240
Straw—			
Tons	32,988	54,232	91,794
Value	$870,419	$1,389,348	$2,027,518
PRODUCTS—continued.			
Wrapping paper—Continued.			
Bogus or wood manila, all grades—			
Tons	367,932	228,371	203,826
Value	$19,777,707	$10,099,772	$9,148,677
All other—			
Tons	179,855	177,870	67,338
Value	$10,202,035	$8,774,804	$3,293,174
Boards:			
Wood pulp—			
Tons	71,036	60,863	44,187
Value	$2,639,496	$2,347,250	$1,406,130
Straw—			
Tons	171,789	167,278	157,534
Value	$3,750,851	$4,367,560	$3,187,342
News—			
Tons	74,606	38,560	32,119
Value	$2,215,469	$1,174,216	$930,531
All other—			
Tons	514,208	253,950	131,777
Value	$17,539,768	$9,070,531	$4,829,316
Other paper products:			
Tissues—			
Tons	77,745	43,925	28,406
Value	$8,553,654	$5,056,438	$3,486,652
Blotting—			
Tons	9,577	8,702	4,351
Value	$1,186,180	$1,046,790	$580,750
Building, roofing, asbestos, and sheathing—			
Tons	225,824	145,024	96,915
Value	$9,251,368	$4,845,628	$3,025,967
Hanging—			
Tons	92,158	62,606	54,330
Value	$4,431,514	$3,013,464	$2,265,345
Miscellaneous—			
Tons	96,577	106,296	49,101
Value	$6,869,169	$6,729,820	$2,795,841
Wood pulp made for sale or for consumption in mills other than where produced:			
Ground—			
Tons	310,747	273,400	280,052
Value	$5,649,466	$4,323,495	$4,433,699
Soda fiber—			
Tons	155,844	130,366	99,014
Value	$6,572,152	$5,159,615	$3,612,602
Sulphite fiber—			
Tons	444,255	376,940	271,585
Value	$17,955,748	$13,661,464	$10,451,400
All other products	$4,738,549	$1,924,195	$919,415
Wood pulp.			
Quantity produced (including that used in mills where manufactured), total tons	2,495,523	1,921,768	1,179,535
Ground, tons	1,179,266	968,976	586,374
Soda fiber, tons	298,626	196,770	177,124
Sulphite fiber, tons	1,017,631	756,022	416,037
EQUIPMENT.			
Paper machines:			
Total number	1,480	1,369	1,232
Capacity, yearly, tons	5,293,397	3,857,903	2,782,219
Fourdrinier—			
Number	804	752	663
Capacity per 24 hours, tons	10,508	8,569	(3)
Cylinder—			
Number	676	617	569
Capacity per 24 hours, tons	6,316	4,740	(3)
Pulp:			
Grinders, number	1,435	1,362	1,168
Digesters, total number	542	517	426
Sulphite fiber, number	348	309	(2)
Soda fiber, number	194	208	(2)
Capacity, yearly, tons of pulp	3,405,621	2,644,753	1,536,431
Ground, tons	1,809,685	1,515,088	(2)
Sulphite, tons	1,250,983	885,092	(2)
Soda, tons	344,953	244,573	(2)

[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	**[1] $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
Total value	$737,876,087	$552,473,353	$395,186,629
Publications:			
Newspapers and periodicals	$337,596,288	$256,816,282	$175,789,610
Subscriptions and sales	$135,063,043	$111,298,691	$79,928,483
Advertising	$202,533,245	$145,517,591	$95,861,127
Newspapers	$232,993,094	(1)	(1)
Subscriptions and sales	$84,438,702	.....	.....
Advertising	$148,554,392	.....	.....
Periodicals	$104,603,194	(1)	(1)
Subscriptions and sales	$50,624,341	.....	.....
Advertising	$53,978,853	.....	.....
Ready prints, patent insides and outsides	$2,293,077	(1)	
Books and pamphlets—			
Published, or printed and published	$62,930,394	$53,312,492	
Printed for publication by others	$10,209,509	(1)	
Sheet music and books of music—			
Published or printed and published	$5,510,698	$4,673,685	$219,397,019
Printed for publication by others	$1,000,966	(1)	
Products for sale and in execution of orders:			
Job printing	$207,940,227	$149,262,070	
Book binding and blank books	$50,552,808	$40,788,768	
Electrotyping, engraving, and lithographing	$47,956,979	$35,018,234	
All other products	$11,885,141	$12,601,822	
NEWSPAPERS AND PERIODICALS.			
Number	**22,141**	**21,848**	**18,793**
Aggregate circulation	**164,463,040**	**150,009,723**	**106,889,334**
By period of issue:			
Daily (exclusive of Sunday)—			
Number	2,600	2,452	2,226
Aggregate circulation	24,211,977	19,632,603	15,102,156
Sunday—			
Number	520	494	567
Aggregate circulation	13,347,282	12,022,341	(2)
Semiweekly and triweekly—			
Number	708	703	699
Aggregate circulation	2,648,308	3,233,658	3,061,478
Weekly—			
Number	15,097	15,006	12,979
Aggregate circulation	40,822,965	36,226,717	34,242,052
Monthly—			
Number	2,491	2,500	1,817
Aggregate circulation	63,280,535	64,306,155	37,869,897
All other—			
Number	725	693	505
Aggregate circulation	20,151,973	14,588,249	16,613,751
By character:			
News, politics, and family reading—			
Number	17,698	17,032	15,506
Aggregate circulation	61,074,990	53,355,893	(2)
Religious—			
Number	1,251	1,287	952
Aggregate circulation	29,523,777	22,383,631	(2)
Agricultural, horticultural, dairy, stock raising, etc.—			
Number	316	360	307
Aggregate circulation	11,327,253	8,106,275	(2)
NEWSPAPERS AND PERIODICALS—continued.			
By character—Continued.			
Commerce, finance, insurance, railroads, etc.—			
Number	264	364	190
Aggregate circulation	1,411,738	2,470,832	(2)
Trade journals generally—			
Number	685	627	520
Aggregate circulation	3,572,441	3,428,596	(2)
General literature, including monthly and quarterly magazines—			
Number	340	328	239
Aggregate circulation	31,322,035	30,615,577	(2)
Medicine and surgery—			
Number	197	192	111
Aggregate circulation	931,584	1,054,948	(2)
Law—			
Number	56	81	62
Aggregate circulation	151,346	194,035	(2)
Science and mechanics—			
Number	139	83	66
Aggregate circulation	1,421,955	525,523	(2)
Fraternal orgainizations—			
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	139
Aggregate circulation	330,705	248,240	(2)
Miscellaneous—			
Number	139	538	293
Aggregate circulation	1,087,937	4,860,518	(2)
By language:			
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	1,032
Aggregate circulation	9,030,797	7,568,655	(2)
French—			
Number	39	46	31
Aggregate circulation	446,739	252,135	(2)
German—			
Number	692	700	633
Aggregate circulation	4,434,146	3,922,227	(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	605,987	(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	10,360	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	**[2] $73,360,315**	**[3] $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, $463,018; boats of under 5 tons, $147,542; and other boat products and repairs, $46,782; or a total of $657,342.

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	381,198	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	96	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	355,815
Steam—			
Number	85	186	396
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]	[5] 8,577	[6] 3,499	1,687
Steam	8	.....	.....
Motor	8,569	3,499	1,687
Gasoline	8,342	(7)	(7)
Electric	12	(7)	(7)
Other	215	(7)	(7)

[1] Not including vessels launched in Government shipyards as follows: In 1909, 3 steel and 28 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	$8,180,769
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:

Table 106 MONTH.	WAGE EARNERS. Number.	Per cent of maximum.	MONTH.	WAGE EARNERS. 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	113,738	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:

Table 107 KIND.	Number of engines or motors.	Horsepower.
Primary power, total		**123,477**
Owned	4,527	109,870
Steam	4,119	105,272
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:

Table 108 KIND.	Unit.	Quantity.
Anthracite coal	Tons (2,240 lbs.)	178,640
Bituminous coal	Tons (2,000 lbs.)	886,734
Coke	Tons (2,000 lbs.)	14,785
Wood	Cords	94,723
Oil	Barrels	372,586
Gas	1,000 feet	2,729,324

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.

Table 109	Small custom sawmills.	Small custom gristmills.
Number of establishments	4,133	11,961
Persons engaged in industry	12,836	22,596
Proprietors and firm members	5,702	15,435
Salaried employees	44	147
Wage earners (average number)	7,090	7,014
Primary horsepower	93,280	272,763
Capital	$5,655,145	$21,258,510
Expenses	2,160,271	48,110,565
Services	1,696,152	1,186,540
Materials	97,574	[1] 46,314,868
Miscellaneous	366,545	609,157
Value of products	4,515,881	[2] 55,115,553

[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.]

Table 110

INDUSTRY.	Census.	Number of establishments.	PERSONS ENGAGED IN INDUSTRY. Total.	Proprietors and firm members.	Salaried employees.	Wage earners (average number).	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. Wage earners (average number).	Value of products.
								Expressed in thousands.							
All industries	**1909**	**268,491**	**7,678,578**	**273,265**	**790,267**	**6,615,046**	**18,675,376**	**$13,428,270**	**$938,575**	**$3,427,038**	**$12,142,791**	**$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	1,501	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	3,316	261	1,403	1,430	4,128	2,698	.....	.....
Artists' materials	1909	46	865	25	182	658	1,628	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	173,837	9,479	48,604	131,646	249,202	117,556	528.4	729.7
	1904	178	13,333	103	1,181	12,049	10,109	23,084	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	857	4,242	2,022	7,805	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	2,203	7,418	739	561	16,270	19,768	3,498	57.6	50.9
	1904	75	882	70	243	569	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	1,829	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	6,595	10,087	3,492	24.3	48.4
	1899	63	.....	.....	340	1,989	2,148	6,917	369	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	1,803	5,187	3,384	21.1	42.7
	1899	454	.....	.....	182	4,217	5,997	2,844	140	1,213	1,335	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	15,909	984	2,057	10,787	17,701	7,004	116.8	158.4
	1899	25	.....	.....	231	2,025	5,612	6,020	380	982	4,528	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	−33.9
	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	720	1,648	919	.....	.....
Blacking 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	29.2
	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	58.2
	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	648	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.

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. Total.	Proprietors and firm members.	Salaried employees.	Wage earners (average number).	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. Wage earners (average number).	Value of products.
								Expressed in thousands.							
Boots and shoes, rubber	1909	22	18,899	.....	1,287	17,612	25,903	$43,905	$1,415	$8,544	$29,577	$49,721	$20,144	−7.3	−29.0
	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	.....	.....	483	14,391	25,017	33,668	597	6,427	22,683	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	5,548	4,457	333	2,120	3,810	7,786	3,976	36.3	32.9
	1899	315	.....	.....	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	23,323	35,475	3,709	14,015	25,716	54,450	28,734	23.2	47.7
	1904	796	35,194	786	2,326	32,082	15,117	22,691	2,313	10,208	16,686	36,867	20,181	16.0	35.0
	1899	729	.....	.....	1,368	27,653	9,286	14,979	1,209	8,152	11,765	27,316	15,551	.....	.....
Brass and bronze products.	1909	1,021	45,441	828	3,995	40,618	106,120	109,319	5,540	23,677	99,228	149,989	50,761	22.5	46.5
	1904	813	36,952	784	3,000	33,168	69,494	77,438	3,778	17,666	65,653	102,407	36,754	22.1	15.5
	1899	695	.....	.....	1,813	27,166	47,257	51,120	2,297	13,599	61,189	88,654	27,465	.....	.....
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	396,865	158,831	23.3	47.2
	1904	18,226	109,673	20,037	8,358	81,278	37,241	122,353	6,273	43,172	155,989	269,583	113,594	35.0	53.7
	1899	14,836	.....	.....	9,167	60,192	22,472	80,902	6,063	27,864	95,052	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	69,040	15.9	30.4
	1904	4,634	75,006	5,295	3,690	66,021	255,362	119,957	3,530	28,646	16,317	71,152	54,835	6.5	38.8
	1899	5,423	.....	.....	2,426	61,979	176,700	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	8,800	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	21,104	10,105	10.4	14.2
	1899	1,523	.....	.....	900	10,346	4,482	9,616	758	3,788	9,544	18,484	8,940	.....	.....
Butter, cheese, and condensed milk.	1909	8,479	31,506	8,019	5,056	18,431	101,349	71,284	3,591	11,081	235,546	274,558	39,012	18.5	63.2
	1904	8,926	25,865	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	.....	.....	2,818	12,799	88,062	36,303	912	6,146	108,841	130,783	21,942	.....	.....
Butter, reworking	1909	24	418	10	113	295	1,471	3,543	128	186	7,424	8,200	776	−27.0	12.8
	1904	35	526	32	90	404	1,684	1,719	85	252	6,247	7,271	1,024	173.0	243.8
	1899	10	.....	.....	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	22,708	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	238	.....	.....	339	8,685	4,165	4,213	296	2,826	2,803	7,696	4,893	.....	.....
Calcium lights	1909	10	26	7	4	15	53	55	4	11	24	52	28	−63.4	−61.5
	1904	22	85	28	16	41	132	144	12	24	35	135	100	−25.5	13.4
	1899	19	.....	.....	6	55	80	95	6	24	35	119	84	.....	.....
Candles [2]	1909	16	649	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	19,082	101,823	157,101	55,278	5.3	20.4
	1904	3,168	66,022	3,450	5,628	56,944	60,831	79,246	5,231	16,336	83,147	130,466	47,319	−0.1	31.3
	1899	2,570	.....	.....	4,199	57,012	38,624	55,481	3,479	13,705	63,668	99,335	35,667	.....	.....
Card cutting and designing.	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	.....	.....	25	325	219	338	22	135	313	618	305	.....	.....
Carpets and rugs, other than rag.	1909	139	34,706	134	1,265	33,307	38,553	75,627	2,209	15,536	39,563	71,188	31,625	0.3	15.6
	1904	139	34,393	149	1,023	33,221	33,945	56,781	1,397	13,724	37,948	61,586	23,638	16.9	27.8
	1899	133	.....	.....	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	9.2
	1899	805	.....	.....	57	1,318	599	867	30	443	622	1,755	1,133	.....	.....
Carriages and sleds, children's.	1909	84	5,769	50	419	5,300	5,281	6,883	490	2,217	4,129	8,805	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	.....	.....	172	2,726	2,462	2,907	159	1,090	1,996	4,290	2,294	.....	.....
Carriages and wagons and materials.	1909	5,492	82,944	6,213	6,803	69,928	126,032	175,474	7,960	37,595	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	.....	.....	5,026	73,812	83,771	128,962	4,759	33,565	66,772	138,262	71,490	.....	.....
Cars and general shop construction and repairs by steam-railroad companies.	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	.....	.....	7,094	173,595	95,087	119,473	6,208	96,007	109,472	218,114	108,642	.....	.....
Cars and general shop construction and repairs by street-railroad companies.	1909	541	23,699	.....	1,281	22,418	35,794	38,899	1,204	14,486	15,168	31,963	16,795	102.8	137.9
	1904	86	11,551	.....	499	11,052	3,154	12,906	543	7,013	5,463	13,437	7,974	57.3	43.4
	1899	108	.....	.....	201	7,025	6,443	10,782	194	4,405	4,337	9,371	5,034	.....	.....
Cars, steam-railroad, not including operations of railroad companies.	1909	110	47,094	7	4,001	43,086	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	34,058	55,994	88,179	2,855	20,248	75,657	111,175	35,518	1.8	22.8
	1899	65	.....	.....	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	4,260	7,810	3,550	−24.2	−28.0
	1904	14	4,997	3	264	4,730	7,054	12,976	398	2,840	5,341	10,844	5,503	31.9	48.4
	1899	20	.....	.....	144	3,585	4,865	7,615	235	1,951	3,967	7,305	3,338	.....	.....
Cash registers and calculating 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	.....	.....	327	2,067	1,340	5,242	329	1,250	921	5,675	4,754	.....	.....
Cement [3]	1909	135	29,511	17	2,719	26,775	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	17,478	149,604	85,759	1,858	8,814	12,215	29,873	17,658	.....	.....
Charcoal	1909	76	731	75	25	631	165	641	23	253	448	872	424	−31.6	−32.5
	1904	74	1,025	77	25	923	355	717	22	343	642	1,292	650	−48.3	13.9
	1899	183	.....	.....	23	1,786	164	811	16	431	405	1,134	729	.....	.....

[1] Includes 898 establishments reported as "brooms" and 384 as "brushes" in 1909.

[2] Included in "soap" in 1899.

[3] Included in "lime" in 1899.

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. Total.	Proprietors and firm members.	Salaried employees.	Wage earners (average number).	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. Wage earners (average number).	Value of products.
								Expressed in thousands.							
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	19,806	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	89,069	2,923	9,393	34,546	62,637	28,091	.....	.....
China decorating	1909	40	436	45	63	328	18	559	80	191	311	786	475	45.8	140.4
	1904	28	273	30	18	225	6	261	16	99	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	43.9
	1899	24	.....	.....	289	1,314	2,756	6,891	371	526	6,877	9,666	2,789	.....	.....
Clocks and watches, including cases and materials.	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 refinishing.	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	4,135	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, buttonholes.	1909	146	1,031	181	20	830	176	225	12	389	105	781	676	−8.1	11.6
	1904	141	1,075	164	8	903	137	262	5	380	95	700	605	−4.3	2.8
	1899	149	.....	.....	11	944	113	247	6	332	98	681	583	.....	.....
Clothing, men's, including 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	116,942	38.2	55.4
	1899	2,701	.....	.....	6,715	83,739	9,962	48,432	6,574	32,586	84,705	159,340	74,635	.....	.....
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	38,735	3,216	2,830	65,847	84,188	18,341	−3.7	21.1
	1899	458	.....	.....	2,749	6,387	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	53,645	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	8,020	35,354	60,644	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	9.6	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	49,679	2,810	16,924	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	76,020	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	8,824	46,031	64,664	18,633	17.0	31.8
	1899	160	.....	.....	682	21,651	47,909	43,153	1,021	6,554	33,064	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	1,008	3,435	5,940	2,505	8.5	32.3
	1904	50	3,080	49	136	2,895	2,589	4,009	198	888	2,459	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	123.3
	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	132,850	371,009	628,392	257,383	19.9	39.5
	1904	1,154	323,287	432	6,981	315,874	986,604	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	368	4	59	335	816	2,051	130	180	1,089	1,849	760	19.6	37.7
	1904	11	340	3	57	280	627	1,577	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	32,996	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	15,463	9,374	86.8	136.3
	1904	176	3,273	165	500	2,608	3,994	5,030	359	1,167	3,203	6,545	3,342	.....	.....
Dentists' materials	1909	87	1,982	69	340	1,573	865	6,258	545	744	8,101	10,836	2,735	−18.2	38.7
	1904	80	2,291	79	290	1,922	1,113	4,681	334	949	5,510	7,810	2,300	89.0	109.9
	1899	68	.....	.....	182	1,017	375	2,112	184	509	2,109	3,721	1,612	.....	.....

[1] Includes "sulphuric, nitric, and mixed acids" and "wood distillation, not including turpentine and rosin" in 1899.
[2] Includes "peanuts, grading, roasting, cleaning, and shelling" in 1899.
[3] Included in other classifications in 1899.

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. Total.	Proprietors and firm members.	Salaried employees.	Wage earners (average number).	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. Wage earners (average number).	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	−6.0	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	15,469	19,621	50,850	31,229	19.4	13.1
	1899	298	.....	.....	1,318	29,776	69,238	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	1,205	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	2,720	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	4,060	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	18,571	814	3,830	7,394	16,316	8,922	27.2	60.1
	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	282	140	.....	.....
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	63.2	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	0.6	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	40,140	17,328	8.2	35.6
	1904	124	7,113	24	1,289	5,800	29,665	42,307	1,797	3,309	17,204	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	28.6
	1904	435	11,748	483	1,066	10,199	5,886	9,501	1,037	4,080	7,537	17,594	10,057	20.7	36.4
	1899	496	.....	.....	875	8,451	4,386	6,854	739	3,023	5,943	12,896	6,953	.....	.....
Fertilizers	1909	550	21,950	323	3,317	18,310	64,711	121,537	4,406	7,477	69,522	103,960	34,438	29.1	83.9
	1904	399	16,091	294	1,613	14,184	47,989	68,917	1,934	5,127	39,288	56,541	17,253	22.5	26.6
	1899	422	.....	.....	1,712	11,581	38,680	60,686	2,125	4,185	28,958	44,657	15,699	.....	.....
Files	1909	57	4,521	47	316	4,158	7,383	10,413	338	1,978	1,596	5,691	4,095	26.9	29.6
	1904	62	3,450	65	109	3,276	5,697	5,866	170	1,514	1,311	4,392	3,081	3.7	29.0
	1899	86	.....	.....	127	3,160	4,835	3,858	154	1,277	1,166	3,404	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	15,867	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	29.6
	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	1,218	−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	3,916	482	1,128	2,506	5,608	3,102	38.2	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	3,936	7,772	3,836	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	60	233	347	114	1.4	118.2
	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	189,281	5,258	16,285	428,117	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	41,389	32.1	104.9
	1904	766	14,739	749	2,657	11,333	28,162	51,784	2,999	4,398	37,668	61,180	23,512	38.0	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	513,102	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	2,298	1,026	47.3	117.0
	1904	34	414	22	77	315	3,543	1,516	73	156	625	1,059	434	13.3	−6.2
	1899	30	.....	.....	75	278	3,505	982	79	136	628	1,129	501	.....	.....
Fuel, manufactured [3]	1909	11	112	2	22	88	1,290	432	22	50	155	311	156	.....	.....

[1] Totals for 1899 and 1904 include some establishments classed as "copper, tin, and sheet-iron products," in 1909.
[2] Includes "locomotives, not made by railroad companies," and "stoves and furnaces, not including gas and oil stoves," in 1899.
[3] None reported in 1904 or 1899.

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. Total.	Proprietors and firm members.	Salaried employees.	Wage earners (average number).	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. Wage earners (average number).	Value of products.
								Expressed in thousands.							
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	28,014	2,158	8,700	26,565	49,032	22,467	−10.3	10.6
	1899	457	.....	.....	2,149	30,322	3,552	20,576	2,188	9,730	23,670	44,346	20,676	.....	.....
Furniture and refrigerators	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	169,774	158,986	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	57,466	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	755	1,642	3,216	1,574	32.3	120.7
	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 reflectors	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	52,428	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	4,601	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	28,257	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 refining	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	788	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	25,064	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
	1904	68	6,084	79	438	5,567	2,366	6,036	487	2,434	5,510	10,357	4,847	.....	.....

[1] Included in other classifications in 1904 and 1899.

[2] Includes "hats, straw," in 1899.

[3] Included in "hats and caps, other than felt, straw, and wool," in 1899.

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. Total.	Proprietors and firm members.	Salaried employees.	Wage earners (average number).	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. Wage earners (average number).	Value of products.
								Expressed in thousands.							
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	18	.....	.....	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	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	46.0
	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	83,691	57,346	82,066	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	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	80.6
	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	6,880	100,421	38,020	1,226	3,403	3,312	13,781	10,469	.....	.....
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	2,613	5,774	3,161	41.4	87.5
	1899	60	.....	.....	253	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	285	359	877	134	114	573	1,293	720	.....	.....
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	508	3,437	2,110	5,383	532	1,823	1,350	5,378	4,028	23.9	10.8
	1899	261	.....	.....	389	2,775	2,471	4,476	402	1,429	1,363	4,853	3,490	.....	.....
Iron and steel, blast furnaces.	1909	208	43,061	48	4,584	38,429	1,173,422	487,581	6,525	24,607	320,638	391,429	70,791	9.6	68.8
	1904	190	37,335	26	2,231	35,078	773,278	236,146	2,891	18,935	178,942	231,823	52,881	−10.6	12.1
	1899	223	.....	.....	1,757	39,241	497,272	143,159	2,304	18,484	131,504	206,757	75,253	.....	.....
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	232,761	13.3	12.9
	1899	445	.....	.....	7,454	183,249	1,100,801	430,232	9,433	102,336	390,895	597,212	206,317	.....	.....
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	24,485	11,681	40.2	66.7
	1904	88	8,771	49	632	8,090	13,825	18,913	912	3,642	7,807	14,687	6,880	5.6	5.1
	1899	72	.....	.....	420	7,660	9,165	10,800	571	2,992	8,071	13,978	5,907	.....	.....
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	103.5
	1904	24	811	19	93	699	969	1,120	117	407	602	1,477	875	497.4	361.6
	1899	13	.....	.....	20	117	223	262	19	86	116	320	204	.....	.....
Iron and steel forgings	1909	172	9,193	90	935	8,168	27,803	27,755	1,300	5,003	10,240	20,293	10,053	44.2	67.6
	1904	138	6,347	77	605	5,665	16,069	28,246	824	3,428	5,752	12,110	6,358	20.8	16.0
	1899	90	.....	.....	322	4,688	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	4,686	8,923	4,237	−17.8	−39.6
	1899	102	.....	.....	431	4,477	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	369	2,473	12,747	17,401	4,654	−2.2	−18.3
	1899	19	.....	.....	193	5,536	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	12,593	24,177	53,226	29,049	7.9	15.4
	1899	851	.....	.....	1,806	20,468	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	23.5	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	819	208	548	35	323	436	1,157	721	.....	.....
Kaolin and ground earths	1909	119	2,351	53	308	1,990	20,920	13,226	417	897	2,042	4,681	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	2,094	18,404	12,212	257	821	1,651	3,722	2,071	.....	.....
Labels and tags	1909	96	2,880	85	482	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	957	2,462	1,505	78.8	122.8
	1899	47	.....	.....	96	754	392	848	120	289	388	1,105	717	.....	.....
Lapidary work	1909	77	886	90	169	627	679	4,808	195	889	6,560	9,173	2,613	23.7	20.0
	1904	54	681	72	102	507	554	2,384	109	657	6,224	7,647	1,423	1.8	32.2
	1899	60	.....	.....	43	498	212	3,087	51	499	4,656	5,786	1,130	.....	.....
Lard, refined, not made in slaughtering and meat-packing establishments.	1909	7	515	6	110	399	723	1,434	108	180	9,631	10,326	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	499	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	186	1,208	2,865	2,009	223	798	768	2,520	1,752	6.8	34.0
	1899	65	.....	.....	97	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	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	4,148	15,707	44,435	82,121	37,686	16.8	35.9
	1899	1,568	.....	.....	3,207	29,274	10,947	33,895	2,829	11,892	33,195	60,414	27,219	.....	.....

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. Total.	Proprietors and firm members.	Salaried employees.	Wage earners (average number).	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. Wage earners (average number).	Value of products.
								Expressed in thousands.							
Leather, tanned, curried, and finished.	1909	919	67,100	784	4,114	62,202	148,140	$332,727	$6,744	$32,103	$248,279	$327,874	$79,595	8.7	29.8
	1904	1,049	61,602	1,112	3,251	57,239	117,450	242,584	4,452	27,049	191,179	252,621	61,442	9.8	23.8
	1899	1,306	.....	.....	2,442	52,109	88,860	173,977	3,159	22,591	155,000	204,038	49,038	.....	.....
Lime [1]	1909	853	15,659	794	968	13,897	27,671	32,520	1,080	5,980	6,731	17,952	11,221	24.6	21.7
	1904	526	12,383	500	731	11,152	18,198	22,596	703	4,597	5,437	14,751	9,314	−41.6	−48.6
	1899	998	.....	.....	1,406	19,085	93,540	48,787	1,416	7,741	11,040	28,674	17,634	.....	.....
Liquors, distilled	1909	613	8,328	563	1,335	6,430	46,120	72,450	1,988	3,074	35,977	204,699	168,722	20.1	55.9
	1904	805	7,229	794	1,080	5,355	42,349	50,101	1,393	2,657	25,626	131,270	105,644	44.0	35.6
	1899	965	.....	.....	661	3,720	31,427	32,540	890	1,733	15,145	96,794	81,649	.....	.....
Liquors, malt	1909	1,414	66,725	639	11,507	54,579	347,726	671,158	22,804	41,206	96,596	374,730	278,134	13.4	25.6
	1904	1,530	58,068	876	9,055	48,137	266,159	515,630	17,316	34,541	74,907	298,346	223,439	22.0	25.9
	1899	1,507	.....	.....	7,146	39,459	197,901	413,767	13,038	25,776	51,598	236,915	185,317	.....	.....
Liquors, vinous	1909	290	2,726	236	579	1,911	6,771	27,908	863	972	6,626	13,121	6,495	−0.1	18.2
	1904	435	2,801	396	492	1,913	6,713	17,775	573	1,002	5,693	11,098	5,405	64.5	69.5
	1899	359	.....	.....	344	1,163	3,416	9,838	365	446	3,689	6,547	2,858	.....	.....
Locomotives, not made by railroad companies. [2]	1909	16	16,945	7	2,029	14,909	35,102	52,060	2,297	8,914	15,060	31,582	16,522	−39.9	−47.0
	1904	15	25,979	9	1,164	24,806	29,806	38,421	1,675	15,798	27,703	59,552	31,849	.....	.....
Looking-glass and picture frames.	1909	437	7,470	431	1,018	6,021	5,330	9,058	1,119	3,261	5,525	13,475	7,950	−9.1	1.5
	1904	442	8,076	467	984	6,625	4,653	7,634	955	3,315	4,975	13,270	8,295	9.9	22.3
	1899	362	.....	.....	884	6,029	3,357	5,500	789	2,550	4,729	10,847	6,118	.....	.....
Lumber and timber products.	1909	40,671	784,989	48,825	41,145	695,019	2,840,082	1,176,675	47,428	318,739	508,118	1,156,129	648,011	30.5	30.7
	1904	25,153	593,342	30,738	30,038	532,566	1,886,624	733,708	31,737	245,834	360,325	884,267	523,942	4.7	16.2
	1899	28,133	.....	.....	29,940	508,766	1,658,594	541,595	18,715	188,395	364,964	760,992	396,028	.....	.....
Malt	1909	114	2,237	52	425	1,760	26,441	60,286	884	1,348	30,464	38,252	7,788	−14.3	26.3
	1904	141	2,594	96	444	2,054	20,288	47,934	747	1,457	23,621	30,289	6,668	3.2	56.3
	1899	146	.....	.....	290	1,990	13,834	39,288	471	1,183	14,817	19,374	4,557	.....	.....
Marble and stone work [3]	1909	4,964	77,275	6,026	5,646	65,603	187,686	114,842	6,386	42,546	37,397	113,093	75,696	28.4	33.3
	1904	2,608	57,866	3,300	3,456	51,110	102,887	79,170	4,000	31,899	26,569	84,844	58,275	22.6	33.3
	1899	2,952	.....	.....	2,606	41,686	83,119	52,982	2,440	22,843	21,546	63,667	42,121	.....	.....
Matches	1909	26	4,220	46	543	3,631	6,224	11,953	723	1,390	4,599	11,353	6,754	14.0	101.0
	1904	23	3,368	7	176	3,185	3,539	5,334	178	1,101	3,285	5,647	2,362	55.6	−6.0
	1899	22	.....	.....	66	2,047	2,666	3,893	87	613	3,421	6,006	2,585	.....	.....
Mats and matting	1909	12	1,040	18	85	937	1,433	4,051	95	385	1,067	2,432	1,365	49.9	95.7
	1904	12	696	13	58	625	1,524	839	67	249	574	1,243	669	−47.8	6.7
	1899	9	.....	.....	42	1,197	1,733	994	31	237	516	1,165	649	.....	.....
Mattresses and spring beds	1909	930	14,109	869	1,918	11,322	17,689	23,735	2,039	5,771	20,483	35,783	15,300	8.6	28.9
	1904	716	12,438	757	1,254	10,427	13,220	14,514	1,253	4,816	15,326	27,755	12,429	36.3	54.6
	1899	589	.....	.....	851	7,649	7,980	7,999	770	3,102	10,227	17,956	7,729	.....	.....
Millinery and lace goods	1909	1,579	46,301	1,934	5,166	39,201	7,918	35,705	5,381	16,308	45,040	85,894	40,854	42.5	69.2
	1904	860	31,417	1,163	2,754	27,500	4,737	17,850	2,296	10,307	26,259	50,778	24,519	63.0	72.3
	1899	591	.....	.....	1,592	16,871	1,852	10,765	1,393	5,818	15,654	29,469	13,815	.....	.....
Mineral and soda waters	1909	4,916	22,060	5,743	3,170	13,147	19,392	42,305	2,846	6,902	16,466	43,508	27,042	20.8	43.8
	1904	3,468	16,554	4,099	1,576	10,879	12,214	26,098	1,393	5,488	10,002	30,251	20,249	23.8	30.0
	1899	2,763	.....	.....	1,423	8,788	8,037	19,727	1,161	4,080	8,565	23,269	14,704	.....	.....
Mirrors	1909	148	3,509	131	384	2,994	3,862	4,890	450	1,763	5,905	9,571	3,666	13.0	25.9
	1904	119	3,068	117	302	2,649	2,795	3,859	332	1,375	4,587	7,605	3,018	3.7	−5.0
	1899	103	.....	.....	269	2,555	2,333	3,184	277	1,232	4,996	8,004	3,008	.....	.....
Models and patterns, not including paper patterns.	1909	709	5,450	840	439	4,171	5,486	5,576	490	2,929	2,876	8,868	5,992	50.0	95.1
	1904	547	3,678	656	242	2,780	4,358	2,896	238	1,788	922	4,545	3,623	6.6	18.5
	1899	530	.....	.....	118	2,607	3,021	2,250	113	1,565	825	3,834	3,009	.....	.....
Moving pictures	1909	16	718	5	207	506	486	19,428	396	335	2,192	4,206	2,014	.....	.....
Mucilage and paste	1909	127	901	108	255	538	2,335	2,717	353	286	3,283	4,918	1,635	14.5	38.3
	1904	111	728	100	158	470	1,505	2,430	166	237	2,301	3,556	1,255	2.6	39.1
	1899	116	.....	.....	166	458	1,426	1,220	155	193	1,613	2,556	943	.....	.....
Musical instruments and materials, not specified.	1909	187	2,269	187	260	1,822	1,423	3,298	343	992	890	3,228	2,338	−14.8	−7.3
	1904	181	2,554	190	225	2,139	1,603	3,743	252	1,162	1,130	3,482	2,352	−11.1	2.6
	1899	229	.....	.....	158	2,405	1,417	3,896	142	1,232	1,205	3,395	2,190	.....	.....
Musical instruments, pianos and organs and materials.	1909	507	41,882	297	3,565	38,020	41,623	103,234	5,552	22,762	43,765	89,790	46,025	14.9	35.9
	1904	444	36,106	303	2,722	33,081	30,134	68,482	3,728	18,527	27,987	66,093	38,106	55.2	61.1
	1899	390	.....	.....	1,518	21,309	20,789	43,810	2,015	11,543	17,371	41,024	23,653	.....	.....
Needles, pins, and hooks and eyes.	1909	49	4,978	27	313	4,638	4,542	6,705	393	2,064	2,329	6,694	4,365	17.0	40.9
	1904	46	4,196	31	200	3,965	2,440	5,332	253	1,596	1,584	4,751	3,167	49.5	46.7
	1899	52	.....	.....	135	2,653	2,103	4,618	147	1,067	1,228	3,238	2,010	.....	.....
Oakum	1909	6	129	7	9	113	289	342	14	42	232	338	106	−20.4	−6.4
	1904	6	158	5	11	142	367	488	14	49	241	361	120	−17.0	−18.0
	1899	7	.....	.....	10	171	375	416	17	51	284	440	156	.....	.....
Oil, castor	1909	4	70	4	12	54	385	1,038	27	32	661	905	244	25.6	40.7
	1904	4	57	.....	14	43	500	625	27	28	487	643	156	−12.2	62.8
	1899	3	.....	.....	12	49	260	539	17	29	293	395	102	.....	.....
Oil, cottonseed, and cake.	1909	817	21,273	110	4,092	17,071	192,342	91,086	4,295	5,835	119,833	147,868	28,035	9.9	53.4
	1904	715	18,832	63	3,229	15,540	150,246	73,770	3,062	4,838	80,030	96,408	16,378	41.2	64.2
	1899	369	.....	.....	1,569	11,007	73,071	34,451	1,579	3,143	45,166	58,727	13,561	.....	.....

[1] Includes "cement" and "wall plaster" in 1899. [2] Included in "foundry and machine-shop products" in 1899. [3] Includes "artificial stone" in 1899.

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. Total.	Proprietors and firm members.	Salaried employees.	Wage earners (average number).	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. 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	.....	.....	39	168	1,048	576	25	61	589	813	224	.....	.....
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	.....	.....	285	1,328	8,491	15,461	446	693	24,396	27,184	2,788	.....	.....
Oil, not elsewhere specified.	1909	189	3,144	118	1,311	1,715	5,772	18,441	1,923	1,060	21,407	30,865	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	−10.4	23.2
	1899	201	.....	.....	810	1,456	3,432	9,889	991	738	10,975	18,612	7,637	.....	.....
Oilcloth and linoleum	1909	31	5,557	11	345	5,201	16,125	19,634	649	2,826	15,550	23,339	7,789	33.9	57.8
	1904	27	4,112	12	217	3,883	10,112	13,803	361	1,944	10,050	14,792	4,742	20.2	29.7
	1899	27	.....	.....	153	3,230	7,561	8,879	295	1,628	7,550	11,403	3,853	.....	.....
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	4,398	5,574	1,176	−21.8	−55.4
	1899	24	.....	.....	394	1,084	1,356	3,024	412	534	7,640	12,500	4,860	.....	.....
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	.....	.....	375	3,715	2,544	4,212	287	1,599	2,101	5,211	3,110	.....	.....
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	.....	.....	3,710	9,697	30,443	60,053	5,017	4,926	44,739	69,562	24,823	.....	.....
Paper and wood pulp	1909	777	81,473	250	5,245	75,978	1,304,265	409,348	9,510	40,805	165,442	267,657	102,215	15.2	41.8
	1904	761	70,051	309	3,778	65,964	1,093,708	277,444	6,097	32,019	111,252	188,715	77,463	32.9	48.2
	1899	763	.....	.....	2,935	49,646	762,118	167,508	4,501	20,746	70,530	127,326	56,796	.....	.....
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	39.4
	1899	246	.....	.....	1,092	9,727	10,421	18,152	1,342	3,658	14,191	24,355	10,164	.....	.....
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	1,790	15	693	1,082	38	2,237	490	445	337	2,265	1,928	29.6	303.0
	1899	15	.....	.....	92	835	9	256	72	262	125	562	437	.....	.....
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	50,376	141,942	91,566	11.8	20.9
	1904	2,777	32,248	2,293	9,483	20,472	17,008	75,607	9,975	7,913	39,494	117,436	77,942	7.6	32.3
	1899	2,154	.....	.....	8,094	19,028	12,707	56,173	8,265	6,910	31,950	88,791	56,841	.....	.....
Paving materials	1909	49	1,731	31	281	1,419	5,757	11,410	373	750	3,478	6,229	2,751	−26.1	23.8
	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	.....	.....	173	2,436	34,397	13,464	184	1,144	1,582	3,936	2,354	.....	.....
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	697	1,712	3,596	7,379	3,783	34.9	66.7
	1904	8	3,351	3	283	3,065	2,625	4,081	396	1,059	1,804	4,426	2,622	41.8	99.2
	1899	7	.....	.....	81	2,162	1,360	2,227	112	683	1,031	2,222	1,191	.....	.....
Pens, fountain, stylographic, and gold.	1909	65	1,820	51	544	1,225	569	3,121	554	712	2,246	4,739	2,493	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	.....	.....	146	690	527	1,087	148	371	664	1,706	1,042	.....	.....
Pens, steel	1909	5	755	.....	56	699	244	804	86	230	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	.....	.....	13	473	138	357	21	138	52	294	242	.....	.....
Petroleum, refining	1909	147	16,640	42	2,669	13,929	90,268	181,916	3,920	9,830	199,273	236,998	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	.....	.....	1,201	12,199	36,127	95,328	1,811	6,717	102,859	123,929	21,070	.....	.....
Phonographs and graphophones.	1909	18	5,928	2	727	5,199	6,371	14,363	945	2,841	3,099	11,726	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	.....	.....	144	1,267	1,082	3,348	179	608	828	2,246	1,418	.....	.....
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	13,023	8,861	10.7	67.0
	1899	153	.....	.....	469	3,444	3,412	5,518	453	1,443	3,378	7,799	4,421	.....	.....
Photo-engraving	1909	313	7,277	233	1,701	5,343	2,638	5,474	1,849	4,750	2,134	11,624	9,490	37.8	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	.....	.....	484	2,691	1,040	1,994	450	1,750	725	4,190	3,465	.....	.....
Pipes, tobacco	1909	62	3,090	70	245	2,775	1,506	3,528	283	1,255	2,459	5,312	2,853	42.5	57.4
	1904	68	2,111	82	82	1,947	1,058	1,256	81	831	1,354	2,834	1,480	22.8	14.6
	1899	98	.....	.....	120	1,585	855	1,111	109	738	1,106	2,472	1,366	.....	.....
Pottery, terra-cotta, and fire-clay products.	1909	822	61,022	452	4,402	56,168	110,017	141,350	5,813	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	16,591	64,201	47,610	19.9	45.0
	1899	1,000	.....	.....	2,777	43,714	75,802	65,952	3,012	17,692	11,915	44,263	32,348	.....	.....
Printing and publishing	1909	31,445	388,466	30,424	99,608	258,434	297,763	588,346	103,458	164,628	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	409,959	12.2	39.8
	1899	23,814	.....	.....	40,685	195,260	119,775	333,003	39,475	99,816	103,654	395,187	291,533	.....	.....
Pulp goods	1909	14	882	1	98	783	3,125	2,680	124	377	971	1,770	799	12.5	20.7
	1904	17	759	7	56	696	2,368	3,198	83	284	719	1,467	748	0.7	15.8
	1899	22	.....	.....	75	691	1,314	2,317	92	284	647	1,267	620	.....	.....

[1] Included in "coffee and spice, roasting and grinding," in 1899.

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. Total.	Proprietors and firm members.	Salaried employees.	Wage earners (average number).	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. Wage earners (average number).	Value of products.
								Expressed in thousands.							
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	2,509	3,230	215	719	1,193	2,853	1,660	122.2	112.6
	1899	130	.....	.....	95	632	1,245	1,261	84	247	638	1,342	704	.....	.....
Rice, cleaning and polishing.	1909	71	1,777	38	500	1,239	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	1,089	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	23,865	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	183	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	703	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	1,402	−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	20,804	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	1,681	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	685,310	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	5,900	7,785	1,885	.....	.....

[1] Included in other classifications in 1904 and 1899.

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. Total.	Proprietors and firm members.	Salaried employees.	Wage earners (average number).	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. Wage earners (average number).	Value of products.
								Expressed in thousands.							
Soap[1]	1909	420	18,393	329	5,005	12,999	28,360	$71,951	$5,506	$6,227	$72,179	$111,358	$39,179	17.7	63.1
	1904	436	14,501	399	3,058	11,044	20,228	54,816	3,503	4,763	43,626	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	20,088	.....	.....
Soda-water apparatus	1909	63	2,399	40	562	1,797	2,894	8,589	624	1,239	2,443	6,556	4,11	22.3	41.5
	1904	37	1,829	27	333	1,469	1,533	3,415	296	835	1,924	4,634	2,710	52.5	53.7
	1899	30	.....	.....	227	963	1,183	4,202	244	550	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	4,260	2,965	4,249	319	1,641	2,963	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	1,853	4,727	9,005	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	0.9
	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	2,938	.....	.....
Statuary and art goods[2]	1909	194	2,172	275	198	1,699	462	2,221	225	1,339	680	3,442	2,762	12.7	42.4
	1904	135	1,812	191	114	1,507	466	1,669	127	1,030	392	2,417	2,025	.....	.....
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	33.4	35.8
	1904	106	3,240	56	450	2,734	8,846	12,253	594	1,273	3,896	8,952	5,056	138.4	156.2
	1899	97	.....	.....	290	1,147	4,488	2,691	326	525	1,546	3,494	1,948	.....	.....
Stereotyping and electrotyping.	1909	174	3,661	133	678	2,850	4,076	3,826	800	2,312	1,765	6,384	4,619	6.4	27.6
	1904	146	3,301	132	490	2,679	2,878	3,298	517	1,993	1,032	5,005	3,973	11.3	32.7
	1889	140	.....	.....	330	2,408	1,470	2,389	312	1,459	767	3,772	3,005	.....	.....
Stoves and furnaces, including gas and oil stoves.[3]	1909	576	42,921	244	5,547	37,130	45,524	86,944	6,975	22,944	29,338	78,853	49,515	11.2	26.9
	1904	494	37,292	306	3,582	33,404	32,017	62,953	4,499	19,770	22,271	62,133	39,862	.....	.....
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	0.7
	1904	344	15,799	364	1,886	13,549	140,650	165,468	2,154	7,576	244,753	277,285	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	.....	.....
Surgical appliances and artificial limbs.	1909	324	5,805	316	1,248	4,241	5,752	11,045	1,488	2,129	5,372	12,399	7,027	34.5	70.6
	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	36.0
	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	239,509	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	2,289	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 printing 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	1,879	10,640	8,770	43.3	53.5
	1899	47	.....	.....	532	4,340	2,272	8,400	480	2,404	1,402	6,932	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	1,869	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	4,985	—13.7	3.0
	1904	236	5,405	244	449	4,712	15,604	9,293	526	1,867	7,977	12,678	4,701	—7.6	26.2
	1899	270	.....	.....	358	5,098	11,351	7,594	364	1,715	5,882	10,048	4,166	.....	.....
Vault lights and ventilators.	1909	37	453	27	99	327	234	607	109	228	338	957	619	47.3	97.7
	1904	24	278	28	28	222	174	241	31	154	161	484	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	8,448	3,484	0.9	16.3
	1904	568	2,514	645	341	1,528	10,556	7,520	359	725	3,852	7,265	3,413	—1.9	22.5
	1899	613	.....	.....	451	1,557	16,849	5,630	391	652	3,134	5,932	2,798	.....	.....
Wall paper	1909	45	4,746	10	699	4,037	5,680	14,153	1,054	2,039	7,623	14,449	6,826	3.2	14.3
	1904	44	4,425	15	497	3,913	4,867	12,354	692	1,868	6,658	12,637	5,979	—6.2	18.5
	1899	51	.....	.....	512	4,172	4,573	8,890	817	2,074	6,073	10,663	4,590	.....	.....

[1] Includes "candles" in 1899.
[2] Included in other classifications in 1899.
[3] "Stoves and furnaces, not including gas and oil stoves," included in "foundry and machine-shop products" in 1899.
[4] Includes 214 establishments reported as "sugar and molasses" and 19 as "sugar, refining, not including beet sugar," in 1909.
[5] Included in "chemicals" in 1899.

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. Total.	Proprietors and firm members.	Salaried employees.	Wage earners (average number).	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. Wage earners (average number).	Value of products.
								Expressed in thousands.							
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	1,625	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	5,837	392	969	2,308	4,795	2,487	−5.7	10.1
	1899	68	.....	.....	281	2,045	2,214	4,309	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	8,488	.....	.....
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	786	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	1,188	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	288,909	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	94,868	.....	.....
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	3,860	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; "whalebons cutting," 3, in 1899.

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.]

Table 111

DIVISION AND STATE.	Census.	Number of establishments.	PERSONS ENGAGED IN INDUSTRY. Total.	Proprietors and firm members.	Salaried employees.	Wage earners (average number).	Primary horsepower.	Capital. (Expressed in thousands.)	Salaries. (Expressed in thousands.)	Wages. (Expressed in thousands.)	Cost of materials. (Expressed in thousands.)	Value of products. (Expressed in thousands.)	Value added by manufacture (value of products less cost of materials). (Expressed in thousands.)	PER CENT OF INCREASE. Wage earners (average number).	PER CENT OF INCREASE. Value of products.
United States	**1909**	**268,491**	**7,678,578**	**273,265**	**790,267**	**6,615,046**	**18,675,376**	**$18,428,270**	**$938,575**	**$3,427,038**	**$12,142,791**	**$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**	......	......
GEOGRAPHIC DIVISIONS:															
New England	1909	25,351	1,212,158	24,171	86,697	1,101,290	2,715,121	2,503,854	112,284	557,631	1,476,297	2,670,065	1,193,768	17.1	31.8
	1904	22,279	1,023,708	22,698	60,258	940,752	2,125,815	1,870,995	72,799	439,050	1,116,273	2,025,999	909,726	10.4	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	4,159,498	7,141,761	2,982,263	17.0	36.9
	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	2,256,271	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	5,211,702	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	857,904	41,303	157,843	862,011	1,284,446	422,435	17.4	32.0
	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	1,381,186	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	395,686	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	625,443	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	26.5	64.6
	1899	7,174	......	......	8,255	113,388	397,471	193,969	7,334	42,715	153,510	252,314	98,804	......	......
Mountain	1909	5,254	89,862	4,849	9,578	75,435	400,766	348,977	12,522	56,870	228,692	363,996	135,304	42.9	42.9
	1904	3,610	61,812	3,302	5,720	52,790	241,825	220,569	7,541	39,046	152,813	254,663	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	802,016	848,477	36,829	153,810	493,678	843,512	349,834	29.9	52.9
	1904	11,192	193,517	11,730	17,710	164,077	460,049	423,623	20,625	106,187	312,489	551,565	239,076	33.2	51.2
	1899	8,320	......	......	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	20.3	33.1
	1904	1,618	69,758	1,726	2,666	65,366	218,344	109,495	2,972	27,693	73,216	123,611	50,395	−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	25,130	......	......
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	232,389	626,411	1,124,092	497,681	11.4	23.8
	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	280,344	122,152	16.7	38.7
	1904	1,617	104,299	1,561	5,420	97,318	181,017	215,901	7,041	43,113	112,872	202,110	89,238	10.3	22.1
	1899	1,678	......	......	4,022	88,197	153,619	176,901	5,300	35,995	87,952	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	198,046	2,918	13,523	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	145,434	......	......
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	1,512,586	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	1,348,603	2,488,346	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	1,871,831	853,454	......	......
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	715,060	28,957	128,109	470,449	774,369	303,920	24.5	40.0
	1899	6,415	......	......	15,361	213,975	322,503	477,301	19,058	95,165	334,726	553,006	218,280	......	......
Pennsylvania	1909	27,563	1,002,171	29,743	94,885	877,543	2,921,547	2,749,006	110,897	455,627	1,582,560	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	409,303	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	579,075	244,700	21.3	47.0
	1904	7,044	176,227	7,191	14,862	154,174	380,758	312,071	15,029	72,058	220,507	393,954	173,447	10.9	16.9
	1899	7,128	......	......	10,447	139,017	325,919	219,321	9,971	59,280	195,163	337,072	141,909	......	......
Illinois	1909	18,026	561,044	17,357	77,923	465,764	1,013,071	1,548,171	91,449	273,319	1,160,927	1,919,277	758,350	22.8	36.1
	1904	14,921	447,947	13,990	54,521	379,436	741,555	975,845	60,560	208,405	840,057	1,410,342	570,285	14.0	25.8
	1899	14,374	......	......	40,964	332,871	559,347	782,830	40,549	159,104	681,450	1,120,868	439,418	......	......

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.	Census.	Number of establishments.	Persons engaged in industry. Total.	Proprietors and firm members.	Salaried employees	Wage earners (average number).	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. Wage earners (average number).	Value of products.
								Expressed in thousands.							
East North Central—Continued.															
Michigan	1909	9,159	271,071	8,965	30,607	231,499	598,288	$583,947	$34,870	$118,968	$368,612	$685,109	$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	6,260	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	7,585	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	154,918	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	18,475	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	199,049	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	3,886	.....	.....	6,741	94,170	132,052	149,155	6,845	32,414	129,355	211,076	81,721	.....	.....
District of Columbia	1909	518	9,758	475	1,576	7,707	16,563	30,553	1,846	4,989	10,247	25,289	15,042	22.4	37.7
	1904	482	7,778	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	88,898	3,643	4,970	80,285	176,998	147,989	4,875	27,943	83,649	148,857	65,208	21.2	37.0
	1899	3,186	.....	.....	3,828	66,223	136,696	92,300	3,630	20,274	59,360	108,644	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	29,779	.....	.....
North Carolina	1909	4,931	133,453	5,451	6,529	121,473	378,556	217,185	6,903	34,355	121,861	216,656	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	1,369	.....	.....	1,419	47,025	112,697	62,750	1,307	9,130	30,486	53,336	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	175,780	102,440	5,081	22,806	79,352	137,961	58,609	31.8	48.7
	1899	3,116	.....	.....	3,329	45,963	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	3,867	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	30.2	40.2
	1904	1,520	42,966	1,588	2,688	38,690	110,338	50,256	2,598	14,819	25,801	57,451	31,650	44.4	70.4
	1899	1,294	.....	.....	1,260	26,799	65,738	22,712	1,093	7,910	16,543	33,718	17,175	.....	.....

[1] Less than one-tenth of 1 per cent.

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.	Census.	Number of establishments.	Persons engaged in industry. Total.	Proprietors and firm members.	Salaried employees.	Wage earners (average number).	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. Wage earners (average number).	Value of products.
								Expressed in thousands.							
West South Central:															
Arkansas	1909	2,925	51,730	3,455	3,293	44,982	173,088	$70,174	$3,461	$19,113	$34,935	$74,916	$39,981	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	134,865	223,949	89,084	36.4	20.2
	1904	2,091	63,735	1,899	5,977	55,859	251,963	150,811	6,044	25,316	117,035	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	2,698	2,193	13,143	71,139	38,873	2,045	7,240	34,153	53,682	19,529	140.9	119.5
	[1]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	200.7
	[1]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	150,528	58,924	27.1	62.0
	1899	3,107	.....	.....	2,861	38,604	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	49,180	73,272	24,092	30.1	10.3
	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	12,480	168.5	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	3,001	1,562	.....	.....
Wyoming	1909	268	3,393	263	263	2,867	7,628	6,195	311	2,081	2,608	6,249	3,641	56.3	77.4
	1904	169	2,163	150	179	1,834	3,604	2,696	206	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	3,268	1,898	.....	.....
Colorado	1909	2,034	34,115	1,722	4,326	28,067	154,615	162,668	5,648	19,912	80,491	130,044	49,553	28.7	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	2,236	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	33,600	50,257	16,657	34.4	79.0
	1904	169	5,217	133	291	4,793	21,412	14,396	472	3,969	14,595	28,083	13,488	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	59.2
	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	59.1	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	102,858	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	529,761	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.]

Table 112. CITY.	Census.	Number of establishments.	Persons engaged in industry. Total.	Proprietors and firm members.	Salaried employees.	Wage earners (average number).	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. Wage earners (average number).	Value of products.
								Expressed in thousands.							
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	248,128	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	32,008	108,727	502,222	707,879	205,657	.....	.....
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	259,878	8,140	22,839	228,899	.....	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	82,698	.....	265,937	13,475	42,642	137,740	267,307	129,567	27.6	36.0
	1899	2,646	.....	.....	8,867	64,832	.....	150,526	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	1,616	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	61,666	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	1,516	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	94,603	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	88,367	147,378	59,011	27.1	39.5
	1899	1,478	.....	.....	3,767	34,275	.....	95,740	3,420	15,678	65,930	105,027	39,088	.....	.....
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	69,986	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	1,631	5,135	50,697	.....	110,026	6,685	25,622	80,689	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	51,956	.....	.....
Cincinnati, Ohio	1909	2,184	72,488	2,015	10,281	60,192	88,597	150,254	12,759	31,101	101,032	194,516	92,584	2.7	17.1
	1904	2,171	68,954	2,180	8,190	58,584	.....	130,272	9,077	27,390	83,258	166,059	82,801	6.6	17.2
	1899	2,454	.....	.....	6,164	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	110,993	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	19,020	.....	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	1,011	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	72,030	22,064	.....	.....
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	33.6
	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	38,368	.....	79,680	3,053	16,931	42,551	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	50,674	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	37,918	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	12,460	54,128	101,284	47,156	8.2	21.7
	1904	842	28,817	706	3,126	24,985	.....	79,999	3,367	10,812	45,682	83,204	37,522	8.3	25.9
	1899	860	.....	.....	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	7,835	62,292	81,271	18,979	29.7	73.5
	1904	113	8,903	86	722	8,095	.....	40,956	870	5,460	35,183	46,853	11,670	—6.7	38.2
	1899	103	.....	.....	414	8,679	.....	22,064	478	4,730	23,133	33,908	10,775	.....	.....
Lawrence, Mass.	1909	162	31,589	145	902	30,542	73,066	79,550	1,581	13,787	45,438	79,993	34,555	39.4	66.5
	1904	187	22,726	183	633	21,910	.....	60,063	971	8,908	29,416	48,037	18,621	4.8	15.1
	1899	107	.....	.....	648	20,899	.....	48,827	997	8,197	24,842	41,742	16,900	.....	.....
New Orleans, La.	1909	848	20,938	754	2,998	17,186	38,145	56,934	3,240	8,020	48,732	78,794	30,062	—1.6	—3.2
	1904	690	20,406	606	2,332	17,468	.....	56,995	2,386	7,396	58,828	81,411	22,583	7.9	41.7
	1899	688	.....	.....	1,579	16,185	.....	42,858	1,667	6,176	40,385	57,446	17,061	.....	.....

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	3,644	4,619
Gadsden	27			786			1,525			621		
Mobile	126	139	113	2,362	2,496	2,371	5,429	4,942	3,486	2,490	2,620	1,944
Montgomery	73	59	52	2,284	1,940	1,528	5,443	3,878	2,944	2,420	1,689	1,229
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	750
Hot Springs	71	22	21	335	239	94	844	597	191	541	309	106
Little Rock	125	104	62	2,017	1,971	1,397	6,882	4,690	3,379	2,868	2,131	1,600
Pine Bluff	42	34	37	1,118	1,425	990	2,387	2,500	1,541	1,033	1,079	752
CALIFORNIA:												
Alameda	51	30	23	915	279	372	2,554	697	1,335	1,625	464	547
Bakersfield	27			746			2,819			1,119		
Berkeley	84	44	22	1,084	338	211	4,435	1,474	651	1,748	692	259
Eureka	48			946			3,012			1,518		
Fresno	76	80	62	1,938	1,915	819	11,090	9,754	2,752	3,098	2,926	1,043
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	7,046
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	9,495	7,083	4,929	4,150
San Bernardino	41			729			1,660			897		
San Diego	117	89	57	1,071	541	255	4,741	1,974	670	2,074	838	389
San Francisco	1,796	2,251	1,748	28,244	38,429	32,555	133,041	137,788	107,024	56,824	61,842	41,489
San Jose	153	153	124	1,430	1,260	1,221	5,611	4,298	3,292	2,368	1,786	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	1,538
Vallejo	23			203			1,896			492		
COLORADO:												
Colorado Springs	59	49	34	516	410	409	1,733	1,101	845	910	690	480
Cripple Creek		22	35		51	167		223	441		147	266
Denver	706	722	574	12,058	9,672	8,500	51,538	36,660	37,906	20,611	15,660	13,434
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	768
Trinidad	30			220			814			503		
CONNECTICUT:												
Ansonia	53	49	49	4,127	3,394	3,288	20,088	19,132	18,515	5,477	3,824	3,559
Bridgeport	367	306	286	25,775	19,492	17,038	65,609	44,586	33,536	27,662	22,252	16,249
Danbury	131	103	104	4,810	4,515	3,939	10,318	8,066	6,527	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	12,460
Meriden	120	97	92	7,845	7,281	6,689	16,317	13,764	11,751	9,374	8,120	6,645
Middletown	58	65	60	2,434	2,318	2,495	4,955	4,351	4,152	2,012	1,788	1,799
Naugatuck borough	24	22	22	3,464	3,628	3,160	11,033	11,010	8,887	3,704	3,750	2,815
New Britain	111	95	82	13,513	10,073	8,019	22,021	14,960	11,096	13,693	9,292	6,500
New Haven	590	490	437	23,547	21,437	17,594	51,071	39,666	34,900	26,752	21,145	18,764
New London	70	57	54	2,225	2,554	1,963	4,483	4,710	4,221	1,952	2,183	1,959
Norwich	91	87	89	4,470	3,706	3,172	9,389	6,022	5,935	4,587	2,979	2,889
Stamford	86	62	49	3,984	3,341	2,445	8,739	5,890	3,920	5,035	3,560	2,220
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	21,624	14,597	12,128
Willimantic	47	35	30	3,020	2,852	2,258	6,733	4,902	3,023	3,539	2,832	1,663
DELAWARE:												
Wilmington	261	245	262	14,663	13,508	14,498	38,069	30,285	30,587	16,093	12,164	12,711
DISTRICT OF COLUMBIA	518	482	491	7,707	6,299	6,155	25,289	18,359	16,426	15,042	10,627	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	1,857
Pensacola	60	39	32	961	1,206	578	1,963	1,937	1,053	1,008	1,117	551
Tampa	215	141	70	8,996	5,831	3,919	17,653	11,264	7,083	10,280	6,713	3,717
GEORGIA:												
Athens	37	28	27	962	509	589	2,112	1,158	678	783	405	264
Atlanta	483	294	196	12,302	11,891	7,966	33,038	25,746	14,419	16,620	12,305	6,976
Augusta	71	64	80	5,073	4,839	5,563	10,456	8,829	7,984	3,854	2,876	2,837
Brunswick	23	29	25	385	254	351	672	407	703	414	220	304
Columbus	55	52	58	4,661	4,434	4,110	8,552	7,080	5,061	2,990	2,796	2,105
Macon	80	61	66	3,729	3,661	2,994	10,703	7,297	5,452	3,833	3,181	2,301
Rome	36			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.]

Table 113—Continued. CITY.	NUMBER OF ESTABLISHMENTS.			AVERAGE NUMBER OF WAGE EARNERS.			VALUE OF PRODUCTS. (Expressed in thousands.)			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	$8,697	$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
Belleville	119	96	89	1,872	1,765	1,335	4,615	4,357	2,873	2,291	2,570	1,938
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	273	289	245	846	486	354	427	328	222
Chicago	9,656	8,159	7,068	293,977	241,984	221,191	1,281,171	955,036	797,879	487,701	365,122	295,657
Chicago Heights	79	.....	.....	3,953	.....	.....	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	91	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	11,120	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	2,919	2,218	1,450	1,503	1,282	830
Jacksonville	57	55	55	947	899	1,066	2,299	1,982	1,684	992	880	834
Joliet	137	104	135	6,383	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	3,158	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	765	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	987
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	1,939
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	34	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	2,051
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	1,311	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	2,062	2,469	2,057	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	4,593	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	868
Davenport	232	173	163	4,231	3,840	3,403	18,802	13,696	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	327
Iowa City	44	.....	.....	282	.....	.....	805	.....	.....	465	.....	.....
Keokuk	91	80	88	1,541	1,533	1,362	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	1,643	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	1,820	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	14,761	14,227	7,037	3,365	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	105
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	19,601	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	523
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	22,564	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.

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. (Expressed in thousands.)			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
KENTUCKY:												
Covington	196	199	204	3,942	3,703	3,212	$8,712	$6,160	$5,479	$4,241	$3,490	$2,962
Frankfort	31	30	34	537	525	281	3,083	1,747	1,327	1,115	614	498
Henderson	43	34	26	1,088	459	352	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	903
Louisville	903	842	860	27,023	24,985	23,062	101,284	83,204	66,110	47,156	37,522	31,234
Newport	144	105	134	2,632	1,958	1,955	6,491	5,231	3,548	3,125	2,259	2,075
Owensboro	69	60	51	1,064	1,392	890	3,505	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	785	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	81,411	57,446	30,062	22,583	17,061
Shreveport	61	63	46	1,114	1,162	736	3,643	2,838	1,556	1,554	1,554	655
MAINE:												
Auburn	83	72	67	3,452	2,652	2,749	8,843	6,407	5,965	3,053	1,990	1,978
Augusta	40	44	52	2,096	1,860	2,018	4,662	3,887	3,313	2,178	2,000	2,101
Bangor	122	87	101	1,327	1,496	1,511	3,346	3,408	3,336	1,499	1,671	1,431
Bath	.....	46	54	.....	1,950	2,097	.....	3,654	3,697	.....	1,672	1,759
Biddeford	43	33	39	5,076	4,764	4,375	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	5,200	3,811	4,061
Portland	271	243	234	4,902	4,345	3,763	11,950	9,133	7,334	5,941	4,778	3,731
Waterville	33	40	29	1,812	2,011	1,926	3,179	3,069	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	135,108	79,954	69,616	59,885
Cumberland	71	72	56	1,936	2,276	1,643	4,534	4,595	2,900	1,858	1,917	1,226
Frederick	55	56	54	1,026	1,032	939	2,911	1,938	1,438	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	3,328	2,804	2,181
Arlington town	19	18	12	283	209	122	695	493	256	384	267	144
Attleborough town	128	108	108	6,429	5,044	4,811	15,160	10,050	8,751	8,347	5,399	4,955
Beverly	63	71	73	4,487	2,083	2,275	8,653	4,101	3,781	5,362	1,778	1,632
Boston	3,155	2,747	2,878	69,637	59,160	52,853	237,457	184,351	162,765	112,880	89,748	80,470
Brockton	196	201	186	14,737	13,889	10,296	45,972	37,791	24,855	17,407	15,238	9,522
Brookline town	16	13	8	340	495	324	532	733	485	336	462	266
Cambridge	275	262	243	15,260	14,586	11,070	44,227	42,407	29,092	20,661	17,290	12,319
Chelsea	110	130	120	5,954	4,939	2,959	17,003	13,879	9,519	6,434	5,572	4,058
Chicopee	58	40	46	7,260	4,670	4,085	19,219	7,716	5,389	8,267	3,386	2,689
Clinton town	39	35	22	4,123	3,482	3,836	7,845	5,458	5,043	3,629	2,050	2,328
Everett	62	51	52	2,680	2,186	1,877	8,747	6,136	4,437	4,241	3,013	1,903
Fall River	288	234	240	37,139	26,836	30,646	64,146	43,473	39,103	28,622	17,377	21,033
Fitchburg	122	107	115	8,497	6,498	6,218	23,252	15,391	13,008	8,810	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	5,019	4,386	3,652	2,449	2,102
Gloucester	102	132	137	2,181	1,763	2,367	7,753	6,921	6,293	2,983	2,239	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	13,691	10,190	8,425
Holyoke	187	179	158	16,513	14,685	12,519	40,097	30,731	24,093	17,796	14,152	11,387
Hyde Park town	40	40	33	4,320	3,991	2,483	7,336	6,739	4,384	3,985	3,158	1,877
Lawrence	162	187	167	30,542	21,910	20,899	79,993	48,037	41,742	34,555	18,621	16,900
Leominster town	94	65	70	5,601	4,127	3,412	10,531	7,502	5,397	4,955	3,538	2,628
Lowell	320	256	286	32,575	29,303	29,254	60,271	46,879	41,203	27,440	19,968	20,924
Lynn	431	431	423	27,368	21,540	16,377	71,503	55,003	39,347	30,142	22,387	14,876
Malden	86	59	53	2,900	2,954	2,416	8,206	11,236	6,602	3,818	7,191	2,518
Marlborough	59	46	50	4,265	3,470	2,524	10,382	7,469	4,498	4,007	2,883	1,664
Medford	40	37	36	500	484	575	2,045	872	1,132	795	486	592
Melrose	25	24	16	1,038	1,571	1,180	2,825	9,451	3,416	1,236	6,536	1,270
Methuen town	19	.....	.....	1,572	.....	.....	3,476	.....	.....	1,250	.....	.....
Milford 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	23,397	24,674	13,378	11,614
Newburyport	74	69	64	3,215	2,955	2,801	6,931	6,810	5,141	3,150	2,548	2,090
Newton	46	48	45	2,174	1,893	1,823	6,279	4,141	3,679	2,896	1,899	1,785
North Adams	60	58	68	5,414	5,502	6,312	10,315	8,036	10,741	4,739	4,025	5,694
Northampton	71	77	66	3,150	2,963	2,635	6,999	5,756	4,707	3,836	2,714	2,167
Peabody town	74	76	86	4,850	3,953	2,661	15,549	10,237	6,944	5,357	3,489	1,870
Pittsfield	71	44	69	6,353	4,455	3,198	15,215	8,577	5,754	6,687	3,948	2,676
Plymouth town	32	35	27	2,912	2,300	1,511	11,618	11,116	5,530	3,143	2,548	1,966
Quincy	183	161	153	5,492	5,371	2,128	10,505	8,982	3,012	6,661	5,278	2,103
Revere town	14	12	17	101	125	87	407	355	156	115	106	105
Salem	155	143	162	6,338	5,945	5,625	14,576	12,202	10,711	5,936	4,281	4,127
Somerville	114	78	85	5,280	3,474	3,528	38,687	22,955	20,065	6,764	3,779	3,344
Southbridge town	36	32	32	4,037	3,223	2,687	6,269	4,202	3,512	3,144	1,922	1,730
Springfield	346	296	278	11,855	10,523	8,152	31,773	25,860	18,155	17,410	13,480	9,263
Taunton	146	127	114	7,407	6,608	6,590	15,380	13,645	11,544	7,605	5,958	6,004
Wakefield town	23	22	25	2,230	1,804	1,436	5,527	4,808	2,647	2,692	1,970	1,393
Waltham	80	60	74	6,037	6,208	4,861	7,814	7,150	5,890	5,370	5,083	4,001
Watertown town	25	20	27	4,335	3,322	1,935	11,546	15,525	5,330	5,083	9,996	1,831
Webster town	23	16	20	3,409	3,107	2,377	11,296	5,868	4,008	3,476	1,927	1,546
Westfield town	91	86	97	3,060	2,634	2,370	7,362	5,818	4,441	4,494	3,567	2,856
Weymouth town	41	46	51	1,991	1,841	1,922	6,627	4,922	5,389	2,423	1,924	2,211
Winthrop town	7	.....	.....	7	.....	.....	42	.....	.....	17	.....	.....
Woburn	59	52	47	1,653	1,482	1,356	5,408	4,654	4,003	2,294	1,846	1,124
Worcester	580	470	465	28,221	22,796	22,593	77,148	52,145	46,793	34,547	25,134	23,323

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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. (Expressed in thousands.)			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
OHIO:[1]												
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	8,838	2,932	3,396	2,851
Cambridge	32	34	28	1,230	814	768	4,291	2,441	2,202	1,406	921	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	14,408	60,378	39,597	31,015	32,850	21,092	16,685
East Liverpool	82	81	75	4,873	5,228	4,171	6,629	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	1,393	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	1,332	2,266
Lancaster	42	42	36	1,532	1,695	1,069	4,074	3,848	1,905	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	3,817	3,831	3,371
Marietta	66	73	77	1,288	1,314	1,511	3,214	2,599	2,398	1,427	1,233	1,248
Marion	55	47	34	2,619	1,721	1,171	5,667	3,228	2,426	3,090	1,876	1,460
Massillon	56	52	49	1,934	1,995	1,474	4,788	3,707	2,749	2,498	2,125	1,486
Middletown	41	47	41	2,576	1,814	1,578	16,517	8,538	5,800	8,567	4,846	3,327
Newark	72	78	69	3,913	3,627	2,075	7,851	5,613	2,879	3,869	3,180	1,699
Norwood	49			3,907			9,684			5,663		
Piqua	82	76	68	2,683	2,044	1,955	6,931	4,036	5,552	3,079	2,128	1,942
Portsmouth	75	81	100	3,728	4,072	4,153	7,277	6,645	6,659	3,383	3,125	3,254
Sandusky	91	93	81	2,118	2,323	1,453	5,947	4,879	2,834	3,112	2,743	1,627
Springfield	195	157	164	7,405	6,258	6,299	19,246	13,382	12,116	10,327	7,620	6,827
Steubenville	55	72	54	4,267	4,184	1,773	21,187	12,370	4,547	6,744	4,127	2,141
Tiffin	75	87	75	1,632	1,645	1,238	3,254	2,434	1,902	2,002	1,434	1,094
Toledo	760	597	445	18,878	15,697	12,747	61,230	44,501	31,976	27,146	19,035	12,579
Warren	68	53	44	1,798	1,505	1,832	5,988	4,414	4,585	2,924	2,366	2,042
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	20			180			451			256		
Muskogee	64			381			2,279			801		
Oklahoma City	171	89	36	1,398	720	220	7,868	3,071	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	26,263	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[2]	49			1,583			3,712			1,382		
Braddock 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	1,986	1,708	1,065	857	661
Carnegie borough	19			422			3,099			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	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	3,491	2,375	2,232
Erie	391	261	260	9,796	8,415	8,032	24,226	18,639	16,493	12,162	9,212	8,285
Greensburg borough	47			310			726			396		
Harrisburg	199	175	175	9,743	7,955	6,439	22,725	16,571	14,996	8,642	6,244	5,991
Hazleton	77	62	45	2,682	1,406	822	4,707	2,186	999	2,005	1,056	706
Homestead borough	26	27	15	171	307	164	659	713	266	337	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	306	300	284	7,957	8,693	7,504	15,979	14,648	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	3,099	2,913
McKeesport	68	75	67	8,246	8,848	7,213	42,495	23,054	36,058	15,199	10,744	14,223
McKees Rocks borough	31			3,591			9,787			4,380		
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	1,476
Philadelphia	8,379	7,087	7,503	251,884	228,899	214,775	746,076	591,388	519,982	316,984	258,036	224,807
Phoenixville borough	31	31	32	2,599	2,888	2,249	5,876	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	211,259	218,198	94,927	86,678	89,740
Pittston	40	40	27	792	830	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.

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).		
							Expressed in thousands.					
	1909	1904	1899	1909	1904	1899	1909	1904	1899	1909	1904	1899
PENNSYLVANIA—Continued.												
Plymouth borough	23	23	24	908	827	756	$1,179	$860	$533	$475	$413	$292
Pottstown borough	78	77	65	3,650	3,457	2,681	12,505	8,145	7,357	3,506	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	1,400
Reading	482	402	403	24,145	18,053	16,892	51,135	30,491	32,682	21,287	13,782	15,686
Scranton	293	258	247	12,851	10,912	11,139	26,385	20,453	24,742	12,083	9,200	7,522
Shamokin borough	39	48	46	1,623	897	762	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	1,501
Shenandoah borough	29	30	22	242	170	107	888	595	302	552	414	208
South Bethlehem borough	49	46	38	7,985	5,754	4,645	26,417	15,275	9,964	10,450	8,014	5,102
Steelton borough [1]	.....	18	18	.....	4,656	4,762	.....	15,746	14,034	.....	4,996	4,098
Sunbury borough	39	32	29	2,069	1,457	968	4,450	2,593	1,868	2,222	891	710
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	1,527
Washington borough	75	.....	.....	2,126	.....	.....	4,837	.....	.....	2,390	.....	.....
West Chester borough	35	35	35	916	849	497	2,146	2,121	859	1,479	1,447	543
Wilkes-Barre	176	129	138	7,553	5,920	4,749	13,526	11,000	8,617	7,093	5,735	4,308
Wilkinsburg borough	24	30	16	185	184	100	538	472	246	276	237	120
Williamsport	159	115	142	5,641	5,296	4,717	13,348	11,367	9,726	6,288	5,351	4,135
York	218	228	241	10,492	7,952	6,851	18,622	13,333	10,560	9,756	6,853	5,100
All other cities [2]	99	.....	.....	18,283	.....	.....	103,288	.....	.....	25,328	.....	.....
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	587	493	5,625	1,639	1,403	2,738	1,043	790
Cumberland town	29	19	10	5,359	4,574	1,500	9,827	5,965	1,756	5,209	2,858	1,164
East Providence town	26	21	15	2,041	1,381	836	7,146	5,544	5,347	2,086	1,290	1,059
Newport	54	46	43	726	849	881	1,379	1,347	1,575	809	791	922
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	36,106
Warwick town	49	37	27	6,471	6,153	5,465	10,589	7,052	6,020	5,195	3,204	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	2,259	2,205
Columbia	55	41	41	2,522	2,393	2,091	5,872	4,677	3,134	2,294	2,035	1,286
Greenville	41	36	22	1,182	1,204	770	2,142	1,677	967	914	576	249
Spartanburg	36	35	28	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	48	677	465	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	1,495	1,135	884
Knoxville	159	138	102	2,773	2,999	4,203	8,149	6,699	6,202	3,048	2,598	2,650
Memphis	329	289	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	8,032	6,726	29,650	21,567	15,301	12,194	9,085	6,274
TEXAS:												
Austin	108	62	84	754	641	495	2,845	1,569	765	1,218	798	308
Beaumont	56	40	30	863	732	1,005	4,831	2,610	1,913	1,387	1,098	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	29	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	1,247	674
Fort Worth	147	102	68	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	1,650
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	454	331	147	258	192
Marshall	22	.....	.....	977	.....	.....	1,787	.....	.....	984	.....	.....
Palestine	20	17	19	745	544	481	1,313	735	704	691	430	355
Paris	45	29	27	541	210	263	1,430	855	743	568	327	282
San Angelo	26	.....	.....	115	.....	.....	318	.....	.....	185	.....	.....
San Antonio	194	141	113	3,105	2,457	2,683	13,435	7,402	5,989	6,483	3,661	3,038
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	318	330
Waco	92	76	80	1,033	947	1,004	4,769	2,980	2,294	1,804	1,201	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	4,279	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	1,978
Burlington	82	67	78	2,371	2,300	2,232	6,800	6,356	6,066	2,477	2,552	2,772
Rutland	63	51	61	1,636	1,803	1,496	2,680	2,523	1,959	1,473	1,361	1,124
VIRGINIA: [3]												
Alexandria	54	51	57	1,470	1,291	859	4,420	2,187	1,539	1,689	1,195	869
Danville	52	34	46	3,076	3,018	2,933	5,389	4,775	3,694	2,153	2,009	1,827
Lynchburg	82	55	61	4,026	2,534	1,487	10,188	4,965	2,994	3,720	2,082	1,469
Norfolk	215	121	140	4,749	2,935	2,638	10,341	5,739	4,692	4,859	2,537	2,150
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	346
Richmond	380	300	276	14,849	12,444	13,715	47,358	27,745	24,669	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	1,805
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.

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. (Expressed in thousands.)			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	38	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	2,342	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	3,201	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	2,097
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	2,092	1,945	1,716	6,287	4,645	3,381	2,962	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.