GENERAL REPORT AND ANALYSIS

CHAPTER I.

INTRODUCTION AND GENERAL EXPLANATIONS.

METHOD OF PRESENTATION.

The statistics of the census of manufactures are contained in three volumes. The present volume contains a general presentation and analysis of the statistics, while Volume IX consists of special reports, one for each of the individual states, and Volume X contains similar special reports dealing with some of the more important individual industries. The greater part of the statistics contained in Volumes IX and X appear in another form in the present volume. In the present volume, however, quantities and values of specific materials and products are not shown, except in Chapter XV, where they are shown for some of the leading industries. Data regarding the different classes of materials and products in the several industries appear in Volume X, and similar data for important industries in each state in Volume IX.

The present volume consists in large part of a series of chapters each dealing with a particular subject. There are also, however, six general tables which are designed to bring together the more important data in convenient form. These general tables reproduce many of the statistics which appear in the tables distributed through the various chapters, but they also contain additional information. Conversely, some of the chapters contain special analytical data not appearing in the general tables. These general tables may be briefly described as follows:

TABLE I. *Comparative summary for the United States, by industries: 1909, 1904, and 1899.*—This is a comparative table covering the last three censuses. It shows, for each census, the number of establishments in each industry; the number of persons engaged in the industry, distributed into three classes: The primary horsepower; the amount of capital; the amounts paid for salaries, wages, and materials, respectively; the value of products; and the value added by manufacture (value of products less cost of materials). It also shows the percentage of increase from 1899 to 1904 and from 1904 to 1909 in average number of wage earners and in value of products.

TABLE II. *Capital, expenses, value of products, persons engaged, and power and fuel, for the United States, by industries: 1909.*—This table is confined to the census of 1909 and covers, for each industry, the same subjects as are covered by Table I, but gives many more details, constituting, in fact, a substantially complete presentation of the census returns for each industry for 1909, the only exception being the number of wage earners employed, by months, which appears in Table 30, Chapter XI, and the statistics as to establishments classified according to character of ownership, size, and prevailing hours of labor—subjects which are covered by Chapters IX, X, and XII, respectively.

TABLE III. *Comparative summary, by geographic divisions and states: 1909, 1904, and 1899.*—This table contains, for all industries combined, in each geographic division and state, the same data which in Table I are shown for each industry in the United States as a whole.

TABLE IV. *Capital, expenses, value of products, persons engaged, and power and fuel, by geographic divisions and states: 1909.*—This table contains, for all industries combined in each state, the same data which are shown for each industry in the United States as a whole in Table II.

TABLE V. *Comparative summary—principal industries, by states: 1909, 1904, and 1899.*—This table presents comparative data for the censuses of 1909, 1904, and 1899, and relates to the 86 industries which in 1909 gave employment to 10,000 wage earners or more. It presents data for every state for which comparable figures are available, with the exception of those states where the publication of the data would directly or indirectly disclose the operations of individual concerns. It shows the same items as are shown for the country as a whole in Table I, except that no percentages of increase are given.

TABLE VI. *Number of establishments, persons engaged, power, capital, expenses, and products—industries, by states: 1909.*—This table is restricted to the census of 1909 and shows for each industry separate totals for all states which can be given without disclosing the operations of individual concerns. It gives somewhat fuller details than are given in Table V.

PROVISIONS OF LAW.

Thirteenth Census act.—The portions of the "Act to provide for the Thirteenth and subsequent decennial censuses," approved July 2, 1909, which refer particularly to the censuses of manufactures, are as follows:

> The schedules of inquiries relating to manufactures * * * shall include the name and location of each establishment; character of organization, whether individual, cooperative, or other form; character of business or kind of goods manufactured; amount of capital actually invested; number of proprietors, firm members,

copartners, stockholders, and officers and the amount of their salaries; number of employees and the amount of their wages; quantity and cost of materials used in manufactures; amount of miscellaneous expenses; quantity and value of products; time in operation during the census year; character and quantity of power used, and character and number of machines employed.

The census of manufactures * * * shall relate to the year ending December thirty-first next preceding the enumeration of population and shall be confined to * * * manufacturing establishments which were in active operation during all or a portion of that year. The census of manufactures shall furthermore be confined to manufacturing establishments conducted under what is known as the factory system, exclusive of the so-called neighborhood household and hand industries.

The inquiry concerning manufactures shall cover the production of turpentine and rosin and the report concerning this industry shall show in addition to the other facts covered by the regular schedule of manufactures, the quantity and quality of turpentine and rosin manufactured and marketed, the sources, methods, and extent of the industry.

Whenever he shall deem it expedient, the Director of the Census may charge the collection of these statistics upon special agents or upon detailed employees, to be employed without respect to locality.

The form and subdivision of inquiries necessary to secure the information under the foregoing topics shall be determined by the Director of the Census.

And it shall be the duty of every owner, president, treasurer, secretary, director, or other officer or agent of any maufacturing establishment * * *, or other establishment of productive industry, whether conducted as a corporation, firm, limited liability company, or by private individuals, when requested by the Director of the Census or by any supervisor, enumerator, special agent, or other employee of the Census Office acting under the instructions of the said Director, to answer completely and correctly to the best of his knowledge all questions on any census schedule applying to such establishment; and any owner, president, secretary, director, or other officer or agent of any manufacturing establishment * * *, or other establishment of productive industry, who under the conditions hereinbefore stated shall refuse or willfully neglect to answer any of these questions, or shall willfully give answers that are false, shall be guilty of a misdemeanor, and upon conviction thereof shall be fined not exceeding ten thousand dollars, or imprisoned for a period not exceeding one year, or both so fined and imprisoned, at the discretion of the court. * * *

That the information furnished under the provisions of the next preceding section shall be used only for the statistical purposes for which it is supplied. No publication shall be made by the Census Office whereby the data furnished by any particular establishment can be identified, nor shall the Director of the Census permit anyone other than the sworn employees of the Census Office to examine the individual reports.

Changes as compared with previous laws.—The foregoing statutory provisions under which the census of 1909 was taken differ comparatively little from those of the act of March 3, 1899, providing for the Twelfth Census. The changes with respect to the period covered by the census and with respect to the establishments to be canvassed are more fully discussed later.

The paragraph referring especially to the production of turpentine and rosin appears for the first time in the act of 1909. The turpentine and rosin industry would have been canvassed in any case as one of the manufacturing industries, but this paragraph calls for information additional to that covered by the regular census schedules.

The provision as to the confidential treatment of the statistics contained in the last paragraph above quoted also appears for the first time in the act of 1909, although in practice, as far back as 1890 at any rate, the returns for individual establishments have been treated as strictly confidential. It is essential to the success of the manufactures census that every concern should be assured explicitly by law that its business will not be disclosed to competitors, to the general public, to state and local officials, or even to officials of the Federal Government outside of the Census Bureau. Only with such pledge of confidential treatment can the Bureau of the Census expect manufacturers to furnish data promptly and accurately.

PERIOD COVERED.

As provided by law, the returns of manufacturing establishments for the Thirteenth Census relate to the calendar year 1909 or to the business year of such establishments corresponding most nearly to that calendar year. The statistics cover the operations of an entire year, except in the case of the comparatively few establishments which began or discontinued business during the year, in which case the reports cover only the time of actual operation. Establishments idle during the entire calendar year were not canvassed.

The quinquennial census of manufactures taken in 1905 similarly related to the calendar year 1904 or to the nearest corresponding business year, but under the act providing for the Twelfth Census the returns for that census were for the fiscal year of the establishments canvassed "having its termination nearest to and preceding the first of June, nineteen hundred." In the tables giving comparative statistics for two or more censuses in the present report it has been customary to refer to the figures in each case as relating to the calendar year next preceding the year in which the census was taken—1909, 1899, 1889, etc.—and it is probable that, as a matter of fact, at each of the censuses as far back as 1850 the major part of the totals given represent the business of the year so indicated. In the case of small establishments which do not prepare formal annual summaries of their business the returns for the censuses prior to 1904 doubtless very frequently related to periods other than the calendar year, but large business concerns which make such formal summaries use the calendar year as their business year much more often than any other twelve-month period, and the statistics for such concerns constitute a very great proportion of the totals for all concerns combined.

TERRITORY COVERED.

The Thirteenth Census, of which the census of manufactures of 1909 formed a part, covered the United States proper, also Alaska, Hawaii, and Porto Rico. The manufactures statistics for Alaska, Hawaii, and Porto Rico are presented entirely separate from

those of the United States proper, and are combined with the latter only in Table 1, Chapter II.

METHOD OF COLLECTING STATISTICS.

As a rule, the canvass of manufacturing establishments for the Thirteenth Census was made by special agents appointed especially to collect statistics of manufactures and of mines and quarries, although a number of regular clerks were detailed from the Census Bureau to assist in the canvass. In a few sparsely settled districts in which the establishments were difficult of access the statistics were collected by the enumerators employed to collect the statistics of population. The canvass, including that of mines and quarries, cost $748,009.40, of which $622,859.45 was paid as salaries, subsistence, and expenses to 1,227 special agents; $99,515.53 to 76 clerical employees of the bureau detailed for field work; $16,749.07 to 31 such employees detailed to offices in the principal cities; $3,749.65 for expenses of offices in principal cities; and $5,135.70 to enumerators. The work was begun soon after January 1, 1910, and was practically finished by November of the same year.

INDUSTRIES AND ESTABLISHMENTS CANVASSED.

Census of 1909 confined to factory industries.—The census of 1909, like that of 1904, was taken in conformity with the provision of law which directs that the canvass shall "be confined to manufacturing establishments conducted under what is known as the factory system, exclusive of the so-called neighborhood, household, and hand industries." No such restriction was provided by law in the Twelfth or earlier censuses.

There is no clearly defined and well recognized distinction between "factory" industries and neighborhood, household, and hand industries. All of these terms require interpretation. The Census Bureau adopted for the canvass of 1909, as for that of 1904, a somewhat broad construction of the term "factory system." It gave to the special agents and clerks collecting the statistics detailed instructions as to what establishments should and what should not be canvassed, including a long list of particular industries which should be omitted.

Broadly speaking, the instructions were to exclude the following classes of establishments:

(1) All establishments producing less than $500 worth of products in 1909.

(2) Establishments doing only work to the order of the individual customer, such as custom tailoring, dressmaking, millinery, and shoemaking establishments, the aim being to confine the census to establishments producing for the general or wholesale trade. Of course, this rule did not apply to large concerns, such as machine shops making machinery to special order.

(3) Establishments engaged in the building industries other than those manufacturing building materials for the general trade.

(4) Establishments engaged in the so-called neighborhood industries and hand trades, such as blacksmithing, harness making, and tinsmithing, in which little, if any, power machinery is used and which usually do only a local business.

(5) Retail stores which incidentally manufacture on a small scale, particularly where it is impossible to distinguish the data relating to the manufacturing business from those relating to the mercantile business.

(6) Educational, eleemosynary, and penal institutions engaged in manufacturing industries.

Most of the establishments of classes 3 and 4 would have been excluded in any case under the rule applying to those of class 2, their work being done mainly to individual order.

Manufacturing establishments operated by the Federal Government were canvassed, but the data are not included with those for other manufacturing establishments, but are separately presented (see Table 4, Chapter II).

It can not be supposed that the special agents in different parts of the United States succeeded in every case in interpreting these instructions exactly alike. The magnitude of the totals other than those for the number of establishments would not, however, be materially affected by differences in interpretation of the instructions, since the establishments as to which doubt might arise are in nearly all cases small establishments.

Scope of previous censuses.—As already stated, the census of 1899 and earlier censuses included establishments engaged in the neighborhood, household, and hand industries. The number of establishments canvassed was therefore relatively far greater at these earlier [illegible] of 1904 and 1909; but as the establishments [illegible] hold, and hand industries are for the most [illegible] the totals relating to capital, wage earners, materials, products, etc., were not augmented in anything like the same proportion as the number of establishments canvassed. For comparative purposes the statistics for 1899 have been revised so as to exclude the establishments which would not have been canvassed under the instructions for the later censuses, but the data for earlier censuses have not been so revised.

Custom sawmills and gristmills and steam laundries.—In only two respects did the scope of the census of 1909 differ from that of the census of 1904. In 1909 reports were secured for all flour and feed mills, gristmills, and sawmills (except those whose products were valued at less than $500 in 1909), including even those engaged exclusively in custom business—that is, grinding or sawing for toll or for a fixed charge and not themselves owning the materials and products. In 1904 custom mills were not canvassed, and the revised data for 1899 likewise do not cover such mills. In order to preserve the comparability of the statistics the data for custom mills for 1909 have been separately tabulated and are not included in the general totals relating to all manufacturing industries (see Table 6, Chapter II).

In the second place, the census of 1909 was the first to include statistics for steam laundries. Before that laundries were not canvassed even at those censuses at which establishments engaged in the neighborhood, household, and hand industries were included. For the sake of comparability, however, the statistics have not been included in the general totals for manufacturing industries, but are shown separately (see Table 5, Chapter II).

Completeness of canvass.—Although, with the two exceptions just noted, the scope of the manufactures census of 1909 was intended to be the same as that of the census of 1904, it seems probable that the canvass for the later year was somewhat more complete than that for the earlier year, particularly with reference to small establishments, and that the increase in the number of establishments shown for a good many industries may be due, in whole or in part, to this more complete canvass rather than to a change in actual conditions. Even if this be the case, however, the comparability of the totals for items other than the number of establishments and the number of proprietors and firm members is not materially affected.

DEFINITION OF THE TERM "ESTABLISHMENT."

In census publications the term "establishment" means the manufacturing unit for which a single census report or schedule is secured. As a rule, the "establishment" corresponds to a plant as understood in ordinary usage; in other words, it represents a single plant or mill and represents it as an entirety.

Two or more plants sometimes counted as one establishment.—In some cases, however, the [illegible] Census obtains [illegible] two or [illegible] operated under a com[illegible]ship and for which only one set of books of account is kept, and therefore counts them as one establishment. But if the plants having a common set of books are located in different states, or if a part of them are located in a city of 10,000 or more inhabitants, the plants in each state or in each such city are counted as separate establishments, and where necessary an estimated segregation of the required statistical items is made, so that the data published for each state or city may represent as nearly as possible the manufacturing operations actually conducted within its boundaries.

One plant sometimes counted as two or more establishments.—In some cases, on the other hand, a single plant is treated by the Census Bureau as comprising two or more establishments. This is done, of course, only where the plant has departments engaged in different branches of industry, and the object is to obtain, so far as practicable, complete statistics for each industry distinguished by the census classification. The most important cases in which two or more distinct industries are frequently conducted in a single plant, which for census purposes is treated as two or more establishments, are the following: The manufacture of coke in connection with blast furnaces; the manufacture of coke in connection with mines; the operation of blast furnaces and of tin-plate mills in connection with rolling mills; the manufacture of clothing in connection with textile mills; the manufacture of sulphuric acid in connection with copper smelting; the manufacture of fertilizers in connection with cottonseed-oil mills and in connection with slaughtering and meat-packing establishments; and the operation of printing plants in connection with the manufacture of patent medicines and with other enterprises in which extensive printing of advertising matter is required. There are a number of other cases of less importance.

The number of instances where a single plant has been treated as consisting of two or more establishments is comparatively small, and the fictitious increase in the number of establishments due to this method of enumeration is much more than offset by the fictitious decrease due to the practice of counting two or more distinct plants operated under a single ownership as a single establishment.

STATISTICS OF PERSONS ENGAGED IN MANUFACTURING INDUSTRIES.

A detailed discussion of the methods employed in presenting the statistics for wage earners and other persons engaged in manufacturing industries need not be given at this point, as the subject is fully treated in Chapter XI. It may be said briefly that at the census of 1909 the schedule distinguished the following classes: (1) Proprietors and firm members, (2) salaried officers of corporations, (3) superintendents and managers, (4) clerks and other subordinate salaried [illegible], sometimes for brevity designated simply as "clerks" in the tables, and (5) wage earners. The statistics as to wage earners for 1904 and 1899 are closely comparable with those for 1909, but in the case of the other classes comparisons are less satisfactory.

For the censuses of 1899, 1904, and 1909 the average number of wage earners for the year was computed by adding the numbers reported for the several months and dividing the sum by 12. The object was to show the number of wage earners who would be required to perform the work accomplished during the year if all were continuously engaged. If a factory employed, say, a hundred wage earners, but was in operation only six months during the year, the method of calculation would show an average of 50 wage earners employed for the year. At the census of 1889 and possibly for prior censuses, such a factory would have been counted as employing 100 wage earners.

The census schedule for 1909 did not call for the number employed in each month for any class of employees other than wage earners, but in view of the fact that the numbers of the other classes do not vary materially from month to month, the returns are assumed to represent substantially the average number employed for the year.

The method of determining the sex and age distribution of wage earners is described in Chapter XI.

The statistics as to sex and age for 1909 are not absolutely comparable with those for 1904 and 1899, but in most industries they are closely enough comparable for all practical purposes.

STATISTICS OF CAPITAL.

Description of inquiry.—The census act of 1909, like those for prior censuses, directed that the schedule for manufacturing establishments should include an inquiry concerning capital. The following form of inquiry, which was substantially the same as that employed at the censuses of 1899 and 1904, was used at the census of 1909:

Capital invested: Amount of capital invested—owned and borrowed.—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.

Land, buildings, machinery, and tools....	$.....
Materials, stocks in process, finished products, fuel, and miscellaneous supplies..	$.....
Cash, plus trading and operating accounts and bills receivable.....	$.....
Total.....	$.....

Borrowed and rented capital.—It will be noted that this form of inquiry regarding capital calls for borrowed capital as well as for that owned by the proprietors of the establishment. In other words, the amount of the various classes of assets is called for without any deduction on account of liabilities whether current or of a more or less permanent character. It is obvious that capital borrowed by a manufacturer for constructing plants or conducting business is just as truly employed in the manufacturing industry as capital owned by him and similarly invested.

The census schedule, however, did not call for the value of rented property used by manufacturers. Although, strictly speaking, the value of such property is also a part of the capital used in manufacturing industries, yet on account of the difficulty of ascertaining that value no attempt was made to do so. The rental paid by manufacturers for the use of their plants was, however, called for as one of the items of miscellaneous expenses (see Table 1, Chapter VIII).

Classes of capital not distinguished in tables.—The inquiry on the schedule for 1909 called for three principal classes of capital separately. The distinction of these three classes was made rather with a view to conveying a correct understanding of what should be included in the total for all capital than with the expectation that accurate data for the separate items would be secured. As a matter of fact, while a majority of the establishments reported separate amounts for the three items, many failed to distinguish them, and in many other cases the separation was based on estimate only. In some instances the entire amount of capital investment was—usually incorrectly—placed opposite one of the three items. In view of these conditions, it was not considered worth while to publish the statistics for the three classes of capital separately in the tables of the census reports, and accordingly only the totals for all capital are shown in such tables.

Defectiveness of statistics of capital.—The statistics of capital have been frequently referred to in the reports of previous censuses as defective and, in fact, almost worthless, and it has been repeatedly recommended by the census authorities that the inquiry should be omitted from the schedule. Experience at the census of 1909 confirms the belief that the statistics are of little value. There are, of course, some establishments which have accounting systems such that a correct return for capital can be made, but this is not true of the great majority canvassed, and the figures for capital do not show the actual amount of the capital invested in manufacturing enterprises.

There is no general agreement among manufacturers, accountants, and statisticians as to the proper standard of measurement of capital investment. Even, however, if the Census Bureau should adopt a definite standard, it would be quite impossible to secure returns uniformly conforming to that standard. The Census Bureau can not employ expert accountants to canvass the many thousands of manufacturing concerns—still less employ expert appraisers to determine whether the values assigned to capital by manufacturers are correct according to the standard prescribed. It is necessary to accept the figures for capital substantially as they appear on the books of the manufacturers or as estimated by them.

Some of the reasons why it can not be expected that uniform returns as to capital will be secured by census methods may be briefly mentioned:

(1) Many concerns have no capital accounts whatever. This is particularly true of small establishments owned by individuals or firms. The proprietors of such establishments may know the amount of capital originally invested, or the amount put in from outside sources, but they keep no record of the changes in capital resulting from the conduct of current business or from other causes.

(2) Capital invested in buildings and machinery always depreciates as the result of wear and tear unless maintained by further expenditure. The great majority of establishments make no allowances for depreciation on their books, and have no definite idea as to the relation between the original cost or value of buildings and machinery and their present value: nor in most cases do they know what it would cost to reproduce such property either wholly new or in its actual condition. On the other hand, some of the few large concerns which keep depreciation accounts write off more than the actual depreciation of their property.

(3) The invention of new machinery, the opening up of new supplies of raw material, or other changes in conditions of production, or changes in demand for the class of goods manufactured, may render worthless an investment in a manufacturing enterprise or greatly reduce its value. It would obviously be improper under such circumstances to report as the value of capital the amount of the original investment, even after deducting for ordinary depreciation, while, on the other hand, the assignment of a present value to property under such conditions must necessarily be arbitrary.

(4) The proprietors of many manufacturing establishments have purchased them as going concerns. In such cases they are likely to enter on their books as the value of the property the amount paid for it, which may bear no relation whatever to the original investment, or to the present physical valuation of the property, or to the cost of reproducing it.

(5) Some corporations engaged in manufacturing industries have issued capital stock and other securities in excess of the actual cost of their properties and assets, or even in excess of the capitalization of the present earning capacity of their plants according to prevailing capitalization rates. In such cases it frequently happens that an arbitrary value is assigned to the assets of the corporation in order to balance its securities, and this arbitrary value is likely to be reported to the Census Bureau rather than the actual value.

(6) Finally, it will be observed that under the form of inquiry used regarding capital in 1909 there is the possibility of very considerable duplication in the amounts reported by different concerns. The schedule did not call for any deduction from live capital—value of stocks of materials and of finished or partly finished goods, accounts receivable, cash, etc.—on account of current liabilities, since it was not believed that it would be possible to secure at all accurate results by calling for such a deduction. The accounts receivable and bills receivable of manufacturing concerns often represent in part money due to them for materials or services furnished to other manufacturing concerns, which in turn report such materials, or the products of such services, as part of their capital.

In view of these and other difficulties encountered in obtaining statistics of capital, it is proper to say that the statistics as actually published in the present census report and in previous census reports have almost no significance. They do not show with any close approximation to accuracy the relative amounts of capital actually invested in different industries or in different localities, nor do they furnish a correct measure of the increase from census to census in the amount of capital invested in all industries combined or in any particular industry. Changes in the method of calculating capital, or in the ownership or the form of organization of an establishment, may result in the reporting of a much larger or much smaller amount at one census than at another without any corresponding change in the actual investment. The percentages of increase or decrease in the capital reported are in many cases so inconsistent with the percentages of increase or decrease in value of products, value added by manufacture, number of wage earners, and other items as to force the conclusion that the figures for capital are incomparable. There are, of course, good reasons why in some cases the statistics of capital should show a movement from census to census different from that of other items covered by the census inquiry, but these reasons can not explain all of the differences in the movements appearing in the statistics.

VALUE OF PRODUCTS AND VALUE ADDED TO MATERIALS BY MANUFACTURE.

Form of inquiry as to value of products and its significance.—The schedule for the census of 1909 contained the following instructions for the reply to the inquiry as to value of products:

Products: Value of products and work performed during the year.—Give the selling value or price at the factory or works, and account for *all* products *manufactured* during the year (whether sold or not), including by-products. The principal products should be enumerated separately and the total value given for each, which value should include that of the containers, if sold with the goods. Under "All other products, including amounts received for custom work and repairing," should be reported the total value of all products, other than those for which separate values are given, together with amounts received for custom work and repairing and work done on materials furnished by others.

In addition to the inquiry in the general schedule, there were in various special schedules used for important industries inquiries regarding the quantity and value of specified products.

It will be noted that the schedule called for the selling value or price of the products. The value, if correctly reported, thus includes the profit of the manufacturer.

The value called for was what may be called the net value at the factory. Some manufacturers sell goods at prices which include delivery, but the special agents collecting the statistics were instructed in such cases to deduct freight and other delivery charges wherever possible. Products are often sold on the basis of a list price subject to discount, and the instructions were that discounts should be deducted. In other words, every effort was made to secure the true net selling value of the products at the factory.

The inquiry called for the value of products manufactured during the year, and not the value of products sold during the year. In the case of a large majority of establishments the products manufactured during the year are substantially the same as the products sold, but there are important exceptions. The special agents were instructed, where the books of the manufacturers would permit, to ascertain accurately the value of the products manufactured by adding to the

amount of sales the increase in the value of the stock of manufactured goods (or of stocks in process of manufacture) on hand at the end of the year as compared with the beginning of the year, or by deducting from the sales the decrease in such stocks.

In the case of the repair shops of steam and street railroads, few if any products are manufactured for sale, but the work is done or the products manufactured solely or principally for the use and benefit of the railroads operating the establishments. In such cases the value reported usually represents the operating cost or cost of production, as no market value can be assigned to the work or the products and as it is not customary for such establishments to make any allowance for profit in assigning a value to them.

Somewhat akin to the case of railroad repair shops is that of establishments which make partly finished products, or containers and auxiliary articles, for the use of other manufacturing establishments under the same ownership. A wood-pulp plant, for example, may make pulp for use in a paper factory owned by the same concern. In such cases the Bureau of the Census accepted as the value of products the "transfer value" assigned by the manufacturer. Such transfer value is based sometimes on market prices, sometimes on cost of manufacture, and sometimes on an arbitrary basis.

The value of products in the case of certain establishments represents merely the receipts for work performed on materials or commodities. In many cases manufacturing establishments do not own the principal materials on which they work, or the finished products as they leave the plant. This is obviously the case where the work done consists simply in repairing articles owned by others. Another very common case of this sort is that of custom gristmills and sawmills, which grind grain or saw lumber belonging to farmers or others, receiving as compensation a percentage of the product or a fixed money payment. Again, many manufacturing establishments do not themselves perform all of the work upon the products which they turn out, but hire the services of other establishments for certain processes. The value of the products of the establishments which perform these processes is the compensation they receive for the work done, which is ordinarily called "contract work."

In the case of repair work it would obviously be absurd to report the value of the complete article after repair as a value produced by the establishment making the repairs. In the case of establishments which perform certain processes for other manufacturing establishments, the inclusion of the entire value of the article as it leaves their hands would involve a duplication, since the final value of the same article when completed is reported by the establishment for which the work is done. In the case of custom gristmills the custom work is not performed for other manufacturers, but for farmers and others, and in order to ascertain the total value of manufactured products for the country it is proper to include an estimated value for the flour, feed, and other products turned out by such mills. Such estimates have accordingly been called for from the mills, or, where lacking, have been prepared by the Census Bureau, the estimated value of the materials being also obtained in the same way. A similar condition exists in the custom sawmills, but it was impracticable to prepare estimates of the value of the logs sawed or of the lumber produced.

A few industries are subject to heavy Federal internal revenue taxes. In the case of the distilled liquor industry the amount of tax collected by the Government greatly exceeds the total cost of manufacturing the product. The manufacturer of an article subject to internal revenue tax of course makes the price of his product high enough as a rule to cover the additional expenses. The value of products for such industries therefore includes substantially the amount of the tax, and may be much greater than would be the case if the industry were simply an ordinary manufacturing industry and not a special source of governmental revenue. The "value added by manufacture" similarly includes the tax. The amount of internal revenue tax was called for as one of the items of miscellaneous expenses (see Table 1, Chapter VIII).

Value added to materials by manufacture.—No manufacturing establishment as such produces the whole of any commodity. Manufacturing is a transformation of materials. The economic importance of the processes of manufacture can not be judged correctly by the quantity or value of the products leaving the factories, but must be judged by the addition to the utility or to the money value of the materials. The value created by the manufacturing processes is in most cases substantially the difference between the cost of the materials and the value of the products. In comparing manufacturing industries with one another this relation of the value of finished products to the cost of materials must be constantly borne in mind. One industry may turn out products valued at the same amount as those turned out by another industry, but the first may, by the manufacturing processes, have added several times as much value to the materials as the second.

For this reason, statistics of "value added by manufacture" are presented throughout the census reports of manufactures for 1909. These statistics in each case represent the difference between the value of products and the cost of materials. The value added by manufacture covers the expenses of the manufacturing operations—wages, salaries, and miscellaneous expenses—and the profit or return to the manufacturer. The statistics of value added by manufacture are particularly valuable because they are almost entirely free from the duplication that appears in the total value of products. In a few industries, however, there is some duplication even in this item,

due to the fact, already mentioned, that certain establishments do contract work on materials furnished by other establishments either in the same industry or in affiliated industries. In such cases the receipts for the work done are reported as value of products for the establishment doing the contract work, while the establishment for which the work is done reports the entire value of the finished product, in which is included the value attributable to the contract work. The total expenditures for contract work in all manufacturing industries in 1909, however, were only $178,645,635, equal to only 2.1 per cent of the value added by manufacture, and not all of this amount represents duplication.

It should be added that it is sometimes contended that in deducting cost of materials in order to arrive at "value added by manufacture," the cost of fuel, payments for rent of power, and the cost of lubricants and other "mill supplies" ought not to be treated as part of the cost of materials, but that the expenditures for these purposes should rather be looked upon as expenditures upon those materials which become a constituent part of the product. Something may be said in favor of this view, but in any case it is scarcely possible in practice to distinguish the cost of such materials from that of others. It was impossible to distinguish the cost of mill supplies from other materials, and in many cases the cost or part of the cost of fuel and power can not be separated. In particular, freight charges on all materials were often reported as a single item, including the charges on fuel and mill supplies, as well as on those materials which become a constituent part of the product. Consequently, it has been deemed preferable in all cases to deduct the total cost of materials, including fuel and mill supplies, from the value of products in calculating the value added by manufacture.

Duplication in value of products.—The value of products as reported by manufacturing establishments duplicates to a large extent the value of products of the industries producing raw materials—the agricultural, mining, and fishery industries. This, however, is by no means the only duplication involved in the census statistics of value of products. There is even greater duplication within the manufacturing industries themselves, due to the fact that the products of one establishment frequently become the materials for other establishments, and in small measure to the practice of "contract work," before mentioned. The total value of products as shown in the census reports is simply the sum of the amounts reported by all establishments.

It would be highly desirable, if practicable, to ascertain the value of the products of manufacturing industries exclusive of duplication within those industries themselves but without excluding the cost of the original raw materials derived from nonmanufacturing industries. At the censuses of 1899 and 1904 an attempt was made to eliminate the duplication within the manufacturing industries themselves (other than that due to contract work) and the resulting figure was designated as the "net value" of the products of manufacture, an item which must be clearly distinguished from the item "value added by manufacture." In order to obtain this figure each manufacturer was called upon to distinguish the value of the partly manufactured materials used by him from that of the strictly raw materials derived from nonmanufacturing industries. Many manufacturing establishments, even though keeping an accurate account of the total cost of materials, do not record the cost of each separate class of materials, and can distinguish the cost of strictly raw materials from that of partly manufactured materials only by rough estimates. Moreover some manufacturers, and some special agents collecting data from them, apparently failed to treat as partly manufactured certain materials of a rather crude character which as a matter of fact had been subjected to some manufacturing process and had been reported as products by other establishments included in the census of manufactures. Further difficulty arose with reference to partly manufactured materials imported from other countries.

The statistics published were chiefly valuable as showing in a rough way the great magnitude of the duplication in value of products within the manufacturing industries. The total value of manufactured products for 1904, including duplication, was given as $14,793,902,563, and the cost of partly manufactured materials as $4,977,369,337, leaving as the "net value of products" $9,816,533,226. Whatever the margin of error in the figures thus obtained, it is obvious that the duplication in value of products within manufacturing industries represents a very considerable fraction of the total value obtained by adding the amounts reported by the several establishments.

This duplication affects not only the total value of products for all manufacturing industries combined, but also, though usually to a much less extent, the totals for individual industries. It often happens that one establishment assigned to a given industry by the Census Bureau turns out partly finished products which become the materials of another establishment in the same industry. For example, the value of products of cotton-yarn mills is largely duplicated in that of mills which weave cotton cloth, yet the returns of mills of both classes are included in one total. To eliminate correctly the duplication in value of products within an industry is even more impracticable than the elimination of duplication in all manufacturing industries combined.

To some extent the amount of duplication in value of products depends upon the system of bookkeeping of individual concerns and the methods followed by them in the preparation of the census schedules. For instance, if a company engaged in the slaughtering and meat-packing industry and also in the

manufacture of fertilizers keeps separate accounts for the two branches of the industry, the concern will ordinarily be treated as two establishments, and separate schedules will be prepared, the report for the slaughtering "establishment" including, under value of products, that of materials turned over to the fertilizer plant, which in turn will report its value of products. Another concern, however, manufacturing under precisely similar conditions but not keeping separate accounts for the manufacture of fertilizers, will necessarily be treated as one establishment and will make but a single census return, the value of finished fertilizers being included with that of other products. In the one case there is duplication in value of products, but not in the other.

Comparisons as to the relative importance of different industries based on value of products are in some cases rendered misleading by the fact that there is a greater amount of duplication in that value in one industry than in another. Comparisons between different censuses as to the value of products of all industries combined, or of individual industries, may also be rendered misleading by changes in the relative importance of duplication in value of products from one census to another. This subject is further discussed elsewhere (see Chapter III).

MONEY AS A STANDARD OF MEASUREMENT.

A large proportion of the census statistics of manufactures are necessarily expressed in terms of money. Capital, value of products, cost of materials, miscellaneous expenses, wages, and salaries are all so expressed.

It is obviously impracticable to compare the importance of different manufacturing industries at a given time by considering the quantities of products which they turn out. Tons of pig iron can not be compared with yards of cloth. Except for the fact that in some industries there is a greater duplication in value of products than in other industries, the value of products as expressed in money is a fairly satisfactory measure of the relative importance, to the public considered as a purchaser, of the commodities produced. Broadly speaking, moreover, the relative importance of the real contribution of each manufacturing industry, as a manufacturing industry, to the production of the nation may, for any given census, be roughly determined from the value added to materials by manufacture.

On the other hand, changes in the purchasing power of money from census to census may affect very materially the validity of conclusions as to the progress of manufacturing industries drawn from the statistics expressed in terms of money—whether from the statistics of value of products or from those of value added by manufacture, or even from those of wage payments.

It should be noted, in the first place, that at the census of 1869 the values were expressed in a currency which was at a great discount as compared with gold. In order to make the figures for that census comparable with those for other censuses, when the business of the country was conducted on a gold basis, it is necessary to reduce the figures by about 20 per cent.

In the second place, the purchasing power even of gold has varied materially from time to time. While the prices of individual commodities may fluctuate in relation to one another, by reason of a great variety of causes, changes in the general level of prices for all commodities represent simply changes in the value of the gold dollar. It would be inexpedient in the present report to enter into elaborate details as to the history of the purchasing power of money during the period covered by the census statistics of manufactures. The subject is exceedingly complicated, and it would be difficult to draw exact conclusions as to the extent to which changes in the value of the dollar have affected the statistics for the several censuses. It is important to note, however, that comparisons for the censuses of 1909, 1904, and 1899 are materially affected. During the decade 1899–1909 there was an almost constant advance in the average prices of commodities in general. Some commodities, of course, showed no advance, and some advanced much more than others, but on the average there was a material advance, or, in other words, a material decline in the value of the gold dollar as measured by commodities. The result is that the census figures for value of products, cost of materials, and value added by manufacture show, as a rule, larger increases than those for the quantities of manufactured products turned out or of materials consumed, so far as those quantities were ascertained.

It would be exceedingly desirable, if practicable, to measure the increase in the output of manufacturing industries, individually and collectively, on the basis of quantities of things produced rather than of values. Were it possible to obtain comparable statistics from census to census as to the quantity of every commodity produced by manufacturing establishments, a general expression of the average quantitative increase in the production of manufactured articles could be computed. This could be done in various ways. One of the simplest methods would be—in the case of a comparison between 1899 and 1909, for example—to ascertain the value of the total quantity of each article produced in 1909 on the basis of the average value of that article as reported for 1899, to add up the values thus calculated for all commodities, and to compare this total with the total value of the same commodities as actually reported in 1899. Whatever increase appeared between the total for 1899 and that for 1909 would obviously be attributable only to increase in quantities. This comparison would therefore indicate the average percentage of increase in the quantity of products, each product being given a weight in the average proportioned to its value. The

procedure above described has been followed by the Census Bureau in connection with the statistics of agricultural crops for 1899 and 1909, and it is worth while to note the fact that, whereas the value of the crops of the country (excluding certain minor crops for which comparable statistics are not available) in 1909 was about 83 per cent greater than the value of the same crops in 1899, yet on the average the increase in quantity produced was only 10 per cent. In other words, the average increase in prices of farm crops was nearly 67 per cent.

From a rough examination of such census statistics of quantities of manufactured articles as are available, it appears that in all probability the average prices of manufactured articles did not advance as much between 1899 and 1909 as those of agricultural crops. It is quite impossible, however, to obtain complete and comparable statistics of the quantities of manufactured articles produced in different census years, so as to furnish a basis for a calculation of the average percentage of increase. In fact, for a large proportion of manufactured products the Census Bureau has never found it practicable to call for quantities.

The difficulty lies primarily in the fact that the number of different commodities and grades of commodities produced by manufacturing industries is enormous, and in the fact that many of the commodities are not standardized. In some cases there is no uniformity in products at all; each individual article made is unique. Even in industries where articles of similar character are produced in considerable numbers, to obtain quantities for each grade of each commodity would necessitate an immense expenditure of time and money. In fact, entire accuracy and completeness could not be secured with any expenditure, because, in many industries, it would be impossible to obtain a description of each grade of each commodity made by a given establishment sufficiently precise to permit identification thereof with the corresponding product of another establishment, and thus to permit the totalization of articles by grades. It would be still further from the range of possibility to make sure that the descriptions of articles and grades given at one census corresponded exactly with those given at another census.

It might be possible at future censuses to compute the average increase in quantities for a sufficient number of important manufactured products to give some clue to the general quantitative movement of production, but the data at present available are not sufficient for such a computation even of the roughest character.

Average unit values based on census returns usually not significant.—The considerations just presented as to the census statistics of products should be borne in mind when any attempt is made to determine from them the average value or price of even a single class of manufactured goods. In the case of most commodities for which the Census Bureau obtains statistics of both quantities and values, it is impossible to determine correctly the movement of prices by dividing the values reported from census to census by the quantities, since the statistics do not distinguish in detail the grades and varieties of the commodities in question. For example, the census statistics specify the number of automobiles using different kinds of power and intended for different purposes which were manufactured during the census year, and the value of automobiles of each class; but each of the classes so distinguished includes a variety of sizes, styles, and grades of machines, some of which are of much higher value than others, so that an average value calculated from the statistics would have very little significance, and the averages for different censuses would not be comparable because of changes in the proportion of the different kinds included in a given class. Of course, there are a few articles which are sufficiently standardized to permit fair comparisons of average values from time to time on the basis of census returns.

Increase in quantity usually not comparable with increase in value.—It is obvious, further, that in the many cases where average values of commodities based on the returns for different censuses are not comparable, the percentages of increase in quantity are no more comparable with the percentages of increase in value. Changes in the proportion of the different grades or subclasses included in a general group may result in showing a greater or a less percentage of increase in value than in quantity, even though there has been no change in the unit prices of comparable commodities.

STATISTICS OF MATERIALS.

Description of inquiry.—The following instructions were given in regard to the inquiry concerning materials in the general schedule for the census of 1909; the form used at the two preceding censuses of manufactures was substantially similar.

Materials, mill supplies, and fuel: Total cost of all used during the year covered by this report.—This inquiry relates to all materials and mill supplies of every description, whether raw or partly manufactured, or whether entering into the product, used as containers, or consumed in the process of manufacture, and all fuel whether used for heat or power or in process of manufacture, as in making coke, gas, or pig iron. The data should embrace the cost only of these articles that were actually *used* during the year covered by the report. Materials produced by the establishment itself and used by it for further manufacture should not be included. If freight paid on materials is kept in a separate account, enter in the proper line below; otherwise include the cost in answers to the first two items.

In addition to the inquiry in the general schedule used for every manufacturing establishment, there were in various special schedules used for certain individual industries inquiries regarding the quantity and cost of specific materials used. The statistics obtained by these special schedules are presented in Volumes IX and X.

The total cost of materials as shown in the census reports includes not only that of materials which be-

come component parts of the product, but also that of materials essential to production by machinery, such as fuel and lubricants, as well as that of articles necessary for the conveyance of the product to the consumer, such as packing boxes, cans, and crates.

The schedule was designed to ascertain the cost of materials delivered at the factory. In many cases the reports gave directly the cost of materials so delivered, while in other cases the freight charges paid by the manufacturer on materials were reported as a separate item. (For a further discussion of the matter of freight charges, and of the distinction between the two main classes of materials—fuel, including rent of power, on the one hand, and all other materials, on the other hand—see Chapter VIII.)

The schedule called for the cost of materials used during the year, which in some cases is different from that of materials purchased during the year. In the case of concerns keeping detailed and accurate accounts, it was possible to obtain the cost of materials actually used by deducting from the amount of the purchases made during the year the increase in the value of the stock of materials on hand at the end of the year as compared with that at the beginning, or by adding the decrease in the value of such stock. In some cases, however, the cost of materials actually used during the year could be given only by estimate, and it is probable that in some instances the figure reported represented rather the cost of materials purchased than the cost of materials used. In a large proportion of the establishments, however, the materials used during the year are substantially the same as those purchased.

Reference has already been made, in the discussion relating to value of products, to the fact that it sometimes happens that the materials used by one establishment are the products of another establishment operated by the same concern, and that the cost assigned to such materials and reported by the establishment using them in further processes of manufacture may be more or less arbitrary.

The total cost of materials as shown in the census reports represents simply the sum of the amounts reported by all establishments. From what has been said regarding the duplication involved in the statistics of the value of products of manufacturing industries, it is obvious that there is also extensive duplication in the total cost of materials reported, due to the use of the products of one establishment as the materials of another. The tannery, for example, reports under cost of materials the cost of hides, and the shoe factory the cost of the leather made from the hides.

The statements presented in connection with the discussion of value of products as to the effect of changes in the purchasing power of money upon the value reported, and also as to comparisons of average unit values and comparisons of the increase in quantity with the increase in value in case of specific products, all apply with equal force to the statistics regarding materials.

MISCELLANEOUS EXPENSES AND RELATION OF TOTAL REPORTED EXPENSES TO VALUE OF PRODUCTS.

A full discussion of the significance of the statistics of "miscellaneous expenses" is presented in Chapter VIII. At this point it is sufficient to state that the miscellaneous expenses reported at the census of 1909 did not include depreciation or interest payments, while at prior censuses interest payments were included, so that the data are not strictly comparable.

Census statistics do not show profits.—Interest payments should properly be excluded from operating expenses, because borrowed capital is treated as part of the total capital invested in manufacturing enterprises, and interest on such capital is therefore part of the general return on capital. On the other hand, the omission of depreciation charges, although necessary because of the impossibility of obtaining correct information, has a very important bearing upon the use of the census statistics of expenses. In most industries depreciation is a very important element in the true cost of manufacture. The sum of the reported expenses—salary and wage payments, cost of materials, and miscellaneous expenses—can not therefore be taken as representing the total cost of production, nor be used, by comparison with value of products, to determine the amount of profit made by manufacturing establishments.

There are also other reasons, more fully set forth in Chapter VIII, why census statistics of manufactures should in no case be assumed to show at all accurately either the cost of production, the amount of profit, or the rate of return on the investment.

STATISTICS OF SALARY AND WAGE PAYMENTS.

The inquiry as to salary and wage payments at the census of 1909 was very simple, calling merely for the aggregate amount paid to each of the following classes: Salaried officers of corporations; superintendents and managers; clerks, stenographers, salesmen, and other salaried employees; and wage earners, including piece-workers. No attempt was made, as at the censuses of 1899 and 1904, to ascertain the number of persons employed at different rates of pay, nor even to segregate the amounts paid to men, to women, and to children employed as wage earners.

Average wages not calculated.—The Census Bureau has not undertaken to calculate the average annual wages or earnings of wage earners in manufacturing industries as a whole or in any individual industry. The only figure which could be calculated on the basis of the returns for 1909 would be a single average for

all wage earners combined, covering persons of both sexes, of all ages, and of all degrees of skill. Such a broad average would have very little significance, being based upon widely varying rates of individual compensation.

Furthermore, it should be noted that such a calculated average would not in any case show the average annual earnings of wage earners, since the average number of wage earners from which it would have to be calculated does not represent the actual number of different persons engaged in manufacturing industries, but represents the number who would be required to perform the work accomplished if all were continuously employed.

Relation of wages to value of products.—Certain careless users of census statistics have in the past undertaken to make a comparison between the value of manufactured products as shown by the census and the amount paid as wages. They have referred to the reported value of products as being the value created by labor and to the amount paid out in wages as being the share of the product received by labor. Any such comparison is absolutely misleading. In the first place, the total value of manufactured products includes the cost of materials produced by nonmanufacturing industries, and a large part of the cost of such materials, in turn, is attributable to labor the wages of which are not included in the returns for manufactures. In the second place, there is, as already stated, an enormous duplication of value of products within the manufacturing industries themselves, due to the use of the products of one establishment as the materials for other establishments. The wages paid by the manufacturer of the partly finished material are included in the value of his product and included again in the value of the product of the establishment using that material in further processes of manufacture. In other words, wage payments, as well as other expenses, are extensively duplicated in the value of products, but not at all in the returns of wage payments themselves.

RELATION BETWEEN STATISTICS OF MINES AND QUARRIES AND OF MANUFACTURES.

Coincident with the census of manufactures of 1909, a census of the mining and quarrying industries of the country was taken, including the petroleum and natural gas industries, which are, for convenience, spoken of as mining industries. The Twelfth Census did not include an enumeration of mines and quarries, but such an enumeration was made for the year 1902.

In some cases it is impossible to make a sharp distinction between mining and quarrying operations, on the one hand, and manufacturing operations on the other. Both are frequently conducted by the same concern. Strictly speaking, mining and quarrying operations cease as soon as substances have been removed from the earth, and all processes thereafter performed on those substances are in the nature of manufacturing. To attempt to make this distinction rigidly in every case in the census statistics, however, would involve a very large amount of estimate, and would, moreover, go contrary to the ordinary conceptions of the operators of mines and quarries as to the scope of the mining and quarrying business. The crude products of mines and quarries, after they leave the ground, are almost always subjected to a certain amount of manipulation at the mine or quarry itself. They have to be crushed, separated, washed, burned, calcined, concentrated, cut, polished, or otherwise modified before they are regarded as marketable commodities. Even coal is often broken up and sorted according to size at the mines. All such work is theoretically in the nature of manufacture, but when of a simple character it is not ordinarily considered as manufacture by those in the industry. Consequently, in those cases where the quasi-manufacturing processes applied to the crude products at the mine or quarry are of a very simple character, the business as a whole is treated as pertaining to the mining and quarrying industry, and no part of the statistics relating to it are segregated for inclusion with the returns for manufactures.

On the other hand, in many cases there are applied to materials at the mine or the quarry manufacturing processes of a character so elaborate that it is most desirable to take them into consideration in the census of manufactures. This desirability is particularly great in those instances where the same kinds of manufacturing processes are in certain cases conducted at the mine or quarry and in other cases by establishments distant from the mines or quarries and not operated under the same ownership. For example, there are many concerns which operate copper mines and in immediate conjunction therewith operate smelters for handling copper ore, sometimes keeping only a single set of books for both branches, while at the same time there are other copper smelters distant from mines and under separate ownership. If the statistics of manufactures are to cover the copper-smelting industry completely, it is obviously necessary to include data relating to those smelters which are operated in immediate conjunction with mines.

The policy actually pursued by the Census Bureau at the Thirteenth Census with respect to industries on the border line between mining and manufacturing has been as follows:

(1) In the case of most of those industries in which there were establishments which conducted both mining or quarrying operations and manufacturing operations of a more or less elaborate character, the data for each such establishment, as a whole, have been included in the census statistics of mines and quarries and also in the census statistics of manufactures.

(2) In the case of the coal and coke industry and the copper industry, however, if an establishment conducted at the same time mining and manufacturing operations, the data for both have been included in the statistics for mines and quarries, but in connection with the statistics of manufactures only data relating to the manufacturing branch have been included; if separate accounts were not kept, by means of which accurate data could be reported, as was sometimes the case, an estimated segregation has been made. The statistics of coke manufacture and of copper smelting contained in the reports for manufactures thus relate only to the manufacturing branch of the business. In cases where they are conducted at the mines the cost of materials as presented in the statistics for manufactures includes a value, sometimes more or less arbitrary, assigned to the coal or ore as produced by the mine. On the other hand, in the mining statistics the value of the product for bituminous coal mines and copper mines having coke ovens or smelters includes the value of the finished product of the ovens or smelters, duplication being avoided by assigning no value to the coal or ore. In a few cases a similar policy has been pursued with respect to establishments in other industries.

(3) On the other hand, in the case of a few industries simple and inexpensive mining or quarrying operations are conducted in connection with a business in which much the greater part of the activities are of a manufacturing character. These are treated only in the statistics for manufactures. This is the case with the brick and tile, cement, lime, and pottery industries.

The reason why the Census Bureau thus adopted a different policy in the case of some border-line industries from that adopted in the case of others was one of practical convenience. In the case of most industries in which the manufacturing operations are conducted in conjunction with mining and quarrying, the two branches are so intimately associated that a segregation of the statistics could be made only on the basis of the roughest kind of estimates. In the case of the bituminous coal and copper mines operating, respectively, coke ovens and smelters, however, the two branches of business are usually much more sharply divided, and many of the establishments were able to furnish for the two separately either accurate statistics or estimates approaching closely to accuracy. In the case of industries of the third group, again, the operations of manufacturing and of mining or quarrying are so intimately associated that segregation would be almost impossible, and in view of the minor importance of the mining or quarrying operations it seemed best to include the data only in the statistics for manufactures.

The following table shows, for 1909, the principal items of the manufactures statistics as contained in the present volume, side by side with the corresponding items relating to mines and quarries as published in the volume dealing with that subject, together with figures showing the numbers or amounts which have been included both in the statistics for manufactures and in those for mines and quarries.

Table 1	Statistics of manufactures.	Statistics of mines and quarries.	Amounts included in statistics for both manufactures and mines and quarries.
Employees	7,405,313	1,109,410	77,169
Salaried employees	790,267	44,127	3,973
Wage earners	[1] 6,615,046	[2] 1,065,283	73,196
Capital	$18,428,209,706	$3,380,525,841	$199,368,976
Expenses:			
Services	4,365,612,851	640,167,630	43,716,537
Salaries	938,574,967	53,393,551	4,842,929
Wages	3,427,037,884	586,774,079	38,873,608
Materials	12,142,790,878	247,866,304	34,645,922
Miscellaneous	[3] 1,945,685,870	[3] 154,608,759	7,859,109
Value of products	20,672,051,870	1,238,410,322	216,347,593

[1] Average number.
[2] Number December 15, or nearest representative day.
[3] Includes royalties and amount paid for contract work.

It should be clearly understood that in the case of the statistics of materials and of value of products the figures in the last column of this table by no means represent the full magnitude of the duplication of data for mines and quarries in the data for manufactures. Almost the entire product of mining and quarrying industries is used as raw material in manufacturing industries, and the value of products of the former largely appears as cost of materials for the latter. To add together the value of products of manufacturing industries and the value of products of mines and quarries, as shown in the table, would give a total having no real significance, and it is of course equally beside the point to add together the figures for cost of materials for the two great branches of industry.

The figures as to duplication of cost of materials and value of products given in the last column of the table represent merely the sum of those items which have been directly, as such, counted twice, once in the statistics for manufactures and once in those for mines and quarries. For example, the case may be taken of an establishment engaged in quarrying stone and making grindstones at the quarry, the total value of whose product in the form in which it leaves the establishment is $10,000. This $10,000 would appear in the value of products of manufacturing industries and also in the value of products of mines and quarries, and would consequently enter into the total shown as duplication in the third column of the table. On the other hand, if a quarrying establishment produced stone valued at $5,000 and sold it to a manufacturing establishment which converted it into grindstones worth, say, $10,000, no duplication would be shown in the third column of the table, but it is obvious that the

actual value of the final product of the two establishments would be $10,000 and not $15,000, which would be the sum of the values actually entering into the statistics.

On the other hand, in the case of the items covered by the table other than cost of materials and value of products, there is some significance in adding the figures for manufactures to those for mines and quarries and deducting the duplication shown in the third column of the table. By this method it appears that the average number of employees in mining and quarrying and in manufacturing industries combined in 1909 was 8,437,554, of which number 830,421 were salaried employees and 7,607,133 were wage earners. The total expenditure of the two groups of industries for salaries amounted to $987,125,589, the total for wages, to $3,974,938,355, and the total for miscellaneous expenses to $2,092,435,520.

The following table names the mining industries in which there were in 1909 establishments all or part of the statistics for which were included with the statistics for manufactures as well as with those for mines and quarries, and shows for each the amount of direct duplication in the number of wage earners and the value of products.

Table 2

INDUSTRY.	TOTALS APPEARING IN STATISTICS OF MINES AND QUARRIES.		NUMBERS OR AMOUNTS DIRECTLY DUPLICATED IN STATISTICS OF MANUFACTURES.	
	Wage earners.	Value of products.	Wage earners.	Value of products.
Total	**744,602**	**$679,161,596**	**73,196**	**$216,347,593**
Bluestone	2,175	1,588,406	945	839,942
Coal, bituminous	569,789	427,962,464	26,878	67,666,042
Copper	53,143	134,616,987	6,596	107,426,714
Feldspar	325	271,437	65	80,569
Fuller's earth	345	315,762	56	58,234
Granite	20,561	18,997,976	12,314	12,234,451
Graphite	404	344,130	35	29,983
Gypsum	3,778	5,812,810	2,697	4,823,871
Lead and zinc	21,603	31,363,094	659	4,444,500
Limestone	37,695	29,832,492	3,660	3,955,672
Marble	6,313	6,239,120	4,448	4,110,020
Peat	182	109,047	72	40,280
Quartz	184	231,025	76	90,560
Sandstone	9,908	7,702,423	3,000	2,461,713
Slate	9,438	6,054,174	9,380	6,025,399
Talc and soapstone	1,336	1,174,516	1,247	1,082,974
Traprock	6,260	5,578,317	289	271,407
All other industries [1]	1,163	967,416	779	696,262

[1] Includes "barytes," "grindstones," "mineral pigments," "scythestones," "tripoli," and "whetstones."

CHAPTER II.

GENERAL SUMMARY FOR THE UNITED STATES.

Continental United States and noncontiguous territories: 1909.—The following table gives for 1909 the most important figures for the manufactures of continental United States and of Alaska, Hawaii, and Porto Rico. The table does not cover possessions of the United States other than those mentioned. The statistics of manufactures for the Philippine Islands secured at the census 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, Tutuila, or the Canal Zone. The statistics for Alaska, Hawaii, and Porto Rico include returns for some small establishments engaged in hand or neighborhood industries, such as were omitted from the canvass for continental United States.

The data given in this table, as in all other tables giving statistics for 1909 for all industries combined, do not include the returns for custom sawmills and gristmills, or for laundries, or for establishments operated by the Federal Government. Data for these classes of establishments are presented elsewhere.

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)	6,639,631	6,615,046	3,099	5,904	15,582
Primary horsepower	18,755,286	18,675,376	3,975	41,930	34,005
Capital	$18,490,749,206	$18,428,269,706	$13,060,116	$23,874,999	$25,544,385
Expenses	18,526,435,292	18,454,089,599	9,453,126	31,753,095	31,139,472
Services	4,375,634,216	4,365,612,851	2,327,780	2,795,357	4,898,228
Salaries	*940,900,207	938,574,967	379,754	686,454	1,259,032
Wages	3,434,734,009	3,427,037,884	1,948,026	2,108,903	3,639,196
Materials	12,195,019,092	12,142,790,878	5,119,613	25,629,309	21,479,292
Miscellaneous	1,955,781,984	1,945,685,870	2,005,733	3,328,429	4,761,952
Value of products	20,767,545,597	20,672,051,870	11,340,105	47,403,880	36,749,742
Value added by manufacture (value of products less cost of materials)	8,572,526,505	8,529,260,992	6,220,492	21,774,571	15,270,450

The total value of manufactures in the area covered by this table in 1909 was $20,767,545,597, 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 curing of fish; that in Hawaii is the manufacture of sugar; and in Porto Rico the leading industries are the manufacture of sugar and of tobacco products, and the preparation of coffee for the market.

The above table is the only one in this volume in which the statistics for the noncontiguous territories are included, all the other tables relating exclusively to continental United States. Sections on the manufactures of Alaska, Hawaii, and Porto Rico are given in Volume IX.

General comparison for the United States: 1909, 1904, and 1899.—Table 2 gives the principal items of information secured through the census inquiries relative to manufactures in continental United States for 1909, 1904, and 1899, together with the percentages of increase from census to census.

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 $4,365,612,851 in salaries and wages, and turned out products to the value of $20,672,051,870, to produce which materials costing $12,142,790,878 were used. The value added by manufacture—that is, the difference between the cost of materials and the total value of products—was $8,529,260,992. 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, fisheries, and mining, or else the products of other manufacturing establishments. The value of products derived from this latter class of materials gives rise to a duplication in the total value of products for manufacturing industries, 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, the only duplication remaining being that due to "contract work," which is small in amount (see Chapter I). The value added by manufacture covers salaries and wages—which represent over one-half of the total—overhead charges, depreciation, interest, taxes, and other expenses incidental to manufacturing, as well as the profits of the undertaking.

Table 2	Number or amount.			Per cent of increase.		
	1909	1904	1899	1899-1909	1904-1909	1899-1904
Number of establishments	268,491	216,180	207,514	29.4	24.2	4.2
Persons engaged in manufactures	7,678,578	6,213,612	(1)	(1)	23.6	(1)
Proprietors and firm members	273,265	225,673	(1)	(1)	21.1	(1)
Salaried employees	790,267	519,556	364,120	117.0	52.1	42.7
Wage earners (average number)	6,615,046	5,468,383	4,712,763	40.4	21.0	16.0
Primary horsepower	18,675,376	13,487,707	10,097,893	84.9	38.5	33.6
Capital	$18,428,269,706	$12,675,580,874	$8,975,256,496	105.3	45.4	41.2
Expenses	18,454,089,599	13,138,259,842	9,870,426,102	87.0	40.5	33.1
Services	4,365,612,851	3,184,884,275	2,389,132,440	82.7	37.1	33.3
Salaries	938,574,967	574,439,322	380,771,321	146.5	63.4	50.9
Wages	3,427,037,884	2,610,444,953	2,008,361,119	70.6	31.3	30.0
Materials	12,142,790,878	8,500,207,810	6,575,851,491	84.7	42.9	29.3
Miscellaneous	1,945,685,870	1,453,167,757	905,442,171	114.9	33.9	60.5
Value of products	20,672,051,870	14,793,902,563	11,406,926,701	81.2	39.7	29.7
Value added by manufacture (value of products less cost of materials)	8,529,260,992	6,293,694,753	4,831,075,210	76.5	35.5	30.3

[1] Figures not available.

For reasons fully set forth in Chapter I the difference between the total expenses shown in Table 2 and the value of products should not be taken as representing the profit of the manufacturers. The ratio between the amount paid as wages and the total value of products should not be taken as in any way indicating the proportion which labor obtains of the product created by manufacturing industries (see p. 28). The average annual wages of wage earners, if obtained by dividing the amount of wages reported by the average number of wage earners, would not show average annual earnings, since many wage earners are not continuously employed. For reasons stated in Chapter I, the statistics for capital in this and other tables are much less reliable and significant than those for other items (see p. 21).

The table above 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, but the rate of increase in the value added to materials 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.

During the 10 years from 1899 to 1909 the number of establishments increased 29.4 per cent; the average number of wage earners, 40.4 per cent; the value of products, 81.2 per cent; and the value added by manufacture, 76.5 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 the cost of the materials used or in the value of products or value added by manufacture, since the increase shown in these items is certainly due in part to the increase that has taken place in the prices of commodities. It may be presumed, however, that the quantity of products increased somewhat more rapidly than the number of wage earners, for not only were many of the processes of manufacture improved during the decade, but the figures show that the primary power employed in manufacturing increased much faster than the number of wage earners, indicating that the wage earner had more assistance from mechanical power in 1909 than in 1899.

It is a matter of interest to note that for both of the five-year periods the wages paid show 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 products for the year covered by the returns 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 have been based principally upon returns for the preceding calendar year or for some 12-month period ending within that year. In general, in this report the statistics for all censuses are referred to as of the year preceding that in which the census was taken.

The statistics of manufactures secured at the decennial censuses from 1849 to 1899, 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, although the canvass was made 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 industries, 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 1849, Table 3 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	$533,245,351	957,059	$236,755,464	$555 123,882	$1,019,106,616	$463,982,734
1859 (census of 1860)	140,433	$1,009,855,715	1,311,246	$378,878,966	$1,031,605,092	$1,885,861,676	$854,256,584
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	$1,694,567,015	2,053,996	$620,467,474	$1,990,741,794	$3,385,860,354	$1,395,118,560
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	$2,790,272,606	2,732,595	$947,953,795	$3,396,823,549	$5,369,579,191	$1,972,755,642
Per cent of increase, 1869 to 1879	0.7	64.7	33.0	52.8	70.6	58.6	41.4
1889 (census of 1890)	355,405	$6,525,050,759	4,251,535	$1,891,219,696	$5,162,013,878	$9,372,378,843	$4,210,364,965
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	$9,813,834,390	5,306,143	$2,320,938,168	$7,343,627,875	$13,000,149,159	$5,656,521,284
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	$8,975,256,496	4,712,763	$2,008,361,119	$6,575,851,491	$11,406,926,701	$4,831,075,210
1904 (census of 1905)	216,180	$12,675,580,874	5,468,333	$2,610,444,953	$8,500,207,810	$14,793,902,563	$6,293,694,753
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	$18,428,269,706	6,615,046	$3,427,037,884	$12,142,790,878	$20,672,051,870	$8,529,260,992
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	76.5

This table shows that, although the returns for 1849 included neighborhood, hand, and building industries and those for 1909 did not, nevertheless the value of products was over 20 times as great in the latter year as in the former and the number of wage earners employed nearly seven times as great.

As judged by the increase in the number of wage earners, the decade showing the most rapid growth was that from 1859 to 1869, during which the average number of wage earners increased 56.6 per cent. The decade 1879–1889 also showed an exceptionally high percentage of increase in this respect, while the next largest percentage of increase was that for the decade from 1899 to 1909. The method of calculating the average number of wage earners for 1899 and subsequent censuses was different from that used for 1889 (see Chapter I); otherwise a somewhat greater increase would be shown in the table for the period 1889–1899. As respects value of products, the percentage of increase during the last decade exceeded that in any other except the decade from 1849 to 1859; but in value added by manufacture, which, as explained later, is more closely comparable from census to census than total value of products, 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 in the various items covered by the table during the decade from 1899 to 1909 were much greater than those during any other decade; the increase in value of products, in fact, was almost equal to the total value of all manufactured products in 1889.

In all comparisons between censuses as to the total value of manufactured products, aside from other limitations as to comparability already referred to, allowance must be made for possible changes in the relative amount of duplication involved by reason of the use of the products of one manufacturing establishment as materials for other establishments. It is impossible from any analysis of the returns to determine whether, in the aggregate, such duplication is

relatively greater or less at one census than at another, and general observation of industrial tendencies fails to furnish any basis for conclusions even of an approximate character. This is due to the fact that there are two opposing tendencies present at the same time. On the one hand there is in many cases a tendency toward integration, a single large establishment now performing a series of processes or making a group of related products which were formerly performed or made by separate establishments. This tendency has the effect of reducing the amount of duplication in the figures reported for value of products. On the other hand, in some other cases there is a tendency toward increased specialization, which has the opposite effect. Whether the net effect of these tendencies has been greater or less duplication in the value of products shown for the manufacturing industries as a whole no one can say with any certainty; and much less is it possible to estimate the magnitude of the change.

Governmental manufacturing establishments.—Although the statistics for establishments operated by the Federal Government are not included in the general tables of this report nor in the totals for manufacturing industries, reports were secured from these establishments for 1909, and the most important of the statistics thus secured are presented in the following table:

Table 4 INDUSTRY.	Number of establishments.	Wage earners (average number).	Wages.	Cost of materials.	Value of products.	Primary horsepower.
All industries	40	32,519	$28,215,976	$21,752,072	$55,919,143	47,787
Clothing, men's, including shirts	5	1,085	536,262	1,884,280	2,643,157	311
Firearms and ammunition	4	3,623	2,449,802	3,788,188	6,661,343	4,411
Ordnance and accessories	3	5,024	4,530,622	3,602,804	8,598,032	5,251
Printing and publishing	8	7,647	7,638,689	2,296,513	10,895,364	3,884
Shipbuilding	12	14,540	12,670,524	9,526,109	25,872,033	32,525
All other industries[1]	8	600	390,077	654,178	1,249,214	1,405

[1] Includes the following industries, with number of establishments as indicated: Bags, other than paper, 1; cement, 1; explosives, 2; foundry and machine-shop products, 2; gas, illuminating and heating, 1; and instruments, professional and scientific, 1.

Laundries.—Steam laundries are not generally considered as manufacturing establishments, and for this reason they have not been canvassed at prior censuses. Since the industry has, however, developed so rapidly, large amounts of capital now being invested and many wage earners being employed, it seemed desirable that it should be covered by the census. The establishments are conducted according to factory methods, and therefore the statistics are associated with those for manufacturing industries. They are not included in the general tables nor in the totals for manufacturing industries, but are shown separately in a special report included in Volume X. For ready reference the totals are presented in Table 5. The figures cover all establishments using mechanical power of any kind.

Table 5	Number or amount.
Number of establishments	5,186
Persons engaged in the industry	124,214
Proprietors and firm members	5,560
Salaried employees	9,170
Wage earners (average number)	109,484
Actual number of wage earners employed on Dec. 15, 1909, or nearest representative day	112,064
Men 16 years of age and over	31,947
Women 16 years of age and over	79,152
Children under 16 years of age—	
Male	274
Female	691
Primary horsepower	123,477
Capital	$68,935,226
Expenses	85,187,604
Services	53,007,747
Salaries	8,180,769
Wages	44,826,978
Materials	17,696,360
Miscellaneous	14,483,497
Amount received for work done	104,680,086

Custom sawmills and gristmills.—Statistics for custom sawmills and gristmills which do no merchant business are not included in the general tables nor in the totals for manufacturing industries, but the totals for such mills are given in Table 6. The cost of materials and value of products for gristmills include an estimate for the grain ground, but it was impossible to estimate the value of the lumber sawed in the custom sawmills.

Table 6	Custom sawmills.	Custom gristmills.
Number of establishments	4,133	11,961
Persons engaged in the industry	12,836	22,795
Proprietors and firm members	5,702	15,634
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
Salaries	8,900	47,828
Wages	1,687,252	1,138,712
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 estimated value of products from all grain ground. In addition custom ground products, valued at $1,170,751, were made by establishments not engaged primarily in the flour and grist-mill industry.

Exports and imports of manufactured products.—It would be desirable, if practicable, to make a close comparison between the quantity and value of the products of each individual industry carried on in the United States and the quantity and value of the corresponding products exported and imported, respectively. Unfortunately, direct and exact comparisons of this character are impossible for most industries or classes of products, as it is impracticable to classify and subdivide the manufacturing industries in such a way that their products will correspond exactly to the classifications which are employed for exports and imports. In the case of certain selected industries or of certain specific products of other industries, however, such comparisons can be made with approximate correctness, and in such cases statistics are presented in Volume X of the census reports, which contain special reports on selected industries. On account

the complexity of the subject, no such statistics dealing with particular industries or products are shown in the present volume, which is in the nature of a general report.

It is worth while, however, to make such comparison as is practicable between the total value of the products of all factory industries combined and the value of exports and imports of manufactured articles. Table 7 shows, for each census year since 1879, the value of such manufactured products, and shows also the value of the exports and imports of manufactured products for the fiscal year (ending June 30) next following each census year. While the statistics of manufactures and of exports and imports relate to different periods of time, those for manufactures are on the whole fairly comparable with those for exports, as in many cases products manufactured at a given time are not exported until several months later.

Inasmuch as the products of the neighborhood, hand, and building industries are not ordinarily the subject of exportation or importation, the value of such products, as reported at the earlier censuses, has been deducted, so far as practicable, from the total value of manufactured products for the United States. As previously explained, establishments of this character were not canvassed in 1909 or 1904, and for 1899 they have been eliminated from the totals, as originally published, by a careful process, consisting in the omission of certain entire industries, and also of such establishments in other industries as did not conform to the new census definition of manufactures under the factory system. For 1889 and 1879, however, it has not been deemed practicable to make such a complete elimination of nonfactory establishments, but the totals for all industries which are primarily or wholly in the nature of hand, building, or neighborhood industries have been deducted, so that the data are approximately comparable.

Table 7

	Value of manufactured products.			Ratio of value of exports and imports to value of domestic production (per cent).	
	Domestic production.	Domestic exports.[1]	Imports.[1]	Exports.	Imports.
Census year:					
1909	$20,672,051,870	$1,026,240,899	$834,428,312	5.0	4.0
1904	14,793,902,563	894,490,254	575,556,449	6.0	3.9
1899	11,406,926,701	802,972,777	470,375,760	7.0	4.1
1889	[2] 8,309,722,605	403,738,622	480,941,692	4.9	5.8
1879	[2] 5,093,921,922	315,171,021	425,492,137	6.2	8.4
Per cent of increase:[3]					
1899-1909	81.2	27.8	77.4	.....	.....
1904-1909	39.7	14.7	45.0	.....	.....
1899-1904	29.7	11.4	22.4	.....	.....
1889-1899	37.3	98.9	—2.2	.....	.....
1879-1889	63.1	28.1	13.0	.....	.....

[1] Figures relate to the fiscal year ending June 30 next succeeding the census year.
[2] Exclusive of all industries which are primarily or wholly of the nature of hand, building, or neighborhood industries.
[3] A minus sign (—) denotes decrease.

In comparing the figures here presented for the value of manufactured products and the value of exports and imports, it should be borne in mind that there is a very great duplication in the census statistics of the gross value of manufactured products. Large quantities of partly manufactured articles which are included among the products of certain factories are used as materials by other factories and thus their value is again included in the value of products for the latter group. Obviously no such duplication exists in the statistics of exports and imports. Could the duplication in the census statistics be eliminated, it would be found that the value both of exports and of imports bore a materially higher ratio to the value of domestic manufactures than that shown in the table. There are other minor elements of incomparability between the statistics of exports or of imports, on the one hand, and those of domestic manufactures, on the other, and, in fact, some elements of incomparability between the statistics of exports and those of imports, but these are so much less important in their effect upon the comparison than the great duplication in the value of products reported for manufacturing industries that they do not merit special discussion.

According to the table the value of exports of domestic manufactures in the year ending June 30, 1910, was equal to 5 per cent of the gross value of manufactured products in the United States in 1909, and that of imports to 4 per cent. The value of exports bore a smaller ratio to the total value of manufactured products in that year than in any other census year covered by the table except 1889, and the value of imports shows a smaller ratio for that year than for any other except 1904. The highest ratio for exports (7 per cent) is shown for 1899.

In considering the changes from census to census in the ratios between the value of exports and of imports and that of domestic manufactures, it should be borne in mind that there may have been some variation, as noted above, in the relative amount of duplication in the value of manufactured products reported by the census. Such variations, however, could not explain in full the considerable decrease in the ratio of the value of exports to the value of products of factory industries between 1899 and 1909. Another possible factor which might affect this ratio would be a difference in price movement as between those articles which are chiefly manufactured for home consumption and those manufactured for export. If the former have advanced in price relatively more than the latter, that fact would help to explain a decline in the ratio of the value of exports of manufactures to the total value of products of manufacturing industries.

A proper understanding of the changes in the ratio between the value of exports and imports of manufactures and the total value of products manufactured in the country requires a consideration of the various

classes of manufactured products exported and imported. The Bureau of Foreign and Domestic Commerce divides such exports and imports into three main classes: (1) Food stuffs wholly or partly manufactured; (2) manufactures for further use in manufacturing, that is, partly finished products; and (3) manufactures (other than foodstuffs) ready for consumption. The following table shows, for the fiscal years corresponding most nearly to the last five census years, the value of exports and imports of each of these classes and the proportion which the value reported for each class formed of the value of all exports or imports, both of manufactured and of unmanufactured articles, the value of all being also shown for convenience.

Table 8

	All exports and imports (value.)	MANUFACTURED PRODUCTS EXPORTED OR IMPORTED (VALUE).									
		Total.		Foodstuffs partly or wholly manufactured.		Manufactures other than foodstuffs.					
						Total.		For further use in manufacturing.		Ready for consumption.	
		Amount.	Per cent of all exports or imports.	Amount.	Per cent of all exports or imports.	Amount.	Per cent of all exports or imports.	Amount.	Per cent of all exports or imports.	Amount.	Per cent of all exports or imports.
Domestic exports, year ending June 30—											
1910	$1,710,083,998	$1,026,240,899	60.0	$259,259,654	15.2	$766,981,245	44.9	$267,765,916	15.7	$499,215,329	29.2
1905	1,491,744,041	894,490,254	60.0	283,064,680	19.0	611,425,574	41.0	209,361,544	14.0	402,064,030	27.0
1900	1,370,763,571	802,972,777	58.6	318,126,502	23.2	484,846,275	35.4	152,890,591	11.2	331,955,684	24.2
1890	845,293,828	403,738,622	47.8	224,756,580	26.6	178,982,042	21.2	46,454,992	5.5	132,527,050	15.7
1880	823,946,353	315,171,021	38.3	193,352,723	23.5	121,818,298	14.8	29,044,159	3.5	92,774,139	11.3
Imports, year ending June 30—											
1910	1,556,947,430	834,428,312	53.6	181,566,572	11.7	652,861,740	41.9	285,138,373	18.3	367,723,367	23.6
1905	1,117,513,071	575,556,449	51.5	145,355,839	13.0	430,200,610	38.5	177,827,960	15.9	252,372,650	22.6
1900	849,941,184	470,375,760	55.3	133,027,374	15.7	337,348,386	39.7	134,222,045	15.8	203,126,341	23.9
1890	789,310,409	480,941,692	60.9	133,332,031	16.9	347,609,661	44.0	116,924,080	14.8	230,685,581	29.2
1880	667,954,746	425,492,137	63.7	118,125,216	17.7	307,366,921	46.0	110,779,516	16.6	196,587,405	29.4

The conspicuous feature of this table is the decline in the relative importance of the exports of foodstuffs partly or wholly manufactured. Exports of this character constituted 23.5 per cent in value of the total exports from the United States in the fiscal year 1880, as compared with 15.2 per cent in the fiscal year 1910. Despite the increase in prices, the value of the exports of manufactured or partly manufactured foodstuffs in 1910 was actually less than in 1900, and only about one-third greater than in 1880. The exportation of foodstuffs, however, is dependent primarily upon agricultural production, rather than upon manufacturing. The exportation of manufactures intended for further use in manufacturing and that of manufactures, other than foodstuffs, ready for consumption, show quite a different movement from that of foodstuffs. The value of exports of both of these classes increased more rapidly between 1879–80 and 1909–10 than the total value of the manufactured products of the country, although during the last decade of this period, the exportation of manufactures ready for consumption increased less rapidly than the total value of domestic manufactures. It may be noted, however, that the value of exports of manufactures ready for consumption in the fiscal year 1911 was nearly one hundred millions greater than in 1910.

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not made in steel works or rolling mills," "sewing machines, cases, and attachments," and "smelting and refining, not from the ore." The total value of wire and wire products for all establishments which drew wire amounted in 1909 to $180,083,522, or more than twice the value of products of the establishments classified as engaged in the wire industry. On the other hand, it should be noted that the $84,486,518 reported as the value of products for the wire industry does not represent the value of wire alone, but includes a large amount representing the value of manufactures of wire, such as wire fence, wire cloth, and wire rope and cable—products similar to those manufactured by establishments classified under the designation "wire-work, including wire rope and cable."

This example represents one of the most extreme cases of the overlapping of the industries distinguished by the Bureau of the Census, but there are many other cases where the overlapping is very considerable. The statistics shown for many of the census classifications can not be accepted either as constituting a complete presentation for the branch of industry indicated by the given designation, or as relating solely to the operations of that branch of industry. There are, however, many industries which do not particularly lend themselves to association with other industries in a single establishment, so that the statistics shown for them are fairly representative of the branches of industry covered by the respective designations.

In an effort to reduce, as far as possible, the amount of overlapping between industries, a number of the classifications which were shown separately at prior censuses have been combined at the present census, at least in the greater number of the tables. The total number of industries distinguished in the general tables has thus been reduced from 339 in 1904 to 264 in 1909. For example, the statistics for the foundry and machine-shop industry for 1909 cover those branches of industry which were shown separately at the census of 1904 under the designations "bells;" "gas machines and gas and water meters;" "hardware;" "hardware, saddlery;" "iron and steel pipe, cast;" "plumbers' supplies;" "steam fittings and heating apparatus;" and "structural ironwork." Even after this combination is made, however, there is no sharp distinction between the foundry and machine-shop industry and some of the other industries which are still shown separately in the census tables.

The Census Bureau has aimed, so far as practicable with a reasonable expenditure of money and of time, to remedy the statistical difficulties due to the overlapping of industries. It has sought to ascertain in the case of the more important industries the quantity and value—or, where quantities would have no significance, the value alone—of each separate class of products. While it is often impracticable for an establishment to assign the proper proportions of its capital, wage earners, and expenses to the different branches of industry carried on within it, most establishments are able to distinguish exactly or approximately the quantity and value of the different classes of products made. In the case of many industries, special schedules calling for detailed information in regard to products were used, and often several different special schedules were filled out by a single establishment whose business was of a varied character. The general manufactures schedule, which was used in canvassing all establishments, also contained spaces for listing the value of the leading products separately, though in a good many instances it was found impracticable to secure a proper classification of the products of a given establishment. The data thus collected have been assembled, and in connection with the statistics for the establishments assigned to a given industry, the quantities and values of similar products made by establishments assigned to other industries are shown wherever practicable. Such supplemental information regarding the quantities and values of products is presented in Chapter XV of this volume, but is shown in greater detail in Volume X of the census reports, which consists of special reports on individual industries.

It should, however, be constantly borne in mind that in all the tables in the census reports, except where expressly stated to the contrary, the statistics presented for a given industry represent simply the sum of the figures for the establishments whose principal products were those indicated by the industry designation.

Comparisons with previous censuses.—The statistics for different censuses with respect to individual industries are not in all cases strictly comparable. From what has been said regarding the overlapping of industries, it is obvious that the character and the degree of such overlapping may differ from census to census, not only because of changes in the character of the business of a few individual concerns, but in some cases because of general industrial changes. The establishments assigned to a given industry may cover the manufacture of the products indicated by the industry designation more completely, or less completely, at one census than at another, while conversely subsidiary products may form a larger, or a smaller proportion of the output of the establishments assigned to a given industry at one time than at another. Broadly speaking, the tendency toward the integration of industry in recent years has probably increased the relative amount of overlapping in the census statistics of industries.

It often happens that after it has been classified in a certain way at one census an individual establishment makes such changes in the character of its products as

to necessitate its assignment to a different industry at the succeeding census. Of course, if the establishment wholly changes the nature of its business its assignment to one industry at one census and to another at the next gives strictly accurate statistical results, but if there has been merely a shift from the preponderance of one branch of business to the preponderance of another branch, the change in the assignment of the establishment as a whole tends to vitiate the comparisons. There are some industries which, by their nature, involve little overlapping and in which the returns from census to census are closely comparable. In such industries, however, as the manufacture of machinery and other highly elaborated products of iron and steel, where the same metal-working machine tools can often be used to produce a variety of products, radical changes in the nature of the output of a single establishment not infrequently occur.

It is natural that, with the progress of invention and with changes in the methods of conducting business, new industries should from time to time come into existence and that others should either disappear or become so blended with more important branches of manufacture that it is no longer worth while to present separate statistics for them. For example, statistics of the manufacture of moving-picture films and apparatus were first shown at the census of 1909. On the other hand, the manufacture of paper collars and cuffs was in 1879 an industry of considerable importance, but the business has so decreased from census to census that, in 1909, the few remaining establishments were classed with those manufacturing men's furnishing goods. Similarly, the statistics for forges and bloomeries, which formerly constituted an industry of considerable importance, and which were shown separately at earlier censuses, have now been merged with those for steel works and rolling mills.

Finally, it should be borne in mind in comparing the progress of individual industries from census to census that no one standard of measurement can afford a fair basis for all such comparisons. One industry, for example, may show a much greater percentage of increase in total value of products than another, and yet this may be due merely to the fact that the prices of the products of the former have increased more rapidly, or decreased less rapidly, than those of the latter. In fact, the higher rate of increase in the gross value of products of the one industry as compared with the other may be wholly due to a more rapid increase in the price of raw materials, and a comparison based on value added by manufacture may show quite a different relative movement. Even the changes in the value added by manufacture, however, are affected by changes in prices and in rates of wages, as well as by changes in quantity of output; and yet again a comparison between two industries as to changes in the number of wage earners alone may furnish no precise indication of relative progress, since labor-saving devices may have been introduced more extensively in the one industry than in the other.

Selection of industries for special presentation.—All the more important results of the census of manufactures, covering a very considerable number of items, are shown in this report for 259 of the 264 industries distinguished by the Bureau of the Census; for the other 5 industries, which are those included under the designations "millstones," "ordnance and accessories," "pulp, from fiber other than wood," "straw goods, not elsewhere specified," and "whalebone cutting," separate statistics can not be presented, as to do so would reveal the operations of individual concerns. Considerations of space and of convenience to the reader, however, make it necessary to confine some of the more detailed analyses, such as those classifying establishments according to the character of ownership or according to size, to selected industries. In some of the condensed summary tables and text discussions also a selection of industries is necessary. In most cases where tables are confined to selected industries they relate to the 86 industries which in 1909 gave employment to more than 10,000 wage earners each. The number of wage earners was considered, on the whole, the most satisfactory basis for selection, as best indicating the relative importance of industries. Some industries, however, which employ fewer than 10,000 wage earners have a decidedly greater value of products than some which employ more than that number. There is usually a closer relation between the number of wage earners and the value added by manufacture, but in some cases industries employing fewer than 10,000 wage earners have a somewhat greater value added by manufacture than certain industries employing more than that number.

Description of general tables.—At the end of this volume are presented several extended tables giving details regarding all individual industries or regarding the more important industries. Table I gives the more important items from the manufactures schedule for 1909, 1904, and 1899 for each of the 259 industries distinguished at the present census for which separate statistics can be presented. Table II gives statistics in greater detail for each industry for 1909. Table V shows the principal items for each of the 86 industries giving employment in 1909 to 10,000 or more wage earners, for 1909, 1904, and 1899, for each state in which the industry is conducted, so far as such data can be given without disclosing the operations of individual establishments. Table VI gives more detailed statistics for 1909 for each industry, by states.

SUMMARY FOR INDIVIDUAL INDUSTRIES.

Principal statistical items for each industry.—The following summary table shows, for each of the 259 industries for which separate statistics can be presented, the number of establishments, the average number of wage earners, the value of products, and the value added by manufacture, as returned at the census of 1909, and also the percentage of increase in each of these items except the number of establishments from 1899 to 1909, from 1904 to 1909, and from 1899 to 1904, respectively. In some cases the percentages of increase are omitted because the statistics for the different years are not comparable. The industries are arranged in the order of their value of products and are grouped in classes made upon this basis.

SUMMARY OF STATISTICS, BY INDUSTRIES.

NOTE.—The percentages in this table are based on the figures in General Table I. In some cases the percentages of increase have been omitted, because the figures for the different censuses are not strictly comparable, or because figures for one of the earlier censuses are not available. The reasons for lack of comparability in each case are given in full in the discussion of the industry concerned in Chapter XV.

Table 1 (pp. 40–43).	CENSUS OF 1909.				PER CENT OF INCREASE.[1]								
INDUSTRY.	Number of establishments.	Wage earners (average number).	Value of products.	Value added by manufacture.	Wage earners (average number).			Value of products.			Value added by manufacture.		
					1899–1909	1904–1909	1899–1904	1899–1909	1904–1909	1899–1904	1899–1909	1904–1909	1899–1904
All industries	**268,491**	**6,615,046**	**$20,672,051,870**	**$8,529,260,992**	**40.4**	**21.0**	**16.0**	**81.2**	**39.7**	**29.7**	**76.5**	**35.5**	**30.3**
INDUSTRIES WITH PRODUCTS VALUED AT $500,000,000 OR OVER.													
Slaughtering and meat packing	1,641	89,728	1,370,568,101	167,740,317	29.5	19.0	8.9	73.8	48.6	17.0	62.8	51.6	7.3
Foundry and machine-shop products	13,253	531,011	1,228,475,148	688,464,009	.....	19.8	.....	.....	39.5	.....	.....	34.2	.....
Lumber and timber products	40,671	695,019	1,156,128,747	648,011,168	36.6	30.5	4.7	51.9	30.7	16.2	63.6	23.7	32.3
Iron and steel, steel works and rolling mills	446	240,076	985,722,534	328,221,678	31.0	15.7	13.3	65.1	46.3	12.9	59.1	41.0	12.8
Flour-mill and gristmill products	11,691	39,453	883,584,405	116,007,926	22.4	0.9	21.4	76.2	23.9	42.2	58.3	24.7	27.0
Printing and publishing	31,445	258,434	737,876,087	536,101,497	32.4	18.0	12.2	86.7	33.6	39.8	83.9	30.8	40.6
Cotton goods, including cotton small wares	1,324	378,880	628,391,813	257,382,343	25.1	19.9	4.3	85.3	39.5	32.8	58.2	56.7	1.0
Clothing, men's, including shirts	6,354	239,696	568,076,635	270,561,189	52.1	38.0	10.2	75.4	39.7	25.6	73.8	38.5	25.[illegible]
Boots and shoes, including cut stock and findings	1,918	198,297	512,797,642	180,059,429	31.1	23.7	6.0	76.8	43.4	23.3	82.6	36.0	34.[illegible]
INDUSTRIES WITH PRODUCTS VALUED AT $100,000,000 BUT LESS THAN $500,000,000.													
Woolen, worsted, and felt goods, and wool hats	985	168,722	435,978,558	153,100,519	29.1	15.0	12.3	75.2	36.5	28.4	61.4	33.4	20.9
Tobacco manufactures	15,822	166,810	416,695,104	239,509,483	25.9	4.6	20.3	58.0	25.8	25.6	40.2	16.8	20.0
Cars and general shop construction and repairs by steam-railroad companies	1,145	282,174	405,600,727	206,187,315	62.5	19.1	36.4	86.0	30.9	42.0	89.8	29.9	46.0
Bread and other bakery products	23,926	100,216	396,864,844	158,831,181	66.5	23.3	35.0	126.3	47.2	53.7	97.8	39.8	41.4
Iron and steel, blast furnaces	208	38,429	391,429,283	70,791,394	−2.1	9.6	−10.6	89.3	68.8	12.1	−5.9	33.9	−29.7
Clothing, women's	4,558	153,743	384,751,649	175,963,423	83.6	32.9	38.2	141.5	55.4	55.4	135.8	50.5	56.7
Smelting and refining, copper	38	15,628	378,805,974	45,274,336	38.0	22.6	12.6	129.4	57.3	45.8	5.4	2.8	2.5
Liquors, malt	1,414	54,579	374,730,096	278,134,460	38.3	13.4	22.0	58.2	25.6	25.9	50.1	24.5	20.6
Leather, tanned, curried, and finished	919	62,202	327,874,187	79,595,254	19.4	8.7	9.8	60.7	29.8	23.8	62.3	29.5	25.3
Butter, cheese, and condensed milk	8,479	18,431	274,557,718	39,011,654	44.0	18.5	21.5	109.9	63.2	28.6	77.8	54.4	15.1
Paper and wood pulp	777	75,978	267,656,964	102,214,623	53.0	15.2	32.9	110.2	41.8	48.2	80.0	32.0	36.4
Automobiles, including bodies and parts	743	75,721	249,202,075	117,556,339	3,278.9	528.4	437.7	5,148.6	729.7	532.6	3,893.1	596.3	473.5
Sugar, refining, not including beet sugar	19	9,399	248,528,659	22,340,699	.....	.....	.....	.....	.....	.....	.....	.....	.....
Furniture and refrigerators	3,155	128,452	239,886,506	131,111,664	41.8	12.5	26.0	83.6	34.9	36.1	79.0	29.9	37.8
Petroleum, refining	147	13,929	236,997,659	37,724,257	14.2	−16.9	37.5	91.2	35.4	41.2	79.0	5.9	69.0
Electrical machinery, apparatus, and supplies	1,009	87,256	221,308,563	112,742,159	107.7	44.3	43.9	139.4	57.2	52.3	162.3	52.4	72.1
Liquors, distilled	613	6,430	204,699,412	168,722,519	72.8	20.1	44.0	111.5	55.9	35.6	106.6	59.7	29.4
Hosiery and knit goods	1,374	129,275	200,143,527	89,902,474	54.5	24.2	24.4	108.8	46.0	43.0	101.4	49.1	35.1
Copper, tin, and sheet-iron products	4,228	73,615	199,824,218	87,241,945	.....	.....	38.4	.....	.....	53.1	.....	.....	56.6
Silk and silk goods, including throwsters	852	99,037	196,911,667	89,144,751	51.4	24.4	21.7	83.6	47.7	24.3	98.8	55.2	28.0
Smelting and refining, lead	28	7,424	167,405,650	15,442,628	−10.8	−2.0	−9.0	−4.6	−9.9	5.9	−50.6	−8.5	−46.1
Gas, illuminating and heating	1,296	37,215	166,814,371	114,386,527	65.7	21.8	36.1	120.3	33.3	65.3	107.6	30.0	59.6
Carriages and wagons and materials	5,492	69,928	159,892,547	77,941,259	−5.3	−10.2	5.5	15.6	2.6	12.7	9.0	−0.5	9.6
Canning and preserving	3,767	59,968	157,101,201	55,278,142	5.2	5.3	−0.1	58.2	20.4	31.3	55.0	16.8	32.7
Brass and bronze products	1,021	40,618	149,989,058	50,760,646	49.5	22.5	22.1	69.2	46.5	15.5	84.8	38.1	33.8
Oil, cottonseed, and cake	817	17,071	147,867,894	28,034,419	55.1	9.9	41.2	151.8	53.4	64.2	106.7	71.2	20.8
Agricultural implements	640	50,551	146,329,268	86,022,749	8.5	6.7	1.7	44.6	30.6	10.7	50.2	35.0	11.3
Patent medicines and compounds and druggists' preparations	3,642	22,895	141,941,602	91,565,937	20.3	11.8	7.6	59.9	20.9	32.3	61.1	17.5	37.1
Confectionery	1,944	44,638	134,795,913	53,645,140	66.2	23.2	34.9	122.3	54.8	43.6	112.1	40.1	51.4
Rubber goods, not elsewhere specified	227	26,521	128,435,747	46,243,926	.....	.....	3.8	.....	.....	19.7	.....	.....	25.8
Food preparations	1,213	14,968	125,331,181	41,389,032	.....	.....	38.0	.....	.....	53.6	.....	.....	56.1
Paint and varnish	791	14,240	124,889,422	45,873,867	46.8	22.4	20.0	79.5	37.5	30.6	84.8	47.9	24.9
Cars, steam-railroad, not including operations of railroad companies	110	43,086	123,729,627	44,976,766	28.8	26.5	1.8	36.7	11.3	22.8	56.3	26.6	23.5
Chemicals	349	23,714	117,688,887	53,567,351	.....	19.7	.....	.....	56.5	.....	.....	61.5	.....
Marble and stone work	4,964	65,603	113,092,967	75,695,833	.....	28.4	.....	.....	33.3	.....	.....	29.9	.....
Soap	420	12,999	111,357,777	39,178,359	.....	17.7	.....	.....	63.1	.....	.....	58.9	.....
Coffee and spice, roasting and grinding	607	7,490	110,532,787	27,327,689	.....	25.7	.....	.....	31.3	.....	.....	49.0	.....
Leather goods	2,375	34,907	104,719,008	44,692,240	19.2	2.1	16.8	73.3	27.5	35.9	64.2	18.6	38.[illegible]
Fertilizers	550	18,310	103,960,213	34,438,293	58.1	29.1	22.5	132.8	83.9	26.6	119.4	99.6	9.[illegible]

[1] A minus sign (−) denotes decrease.

SUMMARY OF STATISTICS, BY INDUSTRIES—Continued.

[See note at head of this table.]

Table 1—Continued.

INDUSTRY.	CENSUS OF 1909.				PER CENT OF INCREASE.[1]								
	Number of establishments.	Wage earners (average number).	Value of products.	Value added by manufacture.	Wage earners (average number).			Value of products.			Value added by manufacture.		
					1899-1909	1904-1909	1899-1904	1899-1909	1904-1909	1899-1904	1899-1909	1904-1909	1899-1904
INDUSTRIES WITH PRODUCTS VALUED AT $25,000,000 BUT LESS THAN $100,000,000.													
Coke	315	29,273	$95,696,622	$31,672,095	72.2	54.2	11.7	168.9	85.0	45.4	99.0	45.0	37.2
Brick and tile	4,215	76,528	92,776,504	69,040,402	23.5	15.9	6.5	81.0	30.4	38.8	71.5	25.9	36.2
Glass	363	68,911	92,095,203	59,975,704	30.5	7.7	21.1	62.9	15.7	40.8	50.7	12.2	34.3
Musical instruments, pianos and organs and materials	507	38,020	89,789,544	46,024,807	78.4	14.9	55.2	118.9	35.9	61.1	94.6	20.8	61.1
Furnishing goods, men's	900	38,482	87,710,197	38,585,354	.....	.....	−10.3	.....	.....	10.6	.....	.....	8.7
Millinery and lace goods	1,579	39,201	85,893,632	40,853,357	.....	.....	63.0	.....	.....	72.3	.....	.....	77.5
Wire	56	18,084	84,486,518	23,943,587	1,028.1	281.8	195.5	796.8	122.8	302.4	894.7	205.0	226.2
Dyeing and finishing textiles	426	44,046	83,556,432	48,295,131	47.9	23.8	19.4	85.8	64.3	13.1	78.8	54.6	15.6
Jewelry	1,537	30,347	80,349,874	43,675,015	48.3	37.4	7.9	74.2	51.0	15.4	82.8	50.3	21.6
Stoves and furnaces, including gas and oil stoves	576	37,130	78,853,323	49,515,062	.....	11.2	.....	.....	26.9	.....	.....	24.2	.....
Pottery, terra-cotta, and fire-clay products	822	56,168	76,118,861	54,207,956	28.5	7.1	19.9	72.0	18.6	45.0	67.6	13.9	47.2
Shipbuilding, including boat building	1,353	40,506	73,360,315	42,145,957	−13.4	−20.2	8.6	−1.6	−11.4	11.1	2.7	−7.0	19.3
Carpets and rugs, other than rag	139	33,307	71,188,152	31,625,148	17.2	0.3	16.9	47.7	15.6	27.6	50.9	33.6	12.8
Cement	135	26,775	63,205,455	33,861,664	.....	53.2	.....	.....	111.6	.....	.....	91.8	.....
Cordage and twine and jute and linen goods	164	25,820	61,019,986	20,105,176	19.3	1.9	17.0	24.3	−5.6	31.8	25.5	7.9	16.4
Cooperage and wooden goods, not elsewhere specified	1,693	26,269	60,248,260	23,320,419	3.7	−5.3	9.6	43.4	4.0	37.9	26.7	1.5	24.9
Fur goods	1,241	11,927	55,937,549	24,160,644	53.7	27.3	20.8	116.0	50.7	43.3	108.0	51.8	37.0
Paper goods, not elsewhere specified	403	19,211	55,170,564	23,921,645	97.5	30.5	51.4	126.5	62.5	39.4	135.4	67.3	46.7
Bags, other than paper	109	7,968	54,881,622	8,517,154	103.2	39.3	45.9	179.3	46.7	90.3	165.1	28.3	106.7
Boxes, fancy and paper	949	39,514	54,450,015	28,733,774	42.9	23.2	16.0	99.3	47.7	35.0	84.8	42.4	29.8
Cutlery and tools, not elsewhere specified	959	32,996	53,265,757	34,986,556	68.0	26.0	33.3	89.2	30.5	38.6	90.2	35.9	39.9
Boots and shoes, rubber	22	17,612	49,720,567	20,143,391	22.4	−7.3	32.0	21.0	−29.0	70.5	9.4	−47.1	106.8
Glucose and starch	118	4,773	48,799,311	11,900,540	−19.7	2.0	−21.3	57.8	49.5	5.6	27.3	66.9	−23.7
Beet sugar	58	7,204	48,122,383	20,857,213	265.7	81.8	101.2	557.0	97.3	233.1	727.7	110.5	293.1
Tin plate and terneplate	31	5,352	47,969,645	6,080,211	45.8	10.4	32.0	50.4	36.0	10.6	17.8	55.6	−24.3
Hats, fur-felt	273	25,064	47,864,630	25,755,399	32.8	13.7	16.8	72.1	30.7	31.7	50.1	24.7	44.5
Gas and electric fixtures and lamps and reflectors	619	18,861	45,057,372	24,590,015	67.8	50.0	11.9	127.3	69.6	34.0	107.4	58.8	36.6
Mineral and soda waters	4,916	13,147	43,508,464	27,042,938	49.6	20.8	23.8	87.0	43.8	30.0	83.9	33.5	37.7
Ice, manufactured	2,004	16,114	42,953,055	31,635,557	134.2	59.5	46.8	211.7	80.6	72.6	202.2	77.9	69.8
Silverware and plated ware	183	16,610	42,228,547	23,896,440	36.1	11.8	21.8	61.7	28.6	25.8	65.3	30.0	27.2
Wirework, including wire rope and cable	611	12,348	41,937,952	17,544,038	35.1	−7.7	46.3	111.4	26.9	66.5	94.4	15.6	68.2
Explosives	86	6,274	40,139,661	17,328,113	39.4	8.2	28.8	134.4	25.6	72.9	155.2	30.8	82.6
Malt	114	1,760	38,252,233	7,787,934	−11.6	−14.3	3.2	97.4	26.3	56.3	70.9	18.8	40.3
Oil, linseed	29	1,452	36,738,694	5,704,118	9.3	7.6	1.6	35.1	33.2	1.4	104.6	28.9	58.7
Mattresses and spring beds	930	11,322	35,783,154	15,300,646	48.0	8.6	36.3	99.3	28.9	54.6	98.0	23.1	60.8
Clocks and watches, including cases and materials	120	23,857	35,196,842	24,066,144	39.1	5.7	31.6	59.2	18.2	34.7	81.1	20.8	49.9
Smelting and refining, zinc	29	6,655	34,205,894	8,975,893	36.7	1.9	34.1	88.1	38.0	36.3	83.1	15.6	58.4
Firearms and ammunition	66	14,715	34,111,564	17,090,901	51.5	7.9	40.4	84.7	26.9	52.7	75.7	7.7	63.1
Corsets	138	17,564	33,257,187	17,616,772	42.8	60.0	−10.8	130.1	123.8	2.8	117.7	101.9	7.8
Cars and general shop construction and repairs by street-railroad companies	541	22,418	31,962,561	16,794,662	219.1	102.8	57.3	241.1	137.9	43.4	233.6	110.6	58.4
Locomotives, not made by railroad companies	16	14,909	31,582,302	16,522,319	.....	−39.9	.....	.....	−47.0	.....	.....	−48.1	.....
Iron and steel pipe, wrought	28	6,817	30,886,270	7,944,361	23.1	25.9	−2.2	45.1	77.5	−18.3	37.7	70.7	−19.3
Oil, not elsewhere specified	189	1,715	30,865,122	9,458,161	17.8	31.4	−10.4	65.8	34.6	23.2	23.8	11.5	11.1
Sugar and molasses	214	4,127	30,620,738	9,325,894	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sewing machines, cases, and attachments	47	19,296	28,262,416	16,807,771	44.4	12.7	28.1	33.8	8.1	23.7	44.1	8.8	32.3
Smelting and refining, not from the ore	89	2,147	28,072,041	4,909,622	118.4	25.4	74.2	260.6	61.3	123.5	160.5	34.8	93.3
Turpentine and rosin	1,585	39,511	25,295,017	20,384,179	5.6	18.4	−20.3	24.3	5.7	17.7	44.0	1.1	42.4
INDUSTRIES WITH PRODUCTS VALUED AT $10,000,000 BUT LESS THAN $25,000,000.													
Belting and hose, woven and rubber	46	6,319	24,729,221	10,223,814	212.0	43.9	116.8	259.1	39.0	158.4	333.6	46.0	197.0
Coffins, burial cases, and undertakers' goods	284	9,339	24,525,905	12,561,638	36.5	10.3	23.8	75.8	21.0	45.3	79.3	16.7	53.6
Iron and steel, bolts, nuts, washers, and rivets, not made in steel works or rolling mills	108	11,345	24,484,907	11,680,572	48.1	40.2	5.6	75.2	66.7	5.1	97.7	69.8	16.5
Artificial flowers and feathers and plumes	412	10,016	23,980,567	10,353,163	.....	130.6	.....	.....	357.0	.....	.....	220.3	.....
Cash registers and calculating machines	50	7,465	23,708,326	20,155,260	261.2	83.0	97.3	317.8	140.1	74.0	324.0	141.1	75.8
Belting and hose, leather	139	3,006	23,691,887	8,069,284	80.3	43.7	25.5	123.0	66.6	33.9	158.4	64.6	57.0
Gloves and mittens, leather	377	11,354	23,630,598	10,422,597	.....	6.7	.....	.....	33.2	.....	.....	34.7	.....
Gold and silver, reducing and refining, not from the ore	62	456	23,611,764	1,628,055	108.2	58.9	31.0	99.9	26.1	58.5	85.0	37.3	34.8
Grease and tallow	353	4,357	23,419,395	7,875,956	113.6	20.1	77.8	95.9	24.5	57.4	146.0	22.2	101.4
Oilcloth and linoleum	31	5,201	23,339,022	7,788,921	61.0	33.9	20.2	104.7	57.8	29.7	102.2	64.3	23.1
Buttons	444	16,427	22,708,065	13,166,774	89.1	55.5	21.7	195.1	104.0	44.7	109.1	58.4	42.9
Fancy articles, not elsewhere specified	494	12,191	22,632,199	12,271,485	44.3	19.5	20.7	75.5	28.6	36.4	76.5	22.0	44.6
Photographic apparatus and materials	103	5,195	22,561,341	15,853,709	50.8	36.3	10.7	189.3	73.2	67.0	258.6	78.9	109.4
Chocolate and cocoa products	27	2,826	22,390,222	6,867,162	115.1	35.2	59.1	131.6	55.6	48.9	146.2	47.1	67.3
Rice, cleaning and polishing	71	1,239	22,371,457	2,870,377	90.3	−17.0	129.2	156.4	37.3	86.8	150.6	−3.8	159.8
Wood, turned and carved	1,050	14,139	22,198,572	12,454,876	22.3	−3.7	27.1	55.0	10.1	40.9	46.7	7.5	36.6
Hats, straw	98	8,814	21,424,255	9,956,055	.....	58.3	.....	.....	106.9	.....	.....	105.4	.....
Baking powders and yeast	144	2,155	20,774,588	11,436,603	11.2	−12.0	26.4	42.6	9.1	30.7	53.7	13.2	35.8
Iron and steel forgings	172	8,168	20,293,440	10,053,589	74.2	44.2	20.8	94.4	67.6	16.0	92.4	58.1	21.7
Babbitt metal and solder	109	897	19,767,935	3,498,235	67.7	57.6	6.4	115.1	50.9	42.5	193.2	56.4	57.4
Typewriters and supplies	89	9,578	19,718,767	15,641,421	120.7	53.7	43.6	184.5	85.3	53.5	182.9	78.4	58.6
Roofing materials	117	2,465	19,204,423	6,746,246	−67.5	−72.0	16.1	40.3	−3.4	45.1	−0.9	−25.3	32.7
Artificial stone	3,439	9,957	18,595,688	11,552,746	.....	297.3	.....	.....	350.5	.....	.....	328.2	.....
Window shades and fixtures	219	3,930	18,570,932	5,918,325	118.2	49.8	45.7	130.0	107.9	10.6	137.0	98.3	19.5
House-furnishing goods, not elsewhere specified	260	4,907	18,508,886	6,138,078	−5.9	2.7	−8.3	29.6	23.3	5.1	20.8	14.0	6.0

[1] A minus sign (−) denotes decrease.

SUMMARY OF STATISTICS, BY INDUSTRIES—Continued.

[See note at head of this table.]

Table 1—Continued.

INDUSTRY.	CENSUS OF 1909.				PER CENT OF INCREASE.[1]								
	Number of establishments.	Wage earners (average number).	Value of products.	Value added by manufacture.	Wage earners (average number),			Value of products.			Value added by manufacture.		
					1899-1909	1904-1909	1899-1904	1899-1909	1904-1909	1899-1904	1899-1909	1904-1909	1899-1904
INDUSTRIES WITH PRODUCTS VALUED AT $10,000,000 BUT LESS THAN $25,000,000—continued.													
Lime	853	13,897	$17,951,987	$11,221,081	.....	24.6	.....	.....	21.7	.....	.....	20.5	.....
Stationery goods, not elsewhere specified	153	6,206	16,647,223	8,903,587	104.7	44.5	41.7	228.6	87.7	75.0	203.0	80.0	68.4
Glass, cutting, staining, and ornamenting	583	9,362	16,101,129	9,854,085	90.5	11.7	70.5	84.0	22.6	50.1	89.0	18.8	59.0
Dyestuffs and extracts	107	2,397	15,954,574	6,270,923	45.5	−11.5	64.4	117.0	46.5	48.2	140.7	54.3	56.0
Umbrellas and canes	256	5,472	15,864,122	5,808,207	−3.0	1.6	−4.5	16.1	19.3	−2.7	9.8	15.1	−4.6
Bags, paper	74	3,212	15,697,959	5,343,367	61.5	29.9	24.3	130.9	55.6	48.4	132.3	53.0	51.8
Dairymen's, poulterers', and apiarists' supplies	233	4,871	15,463,492	9,374,591	.....	86.8	.....	.....	136.3	.....	.....	180.5	.....
Brushes	384	6,954	14,694,003	7,507,066	.....	.....	.....	.....	.....	.....	.....	.....	.....
Blacking and cleansing and polishing preparations	501	2,417	14,679,120	7,716,728	37.5	35.6	1.4	119.2	69.7	29.2	117.6	80.8	20.4
Awnings, tents, and sails	621	4,242	14,499,020	6,122,239	27.2	23.6	2.9	58.6	28.7	23.2	56.3	33.1	17.4
Wall paper	45	4,037	14,449,247	6,825,896	−3.2	3.2	−6.2	35.5	14.3	18.5	48.7	14.2	30.3
Brooms	898	5,199	14,431,593	6,040,260	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wood preserving	53	2,403	14,098,978	4,770,525	402.7	226.1	54.2	488.4	318.6	40.6	735.6	427.2	58.5
Glue	65	3,265	13,717,820	6,193,291	101.8	14.0	77.0	154.6	36.7	86.2	281.8	60.9	137.3
Hats and caps, other than felt, straw, and wool	494	6,201	13,689,338	6,998,886	.....	6.0	.....	.....	5.7	.....	.....	5.3	.....
Signs and advertising novelties	288	5,540	13,546,385	8,837,470	.....	.....	.....	.....	.....	.....	.....	.....	.....
Looking-glass and picture frames	437	6,021	13,475,082	7,950,076	−0.1	−9.1	9.9	24.2	1.5	22.3	29.9	−4.2	35.6
Liquors, vinous	290	1,911	13,120,846	6,495,313	64.3	−0.1	64.5	100.4	18.2	69.5	127.3	20.2	89.1
Upholstering materials	230	4,067	13,053,561	4,984,867	−20.2	−13.7	−7.6	29.9	3.0	26.2	19.7	6.0	12.8
Wall plaster	198	4,791	12,803,758	6,796,581	.....	27.5	.....	.....	26.0	.....	.....	25.0	.....
Surgical appliances and artificial limbs	324	4,241	12,399,314	7,027,658	137.2	34.5	76.3	164.8	70.6	55.3	115.3	59.6	34.9
Steam packing	153	3,648	12,159,989	5,509,696	218.0	33.4	138.4	248.0	35.8	156.2	182.9	9.0	159.5
Optical goods	217	6,398	11,734,811	7,547,354	72.2	47.8	16.6	125.2	91.8	17.4	142.7	98.8	22.1
Phonographs and graphophones	18	5,199	11,725,996	8,626,605	310.3	53.0	168.1	422.1	14.5	355.8	508.4	42.0	328.5
Photo-engraving	313	5,343	11,624,000	9,490,020	.....	.....	.....	.....	.....	.....	.....	.....	.....
Saws	96	4,832	11,535,631	6,623,865	50.3	3.9	44.6	79.0	17.5	52.4	72.3	14.5	50.5
Waste	53	1,897	11,398,011	2,561,422	73.9	21.7	42.9	133.6	36.6	71.0	191.0	68.7	72.5
Matches	26	3,631	11,353,138	6,754,260	77.4	14.0	55.6	89.0	101.0	−6.0	161.3	185.9	−8.6
Salt	124	4,936	11,327,834	6,124,480	3.4	5.8	−2.3	42.2	20.0	18.5	32.3	16.2	13.8
Hair work	250	3,534	11,216,175	5,135,565	331.0	309.5	5.2	697.7	529.4	26.7	464.3	387.2	15.8
Sporting and athletic goods	180	5,321	11,052,286	5,487,520	139.1	24.9	91.5	204.6	57.2	93.8	200.5	34.8	122.8
Dentists' materials	87	1,573	10,835,553	2,734,236	54.7	−18.2	89.0	191.2	38.7	109.9	69.7	18.9	42.7
Bicycles, motorcycles, and parts	95	4,437	10,698,567	5,615,998	−74.7	33.7	−81.1	−66.5	107.6	−83.9	−62.9	122.4	−83.3
Instruments, professional and scientific	263	4,817	10,503,601	7,585,617	73.6	40.2	23.9	116.4	95.3	10.8	117.4	88.3	15.4
Lard, refined, not made in slaughtering and meat-packing establishments	7	399	10,326,471	695,240	−20.0	− 9.5	−11.6	19.6	68.5	−29.0	−38.7	42.1	−56.9
INDUSTRIES WITH PRODUCTS VALUED AT $5,000,000 BUT LESS THAN $10,000,000.													
Sulphuric, nitric, and mixed acids	42	2,252	9,884,057	4,498,229	.....	− 8.0	.....	.....	9.2	.....	.....	10.2	.....
Wood distillation, not including turpentine and rosin	120	2,721	9,736,998	3,861,147	.....	19.8	.....	.....	24.6	.....	.....	30.2	.....
Peanuts, grading, roasting, cleaning, and shelling	46	1,949	9,736,551	1,124,487	.....	43.7	.....	.....	34.1	.....	.....	20.1	.....
Cordials and sirups	117	1,095	9,662,176	4,320,908	202.5	65.9	82.3	358.6	175.3	66.6	617.8	217.5	126.1
Mirrors	148	2,994	9,570,797	3,666,091	17.2	13.0	3.7	19.6	25.9	−5.0	21.9	21.5	0.3
Lapidary work	77	627	9,172,832	2,612,383	25.9	23.7	1.8	58.5	20.0	32.2	131.2	83.6	25.9
Lead, bar, pipe, and sheet	33	802	9,144,930	1,733,397	32.6	24.1	6.8	22.3	−1.4	24.1	44.7	26.8	14.1
Springs, steel, car and carriage	54	3,196	9,005,362	4,278,092	52.0	29.1	17.8	58.3	56.9	0.9	60.5	42.6	12.5
Models and patterns, not including paper patterns	709	4,171	8,868,166	5,991,936	60.0	50.0	6.6	131.3	95.1	18.5	99.1	65.4	20.4
Ink, printing	71	1,121	8,865,504	4,690,587	122.9	57.7	41.4	187.8	53.5	87.5	203.8	48.4	104.7
Flavoring extracts	420	1,229	8,828,034	4,369,806	−1.8	−20.4	23.3	39.9	13.6	23.2	44.8	13.9	27.1
Carriages and sleds, children's	84	5,300	8,805,129	4,676,255	94.4	32.4	46.8	105.2	38.2	48.5	103.8	32.4	53.9
Scales and balances	87	3,559	8,785,642	6,081,645	28.3	13.6	12.9	67.7	46.4	14.6	64.1	39.2	17.9
Boxes, cigar	274	6,115	8,491,082	4,178,038	32.7	−2.7	36.3	45.0	9.1	32.9	49.4	5.1	42.2
Safes and vaults	42	3,343	8,490,541	5,048,011	64.4	−4.2	71.6	116.2	8.0	100.1	125.5	8.6	107.7
Vinegar and cider	963	1,542	8,447,577	3,483,532	−1.0	0.9	−1.9	42.4	16.3	22.5	24.5	2.1	22.0
Toys and games	226	5,305	8,264,135	4,709,897	60.0	22.5	30.6	106.1	48.2	39.1	100.9	43.2	40.3
Hat and cap materials	74	2,367	8,236,319	2,856,349	72.6	−1.9	76.1	114.0	27.9	67.3	171.7	28.5	111.5
Butter, reworking	24	295	8,200,533	776,875	99.3	−27.0	173.0	287.7	12.8	243.8	0.8	−24.2	33.0
Iron and steel, nails and spikes, cut and wrought, including wire nails not made in steel works or rolling mills	57	2,765	8,191,620	4,219,208	−38.2	−24.9	−17.8	−44.6	−8.2	−39.6	−32.1	0.4	−31.8
Oleomargarine	12	606	8,147,629	1,650,997	−44.1	16.1	−51.8	−34.8	46.2	−55.4	−66.0	40.4	−75.8
Flags, banners, regalia, society badges, and emblems	211	3,572	8,113,989	4,304,240	71.9	24.4	38.2	98.5	44.7	37.2	121.4	38.7	59.6
Cars, street railroad, not including operations of railroad companies	14	3,583	7,809,866	3,549,396	−0.1	−24.2	31.9	6.9	−28.0	48.4	6.4	−35.5	64.9
Shoddy	88	2,041	7,446,364	2,445,658	6.0	−2.3	8.5	10.6	−11.4	24.9	31.7	4.0	26.6
Pencils, lead	11	4,134	7,378,744	3,783,111	91.2	34.9	41.8	232.1	66.7	99.2	217.6	44.3	120.2
Galvanizing	46	1,447	7,338,330	1,619,631	170.5	15.2	134.8	197.0	14.3	159.8	104.2	−3.3	111.1
Show cases	149	3,390	7,167,100	4,027,239	148.7	10.0	126.1	190.4	25.3	131.8	185.6	20.3	137.4
Emery and other abrasive wheels	51	1,943	6,710,666	4,059,351	255.9	142.6	46.7	385.6	225.5	49.2	365.1	199.2	55.4
Needles, pins, and hooks and eyes	49	4,638	6,694,095	4,365,421	74.8	17.0	49.5	106.7	40.9	46.7	117.2	37.8	57.6
Windmills	34	2,337	6,676,599	3,345,236	14.3	21.2	−5.7	53.4	39.2	10.1	53.3	34.5	14.0
Soda-water apparatus	63	1,797	6,555,597	4,113,059	86.6	22.3	52.5	117.4	41.5	53.7	103.8	51.8	34.3
Stereotyping and electrotyping	174	2,850	6,383,694	4,618,592	18.4	6.4	11.3	69.2	27.6	32.7	53.7	16.3	32.2
Paving materials	49	1,419	6,229,400	2,751,794	−41.7	−26.1	−21.2	58.3	23.8	27.9	16.9	16.2	0.6
Screws, wood	11	3,464	6,198,955	3,890,429	75.8	132.8	−24.5	138.4	190.5	−17.9	132.0	177.5	−16.4

[1] A minus sign (−) denotes decrease.

SUMMARY OF STATISTICS, BY INDUSTRIES—Continued.

[See note at head of this table.]

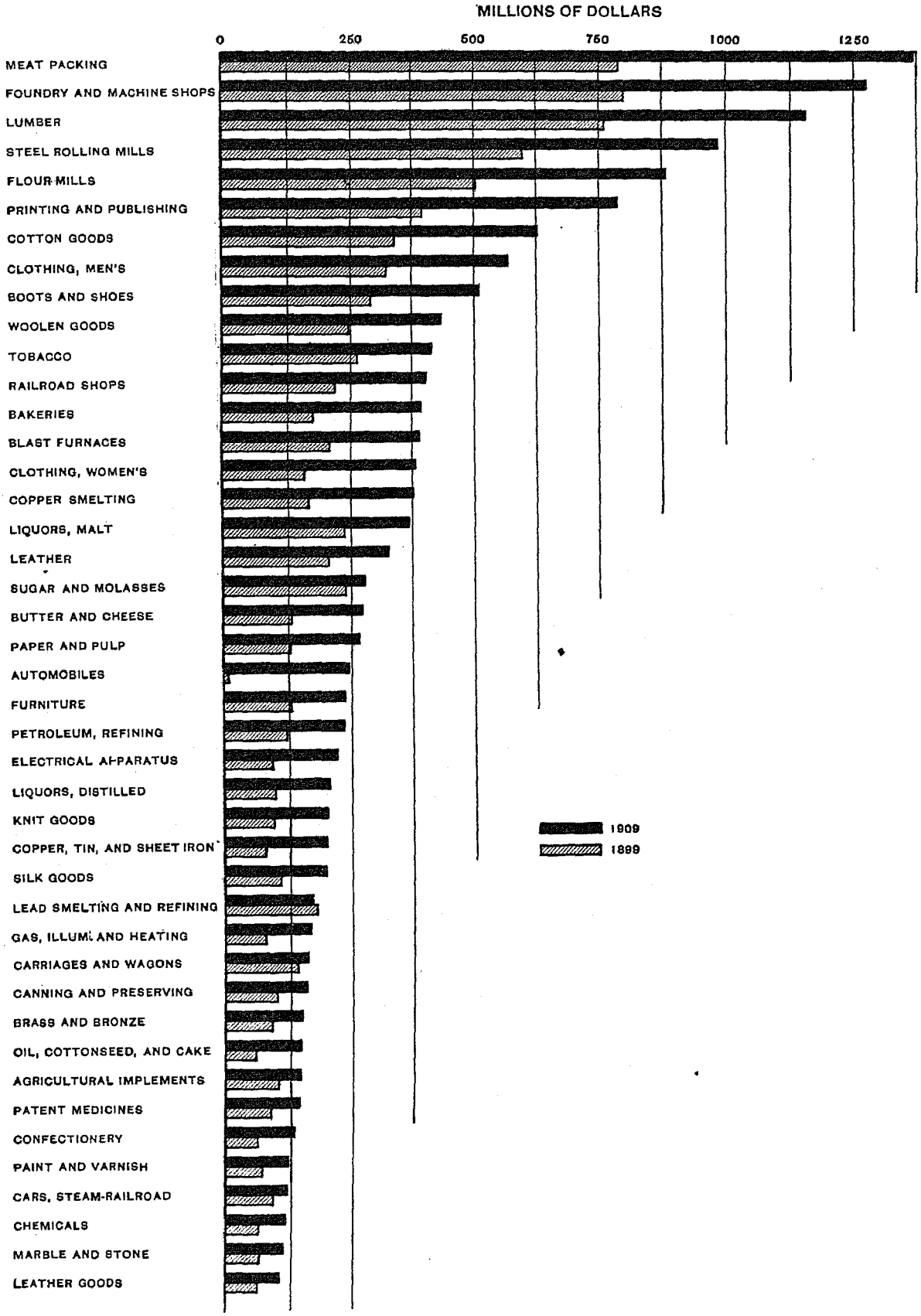
Table 1—Continued. INDUSTRY.	Census of 1909. Number of establishments.	Wage earners (average number).	Value of products.	Value added by manufacture.	Per cent of increase.[1] Wage earners (average number). 1899-1909	1904-1909	1899-1904	Value of products. 1899-1909	1904-1909	1899-1904	Value added by manufacture. 1899-1909	1904-1909	1899-1904
INDUSTRIES WITH PRODUCTS VALUED AT $5,000,000 BUT LESS THAN $10,000,000—continued.													
Drug grinding	25	922	$6,006,999	$2,553,279	43.2	−6.0	52.3	39.4	16.7	19.5	157.1	20.3	113.7
Cork, cutting	62	3,142	5,939,938	2,505,317	34.3	8.5	23.7	35.2	32.3	2.3	26.0	23.3	2.2
Billiard tables and materials	54	1,495	5,877,837	2,509,159	230.0	87.8	75.7	256.7	164.4	34.9	173.0	95.1	39.9
Washing machines and clothes wringers	100	1,835	5,824,889	2,987,528	21.6	13.1	7.5	56.0	51.7	2.8	91.5	83.8	4.2
Baskets, and rattan and willow ware	456	4,664	5,695,356	3,359,948	10.6	−3.7	21.1	56.6	9.8	42.7	46.0	−0.7	47.1
Files	57	4,158	5,691,203	4,095,473	31.6	26.9	3.7	67.2	29.6	29.0	83.0	32.9	37.7
Pumps, not including steam pumps	102	2,136	5,582,962	3,096,360	238.0	52.1	122.2	316.0	95.7	112.6	339.8	86.5	135.8
Pipes, tobacco	62	2,775	5,311,900	2,853,245	75.1	42.5	22.8	114.9	87.4	14.6	108.9	92.8	8.3
Wool pulling	37	631	5,180,856	1,077,606	32.8	−7.3	43.4	875.7	487.4	66.1	126.0	38.6	63.1
INDUSTRIES WITH PRODUCTS LESS THAN $5,000,000 IN VALUE.													
Mucilage and paste	127	538	4,918,341	1,634,900	17.5	14.5	2.6	92.4	38.3	39.1	73.4	30.3	33.1
Pens, fountain, stylographic, and gold	65	1,225	4,738,693	2,492,239	76.0	31.3	34.1	177.8	70.8	62.6	139.3	55.0	54.3
Type founding and printing materials	122	2,026	4,703,506	2,931,275	2.1	12.4	−9.1	19.6	19.5	0.1	10.1	4.1	5.8
Kaolin and ground earths	119	1,990	4,680,548	2,638,737	−5.0	−7.7	3.0	25.8	5.5	19.3	27.4	2.7	24.1
Labels and tags	96	2,313	4,669,965	2,759,626	206.8	71.6	78.8	322.6	89.7	122.8	284.9	83.4	109.9
Electroplating	461	2,717	4,509,559	3,304,374	30.2	39.8	−6.9	65.8	52.1	9.0	70.7	49.0	14.6
Sand and emery paper and cloth	10	611	4,357,792	1,975,334	123.0	100.3	11.3	270.6	195.1	25.6	299.2	368.2	−14.7
Moving pictures	16	506	4,206,448	2,014,323	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lasts	60	1,728	4,158,933	2,834,478	52.8	43.0	6.8	121.2	65.0	34.0	109.5	61.8	29.5
Clothing, horse	33	1,648	4,134,864	1,361,476	186.6	55.0	84.9	216.9	93.2	64.0	198.0	67.9	77.5
Whips	57	1,546	3,948,643	2,363,900	20.1	−0.5	20.7	44.4	25.5	15.1	62.4	24.8	30.1
Hand stamps and stencils and brands	361	1,651	3,673,025	2,545,722	12.3	9.6	2.4	40.7	30.7	7.7	30.7	22.8	6.5
Statuary and art goods	194	1,699	3,441,546	2,761,216	.....	12.7	.....	.....	42.4	.....	.....	36.4	.....
Tin foil	10	683	3,418,818	1,142,245	17.4	−10.8	31.6	114.6	22.3	75.5	120.0	25.9	74.8
Enameling and japanning	108	2,125	3,315,694	1,819,613	.....	.....	27.2	.....	.....	60.1	.....	.....	91.0
Wool scouring	28	1,142	3,289,215	1,167,113	58.6	46.6	8.2	269.6	212.3	18.3	67.7	39.3	20.4
Musical instruments and materials, not specified	187	1,822	3,228,108	2,338,508	24.2	−14.8	−11.1	4.9	−7.3	2.6	6.8	−0.6	7.4
Candles	16	539	3,130,521	954,419	.....	−33.9	.....	.....	−19.5	.....	.....	−2.5	.....
Jewelry and instrument cases	120	2,070	3,116,519	1,895,242	152.7	23.5	104.6	169.3	36.0	98.1	162.8	30.8	101.0
Screws, machine	43	1,667	3,014,112	1,853,634	7.1	−15.2	26.2	46.4	11.1	31.7	46.9	5.3	39.5
Iron and steel, doors and shutters	29	1,601	3,005,685	1,722,780	1,268.4	129.0	497.4	839.4	103.5	361.6	744.6	96.9	328.9
Gold and silver, leaf and foil	88	1,383	2,630,500	1,112,626	18.9	−1.4	20.6	−1.4	−2.4	1.1	4.7	−8.8	14.8
Paper patterns	27	921	2,610,714	1,964,744	10.3	−14.9	29.6	364.6	15.3	303.0	349.7	1.9	341.2
Carpets, rag	428	1,982	2,567,569	1,878,948	50.4	14.2	31.7	46.3	33.9	9.3	65.8	31.5	26.1
Ink, writing	47	505	2,505,414	1,427,406	77.2	17.4	50.9	93.7	33.2	45.5	98.2	39.5	42.1
Mats and matting	12	937	2,431,615	1,365,049	−21.7	49.9	−47.8	108.8	95.7	6.7	110.3	104.0	3.1
Furs, dressed	93	1,241	2,390,959	1,580,159	48.6	12.3	32.3	70.8	−25.7	129.7	79.5	0.4	78.9
Artists' materials	46	658	2,339,935	979,445	229.0	140.1	37.0	370.8	105.4	129.2	295.2	116.8	82.3
Foundry supplies	49	464	2,297,690	1,025,804	66.9	47.3	13.3	103.5	117.0	−6.2	104.8	136.4	−13.4
Fireworks	42	1,403	2,269,349	1,373,159	−14.3	−5.2	−9.6	27.1	14.2	11.3	18.7	12.7	5.3
Engraving and diesinking	253	1,308	2,249,861	1,899,097	35.7	−16.8	63.2	53.3	−7.1	65.0	50.1	−7.2	61.7
Haircloth	14	538	2,230,033	616,452	.....	.....	.....	.....	.....	.....	.....	.....	.....
Crucibles	12	335	1,849,326	760,144	−50.1	19.6	−58.3	−29.1	37.7	−48.5	−18.6	30.8	−37.8
Pulp goods	14	783	1,770,107	799,169	13.3	12.5	0.7	39.7	20.7	15.8	28.9	6.8	20.6
Oil, essential	68	290	1,737,234	481,756	72.6	119.7	−21.4	113.7	18.6	80.2	115.2	36.2	58.0
Grindstones	14	1,394	1,688,171	1,219,979	19.5	97.5	−39.5	55.0	114.2	−27.6	47.9	132.8	−36.5
Wheelbarrows	24	664	1,625,478	910,601	106.9	13.7	81.9	257.9	37.9	159.5	232.1	33.0	149.6
Cloth, sponging and refinishing	57	975	1,543,872	1,458,669	82.6	22.6	48.9	172.8	46.6	86.0	165.8	43.9	84.7
Axle grease	38	176	1,480,811	652,698	38.6	47.9	−6.3	106.3	68.5	22.4	82.4	27.8	42.7
Graphite and graphite refining	9	162	1,139,587	734,108	18.2	−25.7	59.1	165.7	233.3	−20.3	245.7	226.7	6.1
Bone, carbon, and lamp black	27	228	1,093,494	648,886	(2)	14.0	(2)	203.6	68.7	80.0	155.1	45.6	75.2
Bluing	82	313	1,074,231	580,489	42.3	51.9	−6.4	86.5	58.2	17.9	75.2	40.4	24.8
Card cutting and designing	68	525	1,031,392	657,279	61.5	−24.6	114.2	66.8	−4.8	75.2	115.4	8.6	98.4
Horseshoes, not made in steel works or rolling mills	19	293	1,014,576	658,722	26.8	26.3	0.4	103.8	−27.0	60.4	129.6	21.4	89.2
Vault lights and ventilators	37	327	956,720	618,390	137.0	47.3	60.9	183.1	97.7	43.2	214.2	91.6	64.0
Engravers' materials	18	129	920,727	311,674	(2)	(2)	(2)	226.6	438.6	−39.4	122.9	316.0	−46.4
Oil, castor	4	54	904,825	243,647	(2)	(2)	(2)	129.1	40.7	62.8	139.2	56.4	52.9
Charcoal	76	631	872,522	424,945	−64.7	−31.6	−48.3	−23.1	−32.5	13.9	−41.8	−34.8	−10.8
China decorating	40	328	786,293	475,176	10.1	45.8	−24.5	62.1	140.4	−32.6	70.9	116.9	−21.2
Clothing, men's, buttonholes	146	830	780,720	676,143	−12.1	−8.1	−4.3	14.7	11.6	2.8	16.0	11.7	3.8
Fire extinguishers, chemical	31	195	754,165	449,344	(2)	9.6	(2)	245.9	29.6	167.0	205.4	27.2	140.1
Engraving, wood	82	318	711,279	585,178	−5.4	−5.9	0.6	15.8	9.7	5.5	6.2	−0.5	6.7
Hammocks	15	272	578,505	267,259	−19.8	0.4	−20.1	20.4	29.3	−6.9	12.7	3.9	8.4
Pens, steel	5	699	576,696	481,430	47.8	5.4	40.2	96.3	21.7	61.2	99.2	29.9	53.3
Wood carpet	10	184	490,389	262,654	−69.7	−50.7	−33.7	−53.6	−38.8	−24.2	−59.0	−41.8	−29.6
Flax and hemp, dressed	16	164	467,346	131,046	−22.3	−23.4	1.4	193.7	34.6	118.2	92.6	14.9	67.5
Oakum	6	113	338,497	106,505	−33.9	−20.4	−17.0	−23.2	− 6.4	−18.0	−32.1	−11.7	−23.1
Fuel, manufactured	11	88	311,010	156,362	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hones and whetstones	18	152	267,932	157,935	−19.6	−30.9	16.4	36.7	−13.0	57.1	19.7	−22.9	55.3
Rules, ivory and wood	9	109	143,811	112,979	−48.8	−26.8	−30.0	−30.8	−42.2	19.7	−16.3	−41.8	43.7
Calcium lights	10	15	52,216	28,323	(2)	(2)	(2)	−56.3	−61.5	13.4	−66.7	−72.0	19.0
All other industries	8	96	390,206	275,154	.....	.....	.....	.....	.....	.....	.....	.....	.....

[1] A minus sign (−) denotes decrease.

[2] Percentage not shown where base is less than 100.

The following diagram shows graphically the value of products reported for the 48 leading industries in 1909 and 1899. It has been necessary to abbreviate some of the industry designations.

VALUE OF PRODUCTS FOR LEADING INDUSTRIES: 1909 AND 1899.



For reasons indicated in the introduction to this chapter, the statistics of some of the industries, as shown in this table, are more or less unsatisfactory as an index of the relative importance of the industries. For several of the industries shown in the table the figures given fall far short of presenting complete statistics for the branch of industry covered by the industry designation, for the reason that the same products are made or the same processes carried on to a considerable extent by establishments which were of necessity assigned to some other classification. Conspicuous examples are the industries designated as "glue," "candles," "lard, refined, not made in slaughtering and meat-packing establishments," "oleomargarine," "wire," "fertilizers," and "dyeing and finishing textiles." More than nine-tenths of the lard produced in the country and a large quantity of the oleomargarine, glue, and fertilizers are made by slaughtering and meat-packing establishments, and fertilizers are also made in cottonseed-oil mills. As already stated, almost as much wire was produced in 1909 by establishments classed as steel works and rolling mills as by establishments classified as engaged in the wire industry. The dyeing and finishing of textiles is carried on to a very considerable extent in the same establishments as the primary manufacturing process, so that the statistics for independent dyeing and finishing establishments fall far short of being a complete presentation for this branch of manufacturing. The industries above named are merely conspicuous examples of conditions that exist in a good many other cases as well.

Rank of industries in number of wage earners, value of products, and value added by manufacture.—Table 2 shows for each of the 259 industries for which figures are shown separately in the preceding table its rank in 1909 as determined by number of wage earners, value of products, and value added by manufacture, respectively, and also its rank according to value of products in 1904 and 1899. In addition it shows for 1909 the ratio which the value added by manufacture for each industry bore to the value of products. The industries are listed in the same order as in the preceding table, that is, according to their value of products in 1909.

The rank of some of the minor industries has comparatively little significance, but, since the industries in some cases rank very differently according to the three different standards used, it is desirable for the sake of clearness to include every industry. In considering the rank of the industries it should be borne in mind that, as already stated, some of the classifications represent in a sense groups of industries rather than individual industries, and that in some cases the data given by no means cover the entire operations of the branch of manufactures indicated by the industry designation.

RANK OF EACH INDUSTRY AND RELATION OF VALUE ADDED BY MANUFACTURE TO TOTAL VALUE OF PRODUCTS.

Table 2

INDUSTRY.	RANK. 1909: Wage earners (average number).	RANK. 1909: Value of products.	RANK. 1909: Value added by manufacture.	RANK. 1904: Value of products.	RANK. 1899: Value of products.	Per cent value added by manufacture formed of total value of products: 1909
All industries						41.3
Slaughtering and meat packing	16	1	13	1	2	12.2
Foundry and machine-shop products[1]	2	2	1	3	1	56.0
Lumber and timber products	1	3	2	2	3	56.0
Iron and steel, steel works and rolling mills	6	4	4	5	4	33.3
Flour-mill and gristmill products	37	5	18	4	5	13.1
Printing and publishing	5	6	3	6	6	72.7
Cotton goods, including cotton small wares	3	7	7	7	7	41.0
Clothing, men's, including shirts	7	8	6	8	8	47.6
Boots and shoes, including cut stock and findings	8	9	10	9	9	35.1
Woolen, worsted, and felt goods, and wool hats	9	10	15	11	11	35.1
Tobacco manufactures	10	11	8	10	10	57.5
Cars and general shop construction and repairs by steam-railroad companies	4	12	9	12	14	50.8
Bread and other bakery products	14	13	14	15	18	40.0
Iron and steel, blast furnaces	40	14	30	19	15	18.1
Clothing, women's	11	15	11	17	20	45.7
Smelting and refining, copper	70	16	43	18	19	12.0
Liquors, malt	28	17	5	13	13	74.2
Leather, tanned, curried, and finished	25	18	27	16	16	24.3
Butter, cheese, and condensed milk	61	19	51	24	22	14.2
Paper and wood pulp	19	20	21	20	24	38.2
Automobiles, including bodies and parts	20	21	17	77	150	47.2
Sugar, refining, not including beet sugar[2]	89	22	72	14	12	9.0
Furniture and refrigerators	13	23	16	22	23	54.7
Petroleum, refining	76	24	53	23	25	15.9
Electrical machinery, apparatus, and supplies	17	25	20	26	31	50.9
Liquors, distilled	102	26	12	29	29	82.4
Hosiery and knit goods	12	27	23	27	30	44.9
Copper, tin, and sheet-iron products[3]	21	28	25	32	35	43.7
Silk and silk goods, including throwsters	15	29	24	28	26	45.3
Smelting and refining, lead	97	30	87	21	17	9.2
Gas, illuminating and heating	42	31	19	31	36	68.6
Carriages and wagons and materials	22	32	28	25	21	48.7
Canning and preserving	26	33	33	30	28	35.2

[1] "Foundry and machine-shop products" for 1899 includes "stoves and furnaces, including gas and oil stoves," and "locomotives, not made by railroad companies."
[2] "Sugar, refining, not including beet sugar," for 1904 and 1899 includes "sugar and molasses," also some establishments compounding table sirup which were included under "food preparations" in 1909.
[3] Includes for 1909 some establishments manufacturing enameled stamped ware which were included under "enameling and japanning" for 1904 and 1899.

RANK OF EACH INDUSTRY AND RELATION OF VALUE ADDED BY MANUFACTURE TO TOTAL VALUE OF PRODUCTS—Continued.

Table 2—Continued.

INDUSTRY.	RANK. 1909: Wage earners (average number).	1909: Value of products.	1909: Value added by manufacture.	1904: Value of products.	1899: Value of products.	Per cent value added by manufacture formed of total value of products: 1909
Brass and bronze products	33	34	37	36	34	33.8
Oil, cottonseed, and cake	66	35	61	37	44	19.0
Agricultural implements	29	36	26	34	27	58.8
Patent medicines and compounds and druggists' preparations	56	37	22	33	33	64.5
Confectionery	30	38	35	39	42	39.8
Rubber goods, not elsewhere specified[1]	50	39	40	52	47	36.0
Food preparations[2]	71	40	48	55	59	33.0
Paint and varnish	74	41	42	38	38	36.7
Cars, steam-railroad, not including operations of railroad companies	32	42	44	35	32	36.4
Chemicals[3]	55	43	36	45	41	45.5
Marble and stone work[4]	24	44	29	40	40	66.9
Soap[5]	79	45	50	48	46	35.2
Coffee and spice, roasting and grinding[6]	95	46	62	41	39	24.7
Leather goods	44	47	45	43	43	42.7
Fertilizers	62	48	55	58	53	33.1
Coke	48	49	57	60	60	33.1
Brick and tile	18	50	31	46	48	74.4
Glass	23	51	32	44	45	65.1
Musical instruments, pianos and organs and materials	41	52	41	49	58	51.3
Furnishing goods, men's[1]	39	53	52	63	54	44.0
Millinery and lace goods[1]	38	54	49	62	64	47.6
Wire	63	55	68	65	112	28.3
Dyeing and finishing textiles	31	56	39	61	52	57.8
Jewelry	47	57	46	59	51	54.4
Stoves and furnaces, including gas and oil stoves	43	58	38	53	(7)	62.8
Pottery, terra-cotta, and fire-clay products	27	59	34	51	55	71.2
Shipbuilding, including boat building	34	60	47	42	37	57.4
Carpets and rugs, other than rag	45	61	59	54	50	44.4
Cement	49	62	56	78	(8)	53.6
Cordage and twine and jute and linen goods	52	63	77	50	49	32.9
Cooperage and wooden goods, not elsewhere specified	51	64	71	57	56	38.7
Fur goods	82	65	66	67	71	43.2
Paper goods, not elsewhere specified	59	66	69	71	72	43.4
Bags, other than paper	94	67	112	66	81	15.5
Boxes, fancy and paper	35	68	60	68	68	52.8
Cutlery and tools, not elsewhere specified	46	69	54	64	66	65.7
Boots and shoes, rubber	64	70	76	47	57	40.5
Glucose and starch	126	71	93	74	63	24.4
Beet sugar	98	72	73	87	127	43.3
Tin plate and terneplate	112	73	138	70	62	12.7
Hats, fur-felt	53	74	64	69	67	53.8
Gas and electric fixtures and lamps and reflectors	60	75	65	84	80	54.6
Mineral and soda waters	78	76	63	76	73	62.2
Ice, manufactured	69	77	58	89	97	73.7
Silverware and plated ware	67	78	70	73	70	56.6
Wirework, including wire rope and cable	80	79	79	72	79	41.8
Explosives	105	80	80	80	88	43.2
Malt	185	81	118	75	82	20.4
Oil, linseed	197	82	143	83	69	15.5
Mattresses and spring beds	85	83	88	82	87	42.8
Clocks and watches, including cases and materials	54	84	67	79	74	68.4
Smelting and refining, zinc	101	85	108	86	86	26.2
Firearms and ammunition	73	86	81	81	85	50.1
Corsets	65	87	78	106	92	53.0
Cars and general shop construction and repairs by street-railroad companies	57	88	83	112	113	52.5
Locomotives, not made by railroad companies	72	89	84	56	(7)	52.3
Iron and steel pipe, wrought	100	90	115	102	76	25.7
Oil, not elsewhere specified	187	91	105	90	83	30.6
Sugar and molasses	136	92	107	(2)	(2)	30.5
Sewing machines, cases, and attachments	58	93	82	85	77	59.5
Smelting and refining, not from the ore	170	94	151	101	123	17.5
Turpentine and rosin	36	95	74	88	78	80.6
Belting and hose, woven and rubber	104	96	100	98	130	41.3
Coffins, burial cases, and undertakers' goods	91	97	90	92	96	51.2
Iron and steel, bolts, nuts, washers, and rivets, not made in steel works or rolling mills	84	98	94	109	95	47.7
Artificial flowers and feathers and plumes	86	99	99	173	137	43.2
Cash registers and calculating machines	96	100	75	133	143	85.0
Belting and hose, leather	153	101	113	111	107	34.1
Gloves and mittens, leather	83	102	98	99	89	44.1
Gold and silver, reducing and refining, not from the ore	233	103	213	97	103	6.9
Grease and tallow	130	104	116	96	102	33.6
Oilcloth and linoleum	117	105	117	107	104	33.4
Buttons	68	106	89	123	124	58.0
Fancy articles, not elsewhere specified	81	107	92	100	100	54.2
Photographic apparatus and materials	119	108	85	117	122	70.3
Chocolate and cocoa products	156	109	125	110	111	30.7
Rice, cleaning and polishing	205	110	182	104	117	12.8
Wood, turned and carved	75	111	91	93	93	56.1
Hats, straw	92	112	102	128	(9)	46.5
Baking powders and yeast	169	113	96	95	91	55.1
Iron and steel forgings	93	114	101	121	108	49.5
Babbitt metal and solder	215	115	174	116	114	17.7
Typewriters and supplies	88	116	86	127	129	79.3
Roofing materials	161	117	129	94	98	35.1
Artificial stone	87	118	95	187	(4)	62.1
Window shades and fixtures	139	119	141	139	119	31.9
House-furnishing goods, not elsewhere specified	121	120	134	105	94	33.2
Lime[8]	77	121	97	108	65	62.5
Stationery goods, not elsewhere specified	106	122	109	141	147	53.5
Glass, cutting, staining, and ornamenting	90	123	103	115	116	61.2
Dyestuffs and extracts	164	124	132	125	126	39.3
Umbrellas and canes	111	125	142	113	99	36.6
Bags, paper	150	126	147	131	131	34.0
Dairymen's, poulterers', and apiarists' supplies	122	127	106	158	(10)	60.6
Brushes[11]	99	128	122	91	84	51.1
Blacking and cleansing and polishing preparations	162	129	119	142	133	52.6
Awnings, tents, and sails	131	130	136	121	115	42.2
Wall paper	138	131	126	120	106	47.2
Brooms	118	132	139	(11)	(11)	41.9
Wood preserving	163	133	152	194	186	33.8
Glue	149	134	133	132	144	45.1
Hats and caps, other than felt, straw, and wool[9]	107	135	124	118	75	51.1
Signs and advertising novelties	110	136	110	(10)	(10)	65.2
Looking-glass and picture frames	109	137	114	114	105	59.0
Liquors, vinous	180	138	131	124	134	49.5
Upholstering materials	137	139	150	119	110	38.2
Wall plaster	125	140	127	130	(8)	53.1
Surgical appliances and artificial limbs	132	141	123	153	151	56.7
Steam packing	140	142	145	138	170	45.3
Optical goods	103	143	121	163	146	64.3
Phonographs and graphophones	118	144	111	129	187	73.6
Photo-engraving	113	145	104	154	156	81.6
Saws	123	146	130	134	135	57.4
Waste	181	147	192	144	148	22.5
Matches	141	148	128	168	138	59.5
Salt	120	149	135	135	121	54.1
Hair work	145	150	148	218	199	45.8
Sporting and athletic goods	114	151	146	157	169	49.6
Dentists' materials	193	152	189	147	167	25.2
Bicycles, motorcycles, and parts	129	153	144	175	61	52.5
Instruments, professional and scientific	124	154	120	172	149	72.2
Lard, refined, not made in slaughtering and meat-packing establishments	234	155	235	162	118	6.7
Sulphuric, nitric, and mixed acids	168	156	157	137	(3)	45.5
Wood distillation, not including turpentine and rosin	159	157	170	146	(3)	39.7
Peanuts, grading, roasting, cleaning, and shelling	178	158	224	156	(6)	11.5

[1] "Furnishing goods, men's," for 1909 includes some establishments manufacturing suspenders, garters, and elastic woven goods which in 1904 and 1899 were classified under "rubber goods, not elsewhere specified," or under "millinery and lace goods."
[2] "Sugar, refining, not including beet sugar," for 1904 and 1899 includes "sugar and molasses;" also some establishments compounding table sirup which were included under "food preparations," in 1909.
[3] "Chemicals" for 1899 includes "sulphuric, nitric, and mixed acids" and "wood distillation, not including turpentine and rosin."
[4] "Marble and stone work" for 1899 includes "artificial stone."
[5] Includes "candles" for 1899.
[6] "Coffee and spice, roasting and grinding," for 1899 includes "peanuts, grading, roasting, cleaning, and shelling."
[7] Included under "foundry and machine-shop products."
[8] "Lime" for 1899 includes "cement" and "wall plaster."
[9] "Hats and caps, other than felt, straw, and wool," for 1899 includes "hats, straw."
[10] Included under other classifications.

RANK OF EACH INDUSTRY AND RELATION OF VALUE ADDED BY MANUFACTURE TO TOTAL VALUE OF PRODUCTS—Continued.

Table 2—Continued.

INDUSTRY.	RANK. 1909 Wage earners (average number).	1909 Value of products.	1909 Value added by manufacture.	1904 Value of products.	1899 Value of products.	Per cent value added by manufacture formed of total value of products: 1909
Cordials and sirups	210	159	160	192	190	44.7
Mirrors	154	160	172	151	120	38.3
Lapidary work	224	161	191	150	141	28.5
Lead, bar, pipe, and sheet	217	162	209	136	125	19.0
Springs, steel, car and carriage	151	163	162	166	142	47.5
Models and patterns, not including paper patterns	133	164	140	182	163	67.6
Ink, printing	209	165	154	165	174	52.9
Flavoring extracts	206	166	158	149	136	49.5
Carriages and sleds, children's	116	167	155	161	155	53.1
Scales and balances	144	168	137	164	145	69.2
Boxes, cigar	108	169	164	148	140	49.2
Safes and vaults	148	170	149	145	161	59.5
Vinegar and cider	195	171	175	155	139	41.2
Toys and games	115	172	153	170	158	57.0
Hat and cap materials	165	173	183	159	162	34.7
Butter, reworking	240	174	232	152	189	9.5
Iron and steel, nails and spikes, cut and wrought, including wire nails, not made in steel works or rolling mills	158	175	163	140	90	51.5
Oleomargarine	226	176	211	171	101	20.3
Flags, banners, regalia, society badges and emblems	143	177	161	169	157	53.0
Cars, street-railroad, not including operations of railroad companies	142	178	173	126	128	45.4
Shoddy	174	179	198	143	132	32.8
Pencils, lead	135	180	171	185	188	51.3
Galvanizing	198	181	214	160	184	22.1
Show cases	147	182	168	167	185	56.2
Emery and other abrasive wheels	179	183	167	214	201	60.5
Needles, pins, and hooks and eyes	128	184	159	180	173	65.2
Windmills	166	185	177	179	153	50.1
Soda-water apparatus	184	186	165	181	175	62.7
Stereotyping and electrotyping	155	187	156	178	164	72.3
Paving materials	199	188	188	177	159	44.2
Screws, wood	146	189	169	213	181	62.8
Drug grinding	213	190	193	176	154	42.5
Cork, cutting	152	191	196	183	152	42.2
Billiard tables and materials	196	192	195	211	196	42.7
Washing machines and clothes wringers	182	193	180	190	165	51.3
Baskets, and rattan and willow ware	127	194	176	174	168	59.0
Files	134	195	166	186	171	72.0
Pumps, not including steam pumps	171	196	179	198	202	55.5
Pipes, tobacco	157	197	184	199	183	53.7
Wool pulling	223	198	226	230	223	20.8
Mucilage and paste	228	199	212	191	182	33.2
Pens, fountain, stylographic, and gold	207	200	197	202	195	52.6
Type founding and printing materials	175	201	181	188	160	62.3
Kaolin and ground earths	176	202	190	184	166	56.4
Labels and tags	167	203	187	206	211	59.1
Electroplating	160	204	178	197	177	73.3
Sand and emery paper and cloth	225	205	202	219	206	45.3
Moving pictures	230	206	201	(1)	(1)	47.9
Lasts	186	207	185	205	192	68.2
Clothing, horse	191	208	220	212	203	32.9
Whips	194	209	199	196	176	59.9
Hand stamps and stencils and brands	190	210	194	200	179	69.3
Statuary and art goods	188	211	186	208	(2)	80.2
Tin foil	220	212	223	201	197	33.4
Enameling and japanning [3]	172	213	208	103	109	54.9
Wool scouring	208	214	222	229	214	35.5
Musical instruments and materials, not specified	183	215	200	193	172	72.4
Candles	227	216	229	189	(4)	30.5
Jewelry and instrument cases	173	217	205	209	208	60.8
Screws, machine	189	218	207	203	191	61.5
Iron and steel, doors and shutters	192	219	210	219	234	57.3
Gold and silver, leaf and foil	202	220	225	204	178	42.3
Paper patterns	214	221	203	210	222	75.3
Carpets, rag	177	222	206	216	194	73.2
Ink, writing	231	223	217	217	204	57.0
Mats and matting	212	224	219	224	207	56.1
Furs, dressed	204	225	215	195	200	66.1
Artists' materials	222	226	228	226	225	41.9
Foundry supplies	232	227	227	228	210	44.6
Fireworks	200	228	218	215	193	60.5
Engraving and diesinking	203	229	204	207	198	84.4
Haircloth	228	230	242	(2)	(2)	27.6
Crucibles	235	231	233	222	180	41.1
Pulp goods	218	232	231	220	205	45.1
Oil, essential	242	233	245	221	215	27.7
Grindstones	201	234	221	234	212	72.3
Wheelbarrows	221	235	230	225	228	56.0
Cloth, sponging and refinishing	211	236	216	229	221	94.5
Axle grease	247	237	239	231	216	44.1
Graphite and graphite refining	249	238	234	245	230	64.4
Bone, carbon, and lamp black	244	239	240	237	232	59.3
Bluing	239	240	244	236	220	54.0
Card cutting and designing	229	241	238	227	218	63.7
Horseshoes, not made in steel works or rolling mills	241	242	237	233	224	64.9
Vault lights and ventilators	237	243	241	240	233	64.6
Engravers' materials	251	244	250	249	236	33.8
Oil, castor	255	245	253	238	231	26.9
Charcoal	223	246	249	223	209	48.7
China decorating	236	247	247	246	226	60.4
Clothing, men's, buttonholes	216	248	236	235	217	86.6
Fire extinguishers, chemical	245	249	248	239	237	59.6
Engraving, wood	238	250	243	237	219	82.3
Hammocks	243	251	251	242	227	46.2
Pens, steel	219	252	246	241	235	83.5
Wood carpet	246	253	252	232	213	53.6
Flax and hemp, dressed	248	254	256	244	240	28.0
Oakum	252	255	258	243	229	31.5
Fuel, manufactured	254	256	255	(1)	(1)	50.3
Hones and whetstones	250	257	254	247	239	58.9
Rules, ivory and wood	253	258	257	248	238	78.6
Calcium lights	256	259	259	250	241	54.2

[1] Industry not reported.
[2] Included under other classifications.
[3] Includes for 1904 and 1899 some establishments manufacturing enameled stamped ware which are included under "copper, tin, and sheet-iron products" for 1909.
[4] Included under "soap."

From certain standpoints the number of wage earners and the value added by manufacture constitute better measures of the relative importance of manufacturing industries than the 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 the manufacturer's profit to the cost of materials. In other words, the farm, the forest, the mine, or the sea—or perhaps manufacturing establishments in other industries which furnished partly finished materials—have chiefly contributed to the total value of products of such industries. Moreover, in some of the industries there is much greater duplication in the total value of products than in others, as the result of the use of the products of one establishment in the industry as materials for other

establishments. This duplication, of course, does not appear in the value added by manufacture or in the number of wage earners. In a few industries, however, there is considerable duplication in the value added by manufacture, due to the method of reporting contract work (see Chapter I).

Some of the industries that hold a very high rank in value of products rank comparatively low in value added by manufacture; usually where this is the case they also rank low in number of wage earners. In such industries the cost of materials represents a large proportion of the total value of products, and therefore the value added by manufacture, of which wages usually constitute the largest factor, is not commensurate with the total value of products.

There are three industries which in 1909 reported a value of products exceeding a billion dollars, namely, the slaughtering and meat-packing, foundry and machine-shop, and lumber industries. There are six others whose products exceeded half a billion dollars in value, namely, the steel works and rolling mills, the flour-mill and gristmill industry, printing and publishing, and the manufacture of cotton goods, of men's clothing, and of boots and shoes. Some of these leading industries, however, ranked quite differently with respect to number of wage earners or value added by manufacture. Thus the slaughtering and meat-packing industry, which ranked first in value of products, and the flour-mill and gristmill industry, which ranked fifth in that respect, both held a comparatively low rank in number of wage earners and value added by manufacture. On the other hand, the lumber industry, which ranked third with respect to value of products, ranked first with respect to number of wage earners and second with respect to value added by manufacture, and the foundry and machine-shop industry ranked first with respect to value added by manufacture, but second both in number of wage earners and in value of products. The blast-furnace industry, the smelting and refining of copper, the refining of sugar, the manufacture of butter, cheese, and condensed milk, and the refining of petroleum are other important industries which ranked much higher in value of products than in average number of wage earners or value added by manufacture.

Among the important industries, on the other hand, which have decidedly higher rank in average number of wage earners and value added by manufacture than in value of products are the furniture and refrigerator, marble and stone work, agricultural implement, brick and tile, glass, and piano and organ industries.

The foundry and machine-shop industry, the lumber industry, the steel works and rolling mills, the printing and publishing industry, and the manufacture of cotton goods, of men's clothing, and of boots and shoes all ranked in 1909 among the first 10 industries of the country, according to each of the three standards used.

It may be noted at this point that there are a few industries whose products are subject to special taxation by the Federal Government in the form of internal revenue taxes and that the amount of such taxes is included (at least substantially) both in the value of products and in the value added by manufacture. The principal industries subject to internal revenue taxes are "liquors, distilled," "liquors, malt," "tobacco manufactures," "oleomargarine," and "butter, reworking." While the cost of the products of these industries to the public ordinarily includes the full amount of the Federal tax, from the standpoint of the consumption of materials and the employment of labor the importance of these industries can not be judged properly from either the value of products or the value added by manufacture. The taxes imposed in the case of tobacco products, oleomargarine, and reworked or "process" butter are not sufficiently high to make any extraordinary difference between the ranking of the industries producing them according to value of products and value added by manufacture, on the one hand, and their ranking according to number of wage earners on the other. The manufacture of distilled liquors, however, although ranking twenty-sixth among the industries in value of products in 1909 and twelfth in value added by manufacture, ranked one hundred and second in number of wage earners, while the manufacture of malt liquors ranked seventeenth, fifth, and twenty-eighth, respectively.

Comment upon the changes between 1899 and 1909 in the rank of industries, as judged by value of products, must be confined to the larger industries. Among those with products in 1909 valued at more than $25,000,000, that showing the most conspicuous advance in rank is the automobile industry, which ranked one hundred and fiftieth in value of products in 1899 and twenty-first in 1909. Other industries of this group showing notable advances are the wire and beet sugar industries, smelting and refining other than from the ore, the street-railroad repair shops ("cars and general shop construction and repairs by street-railroad companies"), and the manufactured ice industry. On the other hand, several industries having products valued at more than $25,000,000 occupied a lower rank as regards value of products in 1909 than 10 years earlier, among these being the smelting and refining of lead, the carriage and wagon and the shipbuilding industries, and the manufacture of carpets and rugs, other than rag, of cordage and twine and jute and linen goods, and of rubber boots and shoes.

Percentages which selected industries contribute to totals for all industries.—It is scarcely worth while to show for every one of the 259 industries for which separate statistics can be given the percentages which its wage earners, value of products, and value added by manufacture form of the totals for these items for all industries combined. For scores of industries the proportions would be less than one-tenth of 1 per cent. The following table therefore relates only to selected

industries. It includes every industry which in 1909 reported 1 per cent or more of the total value of products, or of the total value added by manufacture, or of the total number of wage earners. In some cases an industry which reported more than 1 per cent of one of these items reported less than 1 per cent of one of the other items, this being notably the case with the sugar, petroleum, and distillery industries, which gave employment to very small proportions of the total number of wage earners in manufacturing industries in 1909. The industries in the table are listed in the order of their gross value of products.

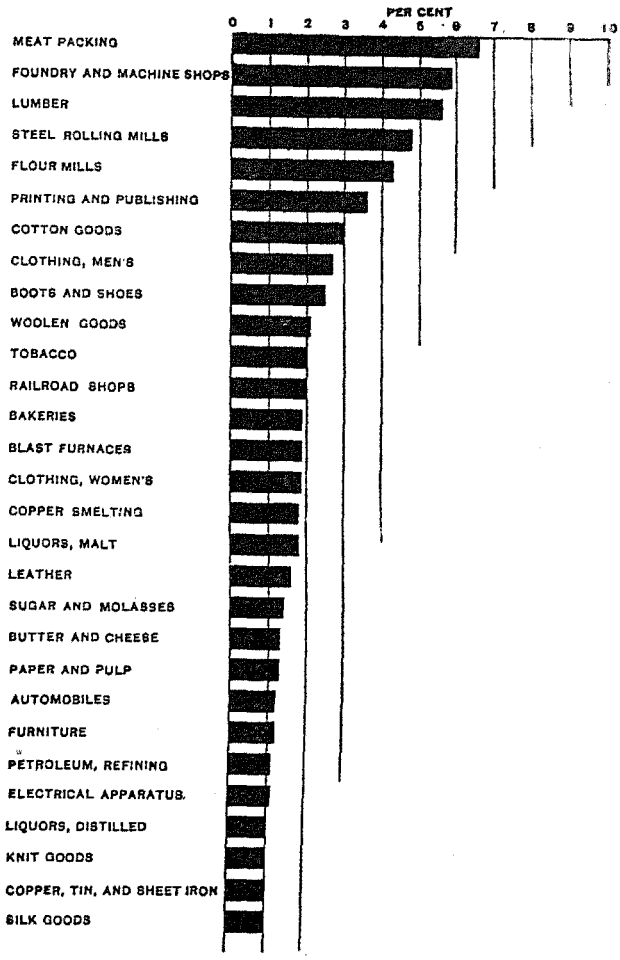
Table 3

INDUSTRY.	PER CENT OF TOTAL: 1909		
	Wage earners (average number).	Value of products.	Value added by manufacture.
All industries	**100.0**	**100.0**	**100.0**
Slaughtering and meat packing	1.4	6.6	2.0
Foundry and machine-shop products	8.0	5.9	8.1
Lumber and timber products	10.5	5.6	7.6
Iron and steel, steel works and rolling mills	3.6	4.8	3.8
Flour-mill and gristmill products	0.6	4.3	1.4
Printing and publishing	3.9	3.6	6.3
Cotton goods, including cotton small wares	5.7	3.0	3.0
Clothing, men's, including shirts	3.6	2.7	3.2
Boots and shoes, including cut stock and findings	3.0	2.5	2.1
Woolen, worsted, and felt goods, and wool hats	2.6	2.1	1.8
Tobacco manufactures	2.5	2.0	2.8
Cars and general shop construction and repairs by steam-railroad companies	4.3	2.0	2.4
Bread and other bakery products	1.5	1.9	1.9
Iron and steel, blast furnaces	0.6	1.9	0.8
Clothing, women's	2.3	1.9	2.1
Smelting and refining, copper	0.2	1.8	0.5
Liquors, malt	0.8	1.8	3.3
Leather, tanned, curried, and finished	0.9	1.6	0.9
Sugar, refining, not including beet sugar	0.2	1.4	0.4
Butter, cheese, and condensed milk	0.3	1.3	0.5
Paper and wood pulp	1.1	1.3	1.2
Automobiles, including bodies and parts	1.1	1.2	1.4
Furniture and refrigerators	1.9	1.2	1.5
Petroleum, refining	0.2	1.1	0.4
Electrical machinery, apparatus, and supplies	1.3	1.1	1.3
Liquors, distilled	0.1	1.0	2.0
Hosiery and knit goods	2.0	1.0	1.1
Copper, tin, and sheet-iron products	1.1	1.0	1.0
Silk and silk goods, including throwsters	1.5	1.0	1.0
Gas, illuminating and heating	0.6	0.8	1.3
Carriages and wagons and materials	1.1	0.8	0.9
Agricultural implements	0.8	0.7	1.0
Patent medicines and compounds and druggists' preparations	0.3	0.7	1.1
Marble and stone work	1.0	0.5	0.9
Brick and tile	1.2	0.4	0.8
Glass	1.0	0.4	0.7

A considerable disparity, for reasons already indicated, often appears between the percentages in the different columns. For example, the slaughtering and meat-packing industry, while it contributed 6.6 per cent of the total value of manufactured products in 1909, gave employment to only 1.4 per cent of the total number of wage earners in manufacturing industries and contributed only 2 per cent of the total value added by manufacture, while, on the other hand, the lumber industry employed a much larger proportion of the total number of wage earners than it contributed to the total value of products.

The following diagram shows graphically the percentage of the total value of products for all industries combined reported for the leading industries in 1909. It may be noted that it has been necessary in this diagram to abbreviate some of the industry designations.

PERCENTAGE OF TOTAL VALUE OF PRODUCTS REPORTED FOR LEADING INDUSTRIES: 1909.



Relative growth of industries: 1899–1909.—Table 1 shows for each of the 259 industries for which separate statistics can be shown, so far as comparable figures for the three censuses are available, the percentages of increase in the number of wage earners, value of products, and value added by manufacture between 1899 and 1909, and also for the periods 1899–1904 and 1904–1909. Nearly all of the industries show more or less increase in each of these items for the decade and for each of the five-year periods, and in most cases the increases have been large, particularly in value of products. It is impossible to comment upon any considerable proportion of the 259 industries listed in the table. For convenience, the discussion is confined chiefly to the 48 industries which in 1909 had products valued at $100,000,000 or over. The absolute amounts of the increase for the decade, as well as the percentages, are significant in the case of these large industries. Table 4, therefore, shows both absolute and relative increases, as well as the number of wage earners, value of products, and value added by manufacture for each industry for 1909 and 1899.

INCREASE IN WAGE EARNERS, VALUE OF PRODUCTS AND VALUE ADDED BY MANUFACTURE FOR LEADING INDUSTRIES: 1899 TO 1909.

NOTE.—The figures for the following industries given in this table do not agree with those in other tables, because a combination of industries and other adjustments were necessary in order to make the totals for the two censuses more exactly comparable:

Chemicals.—The totals for 1909 include the figures for "sulphuric, nitric, and mixed acids" and "wood distillation, not including turpentine and rosin," which are shown as separate industries in other tables. These industries were included with "chemicals" in 1899.

Coffee and spice, roasting and grinding.—The totals for 1909 include the figures for "peanuts, grading, roasting, cleaning, and shelling," which is shown as a separate industry in other tables. This industry was included with "coffee and spice, roasting and grinding," in 1899.

Foundry and machine-shop products.—The totals for 1909 include the figures for "stoves and furnaces, including gas and oil stoves" and "locomotives, not made by railroad companies," which are shown as separate industries in other tables. These industries were included with "foundry and machine-shop products" in 1899.

Marble and stone work.—The totals for 1909 include the figures for "artificial stone," which is shown as a separate industry in other tables. This industry was included with "marble and stone work" in 1899.

Soap.—The totals for 1909 include the figures for "candles," which is shown as a separate industry in other tables. This industry was included with "soap" in 1899.

Sugar and molasses, not including beet sugar.—The totals for 1909 include the figures for "sugar, refining, not including beet sugar" and "sugar and molasses," which are shown as separate industries in most of the other tables. These industries were not reported separately in 1899.

Table 4

INDUSTRY.	WAGE EARNERS (AVERAGE NUMBER).				VALUE OF PRODUCTS.				VALUE ADDED BY MANUFACTURE.			
	1909	1899	Increase.[1] Number.	Increase.[1] Per cent.	1909	1899	Increase.[1] Amount.	Increase.[1] Per cent.	1909	1899	Increase.[1] Amount.	Increase.[1] Per cent.
All industries	**6,615,046**	**4,712,763**	**1,902,283**	**40.4**	**$20,672,051,870**	**$11,406,926,701**	**$9,265,125,169**	**81.2**	**$8,529,260,992**	**$4,831,075,210**	**$3,698,185,782**	**76.5**
Agricultural implements	50,551	46,582	3,969	8.5	146,329,268	101,207,428	45,121,840	44.6	86,022,749	57,262,800	28,759,949	50.2
Automobiles, including bodies and parts	75,721	2,241	73,480	3,278.9	249,202,075	4,748,011	244,454,064	5,148.6	117,556,339	2,943,724	114,612,615	3,893.1
Boots and shoes, including cut stock and findings	198,297	151,231	47,066	31.1	512,797,642	290,047,087	222,750,555	76.8	180,059,429	98,591,560	81,467,869	82.6
Brass and bronze products	40,618	27,166	13,452	49.5	149,989,058	88,653,987	61,335,071	69.2	50,760,646	27,464,663	23,295,983	84.8
Bread and other bakery products	100,216	60,192	40,024	66.5	396,864,844	175,368,682	221,496,162	126.3	158,831,181	80,316,730	78,514,451	97.8
Butter, cheese, and condensed milk	18,431	12,799	5,632	44.0	274,557,718	130,783,349	143,774,369	109.9	39,011,654	21,942,149	17,069,505	77.8
Canning and preserving	59,968	57,012	2,956	5.2	157,101,201	99,335,464	57,765,737	58.2	55,278,142	35,667,896	19,610,246	55.0
Carriages and wagons and materials	69,928	73,812	−3,884	−5.3	159,892,547	138,261,763	21,630,784	15.6	77,941,259	71,489,844	6,451,415	9.0
Cars and general shop construction and repairs by steam-railroad companies	282,174	173,595	108,579	62.5	405,600,727	218,113,658	187,487,069	86.0	206,187,315	108,641,305	97,546,010	89.8
Cars, steam-railroad, not including operations of railroad companies	43,096	33,453	9,633	28.8	123,729,627	90,510,180	33,219,447	36.7	44,976,766	28,767,433	16,209,333	56.3
Chemicals	28,687	19,020	9,667	50.8	137,309,942	62,637,008	74,672,934	119.2	61,926,727	28,091,146	33,835,581	120.4
Clothing, men's, including shirts	239,696	157,549	82,147	52.1	568,076,635	323,838,887	244,237,748	75.4	270,561,189	155,669,525	114,891,664	73.8
Clothing, women's	153,743	83,739	70,004	83.6	384,751,649	159,339,539	225,412,110	141.5	175,963,423	74,634,947	101,328,476	135.8
Coffee and spice, roasting and grinding	9,439	6,387	3,052	47.8	120,269,338	69,527,108	50,742,230	73.0	28,452,176	14,414,905	14,037,271	97.4
Confectionery	44,638	26,866	17,772	66.1	134,795,913	60,643,946	74,151,967	122.3	53,645,140	25,289,738	28,355,402	112.1
Copper, tin, and sheet-iron products[2]	73,615	38,317	35,298	92.1	199,824,218	78,359,069	121,465,149	155.0	87,241,945	35,757,319	51,484,626	144.0
Cotton goods, including cotton small wares	378,880	302,861	76,019	25.1	628,391,813	339,200,320	289,191,493	85.3	257,382,343	162,648,793	94,733,550	58.2
Electrical machinery, apparatus, and supplies	87,256	42,013	45,243	107.7	221,308,563	92,434,435	128,874,128	139.4	112,742,159	42,976,163	69,765,996	162.3
Fertilizers	18,310	11,581	6,729	58.1	103,960,213	44,657,385	59,302,828	132.8	34,438,293	15,698,912	18,739,381	119.4
Flour-mill and gristmill products	39,453	32,226	7,227	22.4	883,584,405	501,396,304	382,188,101	76.2	116,007,926	73,279,547	42,728,379	58.3
Food preparations[3]	14,968	8,214	6,754	82.2	125,331,181	39,836,882	85,494,299	214.6	41,389,032	15,060,257	26,328,775	174.8
Foundry and machine-shop products	583,050	426,985	156,065	36.6	1,338,910,773	798,454,071	540,456,702	67.7	754,501,390	435,418,012	319,083,378	73.3
Furniture and refrigerators	128,452	90,591	37,861	41.8	239,886,506	130,633,872	109,252,634	83.6	131,111,664	73,227,723	57,883,941	79.0
Gas, illuminating and heating	37,215	22,459	14,756	65.7	166,814,371	75,716,693	91,097,678	120.3	114,386,527	55,111,337	59,275,190	107.6
Hosiery and knit goods	129,275	83,691	45,584	54.5	200,143,527	95,833,692	104,309,835	108.8	89,902,474	44,638,362	45,264,112	101.4
Iron and steel, blast furnaces	38,429	39,241	−812	−2.1	391,429,283	206,756,557	184,672,726	89.3	70,791,394	75,252,902	−4,461,508	−5.9
Iron and steel, steel works and rolling mills	240,676	183,249	56,827	31.0	985,722,534	597,211,716	388,510,818	65.1	328,221,678	206,316,439	121,905,239	59.1
Leather goods	34,907	29,274	5,633	19.2	104,719,008	60,414,008	44,305,000	73.3	44,692,240	27,219,432	17,472,808	64.2
Leather, tanned, curried, and finished	62,202	52,109	10,093	19.4	327,874,187	204,038,127	123,836,060	60.7	79,595,254	49,038,123	30,557,131	62.3
Liquors, distilled	6,430	3,720	2,710	72.8	204,699,412	96,793,681	107,905,731	111.5	168,722,519	81,648,318	87,074,201	106.6
Liquors, malt	54,579	39,459	15,120	38.3	374,730,096	236,914,914	137,815,182	58.2	278,134,460	185,316,667	92,817,793	50.1
Lumber and timber products	695,019	508,766	186,253	36.6	1,156,128,747	760,992,360	395,136,387	51.9	648,011,168	396,028,519	251,982,649	63.6
Marble and stone work	75,560	41,686	33,874	81.3	131,688,655	63,667,234	68,021,421	106.8	87,248,579	42,121,424	45,127,155	107.1
Oil, cottonseed, and cake	17,071	11,007	6,064	55.1	147,867,894	58,726,632	89,141,262	151.8	28,034,419	13,560,809	14,473,610	106.7
Paint and varnish	14,240	9,697	4,543	46.8	124,889,422	69,562,235	55,327,187	79.5	45,873,867	24,823,718	21,050,149	84.8
Paper and wood pulp	75,978	49,646	26,332	53.0	267,656,964	127,326,162	140,330,802	110.2	102,214,623	56,795,926	45,418,697	80.0
Patent medicines and compounds and druggists' preparations	22,895	19,028	3,867	20.3	141,941,602	88,790,774	53,150,828	59.9	91,565,937	56,840,884	34,725,053	61.1
Petroleum, refining	13,929	12,199	1,730	14.2	236,997,659	123,929,384	113,068,275	91.2	37,724,257	21,070,043	16,654,214	79.0
Printing and publishing	258,434	195,260	63,174	32.4	737,876,087	395,186,629	342,689,458	86.7	536,101,497	291,532,345	244,569,152	83.9
Rubber goods, not elsewhere specified[4]	26,521	20,404	6,117	30.0	128,435,747	52,621,830	75,813,917	144.1	46,243,926	19,139,516	27,104,410	141.6
Silk and silk goods, including throwsters	99,037	65,416	33,621	51.4	196,911,667	107,256,258	89,655,409	83.6	89,144,751	44,849,593	44,295,158	98.8
Slaughtering and meat packing	89,728	69,264	20,464	29.5	1,370,568,101	788,367,647	582,200,454	73.8	167,740,317	103,057,548	64,682,769	62.8
Smelting and refining, copper	15,628	11,324	4,304	38.0	378,805,974	165,131,670	213,674,304	129.4	45,274,336	42,957,541	2,316,795	5.4
Smelting and refining, lead	7,424	8,319	−895	−10.8	167,405,650	175,466,304	−8,060,654	−4.6	15,442,628	31,271,141	−15,828,513	−50.6
Soap	13,538	9,487	4,051	42.7	114,488,298	53,231,017	61,257,281	115.1	40,132,778	20,087,787	20,044,991	99.8
Sugar and molasses, not including beet sugar	13,526	14,129	−603	−4.3	279,249,397	239,711,011	39,538,386	16.5	31,666,593	18,326,242	13,340,351	72.8
Tobacco manufactures	166,810	132,526	34,284	25.9	416,695,104	263,713,173	152,981,931	58.0	239,509,483	170,846,631	68,662,852	40.2
Woolen, worsted, and felt goods, and wool hats	168,722	130,697	38,025	29.1	435,978,558	248,798,133	187,180,425	75.2	153,100,519	94,867,725	58,232,794	61.4
All other industries	1,498,696	1,066,274	432,422	40.6	3,819,868,070	2,012,780,425	1,807,087,645	89.8	1,807,795,881	973,101,147	834,694,734	85.8

[1] A minus sign (—) denotes decrease.
[2] Includes for 1909 some establishments which were included under "enameling and japanning" in 1899.
[3] Includes for 1909 establishments compounding table sirups which were included under "sugar and molasses" in 1899.
[4] Includes for 1909 some establishments included under "furnishing goods, men's," in 1909.

Among the 48 industries covered by Table 4 there was only one, the smelting and refining of lead, which showed a decrease in value of products between 1899 and 1909, and this decrease was in reality only apparent, being due to a change in the method of accounting in certain establishments (see Chapter V, p. 87). This industry and "iron and steel, blast furnaces," are the only ones which show a decrease for the decade in value added by manufacture. The two industries just mentioned and also the manufacture of carriages and wagons and materials and of sugar and molasses, not including beet sugar, show a decrease in the average number of wage earners employed.

Of the 48 industries for which statistics are presented in Table 4, the manufacture of automobiles shows by far the highest percentages of increase for the decade. The value of products of this industry in 1909 was more than fifty times as great as in 1899. Other industries in this group which show notable relative increases during the decade are the following: "Oil, cottonseed, and cake;" "food preparations;" "rubber goods, not elsewhere specified;" "copper, tin, and sheet-iron products;" "clothing, women's;" "electrical machinery, apparatus, and supplies;" "fertilizers;" and "smelting and refining, copper."

The greatest absolute increase in number of wage earners between 1899 and 1909 was in the lumber industry, but in value of products the increase in this industry was exceeded by that in the slaughtering and meat-packing and in the foundry and machine-shop industries. In absolute increase in value added by manufacture, the foundry and machine-shop industry ranked first, followed by the lumber and the printing and publishing industries.

In 19 of the 48 industries the percentages of increase in the number of wage earners, value of products, and value added by manufacture for the five-year period 1904–1909 were greater than for the five-year period 1899–1904. For 9 industries, on the other hand, the percentages of increase in all three items were less during the later five-year period than during the earlier, the flour-mill and gristmill, steam-railroad repair shop, bakery, and paper and wood pulp industries being the most important of these industries.

Relation of cost of materials and value added by manufacture to value of products.—Attention has repeatedly been called to the fact that industries often have a very different rank with respect to value of products from that which they occupy with respect to value added by manufacture. It is evident that while, from the standpoint of the purchasing public, the relative importance of an industry is best judged by value of products, yet the importance of a given manufacturing industry, as such, in contributing to the production of wealth, can better be judged from the value added by manufacture. In order to bring out the wide differences among industries with respect to the ratio between the value added by manufacture and the value of products, a column has been included in Table 2, on page 45, showing that ratio for each of the 259 industries.

For certain purposes, however, it is more convenient to refer to the ratio which the cost of materials bears to the value of products (which is simply the complement of the ratio of value added by manufacture to value of products). The most significant cases are of course the extreme cases.

The following table shows all the industries presented in Table 2 in which the cost of materials represented less than 30 per cent of the value of products—or, what is the same thing, in which the value added by manufacture was more than 70 per cent of the value of products. The value of products is also given in each case, as an index to the relative importance of the industries.

Table 5

INDUSTRY.	Value of products.	Ratio of cost of materials to value of products (per cent).
Cloth, sponging and refinishing	$1,543,872	5.5
Clothing, men's, buttonholes	780,720	13.4
Cash registers and calculating machines	23,708,326	15.0
Engraving and diesinking	2,249,861	15.6
Pens, steel	576,696	16.5
Liquors, distilled	204,699,412	17.6
Engraving, wood	711,279	17.7
Photo-engraving	11,624,000	18.4
Turpentine and rosin	25,296,017	19.4
Statuary and art goods	3,441,546	19.8
Typewriters and supplies	19,718,767	20.7
Rules, ivory and wood	143,811	21.4
Paper patterns	2,610,714	24.7
Brick and tile	92,776,504	25.6
Liquors, malt	374,730,096	25.8
Ice, manufactured	42,953,055	26.3
Phonographs and graphophones	11,725,996	26.4
Electroplating	4,509,559	26.7
Carpets, rag	2,567,569	26.8
Printing and publishing	737,876,087	27.3
Musical instruments and materials, not specified	3,228,108	27.6
Stereotyping and electrotyping	6,383,694	27.7
Grindstones	1,688,171	27.7
Instruments, professional and scientific	10,503,601	27.8
Files	5,691,203	28.0
Pottery, terra-cotta, and fire-clay products	76,118,861	28.8
Photographic apparatus and materials	22,561,341	29.7

Most of the industries in this group are those turning out highly elaborated products in the manufacture of which much skilled labor is required, or at least products which are highly elaborated as compared with the raw materials used; for there are a few industries with relatively simple products where the low ratio between cost of materials and value of products is due to the fact that the chief materials can be had for little or nothing in the way of direct expenditure. Important examples of this latter type are the turpentine and rosin industry, in which the process of manufacture starts with the tree standing in the forest, and the manufacture of brick and tile, of pottery, terra-cotta, and fire-clay products, and of grindstones, in which the chief materials are clay, sand, and stone. In printing and publishing, the most important of the industries included in the table, the products are highly elabo-

rated, and in addition a considerable part of the total value of products is contributed by receipts from advertising. In the sponging and refinishing of cloth and the making of buttonholes and rag carpets the work is done largely on materials furnished by others, so that the cost of the materials actually purchased by the establishment bears no definite relation to the value of products reported, especially as the latter consists mainly of the amounts received for custom work and does not represent the full value of the carpets made. In the distillery industry the low ratio of cost of materials to value of products is due entirely to the inclusion of the internal revenue tax as a part of the value of products. This tax is likewise largely responsible for the low ratio in the case of the brewery industry ("liquors, malt").

The following table shows all the industries presented in Table 2 in which the cost of materials constituted 75 per cent or more of the value of products:

Table 6

INDUSTRY.	Value of products.	Ratio of cost of materials to value of products (per cent).
Lard, refined, not made in slaughtering and meat-packing establishments	$10,326,471	93.3
Gold and silver, reducing and refining, not from the ore	23,611,764	93.1
Sugar, refining, not including beet sugar	248,628,659	91.0
Smelting and refining, lead	167,405,650	90.8
Butter, reworking	8,200,533	90.5
Peanuts, grading, roasting, cleaning, and shelling	9,736,551	88.5
Smelting and refining, copper	378,805,974	88.0
Slaughtering and meat packing	1,370,568,101	87.8
Tin plate and terneplate	47,969,645	87.3
Rice, cleaning and polishing	22,371,457	87.2
Flour-mill and gristmill products	883,584,405	86.9
Butter, cheese, and condensed milk	274,557,718	85.8
Bags, other than paper	54,881,622	84.5
Oil, linseed	36,738,694	84.5
Petroleum, refining	236,997,659	84.1
Smelting and refining, not from the ore	28,072,041	82.5
Babbitt metal and solder	19,767,935	82.3
Iron and steel, blast furnaces	391,429,283	81.9
Lead, bar, pipe, and sheet	9,144,930	81.0
Oil, cottonseed, and cake	147,867,894	81.0
Oleomargarine	8,147,629	79.7
Malt	38,252,233	79.6
Wool pulling	5,180,856	79.2
Galvanizing	7,338,330	77.9
Waste	11,398,011	77.5
Leather, tanned, curried, and finished	327,874,187	75.7
Glucose and starch	48,799,311	75.6
Coffee and spice, roasting and grinding	110,532,787	75.3

This group of industries consists chiefly of those in which the processes of manufacture are very simple and effect comparatively little change in the materials. In the slaughtering and meat-packing and the leather industries, the processes used for elaborating some of the products are far from simple, but the greater part of the products, both in quantity and in value, are subjected to very little elaboration.

SUMMARY FOR GROUPS OF INDUSTRIES.

Comparative statistics: 1909, 1904, and 1899.—To facilitate the comparison of one broad type of manufacturing with another, the 264 industries distinguished at the census of 1909 have been grouped into 14 general classes. Table 7 presents statistics for these classes for the last three censuses.

Any grouping of industries must necessarily be more or less arbitrary and probably no two persons would agree exactly as to the number of groups which should be distinguished or as to the proper assignment of every industry with respect to the groups established. In making up the 14 classes shown in the table, the Census Bureau has followed two principles: (1) that of similarity with respect to character of materials and (2) that of similarity with respect to the use of the finished product. In some cases the actual classification of an industry might be explained by either principle. Thus the industries assigned to the textile group all resemble one another in using as materials fibers of different sorts or the more advanced products derived from those materials; and most of them resemble one another in that the products are designed, directly or indirectly, chiefly for use as clothing. On the other hand, the uses of the products made by the various industries classed under the general designation "iron and steel and their products" are extremely varied, and the group has been constituted solely with respect to the character of the principal materials used.

Several of the industry groups established by the Census Bureau are fairly well defined; that is, they include few industries, if any, which do not clearly fall under the group designation, and at the same time comprise practically all the industries any part of whose products might be described by that designation. This is true, for instance, of the groups designated "food and kindred products," "textiles," "leather and its finished products," "liquors and beverages," and "tobacco manufactures." Some of the other groups, however, are much less sharply marked off. For example, several of the industries placed in the groups designated "metals and metal products other than iron and steel," "vehicles for land transportation," "railroad repair shops," and "miscellaneous industries" are somewhat similar in the methods of manufacture, the materials used, and the uses of the products to some of the industries included in the group designated "iron and steel and their products." The exact composition of each group can be learned by consulting the various tables appearing in Chapter XV of this report which list the industries assigned to each group.

This classification of industries into broad groups was first made in connection with the census of 1899. Some unimportant changes, however, in the grouping of the industries as published for 1904 and 1899, have been necessary in order to make the figures comparable with those for 1909. Substantially the only significant change in the classification adopted at the present census has been to include the shipbuilding industry under the heading of "miscellaneous industries" instead of treating it as one of 15 separate groups.

SUMMARY FOR 14 GENERAL GROUPS OF INDUSTRIES: 1909, 1904, AND 1899.

Table 7

GROUP.	Year.	Number of establishments.	WAGE EARNERS. Average number.	WAGE EARNERS. Per cent of total.	COST OF MATERIALS. Amount.	VALUE OF PRODUCTS. Amount.	VALUE OF PRODUCTS. Per cent of total.	VALUE ADDED BY MANUFACTURE. Amount.	VALUE ADDED BY MANUFACTURE. Per cent of total.	Per cent value added by manufacture formed of total value of products.	PER CENT OF INCREASE. Period.	Wage earners (average number).	Value of products.	Value added by manufacture.
All industries	**1909**	**268,491**	**6,615,046**	**100.0**	**$12,142,790,878**	**$20,672,051,870**	**100.0**	**$8,529,260,992**	**100.0**	**41.3**	**1899-1909**	**40.4**	**81.2**	**76.5**
	1904	**216,180**	**5,468,383**	**100.0**	**8,500,207,810**	**14,793,902,563**	**100.0**	**6,293,694,753**	**100.0**	**42.5**	**1904-1909**	**21.0**	**39.7**	**35.5**
	1899	**207,514**	**4,712,763**	**100.0**	**6,575,851,491**	**11,406,926,701**	**100.0**	**4,831,075,210**	**100.0**	**42.4**	**1899-1904**	**16.0**	**29.7**	**30.3**
1. Food and kindred products.	1909	55,364	411,575	6.2	3,187,803,080	3,937,617,891	19.0	749,814,811	8.8	19.0	1899-1909	36.3	79.0	80.1
	1904	45,857	354,046	6.5	2,306,120,760	2,845,555,772	19.2	539,435,012	8.6	19.0	1904-1909	16.2	38.4	39.0
	1899	41,247	301,868	6.4	1,782,862,809	2,199,203,442	19.3	416,340,633	8.6	18.9	1899-1904	17.3	29.4	29.6
2. Textiles	1909	21,695	1,437,258	21.7	1,741,987,395	3,054,708,084	14.8	1,312,720,689	15.4	43.0	1899-1909	40.6	87.6	79.0
	1904	17,022	1,155,613	21.1	1,244,864,546	2,144,604,719	14.5	899,740,173	14.3	42.0	1904-1909	24.4	42.4	45.9
	1899	17,640	1,021,869	21.7	894,394,531	1,627,889,077	14.3	733,494,546	15.2	45.1	1899-1904	13.1	31.7	22.7
3. Iron and steel and their products.	1909	17,289	1,025,044	15.5	1,802,105,826	3,163,126,293	15.3	1,361,020,467	16.0	43.0	1899-1909	37.8	74.0	66.7
	1904	14,430	867,390	15.9	1,192,111,689	2,197,773,117	14.9	1,005,661,428	16.0	45.8	1904-1909	18.2	42.9	35.3
	1899	14,080	744,069	15.8	1,001,781,364	1,818,095,771	15.9	816,314,407	16.9	44.9	1899-1904	16.6	20.9	23.2
4. Lumber and its remanufactures.	1909	48,533	907,514	13.7	714,573,711	1,582,522,263	7.7	867,948,552	10.2	54.8	1899-1909	35.6	57.5	65.2
	1904	32,493	729,686	13.3	514,907,696	1,214,476,055	8.2	699,568,359	11.1	57.6	1904-1909	24.4	30.3	24.1
	1899	34,947	669,043	14.2	479,396,305	1,004,716,682	8.8	525,320,377	10.9	52.3	1899-1904	9.1	20.9	33.2
5. Leather and its finished products.	1909	5,728	309,766	4.7	669,874,518	992,713,322	4.8	322,838,804	3.8	32.5	1899-1909	24.6	70.6	74.1
	1904	5,318	264,459	4.8	480,220,706	724,391,050	4.9	244,170,344	3.9	33.7	1904-1909	17.1	37.0	32.2
	1899	5,625	248,626	5.3	396,633,189	582,047,900	5.1	185,414,711	3.8	31.9	1899-1904	6.4	24.5	31.7
6. Paper and printing	1909	34,828	415,990	6.3	451,238,634	1,179,285,247	5.7	728,046,613	8.5	61.7	1899-1909	39.2	94.0	85.1
	1904	30,803	351,640	6.4	309,012,305	859,814,263	5.8	550,801,958	8.8	64.1	1904-1909	18.3	37.2	32.2
	1899	26,627	298,744	6.3	214,565,643	607,907,231	5.3	393,341,588	8.1	64.7	1899-1904	17.7	41.4	40.0
7. Liquors and beverages	1909	7,347	77,827	1.2	186,127,887	674,311,051	3.3	488,183,164	5.7	72.4	1899-1909	41.2	76.1	68.9
	1904	6,379	68,338	1.3	139,849,038	501,253,855	3.4	361,404,817	5.7	72.1	1904-1909	13.9	34.5	35.1
	1899	5,740	55,120	1.2	93,815,032	382,898,381	3.4	289,083,349	6.0	75.5	1899-1904	24.0	30.9	25.0
8. Chemicals and allied products.	1909	11,745	237,988	3.6	867,019,526	1,430,901,954	6.9	563,882,428	6.6	39.4	1899-1909	32.6	97.1	91.6
	1904	9,548	208,345	3.8	604,034,306	1,023,790,759	6.9	419,756,453	6.7	41.0	1904-1909	14.2	39.8	34.3
	1899	8,687	179,539	3.8	431,790,578	726,105,558	6.4	294,314,980	6.1	40.5	1899-1904	16.0	41.0	42.6
9. Stone, clay, and glass products.	1909	16,168	342,827	5.2	183,791,550	531,736,831	2.6	347,945,281	4.1	65.4	1899-1909	48.0	96.5	87.6
	1904	10,773	285,346	5.2	123,066,911	391,147,449	2.6	268,080,538	4.2	68.5	1904-1909	20.1	35.9	29.8
	1899	11,524	231,716	4.9	85,137,414	270,650,143	2.4	185,512,729	3.8	68.5	1899-1904	23.1	44.5	44.5
10. Metals and metal products, other than iron and steel.	1909	8,750	248,785	3.8	891,014,733	1,238,251,401	6.0	347,236,668	4.1	28.0	1899-1909	55.1	79.7	59.8
	1904	5,843	197,692	3.6	632,395,257	894,282,432	6.0	261,887,175	4.2	29.3	1904-1909	25.8	38.5	32.6
	1899	4,996	160,422	3.4	471,598,902	688,927,152	6.0	217,328,250	4.5	31.5	1899-1904	23.2	29.8	20.5
11. Tobacco manufactures	1909	15,822	166,810	2.5	177,185,621	416,695,104	2.0	239,509,483	2.8	57.5	1899-1909	25.9	58.0	40.2
	1904	16,827	159,406	2.9	126,085,608	331,111,181	2.2	205,025,573	3.2	61.9	1904-1909	4.6	25.8	16.8
	1899	14,959	132,526	2.8	92,866,542	263,713,173	2.3	170,846,631	3.5	64.8	1899-1904	20.3	25.6	20.0
12. Vehicles for land transportation.	1909	6,562	202,719	3.1	306,536,675	561,763,289	2.7	255,226,614	3.0	45.4	1899-1909	51.7	102.4	105.4
	1904	6,058	136,625	2.5	177,640,767	320,623,822	2.2	142,983,055	2.3	44.6	1904-1909	48.4	75.2	78.5
	1899	7,338	133,663	2.8	153,253,973	277,485,366	2.4	124,231,393	2.6	44.8	1899-1904	2.2	15.5	15.1
13. Railroad repair shops	1909	1,686	304,592	4.6	214,581,311	437,563,288	2.1	222,981,977	2.6	51.0	1899-1909	68.6	92.3	96.2
	1904	1,226	247,922	4.5	156,568,161	323,212,210	2.2	166,644,049	2.6	51.6	1904-1909	22.9	35.4	33.8
	1899	1,400	180,620	3.8	113,809,097	227,484,469	2.0	113,675,372	2.4	50.0	1899-1904	37.3	42.1	46.6
14. Miscellaneous industries	1909	16,974	526,351	8.0	748,950,411	1,470,855,852	7.1	721,905,441	8.5	49.1	1899-1909	48.3	101.6	97.3
	1904	13,603	441,875	8.1	493,330,060	1,021,865,879	6.9	528,535,819	8.4	51.7	1904-1909	19.1	43.9	36.6
	1899	12,704	354,938	7.5	363,946,112	729,802,356	6.4	365,856,244	7.6	50.1	1899-1904	24.5	40.0	44.5

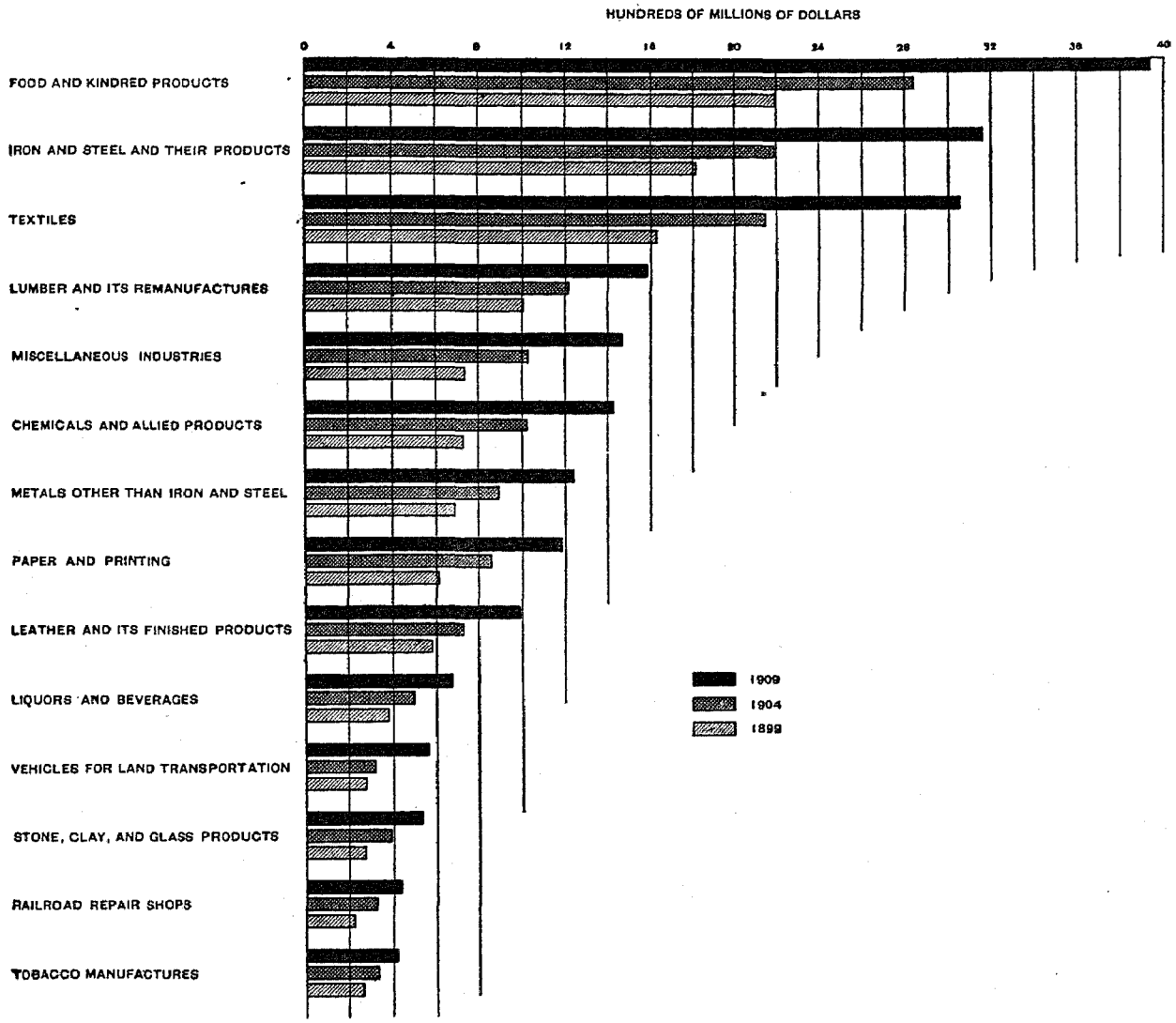
Were it not for the duplication resulting from the use of the products of one establishment or industry as materials for other establishments or industries, the total value of products would indicate fairly well the relative importance of the different groups from the standpoint of the purchasing public. The value of products, however, would not even in that case show the relative importance of the groups from the manufacturing standpoint, because the cost of materials—even of those which are derived from nonmanufacturing industries—constitutes a much larger proportion of the total value of products in some of the groups than in others, as appears from the wide differences in the percentages which the value added by manufacture (that is, value of products less cost of materials) forms of the total value of products for the several groups. Thus in the group designated "food and kindred products" the value added by manufacture in 1909 represented only 19 per cent of the gross value of products, while in the group designated "stone, clay, and glass products," the corresponding proportion was 65.4 per cent, and in the group designated "paper and printing," 61.7 per cent. The percentage for the group designated "liquors and beverages," although higher than that for any other group, has little significance, since both the total value of products and the value added by manufacture include the heavy internal revenue tax on distilled and malt liquors. The great difference between the importance of the groups as measured by value of products and their importance as measured by value added by manufacture is to some extent apparent from the differences in the percentages of the respective totals reported for the several groups.

The statistics for wage earners are, on the whole, the most significant as showing the relative importance of the different groups from the standpoint of manu-

facturing. The textile group in 1909 gave employment to 21.7 per cent of the total number of wage earners; the group designated "iron and steel and their products," to 15.5 per cent; and the group designated "lumber and its remanufactures," to 13.7 per cent. With respect to the value added by manufacture, the group "iron and steel and their products" was the most important, with 16 per cent of the total for all industries combined. The textile industries followed with 15.4 per cent, and the group designated "lumber and its remanufactures" with 10.2 per cent.

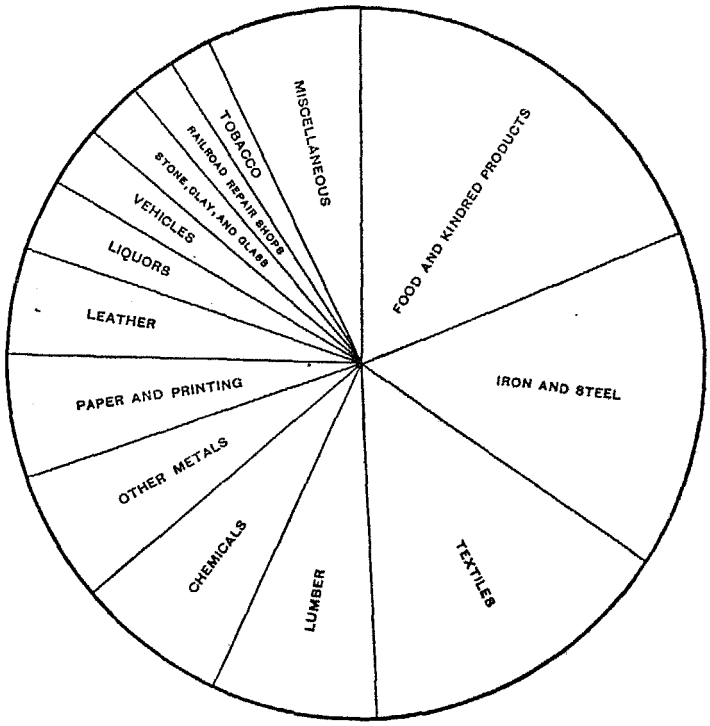
In considering the percentages of increase for the several industry groups in value of products and in value added by manufacture, it should be borne in mind that there have been considerable differences among different classes of industries in the extent of change in the prices of raw materials and of finished products. With respect to the number of wage earners, the most conspicuous increase between 1899 and 1909 is shown for the railroad repair shops, which employed 68.6 per cent more wage earners in the later year than in the earlier. The groups "metals and metal products, other than iron and steel," and "vehicles for land transportation" also showed increases exceeding 50 per cent in the number of wage earners between 1899 and 1909.

VALUE OF PRODUCTS FOR GROUPS OF INDUSTRIES: 1909, 1904, AND 1899.

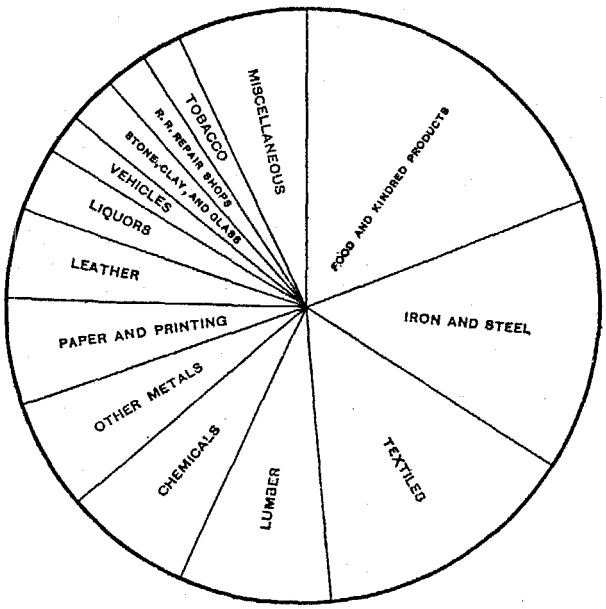


VALUE OF ALL MANUFACTURED PRODUCTS AND PROPORTIONAL VALUE OF EACH GROUP: 1909, 1904, AND 1899.

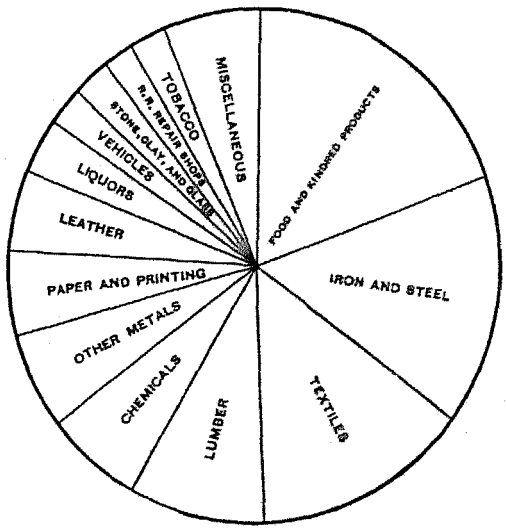
1909



1904



1899



CHAPTER IV.

SUMMARY, BY STATES AND GEOGRAPHIC DIVISIONS.

General Table III presents general totals for all manufacturing industries in each state and geographic division, as reported at the censuses of 1909, 1904, and 1899. More detailed statistics for 1909 are given by states in General Table IV. The more important facts brought out in these larger tables are summarized in the tables and text of this chapter.

Rank of states in manufacturing industries.—Table 1 shows for each state the population and land area in 1910, and the number of industries, number of establishments, average number of wage earners, value of products, and value added by manufacture for all manufacturing industries combined in 1909. The table shows also the value of products and value added by manufacture per capita of the total population, and the ratio that wage earners in manufacturing industries bore to the total population. The distribution of the value of products for all manufacturing industries combined for 1909, by states, is shown graphically by the map on a subsequent page.

Table 1 brings out the well-known fact that there are great differences between different parts of the country with respect to the importance of manufacturing industries. The distribution of such industries is widely different from that of population. In the United States as a whole the value of manufactured products in 1909 was equal to $225 per capita of the total population (based upon the population census of 1910). In the New England division, however, the value of products per capita was $408, while in the West South Central division it was only $71. The state in which the value of manufactured products per capita was highest ($517) was Rhode Island, while the value per capita was lowest ($24) in New Mexico.

The table further brings out the fact that the density of population is greatest in those states where manufacturing is most highly developed. There is a rather close parallel between the figures showing the population per square mile and those showing the value of manufactured products per capita.

Table 2 shows, for 1909, 1904, and 1899, the rank of each state with respect to average number of wage earners, value of products, and value added by manufacture, and also the percentage of the United States totals reported from each state. The states are arranged in the order of their rank with respect to value of manufactured products in 1909. The absolute numbers from which the figures in this table are derived are given in General Table III. The two diagrams on subsequent pages also show graphically the value of products and average number of wage earners for each state in 1909 and 1899.

The five leading states in respect to value of manufactured products in 1909 were New York, Pennsylvania, Illinois, Massachusetts, and Ohio. These states together contained 33.2 per cent, or about one-third, of the total population of the United States in 1910, but reported 51.1 per cent of the total number of wage earners in manufacturing industries in 1909, 52.5 per cent of the value of manufactured products, and 53.8 per cent of the value added by manufacture, or a little more than one-half in each case.

The first seven states in respect to value of products in 1909 were also the first seven in respect to number of wage earners and value added by manufacture. Each of these seven states held the same rank in all three respects except that Illinois, which was third in value of products and value added by manufacture, ranked fourth in number of wage earners, Massachusetts occupying third place. The majority of the other states also held approximately the same rank on each basis, but there are several states whose rank in value of products was materially higher than that in number of wage earners or in value added by manufacture, this being due, in most cases, to the predominance of industries such as the slaughtering and meat-packing, flour-mill and gristmill, and butter, cheese, and condensed-milk industries, in which the cost of materials represents a large proportion of the total value of products. The states showing the greatest variation in this respect are Kansas, Nebraska, Iowa, and Texas.

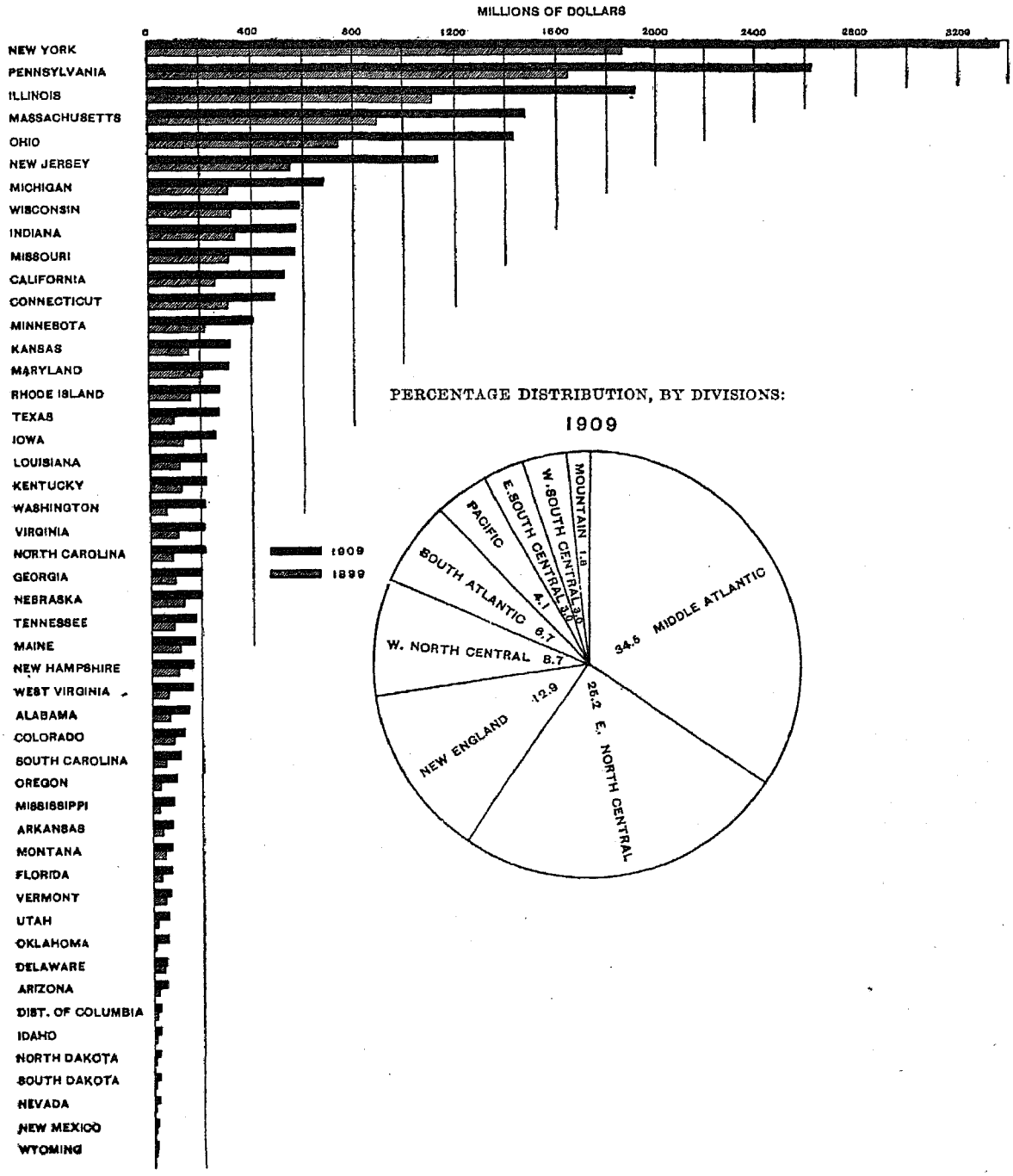
On the other hand, there are a number of states in which the reverse condition exists, and which held in 1909 a considerably higher rank in number of wage earners than in value of products. This was due largely to the importance in these states of such industries as the manufacture of cotton goods and the lumber industry, in which labor cost accounts for a relatively large proportion of the total value of products. Among such states are North Carolina, South Carolina, Maine, and New Hampshire.

Sixteen states held a higher rank in value of manufactured products in 1909 than in 1899, and 19 a lower rank, while 14 states had the same rank in both years. The most pronounced gains in this respect are shown for Washington, Texas, Mississippi, and North Carolina, and the most conspicuous losses for Maine, Nebraska, Delaware, and New Hampshire. On the basis of average number of wage earners, 15 states gained in rank during the decade and 19 states lost in rank, while 15 states show no change; Louisiana, Washington, Oklahoma, and Idaho made the greatest gain in this respect, while Kentucky and Iowa show the greatest loss. In respect to value added by manufacture 17 states show a gain in rank during the decade, 20 a loss, and 12 no change; the states making the greatest gains were Washington, Idaho, Louisiana, North Carolina, Oregon, Texas, and West Virginia, while those suffering the greatest losses were New Hampshire, Maine, Nebraska, Vermont, and Montana.

Table 1

DIVISION AND STATE.	Population: 1910	Land area (square miles): 1910	Population per square mile: 1910	MANUFACTURING INDUSTRIES: 1909					PER CAPITA OF TOTAL POPULATION.		Ratio of average number of wage earners to total population (per ct).
				Number of industries reported.	Number of establishments.	Wage earners (average number).	Value of products.	Value added by manufacture.	Value of products.	Value added by manufacture.	
United States	91,972,266	2,973,890	30.9	264	268,491	6,615,046	$20,672,051,870	$8,529,260,992	$225	$93	7.2
GEOGRAPHIC DIVISIONS:											
New England	6,552,681	61,976	105.7	.....	25,351	1,101,290	2,670,065,114	1,193,768,236	408	182	16.8
Middle Atlantic	19,315,892	100,000	193.2	.....	81,315	2,207,747	7,141,761,302	2,982,263,573	370	154	11.4
East North Central	18,250,621	245,564	74.3	.....	60,013	1,513,764	5,211,702,164	2,177,230,169	286	119	8.3
West North Central	11,637,921	510,804	22.8	.....	27,171	374,337	1,803,898,550	562,043,447	155	48	3.2
South Atlantic	12,194,895	269,071	45.3	.....	28,088	663,015	1,381,186,210	591,181,848	113	48	5.4
East South Central	8,409,901	179,509	46.8	.....	15,381	261,772	630,458,093	294,324,842	75	35	3.1
West South Central	8,784,534	429,746	20.4	.....	12,339	204,520	625,443,045	243,311,949	71	28	2.3
Mountain	2,633,517	859,125	3.1	.....	5,254	75,435	363,995,598	135,303,366	138	51	2.9
Pacific	4,192,304	318,095	13.2	.....	13,579	213,166	843,511,794	349,533,562	201	83	5.1
NEW ENGLAND:											
Maine	742,371	29,895	24.8	126	3,546	79,955	176,029,393	78,928,169	237	106	10.8
New Hampshire	430,572	9,031	47.7	104	1,961	78,658	164,581,019	66,424,003	382	154	18.3
Vermont	355,956	9,124	39.0	84	1,958	33,788	68,309,824	33,457,096	192	94	9.5
Massachusetts	3,366,416	8,039	418.8	223	11,684	584,559	1,490,529,386	659,764,443	443	196	17.4
Rhode Island	542,610	1,067	508.5	135	1,951	113,538	280,343,797	122,152,223	517	225	20.9
Connecticut	1,114,756	4,820	231.3	188	4,251	210,792	490,271,695	233,012,302	440	209	18.9
MIDDLE ATLANTIC:											
New York	9,113,614	47,654	191.2	243	44,935	1,003,981	3,369,490,192	1,512,585,850	370	166	11.0
New Jersey	2,537,167	7,514	337.7	231	8,817	326,223	1,145,529,076	425,495,677	451	168	12.9
Pennsylvania	7,665,111	44,832	171.0	245	27,563	877,543	2,626,742,034	1,044,182,046	343	136	11.4
EAST NORTH CENTRAL:											
Ohio	4,767,121	40,740	117.0	218	15,138	446,934	1,437,935,817	613,733,870	302	129	9.4
Indiana	2,700,876	36,045	74.9	178	7,969	186,984	579,075,046	244,700,293	214	91	6.9
Illinois	5,638,591	56,043	100.6	234	18,026	465,764	1,919,276,594	758,349,904	340	134	8.3
Michigan	2,810,173	57,480	48.9	200	9,159	231,499	685,109,169	316,497,147	244	113	8.2
Wisconsin	2,333,860	55,256	42.2	190	9,721	182,583	590,305,538	243,948,955	253	105	7.8
WEST NORTH CENTRAL:											
Minnesota	2,075,708	80,858	25.7	158	5,561	84,767	409,419,621	127,797,334	197	62	4.1
Iowa	2,224,771	55,586	40.0	133	5,528	61,635	259,237,637	88,530,589	117	40	2.8
Missouri	3,293,335	68,727	47.9	195	8,375	152,993	574,111,070	219,699,919	174	67	4.6
North Dakota	577,056	70,183	8.2	36	752	2,789	19,137,506	5,463,916	33	9	0.5
South Dakota	583,888	76,868	7.6	46	1,020	3,602	17,870,135	6,393,785	31	11	0.6
Nebraska	1,192,214	76,808	15.5	105	2,500	24,336	199,018,579	47,937,608	167	40	2.0
Kansas	1,690,949	81,774	20.7	104	3,435	44,215	325,104,002	66,220,296	192	39	2.6
SOUTH ATLANTIC:											
Delaware	202,322	1,965	103.0	83	726	21,238	52,839,619	21,901,818	261	108	10.5
Maryland	1,295,346	9,941	130.3	170	4,837	107,921	315,669,150	116,620,245	244	90	8.3
District of Columbia	331,069	60	5,517.8	74	518	7,707	25,289,136	15,042,602	76	45	2.3
Virginia	2,061,612	40,262	51.2	130	5,685	105,676	219,793,858	94,211,171	107	46	5.1
West Virginia	1,221,119	24,022	50.8	90	2,556	63,893	161,949,526	69,071,538	133	57	5.2
North Carolina	2,206,287	48,740	45.3	84	4,931	121,473	216,656,055	94,794,525	98	43	5.5
South Carolina	1,515,400	30,495	49.7	69	1,854	73,046	113,235,945	46,885,071	75	31	4.8
Georgia	2,609,121	58,725	44.4	122	4,792	104,588	202,863,262	85,893,498	78	33	4.0
Florida	752,619	54,861	13.7	56	2,159	57,473	72,889,659	46,761,380	97	62	7.6
EAST SOUTH CENTRAL:											
Kentucky	2,289,905	40,181	57.0	133	4,776	65,400	223,754,497	111,975,180	98	49	2.9
Tennessee	2,184,789	41,687	52.4	118	4,609	73,840	180,216,548	76,200,714	82	35	3.4
Alabama	2,138,093	51,279	41.7	88	3,398	72,148	145,961,638	62,519,120	68	29	3.4
Mississippi	1,797,114	46,362	38.8	49	2,598	50,384	80,555,410	43,629,528	45	24	2.8
WEST SOUTH CENTRAL:											
Arkansas	1,574,449	52,525	30.0	72	2,925	44,982	74,916,367	39,981,455	48	25	2.9
Louisiana	1,656,388	45,409	36.5	106	2,516	76,165	223,948,638	89,083,863	135	54	4.6
Oklahoma	1,657,155	69,414	23.9	73	2,310	13,143	53,682,405	19,529,511	32	12	0.8
Texas	3,896,542	262,398	14.8	120	4,588	70,230	272,895,635	94,717,120	70	24	1.8
MOUNTAIN:											
Montana	376,053	146,201	2.6	47	677	11,655	73,271,793	24,091,554	195	64	3.1
Idaho	325,594	83,354	3.9	43	725	8,220	22,399,860	12,479,843	69	38	2.5
Wyoming	145,965	97,594	1.5	23	268	2,867	6,249,078	3,640,889	43	25	2.0
Colorado	799,024	103,658	7.7	124	2,034	28,067	130,044,312	49,553,408	163	62	3.5
New Mexico	327,301	122,503	2.7	28	313	4,143	7,897,756	4,636,713	24	14	1.3
Arizona	204,354	113,810	1.8	34	311	6,441	50,256,694	16,656,454	246	82	3.2
Utah	373,351	82,184	4.5	76	749	11,785	61,989,277	20,723,616	166	56	3.2
Nevada	81,875	109,821	0.7	27	177	2,257	11,886,828	3,520,889	145	43	2.8
PACIFIC:											
Washington	1,141,990	66,836	17.1	127	3,674	69,120	220,746,421	102,858,733	193	90	6.1
Oregon	672,765	95,607	7.0	112	2,246	28,750	93,004,845	42,452,375	138	63	4.3
California	2,377,549	155,652	15.3	185	7,659	115,296	529,760,528	204,522,454	223	86	4.8

VALUE OF PRODUCTS OF MANUFACTURING INDUSTRIES, BY STATES: 1909 AND 1899.



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

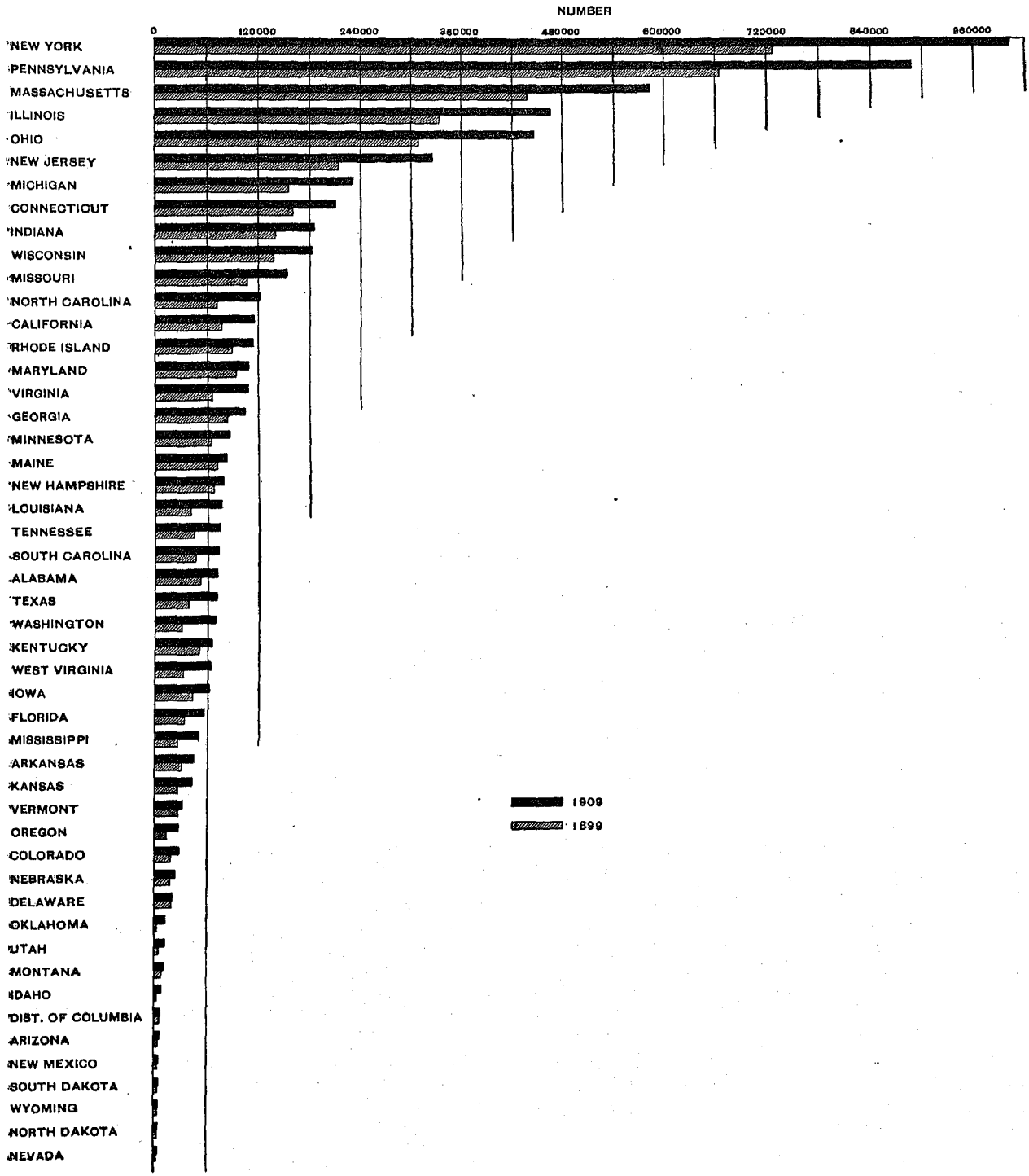


Table 2

STATE.	WAGE EARNERS (AVERAGE NUMBER).						VALUE OF PRODUCTS.						VALUE ADDED BY MANUFACTURE.					
	1909		1904		1899		1909		1904		1899		1909		1904		1899	
	Rank.	Per cent of total.	Rank.	Per cent of total.	Rank.	Per cent of total.	Rank.	Per cent of total.	Rank.	Per cent of total.	Rank.	Per cent of total.	Rank.	Per cent of total.	Rank.	Per cent of total.	Rank.	Per cent of total.
United States	.....	100.0	.....	100.0	.....	100.0	.....	100.0	.....	100.0	.....	100.0	.....	100.0	.....	100.0	.....	100.0
New York	1	15.2	1	15.7	1	15.4	1	16.3	1	16.8	1	16.4	1	17.7	1	18.1	1	17.7
Pennsylvania	2	13.3	2	14.0	2	14.1	2	12.7	2	13.2	2	14.5	2	12.2	2	12.9	2	14.3
Illinois	4	7.0	4	6.9	4	7.1	3	9.3	3	9.5	3	9.8	3	8.9	3	9.1	3	9.1
Massachusetts	3	8.8	3	8.9	3	9.3	4	7.2	4	7.6	4	8.0	4	7.7	4	7.9	4	8.5
Ohio	5	6.8	5	6.7	5	6.5	5	7.0	5	6.5	5	6.6	5	7.2	5	6.9	5	7.0
New Jersey	6	4.9	6	4.9	6	4.5	6	5.5	6	5.2	6	4.8	6	5.0	6	4.8	6	4.5
Michigan	7	3.5	8	3.2	8	3.3	7	3.3	8	2.9	9	2.8	7	3.7	7	3.2	8	3.0
Wisconsin	10	2.8	10	2.8	10	2.9	8	2.9	9	2.8	8	2.9	9	2.9	9	2.9	10	2.9
Indiana	9	2.8	9	2.8	9	2.9	9	2.8	10	2.7	7	3.0	8	2.9	11	2.8	9	2.9
Missouri	11	2.3	11	2.4	11	2.3	10	2.8	7	3.0	10	2.8	11	2.6	8	3.0	11	2.7
California	13	1.7	12	1.8	15	1.6	11	2.6	12	2.5	12	2.3	12	2.4	12	2.4	12	1.9
Connecticut	8	3.2	7	3.3	7	3.4	12	2.4	11	2.5	11	2.8	10	2.7	10	2.8	7	3.0
Minnesota	18	1.3	19	1.3	20	1.4	13	2.0	13	2.1	13	2.0	13	1.5	13	1.5	15	1.5
Kansas	33	0.7	32	0.7	33	0.6	14	1.6	16	1.3	16	1.4	28	0.8	29	0.7	28	0.7
Maryland	15	1.6	14	1.7	12	2.0	15	1.5	14	1.6	14	1.9	15	1.4	14	1.5	13	1.7
Rhode Island	14	1.7	13	1.8	13	1.9	16	1.4	15	1.4	15	1.5	14	1.4	15	1.4	14	1.6
Texas	25	1.1	27	0.9	27	0.8	17	1.3	22	1.0	25	0.8	19	1.1	23	0.9	23	0.8
Iowa	29	0.9	26	0.9	25	0.9	18	1.3	18	1.1	17	1.2	22	1.0	25	0.9	20	1.0
Louisiana	21	1.2	25	1.0	26	0.9	19	1.1	17	1.3	21	1.0	21	1.0	17	1.1	25	0.7
Kentucky	27	1.0	23	1.1	22	1.1	20	1.1	19	1.1	19	1.1	16	1.3	16	1.2	16	1.2
Washington	26	1.0	28	0.8	31	0.7	21	1.1	27	0.9	30	0.6	17	1.2	22	1.0	29	0.7
Virginia	16	1.6	17	1.5	19	1.4	22	1.1	23	1.0	22	1.0	20	1.1	19	1.0	18	1.0
North Carolina	12	1.8	16	1.6	16	1.5	23	1.0	25	1.0	28	0.7	18	1.1	21	1.0	22	0.8
Georgia	17	1.6	15	1.7	14	1.8	24	1.0	21	1.0	24	0.8	23	1.0	18	1.1	21	0.9
Nebraska	37	0.4	36	0.4	37	0.4	25	1.0	20	1.0	18	1.1	31	0.6	34	0.5	26	0.7
Tennessee	22	1.1	22	1.1	24	1.0	26	0.9	26	0.9	26	0.8	25	0.9	24	0.9	24	0.8
Maine	19	1.2	18	1.4	17	1.5	27	0.9	24	1.0	20	1.0	24	0.9	20	2.0	17	1.1
New Hampshire	20	1.2	20	1.2	18	1.4	28	0.8	28	0.8	23	0.9	27	0.8	26	0.8	19	1.0
West Virginia	28	1.0	29	0.8	29	0.7	29	0.8	31	0.7	31	0.6	26	0.8	28	0.7	30	0.6
Alabama	24	1.1	21	1.1	21	1.1	30	0.7	29	0.7	29	0.6	29	0.7	27	0.8	27	0.7
Colorado	36	0.4	35	0.4	36	0.4	31	0.6	30	0.7	27	0.8	30	0.6	30	0.6	31	0.6
South Carolina	23	1.1	24	1.1	23	1.0	32	0.5	32	0.5	32	0.5	32	0.5	36	0.5	33	0.5
Oregon	35	0.4	37	0.3	38	0.3	33	0.4	36	0.4	37	0.3	35	0.5	38	0.4	39	0.3
Mississippi	31	0.8	31	0.7	34	0.6	34	0.4	35	0.4	39	0.3	34	0.5	33	0.5	37	0.4
Arkansas	32	0.7	34	0.6	30	0.7	35	0.4	37	0.4	36	0.3	36	0.5	32	0.5	35	0.4
Montana	41	0.2	39	0.2	39	0.2	36	0.4	33	0.4	33	0.5	38	0.3	37	0.4	34	0.5
Florida	30	0.9	30	0.8	28	0.8	37	0.4	38	0.3	38	0.3	33	0.5	31	0.5	36	0.4
Vermont	34	0.5	33	0.6	32	0.6	38	0.3	34	0.4	34	0.5	37	0.4	35	0.5	32	0.5
Utah	40	0.2	40	0.1	41	0.1	39	0.3	40	0.3	41	0.2	40	0.2	40	0.2	42	0.1
Oklahoma	39	0.2	42	0.1	44	0.1	40	0.3	42	0.2	44	0.1	41	0.2	43	0.1	44	0.1
Delaware	38	0.3	38	0.3	35	0.4	41	0.3	39	0.3	35	0.4	39	0.3	39	0.3	38	0.3
Arizona	44	0.1	43	0.1	42	0.1	42	0.2	41	0.2	40	0.2	42	0.2	41	0.2	40	0.3
District of Columbia	43	0.1	41	0.1	40	0.1	43	0.1	43	0.1	42	0.1	43	0.2	42	0.2	41	0.2
Idaho	42	0.1	45	0.1	47	(1)	44	0.1	46	0.1	48	(1)	44	0.1	44	0.1	48	(1)
North Dakota	48	(1)	48	(1)	48	(1)	45	0.1	45	0.1	45	0.1	46	0.1	47	(1)	45	(1)
South Dakota	46	0.1	46	(1)	45	(1)	46	0.1	44	0.1	43	0.1	45	0.1	45	0.1	43	0.1
Nevada	49	(1)	49	(1)	49	(1)	47	0.1	49	(1)	49	(1)	49	(1)	49	(1)	49	(1)
New Mexico	45	0.1	44	0.1	43	0.1	48	(1)	47	(1)	46	(1)	47	0.1	46	0.1	46	(1)
Wyoming	47	(1)	47	(1)	46	(1)	49	(1)	48	(1)	47	(1)	48	(1)	48	(1)	47	(1)

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

Growth of manufacturing industries, by states: 1899–1909.—The manner in which the changes in the ranking of the states in manufacturing industries at the last three censuses have come about is indicated by Table 3, which shows the percentages of increase for the several states in value of products, value added by manufacture, and number of wage earners. The absolute numbers on which the percentages are based are given in General Table III. As elsewhere pointed out, the fact that the increases in value of products and value added by manufacture are almost without exception greater relatively than those in number of wage earners is in part attributable to the general advance in the prices of commodities during the last decade.

With only one exception all of the states show an increase from 1904 to 1909 in each of the three items covered by the table; in Montana, however, the value added by manufacture shows a decrease for this period, although this was due largely to technical differences in methods of accounting at the two censuses in the principal industry in that state, the smelting and refining of copper. A few of the states show a decrease in one or more items for the period 1899–1904, but every state shows an increase in all three items for the decade as a whole.

Table 4 shows, for each state, the absolute increase in value of products for the 10-year period 1899–1909, the states being arranged according to their rank in the amount of increase. It also shows for each state the percentage of increase in value of products, the states being arranged according to their rank in this respect. The two methods of ranking are, of course, radically different.

The greatest percentages of increase are naturally in those states in which the development of manufacturing industries is comparatively recent. Thus Nevada, Idaho, Oklahoma, Utah, Washington, North Dakota, and Texas show exceptionally high rates of increase for the 10-year period. Of the 10 leading manufacturing states, Michigan, New Jersey, and Ohio show the most conspicuous percentages of increase. The greatest absolute increase during the decade, $1,497,659,320, was in New York, and the smallest absolute increase, $2,980,523, in Wyoming.

Table 3

STATE.	PER CENT OF INCREASE.[1] Wage earners (average number). 1899-1909	1904-1909	1899-1904	Value of products. 1899-1909	1904-1909	1899-1904	Value added by manufacture. 1899-1909	1904-1909	1899-1904
United States	**40.4**	**21.0**	**16.0**	**81.2**	**39.7**	**29.7**	**76.5**	**35.5**	**30.3**
New York	38.1	17.2	17.9	80.0	35.4	32.9	77.2	32.7	33.5
Pennsylvania	32.2	15.0	15.0	59.2	34.3	18.5	51.0	28.5	17.5
Illinois	39.9	22.8	14.0	71.2	36.1	25.8	72.6	33.0	29.8
Massachusetts	33.4	19.7	11.4	64.2	32.6	23.8	61.3	32.6	21.7
Ohio	45.1	22.7	18.2	92.1	49.7	28.3	80.8	41.7	27.6
New Jersey	52.5	22.5	24.5	107.1	47.9	40.0	94.9	40.0	39.2
Michigan	48.6	32.1	12.5	114.3	59.7	34.2	120.2	59.0	38.5
Wisconsin	32.8	20.6	10.1	80.7	43.6	25.8	72.9	32.7	30.4
Indiana	34.5	21.3	10.9	71.8	47.0	16.9	72.4	41.1	22.2
Missouri	42.0	14.9	23.6	81.5	30.6	39.0	.....	17.3	41.8
California	49.3	14.9	30.0	105.8	44.3	42.7	121.1	35.0	63.8
Connecticut	32.0	16.1	13.7	55.6	32.8	17.1	60.2	31.1	22.2
Minnesota	31.3	21.7	7.9	83.0	33.0	37.6	74.1	31.3	32.6
Kansas	63.0	24.3	31.2	111.1	64.0	28.7	99.0	58.7	25.4
Maryland	14.6	14.6	(2)	49.6	29.7	15.3	42.7	24.9	14.2
Rhode Island	28.7	16.7	10.3	69.3	38.7	22.1	57.4	36.9	15.0
Texas	81.9	43.1	27.1	193.8	81.3	62.0	146.0	60.7	53.0
Iowa	38.8	24.6	11.4	95.1	61.4	20.8	88.0	53.4	22.6
Louisiana	86.3	36.4	36.6	101.0	20.2	67.3	147.5	28.5	92.7
Kentucky	26.4	9.4	15.6	76.9	40.1	26.3	89.5	53.0	23.9
Washington	119.3	52.9	43.4	211.7	71.4	81.9	216.0	64.2	92.5
Virginia	59.6	31.6	21.2	102.3	47.7	37.0	91.2	44.5	32.3
North Carolina	68.0	42.3	18.0	154.1	52.0	67.1	134.5	49.9	56.5
Georgia	25.5	12.8	11.3	114.6	34.3	59.8	90.1	27.4	49.2
Nebraska	30.4	20.1	8.5	52.7	28.5	18.9	39.4	55.3	−10.2
Tennessee	60.7	21.9	31.8	94.3	30.6	48.7	99.5	30.0	58.5
Maine	14.4	6.7	7.2	55.8	22.2	27.5	52.5	23.4	23.6
New Hampshire	16.3	20.3	− 3.4	53.0	33.1	14.9	40.1	31.8	6.3
West Virginia	93.1	46.0	32.3	141.7	63.5	47.8	131.9	54.8	49.8
Alabama	36.9	16.0	18.0	102.4	33.7	51.4	83.3	28.3	42.8
Colorado	43.9	28.7	11.9	46.0	29.9	12.4	75.0	33.8	30.8
South Carolina	55.3	22.9	26.4	112.3	42.7	48.8	105.2	59.4	28.7
Oregon	98.8	55.2	28.1	154.2	67.5	51.7	168.6	70.3	57.7
Mississippi	88.0	30.2	44.4	138.9	40.2	70.4	154.0	37.8	84.3
Arkansas	42.7	35.9	5.0	87.8	39.1	35.0	85.1	24.7	48.5
Montana	18.3	30.1	− 9.1	38.9	10.3	25.9	6.2	−5.5	12.4
Florida	62.0	36.5	18.7	113.2	44.9	47.1	119.2	38.5	58.3
Vermont	19.9	2.1	17.5	32.6	8.3	22.5	33.3	9.2	22.0
Utah	117.7	46.4	48.8	244.7	59.2	116.5	216.8	48.2	113.8
Oklahoma	452.0	140.9	129.1	560.0	119.5	200.7	622.2	142.1	198.3
Delaware	3.3	15.0	−10.1	27.9	28.4	−0.4	32.0	34.6	−1.9
Arizona	106.0	34.4	53.3	145.9	79.0	37.4	32.6	23.5	7.4
District of Columbia	25.2	22.4	2.3	54.0	37.7	11.8	68.0	41.6	18.7
Idaho	429.6	168.5	97.2	646.4	155.4	192.2	699.0	165.5	200.9
North Dakota	105.4	58.9	29.2	205.7	87.3	63.2	159.0	75.0	48.0
South Dakota	62.0	44.5	12.0	87.5	36.6	137.3	109.9	45.7	44.1
Nevada	347.8	181.4	59.1	842.7	283.9	45.5	487.8	139.8	145.1
New Mexico	66.4	19.1	39.7	94.5	38.4	40.5	124.9	33.6	68.3
Wyoming	39.2	56.3	−11.0	91.2	77.4	7.8	91.8	63.9	17.0

[1] A minus sign (−) denotes decrease.

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

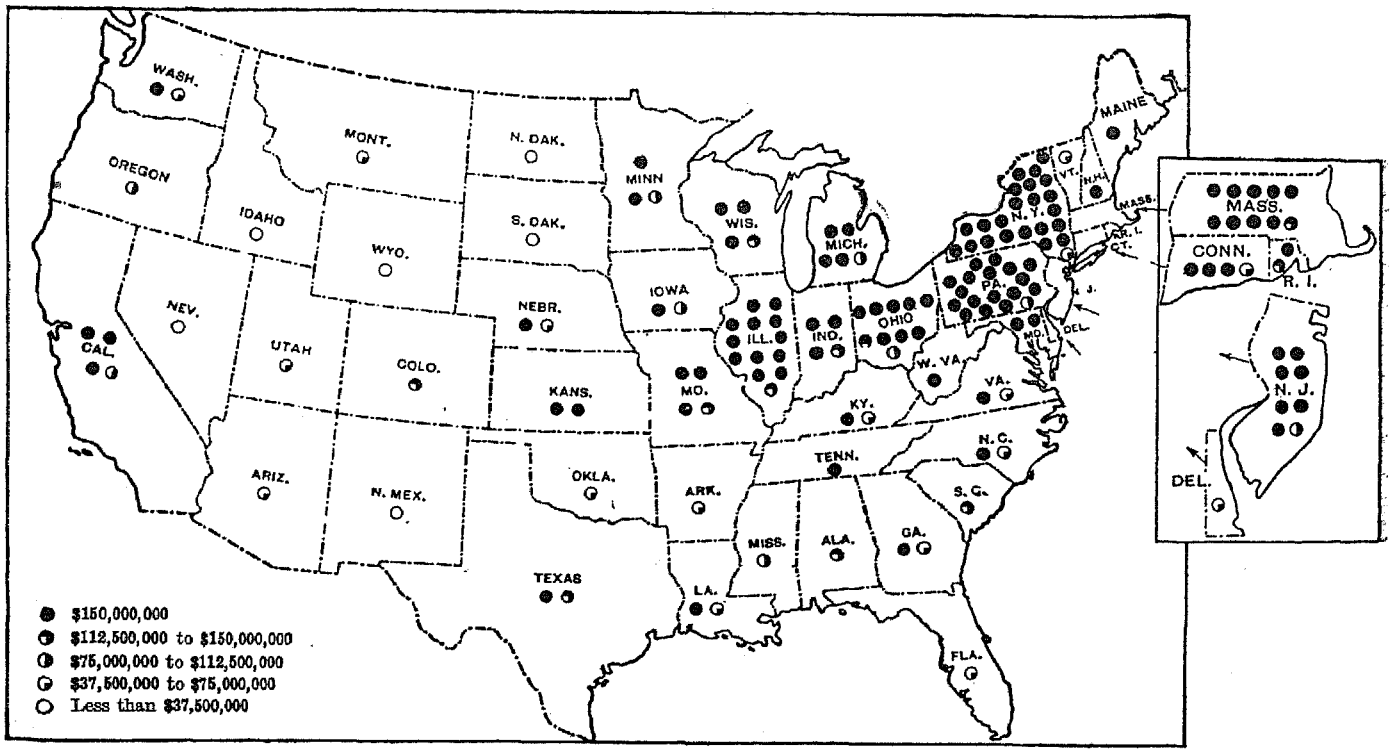
STATES RANKED ACCORDING TO AMOUNT AND PERCENTAGE OF INCREASE IN VALUE OF PRODUCTS FROM 1899 TO 1909.

Table 4

STATES IN ORDER OF ABSOLUTE INCREASE.	INCREASE. Amount.	Per cent.
New York	$1,497,659,320	80.0
Pennsylvania	976,859,654	59.2
Illinois	798,408,286	71.2
Ohio	689,264,962	92.1
New Jersey	592,523,392	107.1
Massachusetts	582,902,947	64.2
Michigan	365,417,313	114.3
California	272,375,007	105.8
Wisconsin	263,552,660	80.7
Missouri	257,806,975	81.5
Indiana	242,003,416	71.8
Minnesota	185,726,699	83.0
Texas	180,001,202	193.8
Connecticut	175,165,545	55.6
Kansas	171,095,458	111.1
Washington	149,915,076	211.7
North Carolina	131,381,972	154.1
Iowa	126,366,772	95.1
Rhode Island	114,793,415	69.3
Louisiana	112,550,719	101.0
Virginia	111,149,708	102.3
Georgia	108,330,894	114.6
Maryland	104,593,007	49.6
Kentucky	97,245,837	76.9
West Virginia	94,942,704	141.7
Tennessee	87,467,419	94.3
Alabama	73,851,709	102.4
Nebraska	68,716,126	52.7
Maine	63,070,295	55.8
South Carolina	59,900,134	112.3
New Hampshire	56,990,216	53.0
Oregon	56,412,131	154.2
Mississippi	46,836,893	138.9
Oklahoma	45,548,469	560.0
Utah	44,007,629	244.7
Colorado	40,976,433	46.0
Florida	38,706,150	113.2
Arkansas	35,028,789	87.8
Arizona	29,817,707	145.9
Montana	20,526,796	38.9
Idaho	19,398,418	646.4
Vermont	16,794,596	32.6
North Dakota	12,877,666	205.7
Delaware	11,518,558	27.9
Nevada	10,625,823	842.7
District of Columbia	8,862,728	54.0
South Dakota	8,340,189	87.5
New Mexico	3,836,832	94.5
Wyoming	2,980,523	91.2

STATES IN ORDER OF PERCENTAGE OF INCREASE.	INCREASE. Amount.	Per cent.
Nevada	$10,625,823	842.7
Idaho	19,398,418	646.4
Oklahoma	45,548,469	560.0
Utah	44,007,629	244.7
Washington	149,915,076	211.7
North Dakota	12,877,666	205.7
Texas	180,001,202	193.8
Oregon	56,412,131	154.2
North Carolina	131,381,972	154.1
Arizona	29,817,707	145.9
West Virginia	94,942,704	141.7
Mississippi	46,836,893	138.9
Georgia	108,330,894	114.6
Michigan	365,417,313	114.3
Florida	38,706,150	113.2
South Carolina	59,900,134	112.3
Kansas	171,095,458	111.1
New Jersey	592,523,392	107.1
California	272,375,007	105.8
Alabama	73,851,709	102.4
Virginia	111,149,708	102.3
Louisiana	112,550,719	101.0
Iowa	126,366,772	95.1
New Mexico	3,836,832	94.5
Tennessee	87,467,419	94.3
Ohio	689,264,962	92.1
Wyoming	2,980,523	91.2
Arkansas	35,028,789	87.8
South Dakota	8,340,189	87.5
Minnesota	185,726,699	83.0
Missouri	257,806,975	81.5
Wisconsin	263,552,660	80.7
New York	1,497,659,320	80.0
Kentucky	97,245,837	76.9
Indiana	242,003,416	71.8
Illinois	798,408,286	71.2
Rhode Island	114,793,415	69.3
Massachusetts	582,902,947	64.2
Pennsylvania	976,859,654	59.2
Maine	63,070,295	55.8
Connecticut	175,165,545	55.6
District of Columbia	8,862,728	54.0
New Hampshire	56,990,216	53.0
Nebraska	68,716,126	52.7
Maryland	104,593,007	49.6
Colorado	40,976,433	46.0
Montana	20,526,796	38.9
Vermont	16,794,596	32.6
Delaware	11,518,558	27.9

VALUE OF PRODUCTS OF MANUFACTURING INDUSTRIES, BY STATES: 1909.



States grouped according to value of products.—In Table 5 the states are arranged in six groups, according to the value of their manufactured products in 1909. The table also gives the value of products reported for each state in 1904 and 1899, and the percentage which the total value of products for each group formed of the United States total at each of the three censuses.

Table 5

STATES GROUPED ACCORDING TO VALUE OF PRODUCTS IN 1909.	VALUE OF PRODUCTS.		
	1909	1904	1899
United States	$20,672,051,870	$14,793,902,563	$11,406,926,701
$1,000,000,000 and over.			
Total	11,989,503,099	8,713,511,973	6,851,884,538
New York	3,369,490,192	2,488,345,579	1,871,830,872
Pennsylvania	2,626,742,034	1,955,551,332	1,649,882,380
Illinois	1,919,276,594	1,410,342,129	1,120,868,308
Massachusetts	1,490,529,386	1,124,092,051	907,626,439
Ohio	1,437,935,817	960,811,857	748,670,855
New Jersey	1,145,529,076	774,369,025	553,005,684
$500,000,000 but less than $1,000,000,000.			
Total	2,958,361,351	2,040,981,597	1,557,205,980
Michigan	685,109,169	429,120,060	319,691,856
Wisconsin	590,305,538	411,139,681	326,752,878
Indiana	579,075,046	393,954,405	337,071,630
Missouri	574,111,070	439,548,957	316,304,095
California	529,760,528	367,218,494	257,385,521
$300,000,000 but less than $500,000,000.			
Total	1,540,464,468	1,118,561,152	903,883,759
Connecticut	490,271,695	369,082,091	315,106,150
Minnesota	409,419,621	307,858,073	223,692,922
Kansas	325,104,002	198,244,992	154,008,544
Maryland	315,669,150	243,375,996	211,076,143
$200,000,000 but less than $300,000,000.			
Total	2,120,239,800	1,430,583,268	988,504,205
Rhode Island	280,343,797	202,109,583	165,550,382
Texas	272,895,635	150,528,389	92,894,433
Iowa	259,237,637	160,572,313	132,870,885
Louisiana	223,948,638	186,379,592	111,397,919
Kentucky	223,754,497	159,753,968	126,508,660
Washington	220,746,421	128,821,667	70,831,345
Virginia	219,793,858	148,856,525	108,644,150
North Carolina	216,656,055	142,520,776	85,274,083
Georgia	202,863,262	151,040,455	94,532,368
$100,000,000 but less than $200,000,000.			
Total	$1,271,036,960	$948,240,656	$725,121,924
Nebraska	199,018,579	154,918,220	130,302,453
Tennessee	180,216,548	137,960,476	92,749,129
Maine	176,029,393	144,020,197	112,959,098
New Hampshire	164,581,019	123,610,904	107,590,803
West Virginia	161,949,526	99,040,676	67,006,822
Alabama	145,961,638	109,169,922	72,109,929
Colorado	130,044,312	100,143,999	89,067,879
South Carolina	113,235,945	79,376,262	53,335,811
Less than $100,000,000.			
Total	792,446,192	542,023,917	380,328,295
Oregon	93,604,845	55,525,123	36,592,714
Mississippi	80,555,410	57,451,445	33,718,517
Arkansas	74,916,367	53,864,394	39,887,578
Montana	73,271,793	66,415,452	52,744,997
Florida	72,889,659	50,298,290	34,183,509
Vermont	68,309,824	63,083,611	51,515,228
Utah	61,989,277	38,926,464	17,981,648
Oklahoma	53,682,405	24,459,107	8,133,936
Delaware	52,839,619	41,160,276	41,321,061
Arizona	50,256,694	28,083,192	20,438,987
District of Columbia	25,289,136	18,359,159	16,426,408
Idaho	22,399,860	8,768,743	3,001,442
North Dakota	19,137,506	10,217,914	6,259,840
South Dakota	17,870,135	13,085,333	9,529,946
Nevada	11,886,828	3,096,274	1,261,005
New Mexico	7,897,756	5,705,880	4,060,924
Wyoming	6,249,078	3,523,260	3,268,555
Percentage each group of states contributed to total value of products	100.0	100.0	100.0
$1,000,000,000 and over	58.0	58.9	60.1
$500,000,000 but less than $1,000,000,000	14.3	13.8	13.6
$300,000,000 but less than $500,000,000	7.5	7.6	7.9
$200,000,000 but less than $300,000,000	10.3	9.7	8.7
$100,000,000 but less than $200,000,000	6.1	6.4	6.4
Less than $100,000,000	3.8	3.7	3.3

This table brings out the way in which individual states have gradually been advancing from the lower to the higher groups. For example, at the census of 1909 there were six states with a value of products amounting to more than $1,000,000,000 each; at the census of 1904 there were only four states in this class, and in 1899 only three. Again, at the census of 1909 there were five states which reported a value of products amounting to $500,000,000 but less than $1,000,000,000 each, none of which reported products valued at as much as $500,000,000 in 1904 or 1899. In 1904 there were two states in this class, and in 1899, three, but by 1909 all these states had advanced into the group comprising states which reported products valued at more than $1,000,000,000 each.

The percentages at the end of the preceding table show whether the principal manufacturing states have made greater or less progress, relatively speaking, than those of less importance. It appears that the six states which in 1909 produced manufactured products valued at $1,000,000,000 or more each reported a somewhat smaller proportion of the total value of products for the country in that year than in 1904 or in 1899, the percentages being 58, 58.9, and 60.1, respectively. On the other hand, the five important manufacturing states which in 1909 made up the group comprising states reporting products valued at more than $500,000,000 but less than $1,000,000,000 each were credited with a materially larger proportion of the total in 1909 than at either of the two preceding censuses. The group comprising states producing less than $100,000,000 worth of products each in 1909 also had a somewhat larger proportion of the total at that census than at the two preceding. The changes shown for the other groups are not particularly significant.

Leading industries of each state.—As the statistics for the individual industries in each state and the District of Columbia are presented and discussed in detail in Volume IX of the Thirteenth Census Reports, only a condensed summary need here be given.

Table 6, which follows, names the five leading industries in each state in 1909 as determined by value of products. It also gives the value of products for each industry where this can be done without revealing individual operations, together with the proportion which this value formed of the total for all industries in the state and of the total for the specified industry in the United States. Similar percentages are given with respect to average number of wage earners, but the absolute numbers are omitted. Of course, in some cases industries not listed ranked higher with respect to number of wage earners than some of those listed. The states are arranged alphabetically.

FIVE LEADING INDUSTRIES OF EACH STATE AS MEASURED BY VALUE OF PRODUCTS: 1909.

Table 6

STATE AND INDUSTRY	Value of products.	PER CENT OF TOTAL FOR ALL INDUSTRIES IN THE STATE.		PER CENT OF TOTAL FOR THE INDUSTRY IN THE UNITED STATES.	
		Value of products.	Wage earners (average number).	Value of products.	Wage earners (average number).
ALABAMA.					
Lumber and timber products	$26,057,662	17.9	31.1	2.3	3.2
Cotton goods, including cotton small wares	22,211,748	15.2	17.6	3.5	3.4
Iron and steel, blast furnaces	21,235,984	14.5	5.2	5.4	9.8
Foundry and machine-shop products	11,550,217	7.9	8.2	0.9	1.1
Oil, cottonseed, and cake	9,178,016	6.3	2.2	6.2	9.5
ARIZONA.					
Smelting and refining, copper	41,059,240	81.7	48.6	10.8	20.0
Cars and general shop construction and repairs by steam-railroad companies	2,393,930	4.8	16.9	0.6	0.4
Lumber and timber products	1,419,114	2.8	13.0	0.1	0.1
Flour-mill and gristmill products	1,316,757	2.6	0.8	0.1	0.1
Printing and publishing	784,487	1.6	4.2	0.1	0.1
ARKANSAS.					
Lumber and timber products	40,640,327	54.2	73.2	3.5	4.7
Oil, cottonseed, and cake	7,788,885	10.4	2.4	5.3	6.4
Flour-mill and gristmill products	5,615,486	7.5	0.7	0.6	0.8
Cars and general shop construction and repairs by steam-railroad companies	4,153,926	5.5	7.2	1.0	1.2
Printing and publishing	2,082,365	2.8	2.2	0.3	0.4
CALIFORNIA.					
Lumber and timber products	45,000,276	8.5	19.9	3.9	3.3
Smelting and refining, lead	.....	.....	.....	.....	.....
Slaughtering and meat packing	34,280,003	6.5	1.4	2.5	1.8
Canning and preserving	32,914,829	6.2	6.7	21.0	12.9
Foundry and machine-shop products	26,730,891	5.1	7.3	2.2	1.6
COLORADO.					
Smelting and refining, lead	.....	.....	.....	.....	.....
Beet sugar	.....	.....	.....	.....	.....
Iron and steel, steel works and rolling mills	.....	.....	.....	.....	.....
Slaughtering and meat packing	$9,656,810	7.4	2.3	0.7	0.7
Flour-mill and gristmill products	7,867,706	6.1	1.0	0.9	0.7
CONNECTICUT.					
Brass and bronze products	66,932,969	13.7	8.0	44.6	41.4
Foundry and machine-shop products	65,535,155	13.4	17.9	5.3	7.1
Cotton goods, including cotton small wares	24,231,881	4.9	6.8	3.9	3.8
Silk and silk goods, including throwsters	21,062,657	4.3	4.1	10.7	8.8
Firearms and ammunition	19,948,235	4.1	4.0	58.5	58.0
DELAWARE.					
Leather, tanned, curried, and finished	12,079,225	22.9	14.3	3.7	4.9
Foundry and machine-shop products	4,751,195	9.0	10.4	0.4	0.4
Cars, steam-railroad, not including operations of railroad companies	3,628,093	6.9	7.9	2.9	3.9
Cars and general shop construction and repairs by steam-railroad companies	3,251,201	6.2	7.2	0.8	0.5
Dyeing and finishing textiles	.....	.....	.....	.....	.....
DISTRICT OF COLUMBIA.					
Printing and publishing	4,899,492	19.4	20.3	0.7	0.6
Bread and other bakery products	3,589,554	14.2	12.7	0.9	1.0
Gas, illuminating and heating	2,305,340	9.1	8.0	1.4	1.7
Slaughtering and meat packing	1,889,575	7.5	1.8	0.1	0.2
Liquors, malt	1,804,791	7.1	3.2	0.5	0.5

FIVE LEADING INDUSTRIES OF EACH STATE AS MEASURED BY VALUE OF PRODUCTS: 1909—Continued.

Table 6—Continued.

STATE AND INDUSTRY.	Value of products.	PER CENT OF TOTAL FOR ALL INDUSTRIES IN THE STATE.		PER CENT OF TOTAL FOR THE INDUSTRY IN THE UNITED STATES.	
		Value of products.	Wage earners (average number).	Value of products.	Wage earners (average number).
FLORIDA.					
Tobacco manufactures	$21,575,021	29.6	21.4	5.2	7.4
Lumber and timber products	20,863,016	28.6	33.5	1.8	2.8
Turpentine and rosin	11,937,518	16.4	31.6	47.2	45.9
Fertilizers	3,878,296	5.3	1.0	3.7	3.2
Printing and publishing	1,865,848	2.6	1.6	0.3	0.4
GEORGIA.					
Cotton goods, including cotton small wares	48,036,817	23.7	26.6	7.6	7.3
Lumber and timber products	24,632,093	12.1	21.3	2.1	3.2
Oil, cottonseed, and cake	23,640,779	11.7	2.8	16.0	16.9
Fertilizers	16,800,301	8.3	2.6	16.2	15.1
Flour-mill and gristmill products	7,999,912	3.9	0.4	0.9	1.0
IDAHO.					
Lumber and timber products	10,689,310	47.7	63.4	0.9	0.7
Flour-mill and gristmill products	2,479,719	11.1	1.5	0.3	0.3
Beet sugar	.....	.....	.....	.....	.....
Cars and general shop construction and repairs by steam-railroad companies	1,366,408	6.1	10.3	0.3	0.3
Printing and publishing	1,148,033	5.1	5.7	0.2	0.2
ILLINOIS.					
Slaughtering and meat packing	389,594,906	20.3	5.7	28.4	29.8
Foundry and machine-shop products	138,578,993	7.2	11.2	11.3	9.8
Clothing, men's, including shirts	89,472,755	4.7	7.8	15.8	15.1
Printing and publishing	87,247,090	4.5	6.1	11.8	11.1
Iron and steel, steel works and rolling mills	86,608,137	4.5	3.8	8.8	7.3
INDIANA.					
Slaughtering and meat packing	47,289,469	8.2	2.4	3.5	4.9
Flour-mill and gristmill products	40,541,422	7.0	1.2	4.6	5.8
Foundry and machine-shop products	39,883,774	6.9	8.5	3.2	3.0
Iron and steel, steel works and rolling mills	38,651,848	6.7	6.6	3.9	5.1
Liquors, distilled	31,610,468	5.5	0.2	15.4	6.7
IOWA.					
Slaughtering and meat packing	59,045,232	22.8	6.7	4.3	4.6
Butter, cheese, and condensed milk	25,849,866	10.0	2.0	9.4	6.7
Foundry and machine-shop products	14,064,382	5.4	8.3	1.1	1.0
Flour-mill and gristmill products	12,870,603	5.0	1.0	1.5	1.6
Lumber and timber products	12,659,259	4.9	7.6	1.1	0.7
KANSAS.					
Slaughtering and meat packing	165,360,516	50.9	24.0	12.1	11.8
Flour-mill and gristmill products	68,476,410	21.1	5.3	7.7	6.0
Cars and general shop construction and repairs by steam-railroad companies	11,193,106	3.4	17.4	2.8	2.7
Smelting and refining, zinc	10,857,250	3.3	4.1	31.7	27.4
Printing and publishing	7,008,865	2.2	7.3	0.9	1.3
KENTUCKY.					
Liquors, distilled	44,360,104	19.8	3.9	21.7	39.5
Flour-mill and gristmill products	22,364,950	10.0	2.1	2.5	3.6
Lumber and timber products	21,380,564	9.6	19.9	1.8	1.9
Tobacco manufactures	18,597,786	8.3	6.1	4.5	2.4
Foundry and machine-shop products	9,626,686	4.3	6.9	0.8	0.8
LOUISIANA.					
Lumber and timber products	62,837,912	28.1	60.5	5.4	6.6
Sugar, refining, not including beet sugar	34,774,173	15.5	1.5	14.0	12.4
Sugar and molasses	29,001,027	12.9	5.2	94.7	95.2
Oil, cottonseed, and cake	13,084,586	5.8	1.2	8.8	5.2
Rice, cleaning and polishing	12,528,656	5.6	0.9	56.0	55.9
MAINE.					
Paper and wood pulp	33,950,230	19.3	10.8	12.7	11.4
Lumber and timber products	26,124,640	14.8	18.9	2.3	2.2
Cotton goods, including cotton small wares	21,932,225	12.5	18.3	3.5	3.9
Woolen, worsted, and felt goods, and wool hats	18,490,120	10.5	10.9	4.2	5.2
Boots and shoes, including cut stock and findings	15,508,771	8.8	8.3	3.0	3.3
MARYLAND.					
Clothing, men's, including shirts	36,921,294	11.7	13.3	6.5	8.3
Smelting and refining, copper	.....	.....	.....	.....	.....
Copper, tin, and sheet-iron products	16,909,447	5.4	4.9	8.5	7.2
Canning and preserving	13,709,449	4.3	8.0	8.7	14.4
Slaughtering and meat packing	13,682,951	4.3	1.0	1.0	1.2
MASSACHUSETTS.					
Boots and shoes, including cut stock and findings	$236,342,915	15.9	14.2	46.1	41.9
Cotton goods, including cotton small wares	186,462,313	12.5	18.6	29.7	28.7
Woolen, worsted, and felt goods, and wool hats	141,966,882	9.5	9.2	32.6	31.9
Foundry and machine-shop products	86,925,671	5.8	7.6	7.1	8.3
Printing and publishing	47,445,006	3.2	3.0	6.4	6.8
MICHIGAN.					
Automobiles, including bodies and parts	96,651,451	14.1	11.0	38.8	33.6
Lumber and timber products	61,513,560	9.0	15.4	5.3	5.1
Foundry and machine-shop products	45,399,023	6.6	9.4	3.7	4.1
Flour-mill and gristmill products	34,860,803	5.1	0.7	3.9	3.9
Furniture and refrigerators	28,641,684	4.2	7.2	11.9	12.9
MINNESOTA.					
Flour-mill and gristmill products	139,136,129	34.0	5.1	15.7	11.0
Lumber and timber products	42,352,507	10.3	24.4	3.7	3.0
Slaughtering and meat packing	25,753,697	6.3	2.3	1.9	2.1
Butter, cheese, and condensed milk	25,287,462	6.2	1.4	9.2	6.4
Printing and publishing	15,982,212	3.9	6.7	2.2	2.2
MISSISSIPPI.					
Lumber and timber products	42,792,844	53.1	66.3	3.7	4.8
Oil, cottonseed, and cake	15,965,543	19.8	5.0	10.8	14.7
Cars and general shop construction and repairs by steam-railroad companies	3,233,288	4.0	5.1	0.8	0.9
Cotton goods, including cotton small wares	3,102,398	3.8	5.2	0.5	0.7
Fertilizers	2,125,029	2.6	0.9	2.0	2.5
MISSOURI.					
Slaughtering and meat packing	79,581,294	13.9	3.1	5.8	5.2
Boots and shoes, including cut stock and findings	48,751,235	8.5	11.4	9.5	8.8
Flour-mill and gristmill products	44,508,106	7.8	1.4	5.0	5.6
Tobacco manufactures	30,950,638	5.4	2.9	7.4	2.7
Printing and publishing	29,651,153	5.2	7.1	4.0	4.2
MONTANA.					
Smelting and refining, copper	.....	.....	.....	.....	.....
Lumber and timber products	6,333,778	8.6	26.6	0.5	0.4
Smelting and refining, lead	.....	.....	.....	.....	.....
Cars and general shop construction and repairs by steam-railroad companies	2,810,521	3.8	16.4	0.7	0.7
Liquors, malt	2,439,832	3.3	2.1	0.7	0.4
NEBRASKA.					
Slaughtering and meat packing	92,305,484	46.4	24.7	6.7	6.7
Smelting and refining, lead	.....	.....	.....	.....	.....
Flour-mill and gristmill products	17,835,596	9.0	3.4	2.0	2.1
Butter, cheese, and condensed milk	7,681,272	3.9	1.6	2.8	2.1
Printing and publishing	6,667,290	3.3	9.6	0.9	0.9
NEVADA.					
Smelting and refining, copper	.....	.....	.....	.....	.....
Cars and general shop construction and repairs by steam-railroad companies	1,032,707	8.7	36.2	0.3	0.3
Slaughtering and meat packing	.....	.....	.....	.....	.....
Flour-mill and gristmill products	597,929	5.0	1.1	0.1	0.1
Printing and publishing	519,243	4.4	8.0	0.1	0.1
NEW HAMPSHIRE.					
Boots and shoes, including cut stock and findings	39,439,544	24.0	18.1	7.7	7.2
Cotton goods, including cotton small wares	33,601,830	20.4	28.3	5.3	58.8
Woolen, worsted, and felt goods, and wool hats	16,730,652	10.2	12.1	3.8	5.6
Lumber and timber products	15,284,357	9.3	10.8	1.3	1.2
Paper and wood pulp	13,994,251	8.5	4.3	5.2	4.5
NEW JERSEY.					
Smelting and refining, copper	125,651,087	11.0	0.7	33.2	14.9
Petroleum, refining	.....	.....	.....	.....	.....
Silk and silk goods, including throwsters	65,429,550	5.7	9.3	33.2	30.6
Foundry and machine-shop products	65,398,437	5.7	8.5	5.3	5.2
Slaughtering and meat packing	37,583,395	3.3	0.6	2.7	2.0

FIVE LEADING INDUSTRIES OF EACH STATE AS MEASURED BY VALUE OF PRODUCTS: 1909—Continued.

Table 6—Continued.

STATE AND INDUSTRY.	Value of products.	PER CENT OF TOTAL FOR ALL INDUSTRIES IN THE STATE.		PER CENT OF TOTAL FOR THE INDUSTRY IN THE UNITED STATES.	
		Value of products.	Wage earners (average number).	Value of products.	Wage earners (average number).
NEW MEXICO.					
Cars and general shop construction and repairs by steam-railroad companies	$2,250,920	28.5	35.9	0.6	0.5
Lumber and timber products	2,162,396	27.4	35.6	0.2	0.2
Coke	.....	.....	.....	.....	.....
Printing and publishing	588,782	7.5	6.8	0.1	0.1
Flour-mill and gristmill products	461,621	5.8	0.7	0.1	0.1
NEW YORK.					
Clothing, women's	272,517,792	8.1	9.8	70.8	63.8
Clothing, men's, including shirts	266,075,427	7.9	9.1	46.8	38.1
Printing and publishing	216,946,482	6.4	6.3	29.4	24.4
Foundry and machine-shop products	154,370,346	4.6	6.4	12.6	12.1
Slaughtering and meat packing	127,130,051	3.8	0.6	9.3	6.8
NORTH CAROLINA.					
Cotton goods, including cotton small wares	72,680,385	33.5	38.9	11.6	12.5
Tobacco manufactures	35,986,639	16.6	6.8	8.6	4.9
Lumber and timber products	33,524,653	15.5	28.0	2.9	4.9
Oil, cottonseed, and cake	8,504,477	3.9	1.0	5.8	6.8
Flour-mill and gristmill products	8,501,219	3.9	0.4	1.0	1.3
NORTH DAKOTA.					
Flour-mill and gristmill products	11,685,116	61.1	15.6	1.3	1.1
Printing and publishing	1,909,514	10.0	28.3	0.3	0.3
Butter, cheese, and condensed milk	1,029,135	5.4	2.2	0.4	0.6
Leather goods	683,273	3.6	3.5	0.7	0.3
Cars and general shop construction and repairs by steam-railroad companies	679,612	3.6	16.6	0.2	0.2
OHIO.					
Iron and steel, steel works and rolling mills	197,780,043	13.8	8.6	20.1	16.1
Foundry and machine-shop products	145,836,648	10.1	14.5	11.9	12.2
Iron and steel, blast furnaces	83,699,238	5.8	1.6	21.4	19.0
Rubber goods, not elsewhere specified	53,910,531	3.7	2.3	42.0	39.1
Slaughtering and meat packing	50,804,100	3.5	0.7	3.7	3.4
OKLAHOMA.					
Flour-mill and gristmill products	19,144,475	35.7	6.4	2.2	2.1
Oil, cottonseed, and cake	5,186,605	9.7	4.4	3.5	3.4
Lumber and timber products	4,438,563	8.3	24.2	0.4	0.5
Printing and publishing	3,988,542	7.4	12.9	0.5	0.7
Smelting and refining, zinc	3,002,233	5.6	4.3	8.8	8.5
OREGON.					
Lumber and timber products	30,199,857	32.5	52.4	2.6	2.2
Flour-mill and gristmill products	8,891,001	9.6	1.4	1.0	1.0
Slaughtering and meat packing	5,879,615	6.3	1.3	0.4	0.4
Printing and publishing	5,040,523	5.4	5.1	0.7	0.6
Butter, cheese, and condensed milk	4,920,462	5.3	1.5	1.8	2.3
PENNSYLVANIA.					
Iron and steel, steel works and rolling mills	500,343,995	19.0	14.5	50.8	52.9
Foundry and machine-shop products	210,746,257	8.0	9.9	17.2	16.4
Iron and steel, blast furnaces	168,578,413	6.4	1.7	43.1	37.8
Leather, tanned, curried, and finished	77,926,321	3.0	1.6	23.8	22.5
Woolen, worsted, and felt goods, and wool hats	77,446,996	2.9	3.1	17.8	16.2
RHODE ISLAND.					
Woolen, worsted, and felt goods, and wool hats	74,600,240	26.6	22.0	17.1	14.8
Cotton goods, including cotton small wares	50,312,597	17.9	25.4	8.0	7.6
Jewelry	20,685,100	7.4	8.4	25.7	31.3
Foundry and machine-shop products	20,611,693	7.4	9.6	1.7	2.1
Dyeing and finishing textiles	13,955,700	5.0	6.9	16.7	17.7
SOUTH CAROLINA.					
Cotton goods, including cotton small wares	65,929,585	58.2	62.2	10.5	12.0
Lumber and timber products	13,140,886	11.6	20.0	1.1	2.1
Oil, cottonseed, and cake	10,902,935	9.6	2.4	7.4	10.3
Fertilizers	9,024,900	8.0	2.5	8.7	10.1
Printing and publishing	1,600,591	1.4	1.1	0.2	0.3
SOUTH DAKOTA.					
Flour-mill and gristmill products	$6,208,216	34.7	7.9	0.7	0.7
Butter, cheese, and condensed milk	2,685,511	15.0	3.9	1.0	0.8
Printing and publishing	1,975,970	11.1	22.9	0.3	0.3
Bread and other bakery products	1,100,536	6.5	7.9	0.3	0.3
Lumber and timber products	944,777	5.3	12.5	0.1	0.1
TENNESSEE.					
Lumber and timber products	30,456,807	16.9	30.3	2.6	3.2
Flour-mill and gristmill products	29,070,019	16.1	2.1	3.3	4.0
Foundry and machine-shop products	9,189,791	5.1	5.5	0.7	0.8
Printing and publishing	7,173,230	4.0	3.9	1.0	1.1
Cars and general shop construction and repairs by steam-railroad companies	6,776,511	3.8	7.5	1.7	2.0
TEXAS.					
Slaughtering and meat packing	42,529,746	15.6	5.2	3.1	4.1
Flour-mill and gristmill products	32,484,612	11.9	1.7	3.7	3.1
Lumber and timber products	32,201,440	11.8	33.5	2.8	3.4
Oil, cottonseed, and cake	29,915,772	11.0	4.4	20.2	18.0
Petroleum, refining	.....	.....	.....	.....	.....
UTAH.					
Smelting and refining, copper	.....	.....	.....	.....	.....
Smelting and refining, lead	.....	.....	.....	.....	.....
Beet sugar	.....	.....	.....	.....	.....
Flour-mill and gristmill products	3,130,895	5.1	1.6	0.4	0.5
Cars and general shop construction and repairs by steam-railroad companies	2,740,463	4.4	14.7	0.7	0.8
VERMONT.					
Marble and stone work	12,395,379	18.1	36.8	11.0	15.9
Lumber and timber products	8,598,084	12.6	14.2	0.7	0.7
Butter, cheese, and condensed milk	8,112,239	11.9	1.5	3.0	2.8
Woolen, worsted, and felt goods, and wool hats	4,496,903	6.6	6.8	1.0	1.4
Flour-mill and gristmill products	4,133,337	6.0	0.5	0.5	0.4
VIRGINIA.					
Lumber and timber products	35,855,310	16.3	31.5	3.1	4.8
Tobacco manufactures	25,385,314	11.5	7.5	6.1	4.7
Flour-mill and gristmill products	17,598,045	8.0	1.0	2.0	2.5
Cars and general shop construction and repairs by steam-railroad companies	9,955,501	4.5	7.2	2.5	2.7
Leather, tanned, curried, and finished	8,266,850	3.8	1.5	2.5	2.6
WASHINGTON.					
Lumber and timber products	89,154,820	40.4	63.3	7.7	6.3
Flour-mill and gristmill products	17,852,944	8.1	0.9	2.0	1.6
Slaughtering and meat packing	15,653,998	7.1	1.2	1.1	0.9
Canning and preserving	9,595,387	4.3	2.9	6.1	3.4
Printing and publishing	9,286,188	4.2	3.8	1.3	1.0
WEST VIRGINIA.					
Lumber and timber products	28,758,481	17.8	29.2	2.5	2.7
Iron and steel, steel works and rolling mills	22,435,411	13.9	7.9	2.3	2.1
Leather, tanned, curried, and finished	12,450,592	7.7	2.5	3.8	2.5
Tin plate and terneplate	9,257,524	5.7	2.1	19.3	24.9
Glass	7,779,483	4.8	9.7	8.4	9.9
WISCONSIN.					
Lumber and timber products	57,969,170	9.8	18.7	5.0	4.9
Foundry and machine-shop products	54,124,000	9.2	13.3	4.4	4.6
Butter, cheese, and condensed milk	53,843,249	9.1	1.6	18.6	15.9
Leather, tanned, curried, and finished	44,667,676	7.6	4.1	13.6	12.1
Liquors, malt	32,125,919	5.4	2.8	8.5	9.3
WYOMING.					
Cars and general shop construction and repairs by steam-railroad companies	2,336,678	37.4	58.9	0.6	0.5
Lumber and timber products	751,249	12.0	22.6	0.1	0.1
Flour-mill and gristmill products	746,299	11.9	1.0	0.1	0.1
Printing and publishing	489,544	7.8	5.6	0.1	0.1
Iron and steel, steel works and rolling mills	.....	.....	.....	.....	.....

It will be seen from this table that there are marked differences among the states with respect to the degree of diversification in industry. In more than half of the states the five leading industries together accounted in 1909 for 50 per cent or more of the total value of products for all manufacturing industries combined, but in some the proportion was much lower; for example, in New York the five leading industries accounted for only 30.8 per cent of the total value of products.

The lumber industry in 1909 ranked first, as measured by value of products, in 12 states—Alabama, Arkansas, California, Idaho, Louisiana, Mississippi, Oregon, Tennessee, Virginia, Washington, West Virginia, and Wisconsin.

The slaughtering and meat-packing industry ranked first on this basis in seven states—Illinois, Indiana, Iowa, Kansas, Missouri, Nebraska, and Texas. In only two of these states, however, did it rank first in number of wage earners.

The manufacture of flour-mill and gristmill products held first place in Minnesota, North Dakota, Oklahoma, and South Dakota; steel works and rolling mills, in Ohio and Pennsylvania; the manufacture of boots and shoes, in Massachusetts and New Hampshire; the manufacture of cotton goods, in Georgia, North Carolina, and South Carolina; steam-railroad repair shops, in New Mexico and Wyoming (the least important states in respect to total value of manufactured products); and the smelting and refining of copper, in Arizona, Montana, Nevada, New Jersey, and Utah. There is no other industry which ranked first in more than one state.

Leading states in each industry.—The following table names the states holding first, second, and third place in each industry as measured by value of products in 1909, and shows the percentage that the value of products for each of the three states formed of the total for the industry in the United States. In some instances these percentages have been omitted, because their inclusion would result indirectly in disclosing the value of products reported by individual concerns.

THREE LEADING STATES IN EACH INDUSTRY AS MEASURED BY VALUE OF PRODUCTS: 1909.

Table 7	VALUE OF PRODUCTS: 1909						
		State ranking—					
		First.		Second.		Third.	
INDUSTRY.	Total for United States.	Name.	Per cent of United States total.	Name.	Per cent of United States total.	Name.	Per cent of United States total.
Agricultural implements	$146,329,268	Illinois	39.1	New York	10.2	Ohio	9.9
Artificial flowers and feathers and plumes	23,980,567	New York	88.2	Pennsylvania	5.5	Illinois	1.7
Artificial stone	18,595,688	Iowa	8.4	Illinois	8.0	Ohio	7.4
Artists' materials	2,339,935	New Jersey	37.3	Illinois	18.0	New York	15.6
Automobiles, including bodies and parts	249,202,075	Michigan	38.8	Ohio	15.6	New York	12.4
Awnings, tents, and sails	14,499,020	New York	15.3	Missouri	12.3	Ohio	9.6
Axle grease	1,480,811	New York	38.1	Missouri	15.1	Illinois	11.7
Babbitt metal and solder	19,767,935	New York	31.0	Illinois	21.0	Pennsylvania	10.7
Bags, other than paper	54,881,622	Missouri		Minnesota		Louisiana	9.8
Bags, paper	15,697,959	New York	35.8	Maine		Ohio	15.2
Baking powders and yeast	20,774,588	Illinois	36.7	New York		California	
Baskets, and rattan and willow ware	5,695,356	New York	34.2	Michigan	8.4	Maryland	8.3
Beet sugar	48,122,383	Colorado		California		Michigan	21.8
Belting and hose, leather	23,691,887	New York	27.1	Massachusetts	23.8	Illinois	9.2
Belting and hose, woven and rubber	24,729,221	New Jersey	39.6	Massachusetts		Ohio	13.9
Bicycles, motorcycles, and parts	10,698,567	Massachusetts	25.3	Ohio	21.6	Illinois	16.6
Billiard tables and materials	5,877,837	New York		Michigan		Ohio	
Blacking and cleansing and polishing preparations	14,679,120	New York	26.1	Massachusetts	25.3	Illinois	8.4
Bluing	1,074,231	Massachusetts		New Jersey		New York	12.4
Bone, carbon, and lamp black	1,093,494	West Virginia	54.5	Pennsylvania		New Jersey	
Boots and shoes, including cut stock and findings	512,797,642	Massachusetts	46.1	Missouri	9.5	New York	9.4
Boots and shoes, rubber	49,720,567	Massachusetts	37.7	Connecticut		Rhode Island	
Boxes, cigar	8,491,082	Pennsylvania	27.4	New York	26.3	Ohio	8.4
Boxes, fancy and paper	54,450,015	New York	26.1	Illinois	11.7	Massachusetts	10.6
Brass and bronze products	149,989,058	Connecticut	44.6	New York	14.8	Michigan	9.3
Bread and other bakery products	396,864,844	New York	21.7	Pennsylvania	11.6	Illinois	9.1
Brick and tile	92,776,504	Illinois	10.5	Ohio	10.1	Pennsylvania	9.9
Brooms	14,431,593	New York	15.3	Illinois	10.2	Pennsylvania	8.7
Brushes	14,694,003	New York	27.7	Massachusetts	19.6	New Jersey	10.6
Butter, cheese, and condensed milk	274,557,718	Wisconsin	19.6	New York	15.5	Iowa	9.4
Butter, reworking	8,200,533	Illinois		Iowa		Ohio	16.5
Buttons	22,708,065	New York	41.3	Iowa	17.8	New Jersey	12.1
Calcium lights	52,216	Illinois	51.2	Indiana		Missouri	
Candles	3,130,521	New York	53.3	Illinois		Louisiana	
Canning and preserving	157,101,201	California	21.0	New York	12.1	Maryland	8.7
Card cutting and designing	1,031,392	New York	47.5	Pennsylvania	17.7	New Jersey	9.2
Carpets and rugs, other than rag	71,188,152	New York	36.0	Pennsylvania	34.9	Massachusetts	18.0
Carpets, rag	2,567,569	Pennsylvania	21.8	Illinois	13.3	New York	11.1
Carriages and sleds, children's	8,805,129	Ohio	22.5	Massachusetts	19.9	Indiana	12.9
Carriages and wagons and materials	159,892,547	Ohio	13.7	Indiana	13.5	Illinois	10.5
Cars and general shop construction and repairs by steam-railroad companies.	405,600,727	Pennsylvania	18.7	Illinois	7.9	Ohio	7.1
Cars and general shop construction and repairs by street-railroad companies.	31,962,561	New York	20.8	Illinois	10.8	California	9.4
Cars, steam-railroad, not including operations of railroad companies	123,729,627	Pennsylvania	22.2	Illinois	21.8	Indiana	7.7
Cars, street-railroad, not including operations of railroad companies	7,809,866	Pennsylvania		Ohio	25.0	Missouri	

THREE LEADING STATES IN EACH INDUSTRY AS MEASURED BY VALUE OF PRODUCTS: 1909—Continued.

Table 7—Continued.

INDUSTRY.	VALUE OF PRODUCTS: 1909						
	Total for United States.	State ranking—					
		First.		Second.		Third.	
		Name.	Per cent of United States total.	Name.	Per cent of United States total.	Name.	Per cent of United States total.
Cash registers and calculating machines	$23,708,326	Ohio		Michigan		Illinois	
Cement	63,205,455	Pennsylvania	29.8	Indiana	11.1	California	10.3
Charcoal	872,522	Michigan	29.6	Alabama	29.6	Illinois	8.1
Chemicals	117,688,887	New York	30.0	New Jersey	19.4	Pennsylvania	13.6
China decorating	786,293	Illinois	38.7	New Jersey	29.2	New York	16.7
Chocolate and cocoa products	22,390,222	Massachusetts		New York	26.0	Pennsylvania	21.5
Clocks and watches, including cases and materials	35,196,842	Connecticut	21.0	Illinois	20.0	New York	17.6
Cloth, sponging and refinishing	1,543,872	New York	66.7	Pennsylvania	9.2	Illinois	7.7
Clothing, horse	4,134,864	Wisconsin	30.9	Ohio		Pennsylvania	22.7
Clothing, men's, buttonholes	780,720	New York	70.3	Ohio	9.8	Maryland	6.3
Clothing, men's, including shirts	568,076,635	New York	46.8	Illinois	15.8	Pennsylvania	7.0
Clothing, women's	384,751,649	New York	70.8	Pennsylvania	8.5	Ohio	5.1
Coffee and spice, roasting and grinding	110,532,787	Illinois	17.9	New York	15.8	Missouri	10.9
Coffins, burial cases, and undertakers' goods	24,525,905	New York	15.4	Ohio	12.5	Pennsylvania	11.2
Coke	95,696,622	Pennsylvania	54.1	Alabama	9.2	West Virginia	7.9
Confectionery	134,795,913	New York	18.9	Massachusetts	11.3	Pennsylvania	10.0
Cooperage and wooden goods, not elsewhere specified	60,248,260	New York	12.5	Illinois	11.0	Pennsylvania	7.7
Copper, tin, and sheet-iron products	199,824,218	New York	19.2	Illinois	11.4	Ohio	9.6
Cordage and twine and jute and linen goods	61,019,986	Massachusetts	27.3	New York	20.0	Illinois	13.5
Cordials and sirups	9,662,176	Illinois	29.7	New York	26.0	Georgia	12.9
Cork, cutting	5,939,938	Pennsylvania	49.9	New York	30.6	New Jersey	13.3
Corsets	33,257,187	Connecticut	38.5	New York	15.5	Michigan	13.1
Cotton goods, including cotton small wares	628,391,813	Massachusetts	29.7	North Carolina	11.6	South Carolina	10.5
Crucibles	1,849,326	Pennsylvania	39.3	New Jersey		Connecticut	
Cutlery and tools, not elsewhere specified	53,265,757	Massachusetts	21.8	Connecticut	20.1	Pennsylvania	15.1
Dairymen's, poulterers', and apiarists' supplies	15,463,492	New York	27.2	Iowa	12.7	Pennsylvania	11.1
Dentists' materials	10,835,553	New York	47.2	Pennsylvania	25.3	Connecticut	
Drug grinding	6,006,999	New Jersey	45.4	Maryland		New York	14.7
Dyeing and finishing textiles	83,556,432	Massachusetts	26.2	New Jersey	18.9	Rhode Island	16.7
Dyestuffs and extracts	15,954,574	New York	28.2	New Jersey	19.6	Pennsylvania	14.7
Electrical machinery, apparatus, and supplies	221,308,563	New York	22.3	Pennsylvania	14.2	New Jersey	12.8
Electroplating	4,509,559	New York	24.8	Illinois	15.4	Massachusetts	15.0
Emery and other abrasive wheels	6,710,666	New York	38.2	Massachusetts	29.5	New Jersey	
Enameling and japanning	3,315,694	Wisconsin		Pennsylvania	19.7	Rhode Island	17.2
Engravers' materials	920,727	New York	35.7	Illinois		New Jersey	
Engraving and diesinking	2,249,861	New York	30.4	Illinois	18.1	Rhode Island	13.2
Engraving, wood	711,279	Illinois	45.6	New York	27.7	Pennsylvania	6.9
Explosives	40,139,661	New Jersey		Pennsylvania	15.9	California	
Fancy articles, not elsewhere specified	22,632,199	New York	34.7	Massachusetts	29.2	New Jersey	8.1
Fertilizers	103,960,213	Georgia	16.2	Maryland	9.3	South Carolina	8.7
Files	5,691,203	Pennsylvania	27.1	New Jersey		Rhode Island	
Firearms and ammunition	34,111,564	Connecticut	58.5	Massachusetts	10.0	New York	7.0
Fire extinguishers, chemical	754,165	New York	35.7	Missouri		Illinois	21.8
Fireworks	2,269,349	New York	33.0	New Jersey	16.7	Massachusetts	12.6
Flags, banners, regalia, society badges, and emblems	8,113,989	Ohio	37.3	New York	23.0	Michigan	
Flavoring extracts	8,828,034	New York	20.0	Ohio	11.4	Illinois	10.6
Flax and hemp, dressed	467,346	Minnesota		Kentucky	43.6	North Dakota	
Flour-mill and gristmill products	883,584,405	Minnesota	15.7	New York	7.9	Kansas	7.7
Food preparations	125,331,181	New York	13.8	Michigan	9.2	Ohio	8.6
Foundry and machine-shop products	1,228,475,148	Pennsylvania	17.2	New York	12.6	Ohio	11.9
Foundry supplies	2,297,690	Ohio	31.6	Pennsylvania	27.2	Illinois	13.4
Fuel, manufactured	311,010	Pennsylvania		New York		New Jersey	
Fur goods	55,937,549	New York	73.8	Minnesota	6.8	Michigan	4.1
Furnishing goods, men's	87,710,197	New York	48.1	Massachusetts	13.7	Illinois	8.2
Furniture and refrigerators	239,886,506	New York	17.5	Michigan	11.9	Illinois	11.6
Furs, dressed	2,390,959	New York	51.8	New Jersey	26.2	Minnesota	7.6
Galvanizing	7,338,330	Ohio	32.2	West Virginia		Missouri	
Gas and electric fixtures and lamps and reflectors	45,057,372	New York	28.9	Illinois	12.9	New Jersey	12.8
Gas, illuminating and heating	166,814,371	New York	25.4	Illinois	12.6	Pennsylvania	9.5
Glass	92,095,203	Pennsylvania	35.6	Ohio	15.6	Indiana	12.6
Glass, cutting, staining, and ornamenting	16,101,129	New York	30.1	Pennsylvania	23.2	Illinois	12.1
Gloves and mittens, leather	23,630,598	New York	60.7	Wisconsin	11.8	Illinois	10.7
Glucose and starch	48,799,311	Illinois		Iowa		New Jersey	
Glue	13,717,820	Illinois	27.5	New York	21.8	Pennsylvania	14.9
Gold and silver, leaf and foil	2,630,500	New York	34.9	Pennsylvania	15.9	Rhode Island	
Gold and silver, reducing and refining, not from the ore	23,611,764	Connecticut		Rhode Island	18.8	New Jersey	18.8
Graphite and graphite refining	1,139,587	New York		Michigan		Pennsylvania	19.5
Grease and tallow	23,419,395	Illinois	23.9	New York	15.1	Pennsylvania	14.2
Grindstones	1,688,171	Ohio	88.8	Michigan		Maine	
Haircloth	2,230,033	Pennsylvania		Rhode Island		New York	
Hair work	11,216,175	New York	70.1	Illinois	18.9	Pennsylvania	2.1
Hammocks	578,505	Pennsylvania	67.2	Massachusetts		Wisconsin	11.2
Hand stamps and stencils and brands	3,673,025	New York	19.5	Illinois	13.0	Pennsylvania	9.0
Hat and cap materials	8,236,319	New York	46.6	Connecticut	18.3	New Jersey	16.8
Hats and caps, other than felt, straw, and wool	13,689,338	New York	57.2	Pennsylvania	8.0	Illinois	7.6
Hats, fur-felt	47,864,630	Pennsylvania	27.2	Connecticut	21.7	New York	21.3
Hats, straw	21,424,255	New York	35.6	Massachusetts	30.8	Maryland	15.6
Hones and whetstones	267,932	New Hampshire		Vermont		New Jersey	
Horseshoes, not made in steel works or rolling mills	1,014,576	New Jersey		Massachusetts		Pennsylvania	8.3
Hosiery and knit goods	200,143,527	New York	33.5	Pennsylvania	24.8	Massachusetts	7.4

THREE LEADING STATES IN EACH INDUSTRY AS MEASURED BY VALUE OF PRODUCTS: 1909—Continued.

Table 7—Continued.

INDUSTRY.	VALUE OF PRODUCTS: 1909						
	Total for United States.	State ranking—					
		First.		Second.		Third.	
		Name.	Per cent of United States total.	Name.	Per cent of United States total.	Name	Per cent of United States total.
House-furnishing goods, not elsewhere specified	$18,508,886	New York	42.1	Pennsylvania	8.5	Ohio	8.4
Ice, manufactured	42,953,055	Pennsylvania	11.2	Texas	8.9	New York	8.9
Ink, printing	8,865,504	New York	45.8	Ohio	21.5	Pennsylvania	11.8
Ink, writing	2,505,414	Massachusetts		New York	29.7	Illinois	
Instruments, professional and scientific	10,503,601	New York	31.5	Illinois	16.8	Pennsylvania	9.9
Iron and steel, blast furnaces	391,429,283	Pennsylvania	43.1	Ohio	21.4	Illinois	9.8
Iron and steel, steel works and rolling mills	985,722,534	Pennsylvania	50.8	Ohio	20.1	Illinois	8.8
Iron and steel, bolts, nuts, washers, and rivets, not made in steel works or rolling mills.	24,484,907	Ohio	25.6	Pennsylvania	20.9	New York	12.1
Iron and steel, doors and shutters	3,005,685	New York	45.0	Illinois	19.3	Ohio	14.4
Iron and steel forgings	20,293,440	Pennsylvania	28.9	Ohio	19.9	New York	12.6
Iron and steel, nails and spikes, cut and wrought, including wire nails, not made in steel works or rolling mills.	8,191,620	Massachusetts	35.7	Connecticut		Illinois	14.3
Iron and steel pipe, wrought	30,886,270	Pennsylvania	59.2	West Virginia		Ohio	11.1
Jewelry	80,349,874	Rhode Island	25.7	New York	25.3	Massachusetts	18.9
Jewelry and instrument cases	3,116,519	New York	57.1	New Jersey	12.7	Massachusetts	9.5
Kaolin and ground earths	4,680,548	New Jersey	16.8	Pennsylvania	16.2	New York	15.8
Labels and tags	4,669,965	New York	29.8	Illinois	17.6	Pennsylvania	17.5
Lapidary work	9,172,832	New York	94.4	California	3.2	Illinois	1.0
Lard, refined, not made in slaughtering and meat-packing establishments.	10,326,471	Illinois		New Jersey		Maryland	
Lasts	4,158,933	Massachusetts	45.9	New York	18.9	Ohio	
Lead, bar, pipe, and sheet	9,144,930	New York	22.6	Illinois		Massachusetts	
Leather goods	104,719,008	New York	20.0	Illinois	8.5	Missouri	6.2
Leather, tanned, curried, and finished	327,874,187	Pennsylvania	23.8	Wisconsin	13.6	Massachusetts	12.2
Lime	17,951,987	Pennsylvania	18.6	Ohio	9.0	Wisconsin	7.1
Liquors, distilled	204,699,412	Illinois	27.0	Kentucky	21.7	Indiana	15.4
Liquors, malt	374,730,096	New York	20.7	Pennsylvania	12.7	Wisconsin	8.6
Liquors, vinous	13,120,846	California	68.1	New York	13.8	Ohio	9.9
Locomotives, not made by railroad companies	31,582,302	Pennsylvania		New York		Ohio	
Looking-glass and picture frames	13,475,082	Illinois	33.5	New York	26.4	Pennsylvania	7.2
Lumber and timber products	1,156,128,747	Washington	7.7	New York	6.3	Louisiana	5.4
Malt	38,252,233	New York	28.9	Wisconsin	25.1	Illinois	24.9
Marble and stone work	113,092,967	New York	15.8	Vermont	11.0	Pennsylvania	10.2
Matches	11,353,138	Ohio		Wisconsin		New York	
Mats and matting	2,431,615	Minnesota		Wisconsin		Massachusetts	
Mattresses and spring beds	35,783,154	New York	16.5	Ohio	9.2	Illinois	8.0
Millinery and lace goods	85,893,632	New York	60.7	Illinois	8.5	New Jersey	8.0
Millstones		Illinois	100.0				
Mineral and soda waters	43,508,464	New York	17.1	Pennsylvania	9.3	Illinois	7.0
Mirrors	9,570,797	New York	34.1	Illinois	11.6	North Carolina	8.2
Models and patterns, not including paper patterns	8,868,166	New York	27.7	Pennsylvania	23.5	Illinois	10.0
Moving pictures	4,206,448	New Jersey		New York	30.9	Illinois	
Mucilage and paste	4,918,341	Massachusetts	32.8	New York	27.1	Pennsylvania	17.1
Musical instruments and materials, not specified	3,228,108	New Jersey	19.7	Illinois	19.5	Indiana	18.9
Musical instruments, pianos and organs and materials	89,789,544	New York	37.5	Illinois	21.4	Massachusetts	10.1
Needles, pins, and hooks and eyes	6,694,095	Connecticut	63.3	Pennsylvania		New Jersey	9.3
Oakum	338,497	New Jersey		Maryland		California	
Oil, castor	904,825	New Jersey		Missouri		Massachusetts	
Oil, cottonseed, and cake	147,867,894	Texas	20.2	Georgia	16.0	Mississippi	10.8
Oil, essential	1,737,234	Michigan	28.0	New Jersey		Connecticut	
Oil, linseed	36,738,694	New York	41.9	Minnesota	30.0	Ohio	9.9
Oil, not elsewhere specified	30,865,122	Pennsylvania	33.6	New Jersey	25.4	New York	9.7
Oilcloth and linoleum	23,339,022	New Jersey	43.5	Pennsylvania		New York	15.1
Oleomargarine	8,147,629	Illinois		Rhode Island	16.0	Ohio	
Optical goods	11,734,811	New York	34.1	Massachusetts	26.1	Pennsylvania	9.1
Ordnance and accessories		Massachusetts		Pennsylvania			
Paint and varnish	124,889,422	New York	22.8	Illinois	16.4	Pennsylvania	11.2
Paper and wood pulp	267,656,964	New York	18.3	Massachusetts	15.0	Maine	12.7
Paper goods, not elsewhere specified	55,170,564	Massachusetts	24.5	New York	22.0	Ohio	11.4
Paper patterns	2,610,714	New York	83.0	New Jersey		Illinois	1.4
Patent medicines and compounds and druggists' preparations	141,941,602	New York	26.3	Michigan	9.5	Illinois	9.2
Paving materials	6,229,400	New Jersey		New York	18.7	Illinois	8.0
Peanuts, grading, roasting, cleaning, and shelling	9,736,551	Virginia	81.5	Missouri		Pennsylvania	7.1
Pencils, lead	7,378,744	New Jersey		New York		Pennsylvania	
Pens, fountain, stylographic, and gold	4,738,693	New York	67.9	Ohio	9.9	Connecticut	
Pens, steel	576,696	New Jersey		Pennsylvania		Connecticut	
Petroleum, refining	236,997,659	New Jersey		Pennsylvania	22.4	New York	
Phonographs and graphophones	11,725,996	New Jersey		Connecticut		New York	
Photographic apparatus and materials	22,561,341	New York	83.2	Missouri	6.3	Illinois	3.3
Photo-engraving	11,624,000	New York	25.0	Illinois	23.0	Pennsylvania	9.7
Pipes, tobacco	5,311,900	New York	60.5	New Jersey	20.9	Missouri	7.4
Pottery, terra-cotta, and fire-clay products	76,118,861	Ohio	27.8	New Jersey	17.3	Pennsylvania	17.2
Printing and publishing	737,876,087	New York	29.4	Illinois	11.8	Pennsylvania	9.6
Pulp, from fiber other than wood		Pennsylvania	100.0				
Pulp goods	1,770,107	Delaware	58.3	New York		Maine	
Pumps, not including steam pumps	5,582,962	Ohio	49.2	New York	14.6	Illinois	11.8
Rice, cleaning and polishing	22,371,457	Louisiana	56.0	Texas	36.4	Arkansas	4.2
Roofing materials	19,204,423	Ohio	20.3	Illinois	17.6	Pennsylvania	17.4
Rubber goods, not elsewhere specified	128,435,747	Ohio	42.0	New Jersey	15.2	Massachusetts	12.3
Rules, ivory and wood	143,811	New York	79.4	Ohio		Connecticut	
Safes and vaults	8,490,541	Ohio	64.6	Pennsylvania	15.8	New York	
Salt	11,327,834	Michigan	32.2	New York	25.6	Ohio	16.0

THREE LEADING STATES IN EACH INDUSTRY AS MEASURED BY VALUE OF PRODUCTS: 1909—Continued.

Table 7—Continued.

INDUSTRY.	VALUE OF PRODUCTS: 1909						
	Total for United States.	State ranking—					
		First.		Second.		Third.	
		Name.	Per cent of United States total.	Name.	Per cent of United States total.	Name.	Per cent of United States total.
Sand and emery paper and cloth	$4,357,792	Pennsylvania	49.0	New York		Massachusetts	
Saws	11,535,631	Pennsylvania	32.9	Indiana		Illinois	
Scales and balances	8,785,642	Ohio		Vermont		New York	13.4
Screws, machine	3,014,112	Connecticut		Ohio	19.8	Massachusetts	18.9
Screws, wood	6,198,955	Rhode Island		Connecticut		Massachusetts	
Sewing machines, cases, and attachments	28,262,416	Indiana		Ohio	21.1	Connecticut	7.5
Shipbuilding, including boat building	73,360,315	New York	15.6	New Jersey	12.0	Virginia	
Shoddy	7,446,364	Pennsylvania	27.5	Massachusetts	23.7	Ohio	16.9
Show cases	7,167,100	Michigan	26.0	New York	12.6	Illinois	11.6
Signs and advertising novelties	13,546,385	Illinois	24.1	Ohio	19.2	New Jersey	15.4
Silk and silk goods, including throwsters	196,911,667	New Jersey	33.2	Pennsylvania	31.5	New York	13.5
Silverware and plated ware	42,228,547	Connecticut	37.5	New York	18.6	Massachusetts	15.5
Slaughtering and meat packing	1,370,568,101	Illinois	28.4	Kansas	12.1	New York	9.3
Smelting and refining, copper	378,805,974	New Jersey	33.2	New York		Montana	
Smelting and refining, lead	167,405,650	California		Nebraska		Colorado	
Smelting and refining, zinc	34,205,894	Kansas	31.7	Illinois	26.3	Pennsylvania	
Smelting and refining, not from the ore	28,072,041	New Jersey	34.2	New York	32.1	Illinois	14.0
Soap	111,357,777	New York	21.2	Illinois	18.1	Ohio	15.3
Soda-water apparatus	6,555,597	Illinois	47.8	Massachusetts	20.2	Pennsylvania	8.9
Sporting and athletic goods	11,052,286	Pennsylvania	24.5	Massachusetts	22.7	Illinois	14.2
Springs, steel, car and carriage	9,005,362	Pennsylvania	41.3	Illinois	15.3	Michigan	14.5
Stationery goods, not elsewhere specified	16,647,223	Massachusetts	27.2	New York	20.1	Ohio	14.6
Statuary and art goods	3,441,546	New York	28.8	Illinois	22.8	Massachusetts	8.4
Steam packing	12,159,989	Pennsylvania	41.0	New York	31.1	Wisconsin	
Stereotyping and electrotyping	6,383,694	New York	34.9	Illinois	20.1	Pennsylvania	10.1
Stoves and furnaces, including gas and oil stoves	78,853,323	Ohio	19.5	Illinois	13.0	Michigan	11.6
Straw goods, not elsewhere specified		Wisconsin		Massachusetts			
Sugar and molasses	30,620,738	Louisiana	94.7	Texas	2.8	Illinois	
Sugar, refining, not including beet sugar	248,628,659	New York		Pennsylvania		Louisiana	14.0
Sulphuric, nitric, and mixed acids	9,884,057	New Jersey	21.5	New York		Illinois	
Surgical appliances and artificial limbs	12,399,314	Pennsylvania		New Jersey	24.1	Illinois	16.9
Tin plate and terneplate	47,969,645	Pennsylvania	52.6	West Virginia	19.3	Ohio	16.4
Tin foil	3,418,818	New York		Missouri		Illinois	
Tobacco manufactures	416,695,104	New York	18.4	Pennsylvania	12.0	North Carolina	8.6
Toys and games	8,264,135	New York	22.4	Massachusetts	21.2	Pennsylvania	10.3
Turpentine and rosin	25,295,017	Florida	47.2	Georgia	27.4	Alabama	9.8
Type founding and printing materials	4,703,506	Illinois	26.5	New York	17.5	New Jersey	
Typewriters and supplies	19,718,767	New York	52.2	Connecticut	20.4	Illinois	
Umbrellas and canes	15,864,122	New York	40.5	Pennsylvania	31.9	Maryland	10.4
Upholstering materials	13,053,561	Pennsylvania	15.6	Illinois	15.2	New York	14.7
Vault lights and ventilators	956,720	Illinois	35.7	New York	34.3	Pennsylvania	22.3
Vinegar and cider	8,447,577	New York	26.6	Michigan	11.5	Pennsylvania	8.3
Wall paper	14,449,247	New York	36.5	Pennsylvania	25.6	New Jersey	19.9
Wall plaster	12,803,758	New York	35.1	Michigan	11.1	Ohio	7.3
Washing machines and clothes wringers	5,824,889	Rhode Island		Iowa	19.2	Pennsylvania	17.2
Waste	11,398,011	Massachusetts	29.3	Pennsylvania	15.4	New York	12.0
Whalebone cutting		New York	100.0				
Wheelbarrows	1,625,478	Michigan		Minnesota		Ohio	12.7
Whips	3,948,643	Massachusetts	70.3	Ohio	8.8	New York	8.6
Windmills	6,676,599	Illinois	61.2	Indiana	20.9	Wisconsin	11.5
Window shades and fixtures	18,570,932	New York	29.5	Illinois	25.1	Michigan	7.0
Wire	84,486,518	New Jersey	34.2	Illinois		New York	11.9
Wirework, including wire rope and cable	41,937,952	New York	14.0	Michigan	12.6	Ohio	8.6
Wood carpet	490,389	New York	63.4	Pennsylvania		Iowa	
Wood distillation, not including turpentine and rosin	9,736,998	New York	34.9	Pennsylvania	30.4	Michigan	24.6
Wood preserving	14,098,978	Texas	27.4	Illinois	12.3	Mississippi	9.3
Wood, turned and carved	22,198,572	Ohio	11.1	New York	10.9	Maine	8.4
Wool pulling	5,180,856	Indiana		Massachusetts		Washington	
Wool scouring	3,289,215	Illinois		Massachusetts	19.2	New Jersey	
Woolen, worsted, and felt goods, and wool hats	435,978,558	Massachusetts	32.6	Pennsylvania	17.8	Rhode Island	17.1

Table 8 summarizes the preceding table by showing the number of industries in which each state held first place among the states in 1909 as measured by value of products, and also the number in which it held second and third place, respectively. Of course there are some states that occupy neither first, second, nor third place in any industry. For convenience, the rank of each state in value of products for all manufacturing industries combined is also shown.

The importance of New York as a manufacturing state is brought out clearly by the fact that in 104 industries, or practically two-fifths of the 264 industries distinguished by the Bureau of the Census, it held first place, on the basis of value of products, in 1909, while in 177 industries, or slightly more than two-thirds of the total, it ranked either first, second, or third. Pennsylvania and Illinois ranked either first, second, or third in 114 and 111 industries, respectively.

Table 8

STATE.	Rank of state in 1909 in value of products.	NUMBER OF INDUSTRIES IN WHICH THE STATE'S RANK AS TO VALUE OF PRODUCTS IN 1909 WAS— First.	Second.	Third.
New York	1	104	45	28
Pennsylvania	2	35	37	42
Illinois	3	24	44	43
Massachusetts	4	19	22	18
Ohio	5	17	21	30
New Jersey	6	21	19	21
Michigan	7	6	11	9
Wisconsin	8	4	5	5
Indiana	9	2	5	5
Missouri	10	1	8	6
California	11	3	2	5
Connecticut	12	8	8	7
Minnesota	13	3	4	1
Kansas	14	1	1	1
Maryland	15		3	6
Rhode Island	16	3	3	7
Texas	17	2	3	
Iowa	18	1	5	2
Louisiana	19	2		4
Kentucky	20		2	
Washington	21	1		1
Virginia	22	1		1
North Carolina	23		1	2
Georgia	24	1	2	1
Nebraska	25		1	
Tennessee	26			
Maine	27		1	4
New Hampshire	28	1		
West Virginia	29	1	3	1
Alabama	30		2	1
Colorado	31	1		1
South Carolina	32			2
Oregon	33			
Mississippi	34			2
Arkansas	35			1
Montana	36			1
Florida	37	1		
Vermont	38		3	
Utah	39			
Oklahoma	40			
Delaware	41	1		
Arizona	42			
District of Columbia	43			
Idaho	44			
North Dakota	45			1
South Dakota	46			
Nevada	47			
New Mexico	48			
Wyoming	49			

As a matter of interest the following table is presented, which shows the rank of New York, on the basis of value of products, in each of the 20 leading industries of the country.

Table 9

INDUSTRY.	VALUE OF PRODUCTS. United States.	New York. Amount.	Rank among the states.
Slaughtering and meat packing	$1,370,568,101	$127,130,051	3
Foundry and machine-shop products	1,228,475,148	154,370,346	2
Lumber and timber products	1,156,128,747	72,529,813	2
Iron and steel, steel works and rolling mills	985,722,534	39,532,414	4
Flour-mill and gristmill products	883,584,405	69,802,278	2
Printing and publishing	737,876,087	216,946,482	1
Cotton goods, including cotton small wares	628,391,813	20,351,555	11
Clothing, men's, including shirts	568,076,635	266,075,427	1
Boots and shoes, including cut stock and findings	512,797,642	48,185,914	3
Woolen, worsted, and felt goods, and wool hats	435,978,558	23,739,421	5
Tobacco manufactures	416,695,104	76,661,552	1
Cars and general shop construction and repairs by steam-railroad companies	405,600,727	21,726,491	4
Bread and other bakery products	396,864,844	86,232,985	1
Iron and steel, blast furnaces	391,429,283	26,620,948	4
Clothing, women's	384,751,649	272,517,792	1
Smelting and refining, copper	378,805,974	(1)	2
Liquors, malt	374,730,096	77,720,045	1
Leather, tanned, curried, and finished	327,874,187	27,642,383	5
Butter, cheese, and condensed milk	274,557,718	42,458,345	2
Paper and wood pulp	267,656,964	48,859,610	1

[1] Figures can not be shown without disclosing individual operations.

Of the 20 industries shown in the above table, New York ranked first in 7, second in 5, third in 2, fourth in 3, fifth in 2, and eleventh in 1.

Table 10, which is derived from Table 7, shows for each state that ranked first in at least one industry the industries in which it ranked first, and those, if any, in which it ranked second and third, respectively, as measured by value of products, in 1909, and also the percentage which it contributed of the total value of products for those industries in the country as a whole.

INDUSTRIES IN WHICH EACH SPECIFIED STATE RANKED FIRST, SECOND, OR THIRD, AS MEASURED BY VALUE OF PRODUCTS: 1909.

Table 10 (pp. 70–76). INDUSTRIES IN WHICH STATE RANKED—

FIRST. Industry.	State's percentage of total value of products for United States.	SECOND. Industry.	State's percentage of total value of products for United States.	THIRD. Industry.	State's percentage of total value of products for United States.
NEW YORK.					
Artificial flowers and feathers and plumes	88.2	Agricultural implements	10.2	Artists' materials	15.6
Awnings, tents, and sails	15.3	Baking powders and yeast	(1)	Automobiles, including bodies and parts	12.4
Axle grease	38.1	Boxes, cigar	26.3	Bluing	12.4
Babbitt metal and solder	31.0	Brass and bronze products	14.8	Boots and shoes, including cut stock and findings	9.4
Bags, paper	35.8	Butter, cheese, and condensed milk	15.5	Carpets, rag	11.1
Baskets, and rattan and willow ware	34.2	Canning and preserving	12.1	China decorating	16.7
Belting and hose, leather	27.1	Chocolate and cocoa products	26.0	Clocks and watches, including cases and materials	17.6
Billiard tables and materials	(1)	Coffee and spice, roasting and grinding	15.8	Drug grinding	14.7
Blacking and cleansing and polishing preparations	26.1	Cordage and twine and jute and linen goods	20.0	Firearms and ammunition	7.0
Boxes, fancy and paper	26.1	Cordials and sirups	26.0	Haircloth	(1)
Bread and other bakery products	21.7	Cork, cutting	30.6	Hats, fur-felt	21.4
Brooms	15.3	Corsets	15.5	Ice, manufactured	8.9
Brushes	27.7	Engraving, wood	27.7	Iron and steel, bolts, nuts, washers, and rivets, not made in steel works or rolling mills	12.1
Buttons	41.3	Flags, banners, regalia, society badges, and emblems	23.0	Iron and steel forgings	12.6
Candles	53.3	Flour-mill and gristmill products	7.9	Kaolin and ground earths	15.8
Card cutting and designing	47.5	Foundry and machine-shop products	12.6	Matches	(1)
Carpets and rugs, other than rag	36.0	Fuel, manufactured	(1)	Oil, not elsewhere specified	9.7
Cars and general shop construction and repairs by street-railroad companies	20.8	Glue	21.8	Oilcloth and linoleum	15.1
Chemicals	30.0	Grease and tallow	15.1	Petroleum, refining	(1)
Cloth, sponging and refinishing	66.7	Ink, writing	29.7		
		Jewelry	25.3		

[1] Figures can not be shown without disclosing individual operations.

INDUSTRIES IN WHICH EACH SPECIFIED STATE RANKED FIRST, SECOND, OR THIRD, AS MEASURED BY VALUE OF PRODUCTS: 1909—Continued.

Table 10—Continued. INDUSTRIES IN WHICH STATE RANKED—

FIRST.		SECOND.		THIRD.	
Industry.	State's percentage of total value of products for United States.	Industry.	State's percentage of total value of products for United States.	Industry.	State's percentage of total value of products for United States.
NEW YORK—Continued.					
Clothing, men's, buttonholes	70.3	Lasts	18.9	Phonographs and graphophones	(1)
Clothing, men's, including shirts	46.8	Liquors, vinous	13.8	Safes and vaults	(1)
Clothing, women's	70.8	Locomotives, not made by railroad companies	(1)	Scales and balances	13.4
Coffins, burial cases, and undertakers' goods	15.4	Looking-glass and picture frames	26.4	Silk and silk goods, including throwsters	13.4
Confectionery	19.0	Lumber and timber products	6.3	Slaughtering and meat packing	9.3
Cooperage and wooden goods, not elsewhere specified	12.5	Moving pictures	30.9	Upholstering materials	14.7
Copper, tin, and sheet-iron products	19.2	Mucilage and paste	27.1	Waste	12.0
Dairymen's, poulterers', and apiarists' supplies	27.2	Paper goods, not elsewhere specified	22.0	Whips	8.6
Dentists' materials	47.2	Paving materials	18.7	Wire	11.9
Dyestuffs and extracts	28.2	Pencils, lead	(1)		
Electrical machinery, apparatus, and supplies	22.3	Pulp goods	(1)		
Electroplating	24.8	Pumps, not including steam pumps	14.6		
Emery and other abrasive wheels	38.2	Sand and emery paper and cloth	(1)		
Engravers' materials	35.7	Salt	25.6		
Engraving and diesinking	30.4	Show cases	12.6		
Fancy articles, not elsewhere specified	34.7	Silverware and plated ware	18.6		
Fire extinguishers, chemical	35.7	Smelting and refining, copper	(1)		
Fireworks	33.0	Smelting and refining, not from the ore	32.1		
Flavoring extracts	20.0	Stationery goods, not elsewhere specified	20.1		
Food preparations	13.8	Steam packing	31.1		
Fur goods	73.8	Sulphuric, nitric, and mixed acids	(1)		
Furnishing goods, men's	48.1	Type founding and printing materials	17.5		
Furniture and refrigerators	17.5	Vault lights and ventilators	34.3		
Furs, dressed	51.8	Wood, turned and carved	10.9		
Gas and electric fixtures and lamps and reflectors	28.9				
Gas, illuminating and heating	25.4				
Glass, cutting, staining, and ornamenting	30.1				
Gloves and mittens, leather	60.7				
Gold and silver, leaf and foil	34.9				
Graphite and graphite refining	(1)				
Hair work	70.1				
Hand stamps and stencils and brands	19.5				
Hat and cap materials	46.6				
Hats and caps, other than felt, straw, and wool	57.2				
Hats, straw	35.6				
Hosiery and knit goods	33.5				
House-furnishing goods, not elsewhere specified	42.1				
Ink, printing	45.8				
Instruments, professional and scientific	31.5				
Iron and steel, doors and shutters	45.0				
Jewelry and instrument cases	57.1				
Labels and tags	29.8				
Lapidary work	94.4				
Lead, bar, pipe, and sheet	22.6				
Leather goods	20.0				
Liquors, malt	20.7				
Malt	28.9				
Marble and stone work	15.8				
Mattresses and spring beds	16.5				
Millinery and lace goods	60.7				
Mineral and soda waters	17.1				
Mirrors	34.1				
Models and patterns, not including paper patterns	27.7				
Musical instruments, pianos and organs and materials	37.5				
Oil, linseed	41.9				
Optical goods	34.1				
Paint and varnish	22.9				
Paper and wood pulp	18.3				
Paper patterns	83.0				
Patent medicines and compounds and druggists' preparations	26.3				
Pens, fountain, stylographic, and gold	67.9				
Photographic apparatus and materials	83.2				
Photo-engraving	25.0				
Pipes, tobacco	60.5				
Printing and publishing	29.4				
Rules, ivory and wood	79.4				
Shipbuilding, including boat building	15.6				
Soap	21.2				
Statuary and art goods	28.8				
Stereotyping and electrotyping	34.9				
Sugar, refining, not including beet sugar	(1)				
Tin foil	(1)				
Tobacco manufactures	18.4				
Toys and games	22.4				
Typewriters and supplies	52.2				
Umbrellas and canes	40.5				
Vinegar and cider	26.6				
Wall paper	36.5				
Wall plaster	35.1				
Whalebone cutting	100.0				
Window shades and fixtures	29.5				
Wirework, including wire rope and cable	14.0				
Wood carpet	63.4				
Wood distillation, not including turpentine and rosin	34.9				

[1] Figures can not be shown without disclosing individual operations.

INDUSTRIES IN WHICH EACH SPECIFIED STATE RANKED FIRST, SECOND, OR THIRD, AS MEASURED BY VALUE OF PRODUCTS: 1909—Continued.

Table 10—Continued.

INDUSTRIES IN WHICH STATE RANKED—

PENNSYLVANIA.

FIRST. Industry.	State's percentage of total value of products for United States.	SECOND. Industry.	State's percentage of total value of products for United States.	THIRD. Industry.	State's percentage of total value of products for United States.
Boxes, cigar	27.4	Artificial flowers and feathers and plumes	5.5	Babbitt metal and solder	10.7
Carpets, rag	21.8	Bone, carbon, and lamp black	(1)	Brick and tile	9.9
Cars and general shop construction and repairs by steam-railroad companies	18.7	Bread and other bakery products	11.6	Brooms	8.7
Cars, steam-railroad, not including operations of railroad companies	22.2	Card cutting and designing	17.7	Chemicals	13.6
Cars, street-railroad, not including operations of railroad companies	(1)	Carpets and rugs, other than rag	34.9	Chocolate and cocoa products	21.5
Cement	29.8	Cloth, sponging and refinishing	9.2	Clothing, horse	22.7
Coke	54.1	Clothing, women's	8.5	Clothing, men's, including shirts	7.0
Cork, cutting	49.9	Dentists' materials	25.3	Coffins, burial cases, and undertakers' goods	11.2
Crucibles	39.3	Electrical machinery, apparatus, and supplies	14.2	Confectionery	10.0
Files	27.1	Enameling and japanning	19.7	Cooperage and wooden goods, not elsewhere specified	7.7
Foundry and machine-shop products	17.2	Explosives	15.9	Cutlery and tools, not elsewhere specified	15.1
Fuel, manufactured	(1)	Foundry supplies	27.2	Dairymen's, poulterers', and apiarists' supplies	11.1
Glass	35.6	Glass, cutting, staining, and ornamenting	23.2	Dyestuffs and extracts	14.7
Haircloth	(1)	Gold and silver, leaf and foil	15.9	Engraving, wood	6.9
Hammocks	67.2	Hats and caps, other than felt, straw, and wool	8.0	Gas, illuminating and heating	9.5
Hats, fur-felt	27.2	Hosiery and knit goods	24.8	Glue	14.9
Ice, manufactured	11.2	House-furnishing goods, not elsewhere specified	8.5	Graphite and graphite refining	19.5
Iron and steel, blast furnaces	43.1	Iron and steel, bolts, nuts, washers, and rivets, not made in steel works or rolling mills	20.9	Grease and tallow	14.2
Iron and steel, steel works and rolling mills	50.8	Kaolin and ground earths	16.2	Hair work	2.1
Iron and steel forgings	28.9	Liquors, malt	12.7	Hand stamps and stencils and brands	9.0
Iron and steel pipe, wrought	59.2	Mineral and soda waters	9.3	Horseshoes, not made in steel works or rolling mills	8.3
Leather, tanned, curried, and finished	23.8	Models and patterns, not including paper patterns	23.5	Ink, printing	11.8
Lime	18.6	Needles, pins, and hooks and eyes	(1)	Instruments, professional and scientific	9.9
Locomotives, not made by railroad companies	(1)	Oilcloth and linoleum	(1)	Labels and tags	17.5
Oil, not elsewhere specified	33.6	Ordnance and accessories	(1)	Looking-glass and picture frames	7.2
Pulp, from fiber other than wood	100.0	Pens, steel	(1)	Marble and stone work	10.2
Sand and emery paper and cloth	49.0	Petroleum, refining	22.4	Mucilage and paste	17.1
Saws	32.9	Safes and vaults	15.8	Optical goods	9.1
Shoddy	27.5	Silk and silk goods, including throwsters	31.5	Paint and varnish	11.2
Sporting and athletic goods	24.5	Sugar, refining, not including beet sugar	(1)	Peanuts, grading, roasting, cleaning, and shelling	7.1
Springs, steel, car and carriage	41.3	Tobacco manufactures	12.0	Pencils, lead	(1)
Steam packing	41.0	Umbrellas and canes	31.9	Photo-engraving	9.7
Surgical appliances and artificial limbs	(1)	Wall paper	25.6	Pottery, terra-cotta, and fire-clay products	17.2
Tin plate and terneplate	52.6	Waste	15.4	Printing and publishing	9.6
Upholstering materials	15.6	Wood carpet	(1)	Roofing materials	17.4
		Wood distillation, not including turpentine and rosin	30.4	Smelting and refining, zinc	(1)
		Woolen, worsted, and felt goods, and wool hats	17.8	Soda-water apparatus	8.9
				Stereotyping and electrotyping	10.1
				Toys and games	10.3
				Vault lights and ventilators	22.3
				Vinegar and cider	8.3
				Washing machines and clothes wringers	17.2

ILLINOIS.

FIRST. Industry.	State's percentage of total value of products for United States.	SECOND. Industry.	State's percentage of total value of products for United States.	THIRD. Industry.	State's percentage of total value of products for United States.
Agricultural implements	39.1	Artificial stone	8.0	Artificial flowers and feathers and plumes	1.7
Baking powders and yeast	36.7	Artists' materials	18.0	Axle grease	11.7
Brick and tile	10.5	Babbitt metal and solder	21.0	Belting and hose, leather	9.2
Butter, reworking	(1)	Boxes, fancy and paper	11.7	Bicycles, motorcycles, and parts	16.6
Calcium lights	51.2	Brooms	10.2	Blacking and cleansing and polishing preparations	8.4
China decorating	38.7	Candles	(1)	Bread and other bakery products	9.1
Coffee and spice, roasting and grinding	17.9	Carpets, rag	13.3	Carriages and wagons and materials	10.5
Cordials and sirups	29.7	Cars and general shop construction and repairs by steam-railroad companies	7.9	Cash registers and calculating machines	(1)
Engraving, wood	45.6	Cars and general shop construction and repairs by street-railroad companies	10.8	Charcoal	8.1
Glucose and starch	(1)	Cars, steam-railroad, not including operations of railroad companies	21.8	Cloth, sponging and refinishing	7.7
Glue	27.5	Clocks and watches, including cases and materials	20.0	Cordage and twine and jute and linen goods	13.5
Grease and tallow	23.9	Clothing, men's, including shirts	15.8	Fire extinguishers, chemical	21.8
Lard, refined, not made in slaughtering and meat-packing establishments	(1)	Cooperage and wooden goods, not elsewhere specified	11.0	Flavoring extracts	10.6
Liquors, distilled	27.0	Copper, tin, and sheet-iron products	11.4	Foundry supplies	13.4
Looking-glass and picture frames	33.5	Electroplating	15.4	Furnishing goods, men's	8.2
Millstones	100.0	Engravers' materials	(1)	Furniture and refrigerators	11.6
Oleomargarine	(1)	Engraving and diesinking	18.1	Glass, cutting, staining, and ornamenting	12.1
Signs and advertising novelties	24.1	Gas and electric fixtures and lamps and reflectors	12.9	Gloves and mittens, leather	10.7
Slaughtering and meat packing	28.4	Gas, illuminating and heating	12.6	Hats and caps, other than felt, straw, and wool	7.6
Soda-water apparatus	47.8	Hair work	18.9	Ink, writing	(1)
Type founding and printing materials	26.5	Hand stamps and stencils and brands	13.0	Iron and steel, blast furnaces	9.8
Vault lights and ventilators	35.7	Instruments, professional and scientific	16.8	Iron and steel, steel works and rolling mills	8.8
Windmills	61.2	Iron and steel, doors and shutters	19.3	Iron and steel, nails and spikes, cut and wrought, including wire nails, not made in steel works or rolling mills	14.3
Wool scouring	(1)	Labels and tags	17.6	Lapidary work	1.0
		Lead, bar, pipe, and sheet	(1)	Malt	24.9
		Leather goods	8.5	Mattresses and spring beds	8.0
		Millinery and lace goods	8.5	Mineral and soda waters	7.0
		Mirrors	11.6	Models and patterns, not including paper patterns	10.0
				Moving pictures	(1)

[1] Figures can not be shown without disclosing individual operations.

INDUSTRIES IN WHICH EACH SPECIFIED STATE RANKED FIRST, SECOND, OR THIRD, AS MEASURED BY VALUE OF PRODUCTS: 1909—Continued.

Table 10—Continued.

INDUSTRIES IN WHICH STATE RANKED—

FIRST.		SECOND.		THIRD.	
Industry.	State's percentage of total value of products for United States.	Industry.	State's percentage of total value of products for United States.	Industry.	State's percentage of total value of products for United States.
ILLINOIS—Continued.					
		Musical instruments and materials, not specified	19.5	Paper patterns	1.4
		Musical instruments, pianos and organs and materials	21.4	Patent medicines and compounds and druggists' preparations	9.2
		Paint and varnish	16.4	Paving materials	8.0
		Photo-engraving	23.0	Photographic apparatus and materials	3.3
		Printing and publishing	11.8	Pumps, not including steam pumps	11.8
		Roofing materials	17.6	Saws	(1)
		Smelting and refining, zinc	26.3	Show cases	11.6
		Soap	18.1	Smelting and refining, not from the ore	14.0
		Springs, steel, car and carriage	15.3	Sporting and athletic goods	14.2
		Statuary and art goods	22.8	Sugar and molasses	(1)
		Stereotyping and electrotyping	20.1	Sulphuric, nitric, and mixed acids	(1)
		Stoves and furnaces, including gas and oil stoves	13.0	Surgical appliances and artificial limbs	16.9
		Upholstering materials	15.2	Tin foil	(1)
		Window shades and fixtures	25.1	Typewriters and supplies	(1)
		Wire	(1)		
		Wood preserving	12.3		
MASSACHUSETTS.					
Bicycles, motorcycles, and parts	25.3	Belting and hose, leather	23.8	Boxes, fancy and paper	10.6
Bluing	(1)	Belting and hose, woven and rubber	(1)	Carpets and rugs, other than rag	18.0
Boots and shoes, including cut stock and findings	46.1	Blacking and cleansing and polishing preparations	25.3	Electroplating	15.0
Boots and shoes, rubber	37.7	Brushes	19.6	Fireworks	12.6
Chocolate and cocoa products	(1)	Carriages and sleds, children's	19.9	Hosiery and knit goods	7.4
Cordage and twine and jute and linen goods	27.3	Confectionery	11.3	Jewelry	18.9
Cotton goods, including cotton small wares	29.7	Emery and other abrasive wheels	29.5	Jewelry and instrument cases	9.5
Cutlery and tools, not elsewhere specified	21.8	Fancy articles, not elsewhere specified	29.2	Lead, bar, pipe, and sheet	(1)
Dyeing and finishing textiles	26.2	Firearms and ammunition	10.0	Leather, tanned, curried, and finished	12.2
Ink, writing	(1)	Furnishing goods, men's	13.7	Mats and matting	(1)
Iron and steel, nails and spikes, cut and wrought, including wire nails, not made in steel works or rolling mills	35.7	Hammocks	(1)	Musical instruments, pianos and organs and materials	10.1
Lasts	45.9	Hats, straw	30.8	Oil, castor	(1)
Mucilage and paste	32.8	Horseshoes, not made in steel works or rolling mills	(1)	Rubber goods, not elsewhere specified	12.3
Ordnance and accessories	(1)	Optical goods	26.1	Sand and emery paper and cloth	(1)
Paper goods, not elsewhere specified	24.5	Paper and wood pulp	15.0	Screws, machine	18.9
Stationery goods, not elsewhere specified	27.2	Shoddy	23.7	Screws, wood	(1)
Waste	29.3	Soda-water apparatus	20.2	Silverware and plated ware	15.5
Whips	70.3	Sporting and athletic goods	22.7	Statuary and art goods	8.4
Woolen, worsted, and felt goods, and wool hats	32.6	Straw goods, not elsewhere specified	(1)		
		Toys and games	21.2		
		Wool pulling	(1)		
		Wool scouring	19.2		
OHIO.					
Carriages and sleds, children's	22.5	Automobiles, including bodies and parts	15.6	Agricultural implements	9.9
Carriages and wagons and materials	13.7	Bicycles, motorcycles, and parts	21.6	Artificial stone	7.4
Cash registers and calculating machines	(1)	Brick and tile	10.1	Awnings, tents, and sails	9.6
Flags, banners, regalia, society badges, and emblems	37.3	Cars, street-railroad, not including operations of railroad companies	25.0	Bags, paper	15.2
Foundry supplies	31.6	Clothing, horse	(1)	Belting and hose, woven and rubber	13.9
Galvanizing	32.2	Clothing, men's, buttonholes	9.8	Billiard tables and materials	(1)
Grindstones	88.8	Coffins, burial cases, and undertakers' goods	12.5	Boxes, cigar	8.4
Iron and steel, bolts, nuts, washers, and rivets, not made in steel works or rolling mills	25.6	Flavoring extracts	11.4	Butter, reworking	16.5
Matches	(1)	Glass	15.6	Cars and general shop construction and repairs by steam-railroad companies	7.1
Pottery, terra-cotta, and fire-clay products	27.8	Ink, printing	21.5	Clothing, women's	5.1
Pumps, not including steam pumps	49.2	Iron and steel, blast furnaces	21.4	Copper, tin, and sheet-iron products	9.6
Roofing materials	20.3	Iron and steel, steel works and rolling mills	20.1	Food preparations	8.6
Rubber goods, not elsewhere specified	42.0	Iron and steel forgings	19.9	Foundry and machine-shop products	11.9
Safes and vaults	64.6	Lime	9.0	House-furnishing goods, not elsewhere specified	8.4
Scales and balances	(1)	Mattresses and spring beds	9.2	Iron and steel, doors and shutters	14.4
Stoves and furnaces, including gas and oil stoves	19.5	Pens, fountain, stylographic, and gold	9.9	Iron and steel pipe, wrought	11.1
Wood, turned and carved	11.1	Rules, ivory and wood	(1)	Lasts	(1)
		Screws, machine	19.8	Liquors, vinous	9.9
		Sewing machines, cases, and attachments	21.1	Locomotives, not made by railroad companies	(1)
		Signs and advertising novelties	19.2	Oil, linseed	9.9
		Whips	8.8	Oleomargarine	(1)
				Paper goods, not elsewhere specified	11.4
				Salt	16.0
				Shoddy	16.9
				Soap	15.3
				Stationery goods, not elsewhere specified	14.6
				Tin plate and terneplate	16.4
				Wall plaster	7.3
				Wheelbarrows	12.7
				Wirework, including wire rope and cable	8.6

[1] Figures can not be shown without disclosing individual operations.

INDUSTRIES IN WHICH EACH SPECIFIED STATE RANKED FIRST, SECOND, OR THIRD, AS MEASURED BY VALUE OF PRODUCTS: 1909—Continued.

Table 10—Continued.

INDUSTRIES IN WHICH STATE RANKED—

FIRST.		SECOND.		THIRD.	
Industry.	State's percentage of total value of products for United States.	Industry.	State's percentage of total value of products for United States.	Industry.	State's percentage of total value of products for United States.
NEW JERSEY.					
Artists' materials	37.3	Bluing	(1)	Bone, carbon, and lamp black	(1)
Belting and hose, woven and rubber	39.6	Chemicals	19.4	Brushes	16.6
Drug grinding	45.4	China decorating	29.2	Buttons	12.1
Explosives	(1)	Crucibles	(1)	Card cutting and designing	9.2
Horseshoes, not made in steel works or rolling mills	(1)	Dyeing and finishing textiles	18.9	Cork, cutting	13.3
Kaolin and ground earths	16.8	Dyestuffs and extracts	19.6	Electrical machinery, apparatus, and supplies	12.8
Moving pictures	(1)	Files	(1)	Emery and other abrasive wheels	(1)
Musical instruments and materials, not specified	19.7	Fireworks	16.7	Engravers' materials	(1)
Oakum	(1)	Furs, dressed	26.2	Fancy articles, not elsewhere specified	8.1
Oil, castor	(1)	Jewelry and instrument cases	12.7	Fuel, manufactured	(1)
Oilcloth and linoleum	43.5	Lard, refined, not made in slaughtering and meat-packing establishments	(1)	Gas and electric fixtures and lamps and reflectors	12.8
Paving materials	(1)	Oil, essential	(1)	Glucose and starch	(1)
Pencils, lead	(1)	Oil, not elsewhere specified	25.4	Gold and silver, reducing and refining, not from the ore	18.8
Pens, steel	(1)	Paper patterns	(1)	Hat and cap materials	16.8
Petroleum, refining	(1)	Pipes, tobacco	20.9	Hones and whetstones	(1)
Phonographs and graphophones	(1)	Pottery, terra-cotta, and fire-clay products	17.3	Millinery and lace goods	8.0
Silk and silk goods, including throwsters	33.2	Rubber goods, not elsewhere specified	15.2	Needles, pins, and hooks and eyes	9.3
Smelting and refining, copper	33.2	Shipbuilding, including boat building	12.0	Signs and advertising novelties	15.4
Smelting and refining, not from the ore	34.2	Surgical appliances and artificial limbs	24.1	Type founding and printing materials	(1)
Sulphuric, nitric, and mixed acids	21.5			Wall paper	19.9
Wire	34.2			Wool scouring	(1)
MICHIGAN.					
Automobiles, including bodies and parts	33.8	Baskets, and rattan and willow ware	8.4	Beet sugar	21.8
Charcoal	29.6	Billiard tables and materials	(1)	Brass and bronze products	9.3
Oil, essential	28.0	Cash registers and calculating machines	(1)	Corsets	13.1
Salt	32.2	Food preparations	9.2	Flags, banners, regalia, society badges, and emblems	(1)
Show cases	26.0	Furniture and refrigerators	11.9	Fur goods	4.1
Wheelbarrows	(1)	Graphite and graphite refining	(1)	Springs, steel, car and carriage	14.5
		Grindstones	(1)	Stoves and furnaces, including gas and oil stoves	11.6
		Patent medicines and compounds and druggists' preparations	9.5	Window shades and fixtures	7.0
		Vinegar and cider	11.5	Wood distillation, not including turpentine and rosin	24.6
		Wall plaster	11.1		
		Wirework, including wire rope and cable	12.6		
WISCONSIN.					
Butter, cheese, and condensed milk	19.6	Gloves and mittens, leather	11.8	Hammocks	11.2
Clothing, horse	30.9	Leather, tanned, curried, and finished	13.6	Lime	7.1
Enameling and japanning	(1)	Malt	25.1	Liquors, malt	8.6
Straw goods, not elsewhere specified	(1)	Matches	(1)	Steam packing	(1)
		Mats and matting	(1)	Windmills	11.5
INDIANA.					
Sewing machines, cases, and attachments	(1)	Calcium lights	(1)	Carriages and sleds, children's	12.9
Wool pulling	(1)	Carriages and wagons and materials	13.5	Cars, steam-railroad, not including operations of railroad companies	7.7
		Cement	11.1	Glass	12.6
		Saws	(1)	Liquors, distilled	15.4
		Windmills	20.9	Musical instruments and materials, not specified	18.9
MISSOURI.					
Bags, other than paper	(1)	Awnings, tents, and sails	12.3	Calcium lights	(1)
		Axle grease	15.1	Cars, street-railroad, not including operations of railroad companies	(1)
		Boots and shoes, including cut stock and findings	9.5	Coffee and spice, roasting and grinding	10.9
		Fire extinguishers, chemical	(1)	Galvanizing	(1)
		Oil, castor	(1)	Leather goods	6.2
		Peanuts, grading, roasting, cleaning, and shelling	(1)	Pipes, tobacco	7.4
		Photographic apparatus and materials	6.3		
		Tin foil	(1)		

[1] Figures can not be shown without disclosing individual operations.

INDUSTRIES IN WHICH EACH SPECIFIED STATE RANKED FIRST, SECOND, OR THIRD, AS MEASURED BY VALUE OF PRODUCTS: 1909—Continued.

Table 10—Continued.

INDUSTRIES IN WHICH STATE RANKED—					
FIRST.		SECOND.		THIRD.	
Industry.	State's percentage of total value of products for United States.	Industry.	State's percentage of total value of products for United States.	Industry.	State's percentage of total value of products for United States.
CALIFORNIA.					
Canning and preserving	21.0	Beet sugar	(1)	Baking powders and yeast	(1)
Liquors, vinous	68.1	Lapidary work	3.2	Cars and general shop construction and repairs by street-railroad companies	9.4
Smelting and refining, lead	(1)			Cement	10.3
				Explosives	(1)
				Oakum	(1)
CONNECTICUT.					
Brass and bronze products	44.6	Boots and shoes, rubber	(1)	Crucibles	(1)
Clocks and watches, including cases and materials	21.0	Cutlery and tools, not elsewhere specified	20.1	Dentists' materials	(1)
Corsets	38.5	Hat and cap materials	18.3	Oil, essential	(1)
Firearms and ammunition	58.5	Hats, fur-felt	21.7	Pens, fountain, stylographic, and gold	(1)
Gold and silver, reducing and refining, not from the ore	(1)	Iron and steel, nails and spikes, cut and wrought, including wire nails, not made in steel works or rolling mills	(1)	Pens, steel	(1)
Needles, pins, and hooks and eyes	63.3	Phonographs and graphophones	(1)	Rules, ivory and wood	(1)
Screws, machine	(1)	Screws, wood	(1)	Sewing machines, cases, and attachments	7.5
Silverware and plated ware	37.5	Typewriters and supplies	20.4		
MINNESOTA.					
Flax and hemp, dressed	(1)	Bags, other than paper	(1)	Furs, dressed	7.6
Flour-mill and gristmill products	15.7	Fur goods	6.8		
Mats and matting	(1)	Oil, linseed	30.0		
		Wheelbarrows	(1)		
KANSAS.					
Smelting and refining, zinc	31.7	Slaughtering and meat packing	12.1	Flour-mill and gristmill products	7.7
RHODE ISLAND.					
Jewelry	25.7	Gold and silver, reducing and refining, not from the ore	18.8	Boots and shoes, rubber	(1)
Screws, wood	(1)	Haircloth	(1)	Dyeing and finishing textiles	16.7
Washing machines and clothes wringers	(1)	Oleomargarine	16.0	Enameling and japanning	17.2
				Engraving and diesinking	13.2
				Files	(1)
				Gold and silver, leaf and foil	(1)
				Woolen, worsted, and felt goods, and wool hats	17.1
TEXAS.					
Oil, cottonseed, and cake	20.2	Ice, manufactured	8.9		
Wood preserving	27.4	Rice, cleaning and polishing	36.4		
		Sugar and molasses	2.8		
IOWA.					
Artificial stone	8.4	Butter, reworking	(1)	Butter, cheese, and condensed milk	9.4
		Buttons	17.8	Wood carpet	(1)
		Dairymen's, poulterers', and apiarists' supplies	12.7		
		Glucose and starch	(1)		
		Washing machines and clothes wringers	19.2		
LOUISIANA.					
Rice, cleaning and polishing	56.0			Bags, other than paper	9.8
Sugar and molasses	94.7			Candles	(1)
				Lumber and timber products	5.4
				Sugar, refining, not including beet sugar	14.0
WASHINGTON.					
Lumber and timber products	7.7			Wool pulling	(1)

[1] Figures can not be shown without disclosing individual operations.

INDUSTRIES IN WHICH EACH SPECIFIED STATE RANKED FIRST, SECOND, OR THIRD, AS MEASURED BY VALUE OF PRODUCTS: 1909—Continued.

Table 10—Continued.

INDUSTRIES IN WHICH STATE RANKED—					
FIRST.		SECOND.		THIRD.	
Industry.	State's percentage of total value of products for United States.	Industry.	State's percentage of total value of products for United States.	Industry.	State's percentage of total value of products for United States.
VIRGINIA.					
Peanuts, grading, roasting, cleaning, and shelling	81.5			Shipbuilding, including boat building	(1)
GEORGIA.					
Fertilizers	16.2	Oil, cottonseed, and cake Turpentine and rosin	16.0 27.4	Cordials and sirups	12.9
NEW HAMPSHIRE.					
Hones and whetstones	(1)				
WEST VIRGINIA.					
Bone, carbon, and lamp black	54.5	Galvanizing Iron and steel pipe, wrought Tin plate and terneplate	(1) (1) 19.3	Coke	7.9
COLORADO.					
Beet sugar	(1)			Smelting and refining, lead	(1)
FLORIDA.					
Turpentine and rosin	47.2				
DELAWARE.					
Pulp goods	58.3				

[1] Figures can not be shown without disclosing individual operations.

Table 11 shows for the different states the number of industries in which the state contributed one-half or more of the value of products for the country as a whole, and also the number in which it contributed one-third of the total but less than one-half. In a few instances the figures in the table do not represent the total number of industries for which the specified proportion of the total value of products was reported from the given state, owing to the fact that in some cases the percentage of the total value of products reported from the state in question can not be shown in Table 10, as it would indirectly result in disclosing the operations of individual concerns.

In 41 industries, representing nearly one-sixth of the total number (264), more than half of the total value of products was reported from a single state. In 62 other industries more than one-third of the total value of products was reported from a single state, 3 industries being counted twice in the table, as two states in each case reported more than one-third of the total value of products. There are thus 103 industries, representing nearly two-fifths of the total number distinguished by the Bureau of the Census, in which a single state reported at least one-third of the total value of products.

A fuller discussion of the subject of concentration of industries is given in Chapter VII.

Table 11

STATE.	NUMBER OF INDUSTRIES IN WHICH THE STATE'S PROPORTION OF THE TOTAL VALUE OF PRODUCTS IN 1909 WAS—	
	50 per cent or over.	33.3 per cent but less than 50.
New York	21	29
Pennsylvania	6	9
Illinois	3	7
Massachusetts	1	4
Ohio	2	3
New Jersey		6
Michigan		1
California	1	
Connecticut	2	3
Texas		1
Louisiana	2	
Virginia	1	
West Virginia	1	
Florida		1
Delaware	1	
Kentucky		1

Summary, by geographic divisions.—In the census reports on population and agriculture much attention is given to the presentation and discussion of statistics for the nine main geographic divisions of the country. The states within a given geographic division are usually fairly similar to one another as to the composition and characteristics of the population and as to agricultural conditions. There is, however, much less similarity among the states of any given division with regard to manufacturing and mining, and the presentation of statistics by divisions, therefore, often fails to bring out the geographic distribution of these industries as a whole, or of individual industries, in a satisfactory manner. Nevertheless, considerable interest attaches to statistics of manufactures by geographic divisions, and information of material value may be derived from them. Such statistics are therefore given in the present report, but with less prominence than in the reports dealing with population and agriculture.

General Table III presents the figures for the leading items covered by the manufactures censuses of 1909, 1904, and 1899 for all industries combined in each geographic division as well as in each state; and General Table IV gives detailed statistics for all industries combined, by divisions and states, for the census of 1909.

The following summary shows, for each geographic division, and also for the three great sections, the North, the South, and the West, the population in 1910, and the number of manufacturing establishments, average number of wage earners in such establishments, value of manufactured products, and value added to materials by manufacture in 1909. For comparison, some of the leading items from the agricultural census are also included.

Table 12

SECTION AND DIVISION.	POPULATION: 1910	MANUFACTURING INDUSTRIES: 1909				AGRICULTURE.		
		Number of establishments.	Wage earners (average number).	Value of products.	Value added by manufacture.	Acreage of land in farms: 1910	Value of all farm property: 1910	Value of all crops: 1909
United States	**91,972,266**	**268,491**	**6,615,046**	**$20,672,051,870**	**$8,529,260,992**	**878,798,325**	**$40,991,449,090**	**$5,487,161,223**
The North	**55,757,115**	**193,850**	**5,197,138**	**16,827,427,130**	**6,915,305,425**	**413,483,256**	**27,481,267,056**	**3,120,454,108**
New England	6,552,681	25,351	1,101,290	2,670,065,114	1,193,768,236	19,714,931	867,240,457	141,113,829
Middle Atlantic	19,315,892	81,315	2,207,747	7,141,761,302	2,982,263,573	43,191,056	2,959,589,622	416,248,625
East North Central	18,250,621	60,013	1,513,764	5,211,702,164	2,177,230,169	117,929,148	10,119,128,966	1,117,182,190
West North Central	11,637,921	27,171	374,337	1,803,898,550	562,043,447	232,648,121	13,535,309,511	1,445,909,494
The South	**29,389,330**	**55,808**	**1,129,307**	**2,637,117,348**	**1,128,818,639**	**354,452,860**	**8,972,126,289**	**1,921,720,571**
South Atlantic	12,194,895	28,088	663,015	1,381,186,210	591,181,848	103,782,255	2,951,209,773	742,195,246
East South Central	8,409,901	15,381	261,772	630,488,093	294,324,842	81,520,629	2,182,771,779	551,282,298
West South Central	8,784,534	12,339	204,520	625,443,045	243,311,949	169,149,976	3,838,154,237	628,243,009
The West	**6,825,821**	**18,833**	**288,601**	**1,207,507,392**	**485,136,928**	**110,862,209**	**4,538,055,145**	**444,976,544**
Mountain	2,633,517	5,254	75,435	363,995,598	135,303,366	59,533,420	1,757,573,368	163,897,753
Pacific	4,192,304	13,579	213,166	843,511,794	349,833,562	51,328,789	2,780,481,777	281,078,791

The significance of the statistics in the preceding table can be best brought out by means of Table 13, which shows for each item except number of establishments the percentage of the total for the United States reported from each geographic division or section of the country, and which also gives the percentage of the total land area in each division and the rank of the nine divisions with respect to each item.

Table 13

SECTION AND DIVISION.	POPULATION: 1910		TOTAL LAND AREA.		MANUFACTURING INDUSTRIES: 1909						AGRICULTURE.					
					Wage earners (average number).		Value of products.		Value added by manufacture.		Acreage of land in farms: 1910		Value of all farm property: 1910		Value of all crops: 1909	
	Rank.	Per cent of total.	Rank.	Per cent of total.	Rank.	Per cent of total.	Rank.	Per cent of total.	Rank.	Per cent of total.	Rank.	Per cent of total.	Rank.	Per cent of total.	Rank.	Per cent of total.
United States	.....	**100.0**	.....	**100.0**	.....	**100.0**	.....	**100.0**	.....	**100.0**	.....	**100.0**	.....	**100.0**	.....	**100.0**
The North	.....	**60.6**	.....	**31.0**	.....	**78.6**	.....	**81.4**	.....	**81.1**	.....	**47.1**	.....	**67.0**	.....	**56.9**
New England	7	7.1	9	2.1	3	16.6	3	12.9	3	14.0	9	2.2	9	2.1	9	2.6
Middle Atlantic	1	21.0	8	3.4	1	33.4	1	34.5	1	35.0	8	4.9	4	7.2	5	7.6
East North Central	2	19.8	6	8.3	2	22.9	2	25.2	2	25.5	3	13.4	2	24.7	2	20.4
West North Central	4	12.7	2	17.2	5	5.7	4	8.7	5	6.6	1	26.5	1	33.0	1	26.4
The South	.....	**32.0**	.....	**29.5**	.....	**17.1**	.....	**12.8**	.....	**13.2**	.....	**40.3**	.....	**21.9**	.....	**25.9**
South Atlantic	3	13.3	5	9.0	4	14.0	5	6.7	4	6.9	4	11.8	5	7.2	3	13.5
East South Central	6	9.1	7	6.0	6	4.0	7	3.0	7	3.5	3	9.3	7	5.3	5	10.0
West South Central	5	9.6	3	14.5	8	3.1	8	3.0	8	2.9	2	19.2	3	9.4	4	11.5
The West	.....	**7.4**	.....	**39.6**	.....	**4.4**	.....	**5.8**	.....	**5.7**	.....	**12.6**	.....	**11.1**	.....	**8.1**
Mountain	9	2.9	1	28.9	9	1.1	9	1.8	9	1.6	6	6.8	8	4.3	8	3.0
Pacific	8	4.6	4	10.9	7	3.2	6	4.1	6	4.1	7	5.8	6	6.8	7	5.1

The North is by far the most important of the three great geographic sections of the country in manufacturing industries. With about three-fifths of the population of the country in 1910, it contributed in 1909 more than four-fifths of the total value of manufactured products and employed nearly four-fifths of the

total number of wage earners in manufacturing industries. Most of the manufacturing industries of the North, however, are confined to three of the four geographic divisions in that section. The Middle Atlantic division is much more important in manufactures than any other in the country. With a little over one-fifth of the total population, it carried on in 1909 more than one-third of the manufacturing, as measured by all three of the items shown in the table. The East North Central division ranked next, with more than one-fourth of the total value of manufactured products and value added by manufacture. New England ranked third among the nine geographic divisions in manufacturing industries. The three divisions just named together reported nearly three-fourths of the United States total for each of the three items of manufactures statistics shown.

The South, with about one-third of the total population of the country in 1910, contained slightly more than one-sixth of the total number of wage earners in manufacturing industries in 1909, and contributed somewhat over one-eighth of the total value of products and value added by manufacture. The South Atlantic was the most important of the three southern divisions in manufacturing, and outranked the West North Central division with respect to average number of wage earners and value added by manufacture, though not with respect to total value of manufactured products. The West South Central division was, however, one of the least important of the nine divisions with respect to manufactures.

The West, like the South, ranks higher in agriculture than in manufactures. With 7.4 per cent of the total population of the country in 1910, it contributed less than 6 per cent of the value of manufactured products and value added by manufacture in 1909, and employed only 4.4 per cent of the total number of wage earners in manufacturing industries. The Mountain division ranked lowest among the nine divisions in manufacturing, but the Pacific division ranked higher than the East South Central or the West South Central division, except that with respect to average number of wage earners it fell below the East South Central division.

Comparison between the ranking and percentages for manufactures and those for agriculture, as shown in the preceding table, indicates wide differences between these two great branches of industry with respect to geographic distribution. The Middle Atlantic states and New England, which are highly important in manufacturing industries, occupy but a low rank in agriculture. The East North Central division, however, ranked second among the nine divisions, both with respect to the three items relating to manufactures shown in the table and with respect to value of farm property and value of crops. The West North Central division is much the most important from the standpoint of agriculture but holds a comparatively low rank with respect to manufactures; and the West South Central division has also a much higher rank in agriculture than in manufactures. On the whole, agricultural industry is more evenly distributed over the country than manufacturing industry.

The following table shows the rank of the nine geographic divisions in manufactures at each of the last three censuses as measured by average number of wage earners, by value of products, and by value added to materials by manufacture, together with the percentages of the United States totals reported from each division. The figures are based on the absolute numbers appearing in General Table III, and the divisions are arranged according to the value of products reported at the census of 1909.

Table 14

DIVISION.	WAGE EARNERS (AVERAGE NUMBER).						VALUE OF PRODUCTS.						VALUE ADDED BY MANUFACTURE.					
	1909		1904		1899		1909		1904		1899		1909		1904		1899	
	Rank.	Per cent of total.	Rank.	Per cent of total.	Rank.	Per cent of total.	Rank.	Per cent of total.	Rank.	Per cent of total.	Rank.	Per cent of total.	Rank.	Per cent of total.	Rank.	Per cent of total.	Rank.	Per cent of total.
United States	.....	100.0	.....	100.0	.....	100.0	.....	100.0	.....	100.0	.....	100.0	.....	100.0	.....	100.0	.....	100.0
Middle Atlantic	1	33.4	1	34.5	1	34.1	1	34.5	1	35.3	1	35.7	1	35.0	1	35.8	1	36.5
East North Central	2	22.9	2	22.4	2	22.8	2	25.2	2	24.4	2	25.0	2	25.5	2	24.8	2	25.0
New England	3	16.6	3	17.2	3	18.1	3	12.9	3	13.7	3	14.6	3	14.0	3	14.5	3	15.7
West North Central	5	5.7	5	5.7	5	5.6	4	8.7	4	8.7	4	8.5	5	6.6	5	6.7	4	6.7
South Atlantic	4	10.0	4	9.6	4	9.7	5	6.7	5	6.6	5	6.2	4	6.9	4	6.7	5	6.5
Pacific	7	3.2	7	3.0	7	2.6	6	4.1	6	3.7	6	3.2	6	4.1	6	3.8	7	2.9
East South Central	6	4.0	6	4.0	6	3.8	7	3.0	7	3.1	7	2.8	7	3.4	7	3.4	6	3.1
West South Central	8	3.1	8	2.6	8	2.4	8	3.0	8	2.8	8	2.2	8	2.9	8	2.7	8	2.0
Mountain	9	1.1	9	1.0	9	0.9	9	1.8	9	1.7	9	1.7	9	1.6	9	1.6	9	1.6

With respect to average number of wage earners, the nine geographic divisions had precisely the same rank at each of the three censuses, and the same is true with respect to total value of products, but with respect to value added by manufacture there was some change between 1899 and 1904. The West North Central division ranked fourth in this respect in 1899 and fifth in 1904 and 1909, while the South Atlantic division, which occupied fifth place in 1899, had advanced to fourth place in 1904. Similarly, the East South Central and the Pacific divisions changed places between 1899 and 1904.

The percentages for the several divisions, however, show considerable change. The Middle Atlantic division, which is still the most important in manufacturing, and the New England division, which ranks third, both reported a smaller proportion of the average number of wage earners, value of products, and value added by manufacture in 1909 than in 1899, while each of the other seven geographic divisions reported a larger proportion in the later year than in the earlier in the case of each item, except that the West North Central division reported a slightly smaller proportion of the value added by manufacture in 1909 than in 1899, and that the Mountain division reported the same proportion of the total value added by manufacture in both years. The divisions which gained most conspicuously in their proportion of the total manufacturing business of the country were the Pacific and the West South Central.

The North reported 80.5 per cent of the total number of wage earners in manufacturing industries in 1899, as compared with 78.6 per cent 10 years later. The proportion for the South advanced from 15.9 per cent to 17.1 per cent during the same period and that for the West from 3.6 per cent to 4.4 per cent. Similar changes occurred with respect to value of products and value added by manufacture.

The changes which appear from census to census with respect to the percentages which the several sections and geographic divisions, respectively, reported of the totals for all manufacturing industries in the United States are much less conspicuous than the differences in the percentages of increase for the several sections and divisions. The following table shows the percentages of increase in the average number of wage earners, value of products, and value added by manufacture from 1899 to 1909, and also for each of the five-year periods making up the decade:

Table 15

SECTION AND DIVISION.	PER CENT OF INCREASE.								
	Wage earners (average number).			Value of products.			Value added by manufacture.		
	1899–1909	1904–1909	1899–1904	1899–1909	1904–1909	1899–1904	1899–1909	1904–1909	1899–1904
United States	**40.4**	**21.0**	**16.0**	**81.2**	**39.7**	**29.7**	**76.5**	**35.5**	**30.3**
The North	**36.9**	**19.1**	**15.0**	**76.0**	**38.7**	**26.9**	**70.7**	**34.3**	**27.1**
New England	29.3	17.1	10.4	60.8	31.8	22.0	57.8	31.2	20.3
Middle Atlantic	37.6	17.0	17.6	75.3	36.9	28.1	69.1	32.2	28.0
East North Central	41.0	23.6	14.1	82.7	44.6	26.4	80.6	39.6	29.4
West North Central	40.7	19.8	17.4	85.4	40.4	32.0	72.7	33.0	29.8
The South	**50.8**	**27.3**	**18.5**	**104.6**	**42.3**	**43.8**	**100.3**	**40.3**	**42.8**
South Atlantic	44.7	26.9	14.0	94.0	41.8	36.8	87.0	39.5	34.1
East South Central	47.7	18.3	24.8	93.9	35.8	42.8	98.1	38.7	42.8
West South Central	80.4	42.6	26.5	147.9	50.6	64.6	146.3	44.5	70.4
The West	**72.1**	**33.1**	**29.3**	**116.9**	**49.8**	**44.8**	**123.5**	**42.3**	**57.1**
Mountain	69.5	42.9	18.6	89.8	42.9	32.8	77.5	32.8	33.6
Pacific	73.0	29.9	33.2	131.2	52.9	51.2	148.4	46.3	69.7

The manufacturing industries of the South and the West have shown a more rapid growth than those of the North, the percentages of increase naturally being the greatest in those parts of the country where such industries are of comparatively recent development. In the North the average number of wage earners in manufacturing industries increased 36.9 per cent between 1899 and 1909; in the South the increase was 50.8 per cent, and in the West 72.1 per cent. The value of manufactured products increased 76 per cent in the North, 104.6 per cent in the South, and 116.9 per cent in the West, and similar differences appear among these three sections with respect to the rate of increase in value added by manufacture. Among the nine geographic divisions those showing the lowest percentages of increase for the decade, with respect to all three items covered by the table, were the New England and Middle Atlantic divisions, while those showing the highest were the West South Central and Pacific divisions.

While two of the divisions forming the northeastern part of the country show the lowest percentages of increase between 1899 and 1909, they all show the greatest absolute increases. The following table shows the absolute increase in average number of wage earners, value of products, and value added by manufacture in each division:

Table 16

SECTION AND DIVISION.	INCREASE: 1899–1909		
	Wage earners (average number).	Value of products.	Value added by manufacture.
United States	**1,902,283**	**$9,265,125,169**	**$3,698,185,782**
The North	**1,401,018**	**7,266,335,902**	**2,864,797,005**
New England	249,387	1,009,717,614	437,457,116
Middle Atlantic	602,903	3,067,642,366	1,218,949,189
East North Central	440,442	2,358,648,637	971,781,352
West North Central	108,286	830,929,585	236,609,348
The South	**380,367**	**1,347,916,892**	**565,321,605**
South Atlantic	204,671	669,355,855	275,967,743
East South Central	84,564	305,491,858	145,745,119
West South Central	91,132	373,129,179	144,508,815
The West	**120,898**	**650,872,375**	**268,067,199**
Mountain	30,938	172,170,161	59,983,081
Pacific	89,960	478,702,214	208,084,028

As already indicated, the New England, Middle Atlantic, and East North Central divisions are decidedly the most important in manufacturing and are those in which manufacturing industries on an extensive scale have been longest established. It is worth while, therefore, to compare the progress of these three divisions as a whole during the decade 1899–1909 with that of the other six geographic divisions taken together. The following table gives figures for these two sections of the country:

Table 17

AREA.	Wage earners (average number).	Value of products.	Value added by manufacture.
New England, Middle Atlantic, and East North Central divisions:			
Total, 1909	4,822,801	$15,023,528,580	$6,323,261,978
Total, 1899	3,520,069	8,398,122,563	3,725,194,321
Increase	1,292,732	6,435,406,017	2,598,157,657
Per cent of increase	36.6	74.9	70.5
Remainder of country:			
Total, 1909	1,792,245	5,648,323,290	2,175,099,614
Total, 1899	1,182,694	2,818,804,138	1,105,970,889
Increase	609,551	2,829,719,152	1,070,028,125
Per cent of increase	51.5	100.4	96.7

The three northeasterly divisions taken together show an increase of 36.6 per cent in average number of

wage earners, 74.9 per cent in value of products, and 70.5 per cent in value added by manufacture, while the corresponding percentages for the remainder of the country are 51.5, 100.4, and 96.7, respectively. The absolute increase in each item for the three northeasterly divisions, however, was more than twice as great as the corresponding increases for the other six divisions taken together.

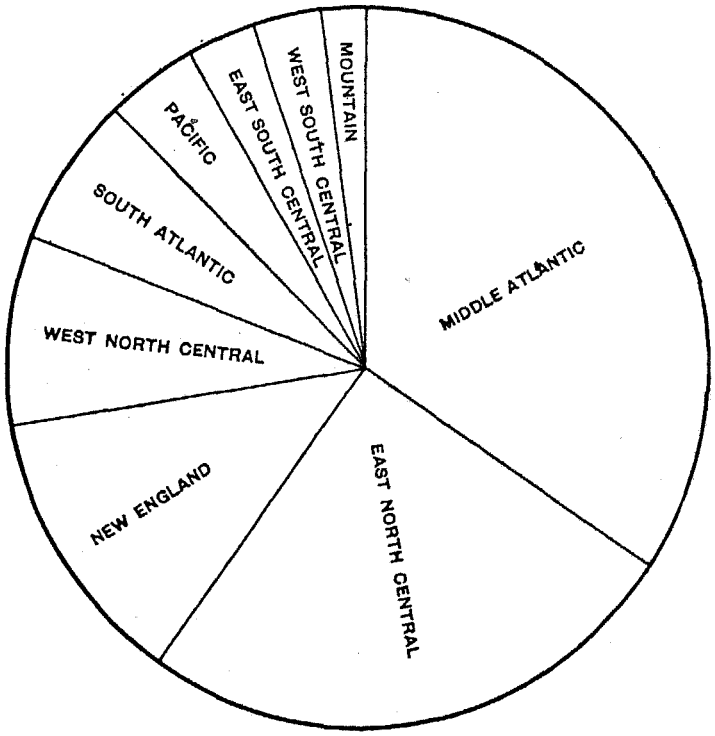
The general tables giving manufactures statistics, although they show the nine geographic divisions separately, do not give figures for the three great sections of the country—the North, the South, and the West. The most important items have already been presented for these three sections, but for convenience a more complete presentation for each of the last three censuses is given in the accompanying table.

SUMMARY OF MANUFACTURES STATISTICS FOR THE NORTH, THE SOUTH, AND THE WEST: 1909, 1904, AND 1899.

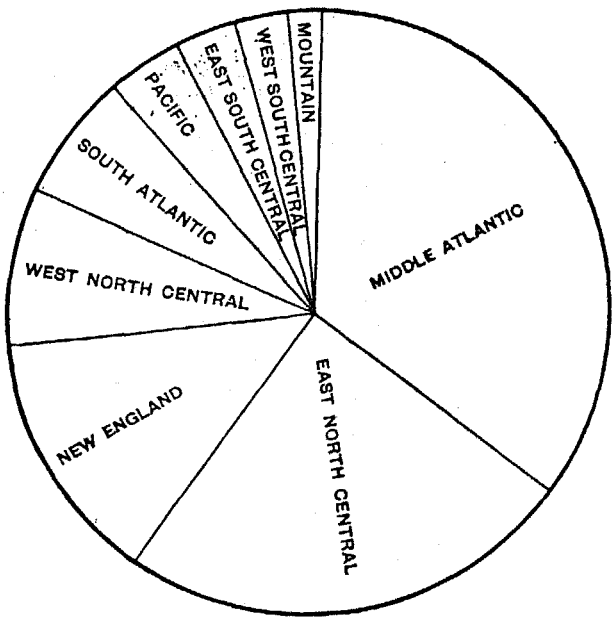
Table 18 SECTION.	Number of establishments.	PERSONS ENGAGED IN MANUFACTURING INDUSTRIES. Total.	Proprietors and firm members.	Salaried employees.	Wage earners (average number).	Primary horsepower.	Capital.	Salaries.	Wages.	Cost of materials.	Value of products.	Value added by manufacture.
United States:												
1909	268,491	7,678,578	273,265	790,267	6,615,046	18,675,376	$18,428,269,706	$938,574,967	$3,427,037,884	$12,142,790,878	$20,672,051,870	$8,529,260,992
1904	216,180	6,213,612	225,673	519,556	5,468,383	13,487,707	12,675,580,874	574,439,322	2,610,444,953	8,500,207,810	14,793,902,563	6,293,694,753
1899	207,514	.....	.....	364,120	4,712,763	10,097,893	8,975,256,436	380,771,321	2,008,361,119	6,575,851,491	11,406,926,701	4,831,075,210
THE NORTH—												
1909	193,850	6,040,103	193,641	649,324	5,197,138	13,730,683	14,728,325,195	777,561,484	2,772,142,882	9,912,121,705	16,827,427,130	6,915,305,425
1904	163,224	4,962,762	169,148	429,408	4,364,206	10,255,148	10,366,702,031	479,465,197	2,138,680,939	6,985,815,654	12,134,078,307	5,148,262,653
1899	159,663	.....	.....	306,684	3,796,120	7,938,376	7,591,818,144	325,966,995	1,687,287,126	5,510,582,808	9,561,091,228	4,050,508,420
THE SOUTH—												
1909	55,808	1,292,197	60,935	101,955	1,129,307	3,741,911	2,502,490,234	111,661,702	444,215,061	1,508,298,709	2,637,117,348	1,128,818,639
1904	38,154	995,521	41,493	66,718	887,310	2,530,685	1,664,686,919	66,898,796	326,530,311	1,049,090,467	1,853,595,708	804,505,241
1899	36,376	.....	.....	43,827	748,940	1,761,946	1,011,312,400	40,126,746	229,583,119	725,703,485	1,289,200,456	563,496,971
THE WEST—												
1909	18,833	346,278	18,689	38,988	288,601	1,202,782	1,197,454,277	49,351,781	210,679,941	722,370,464	1,207,507,392	485,136,928
1904	14,802	255,329	15,032	23,430	216,867	701,874	644,191,924	28,165,329	145,233,703	465,301,689	806,228,548	340,926,859
1899	11,475	.....	.....	13,609	167,703	397,571	372,125,952	14,677,580	91,490,874	339,565,198	556,635,017	217,069,819
Per cent of increase:												
United States—												
1899–1909	29.4	.....	.....	117.0	40.4	84.9	105.3	146.5	70.6	84.7	81.2	76.6
1904–1909	24.2	23.6	21.1	52.1	21.0	38.5	45.4	63.4	31.3	42.9	39.7	35.5
1899–1904	4.2	.....	.....	42.7	16.0	33.6	41.2	50.9	30.0	29.3	29.7	30.3
The North—												
1899–1909	21.4	.....	.....	111.7	36.9	73.0	94.0	138.5	64.3	79.9	76.0	70.7
1904–1909	18.8	21.7	14.5	51.2	19.1	33.9	42.1	62.2	29.6	41.9	38.7	34.3
1899–1904	2.2	.....	.....	40.0	15.0	29.2	36.6	47.1	26.8	26.8	26.9	27.1
The South—												
1899–1909	53.4	.....	.....	132.6	50.8	112.4	147.4	178.3	93.5	107.8	104.6	100.3
1904–1909	46.3	29.8	46.9	52.8	27.3	47.9	50.3	67.1	36.0	43.8	42.3	40.3
1899–1904	4.9	.....	.....	52.2	18.5	43.6	64.6	66.5	42.2	44.6	43.8	42.8
The West—												
1899–1909	64.1	.....	.....	186.5	72.1	202.5	221.8	236.2	130.3	112.7	116.9	123.5
1904–1909	27.2	35.6	24.3	66.4	33.1	71.4	85.9	75.2	45.1	55.2	49.8	42.3
1899–1904	29.0	.....	.....	72.2	29.3	76.5	73.1	91.9	58.7	37.0	44.8	57.1
Per cent of United States total:												
The North—												
1909	72.2	78.7	70.9	82.2	78.6	73.5	79.9	82.8	80.9	81.6	81.4	81.1
1904	75.5	79.9	75.0	82.6	79.8	76.0	81.8	83.5	81.9	82.2	82.0	81.8
1899	76.9	.....	.....	84.2	80.5	78.6	84.6	85.6	84.0	83.8	83.8	83.8
The South—												
1909	20.8	16.8	22.3	12.9	17.1	20.0	13.6	11.9	13.0	12.4	12.8	13.2
1904	17.6	16.0	18.4	12.8	16.2	18.8	13.1	11.6	12.5	12.3	12.5	12.8
1899	17.5	.....	.....	12.0	15.9	17.4	11.3	10.5	11.4	11.0	11.3	11.7
The West—												
1909	7.0	4.5	6.8	4.9	4.4	6.4	6.5	5.3	6.1	5.9	5.8	5.7
1904	6.8	4.1	6.7	4.5	4.0	5.2	5.1	4.9	5.6	5.5	5.4	5.4
1899	5.5	.....	.....	3.7	3.6	3.9	4.1	3.9	4.6	5.2	4.9	4.5

VALUE OF ALL MANUFACTURED PRODUCTS AND PROPORTIONAL VALUE FOR EACH DIVISION: 1909, 1904, AND 1899.

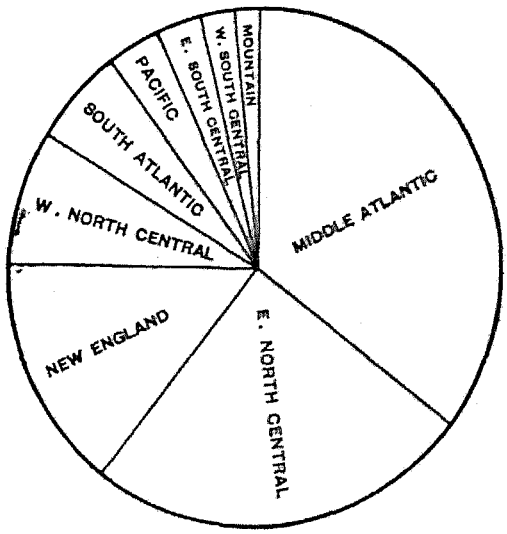
1909



1904



1899



CHAPTER V.

STATISTICS FOR INDIVIDUAL CITIES.[1]

Introduction.—The practice of publishing census statistics of manufactures for individual cities was begun at the census of 1879. Prior to that the state and the county were the only political divisions for which separate manufactures statistics were given in the census reports. Beginning with the census of 1879 certain cities have been selected at each census for separate presentation. For 1879 the statistics for 100 cities were shown separately; for 1889 those for 165 cities; for 1899 those for 1,340 cities; for 1904 those for 544 cities; and for 1909, the year covered by the present census, those for 593 cities. The basis of selection has differed at each census. For 1879 279 cities were chosen for special canvass, although statistics were published only for the 100 largest cities; for 1889, statistics for 1,042 cities and towns were collected by special canvass but statistics were published separately only for places of 20,000 inhabitants or over. For 1899 the selection was based on quite a different principle; 1,340 places were selected, in advance of the enumeration, to be canvassed by special agents, because it was thought the work could be done to greater advantage by them than by the population enumerators, who collected the statistics of manufactures elsewhere at that census, and the statistics were published for all cities thus selected. Some of the places canvassed by this method had both a smaller population and less manufacturing business than some canvassed by the enumerators.

For the census of 1904 separate figures were published for all places of 8,000 inhabitants or over, and for that of 1909 for all places of 10,000 or more. It has not been considered desirable to incur the heavy expense of segregating the schedules for smaller places in making the tabulations and publishing the results. To do so would be the less justifiable because in many cases the data for these places, even those for all industries combined, could not be published without virtually disclosing the operations of individual establishments. Moreover, in the case of many small places a very large part of the manufacturing business which to all intents and purposes belongs to them is conducted in establishments located just outside the municipal boundaries. For such places data based only on establishments within the boundaries would be misleading, and, on the other hand, it would be impossible to determine precisely in a large number of cases what outside establishments should properly be considered as pertaining to the given city or village. It often happens, even in the case of cities of more than 10,000 inhabitants, that manufacturing establishments which for all practical purposes form part of the industrial activities of the city are located outside its boundaries. Consequently, the statistics for individual cities in the present report should not be taken as showing precisely the true relative importance of each city as a manufacturing center in the broad sense. Many cities would rank very differently if the establishments in their suburbs were uniformly included. (For a further discussion of this subject, see Chapter VI.)

In selecting cities of 10,000 or more inhabitants for separate tabulation, the Census Bureau, of course, recognizes that some places of smaller population are more important from the manufacturing standpoint than some of those for which figures are shown separately, but convenience makes it desirable to adopt a definite population limit; otherwise much expense would be incurred merely in determining which places should and which should not be distinguished in the tabulation work.

At the census of 1904 statistics for individual industries were presented, so far as practicable, in the case of all cities of over 20,000 inhabitants and totals for all industries were published for each city with a population of 8,000 but less than 20,000. It was found, however, that in the case of a great many of the smaller cities it was impossible to give separate statistics for some of the most important industries, because to do so would result in the direct or indirect disclosure of the operations of individual concerns. It often happened, therefore, that the most important industry in a city would have to be grouped under the heading of "all other industries," and in a good many cases the industries for which statistics could be presented separately represented less than half of the total manufacturing interests of the city. For this reason it was not deemed worth while, in connection with the census of 1909, to present statistics for individual industries in cities of less than 50,000 inhabitants.

Description of detailed tables for individual cities.—A large part of the statistics regarding manufactures in individual cities are presented only in Volume IX of the Reports of the Thirteenth Census. In that volume the statistics for each state are presented in a separate section, and the details for the more important cities of the state are there shown. The prin-

[1] The term "city," as used in this report, covers all incorporated places (including New England towns, except in Connecticut).

cipal items covered by the manufactures census are shown for 1909, 1904, and 1899 for all industries combined in each city of 10,000 or more inhabitants and for the leading individual industries in each city of 50,000 inhabitants or over, and more detailed statistics for the census of 1909 are likewise shown.

Table 5 (pp. 92 to 115) shows, for each city having 10,000 inhabitants or over in 1910 or in 1900, for all industries combined, the principal items covered by the manufactures censuses of 1909, 1904, and 1899, respectively. The cities are arranged alphabetically under the name of the state in which they are located. For each state also the combined totals for all of the cities covered are presented. It should be noted, however, that the number of cities for which statistics for 1909 are presented is in many states greater than the number for which statistics for 1904 and 1899 are shown. This condition arises from the fact that the table gives no statistics for 1904 or 1899 for cities which had less than 10,000 inhabitants in 1900, and that some of the cities, which had more than 10,000 inhabitants in 1910 had less than that number in 1900. In a few instances the population of cities which had 10,000 inhabitants or over in 1900 had decreased to less than 10,000 in 1910. This fact resulted in a decrease in the total number of cities of 10,000 inhabitants or over in one state, Colorado, where 5 cities are shown for 1899 and 4 for 1909.

Summary for 75 leading cities: 1909.—Table 1, derived from the more detailed Table 5, presents for the 75 cities which ranked highest in value of manufactured products, statistics in regard to population in 1910 and number of manufacturing establishments, average number of wage earners, value of products, and value added by manufacture in 1909, together with the percentage of increase in the last three items for the decade 1899–1909 and the two five-year periods making up the decade, and the rank in each of these three items in 1909. The cities are arranged in order of rank as determined by value of products. As already indicated, the figures relate only to the manufacturing establishments actually situated within the boundaries of the respective cities. In the case of several of the cities establishments outside the boundary, 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 among the 75 cities are Pittsburgh and Boston, which would rank decidedly higher if the suburbs of each city were included with it than they do in the table, in which the statistics are confined to establishments within the city limits.

It should be noted, further, that there are a considerable number of cities not listed in the table which reported more wage earners or a greater value added by manufacture than some of the cities in the table, which were selected solely on the basis of rank in value of products. The ranking shown for the cities as to number of wage earners and value added by manufacture relates only to the cities covered by the table, while in the case of value of products the ranking represents correctly the standing of the cities named among all the cities of the country. The rank with respect to population is not shown; many cities not included in the table rank higher in population than some of those which are included.

New York decidedly outranks any other city in manufacturing, although in proportion to its population its manufacturing interests are relatively less important than in a considerable number of other cities. Nearly one-tenth of the total value of manufactured products for the United States in 1909 was reported from New York City. As judged by value of products, Chicago ranked second among the manufacturing cities in 1909, followed by Philadelphia, St. Louis, Cleveland, Detroit, Pittsburgh, Boston, Buffalo, Milwaukee, and Newark, in the order named. Each of the 11 cities just named produced in 1909 manufactured products valued at more than $200,000,000.

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 among all the cities of the country in population, but eighth in value of manufactured products; Baltimore ranks seventh in population but thirteenth in value of manufactured products; and Los Angeles ranks seventeenth 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 ranks sixty-fifth among the cities of the country in respect to population.

Of the 75 leading cities of the United States on the basis of population, there are 19 which are not included among the 75 cities shown in Table 1 as having the largest value of manufactures; these cities, in the order of their importance in population are Washington, D. C.; Oakland, Cal.; Birmingham, Ala.; Memphis, Tenn.; Scranton, Pa.; Nashville, Tenn.; Spokane, Wash.; Albany, N. Y.; San Antonio, Tex.; Salt Lake City, Utah; Dallas, Tex.; Des Moines, Iowa; Tacoma, Wash.; Houston, Tex.; Duluth, Minn.; St. Joseph, Mo.; Utica, N. Y.; Elizabeth, N. J.; and Fort Worth, Tex. Correspondingly, 19 cities which are not among the 75 leading cities of the country with respect to population are included in the table; arranged in the order of their rank in value of manufactured products, these cities are South Omaha, Nebr.; Bayonne, N. J.; Akron, Ohio; Perth Amboy, N. J.; Peoria, Ill.; Waterbury, Conn.; Johnstown, Pa.; Manchester, N. H.; Brockton, Mass.; McKeesport, Pa.; Passaic, N. J.; Holyoke, Mass.; Lorain, Ohio; Joliet, Ill.; Schenectady, N. Y.; New Castle, Pa.; Pawtucket, R. I.; Sioux City, Iowa; and Haverhill, Mass.

The diagram following Table 1 shows graphically the value of products in 1909 for the 48 cities reporting products valued at more than $50,000,000.

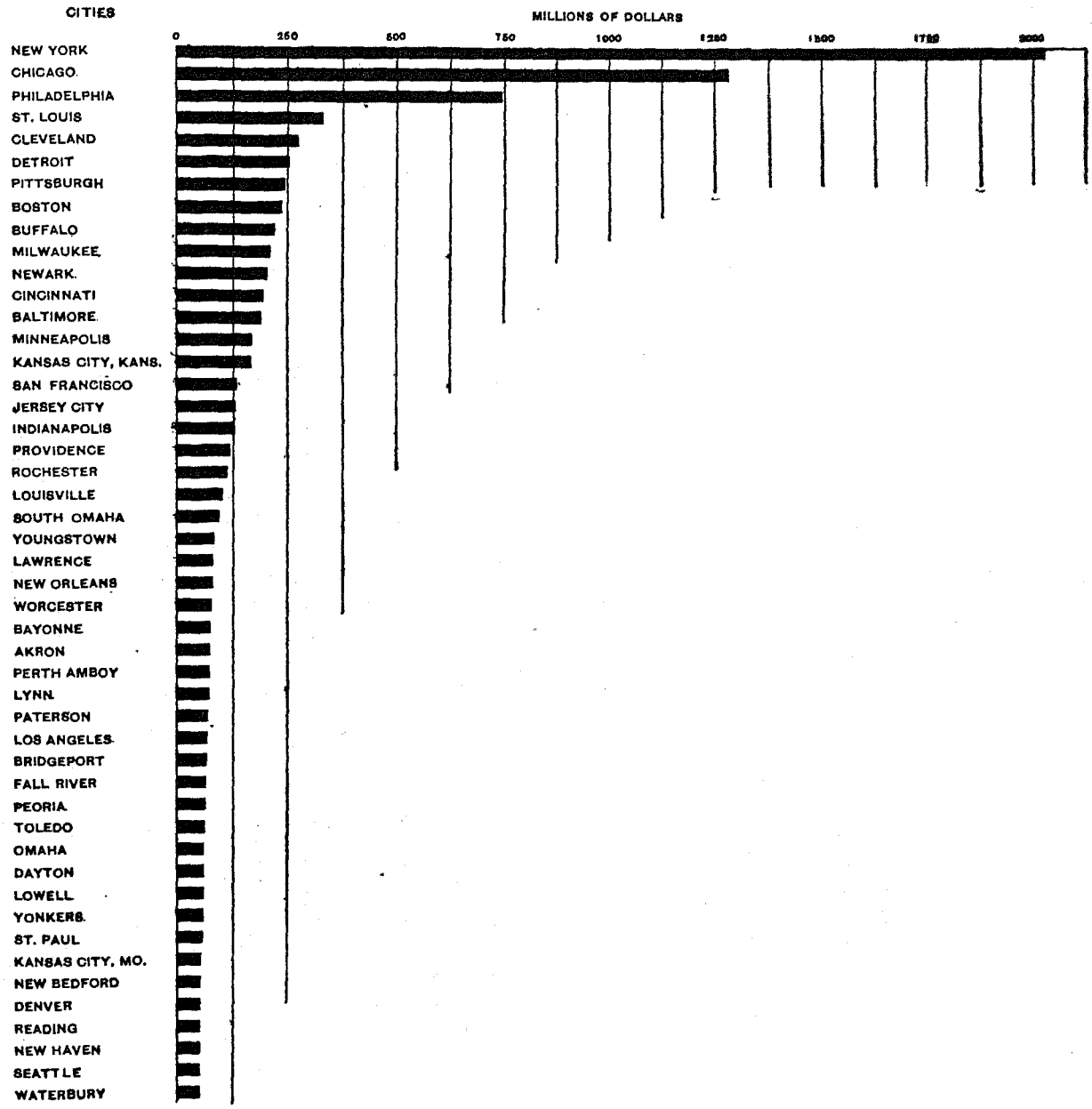
SUMMARY FOR 75 CITIES LEADING IN MANUFACTURING INDUSTRIES, AS MEASURED BY VALUE OF PRODUCTS.

Table 1

City.	Population: 1910	Number of establishments: 1909	Wage earners: 1909		Value of products: 1909		Value added by manufacture: 1909		Per cent of increase.[1]								
			Average number.	Rank.	Amount.	Rank.	Amount.	Rank.	Wage earners (average number).			Value of products.			Value added by manufacture.		
									1899-1909	1904-1909	1899-1904	1899-1909	1904-1909	1899-1904	1899-1909	1904-1909	1899-1904
New York, N. Y.	4,766,883	25,938	554,002	1	$2,029,692,576	1	$937,537,243	1	42.6	19.2	19.6	73.1	33.0	30.2	74.0	32.3	31.5
Chicago, Ill.	2,185,283	9,656	293,977	2	1,281,171,181	2	487,701,458	2	32.9	21.5	9.4	60.6	34.1	19.7	65.0	33.6	23.5
Philadelphia, Pa.	1,549,008	8,379	251,884	3	746,075,659	3	316,983,382	3	17.3	10.0	6.6	43.5	26.2	13.7	41.0	22.8	14.8
St. Louis, Mo.	687,029	2,667	87,371	4	328,495,313	4	140,306,150	4	34.8	5.6	27.6	69.6	22.9	38.0	52.7	8.3	41.0
Cleveland, Ohio	560,663	2,148	84,728	5	271,960,833	5	117,045,810	6	53.1	32.3	15.7	95.2	58.2	23.4	86.1	57.4	18.2
Detroit, Mich.	465,766	2,036	81,011	6	252,992,123	6	122,774,582	5	111.1	67.1	26.3	186.3	97.3	45.1	196.8	99.1	49.1
Pittsburgh, Pa.	533,905	1,659	67,474	9	243,453,693	7	94,926,910	8	−6.0	−5.8	−0.2	11.6	15.2	−3.2	5.8	9.5	−3.4
Boston, Mass.	670,585	3,155	69,637	8	237,457,472	8	112,880,317	7	31.8	17.7	11.9	45.9	28.8	13.3	40.3	25.8	11.5
Buffalo, N. Y.	423,715	1,753	51,412	13	218,803,994	9	82,265,753	12	50.0	18.0	27.1	107.1	48.5	39.5	107.3	39.4	48.7
Milwaukee, Wis.	373,857	1,764	59,502	12	208,323,630	10	87,702,207	11	44.4	37.2	5.2	87.9	51.0	24.5	71.4	31.1	30.8
Newark, N. J.	347,469	1,858	59,955	11	202,511,520	11	87,832,112	10	39.8	18.3	18.2	79.6	35.0	33.1	69.0	26.6	33.5
Cincinnati, Ohio	363,591	2,184	60,192	10	194,515,692	12	92,583,742	9	9.6	2.7	6.6	37.3	17.1	17.2	31.7	11.8	17.8
Baltimore, Md.	558,485	2,502	71,444	7	186,977,710	13	79,953,827	13	7.3	9.8	−2.3	38.4	24.5	11.1	33.5	14.9	16.2
Minneapolis, Minn.	301,408	1,102	26,962	25	165,404,680	14	45,411,545	18	37.4	24.4	10.5	75.2	36.5	28.3	78.1	40.7	26.6
Kansas City, Kans.	82,331	165	12,294	57	164,080,607	15	19,690,449	52	29.6	16.8	11.0	105.0	70.1	20.6	76.6	56.4	12.9
San Francisco, Cal.	416,912	1,796	28,244	21	133,041,069	16	56,823,748	15	−13.2	−26.5	18.0	24.3	−3.4	28.7	37.0	−8.1	49.1
Jersey City, N. J.	267,779	745	25,454	28	128,774,978	17	39,457,751	21	46.4	25.1	17.0	76.6	70.0	3.9	74.1	46.5	18.9
Indianapolis, Ind.	233,650	855	31,815	19	126,522,113	18	42,371,177	20	51.6	19.0	27.4	113.3	53.9	38.6	101.4	39.1	44.8
Providence, R. I.	224,326	1,080	46,381	14	120,240,584	19	55,470,539	16	20.9	16.5	3.7	52.9	30.7	16.9	53.6	32.0	16.3
Rochester, N. Y.	218,149	1,203	39,108	15	112,676,215	20	62,001,833	14	39.4	23.1	13.3	88.8	38.9	35.9	97.3	43.6	37.4
Louisville, Ky.	223,928	903	27,023	24	101,283,955	21	47,156,376	17	17.2	8.2	8.3	53.2	21.7	25.9	51.0	25.7	20.1
South Omaha, Nebr.	26,259	71	6,306	70	92,435,712	22	14,762,682	68	−0.3	11.4	−10.5	33.0	37.1	−3.0	73.9	79.6	−3.2
Youngstown, Ohio	79,066	115	10,498	64	81,270,747	23	18,978,773	53	21.0	29.7	−6.7	139.7	73.5	38.2	76.1	62.6	8.3
Lawrence, Mass.	85,892	162	30,542	20	79,992,668	24	34,554,606	23	46.1	39.4	4.8	91.6	66.5	15.1	104.5	85.6	10.2
New Orleans, La.	339,075	848	17,186	41	78,794,030	25	30,061,971	28	6.2	−1.6	7.9	37.2	−3.2	41.7	76.2	33.1	32.4
Worcester, Mass.	145,986	580	28,221	22	77,147,884	26	34,546,996	24	24.9	23.8	0.9	64.9	47.9	11.4	48.1	37.5	7.8
Bayonne, N. J.	55,545	97	7,519	67	73,640,900	27	14,708,359	69	61.0	6.5	51.1	90.8	21.5	57.1	206.0	7.8	184.0
Akron, Ohio	69,067	246	15,831	45	73,158,206	28	30,087,578	27	91.7	64.5	16.6	232.3	118.0	52.4	223.7	128.8	41.4
Perth Amboy, N. J.	32,121	80	5,866	72	73,092,703	29	9,160,649	72	192.6	48.5	97.0	419.8	110.0	147.5	237.5	104.3	65.2
Lynn, Mass.	89,336	431	27,368	23	71,503,140	30	30,142,053	26	67.1	27.1	31.5	81.7	30.0	39.8	102.6	34.6	50.5
Paterson, N. J.	125,600	702	32,004	18	69,584,351	31	34,856,753	22	12.1	12.3	−0.1	43.5	27.3	12.7	48.7	28.0	16.1
Los Angeles, Cal.	319,198	1,325	17,327	40	68,586,274	32	29,673,666	29	235.0	66.2	101.5	353.2	97.0	130.0	321.1	84.0	128.9
Bridgeport, Conn.	102,054	367	25,775	27	65,608,806	33	27,662,108	32	51.3	32.2	14.4	95.6	47.2	32.9	70.2	24.3	36.9
Fall River, Mass.	119,295	288	37,139	16	64,145,726	34	28,621,794	31	21.2	38.4	−12.4	64.0	47.6	11.2	36.1	64.7	−17.4
Peoria, Ill.	66,950	283	5,981	71	63,061,155	35	45,287,949	19	−0.3	2.5	−2.7	41.5	4.4	35.6	43.4	1.6	41.2
Toledo, Ohio	168,497	760	18,878	36	61,229,542	36	27,145,955	35	48.1	20.3	23.1	91.5	37.6	39.2	115.8	42.6	51.3
Omaha, Nebr.	124,096	432	8,023	66	60,854,550	37	17,439,923	55	52.1	37.8	10.3	59.8	12.7	41.8	−3.9	57.0	−38.8
Dayton, Ohio	116,577	513	21,549	32	60,378,376	38	32,850,558	25	49.6	26.1	18.6	94.7	52.5	27.7	96.9	55.7	26.4
Lowell, Mass.	106,294	320	32,575	17	60,270,961	39	27,440,216	34	11.4	11.2	0.2	46.3	28.6	13.8	31.1	37.4	−4.6
Yonkers, N. Y.	79,803	158	12,711	55	59,333,865	40	16,131,946	63	68.2	30.0	29.4	242.9	76.9	93.9	107.8	57.9	31.7
St. Paul, Minn.	214,744	719	19,339	35	58,990,025	41	28,690,391	30	48.5	34.6	10.3	96.3	53.9	27.5	102.8	52.4	33.1
Kansas City, Mo.	248,381	902	14,643	53	54,704,510	42	23,742,651	39	51.0	32.6	13.8	131.9	53.8	50.8	114.7	47.9	45.1
New Bedford, Mass.	96,652	207	26,566	26	53,237,839	43	24,674,271	37	74.1	48.8	17.0	127.5	80.7	26.0	112.5	84.4	15.2
Denver, Colo.	213,381	766	12,058	59	51,538,547	44	20,611,242	51	41.9	24.7	13.8	36.0	40.6	−3.3	53.4	31.6	16.6
Reading, Pa.	96,071	482	24,145	30	51,134,967	45	21,286,662	48	42.9	33.7	6.9	56.5	67.7	−6.7	35.7	54.5	−12.1
New Haven, Conn.	133,605	590	23,547	31	51,071,397	46	26,752,139	36	33.8	9.8	21.8	46.3	28.8	13.7	42.6	26.5	12.7
Seattle, Wash.	237,194	751	11,331	62	50,569,198	47	21,884,464	44	155.2	77.3	43.9	230.0	99.0	65.8	238.8	98.1	71.0
Waterbury, Conn.	73,141	169	20,170	33	50,349,816	48	21,623,904	46	52.5	30.9	16.5	66.0	55.6	6.7	78.3	48.1	20.4
Syracuse, N. Y.	137,249	738	18,148	38	49,434,615	49	27,659,019	33	53.7	24.7	23.2	86.2	42.5	30.7	97.6	48.7	32.9
Camden, N. J.	94,538	365	16,527	42	49,137,874	50	21,754,074	45	113.5	30.5	63.5	173.4	46.3	86.9	189.0	65.3	74.9
Columbus, Ohio	181,511	586	16,428	44	49,031,872	51	23,828,062	38	19.2	14.5	4.1	41.1	24.0	13.8	44.4	17.5	23.0
Trenton, N. J.	96,815	340	18,543	37	49,008,715	52	21,336,166	47	41.1	31.2	7.6	72.2	51.4	13.7	79.6	44.1	24.7
Johnstown, Pa.	55,482	97	10,574	63	48,105,775	53	15,757,293	65	88.8	52.9	23.5	125.2	66.5	35.2	111.3	72.5	22.5
Richmond, Va.	127,628	380	14,849	50	47,357,985	54	23,105,850	40	8.3	19.3	−9.3	92.0	70.7	12.5	75.3	65.3	6.1
Portland, Oreg.	207,214	649	12,214	58	46,860,767	55	20,785,151	49	127.0	49.5	51.9	177.2	63.6	69.5	209.0	78.8	72.8
Manchester, N. H.	70,063	175	24,735	29	46,811,919	56	16,314,820	60	38.5	40.7	−1.6	90.1	52.5	24.6	50.7	36.1	10.8
Brockton, Mass.	56,878	196	14,737	51	45,972,388	57	17,406,991	57	43.1	6.1	34.9	85.0	21.6	52.0	82.8	14.2	60.0
Cambridge, Mass.	104,839	275	15,260	47	44,227,395	58	20,661,738	50	37.8	4.6	31.8	52.0	4.3	45.8	67.7	19.5	40.4
McKeesport, Pa.	42,694	68	8,246	65	42,494,567	59	15,198,832	66	14.3	−6.8	22.7	17.9	84.3	−36.1	6.9	41.5	−24.5
Grand Rapids, Mich.	112,571	524	17,590	39	42,230,675	60	22,494,959	42	36.1	13.4	20.0	90.0	37.6	38.1	102.5	38.3	46.5
Passaic, N. J.	54,773	169	15,086	48	41,729,257	61	17,394,412	58	135.8	37.1	71.9	225.9	83.2	77.9	222.9	79.8	79.6
Hartford, Conn.	98,915	396	14,627	54	40,679,598	62	22,816,860	41	37.0	30.4	5.1	70.7	56.6	9.0	83.1	57.5	16.3
Holyoke, Mass.	57,730	187	16,513	43	40,097,224	63	17,796,637	54	31.9	12.4	17.3	66.4	30.5	27.6	56.3	25.7	24.3
Lorain, Ohio	28,883	57	6,697	68	38,986,996	64	14,765,412	67	199.9	115.9	38.9	311.2	169.0	52.8	392.8	208.7	59.6
Joliet, Ill.	34,670	137	6,383	69	38,816,523	65	11,058,353	71	10.2	10.2	.....	48.5	18.0	25.9	23.7	−5.0	30.2
Somerville, Mass.	77,236	114	5,280	74	38,686,527	66	6,763,665	75	49.7	52.0	−1.5	92.8	68.5	14.4	102.3	79.0	13.0
Schenectady, N. Y.	72,826	134	14,931	49	38,164,699	67	16,212,379	61	75.8	4.3	68.5	116.8	15.4	87.9	111.1	−2.3	116.0
Wilmington, Del.	87,411	261	14,663	52	38,069,383	68	16,093,083	64	1.1	8.6	−6.8	24.5	25.7	−1.0	26.6	32.3	−4.3
New Castle, Pa.	36,280	82	5,339	73	38,037,522	69	7,063,432	73	17.9	−1.7	20.0	90.0	31.5	44.5	2.8	−8.4	12.2
Troy, N. Y.	76,813	363	20,020	34	37,979,986	70	22,353,612	43	−12.7	4.7	−16.7	32.2	19.2	10.9	29.4	23.4	4.8
Pawtucket, R. I.	51,622	217	15,275	46	37,696,186	71	16,156,362	62	42.6	26.7	12.5	95.6	45.8	34.1	73.8	37.7	26.3
Sioux City, Iowa	47,828	136	3,750	75	37,424,450	72	7,036,231	74	52.3	63.1	−6.7	163.1	153.5	3.8	71.8	109.1	−17.9
Haverhill, Mass.	44,115	346	11,689	61	35,376,617	73	13,690,748	70	19.8	22.1	−1.9	51.1	44.7	4.4	62.5	34.4	20.9
Atlanta, Ga.	154,839	483	12,302	56	33,038,002	74	16,619,685	59	54.4	3.5	49.3	129.1	28.3	78.6	138.2	35.1	76.4
Springfield, Mass.	83,926	346	11,855	60	31,772,815	75	17,409,730	56	45.4	12.7	29.1	75.0	22.9	42.4	88.0	29.2	45.5

[1] Percentages are based on figures in Table 5. A minus sign (−) denotes decrease.

VALUE OF MANUFACTURED PRODUCTS FOR 48 LEADING CITIES: 1909.



In the case of some of the cities listed in the table, the rank with respect to number of wage earners and value added by manufacture in 1909 was very different from that with respect to value of products, these differences being dependent upon the character of the predominating industries and upon the relative amount of duplication appearing in the statistics of value of products. It is noteworthy, however, that the 13 cities which ranked highest in value of products were also the 13 which occupied the highest rank with respect to wage earners and value added by manufacture, although considered individually only 4 of these cities held the same rank in each of the three respects. Conspicuous instances of cities having higher rank in value of products than in number of wage earners or value added by manufacture are Kansas City, Kans.; South Omaha, Nebr.; Youngstown, Ohio; and Bayonne and Perth Amboy, N. J. On the other hand, certain cities—particularly some in which textile industries predominate, such as Lawrence, Fall River, Lowell, and New Bedford, Mass., and Paterson, N. J.—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.

In considering the percentages of increase in value of products and value added by manufacture, as shown in the table, it should be borne in mind that in general there was an advance in the prices of commodities during the decade, and that this advance may have been relatively greater in the case of the products of the leading industries of some cities than in those of others.

For every city listed in the table a greater gross value of manufactured products was reported in 1909 than in 1899, and for every city except Omaha, a greater value added by manufacture. Only two cities—San Francisco, Cal., and New Orleans, La.—showed a loss in gross value of products in 1909 as compared with 1904; and four cities—San Francisco, Cal., Joliet, Ill., Schenectady, N. Y., and New Castle, Pa.—a loss in value added by manufacture. Between 1899 and 1904, however, decreases in value of products occurred in six cities. In number of wage earners Pittsburgh, Pa., San Francisco, Cal., South Omaha, Nebr., Peoria, Ill., and Troy, N. Y., showed a decline in 1909 as compared with 1899; several other cities show 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 metropolitan district, which is much more comprehensive than the city, show decided gains from census to census, and that a temporary decline in the manufacturing industries in San Francisco was the natural result of the earthquake and fire in 1906.

Of the cities reporting products valued at $200,000,000 or more, Detroit shows the greatest percentages of increase between 1899 and 1909 in all of the items regarding manufactures shown in the table, and Buffalo the next greatest, except that the percentage of increase in the number of wage earners for Buffalo was exceeded by that for Cleveland. Among the smaller manufacturing cities included in the table, those showing the most conspicuous increases are Akron, Ohio; Perth Amboy, N. J.; Los Angeles, Cal.; Seattle, Wash.; Camden, N. J.; Portland, Oreg.; Passaic, N. J.: and Lorain, Ohio.

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

Comparison of selected cities with states.—The importance of the large cities in the manufacturing industries of the country is made more fully evident by a comparison of their statistics with those for the individual states as units. A comparison of this character is made in Table 2, which presents the cities in the order of their importance with respect to value of products in 1909, and also gives the number of states and territories (not counting the District of Columbia) which were outranked in value of products by each city.

Every state in the Union, except New York and Pennsylvania, was outranked in value of manufactured products in 1909 by the city of New York, and this was the case also in 1904 and 1899. Chicago and Philadelphia outranked in 1909, 43 and 42 states, respectively. Only New York, Pennsylvania, Illinois, Massachusetts, and Ohio outranked Chicago, while New Jersey, in addition to the states just mentioned, had a greater value of products than Philadelphia. Six states (besides the District of Columbia) reported a smaller value of products than Springfield, Mass., the lowest city in the table with respect to value of products in 1909.

Table 2

CITY.	Value of products: 1909	RANK OF CITY IN VALUE OF PRODUCTS. 1909	1899	Number of states and territories outranked in value of products: 1909	CITY.	Value of products: 1909	RANK OF CITY IN VALUE OF PRODUCTS. 1909	1899	Number of states and territories outranked in value of products: 1909
New York, N. Y.	$2,029,692,576	1	1	46	Lowell, Mass.	$60,270,961	39	28	9
Chicago, Ill.	1,281,171,181	2	2	43	Yonkers, N. Y.	59,333,865	40	72	9
Philadelphia, Pa.	746,075,659	3	3	42	St. Paul, Minn.	58,990,025	41	44	9
St. Louis, Mo.	328,495,313	4	5	35	Kansas City, Mo.	54,704,510	42	58	9
Cleveland, Ohio	271,960,833	5	8	31	New Bedford, Mass.	53,237,839	43	60	8
Detroit, Mich.	252,992,123	6	15	30	Denver, Colo.	51,538,547	44	33	7
Pittsburgh, Pa.	243,453,693	7	4	30	Reading, Pa.	51,134,967	45	39	7
Boston, Mass.	237,457,472	8	6	30	New Haven, Conn.	51,071,397	46	35	7
Buffalo, N. Y.	218,803,994	9	13	26	Seattle, Wash.	50,569,198	47	78	7
Milwaukee, Wis.	208,323,630	10	11	25	Waterbury, Conn.	50,349,816	48	43	7
Newark, N. J.	202,511,520	11	10	24	Syracuse, N. Y.	49,434,615	49	48	6
Cincinnati, Ohio	194,515,692	12	7	23	Camden, N. J.	49,137,874	50	70	6
Baltimore, Md.	186,977,710	13	9	23	Columbus, Ohio	49,031,872	51	36	6
Minneapolis, Minn.	165,404,680	14	14	21	Trenton, N. J.	49,008,715	52	47	6
Kansas City, Kans.	164,080,607	15	16	20	Johnstown, Pa.	48,105,775	53	64	6
San Francisco, Cal.	133,041,069	16	12	18	Richmond, Va.	47,357,985	54	54	6
Jersey City, N. J.	128,774,978	17	18	17	Portland, Oreg.	46,860,767	55	74	6
Indianapolis, Ind.	126,522,113	18	22	17	Manchester, N. H.	46,811,919	56	55	6
Providence, R. I.	120,240,584	19	17	17	Brockton, Mass.	45,972,388	57	52	6
Rochester, N. Y.	112,676,215	20	21	16	Cambridge, Mass.	44,227,395	58	45	6
Louisville, Ky.	101,283,955	21	20	16	McKeesport, Pa.	42,494,567	59	34	6
South Omaha, Nebr.	92,435,712	22	19	15	Grand Rapids, Mich.	42,230,675	60	62	6
Youngstown, Ohio	81,270,747	23	37	15	Passaic, N. J.	41,729,257	61	92	6
Lawrence, Mass.	79,992,668	24	27	14	Hartford, Conn.	40,679,598	62	57	6
New Orleans, La.	78,794,030	25	23	14	Holyoke, Mass.	40,097,224	63	56	6
Worcester, Mass.	77,147,884	26	25	14	Lorain, Ohio	38,986,996	64	125	6
Bayonne, N. J.	73,640,900	27	31	13	Joliet, Ill.	38,816,523	65	50	6
Akron, Ohio	73,158,206	28	63	12	Somerville, Mass.	38,686,527	66	65	6
Perth Amboy, N. J.	73,092,703	29	89	12	Schenectady, N. Y.	38,164,699	67	71	6
Lynn, Mass.	71,503,140	30	29	11					
					Wilmington, Del.	38,069,383	68	42	6
Paterson, N. J.	69,584,351	31	24	11	New Castle, Pa.	38,037,522	69	66	6
Los Angeles, Cal.	68,586,274	32	80	11	Troy, N. Y.	37,979,986	70	46	6
Bridgeport, Conn.	65,608,806	33	38	10	Pawtucket, R. I.	37,696,186	71	67	6
Fall River, Mass.	64,145,726	34	30	10					
Peoria, Ill.	63,061,155	35	26	10	Sioux City, Iowa	37,424,450	72	88	6
Toledo, Ohio	61,229,542	36	40	9	Haverhill, Mass.	35,376,617	73	59	6
Omaha, Nebr.	60,854,550	37	32	9	Atlanta, Ga.	33,038,002	74	82	6
Dayton, Ohio	60,378,376	38	41	9	Springfield, Mass.	31,772,815	75	69	6

Leading industries in principal cities.—Table 3 shows for 1909 and 1904 the six leading industries in each of the 25 cities which led in value of manufactures in 1909.

Comparatively few changes took place between 1904 and 1909 in the industries which held first place in the several cities. In St. Louis the boot and shoe industry, which was third in 1904, took the lead in 1909, displacing the tobacco-products industry, which fell back to second place. In Detroit the remarkable growth of the automobile industry caused it to advance from fifth place in 1904 to first in 1909. Other cities in which the industry which led in 1904 had fallen to a lower position in 1909 are Milwaukee, Cincinnati, San Francisco, and Jersey City. In Newark, N. J., a single concern was engaged in smelting and refining copper and lead in both 1909 and 1904. In 1904, however, two reports were prepared for the different branches of the business, while in 1909 but one report was prepared and the establishment was classified as a whole under "smelting and refining, copper." The smelting and refining of lead, therefore, does not appear as a separate industry for 1909. Of the 25 cities included in the table, Minneapolis is the only one in which all the six leading industries occupied the same relative positions at the two censuses, although in several other cities the changes were comparatively few. Slaughtering and meat packing was first in value of products in 1909 in 7 of the cities listed, a larger number than in the case of any other industry shown in the table. The foundry and machine-shop industry was among the six leading industries in 23 of the 25 cities in 1909, and in 22 in 1904; slaughtering and meat packing in 16 cities in 1909 and in 14 in 1904; and printing and publishing in 12 cities in 1909, and in 16 in 1904.

SIX LEADING INDUSTRIES AS MEASURED BY VALUE OF PRODUCTS

Table 3	INDUSTRY RANKING—		
CITY AND CENSUS YEAR.	First.	Second.	Third.
NEW YORK, N. Y.:			
1909	Clothing, women's.	Clothing, men's, including shirts.	Printing and publishing.
1904	Clothing, women's.	Clothing, men's, including shirts.	Printing and publishing.
CHICAGO, ILL.:			
1909	Slaughtering and meat packing.	Foundry and machine-shop products.	Clothing, men's, including shirts.
1904	Slaughtering and meat packing.	Foundry and machine-shop products.	Clothing, men's, including shirts.
PHILADELPHIA, PA.:			
1909	Woolen, worsted, and felt goods, and wool hats.	Printing and publishing.	Sugar, refining, not including beet sugar.
1904	Woolen, worsted, and felt goods, and wool hats.	Sugar, refining, not including beet sugar.	Printing and publishing.
ST. LOUIS, MO.:			
1909	Boots and shoes, including cut stock and findings.	Tobacco manufactures.	Slaughtering and meat packing.
1904	Tobacco manufactures.	Liquors, malt.	Boots and shoes, including cut stock and findings.
CLEVELAND, OHIO:			
1909	Iron and steel, steel works and rolling mills.	Foundry and machine-shop products.	Automobiles, including bodies and parts.
1904	Iron and steel, steel works and rolling mills.	Foundry and machine-shop products.	Slaughtering and meat packing.
DETROIT, MICH.:			
1909	Automobiles, including bodies and parts.	Foundry and machine-shop products.	Slaughtering and meat packing.
1904	Foundry and machine-shop products.	Cars, steam-railroad, not including operations of railroad companies.	Patent medicines and compounds and druggists' preparations
PITTSBURGH, PA.:			
1909	Iron and steel, steel works and rolling mills.	Foundry and machine-shop products.	Iron and steel, blast furnaces.
1904	Iron and steel, steel works and rolling mills.	Foundry and machine-shop products.	Iron and steel, blast furnaces.
BOSTON, MASS.:			
1909	Printing and publishing.	Boots and shoes, including cut stock and findings.	Clothing, men's, including shirts.
1904	Printing and publishing.	Foundry and machine-shop products.	Sugar, refining, not including beet sugar.
BUFFALO, N. Y.:			
1909	Slaughtering and meat packing.	Foundry and machine-shop products.	Flour-mill and gristmill products.
1904	Slaughtering and meat packing.	Foundry and machine-shop products.	Flour-mill and gristmill products.
MILWAUKEE, WIS.:			
1909	Leather, tanned, curried, and finished.	Liquors, malt.	Foundry and machine-shop products.
1904	Liquors, malt.	Leather, tanned, curried, and finished.	Foundry and machine-shop products.
NEWARK, N. J.:			
1909	Smelting and refining, copper.	Leather, tanned, curried, and finished.	Foundry and machine-shop products.
1904	Smelting and refining, lead.	Leather, tanned, curried, and finished.	Liquors, malt.
CINCINNATI, OHIO:			
1909	Slaughtering and meat packing.	Foundry and machine-shop products.	Clothing, men's, including shirts.
1904	Foundry and machine-shop products.	Clothing, men's, including shirts.	Slaughtering and meat packing.
BALTIMORE, MD.:			
1909	Clothing, men's, including shirts.	Copper, tin, and sheet-iron products.	Tobacco manufactures.
1904	Clothing, men's, including shirts.	Tobacco manufactures.	Foundry and machine-shop products.
MINNEAPOLIS, MINN.:			
1909	Flour-mill and gristmill products.	Lumber and timber products.	Oil, linseed.
1904	Flour-mill amd gristmill products.	Lumber and timber products.	Oil, linseed.
KANSAS CITY, KANS.:			
1909	Slaughtering and meat packing.	Flour-mill and gristmill products.	Soap.
1904	Slaughtering and meat packing.	Soap.	Foundry and machine-shop products.
SAN FRANCISCO, CAL.:			
1909	Printing and publishing.	Sugar, refining, not including beet sugar.	Slaughtering and meat packing.
1904	Sugar, refining, not including beet sugar.	Printing and publishing.	Foundry and machine-shop products.
JERSEY CITY, N. J.:			
1909	Slaughtering and meat packing,	Sugar, refining, not including beet sugar.	Tobacco manufactures.
1904	Sugar, refining, not including beet sugar.	Slaughtering and meat packing.	Foundry and machine-shop products.
INDIANAPOLIS, IND.:			
1909	Slaughtering and meat packing.	Foundry and machine-shop products.	Automobiles, including bodies and parts.
1904	Slaughtering and meat packing.	Foundry and machine-shop products.	Flour-mill and gristmill products.
PROVIDENCE, R. I.:			
1909	Woolen, worsted, and felt goods, and wool hats.	Jewelry.	Foundry and machine-shop products.
1904	Woolen, worsted, and felt goods. and wool hats.	Jewelry.	Foundry and machine-shop products.
ROCHESTER, N. Y.:			
1909	Clothing, men's, including shirts.	Photographic apparatus and materials.	Boots and shoes, including cut stock and findings.
1904	Clothing, men's, including shirts.	Boots and shoes, including cut stock and findings.	Photographic apparatus and materials.
LOUISVILLE, KY.:			
1909	Tobacco manufactures.	Liquors, distilled.	Foundry and machine-shop products.
1904	Tobacco manufactures.	Oil, cottonseed, and cake.	Slaughtering and meat packing
SOUTH OMAHA, NEBR.:			
1909	Slaughtering and meat packing.	Soap.	Cooperage and wooden goods, not elsewhere specified.
1904	Slaughtering and meat packing.	Soap.	Cooperage and wooden goods, not elsewhere specified.
YOUNGSTOWN, OHIO:			
1909	Iron and steel, steel works and rolling mills.	Iron and steel, blast furnaces.	Foundry and machine-shop products.
1904	Iron and steel, steel works and rolling mills.	Iron and steel, blast furnaces.	Foundry and machine-shop products.
LAWRENCE, MASS.:			
1909	Woolen, worsted, and felt goods, and wool hats.	Cotton goods, including cotton small wares.	Dyeing and finishing textiles.
1904	Woolen, worsted, and felt goods, and wool hats.	Cotton goods, including cotton small wares.	Paper and wood pulp.
NEW ORLEANS, LA.:			
1909	Sugar, refining, not including beet sugar.	Liquors, distilled.	Bags, other than paper.
1904	Sugar, refining, not including beet sugar.	Rice, cleaning and polishing.	Bags, other than paper.

IN 25 CITIES LEADING IN MANUFACTURING INDUSTRIES:[1] 1909 AND 1904.

Table 3—Contd.	INDUSTRY RANKING—		
CITY AND CENSUS YEAR	Fourth.	Fifth.	Sixth.
NEW YORK, N. Y.:			
1909	Slaughtering and meat packing.	Sugar, refining, not including beet sugar.	Foundry and machine-shop products.
1904	Sugar, refining, not including beet sugar.	Foundry and machine-shop products.	Slaughtering and meat packing.
CHICAGO, ILL.:			
1909	Printing and publishing.	Iron and steel, steel works and rolling mills.	Lumber and timber products.
1904	Printing and publishing.	Iron and steel, steel works and rolling mills.	Cars, steam-railroad, not including operations of railroad companies.
PHILADELPHIA, PA.:			
1909	Foundry and machine-shop products.	Clothing, women's.	Clothing, men's, including shirts.
1904	Foundry and machine-shop products.	Petroleum, refining.	Carpets and rugs, other than rag.
ST. LOUIS, MO.:			
1909	Liquors, malt.	Printing and publishing.	Foundry and machine shop products.
1904	Slaughtering and meat packing.	Printing and publishing.	Foundry and machine-shop products.
CLEVELAND, OHIO:			
1909	Slaughtering and meat packing.	Clothing, women's.	Iron and steel, blast furnaces.
1904	Clothing, women's.	Printing and publishing.	Iron and steel, blast furnaces.
DETROIT, MICH.:			
1909	Tobacco manufactures.	Brass and bronze products.	Patent medicines and compounds and druggists' preparations.
1904	Tobacco manufactures.	Automobiles, including bodies and parts.	Brass and bronze products.
PITTSBURGH, PA.:			
1909	Slaughtering and meat packing.	Printing and publishing.	Cars and general shop construction and repairs by steam-railroad companies.
1904	Slaughtering and meat packing.	Printing and publishing.	Bread and other bakery products.
BOSTON, MASS.:			
1909	Foundry and machine-shop products.	Sugar, refining, not including beet sugar.	Confectionery.
1904	Clothing, men's, including shirts.	Boots and shoes, including cut stock and findings.	Liquors, malt.
BUFFALO, N. Y.:			
1909	Oil, linseed.	Automobiles, including bodies and parts.	Soap.
1904	Oil, linseed.	Printing and publishing.	Smelting and refining, copper.
MILWAUKEE, WIS.:			
1909	Slaughtering and meat packing.	Cars and general shop construction and repairs by steam-railroad companies.	Iron and steel, steel works and rolling mills.
1904	Iron and steel, steel works and rolling mills.	Slaughtering and meat packing.	Flour-mill and gristmill products.
NEWARK, N. J.:			
1909	Jewelry.	Liquors, malt.	Paint and varnish.
1904	Foundry and machine-shop products.	Jewelry.	Smelting and refining, copper.
CINCINNATI, OHIO:			
1909	Boots and shoes, including cut stock and findings.	Printing and publishing.	Liquors, malt.
1904	Boots and shoes, including cut stock and findings.	Printing and publishing.	Liquors, distilled.
BALTIMORE, MD.:			
1909	Slaughtering and meat packing.	Foundry and machine-shop products.	Printing and publishing.
1904	Copper, tin, and sheet-iron products.	Canning and preserving.	Printing and publishing.
MINNEAPOLIS, MINN.:			
1909	Foundry and machine-shop products.	Printing and publishing.	Bags, other than paper.
1904	Foundry and machine-shop products.	Printing and publishing.	Bags, other than paper.
KANSAS CITY, KANS.:			
1909	Foundry and machine-shop products.	Lumber and timber products.	Cars and general shop construction and repairs by steam-railroad companies.
1904	Flour-mill and gristmill products.	Oleomargarine.	Cooperage and wooden goods, not elsewhere specified.
SAN FRANCISCO, CAL.:			
1909	Foundry and machine-shop products.	Bread and other bakery products.	Coffee and spice, roasting and grinding.
1904	Slaughtering and meat packing.	Shipbuilding, including boat building.	Bread and other bakery products.
JERSEY CITY, N. J.:			
1909	Soap.	Petroleum, refining.	Foundry and machine-shop products.
1904	Soap.	Cars and general shop construction and repairs by steam-railroad companies.	Tobacco manufactures.
INDIANAPOLIS, IND.:			
1909	Flour-mill and gristmill products.	Printing and publishing.	Canning and preserving.
1904	Printing and publishing.	Lumber and timber products.	Carriages and wagons and materials.
PROVIDENCE, R. I.:			
1909	Silverware and plated ware.	Gold and silver, reducing and refining, not from the ore.	Rubber goods, not elsewhere specified.
1904	Silverware and plated ware.	Gold and silver, reducing and refining, not from the ore.	Cotton goods, including cotton small wares.
ROCHESTER, N. Y.:			
1909	Foundry and machine-shop products.	Printing and publishing.	Flour-mill and gristmill products.
1904	Petroleum, refining.	Printing and publishing.	Foundry and machine-shop products.
LOUISVILLE, KY.:			
1909	Flour-mill and gristmill products.	Slaughtering and meat packing.	Clothing, men's, including shirts.
1904	Clothing, men's, including shirts.	Flour-mill and gristmill products.	Liquors, distilled.
SOUTH OMAHA, NEBR.:			
1909	Food preparations.	Liquors, malt.	Patent medicines and compounds and druggists' preparations.
1904	Firearms and ammunition.	Liquors, malt.	Printing and publishing.
YOUNGSTOWN, OHIO:			
1909	Lumber and timber products.	Electrical machinery, apparatus, and supplies.	Liquors, malt.
1904	Iron and steel pipe, wrought.	Lumber and timber products.	Printing and publishing.
LAWRENCE, MASS.:			
1909	Paper and wood pulp.	Foundry and machine-shop products.	Lumber and timber products.
1904	Foundry and machine-shop products.	Dyeing and finishing textiles.	Boots and shoes, including cut stock and findings.
NEW ORLEANS, LA.:			
1909	Rice, cleaning and polishing.	Lumber and timber products.	Tobacco manufactures.
1904	Lumber and timber products.	Tobacco manufactures.	Printing and publishing.

[1] As measured by value of products in 1909.

Leading cities in 15 leading industries.—Table 4 shows, for each of the 15 leading industries of the United States as determined by value of products in 1909, the 6 cities which reported the largest value of products in 1909 and in 1904, together with the percentage of the total value of products for the industry which was reported from the given city.

The prominence of any particular city with reference to a given industry may be due to the fact that the industry is largely concentrated in a few cities or in a limited section of the country, or it may be due merely to the fact that the city is one of very large population. For example, Kansas City, Kans., although a comparatively small city, ranked second in 1909 among the cities of the country with reference to the slaughtering and meat-packing industry, that industry being in considerable measure concentrated in a few localities. The prominence of Chicago in the same industry may be attributed partly to the size of the city and partly to a concentration of the industry there on account of transportation facilities. Again, the prominence of Fall River, New Bedford, and Lowell in the manufacture of cotton goods is an illustration of the local concentration of industry. In the case of such localized industries the products are usually marketed widely. On the other hand, in such industries as printing and publishing and the bakery industry, the output is mainly utilized in the community where produced, and the magnitude of such an industry in any given city is largely dependent upon the population of that city. New York, Chicago, and Philadelphia, the three largest cities from the standpoint of population, also ranked first, second, and third, respectively, in the printing and publishing and the bakery industries.

In 1909 New York and Chicago each ranked first among the cities of the country in 5 of the 15 leading industries, and Pittsburgh, Minneapolis, Fall River, Lynn, and Lawrence, each in 1 industry.

In 12 of the 15 industries shown in the table the same cities held first place in 1909 as in 1904, and in 4 industries—printing and publishing, the manufacture of cotton goods, and the making of men's clothing and of women's clothing—the same 6 cities held the leading places at both of these censuses, their rank in each case being the same in both years.

SIX LEADING CITIES, AS MEASURED BY VALUE OF PRODUCTS IN 15 LEADING INDUSTRIES,[1] WITH PERCENTAGE WHICH EACH REPORTED OF THE TOTAL VALUE OF PRODUCTS FOR THE INDUSTRY: 1909 AND 1904.

Table 4

INDUSTRY.	Census.	CITY RANKING— First.	Per cent of United States total.	Second.	Per cent of United States total.	Third.	Per cent of United States total.
Slaughtering and meat packing	1909	Chicago, Ill	23.7	Kansas City, Kans	10.8	New York, N. Y	7.0
	1904	Chicago, Ill	29.3	Kansas City, Kans	9.8	South Omaha, Nebr	(2)
Foundry and machine-shop products	1909	Chicago, Ill	7.3	New York, N. Y	5.2	Philadelphia, Pa	3.1
	1904	Chicago, Ill	7.8	New York, N. Y	6.6	Philadelphia, Pa	3.7
Lumber and timber products	1909	Chicago, Ill	2.8	New York, N. Y	2.1	Minneapolis, Minn	1.0
	1904	New York, N. Y	2.4	Chicago, Ill	2.2	Minneapolis, Minn	1.2
Iron and steel, steel works and rolling mills.	1909	Pittsburgh, Pa	8.3	Youngstown, Ohio	5.1	Chicago, Ill	4.7
	1904	Pittsburgh, Pa	11.5	Cleveland, Ohio	4.8	Youngstown, Ohio	4.4
Flour-mill and gristmill products	1909	Minneapolis, Minn	8.9	Buffalo, N. Y	2.3	Milwaukee, Wis	0.9
	1904	Minneapolis, Minn	8.8	New York, N. Y	(2)	Buffalo, N. Y	1.4
Printing and publishing	1909	New York, N. Y	24.9	Chicago, Ill	10.1	Philadelphia, Pa	6.2
	1904	New York, N. Y	25.1	Chicago, Ill	9.6	Philadelphia, Pa	6.4
Cotton goods, including cotton small wares.	1909	Fall River, Mass	7.7	New Bedford, Mass	6.8	Lowell, Mass	3.9
	1904	Fall River, Mass	7.2	New Bedford, Mass	5.0	Lowell, Mass	4.3
Clothing, men's, including shirts	1909	New York, N. Y	38.4	Chicago, Ill	15.0	Baltimore, Md	6.4
	1904	New York, N. Y	36.7	Chicago, Ill	13.4	Baltimore, Md	6.2
Boots and shoes, including cut stock and findings.	1909	Lynn, Mass	9.1	Brockton, Mass	7.7	St. Louis, Mo	6.6
	1904	Lynn, Mass	9.9	Brockton, Mass	9.5	Haverhill, Mass	5.7
Woolen, worsted, and felt goods, and wool hats.	1909	Lawrence, Mass	13.4	Philadelphia, Pa	12.6	Providence, R. I	6.9
	1904	Philadelphia, Pa	12.3	Lawrence, Mass	9.7	Providence, R. I	7.2
Tobacco manufactures	1909	New York, N. Y	15.0	St. Louis, Mo	(2)	Richmond, Va	(2)
	1904	New York, N. Y	15.3	St. Louis, Mo	(2)	Louisville, Ky	3.9
Cars and general shop construction and repairs by steam-railroad companies.	1909	Chicago, Ill	3.8	Altoona, Pa	(2)	Pittsburgh, Pa	2.1
	1904	Altoona, Pa	(2)	Chicago, Ill	3.6	Pittsburgh, Pa	2.0
Bread and other bakery products	1909	New York, N. Y	15.6	Chicago, Ill	6.8	Philadelphia, Pa	4.8
	1904	New York, N. Y	16.3	Chicago, Ill	7.7	Philadelphia, Pa	5.4
Iron and steel, blast furnaces	1909	Chicago, Ill	(2)	Youngstown, Ohio	(2)	Pittsburgh, Pa	5.3
	1904	Chicago, Ill	(2)	Pittsburgh, Pa	6.7	Youngstown, Ohio	(2)
Clothing, women's	1909	New York, N. Y	69.3	Philadelphia, Pa	7.8	Chicago, Ill	4.1
	1904	New York, N. Y	68.0	Philadelphia, Pa	5.2	Chicago, Ill	4.7

INDUSTRY.	Census.	CITY RANKING— Fourth.	Per cent of United States total.	Fifth.	Per cent of United States total.	Sixth.	Per cent of United States total.
Slaughtering and meat packing	1909	South Omaha, Nebr	(2)	Indianapolis, Ind	2.9	St. Louis, Mo	1.9
	1904	New York, N. Y	6.1	Indianapolis, Ind	2.7	St. Louis, Mo	1.9
Foundry and machine-shop products	1909	Cleveland, Ohio	3.0	Pittsburgh, Pa	1.8	Buffalo, N. Y	1.7
	1904	Cleveland, Ohio	2.7	Pittsburgh, Pa	2.4	Cincinnati, Ohio	1.8
Lumber and timber products	1909	Portland, Oreg	0.9	Seattle, Wash	0.7	Philadelphia, Pa	0.7
	1904	Portland, Oreg	0.6	Philadelphia, Pa	0.6	Cincinnati, Ohio	0.6
Iron and steel, steel works and rolling mills.	1909	Cleveland, Ohio	3.9	McKeesport, Pa	(2)	Johnstown, Pa	(2)
	1904	Chicago, Ill	3.7	Duquesne, Pa	(2)	McKeesport, Pa	(2)
Flour-mill and gristmill products	1909	Chicago, Ill	(2)	Louisville, Ky	0.7	Indianapolis, Ind	0.7
	1904	Milwaukee, Wis	0.9	Kansas City, Mo	0.8	Seattle, Wash	0.6
Printing and publishing	1909	Boston, Mass	3.8	St. Louis, Mo	2.3	San Francisco, Cal	1.7
	1904	Boston, Mass	4.1	St. Louis, Mo	3.0	San Francisco, Cal	2.0
Cotton goods, including cotton small wares.	1909	Philadelphia, Pa	3.6	Manchester, N. H	(2)	Pawtucket, R. I	2.3
	1904	Philadelphia, Pa	3.9	Manchester, N. H	(2)	Pawtucket, R. I	2.2
Clothing, men's, including shirts	1909	Philadelphia, Pa	5.1	Rochester, N. Y	3.3	Cincinnati, Ohio	3.0
	1904	Philadelphia, Pa	5.8	Rochester, N. Y	3.7	Cincinnati, Ohio	3.6
Boots and shoes, including cut stock and findings.	1909	Haverhill, Mass	5.7	Boston, Mass	5.1	New York, N. Y	3.6
	1904	St. Louis, Mo	5.5	New York, N. Y	3.8	Boston, Mass	3.2
Woolen, worsted, and felt goods, and wool hats.	1909	Passaic, N. J	3.8	Woonsocket, R. I	(2)	Holyoke, Mass	(2)
	1904	Passaic, N. J	0.3	Woonsocket, R. I	(2)	Holyoke, Mass	(2)
Tobacco manufactures	1909	Durham, N. C	(2)	Chicago, Ill	4.0	Louisville, Ky	3.9
	1904	Chicago, Ill	3.3	Baltimore, Md	(2)	Winston, N. C	(2)
Cars and general shop construction and repairs by steam-railroad companies.	1909	Baltimore, Md	1.8	Reading, Pa	1.4	Philadelphia, Pa	1.3
	1904	Philadelphia, Pa	1.5	Baltimore, Md	1.4	Reading, Pa	1.4
Bread and other bakery products	1909	St. Lous, Mo	2.2	Boston, Mass	2.0	Pittsburgh, Pa	2.0
	1904	Pittsburgh, Pa	2.3	St. Louis, Mo	2.3	Boston, Mass	1.9
Iron and steel, blast furnaces	1909	Cleveland, Ohio	(2)	Lackawanna, N. Y	(2)	Duquesne, Pa	(2)
	1904	Duquesne, Pa	(2)	Johnstown, Pa	(2)	Cleveland, Ohio	(2)
Clothing, women's	1909	Cleveland, Ohio	3.3	Boston, Mass	2.0	St. Louis, Mo	1.3
	1904	Cleveland, Ohio	3.0	Boston, Mass	2.3	St. Louis, Mo	1.2

[1] As measured by value of products in 1909.

[2] Figures can not be shown without disclosing individual operations.

COMPARATIVE SUMMARY FOR CITIES AND TOWNS HAVING 10,000 INHABITANTS OR MORE, BY STATES: 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 city. Statistics of power are not available for the censuses of 1904 and 1899.

[A minus sign (—) denotes decrease.]

Table 5 STATE AND 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.							
United States:															
593 cities	1909	135,772	5,041,165	129,058	595,465	4,316,642	8,935,337	$12,054,112	$714,394	$2,335,505	$8,261,873	$14,264,879	$6,003,006	.....	.....
436 cities	1904	108,984	3,951,141	109,791	377,786	3,463,564	.....	8,187,242	424,787	1,719,154	5,569,549	9,846,782	4,277,233	.....	.....
436 cities	1899	102,918	.....	.....	273,566	3,044,439	.....	6,163,082	294,430	1,370,624	4,487,086	7,864,564	3,377,478	.....	.....
Alabama:															
7 cities	1909	579	22,271	397	2,647	19,227	96,151	49,068	2,855	9,159	29,534	49,346	19,812	.....	.....
3 cities	1904	320	9,649	279	947	8,423	.....	12,775	967	3,548	8,460	16,413	7,953	.....	.....
3 cities	1899	274	.....	.....	565	7,389	.....	8,840	576	2,807	7,237	15,029	7,792	.....	.....
Anniston	1909	39	2,352	23	162	2,167	9,310	4,345	210	870	2,824	4,333	1,509	.....	.....
Bessemer	1909	31	2,111	23	272	1,816	15,120	7,812	310	991	4,239	6,106	1,867	.....	.....
Birmingham	1909	248	10,412	152	1,261	8,999	55,311	23,718	1,435	4,392	14,010	24,128	10,118	125.7	217.8
	1904	122	4,551	97	467	3,987	.....	5,739	485	1,709	3,949	7,593	3,644	14.2	—11.7
	1899	109	.....	.....	284	3,490	.....	4,314	321	1,359	3,980	8,599	4,619	.....	.....
Gadsden	1909	27	871	16	69	786	1,524	987	66	355	904	1,525	621	.....	.....
Mobile	1909	126	2,828	109	357	2,362	5,845	5,250	366	1,199	2,939	5,429	2,490	—5.4	9.9
	1904	139	2,862	128	238	2,496	.....	3,824	235	1,199	2,322	4,942	2,620	5.3	41.8
	1899	113	.....	.....	161	2,371	.....	2,506	146	948	1,542	3,486	1,944	.....	.....
Montgomery	1909	73	2,723	46	393	2,284	6,355	5,234	353	1,003	3,023	5,443	2,420	17.7	40.4
	1904	59	2,236	54	242	1,940	.....	3,212	247	640	2,189	3,878	1,689	27.0	31.7
	1899	52	.....	.....	120	1,528	.....	2,020	109	500	1,715	2,944	1,229	.....	.....
Selma	1909	35	974	28	133	813	2,686	1,722	115	349	1,595	2,382	787	.....	.....
Arizona:															
2 cities	1909	92	1,057	86	112	859	2,072	2,166	126	754	2,134	3,504	1,370	.....	.....
Phoenix	1909	57	432	58	70	304	669	1,258	69	242	864	1,467	603	.....	.....
Tucson	1909	35	625	28	42	555	1,403	902	57	512	1,270	2,037	767	.....	.....
Arkansas:															
5 cities	1909	339	8,411	319	1,010	7,082	19,934	14,846	1,089	4,036	10,362	18,694	8,332	.....	.....
3 cities	1904	201	5,029	157	427	4,445	.....	8,915	461	1,993	5,093	9,519	4,426	.....	.....
3 cities	1899	165	.....	.....	363	3,064	.....	5,469	314	1,243	3,219	6,321	3,102	.....	.....
Argenta	1909	18	2,357	12	188	2,157	2,885	2,240	212	1,400	2,685	4,842	2,157	.....	.....
Fort Smith	1909	83	1,793	87	251	1,455	4,202	3,206	278	741	2,006	3,739	1,733	38.7	60.5
	1904	63	1,198	43	106	1,049	.....	1,726	113	481	1,113	2,329	1,216	54.9	66.2
	1899	66	.....	.....	63	677	.....	897	56	256	651	1,401	750	.....	.....
Hot Springs	1909	71	430	69	26	335	1,644	770	28	210	303	844	541	.....	.....
Little Rock	1909	125	2,566	119	430	2,017	6,619	6,045	445	1,080	4,014	6,882	2,868	2.3	46.7
	1904	104	2,305	97	237	1,971	.....	4,493	249	938	2,559	4,690	2,131	41.1	38.8
	1899	62	.....	.....	209	1,397	.....	2,928	181	544	1,779	3,379	1,600	.....	.....
Pine Bluff	1909	42	1,265	32	115	1,118	4,584	2,585	126	605	1,354	2,387	1,033	—21.5	—4.5
	1904	34	1,526	17	84	1,425	.....	2,696	99	574	1,421	2,500	1,079	43.9	62.2
	1899	37	.....	.....	91	990	.....	1,644	77	443	789	1,541	752	.....	.....
California:															
21 cities	1909	4,881	88,562	5,529	13,434	69,599	137,073	268,250	16,406	53,580	168,922	294,851	125,929	.....	.....
10 cities	1904	3,975	75,435	4,667	8,693	62,075	.....	162,722	10,240	40,634	121,427	217,917	96,490	.....	.....
10 cities	1899	2,967	.....	.....	5,062	47,953	.....	102,781	5,530	25,664	90,674	151,246	60,572	.....	.....
Alameda	1909	51	1,076	50	111	915	1,526	3,002	171	797	929	2,554	1,625	228.0	266.4
	1904	30	326	32	15	279	.....	541	20	241	233	697	464	—25.0	—47.8
	1899	23	.....	.....	23	372	.....	749	43	216	788	1,335	547	.....	.....
Bakersfield	1909	27	844	20	78	746	910	1,791	94	664	1,700	2,819	1,119	.....	.....
Berkeley	1909	84	1,420	115	221	1,084	2,433	3,465	254	840	2,687	4,435	1,748	220.7	200.9
	1904	44	453	28	87	338	.....	1,429	86	230	782	1,474	692	60.2	126.4
	1899	22	.....	.....	19	211	.....	456	14	99	392	651	259	.....	.....
Eureka	1909	48	1,075	30	99	946	3,901	3,306	124	673	1,494	3,012	1,518	.....	.....
Fresno	1909	76	2,262	43	281	1,938	3,403	4,933	328	1,103	7,992	11,090	3,098	1.2	13.7
	1904	80	2,169	51	203	1,915	.....	3,430	264	1,062	6,828	9,754	2,926	133.8	254.4
	1899	62	.....	.....	87	819	.....	1,435	86	396	1,704	2,752	1,048	.....	.....
Long Beach	1909	51	413	49	87	277	1,450	1,326	87	207	498	927	429	.....	.....
Los Angeles	1909	1,325	21,875	1,181	3,367	17,327	33,166	59,518	3,912	12,588	38,913	68,586	29,673	66.2	97.0
	1904	814	13,189	761	2,004	10,424	.....	28,181	1,997	7,088	18,689	34,814	16,125	101.5	130.0
	1899	534	.....	.....	717	5,173	.....	10,045	671	2,600	8,088	15,134	7,046	.....	.....
Oakland	1909	441	8,538	554	1,079	6,905	13,683	19,113	1,300	5,317	11,847	22,343	10,496	105.9	147.8
	1904	248	3,980	237	390	3,353	.....	9,126	409	2,068	4,307	9,015	4,708	35.4	67.9
	1899	195	.....	.....	264	2,476	.....	5,173	246	1,210	2,704	5,368	2,664	.....	.....
Pasadena	1909	88	708	92	117	499	969	1,347	118	380	854	1,724	870	.....	.....
Pomona	1909	30	285	32	29	224	334	630	22	152	230	560	330	.....	.....
Redlands	1909	37	260	36	77	147	439	1,104	47	100	239	518	279	.....	.....

COMPARATIVE SUMMARY FOR CITIES AND TOWNS HAVING 10,000 INHABITANTS OR MORE, BY STATES: 1909, 1904, AND 1899—Continued.

[See note at the head of this table. A minus sign (—) denotes decrease.]

Table 5—Contd. STATE AND 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.							
California.—Contd.															
Riverside	1909	53	399	56	76	267	700	$1,102	$50	$214	$667	$1,178	$511	.....	.....
Sacramento	1909	211	5,266	219	533	4,514	8,517	10,097	616	3,918	6,894	13,977	7,083	7.4	38.8
	1904	156	4,742	164	375	4,203	.....	7,359	419	2,952	5,144	10,073	4,929	14.0	6.1
	1899	111	.....	.....	170	3,686	.....	6,856	202	2,519	5,345	9,495	4,150	.....	.....
San Bernardino	1909	41	883	38	116	729	1,411	1,242	94	639	763	1,660	897	.....	.....
San Diego	1909	117	1,440	99	270	1,071	3,269	5,326	263	806	2,667	4,741	2,074	98.0	140.2
	1904	89	703	97	65	541	.....	1,991	60	392	1,136	1,974	838	112.2	194.6
	1899	57	.....	.....	43	255	.....	990	42	148	281	670	389	.....	.....
San Francisco	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	.....	.....
San Jose	1909	153	1,828	134	264	1,430	2,078	3,815	249	903	3,243	5,611	2,368	13.5	30.5
	1904	153	1,625	145	220	1,260	.....	3,083	190	682	2,512	4,298	1,786	3.2	30.6
	1899	124	.....	.....	189	1,221	.....	2,980	146	567	1,850	3,292	1,442	.....	.....
Santa Barbara	1909	51	382	43	74	265	491	895	63	197	696	1,169	473	.....	.....
Santa Cruz	1909	34	388	31	83	274	1,827	2,605	77	211	668	1,161	493	.....	.....
Stockton	1909	144	2,039	141	304	1,594	5,016	8,250	376	1,306	8,320	11,849	3,529	19.6	47.6
	1904	110	1,582	105	144	1,333	.....	5,220	165	904	5,850	8,030	2,180	12.5	45.3
	1899	91	.....	.....	137	1,185	.....	4,454	151	650	3,987	5,525	1,538	.....	.....
Vallejo	1909	23	271	22	46	203	1,616	1,559	75	184	1,404	1,896	492	.....	.....
Colorado:															
4 cities	1909	949	17,647	719	2,814	14,114	29,199	54,563	3,464	9,945	33,558	57,430	23,872	.....	.....
5 cities	1904	905	14,451	759	1,757	11,935	.....	34,951	2,127	8,416	26,312	45,627	19,315	.....	.....
5 cities	1899	746	.....	.....	1,252	11,093	.....	37,130	1,395	6,775	30,524	46,515	15,991	.....	.....
Colorado Springs	1909	59	694	40	138	516	907	2,023	144	413	823	1,733	910	25.9	57.4
	1904	49	547	45	92	410	.....	1,611	84	284	411	1,101	690	0.2	30.3
	1899	34	.....	.....	78	409	.....	1,127	50	225	365	845	480	.....	.....
Cripple Creek	1904	22	89	22	16	51	.....	96	17	44	76	223	147	—69.5	—49.4
	1899	35	.....	.....	22	167	.....	165	21	129	175	441	266	.....	.....
Denver	1909	766	15,037	586	2,393	12,058	25,165	47,534	3,019	8,405	30,927	51,538	20,611	24.7	40.6
	1904	722	11,752	596	1,484	9,672	.....	27,434	1,818	6,711	21,000	36,660	15,660	13.8	—3.3
	1899	574	.....	.....	1,036	8,500	.....	31,271	1,181	5,236	24,472	37,906	13,434	.....	.....
Leadville	1904	32	943	31	51	861	.....	3,770	79	716	3,884	5,446	1,562	—29.8	—7.4
	1899	34	.....	.....	46	1,227	.....	3,383	73	727	4,840	5,883	1,043	.....	.....
Pueblo	1909	94	1,637	73	244	1,320	2,276	4,137	264	957	1,497	3,345	1,848	40.3	52.3
	1904	80	1,120	65	114	941	.....	2,040	129	661	941	2,197	1,256	19.1	52.6
	1899	69	.....	.....	70	790	.....	1,184	70	458	672	1,440	768	.....	.....
Trinidad	1909	30	279	20	39	220	851	869	37	170	311	814	503	.....	.....
Connecticut:															
15 cities	1909	2,367	154,792	1,845	14,448	138,499	220,068	342,266	17,820	74,990	175,582	334,336	158,754	.....	.....
12 cities	1904	1,851	116,969	1,559	9,362	106,048	.....	218,679	11,268	54,049	115,587	226,147	110,560	.....	.....
12 cities	1899	1,710	.....	.....	5,997	91,209	.....	170,573	7,343	44,477	103,990	193,447	89,457	.....	.....
Ansonia	1909	53	4,488	46	315	4,127	13,209	9,763	438	2,384	14,611	20,088	5,477	21.6	5.0
	1904	49	3,739	40	305	3,394	.....	7,626	377	1,683	15,308	19,132	3,824	3.2	3.3
	1899	49	.....	.....	186	3,288	.....	6,240	202	1,707	14,956	18,515	3,559	.....	.....
Bridgeport	1909	367	28,952	243	2,934	25,775	43,387	62,779	3,709	13,349	37,947	65,609	27,662	32.2	47.2
	1904	306	21,681	234	1,955	19,492	.....	49,381	2,511	9,480	22,334	44,586	22,252	14.4	32.9
	1899	286	.....	.....	1,057	17,038	.....	31,625	1,434	7,885	17,287	33,536	16,249	.....	.....
Danbury	1909	131	5,499	122	567	4,810	5,660	7,786	492	2,858	4,879	10,318	5,439	6.5	27.9
	1904	103	5,030	107	408	4,515	.....	4,037	346	2,264	3,695	8,066	4,371	14.6	23.6
	1899	104	.....	.....	154	3,939	.....	3,423	139	1,845	3,258	6,527	3,269	.....	.....
Hartford	1909	396	17,447	320	2,500	14,627	19,410	48,085	2,710	9,374	17,863	40,680	22,817	30.4	56.6
	1904	340	12,907	303	1,383	11,221	.....	28,359	1,693	6,562	11,487	25,974	14,487	5.1	9.0
	1899	322	.....	.....	1,149	10,677	.....	28,057	1,374	5,950	11,369	23,829	12,460	.....	.....
Meriden	1909	120	8,730	80	805	7,845	6,615	17,675	1,194	4,235	6,943	16,317	9,374	7.7	18.5
	1904	97	7,945	82	582	7,281	.....	16,442	807	3,669	5,644	13,764	8,120	8.8	17.1
	1899	92	.....	.....	374	6,689	.....	15,417	605	3,243	5,106	11,751	6,645	.....	.....
Middletown	1909	58	2,678	38	206	2,434	3,333	3,544	247	1,003	2,943	4,955	2,012	.....	.....
Naugatuck	1909	24	3,657	19	174	3,464	5,967	8,642	211	1,967	7,329	11,033	3,704	—4.5	0.2
	1904	22	3,787	14	145	3,628	.....	7,900	184	1,998	7,260	11,010	3,750	14.8	23.9
	1899	22	.....	.....	82	3,160	.....	6,607	121	1,601	6,072	8,887	2,815	.....	.....
New Britain	1909	111	14,755	80	1,162	13,513	14,303	31,790	1,477	6,741	8,328	22,021	13,693	34.2	47.2
	1904	95	10,921	65	783	10,073	.....	19,980	892	4,687	5,668	14,960	9,292	25.6	34.8
	1899	82	.....	.....	439	8,019	.....	13,768	533	3,618	4,596	11,096	6,500	.....	.....
New Haven	1909	590	26,874	536	2,791	23,547	31,382	52,014	3,462	12,776	24,319	51,071	26,752	9.8	28.8
	1904	490	23,711	455	1,819	21,437	.....	31,413	2,026	11,204	18,521	39,666	21,145	21.8	13.7
	1899	437	.....	.....	1,396	17,594	.....	27,962	1,443	8,520	16,136	34,900	18,764	.....	.....
New London	1909	70	2,467	52	190	2,225	2,912	5,467	183	926	2,531	4,483	1,952	—12.9	—4.8
	1904	57	2,747	42	151	2,554	.....	4,590	162	1,070	2,527	4,710	2,183	30.1	11.6
	1899	54	.....	.....	130	1,963	.....	4,256	126	801	2,262	4,221	1,959	.....	.....

COMPARATIVE SUMMARY FOR CITIES AND TOWNS HAVING 10,000 INHABITANTS OR MORE, BY STATES: 1909, 1904, AND 1899—Continued.

[See note at the head of this table. A minus sign (—) denotes decrease.]

Table 5—Contd. STATE AND 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.							
Connecticut—Contd.															
Norwich	1909	91	4,795	65	260	4,470	12,027	$12,531	$386	$2,164	$4,802	$9,389	$4,587	20.6	55.9
	1904	87	4,014	67	241	3,706	.....	8,475	310	1,694	3,043	6,022	2,979	16.8	1.5
	1899	89	.....	.....	154	3,172	.....	6,438	193	1,423	3,046	5,935	2,889	.....	.....
Stamford	1909	86	4,719	64	671	3,984	6,554	11,926	741	2,350	3,704	8,739	5,035	19.2	43.4
	1904	62	3,816	58	417	3,341	.....	7,526	439	1,722	2,330	5,890	3,560	36.6	50.3
	1899	49	.....	.....	281	2,445	.....	4,813	261	1,193	1,700	3,920	2,220	.....	.....
Torrington	1909	54	4,853	42	323	4,488	7,165	15,692	421	2,384	7,463	12,550	5,087	.....	.....
Waterbury	1909	169	21,600	97	1,333	20,170	37,518	44,653	1,926	11,244	28,726	50,350	21,624	30.9	55.6
	1904	143	16,671	92	1,173	15,406	.....	32,950	1,521	8,016	17,770	32,367	14,597	16.5	6.7
	1899	124	.....	.....	595	13,225	.....	21,967	912	6,691	18,202	30,330	12,128	.....	.....
Willimantic	1909	47	3,278	41	217	3,020	10,566	9,919	223	1,235	3,194	6,733	3,539	.....	.....
Delaware:															
1 city	1909	261	16,295	190	1,442	14,663	29,282	38,504	1,751	7,937	21,976	38,069	16,093	.....	.....
1 city	1904	245	14,806	192	1,106	13,508	.....	33,102	1,262	6,513	18,121	30,285	12,164	.....	.....
1 city	1899	262	.....	.....	922	14,498	.....	26,490	1,057	6,697	17,876	30,587	12,711	.....	.....
Wilmington	1909	261	16,295	190	1,442	14,663	29,282	38,504	1,751	7,937	21,976	38,069	16,093	8.6	25.7
	1904	245	14,806	192	1,106	13,508	.....	33,102	1,262	6,513	18,121	30,285	12,164	—6.8	—1.0
	1899	262	.....	.....	922	14,498	.....	26,490	1,057	6,697	17,876	30,587	12,711	.....	.....
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	.....	20,200	1,207	3,658	7,732	18,359	10,627	2.3	11.8
	1899	491	.....	.....	957	6,155	.....	17,960	872	3,023	7,475	16,426	8,951	.....	.....
Florida:															
4 cities	1909	445	16,260	461	1,423	14,376	9,556	22,753	2,062	8,233	13,968	30,303	16,335	.....	.....
4 cities	1904	378	13,710	414	1,143	12,153	.....	14,510	1,208	6,452	9,967	22,795	12,828	.....	.....
4 cities	1899	229	.....	.....	390	7,544	.....	8,575	455	3,719	5,905	13,023	7,118	.....	.....
Jacksonville	1909	114	2,455	80	387	1,988	5,165	7,068	455	988	3,997	6,722	2,725	—25.0	25.9
	1904	125	3,046	122	274	2,650	.....	4,837	302	1,073	2,790	5,340	2,550	114.1	196.8
	1899	74	.....	.....	112	1,238	.....	1,858	101	498	806	1,799	993	.....	.....
Key West	1909	56	2,693	72	190	2,431	295	1,911	257	1,397	1,643	3,965	2,322	—1.4	—6.8
	1904	73	2,787	103	218	2,466	.....	1,512	229	1,325	1,806	4,254	2,448	36.3	37.8
	1899	53	.....	.....	60	1,809	.....	1,738	82	1,074	1,231	3,088	1,857	.....	.....
Pensacola	1909	60	1,142	59	122	961	1,438	2,164	131	473	955	1,963	1,008	—20.3	1.3
	1904	39	1,354	28	120	1,206	.....	2,147	132	476	820	1,937	1,117	108.6	84.0
	1899	32	.....	.....	39	578	.....	1,158	34	246	502	1,053	551	.....	.....
Tampa	1909	215	9,970	250	724	8,996	2,658	11,610	1,219	5,375	7,373	17,653	10,280	54.3	56.7
	1904	141	6,523	161	531	5,831	.....	6,014	545	3,578	4,551	11,264	6,713	48.8	59.0
	1899	70	.....	.....	179	3,919	.....	3,821	238	1,901	3,366	7,083	3,717	.....	.....
Georgia:															
9 cities	1909	943	36,725	690	4,052	31,983	74,289	72,543	4,575	12,737	42,078	75,334	33,256	.....	.....
6 cities	1904	621	31,597	501	2,532	28,564	.....	51,302	2,700	9,695	31,801	56,450	24,649	.....	.....
6 cities	1899	509	.....	.....	1,483	23,471	.....	35,735	1,589	6,883	20,919	37,344	16,425	.....	.....
Athens	1909	37	1,104	41	101	962	2,209	1,921	104	294	1,329	2,112	783	89.0	82.4
	1904	28	590	23	58	509	.....	946	49	140	753	1,158	405	—13.6	70.8
	1899	27	.....	.....	29	589	.....	671	16	109	414	678	264	.....	.....
Atlanta	1909	483	15,091	367	2,422	12,302	22,768	30,878	2,711	5,436	16,418	33,038	16,620	3.5	28.3
	1904	294	13,417	223	1,303	11,891	.....	21,631	1,361	4,435	13,441	25,746	12,305	49.3	78.6
	1899	196	.....	.....	692	7,966	.....	14,603	759	2,597	7,443	14,419	6,976	.....	.....
Augusta	1909	71	5,442	45	324	5,073	13,324	11,066	412	1,741	6,602	10,456	3,854	4.8	18.4
	1904	64	5,189	59	291	4,839	.....	8,101	304	1,294	5,953	8,829	2,876	—13.0	10.6
	1899	80	.....	.....	195	5,563	.....	7,987	220	1,325	5,147	7,984	2,837	.....	.....
Brunswick	1909	23	450	11	54	385	712	452	50	191	258	672	414	.....	.....
Columbus	1909	55	4,944	26	257	4,661	14,741	7,997	320	1,631	5,562	8,552	2,990	5.1	20.8
	1904	52	4,702	25	243	4,434	.....	5,874	272	1,305	4,284	7,080	2,796	7.9	39.9
	1899	58	.....	.....	162	4,110	.....	4,710	159	1,009	2,956	5,061	2,105	.....	.....
Macon	1909	80	4,150	51	370	3,729	8,872	8,476	421	1,433	6,870	10,703	3,833	1.9	46.7
	1904	61	4,000	41	298	3,661	.....	6,750	357	1,201	4,116	7,297	3,181	22.3	33.8
	1899	66	.....	.....	208	2,994	.....	4,009	231	864	3,151	5,452	2,301	.....	.....
Rome	1909	36	1,129	15	100	1,014	2,265	1,551	110	320	1,078	1,864	786	.....	.....
Savannah	1909	137	3,196	121	348	2,727	6,403	9,334	382	1,222	3,349	6,734	3,385	—15.6	6.2
	1904	122	3,699	130	339	3,230	.....	8,000	357	1,320	3,254	6,340	3,086	43.6	69.1
	1899	82	.....	.....	197	2,249	.....	3,755	204	979	1,808	3,750	1,942	.....	.....
Waycross	1909	21	1,219	13	76	1,130	2,995	868	65	469	612	1,203	591	.....	.....
Idaho:															
1 city	1909	50	577	48	118	411	672	1,544	120	308	895	1,661	766	.....	.....
Boise	1909	50	577	48	118	411	672	1,544	120	308	895	1,661	766	.....	.....
Illinois:															
32 cities	1909	12,525	456,666	10,850	66,075	379,741	753,171	1,261,044	78,519	224,881	955,752	1,595,136	639,384	.....	.....
25 cities	1904	10,316	366,598	9,141	47,503	309,954	.....	800,285	53,438	173,296	695,654	1,180,187	484,533	.....	.....
25 cities	1899	9,695	.....	.....	36,949	279,322	.....	636,656	36,606	136,173	578,783	957,089	378,306	.....	.....

COMPARATIVE SUMMARY FOR CITIES AND TOWNS HAVING 10,000 INHABITANTS OR MORE, BY STATES: 1909, 1904, AND 1899—Continued.

[See note at the head of this table. A minus sign (—) denotes decrease.]

Table 5—Contd. STATE AND 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.							
Illinois—Continued.															
Alton	1909	69	2,729	45	255	2,429	5,453	$5,585	$299	$1,528	$7,262	$10,096	$2,834	—20.9	16.1
	1904	62	3,346	37	240	3,069	.....	4,002	220	1,728	5,423	8,697	3,274	41.2	104.6
	1899	59	.....	.....	123	2,174	.....	2,773	112	1,037	2,472	4,250	1,778	.....	.....
Aurora	1909	165	5,884	165	624	5,095	7,906	11,427	722	2,936	5,581	10,954	5,373	24.9	49.5
	1904	103	4,517	91	348	4,078	.....	6,800	387	2,068	3,538	7,329	3,791	3.3	30.0
	1899	97	.....	.....	280	3,949	.....	4,666	275	1,615	2,592	5,638	3,046	.....	.....
Belleville	1909	119	2,248	107	269	1,872	4,541	5,541	296	1,062	2,324	4,615	2,291	6.1	5.9
	1904	96	2,005	75	165	1,765	.....	3,084	171	1,011	1,787	4,357	2,570	32.2	51.7
	1899	89	.....	.....	118	1,335	.....	2,314	108	620	935	2,873	1,938	.....	.....
Bloomington	1909	107	2,495	99	319	2,077	2,877	4,762	325	1,186	2,527	4,868	2,341	—8.7	—15.7
	1904	81	2,679	78	326	2,275	.....	3,347	268	1,228	3,492	5,777	2,285	36.1	91.8
	1899	68	.....	.....	166	1,671	.....	2,135	127	797	1,595	3,012	1,417	.....	.....
Cairo	1909	56	1,444	51	156	1,237	4,764	4,854	178	628	2,957	4,440	1,483	—13.8	1.3
	1904	57	1,649	64	150	1,435	.....	3,086	153	653	2,838	4,382	1,544	—4.4	40.6
	1899	53	.....	.....	105	1,501	.....	1,936	92	548	1,900	3,116	1,216	.....	.....
Canton	1909	33	1,421	39	120	1,262	3,716	8,189	129	602	1,183	2,942	1,759	.....	.....
Champaign	1909	42	381	44	64	273	476	895	52	174	419	846	427	.....	.....
Chicago	1909	9,656	356,954	8,156	54,821	293,977	525,236	971,841	65,925	174,112	793,470	1,281,171	487,701	21.5	34.1
	1904	8,159	289,529	7,269	40,276	241,984	.....	637,743	45,601	136,405	589,914	955,036	365,122	9.4	19.7
	1899	7,668	.....	.....	32,406	221,191	.....	511,249	32,068	108,727	502,222	797,879	295,657	.....	.....
Chicago Heights	1909	79	4,444	60	431	3,953	10,176	10,421	606	2,471	5,612	10,839	5,227	.....	.....
Cicero[1]	1909	7	735	2	75	658	1,580	2,496	97	406	733	1,461	728	.....	.....
Danville	1909	76	2,044	76	224	1,744	3,258	2,656	236	1,077	1,430	3,351	1,921	—7.4	1.4
	1904	70	2,109	77	148	1,884	.....	2,102	129	977	1,665	3,304	1,639	96.9	72.6
	1899	72	.....	.....	47	957	.....	1,413	47	458	1,047	1,914	867	.....	.....
Decatur	1909	157	3,447	148	600	2,699	6,447	6,579	609	1,420	5,918	9,768	3,850	15.3	12.7
	1904	116	2,841	91	410	2,340	.....	4,874	373	1,125	5,593	8,667	3,074	21.9	68.8
	1899	108	.....	.....	217	1,920	.....	3,296	201	830	3,359	5,134	1,775	.....	.....
East St. Louis	1909	139	6,005	92	661	5,252	23,273	31,298	691	3,250	11,440	18,228	6,788	16.6	72.2
	1904	91	4,951	52	394	4,505	.....	12,854	473	2,494	5,696	10,586	4,890	45.0	69.6
	1899	58	.....	.....	112	3,106	.....	5,448	147	1,426	3,678	6,241	2,563	.....	.....
Elgin	1909	115	6,583	100	389	6,094	6,059	16,079	491	3,379	4,538	11,120	6,582	24.7	18.9
	1904	76	5,253	72	296	4,885	.....	10,980	427	2,713	4,090	9,349	5,259	11.6	46.4
	1899	80	.....	.....	152	4,376	.....	8,383	189	2,074	2,614	6,386	3,772	.....	.....
Evanston	1909	60	1,040	63	140	837	1,056	4,241	178	590	2,350	3,778	1,428	13.4	48.1
	1904	33	876	36	102	738	.....	1,723	76	384	1,583	2,551	968	84.5	207.3
	1899	27	.....	.....	29	400	.....	1,290	24	192	362	830	468	.....	.....
Freeport	1909	69	3,225	56	316	2,853	4,412	6,403	307	1,570	4,417	7,811	3,394	88.2	151.2
	1904	61	1,754	70	168	1,516	.....	3,490	145	827	1,423	3,109	1,686	13.7	14.8
	1899	51	.....	.....	127	1,333	.....	2,010	118	695	1,314	2,708	1,394	.....	.....
Galesburg	1909	62	1,738	58	215	1,465	1,968	2,454	201	887	1,416	2,919	1,503	1.2	31.6
	1904	58	1,665	46	172	1,447	.....	1,566	165	756	936	2,218	1,282	35.2	53.0
	1899	39	.....	.....	99	1,070	.....	1,285	89	521	620	1,450	830	.....	.....
Jacksonville	1909	57	1,096	58	91	947	1,189	1,503	84	487	1,307	2,299	992	5.3	16.0
	1904	55	1,077	70	108	899	.....	1,817	115	458	1,102	1,982	880	—15.7	17.7
	1899	55	.....	.....	113	1,066	.....	1,296	103	433	850	1,684	834	.....	.....
Joliet	1909	137	7,266	128	755	6,383	37,744	25,586	930	4,435	27,758	38,817	11,059	10.2	18.0
	1904	104	6,627	86	749	5,792	.....	14,136	853	3,699	21,259	32,897	11,638	.....	25.9
	1899	135	.....	.....	406	5,792	.....	15,040	345	3,548	17,193	26,132	8,939	.....	.....
Kankakee	1909	55	1,552	60	143	1,349	3,988	2,599	105	622	1,493	2,723	1,230	30.0	30.3
	1904	49	1,205	47	120	1,038	.....	1,746	120	512	1,026	2,089	1,063	175.3	221.9
	1899	36	.....	.....	19	377	.....	604	19	162	289	649	360	.....	.....
La Salle	1909	29	1,439	24	122	1,293	8,795	4,393	324	856	2,928	5,308	2,380	8.0	68.1
	1904	24	1,298	22	79	1,197	.....	2,053	139	685	1,878	3,158	1,280	30.5	—4.6
	1899	26	.....	.....	67	917	.....	2,020	177	447	2,397	3,309	912	.....	.....
Lincoln	1909	40	308	49	39	220	385	611	32	115	290	570	280	.....	.....
Mattoon	1909	35	1,102	39	115	948	1,019	832	94	561	669	1,434	765	.....	.....
Moline	1909	66	6,106	44	613	5,449	10,230	26,334	888	3,523	11,189	20,892	9,703	36.7	58.8
	1904	62	4,474	45	442	3,987	.....	24,405	630	2,363	6,895	13,158	6,263	—3.6	41.5
	1899	55	.....	.....	332	4,138	.....	10,994	372	2,116	4,598	9,302	4,704	.....	.....
Oak Park	1909	23	362	21	59	282	758	6,061	57	197	391	1,118	727	.....	.....
Ottawa	1904	54	1,266	56	83	1,127	.....	2,489	123	618	773	2,078	1,305	10.5	19.6
	1899	57	.....	.....	108	1,020	.....	2,652	117	455	751	1,738	987	.....	.....
Peoria	1909	283	7,323	242	1,100	5,981	16,266	24,945	1,331	3,552	17,773	63,061	45,288	2.5	4.4
	1904	263	6,797	227	736	5,834	.....	20,513	815	3,209	15,835	60,420	44,585	—2.7	35.6
	1899	291	.....	.....	686	5,996	.....	26,638	709	2,872	12,985	44,569	31,584	.....	.....
Quincy	1909	235	5,056	201	823	4,032	7,557	11,906	680	2,083	5,792	11,436	5,644	—12.4	6.4
	1904	234	5,509	207	700	4,602	.....	9,470	643	2,206	5,188	10,748	5,560	20.6	35.7
	1899	198	.....	.....	408	3,815	.....	6,443	364	1,602	4,351	7,919	3,568	.....	.....

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

COMPARATIVE SUMMARY FOR CITIES AND TOWNS HAVING 10,000 INHABITANTS OR MORE, BY STATES: 1909, 1904, AND 1899—Continued.

[See note at the head of this table. A minus sign (—) denotes decrease.]

Table 5—Contd. STATE AND 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.							
Illinois—Continued.															
Rock Island	1909	74	2,179	51	374	1,754	3,173	$9,287	$366	$1,026	$2,818	$5,387	$2,569	3.0	1.0
	1904	72	2,027	58	266	1,703	.....	7,203	292	895	2,580	5,333	2,753	—9.7	15.4
	1899	66	.....	.....	184	1,885	.....	4,762	190	962	2,683	4,622	1,939	.....	.....
Rockford	1909	205	10,523	208	1,006	9,309	16,217	22,412	1,131	5,213	10,582	22,266	11,684	28.6	45.8
	1904	180	7,969	112	618	7,239	.....	14,159	669	3,608	8,066	15,276	7,210	23.7	38.6
	1899	159	.....	.....	430	5,851	.....	13,613	405	2,397	6,202	11,022	4,820	.....	.....
Springfield	1909	171	4,355	174	529	3,652	6,368	7,174	466	2,096	4,204	8,497	4,293	18.9	46.6
	1904	122	3,546	118	357	3,071	.....	5,264	383	1,639	2,490	5,797	3,307	39.7	67.2
	1899	106	.....	.....	174	2,199	.....	3,459	164	1,037	1,412	3,467	2,055	.....	.....
Streator	1909	45	1,409	44	90	1,275	3,140	4,588	103	644	817	2,137	1,320	—17.4	13.1
	1904	34	1,629	35	50	1,544	.....	1,379	68	1,035	584	1,889	1,305	20.3	51.7
	1899	42	.....	.....	41	1,283	.....	937	44	602	362	1,245	883	.....	.....
Waukegan	1909	59	3,773	146	537	3,090	23,144	17,092	586	2,103	14,164	19,984	5,820	.....	.....
Indiana:[1]															
24 cities	1909	2,975	130,955	2,293	16,004	112,658	210,947	285,726	18,115	57,040	200,150	348,760	148,610	.....	.....
19 cities	1904	2,568	97,420	2,138	9,665	85,617	.....	170,594	9,879	40,649	123,046	219,425	96,379	.....	.....
19 cities	1899	2,334	.....	.....	6,638	78,097	.....	127,335	6,567	33,823	120,111	208,227	88,116	.....	.....
Anderson	1909	116	5,109	89	627	4,393	12,981	10,728	597	2,104	8,127	13,765	5,638	42.7	68.3
	1904	102	3,491	80	332	3,079	.....	6,649	312	1,531	4,860	8,181	3,321	—12.9	—1.4
	1899	96	.....	.....	244	3,537	.....	5,080	245	1,844	4,440	8,296	3,856	.....	.....
East Chicago	1909	16	2,568	6	192	2,370	7,017	4,614	247	1,285	3,060	5,483	2,423	.....	.....
Elkhart	1909	69	3,508	51	447	3,010	4,623	5,478	612	1,534	3,021	6,932	3,911	32.9	59.5
	1904	58	2,602	36	301	2,265	.....	3,291	281	1,037	2,016	4,345	2,329	6.7	10.5
	1899	57	.....	.....	219	2,123	.....	2,790	167	1,012	1,882	3,933	2,051	.....	.....
Elwood	1909	37	2,301	30	198	2,073	6,122	4,572	227	1,399	6,249	8,408	2,159	16.5	37.6
	1904	32	1,895	27	89	1,779	.....	3,303	79	1,011	4,397	6,111	1,714	—35.2	—35.2
	1899	46	.....	.....	102	2,745	.....	4,362	112	1,665	6,755	9,433	2,678	.....	.....
Evansville	1909	299	10,162	231	934	8,997	18,849	20,093	1,039	3,965	12,794	22,929	10,135	16.0	26.7
	1904	268	8,771	251	762	7,758	.....	14,337	818	3,430	10,122	18,091	7,969	23.5	48.7
	1899	273	.....	.....	561	6,284	.....	9,428	596	2,451	6,545	12,168	5,623	.....	.....
Fort Wayne	1909	230	12,184	205	1,681	10,298	15,063	20,346	1,795	5,023	11,415	23,687	12,272	33.2	69.1
	1904	193	8,845	183	933	7,729	.....	12,363	978	3,595	7,019	14,011	6,992	18.6	24.4
	1899	178	.....	.....	601	6,519	.....	8,674	528	2,627	6,032	11,263	5,231	.....	.....
Hammond	1909	49	4,379	33	505	3,841	7,348	16,271	614	1,861	6,651	15,580	8,929	148.1	103.1
	1904	38	1,702	26	128	1,548	.....	5,975	213	879	2,545	7,671	5,126	—42.3	—69.4
	1899	21	.....	.....	290	2,683	.....	6,301	331	1,237	20,202	25,070	4,868	.....	.....
Huntington	1909	33	1,575	24	175	1,376	1,400	1,302	175	623	1,130	2,228	1,098	.....	.....
Indianapolis	1909	855	37,929	631	5,483	31,815	50,872	76,497	6,494	16,557	84,151	126,522	42,371	19.0	53.9
	1904	810	31,431	591	4,115	26,725	.....	53,420	4,096	12,620	51,763	82,228	30,465	27.4	38.6
	1899	697	.....	.....	2,325	20,985	.....	34,736	2,248	8,844	38,287	59,322	21,035	.....	.....
Jeffersonville	1909	35	919	29	124	766	3,422	2,682	152	437	1,083	1,916	833	—48.7	—57.7
	1904	33	1,598	34	72	1,492	.....	2,487	74	816	2,827	4,526	1,699	—1.6	20.0
	1899	34	.....	.....	68	1,516	.....	2,451	110	778	2,436	3,772	1,336	.....	.....
Kokomo	1909	72	2,366	52	263	2,051	3,955	3,921	294	1,075	2,982	5,451	2,469	7.0	49.3
	1904	61	2,131	52	162	1,917	.....	3,384	157	966	1,594	3,651	2,057	41.5	77.1
	1899	62	.....	.....	90	1,355	.....	2,266	83	528	1,010	2,062	1,052	.....	.....
La Fayette	1909	69	1,983	32	291	1,660	3,526	3,914	281	919	3,446	5,542	2,096	—7.1	19.7
	1904	80	2,097	49	262	1,786	.....	3,617	264	834	2,703	4,631	1,928	33.0	31.8
	1899	85	.....	.....	266	1,343	.....	2,880	246	573	1,990	3,514	1,524	.....	.....
Laporte	1909	41	1,960	26	260	1,674	3,373	5,872	323	795	1,814	3,972	2,158	.....	.....
Logansport	1909	68	2,412	75	168	2,169	2,338	2,004	162	1,237	1,982	4,201	2,219	26.1	42.1
	1904	61	1,976	72	184	1,720	.....	1,920	149	859	1,562	2,956	1,394	30.7	40.8
	1899	68	.....	.....	70	1,316	.....	1,646	51	588	1,026	2,100	1,074	.....	.....
Marion	1909	89	2,610	64	277	2,269	6,206	3,934	271	1,182	2,324	4,442	2,118	2.3	10.1
	1904	96	2,507	91	197	2,219	.....	3,466	203	1,129	1,738	4,034	2,296	—21.9	—12.2
	1899	81	.....	.....	173	2,843	.....	3,316	154	1,337	2,199	4,593	2,394	.....	.....
Michigan City	1909	48	3,123	40	196	2,887	5,900	8,890	312	1,263	5,365	8,290	2,925	—8.1	31.3
	1904	52	3,314	44	130	3,140	.....	4,293	149	1,453	3,980	6,314	2,334	7.8	4.7
	1899	41	.....	.....	91	2,912	.....	4,215	104	1,033	3,961	6,032	2,071	.....	.....
Mishawaka	1909	42	3,934	22	467	3,445	7,610	14,224	810	1,748	5,270	10,883	5,613	.....	.....
Muncie	1909	102	4,444	83	328	4,033	7,504	6,627	350	2,126	5,474	9,684	4,210	41.3	64.4
	1904	97	3,106	93	158	2,855	.....	4,400	170	1,400	3,320	5,891	2,571	—25.8	—16.3
	1899	90	.....	.....	173	3,848	.....	3,613	210	1,958	3,848	7,042	3,194	.....	.....
New Albany	1909	95	2,135	80	145	1,910	3,954	3,566	166	724	1,886	3,493	1,607	—14.7	—8.9
	1904	93	2,444	83	121	2,240	.....	2,491	126	996	2,041	3,835	1,794	4.8	5.4
	1899	95	.....	.....	104	2,137	.....	2,798	104	732	2,116	3,638	1,522	.....	.....
Peru	1909	31	692	40	33	619	2,013	1,654	39	276	482	1,097	615	.....	.....

[1] Does not include statistics for Gary.

COMPARATIVE SUMMARY FOR CITIES AND TOWNS HAVING 10,000 INHABITANTS OR MORE, BY STATES: 1909, 1904, AND 1899—Continued.

[See note at the head of this table. A minus sign (—) denotes decrease.]

Table 5—Contd. STATE AND 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.							
Indiana—Continued.															
Richmond	1909	107	4,433	80	732	3,621	5,087	$13,139	$676	$1,834	$5,118	$10,374	$5,256	21.9	54.1
	1904	98	3,483	65	448	2,970	.....	9,508	478	1,381	3,001	6,732	3,731	10.5	41.6
	1899	88	.....	.....	345	2,688	.....	5,044	322	1,183	2,231	4,754	2,523	.....	.....
South Bend	1909	218	13,609	156	1,664	11,789	16,280	41,467	1,612	5,886	15,253	27,854	12,601	31.0	83.5
	1904	156	9,905	128	780	8,997	.....	26,197	848	3,978	8,170	15,180	7,010	17.2	17.1
	1899	131	.....	.....	521	7,678	.....	17,826	566	3,136	6,841	12,960	6,119	.....	.....
Terre Haute	1909	170	5,159	142	658	4,359	10 460	10,371	701	2,518	8,657	21,793	13,136	7.8	21.0
	1904	178	4,594	177	373	4,044	.....	7,391	383	2,134	7,647	18,008	10,361	—13.6	—31.5
	1899	143	.....	.....	326	4,679	.....	8,454	335	1,953	7,369	26,296	18,927	.....	.....
Vincennes	1909	84	1,461	72	156	1,233	5,044	3,560	166	669	2,416	4,234	1,818	—8.9	39.8
	1904	62	1,528	56	118	1,354	.....	2,102	101	600	1,741	3,029	1,288	49.4	53.1
	1899	48	.....	.....	69	906	.....	1,455	55	344	941	1,979	1,038	.....	.....
Iowa:															
17 cities	1909	1,987	54,933	1,650	8,438	44,845	83,955	120,936	8,592	23,105	126,156	189,271	63,115	.....	.....
14 cities	1904	1,548	40,016	1,306	4,691	34,019	.....	79,060	4,523	15,965	72,520	112,160	39,640	.....	.....
14 cities	1899	1,417	.....	.....	3,710	29,798	.....	61,399	3,444	12,112	57,846	89,631	31,785	.....	.....
Boone	1909	34	429	38	61	330	456	918	42	232	283	682	399	.....	.....
Burlington	1909	128	4,790	90	510	4,190	5,346	7,003	454	1,723	4,645	8,443	3,798	43.7	46.1
	1904	109	3,335	97	323	2,915	.....	5,031	312	1,418	2,706	5,779	3,073	41.9	29.9
	1899	125	.....	.....	286	2,054	.....	3,993	193	785	2,442	4,450	2,008	.....	.....
Cedar Rapids	1909	153	4,520	125	830	3,565	7,224	11,481	748	1,869	18,650	24,824	6,174	9.4	52.5
	1904	134	3,782	92	431	3,259	.....	8,697	409	1,465	12,280	16,280	4,000	37.3	46.2
	1899	89	.....	.....	295	2,374	.....	5,759	268	986	8,163	11,136	2,973	.....	.....
Clinton	1909	69	2,752	35	303	2,414	6,391	6,532	359	1,273	4,530	7,480	2,850	12.1	52.5
	1904	83	2,450	61	236	2,153	.....	4,381	257	1,044	2,646	4,906	2,260	—13.9	—20.9
	1899	81	.....	.....	185	2,502	.....	3,973	221	980	3,910	6,203	2,293	.....	.....
Council Bluffs	1909	101	1,825	90	301	1,434	1,756	2,893	248	845	1,957	3.769	1,812	43.3	95.9
	1904	71	1,167	63	103	1,001	.....	1,472	97	530	930	1,924	994	27.0	13.7
	1899	74	.....	.....	107	788	.....	960	99	387	824	1,692	868	.....	.....
Davenport	1909	232	5,302	204	867	4,231	9,166	15,306	926	2,178	11,571	18,802	7,231	10.2	37.3
	1904	173	4,517	144	533	3,840	.....	13,064	547	1,756	8,839	13,696	4,857	12.8	38.7
	1899	163	.....	.....	424	3,403	.....	10,219	430	1,457	6,057	9,872	3,815	.....	.....
Des Moines	1909	387	7,637	276	1,978	5,383	10,106	17,880	2,020	2,945	13,565	23,585	10,020	29.6	56.3
	1904	291	5,328	241	932	4,155	.....	9,594	985	2,083	8,644	15,085	6,441	19.4	79.6
	1899	218	.....	.....	656	3,479	.....	7,417	558	1,474	4,138	8,397	4,259	.....	.....
Dubuque	1909	156	6,063	148	747	5,168	9,623	12,269	744	2,606	9,110	15,376	6,266	20.9	65.7
	1904	156	5,043	123	646	4,274	.....	9,437	538	1,913	4,706	9,279	4,573	—8.2	—3.9
	1899	161	.....	.....	561	4,658	.....	7,507	445	1,675	5,358	9,651	4,293	.....	.....
Fort Dodge	1909	44	1,306	30	161	1,115	2,204	3,093	196	421	1,812	2,975	1,163	16.0	—1.7
	1904	42	1,111	31	119	961	.....	3,701	121	477	1,702	3,026	1,324	146.4	200.8
	1899	30	.....	.....	79	390	.....	769	59	171	679	1,006	327	.....	.....
Iowa City	1909	44	465	60	123	282	814	746	96	143	340	805	465	.....	.....
Keokuk	1909	91	1,872	86	245	1,541	3,219	4,334	334	776	4,684	7,399	2,715	0.5	75.1
	1904	80	1,777	76	168	1,533	.....	3,148	152	674	2,234	4,226	1,992	12.6	38.6
	1899	88	.....	.....	328	1,362	.....	1,956	427	480	1,591	3,049	1,458	.....	.....
Marshalltown	1909	49	1,590	40	185	1,365	1,975	2,558	197	806	3,179	4,822	1,643	53.7	56.1
	1904	44	1,084	42	154	888	.....	1,441	135	447	2,140	3,090	950	—20.1	—21.9
	1899	44	.....	.....	90	1,112	.....	5,636	99	520	2,796	3,957	1,161	.....	.....
Mason City	1909	49	963	25	131	807	3,729	2,156	198	470	1,796	2,881	1,085	.....	.....
Muscatine	1909	113	3,862	122	244	3,496	4,560	6,774	244	1,575	2,738	6,166	3,428	26.5	22.3
	1904	107	3,061	131	167	2,763	.....	4,860	165	1,114	3,015	5,040	2,025	6.7	—3.4
	1899	105	.....	.....	136	2,589	.....	3,567	129	950	3,515	5,220	1,705	.....	.....
Ottumwa	1909	93	3,058	94	314	2,650	4,332	5,809	314	1,319	12,166	14,838	2,672	15.0	43.0
	1904	62	2,589	62	223	2,304	.....	4,993	228	896	8,533	10,374	1,841	26.6	19.5
	1899	61	.....	.....	182	1,820	.....	3,233	168	699	6,900	8,683	1,783	.....	.....
Sioux City	1909	136	4,755	110	895	3,750	8,807	13,603	939	2,131	30,388	37,425	7,037	63.1	153.5
	1904	106	2,763	91	373	2,299	.....	5,889	333	1,263	11,396	14,761	3,365	—6.7	3.8
	1899	123	.....	.....	276	2,463	.....	5,258	271	1,169	10,130	14,227	4,097	.....	.....
Waterloo	1909	108	3,744	77	543	3,124	4,247	7,581	533	1,793	4,642	8,999	4,357	86.6	91.7
	1904	90	2,009	52	283	1,674	.....	3,352	244	885	2,749	4,694	1,945	108.2	124.8
	1899	55	.....	.....	105	804	.....	1,152	77	379	1,343	2,088	745	.....	.....
Kansas:															
12 cities	1909	1,043	31,640	973	4,433	26,234	69,233	81,273	4,729	14,985	189,810	228,975	39,165	.....	.....
9 cities	1904	647	22,469	653	2,258	19,568	.....	46,335	2,287	10,059	107,201	130,028	22,827	.....	.....
9 cities	1899	613	.....	.....	2,806	16,790	.....	28,990	2,520	7,983	82,490	100,861	18,371	.....	.....
Atchison	1909	68	1,044	67	153	824	2,726	2,183	147	458	3,137	4,405	1,268	3.3	15.0
	1904	60	961	61	102	798	.....	1,873	79	366	2,956	3,829	873	36.9	82.9
	1899	39	.....	.....	41	583	.....	939	30	280	1,502	2,093	591	.....	.....
Coffeyville	1909	47	1.240	31	140	1,069	3,375	3,746	153	663	3,492	4,752	1,260	.....	.....
Fort Scott	1909	36	359	34	59	266	657	626	49	130	670	1,010	340	9.0	28.5
	1904	46	333	51	38	244	.....	650	30	127	463	786	323	—37.3	10.1
	1899	32	.....	.....	29	389	.....	578	26	198	379	714	335	.....	.....

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								Expressed in thousands.							
Kansas—Continued.															
Galena	1904	15	161	18	13	130	.....	$250	$12	$70	$688	$797	$109	14.0	89.3
	1899	19	.....	.....	6	114	.....	116	5	66	316	421	105	.....	.....
Hutchinson	1909	67	876	68	141	667	3,396	3,270	140	320	2,673	3,614	941	.....	.....
Independence	1909	31	328	30	46	252	945	793	42	148	392	757	365	.....	.....
Kansas City	1909	165	14,333	142	1,897	12,294	31,885	42,817	2,138	7,027	144,390	164,081	19,691	16.8	70.1
	1904	100	11,761	82	1,150	10,529	.....	27,773	1,216	5,449	83,883	96,473	12,590	11.0	20.6
	1899	114	.....	.....	2,063	9,483	.....	18,236	1,911	4,259	68,875	80,023	11,148	.....	.....
Lawrence	1909	49	535	45	68	422	2,540	814	62	195	1,155	1,653	498	5.0	151.2
	1904	39	477	37	38	402	.....	730	30	172	317	658	341	—12.8	—46.9
	1899	39	.....	.....	44	461	.....	697	30	153	892	1,239	347	.....	.....
Leavenworth	1909	79	1,644	77	256	1,311	3,005	3,111	295	702	3,198	4,875	1,677	—0.8	17.4
	1904	89	1,619	88	210	1,321	.....	2,961	201	600	2,588	4,152	1,564	15.8	27.7
	1899	89	.....	.....	194	1,141	.....	2,705	177	520	1,981	3,251	1,270	.....	.....
Parsons	1909	25	1,200	29	41	1,130	2,093	1,530	49	722	735	1,626	891	.....	.....
Pittsburg	1909	49	1,152	50	130	972	2,268	1,786	154	633	724	1,817	1,093	5.8	21.6
	1904	34	1,045	32	94	919	.....	1,366	95	522	646	1,494	848	4.2	4.2
	1899	33	.....	.....	28	882	.....	750	27	423	911	1,434	523	.....	.....
Topeka	1909	202	5,230	202	784	4,244	9,435	10,748	755	2,521	12,259	17,821	5,562	7.4	23.3
	1904	154	4,513	174	386	3,953	.....	6,597	385	2,146	10,233	14,449	4,216	37.5	72.9
	1899	145	.....	.....	280	2,874	.....	3,304	215	1,705	5,278	8,357	3,079	.....	.....
Wichita	1909	225	3,699	198	718	2,783	6,908	9,849	745	1,466	16,985	22,564	5,579	120.5	205.3
	1904	110	1,599	110	227	1,262	.....	4,135	239	607	5,427	7,390	1,963	46.2	122.0
	1899	103	.....	.....	121	863	.....	1,665	99	379	2,356	3,329	973	.....	.....
Kentucky:															
8 cities	1909	1,562	47,570	1,252	6,387	39,931	78,418	106,192	7,348	18,508	71,504	133,825	62,321	.....	.....
7 cities	1904	1,408	41,965	1,245	4,268	36,452	.....	100,295	4,445	15,643	57,072	106,437	49,365	.....	.....
7 cities	1899	1,433	.....	.....	3,193	32,329	.....	57,171	3,204	12,023	42,683	82,775	40,092	.....	.....
Covington	1909	196	4,523	189	397	3,942	8,256	6,634	427	1,838	4,471	8,712	4,241	6.5	42.8
	1904	199	4,150	203	244	3,703	.....	6,725	256	1,453	2,610	6,100	3,490	15.3	11.3
	1899	204	.....	.....	199	3,212	.....	4,228	199	1,200	2,517	5,479	2,962	.....	.....
Frankfort	1909	31	727	26	164	537	1,331	2,403	224	232	1,968	3,083	1,115	.....	.....
Henderson	1909	43	1,210	40	82	1,088	3,270	2,257	87	413	1,722	2,932	1,210	137.0	114.8
	1904	34	558	31	68	459	.....	1,453	51	186	762	1,365	603	30.4	32.3
	1899	26	.....	.....	34	352	.....	653	28	127	581	1,032	451	.....	.....
Lexington	1909	85	1,307	70	205	1,032	2,579	1,896	194	511	1,249	2,851	1,602	—7.4	2.7
	1904	84	1,389	79	196	1,114	.....	2,064	148	455	1,386	2,775	1,389	39.8	46.9
	1899	88	.....	.....	120	797	.....	1,366	88	316	986	1,889	903	.....	.....
Louisville	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	.....	.....
Newport	1909	144	2,995	146	217	2,632	3,750	4,568	277	1,341	3,366	6,491	3,125	34.4	24.1
	1904	105	2,220	102	160	1,958	.....	2,816	191	1,052	2,972	5,231	2,259	0.2	47.4
	1899	134	.....	.....	109	1,955	.....	2,389	117	873	1,473	3,548	2,075	.....	.....
Owensboro	1909	69	1,340	48	228	1,064	4,059	4,294	214	468	2,252	3,505	1,253	—23.6	5.6
	1904	60	1,627	52	183	1,392	.....	2,845	160	500	1,815	3,319	1,504	56.4	90.7
	1899	51	.....	.....	116	890	.....	1,960	78	276	915	1,740	825	.....	.....
Paducah	1909	91	3,066	64	389	2,613	5,247	4,703	392	1,245	2,348	4,967	2,619	—8.0	11.8
	1904	84	3,204	72	291	2,841	.....	4,393	272	1,185	1,845	4,443	2,598	37.8	49.2
	1899	70	.....	.....	124	2,061	.....	2,559	99	795	1,335	2,977	1,642	.....	.....
Louisiana:															
6 cities	1909	1,028	24,995	908	3,500	20,587	53,290	65,901	3,831	9,858	53,569	87,880	34,311	.....	.....
3 cities	1904	790	22,476	684	2,542	19,250	.....	60,842	2,612	8,366	60,710	85,632	24,922	.....	.....
3 cities	1899	747	.....	.....	1,690	17,250	.....	44,834	1,759	6,607	41,673	59,720	18,047	.....	.....
Alexandria	1909	30	628	26	89	513	3,910	1,638	95	235	598	1,279	681	.....	.....
Baton Rouge	1909	33	438	46	35	357	1,522	909	37	143	336	658	322	—42.4	—52.4
	1904	37	719	30	69	620	.....	1,291	65	309	598	1,383	785	88.4	92.6
	1899	13*	.....	.....	40	329	.....	747	32	111	387	718	331	.....	.....
Lake Charles	1909	33	846	20	90	736	3,777	1,619	128	395	1,269	2,251	982	.....	.....
Monroe	1909	23	764	21	62	681	2,894	1,082	76	394	545	1,255	710	.....	.....
New Orleans	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	.....	.....
Shreveport	1909	61	1,381	41	226	1,114	3,042	3,719	255	671	2,069	3,643	1,554	—4.1	28.4
	1904	63	1,351	48	141	1,162	.....	2,556	161	661	1,284	2,838	1,554	57.9	82.4
	1899	46	.....	.....	71	736	.....	1,229	60	320	901	1,556	655	.....	.....
Maine:															
7 cities	1909	675	27,907	551	1,903	25,453	58,745	45,234	2,023	11,689	28,074	51,467	23,393	.....	.....
7 cities	1904	606	25,115	558	1,323	23,234	.....	34,828	1,430	9,765	23,231	41,966	18,735	.....	.....
7 cities	1899	631	.....	.....	1,126	23,190	.....	33,534	1,133	9,099	19,329	36,896	17,567	.....	.....

COMPARATIVE SUMMARY FOR CITIES AND TOWNS HAVING 10,000 INHABITANTS OR MORE, BY STATES: 1909, 1904, AND 1899—Continued.

[See note at the head of this table. A minus sign (–) denotes decrease.]

Table 5—Contd. STATE AND 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.							
Maine—Continued.															
Auburn	1909	83	3,778	73	253	3,452	3,445	$4,085	$298	$1,748	$5,790	$8,843	$3,053	30.2	38.6
	1904	72	2,869	65	152	2,652	.....	2,826	174	1,216	4,417	6,407	1,990	–3.5	7.4
	1899	67	.....	.....	201	2,749	.....	3,246	171	1,156	3,987	5,965	1,978	.....	.....
Augusta	1909	40	2,431	30	305	2,096	5,350	3,414	232	1,159	2,484	4,662	2,178	12.7	19.9
	1904	44	2,026	41	125	1,860	.....	2,286	134	702	1,887	3,887	2,000	–7.8	17.3
	1899	52	.....	.....	94	2,018	.....	3,296	112	667	1,212	3,313	2,101	.....	.....
Bangor	1909	122	1,672	117	228	1,327	2,441	3,565	204	735	1,847	3,346	1,499	–11.3	–1.8
	1904	87	1,709	85	128	1,496	.....	2,944	129	748	1,737	3,408	1,671	–1.0	2.2
	1899	101	.....	.....	148	1,511	.....	2,125	127	695	1,905	3,336	1,431	.....	.....
Bath	1904	46	2,090	40	100	1,950	.....	2,227	152	1,067	1,982	3,654	1,672	–7.0	–1.2
	1899	54	.....	.....	81	2,097	.....	2,968	83	1,108	1,938	3,697	1,759	.....	.....
Biddeford	1909	43	5,178	45	57	5,076	17,038	7,172	122	1,993	4,898	9,012	4,114	6.5	29.7
	1904	33	4,890	34	92	4,764	.....	7,000	126	1,791	4,136	6,949	2,813	8.9	27.0
	1899	39	.....	.....	44	4,375	.....	5,924	76	1,487	2,966	5,472	2,506	.....	.....
Lewiston	1909	83	7,050	76	186	6,788	19,438	12,639	308	2,741	5,275	10,475	5,200	10.1	22.8
	1904	81	6,419	85	167	6,167	.....	11,265	230	2,168	4,717	8,528	3,811	–7.6	9.6
	1899	84	.....	.....	152	6,677	.....	10,657	193	2,307	3,718	7,779	4,061	.....	.....
Portland	1909	271	5,891	193	796	4,902	7,849	9,597	770	2,508	6,009	11,950	5,941	12.8	30.8
	1904	243	5,112	208	559	4,345	.....	6,280	485	2,073	4,355	9,133	4,778	15.5	24.5
	1899	234	.....	.....	406	3,763	.....	5,318	371	1,679	3,603	7,334	3,731	.....	.....
Waterville	1909	33	1,907	17	78	1,812	3,184	4,762	89	805	1,771	3,179	1,408	.....	.....
Maryland:															
4 cities	1909	2,704	88,795	2,855	9,816	76,124	85,940	173,872	10,969	33,063	113,573	197,620	84,047	.....	.....
3 cities	1904	2,297	79,203	2,552	7,115	69,536	.....	153,294	7,313	27,309	84,884	157,793	72,909	.....	.....
3 cities	1899	2,410	.....	.....	5,708	69,729	.....	110,690	6,030	24,567	77,996	139,828	61,832	.....	.....
Baltimore	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	.....	.....
Cumberland	1909	71	2,200	53	211	1,936	5,119	4,095	185	948	2,676	4,534	1,858	–14.9	–1.3
	1904	72	2,512	55	181	2,276	.....	4,139	200	1,084	2,678	4,595	1,917	38.5	58.4
	1899	56	.....	.....	124	1,643	.....	2,352	111	684	1,674	2,900	1,226	.....	.....
Frederick	1909	55	1,184	63	95	1,026	1,989	2,370	97	361	2,075	2,911	836	.....	.....
Hagerstown	1909	76	1,938	79	141	1,718	2,068	2,970	116	583	1,798	3,197	1,399	–22.3	5.6
	1904	67	2,457	65	182	2,210	.....	2,194	116	718	1,651	3,027	1,376	45.9	66.3
	1899	80	.....	.....	83	1,515	.....	1,121	48	390	1,099	1,820	721	.....	.....
Massachusetts:															
55 cities	1909	9,210	528,414	8,792	41,856	477,766	877,720	1,072,533	53,687	246,794	687,417	1,236,269	548,852	.....	.....
47 cities	1904	8,039	416,532	8,440	27,609	380,483	.....	774,184	32,866	182,779	489,249	880,764	391,515	.....	.....
47 cities	1899	8,210	.....	.....	21,095	341,251	.....	628,035	24,258	153,277	389,471	715,627	326,156	.....	.....
Adams	1909	31	4,100	32	77	3,991	10,173	8,019	183	1,719	3,082	6,410	3,328	–0.1	16.7
	1904	23	4,089	25	70	3,994	.....	6,945	151	1,509	2,688	5,492	2,804	25.5	41.0
	1899	26	.....	.....	51	3,182	.....	6,560	125	1,166	1,713	3,894	2,181	.....	.....
Arlington	1909	19	335	18	34	283	851	778	46	177	311	695	384	.....	.....
Attleborough	1909	128	7,168	132	607	6,429	5,991	14,305	785	3,763	6,813	15,160	8,347	27.5	50.8
	1904	108	5,553	128	381	5,044	.....	10,438	451	2,474	4,651	10,050	5,399	4.8	14.8
	1899	108	.....	.....	273	4,811	.....	5,724	285	2,191	3,796	8,751	4,955	.....	.....
Beverly	1909	63	4,896	60	349	4,487	3,778	8,658	496	2,929	3,291	8,653	5,362	115.4	111.0
	1904	71	2,292	91	118	2,083	.....	1,900	93	1,098	2,323	4,101	1,778	–8.4	8.5
	1899	73	.....	.....	96	2,275	.....	2,112	64	1,021	2,149	3,781	1,632	.....	.....
Boston	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	.....	.....
Brocton	1909	196	16,291	176	1,378	14,737	9,773	18,978	1,696	9,122	28,565	45,972	17,407	6.1	21.6
	1904	201	15,007	228	890	13,889	.....	15,336	931	8,838	22,553	37,791	15,238	34.9	52.0
	1899	186	.....	.....	604	10,296	.....	9,635	639	5,775	15,333	24,855	9,522	.....	.....
Brookline	1909	16	404	19	45	340	339	617	37	194	196	532	336	–31.3	–27.4
	1904	13	552	14	43	495	.....	618	43	286	271	733	462	52.8	51.1
	1899	8	.....	.....	21	324	.....	320	25	168	219	485	266	.....	.....
Cambridge	1909	275	17,475	223	1,992	15,260	21,372	37,929	2,404	8,365	23,566	44,227	20,661	4.6	4.3
	1904	262	16,343	279	1,478	14,586	.....	32,260	1,713	7,494	25,117	42,407	17,290	31.8	45.8
	1899	243	.....	.....	1,033	11,070	.....	24,591	1,221	5,451	16,773	29,092	12,319	.....	.....
Chelsea	1909	110	6,694	98	642	5,954	8,339	11,021	869	3,326	10,569	17,003	6,434	20.6	22.5
	1904	130	5,532	139	454	4,939	.....	9,684	581	2,442	8,307	13,879	5,572	66.9	45.8
	1899	120	.....	.....	328	2,959	.....	7,960	343	1,406	5,461	9,519	4,058	.....	.....
Chicopee	1909	58	7,776	45	471	7,260	18,738	14,803	468	3,696	10,952	19,219	8,267	55.5	149.1
	1904	40	4,899	41	188	4,670	.....	6,829	255	1,935	4,330	7,716	3,386	14.3	43.2
	1899	46	.....	.....	120	4,085	.....	5,976	148	1,588	2,700	5,389	2,689	.....	.....
Clinton	1909	39	4,357	33	201	4,123	10,882	7,607	276	1,872	4,216	7,845	3,629	18.4	43.7
	1904	35	3,646	35	129	3,482	.....	5,590	177	1,438	3,408	5,458	2,050	–9.2	8.2
	1899	22	.....	.....	85	3,836	.....	6,930	115	1,516	2,715	5,043	2,328	.....	.....

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								Expressed in thousands.							
Massachusetts—Con.															
Everett	1909	62	3,096	56	360	2,680	7,816	$22,905	$471	$1,508	$4,506	$8,747	$4,241	22.6	42.6
	1904	51	2,451	49	216	2,186	.....	8,477	284	1,155	3,123	6,136	3,013	16.5	38.3
	1899	52	.....	.....	152	1,877	.....	5,975	168	903	2,474	4,437	1,963	.....	.....
Fall River	1909	288	38,210	247	824	37,139	122,061	82,086	1,514	15,339	35,524	64,146	28,622	38.4	47.6
	1904	234	27,711	208	667	26,836	.....	69,375	1,142	10,099	26,096	43,473	17,377	—12.4	11.2
	1899	240	.....	.....	512	30,646	.....	57,415	861	10,742	18,070	39,103	21,033	.....	.....
Fitchburg	1909	122	9,103	101	505	8,497	28,754	20,888	711	4,231	14,442	23,252	8,810	30.8	51.1
	1904	107	6,904	111	295	6,498	.....	13,109	379	3,168	9,421	15,391	5,970	4.5	18.3
	1899	115	.....	.....	290	6,218	.....	12,586	364	2,802	7,480	13,008	5,528	.....	.....
Framingham	1909	27	3,307	19	219	3,069	4,486	7,770	326	1,446	3,411	6,917	3,506	23.6	65.7
	1904	36	2,609	36	89	2,484	.....	2,613	133	1,121	2,517	4,174	1,657	12.6	38.8
	1899	34	.....	.....	69	2,207	.....	2,821	66	857	1,692	3,007	1,315	.....	.....
Gardner	1909	52	3,849	40	192	3,617	5,031	10,273	300	1,774	2,833	6,485	3,652	14.2	29.2
	1904	50	3,386	62	156	3,168	.....	8,619	201	1,491	2,570	5,019	2,449	9.4	14.4
	1899	46	.....	.....	108	2,896	.....	5,888	125	1,199	2,284	4,386	2,102	.....	.....
Gloucester	1909	102	2,593	104	308	2,181	2,427	5,693	337	1,042	4,770	7,753	2,983	23.7	12.0
	1904	132	2,141	175	203	1,763	.....	4,321	197	811	4,682	6,921	2,239	—25.5	10.0
	1899	137	.....	.....	183	2,367	.....	3,865	168	916	4,232	6,293	2,061	.....	.....
Greenfield	1909	47	1,484	24	209	1,251	2,327	2,520	228	701	1,034	2,801	1,767	.....	.....
Haverhill	1909	346	12,791	407	695	11,689	7,930	14,786	707	6,658	21,686	35,377	13,691	22.1	44.7
	1904	320	10,529	404	551	9,574	.....	10,306	542	4,818	14,257	24,447	10,190	—1.9	4.4
	1899	390	.....	.....	479	9,761	.....	6,358	366	4,538	14,994	23,419	8,425	.....	.....
Holyoke	1909	187	17,776	153	1,110	16,513	60,269	42,675	1,677	8,076	22,301	40,097	17,796	12.4	30.5
	1904	179	15,563	158	720	14,685	.....	37,150	1,018	6,693	16,579	30,731	14,152	17.3	27.6
	1899	158	.....	.....	580	12,519	.....	25,935	810	5,254	12,706	24,093	11,387	.....	.....
Hyde Park	1909	40	4,649	37	292	4,320	8,856	8,158	377	2,476	3,351	7,336	3,985	8.2	8.9
	1904	40	4,297	24	282	3,991	.....	7,487	333	2,020	3,581	6,739	3,158	66.7	53.7
	1899	33	.....	.....	98	2,483	.....	3,554	148	1,122	2,507	4,384	1,877	.....	.....
Lawrence	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	167	.....	.....	648	20,899	.....	48,827	997	8,197	24,842	41,742	16,900	.....	.....
Leominster	1909	94	6,000	76	323	5,601	5,890	6,633	442	2,794	5,576	10,531	4,955	35.7	40.4
	1904	65	4,437	64	246	4,127	.....	4,573	268	1,946	3,964	7,502	3,538	21.0	39.0
	1899	70	.....	.....	155	3,412	.....	3,862	165	1,481	2,769	5,397	2,628	.....	.....
Lowell	1909	320	34,108	316	1,217	32,575	72,012	61,984	1,682	14,149	32,831	60,271	27,440	11.2	23.6
	1904	256	30,544	277	964	29,303	.....	54,809	1,345	11,590	26,911	46,879	19,968	0.2	13.8
	1899	286	.....	.....	684	29,254	.....	45,510	929	10,853	20,279	41,203	20,924	.....	.....
Lynn	1909	431	30,685	469	2,848	27,368	17,089	42,784	3,008	15,666	41,361	71,503	30,142	27.1	30.0
	1904	431	23,811	565	1,706	21,540	.....	23,139	1,530	11,738	32,616	55,003	22,387	31.5	39.8
	1899	423	.....	.....	1,175	16,377	.....	16,037	954	7,971	24,471	39,347	14,876	.....	.....
Malden	1909	86	3,259	71	288	2,900	3,433	9,910	330	1,346	4,388	8,206	3,818	—1.8	—27.0
	1904	59	3,154	65	135	2,954	.....	5,553	133	1,428	4,045	11,236	7,191	22.3	70.2
	1899	53	.....	.....	104	2,416	.....	5,631	122	1,135	4,084	6,602	2,518	.....	.....
Marlborough	1909	59	4,585	46	274	4,265	2,721	3,378	289	2,224	6,375	10,382	4,007	22.6	39.0
	1904	46	3,708	43	186	3,479	.....	2,661	180	1,644	4,586	7,469	2,883	37.8	66.1
	1899	50	.....	.....	73	2,524	.....	2,001	100	1,152	2,834	4,498	1,664	.....	.....
Medford	1909	40	673	33	80	560	1,123	1,596	115	331	1,250	2,045	795	15.7	134.5
	1904	37	572	37	51	434	.....	1,449	67	244	386	872	486	—15.8	—23.0
	1899	36	.....	.....	58	575	.....	1,051	71	279	540	1,132	592	.....	.....
Melrose	1909	25	1,141	21	82	1,038	1,535	2,015	86	493	1,589	2,825	1,236	—33.9	—70.1
	1904	24	1,653	25	57	1,571	.....	4,645	51	796	2,915	9,451	6,536	33.1	176.7
	1899	16	.....	.....	65	1,180	.....	3,151	77	566	2,146	3,416	1,270	.....	.....
Methuen	1909	19	1,626	12	42	1,572	5,772	2,956	63	689	2,226	3,476	1,250	.....	.....
Milford	1909	53	1,980	50	129	1,801	2,410	1,756	205	945	2,389	4,442	2,053	1.1	31.0
	1904	44	1,930	55	93	1,782	.....	1,663	94	910	1,776	3,390	1,614	31.3	32.8
	1899	50	.....	.....	75	1,357	.....	1,077	71	633	1,466	2,552	1,086	.....	.....
New Bedford	1909	207	27,538	303	669	26,566	76,147	58,970	1,245	12,598	28,564	53,238	24,674	48.8	80.7
	1904	176	18,563	189	519	17,855	.....	40,410	781	7,251	16,091	29,469	13,378	17.0	26.0
	1899	171	.....	.....	425	15,263	.....	28,182	535	6,123	11,783	23,397	11,614	.....	.....
Newburyport	1909	74	3,543	71	257	3,215	3,820	4,900	320	1,642	3,781	6,931	3,150	8.8	1.8
	1904	69	3,261	68	238	2,955	.....	4,020	213	1,392	4,262	6,810	2,548	5.5	32.5
	1899	64	.....	.....	209	2,801	.....	3,696	205	1,175	3,051	5,141	2,090	.....	.....
Newton	1909	46	2,373	39	160	2,174	4,153	5,669	302	1,125	3,383	6,279	2,896	14.8	51.6
	1904	48	2,077	45	139	1,893	.....	4,324	201	944	2,242	4,141	1,899	3.8	12.6
	1899	45	.....	.....	103	1,823	.....	4,321	142	846	1,894	3,679	1,785	.....	.....
North Adams	1909	60	5,846	62	370	5,414	11,928	15,943	617	2,567	5,576	10,315	4,739	—1.6	28.4
	1904	58	5,831	66	263	5,502	.....	18,168	373	2,333	4,011	8,036	4,025	—12.8	—25.2
	1899	68	.....	.....	248	6,312	.....	14,127	461	2,708	5,047	10,741	5,694	.....	.....
Northampton	1909	71	3,434	58	226	3,150	6,139	7,996	302	1,503	3,163	6,999	3,836	6.3	21.6
	1904	77	3,235	71	201	2,963	.....	4,380	211	1,217	3,042	5,756	2,714	12.4	22.3
	1899	66	.....	.....	141	2,635	.....	4,629	150	1,129	2,540	4,707	2,167	.....	.....

COMPARATIVE SUMMARY FOR CITIES AND TOWNS HAVING 10,000 INHABITANTS OR MORE, BY STATES: 1909, 1904, AND 1899—Continued.

[See note at the head of this table. A minus sign (—) denotes decrease.]

Table 5—Contd. STATE AND 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.							
Massachusetts—Con.															
Peabody	1909	74	5,231	55	326	4,850	9,981	$15,804	$417	$2,638	$10,192	$15,549	$5,357	22.7	51.9
	1904	76	4,227	74	200	3,953	.....	7,654	260	1,990	6,748	10,237	3,489	48.6	47.4
	1899	86	.....	.....	146	2,661	.....	4,339	149	1,273	5,074	6,944	1,870	.....	.....
Pittsfield	1909	71	7,414	59	1,002	6,353	8,301	15,080	1,081	3,718	8,528	15,215	6,687	42.6	77.4
	1904	44	4,781	34	292	4,455	.....	8,035	459	2,082	4,629	8,577	3,948	39.3	49.1
	1899	69	.....	.....	205	3,198	.....	5,557	243	1,271	3,078	5,754	2,676	.....	.....
Plymouth	1909	32	3,104	24	168	2,912	6,239	10,760	268	1,416	8,475	11,618	3,143	.....	.....
Quincy	1909	183	6,247	241	514	5,492	9,147	11,975	806	3,434	3,844	10,505	6,661	2.3	17.0
	1904	161	5,938	222	345	5,371	.....	9,221	440	3,060	3,704	8,982	5,278	152.4	198.2
	1899	153	.....	.....	113	2,128	.....	1,886	100	1,145	909	3,012	2,103	.....	.....
Revere	1909	14	125	12	12	101	548	661	11	54	292	407	115	—19.2	14.6
	1904	12	151	12	14	125	.....	765	14	66	249	355	106	43.7	127.6
	1899	17	.....	.....	8	87	.....	388	8	46	51	156	105	.....	.....
Salem	1909	155	6,852	149	365	6,338	11,436	9,345	396	2,893	8,640	14,576	5,936	6.6	19.5
	1904	143	6,393	167	281	5,945	.....	9,670	269	2,506	7,921	12,202	4,281	5.7	13.9
	1899	162	.....	.....	214	5,625	.....	6,947	202	2,390	6,584	10,711	4,127	.....	.....
Somerville	1909	114	5,951	97	574	5,280	7,680	17,282	692	2,870	31,923	38,687	6,764	52.0	68.5
	1904	78	3,951	80	397	3,474	.....	10,264	431	1,753	19,176	22,955	3,779	—1.5	14.4
	1899	85	.....	.....	224	3,528	.....	9,503	231	1,721	16,721	20,065	3,344	.....	.....
Southbridge	1909	36	4,281	28	216	4,037	7,636	4,266	423	1,805	3,125	6,269	3,144	25.3	49.2
	1904	32	3,342	28	91	3,223	.....	3,795	199	1,305	2,280	4,202	1,922	19.9	19.6
	1899	32	.....	.....	66	2,687	.....	4,144	94	1,123	1,782	3,512	1,730	.....	.....
Springfield	1909	346	14,455	288	2,312	11,855	17,744	28,658	2,362	6,867	14,363	31,773	17,410	12.7	22.9
	1904	296	11,957	246	1,188	10,523	.....	24,081	1,499	5,645	12,380	25,860	13,480	29.1	42.4
	1899	278	.....	.....	848	8,152	.....	16,071	982	3,975	8,892	18,155	9,263	.....	.....
Taunton	1909	146	7,945	110	428	7,407	19,141	16,504	701	3,834	7,775	15,380	7,605	12.1	12.7
	1904	127	7,020	118	294	6,608	.....	14,790	468	3,147	7,687	13,645	5,958	0.3	18.2
	1899	114	.....	.....	313	6,590	.....	11,267	418	3,043	5,540	11,544	6,004	.....	.....
Wakefield	1909	23	2,359	14	115	2,230	1,729	3,864	157	1,046	2,835	5,527	2,692	.....	.....
Waltham	1909	80	6,354	67	250	6,037	7,583	12,871	406	3,288	2,444	7,814	5,370	—2.8	9.3
	1904	60	6,484	55	221	6,208	.....	10,693	370	3,240	2,067	7,150	5,083	27.7	21.4
	1899	74	.....	.....	179	4,861	.....	8,777	255	2,371	1,889	5,890	4,001	.....	.....
Watertown	1909	25	4,805	13	457	4,335	4,862	7,220	440	2,235	6,463	11,546	5,083	.....	.....
Webster	1909	23	3,621	14	198	3,409	7,204	10,479	322	1,476	7,820	11,296	3,476	.....	.....
Westfield	1909	91	3,500	86	354	3,060	3,731	7,500	462	1,695	2,868	7,362	4,494	16.2	26.5
	1904	86	2,945	78	233	2,634	.....	5,888	312	1,348	2,251	5,818	3,567	11.1	31.0
	1899	97	.....	.....	250	2,370	.....	4,157	321	1,077	2,085	4,441	2,356	.....	.....
Weymouth	1909	41	2,238	45	202	1,991	1,902	5,504	240	1,110	4,204	6,627	2,423	8.1	34.6
	1904	46	2,035	54	140	1,841	.....	3,652	155	927	2,998	4,922	1,924	—4.2	—8.7
	1899	51	.....	.....	216	1,922	.....	4,333	286	878	3,178	5,389	2,211	.....	.....
Winthrop	1909	7	19	6	6	7	41	25	3	5	25	42	17	.....	.....
Woburn	1909	59	1,867	65	149	1,653	3,560	8,405	195	932	3,114	5,408	2,294	11.5	16.2
	1904	52	1,622	59	81	1,482	.....	4,427	107	783	2,808	4,654	1,846	9.3	16.3
	1899	47	.....	.....	51	1,356	.....	2,832	63	617	2,879	4,003	1,124	.....	.....
Worcester	1909	580	32,154	750	3,183	28,221	53,405	64,639	4,169	15,295	42,601	77,148	34,547	23.8	47.9
	1904	470	25,259	420	2,043	22,796	.....	48,772	2,377	11,825	27,011	52,145	25,134	0.9	11.4
	1899	465	.....	.....	1,326	22,593	.....	41,384	1,706	11,281	23,470	46,793	23,323	.....	.....
Michigan:															
24 cities	1909	4,500	184,603	4,038	23,240	157,325	284,118	391,875	26,691	82,674	242,121	469,603	227,482	.....	.....
18 cities	1904	3,136	117,976	3,007	11,619	103,350	.....	188,743	12,076	48,315	127,052	250,256	123,204	.....	.....
18 cities	1899	2,892	.....	.....	9,050	84,805	.....	144,721	8,587	34,384	93,116	178,125	85,009	.....	.....
Adrian	1909	80	1,466	66	341	1,059	3,211	5,086	327	540	4,150	6,085	1,935	.....	.....
Alpena	1909	58	1,614	57	125	1,432	10,670	5,798	151	711	2,301	3,964	1,663	15.0	36.5
	1904	57	1,369	60	64	1,245	.....	2,682	68	534	1,685	2,905	1,220	3.6	27.8
	1899	46	.....	.....	54	1,202	.....	2,356	46	496	1,276	2,273	997	.....	.....
Ann Arbor	1909	63	783	67	143	573	1,458	1,760	125	287	1,010	1,866	856	4.4	34.6
	1904	65	690	61	80	549	.....	1,095	62	244	774	1,386	612	—11.9	0.7
	1899	71	.....	.....	67	623	.....	1,055	49	234	785	1,377	592	.....	.....
Battle Creek	1909	105	5,281	95	1,011	4,175	14,923	19,176	1,256	2,354	7,068	20,174	13,106	23.2	64.0
	1904	120	4,290	131	770	3,389	.....	13,039	872	1,886	3,984	12,298	8,314	65.2	95.2
	1899	75	.....	.....	432	2,051	.....	7,212	402	979	2,100	6,301	4,201	.....	.....
Bay City	1909	182	5,357	178	442	4,737	17,872	10,289	467	2,118	5,647	10,294	4,647	6.3	16.9
	1904	173	4,899	161	282	4,456	.....	5,343	272	2,002	4,948	8,809	3,861	3.4	—2.2
	1899	177	.....	.....	262	4,309	.....	6,843	243	1,801	5,235	9,011	3,776	.....	.....
Detroit	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	.....	.....
Escanaba	1909	39	804	36	48	720	1,416	1,024	62	405	364	1,074	710	.....	.....

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Table 5—Contd. STATE AND 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.							
Michigan—Contd.															
Flint	1909	104	7,840	117	635	7,088	8,240	$18,085	$535	$4,429	$13,971	$24,118	$10,147	228.0	290.4
	1904	70	2,494	84	249	2,161	.....	4,216	228	1,041	3,769	6,177	2,408	10.3	31.1
	1899	63	.....	.....	87	1,960	.....	2,507	73	802	2,754	4,713	1,959	.....	.....
Grand Rapids	1909	524	20,327	447	2,290	17,590	27,676	38,783	2,943	9,217	19,736	42,231	22,495	13.4	37.6
	1904	388	17,366	386	1,466	15,514	.....	25,431	1,671	7,318	14,422	30,690	16,268	20.0	38.1
	1899	382	.....	.....	1,148	12,929	.....	22,692	1,137	5,298	11,121	22,229	11,108	.....	.....
Holland	1909	59	2,183	45	198	1,940	2,956	4,524	262	936	2,584	4,622	2,038	.....	.....
Ironwood	1909	14	229	16	12	201	521	304	14	88	201	377	176	.....	.....
Ishpeming	1909	19	92	19	7	66	73	88	7	37	52	132	80	—9.6	—46.6
	1904	15	92	11	8	73	.....	199	11	42	142	247	105	—8.8	26.7
	1899	14	.....	.....	5	80	.....	132	7	44	95	195	100	.....	.....
Jackson	1909	169	5,624	135	692	4,797	6,360	9,078	719	2,492	8,168	14,006	5,838	20.9	67.8
	1904	147	4,575	132	476	3,967	.....	5,346	427	1,838	4,272	8,348	4,076	6.8	24.4
	1899	117	.....	.....	374	3,715	.....	4,371	356	1,437	3,808	6,710	2,902	.....	.....
Kalamazoo	1909	193	7,527	152	1,103	6,272	14,449	15,395	1,236	3,149	9,505	17,904	8,399	10.7	36.2
	1904	157	6,467	133	668	5,666	.....	9,618	691	2,562	6,896	13,142	6,246	46.4	82.9
	1899	129	.....	.....	485	3,870	.....	5,571	432	1,428	3,893	7,186	3,293	.....	.....
Lansing	1909	169	6,152	142	725	5,285	8,720	13,131	808	2,707	8,802	16,567	7,765	77.2	140.6
	1904	98	3,405	83	340	2,982	.....	5,999	352	1,389	3,473	6,887	3,414	109.3	134.1
	1899	74	.....	.....	163	1,425	.....	2,047	135	577	1,632	2,942	1,310	.....	.....
Manistee	1909	64	2,365	78	162	2,125	6,811	3,248	183	1,019	1,289	3,344	2,055	2.0	2.7
	1904	47	2,238	33	121	2,084	.....	2,832	106	999	1,274	3,257	1,983	—0.9	—10.2
	1899	56	.....	.....	113	2,103	.....	3,606	111	964	1,376	3,625	2,249	.....	.....
Marquette	1909	34	601	29	74	498	1,500	1,392	82	305	556	1,254	698	—32.5	—47.0
	1904	31	814	23	53	738	.....	1,663	67	436	1,392	2,364	972	—11.7	49.1
	1899	29	.....	.....	64	836	.....	1,177	76	355	813	1,585	772	.....	.....
Menominee	1909	52	1,930	41	189	1,700	4,770	5,213	205	718	1,657	3,728	2,071	14.2	25.4
	1904	45	1,630	35	106	1,489	.....	3,340	120	705	1,373	2,974	1,601	—12.6	—27.0
	1899	38	.....	.....	88	1,703	.....	3,788	129	769	1,837	4,076	2,239	.....	.....
Muskegon	1909	101	5,098	89	487	4,522	10,436	8,337	445	2,107	4,938	9,648	4,710	46.9	52.7
	1904	70	3,371	70	223	3,078	.....	4,790	257	1,211	3,526	6,319	2,793	.....	39.6
	1899	67	.....	.....	164	3,078	.....	3,637	154	1,125	2,269	4,528	2,259	.....	.....
Pontiac	1909	42	2,009	27	243	1,739	2,854	3,826	221	1,087	3,240	5,894	2,654	.....	.....
Port Huron	1909	82	1,862	75	207	1,580	3,130	3,889	201	791	1,949	3,588	1,639	—26.0	—3.4
	1904	74	2,356	69	151	2,136	.....	3,205	155	1,107	1,747	3,715	1,968	5.4	2.4
	1899	78	.....	.....	216	2,026	.....	3,149	138	933	1,752	3,627	1,875	.....	.....
Saginaw	1909	203	7,090	232	868	5,990	14,412	26,703	926	3,184	10,409	18,833	8,424	34.8	86.9
	1904	179	5,205	191	569	4,445	.....	7,273	502	1,981	5,367	10,079	4,712	5.7	16.5
	1899	184	.....	.....	357	4,205	.....	7,041	355	1,672	5,084	8,653	3,569	.....	.....
Sault Ste. Marie	1909	47	1,125	37	83	1,005	3,239	4,663	117	542	3,123	4,619	1,496	12.3	91.5
	1904	38	997	32	70	895	.....	1,634	89	462	1,427	2,412	985	182.3	231.3
	1899	33	.....	.....	24	317	.....	313	18	153	279	728	449	.....	.....
Traverse City	1909	61	1,403	54	129	1,220	4,231	1,958	139	444	1,183	2,289	1,106	.....	.....
Minnesota:															
8 cities	1909	2,305	69,872	2,174	10,973	56,725	150,973	184,302	12,175	32,398	172,347	262,001	89,654	.....	.....
6 cities	1904	1,829	52,110	1,750	6,707	43,653	.....	123,212	6,802	22,466	122,291	183,677	61,386	.....	.....
6 cities	1899	1,603	.....	.....	4,800	39,611	.....	90,365	4,539	17,848	94,887	141,976	47,089	.....	.....
Duluth	1909	194	6,916	155	678	6,083	17,561	17,709	910	3,593	8,844	17,180	8,336	52.6	69.4
	1904	163	4,645	155	503	3,987	.....	9,538	504	2,186	4,634	10,139	5,505	9.0	29.8
	1899	126	.....	.....	220	3,658	.....	5,967	212	1,779	3,659	7,811	4,152	.....	.....
Mankato	1909	63	1,033	69	157	807	3,654	2,217	162	346	2,728	3,723	995	11.5	8.8
	1904	54	906	67	115	724	.....	2,223	102	303	2,529	3,422	893	39.2	81.3
	1899	47	.....	.....	81	520	.....	1,077	71	176	1,355	1,887	532	.....	.....
Minneapolis	1909	1,102	33,923	1,012	5,949	26,962	89,247	90,382	6,277	15,638	119,993	165,405	45,412	24.4	36.5
	1904	876	26,045	847	3,527	21,671	.....	66,135	3,536	11,418	88,882	121,163	32,281	10.5	28.3
	1899	789	.....	.....	2,158	19,620	.....	50,177	2,113	9,383	68,910	94,408	25,498	.....	.....
St. Cloud	1909	69	812	102	84	626	3,362	1,607	98	355	1,342	2,299	957	.....	.....
St. Paul	1909	719	23,530	649	3,542	19,339	26,204	60,467	4,048	10,952	30,300	58,990	28,690	34.6	53.9
	1904	614	17,037	566	2,108	14,363	.....	36,401	2,202	7,211	19,488	38,319	18,831	10.3	27.5
	1899	537	.....	.....	2,079	13,019	.....	25,659	1,875	5,324	15,912	30,056	14,144	.....	.....
Stillwater	1909	38	940	83	169	688	1,952	3,277	222	359	1,648	2,686	1,038	—28.0	—3.5
	1904	36	1,196	38	203	955	.....	2,828	176	454	1,484	2,784	1,300	15.2	54.6
	1899	32	.....	.....	76	829	.....	2,172	85	358	1,050	1,801	751	.....	.....
Virginia	1909	21	229	19	22	188	365	765	45	131	162	519	357	.....	.....
Winona	1909	99	2,489	85	372	2,032	8,628	7,878	413	1,024	7,330	11,199	3,869	4.0	42.7
	1904	86	2,281	77	251	1,953	.....	6,087	282	894	5,274	7,850	2,576	—0.6	30.6
	1899	72	.....	.....	186	1,965	.....	5,313	183	828	4,001	6,013	2,012	.....	.....

COMPARATIVE SUMMARY FOR CITIES AND TOWNS HAVING 10,000 INHABITANTS OR MORE, BY STATES: 1909, 1904, AND 1899—Continued.

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								Expressed in thousands.							
Mississippi:															
5 cities	1909	202	5,383	168	614	4,601	14,569	$9,107	$630	$2,182	$6,904	$11,945	$5,041	.....	.....
3 cities	1904	109	3,052	98	261	2,693	.....	4,403	258	1,246	3,548	5,975	2,427	.....	.....
3 cities	1899	82	.....	.....	151	2,469	.....	3,790	151	922	2,412	4,407	1,995	.....	.....
Hattiesburg	1909	29	742	22	72	648	2,273	1,341	70	297	625	1,251	626	.....	.....
Jackson	1909	45	965	36	130	799	3,417	1,783	146	377	1,968	3,113	1,145	.....	.....
Meridian	1909	54	1,799	45	230	1,524	5,361	3,816	220	702	2,474	4,238	1,764	13.2	29.7
	1904	53	1,529	55	128	1,346	.....	2,516	126	588	2,052	3,267	1,215	61.4	69.8
	1899	42	.....	.....	58	834	.....	1,402	62	327	1,115	1,924	809	.....	.....
Natchez	1909	27	513	17	68	428	1,481	931	69	169	689	1,114	425	35.4	35.9
	1904	24	375	15	44	316	.....	632	42	134	503	820	317	—51.2	—26.5
	1899	16	.....	.....	38	648	.....	1,243	34	174	581	1,115	534	.....	.....
Vicksburg	1909	47	1,364	48	114	1,202	2,037	1,236	125	637	1,148	2,229	1,081	16.6	18.1
	1904	32	1,148	28	89	1,031	.....	1,255	90	524	993	1,888	895	4.5	28.0
	1899	24	.....	.....	55	987	.....	1,145	55	421	716	1,368	652	.....	.....
Missouri:															
10 cities	1909	4,247	140,091	3,206	20,635	116,250	222,230	342,373	25,205	64,327	246,399	427,078	180,679	.....	.....
7 cities	1904	3,559	121,393	2,828	14,542	104,023	.....	317,403	16,656	53,476	172,418	326,009	155,591	.....	.....
7 cities	1899	3,662	.....	.....	10,852	84,165	.....	187,638	11,996	37,879	127,268	238,424	111,156	.....	.....
Hannibal	1909	66	2,688	65	178	2,445	3,412	2,498	176	1,284	4,316	6,195	1,879	35.0	73.8
	1904	58	1,957	49	97	1,811	.....	1,848	91	825	2,156	3,564	1,408	46.3	32.0
	1899	66	.....	.....	121	1,238	.....	1,754	109	535	1,735	2,699	964	.....	.....
Jefferson City	1909	35	1,572	19	217	1,336	1,166	3,079	257	391	3,652	5,446	1,794	.....	.....
Joplin	1909	77	1,089	73	186	830	3,102	2,992	184	494	2,358	4,136	1,778	22.1	37.6
	1904	56	835	55	100	680	.....	2,524	119	386	1,960	3,006	1,046	—0.3	29.3
	1899	45	.....	.....	50	682	.....	1,268	53	380	1,556	2,325	769	.....	.....
Kansas City	1909	902	18,651	757	3,251	14,643	36,064	42,729	3,478	8,526	30,962	54,704	23,742	32.6	53.8
	1904	612	13,559	519	2,001	11,039	.....	32,127	2,120	5,920	19,525	35,573	16,048	13.8	52.8
	1899	585	.....	.....	1,183	9,699	.....	22,992	1,164	4,569	12,531	23,588	11,057	.....	.....
Moberly	1909	31	1,155	29	127	999	1,276	1,320	120	538	1,092	1,984	892	.....	.....
St. Joseph	1909	261	6,514	213	911	5,390	7,737	12,038	873	2,710	11,053	17,626	6,573	15.6	32.3
	1904	219	5,552	211	678	4,663	.....	9,734	579	2,072	6,820	11,574	4,754	—8.5	1.9
	1899	184	.....	.....	457	5,095	.....	8,016	449	1,998	6,942	11,362	4,420	.....	.....
St. Louis	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	38.9
	1899	2,646	.....	.....	8,867	64,832	.....	150,526	10,079	29,145	101,838	193,733	91,895	.....	.....
Sedalia	1909	75	1,150	66	149	935	1,662	2,346	145	461	1,216	2,333	1,117	—4.0	37.9
	1904	50	1,097	42	81	974	.....	1,307	80	503	825	1,692	867	7.2	31.9
	1899	57	.....	.....	66	909	.....	1,152	53	399	675	1,283	608	.....	.....
Springfield	1909	108	2,473	91	251	2,131	3,685	5,517	283	1,280	3,048	5,382	2,334	—1.3	1.7
	1904	82	2,431	69	204	2,158	.....	3,926	192	1,128	3,392	5,293	1,901	26.2	54.1
	1899	79	.....	.....	108	1,710	.....	1,930	89	853	1,991	3,434	1,443	.....	.....
Webb City	1909	25	212	24	18	170	511	462	18	108	513	777	264	.....	.....
Montana:[1]															
5 cities	1909	186	2,391	153	405	1,833	3,518	6,233	531	1,777	2,737	6,772	4,035	.....	.....
2 cities	1904	88	1,054	76	151	827	.....	2,379	236	769	996	2,923	1,927	.....	.....
2 cities	1899	83	.....	.....	108	675	.....	1,947	128	568	1,114	2,293	1,179	.....	.....
Anaconda	1909	13	151	10	44	97	258	489	77	134	157	591	434	.....	.....
Billings	1909	37	294	32	36	226	661	951	52	229	765	1,243	478	.....	.....
Butte	1909	66	867	58	147	662	1,217	1,899	200	649	920	2,464	1,544	38.5	42.6
	1904	54	614	47	89	478	.....	1,267	150	509	568	1,760	1,192	16.3	16.0
	1899	56	.....	.....	58	411	.....	1,130	66	396	778	1,517	739	.....	.....
Helena	1909	44	550	33	97	420	788	1,981	121	382	493	1,303	810	20.3	12.0
	1904	34	440	29	62	349	.....	1,112	86	260	428	1,163	735	32.2	49.9
	1899	27	.....	.....	50	264	.....	817	62	172	336	776	440	.....	.....
Missoula	1909	26	529	20	81	428	594	913	81	403	402	1,171	769	.....	.....
Nebraska:															
4 cities	1909	714	21,429	567	3,777	17,085	31,052	74,142	4,261	9,817	125,963	162,137	36,174	.....	.....
3 cities	1904	487	15,754	431	2,222	13,101	.....	58,543	2,403	7,267	104,777	126,641	21,864	.....	.....
3 cities	1899	429	.....	.....	1,736	12,707	.....	51,587	1,667	6,199	82,542	110,347	27,805	.....	.....
Grand Island	1909	44	749	41	92	616	950	1,697	97	380	1,011	1,837	826	.....	.....
Lincoln	1909	167	2,836	134	562	2,140	2,206	7,107	534	1,056	3,864	7,010	3,146	32.3	34.2
	1904	128	2,119	121	381	1,617	.....	4,421	373	853	2,691	5,222	2,531	46.5	88.9
	1899	81	.....	.....	176	1,104	.....	2,249	165	481	1,596	2,764	1,168	.....	.....
Omaha	1909	432	10,185	329	1,833	8,023	16,037	45,461	2,071	4,837	43,415	60,854	17,439	37.8	12.7
	1904	318	7,064	276	966	5,822	.....	34,558	1,080	3,204	42,893	54,004	11,111	10.3	41.8
	1899	307	.....	.....	791	5,276	.....	32,956	766	2,603	19,928	38,074	18,146	.....	.....
South Omaha	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	—3.9
	1899	41	.....	.....	769	6,327	.....	16,382	756	3,115	61,013	69,509	8,491	.....	.....

[1] Does not include statistics for Great Falls.

COMPARATIVE SUMMARY FOR CITIES AND TOWNS HAVING 10,000 INHABITANTS OR MORE, BY STATES: 1909, 1904, AND 1899—Continued.

[See note at the head of this table. A minus sign (—) denotes decrease.]

Table 5—Contd. STATE AND 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.							
Nevada:															
1 city	1909	40	419	25	84	310	1,746	$1,872	$121	$308	$1,171	$1,862	$691	.....	.....
Reno	1909	40	419	25	84	310	1,746	1,872	121	308	1,171	1,862	691	.....	.....
New Hampshire:															
8 cities	1909	604	47,009	539	2,003	44,467	130,877	73,370	2,295	20,016	56,523	93,054	36,531	.....	.....
5 cities	1904	382	31,502	356	1,257	29,689	.....	50,774	1,463	12,842	34,779	57,574	22,795	.....	.....
5 cities	1899	402	.....	.....	826	30,191	.....	45,401	1,016	11,981	27,165	48,336	21,171	.....	.....
Berlin	1909	20	1,906	18	98	1,790	25,537	13,059	166	879	3,654	5,897	2,243	.....	.....
Concord	1909	111	3,059	110	256	2,693	6,381	5,574	264	1,641	3,546	6,477	2,931	1.5	20.5
	1904	80	2,949	79	216	2,654	.....	5,701	238	1,436	2,831	5,374	2,543	9.1	27.6
	1899	86	.....	.....	146	2,432	.....	4,254	135	1,300	2,088	4,211	2,123	.....	.....
Dover	1909	51	3,227	49	148	3,030	10,395	6,398	183	1,486	3,236	6,370	3,134	6.0	5.4
	1904	42	3,034	43	132	2,859	.....	7,789	182	1,227	3,870	6,043	2,173	2.2	11.1
	1899	40	.....	.....	99	2,797	.....	6,408	139	1,229	3,273	5,440	2,167	.....	.....
Keene	1909	64	1,993	47	177	1,769	5,158	2,959	165	973	1,837	3,483	1,646	.....	.....
Laconia	1909	43	2,252	39	67	2,146	2,203	3,168	88	981	2,013	3,818	1,805	.....	.....
Manchester	1909	175	25,718	156	827	24,735	61,796	26,221	880	10,444	30,497	46,812	16,315	40.7	52.5
	1904	155	18,327	142	606	17,579	.....	25,248	681	7,323	18,707	30,697	11,990	—1.6	24.6
	1899	166	.....	.....	308	17,862	.....	21,540	441	6,468	13,803	24,628	10,825	.....	.....
Nashua	1909	104	7,757	92	353	7,312	17,567	12,854	441	3,112	10,379	17,326	6,947	18.7	34.7
	1904	78	6,462	68	235	6,159	.....	9,405	266	2,508	8,483	12,858	4,375	6.6	27.4
	1899	72	.....	.....	179	5,777	.....	9,287	189	2,327	6,126	10,096	3,970	.....	.....
Portsmouth	1909	36	1,097	28	77	992	1,840	3,137	108	500	1,361	2,871	1,510	55.5	10.3
	1904	27	730	24	68	638	.....	2,631	96	348	888	2,602	1,714	—51.8	—34.3
	1899	38	.....	.....	94	1,323	.....	3,912	112	657	1,875	3,961	2,086	.....	.....
New Jersey:															
32 cities	1909	5,939	283,129	5,492	28,872	248,765	383,358	699,760	37,717	129,477	525,860	851,499	325,639	.....	.....
24 cities	1904	4,621	219,514	4,448	17,476	197,590	.....	519,358	21,703	96,254	336,856	566,942	230,086	.....	.....
24 cities	1899	4,253	.....	.....	11,624	160,842	.....	376,720	14,682	73,339	253,777	419,802	166,025	.....	.....
Asbury Park	1909	27	332	28	40	264	392	537	30	175	294	602	308	.....	.....
Atlantic City	1909	94	973	94	153	726	1,718	4,242	110	480	1,136	2,260	1,124	90.6	131.8
	1904	62	512	64	67	381	.....	1,919	53	223	365	975	610	24.9	60.4
	1899	36	.....	.....	32	305	.....	1,332	20	165	281	608	327	.....	.....
Bayonne	1909	97	8,790	84	1,187	7,519	28,094	62,281	1,762	4,775	58,932	73,641	14,709	6.5	21.5
	1904	58	7,851	48	746	7,057	.....	50,297	1,037	4,277	46,984	60,634	13,650	51.1	57.1
	1899	63	.....	.....	248	4,670	.....	26,251	413	2,623	33,794	38,601	4,807	.....	.....
Bloomfield	1909	45	3,435	35	443	2,957	6,031	7,769	591	1,301	2,301	5,895	3,594	.....	.....
Bridgeton	1909	74	2,649	62	200	2,387	2,105	3,302	207	1,163	1,997	4,070	2,073	4.9	37.3
	1904	61	2,492	54	162	2,276	.....	2,147	128	1,014	1,239	2,964	1,725	4.3	31.2
	1899	62	.....	.....	115	2,182	.....	2,155	108	749	1,043	2,259	1,216	.....	.....
Camden	1909	365	18,709	315	1,867	16,527	29,056	49,158	2,406	8,607	27,384	49,138	21,754	30.5	46.3
	1904	298	14,127	265	1,201	12,661	.....	31,992	1,496	6,098	20,423	33,587	13,164	63.5	86.9
	1899	322	.....	.....	658	7,742	.....	15,593	682	3,217	10,442	17,970	7,528	.....	.....
East Orange	1909	42	1,861	45	430	1,386	1,087	3,849	264	858	1,768	3,725	1,957	62.3	60.1
	1904	17	1,251	14	383	854	.....	3,048	267	454	1,108	2,327	1,219	23.8	11.5
	1899	22	.....	.....	150	690	.....	1,896	186	356	911	2,087	1,176	.....	.....
Elizabeth	1909	163	13,670	132	801	12,737	20,124	26,774	1,052	7,513	16,429	29,147	12,718	3.3	—0.5
	1904	124	13,175	100	740	12,335	.....	23,564	866	7,398	16,981	29,301	12,320	29.9	28.2
	1899	141	.....	.....	584	9,498	.....	15,951	801	5,476	12,913	22,861	9,948	.....	.....
Garfield	1909	25	2,661	20	111	2,530	5,416	8,006	205	1,080	5,975	8,894	2,919	.....	.....
Hackensack	1909	46	873	44	91	738	1,021	1,846	119	360	899	1,978	1,079	.....	.....
Harrison	1909	54	7,339	33	806	6,500	8,021	20,602	925	3,672	5,413	13,142	7,729	60.9	56.3
	1904	41	4,472	19	413	4,040	.....	11,388	524	1,929	3,629	8,409	4,780	41.3	38.1
	1899	41	.....	.....	202	2,859	.....	5,076	234	1,381	3,202	6,087	2,885	.....	.....
Hoboken	1909	244	9,339	206	1,033	8,100	11,108	19,898	1,365	4,553	9,469	20,413	10,944	12.1	45.0
	1904	279	8,230	278	725	7,227	.....	11,777	914	3,573	6,580	14,077	7,497	26.5	34.3
	1899	194	.....	.....	402	5,712	.....	7,475	495	2,625	5,026	10,483	5,457	.....	.....
Irvington	1909	51	656	40	76	540	967	1,406	103	278	2,343	3,018	675	.....	.....
Jersey City	1909	745	30,239	614	4,171	25,454	35,917	79,794	5,049	13,216	89,317	128,775	39,458	25.1	70.0
	1904	628	23,312	580	2,379	20,353	.....	82,395	2,990	10,021	48,799	75,741	26,942	17.0	3.9
	1899	536	.....	.....	1,614	17,391	.....	78,612	2,039	7,965	50,266	72,930	22,664	.....	.....
Kearny	1909	18	3,111	14	277	2,820	5,879	6,551	269	1,540	5,263	8,306	3,043	116.4	87.6
	1904	11	1,362	15	44	1,303	.....	2,925	63	505	3,505	4,428	923	32.2	175.5
	1899	16	.....	.....	28	986	.....	1,983	43	359	984	1,607	623	.....	.....
Long Branch	1909	34	562	36	111	415	922	2,362	75	225	584	1,117	533	.....	.....
Millville	1909	39	3,144	37	346	2,761	3,681	3,578	368	1,424	1,599	4,182	2,583	—0.2	12.4
	1904	35	3,022	26	229	2,767	.....	3,810	236	1,528	1,384	3,719	2,335	23.6	47.9
	1899	18	.....	.....	152	2,239	.....	3,169	160	1,098	919	2,514	1,595	.....	.....

COMPARATIVE SUMMARY FOR CITIES AND TOWNS HAVING 10,000 INHABITANTS OR MORE, BY STATES: 1909, 1904, AND 1899—Continued.

[See note at the head of this table. A minus sign (—) denotes decrease.]

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								Expressed in thousands.							
New Jersey—Contd.															
Montclair	1909	23	321	17	52	252	1,245	$1,105	$44	$139	$669	$1,026	$357	66.9	65.2
	1904	19	188	17	20	151	.....	566	24	72	419	621	202	—10.7	—6.5
	1899	23	.....	.....	12	169	.....	505	14	86	386	664	278	.....	.....
Morristown	1909	31	278	32	45	201	766	948	39	130	369	724	355	—34.5	2.7
	1904	26	359	27	25	307	.....	782	22	171	299	705	406	21.8	18.3
	1899	22	.....	.....	36	252	.....	747	24	146	310	596	286	.....	.....
New Brunswick	1909	93	5,948	72	612	5,264	6,337	11,189	780	2,020	4,549	10,005	5,456	14.7	12.2
	1904	71	4,991	63	338	4,590	.....	10,393	400	1,792	4,158	8,917	4,759	19.7	54.0
	1899	72	.....	.....	238	3,836	.....	6,319	303	1,304	2,994	5,791	2,797	.....	.....
Newark	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	.....	119,026	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	.....	.....
Orange	1909	85	5,054	65	606	4,383	5,962	11,148	772	2,463	3,688	9,176	5,488	78.9	49.2
	1904	66	2,687	80	157	2,450	.....	3,441	192	1,312	2,642	6,151	3,509	49.4	105.3
	1899	74	.....	.....	50	1,640	.....	1,360	46	912	1,580	2,996	1,416	.....	.....
Passaic	1909	169	16,386	145	1,155	15,086	23,245	42,841	1,784	6,269	24,335	41,729	17,394	37.1	83.2
	1904	95	11,854	78	776	11,000	.....	28,611	1,073	3,866	13,110	22,783	9,673	71.9	77.9
	1899	70	.....	.....	403	6,399	.....	18,377	623	2,374	7,418	12,805	5,387	.....	.....
Paterson	1909	702	35,116	871	2,241	32,004	35,889	66,402	2,981	15,205	34,728	69,584	34,856	12.3	27.3
	1904	513	30,875	507	1,859	28,509	.....	53,696	2,164	13,002	27,441	54,673	27,232	—0.1	12.7
	1899	487	.....	.....	1,199	28,542	.....	46,894	1,588	11,843	25,055	48,502	23,447	.....	.....
Perth Amboy	1909	80	6,595	55	674	5,866	22,314	25,100	986	2,679	63,932	73,093	9,161	48.5	110.0
	1904	53	4,333	37	346	3,950	.....	11,583	400	1,827	30,316	34,800	4,484	97.0	147.5
	1899	47	.....	.....	157	2,005	.....	6,374	185	920	11,347	14,061	2,714	.....	.....
Phillipsburg	1909	39	3,753	27	294	3,432	7,061	9,764	362	1,732	4,770	9,150	4,380	9.0	36.9
	1904	32	3,279	21	110	3,148	.....	6,723	179	1,472	3,566	6,684	3,118	42.1	45.8
	1899	34	.....	.....	74	2,216	.....	3,308	104	887	2,803	4,585	1,782	.....	.....
Plainfield	1909	60	2,027	55	214	1,758	3,912	6,508	281	968	1,530	3,649	2,119	—11.5	2.2
	1904	49	2,283	51	246	1,986	.....	5,101	238	1,026	1,154	3,572	2,418	43.5	46.6
	1899	32	.....	.....	121	1,384	.....	2,450	139	761	813	2,437	1,624	.....	.....
Trenton	1909	340	20,679	295	1,841	18,543	29,839	46,639	2,232	9,726	27,673	49,009	21,336	31.2	51.4
	1904	311	15,435	293	1,012	14,130	.....	40,861	1,311	6,921	17,551	32,360	14,809	7.6	13.7
	1899	246	.....	.....	739	13,138	.....	24,625	903	6,003	16,581	28,458	11,877	.....	.....
Union	1909	83	3,155	83	178	2,894	3,034	10,910	230	1,411	3,539	7,941	4,402	55.9	126.1
	1904	77	2,038	78	104	1,856	.....	7,295	183	875	1,392	3,512	2,120	34.9	3.2
	1899	57	.....	.....	92	1,376	.....	5,354	164	665	1,408	3,403	1,995	.....	.....
West Hoboken	1909	137	3,179	154	243	2,782	1,477	4,861	268	1,425	2,488	5,577	3,089	—21.9	—6.2
	1904	95	3,923	102	259	3,562	.....	6,018	258	1,276	3,122	5,947	2,825	30.3	24.7
	1899	65	.....	.....	172	2,733	.....	3,732	152	1,059	2,529	4,769	2,240	.....	.....
West New York	1909	66	1,779	70	201	1,508	1,443	4,163	237	729	7,409	9,274	1,865	.....	.....
West Orange	1909	10	530	8	46	476	1,032	1,994	44	285	399	748	349	.....	.....
New Mexico:															
1 city	1909	31	686	32	67	587	1,626	847	71	489	584	1,288	704	.....	.....
Albuquerque	1909	31	686	32	67	587	1,626	847	71	489	584	1,288	704	.....	.....
New York:[1]															
50 cities	1909	34,436	1,030,352	36,685	136,792	856,875	1,071,926	2,244,069	168,438	482,713	1,586,988	2,925,072	1,338,084	.....	.....
39 cities	1904	27,967	829,728	31,911	87,274	710,543	.....	1,623,770	98,889	363,107	1,140,289	2,130,276	989,887	.....	.....
39 cities	1899	26,467	.....	.....	60,334	605,358	.....	1,260,194	68,879	287,489	870,223	1,613,790	743,567	.....	.....
Albany	1909	395	11,607	410	1,336	9,861	15,629	26,276	1,581	5,234	10,521	22,826	12,305	—9.9	12.9
	1904	490	10,685	550	1,159	8,976	.....	16,676	1,377	4,269	9,377	20,209	10,832	10.7	17.0
	1899	511	.....	.....	761	8,106	.....	18,011	914	3,852	7,507	17,269	9,762	.....	.....
Amsterdam	1909	97	10,776	103	389	10,284	11,745	18,162	545	4,823	13,195	22,449	9,254	28.7	49.6
	1904	89	8,504	95	416	7,993	.....	14,554	404	3,179	8,853	15,007	6,154	27.7	41.0
	1899	98	.....	.....	188	6,261	.....	9,461	218	2,457	5,990	10,643	4,653	.....	.....
Auburn	1909	140	7,484	130	857	6,497	15,455	23,743	701	3,157	8,937	15,961	7,024	—2.4	18.9
	1904	111	7,275	120	495	6,660	.....	18,178	455	2,867	8,245	13,421	5,176	13.0	40.2
	1899	120	.....	.....	311	5,895	.....	12,427	322	2,452	5,212	9,575	4,363	.....	.....
Batavia	1909	59	2,346	51	288	2,007	3,204	5,697	349	960	1,781	4,401	2,620	.....	.....
Binghamton	1909	266	7,997	239	935	6,823	7,742	14,214	1,062	3,084	8,726	17,114	8,388	21.1	23.1
	1904	241	6,514	247	631	5,636	.....	11,827	589	2,425	6,421	13,967	7,486	12.5	32.0
	1899	219	.....	.....	465	5,011	.....	8,654	460	1,891	5,362	10,529	5,177	.....	.....
Buffalo	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	3,429	15,678	65,939	105,627	39,688	.....	.....
Cohoes	1909	103	8,596	84	303	8,209	14,291	13,117	439	3,387	8,176	14,831	6,655	18.8	44.1
	1904	98	7,276	93	273	6,910	.....	10,063	304	2,707	6,284	10,290	4,006	—16.5	—6.7
	1899	112	.....	.....	201	8,273	.....	11,136	251	2,971	5,908	11,031	5,123	.....	.....
Corning	1909	45	2,289	48	167	2,074	1,486	3,216	191	1,038	864	3,050	2,186	—11.9	—1.1
	1904	57	2,583	58	170	2,355	.....	2,658	194	1,148	1,075	3,084	2,009	47.2	35.7
	1899	49	.....	.....	113	1,600	.....	1,818	139	740	920	2,273	1,353	.....	.....

[1] Does not include statistics for Lackawanna.

COMPARATIVE SUMMARY FOR CITIES AND TOWNS HAVING 10,000 INHABITANTS OR MORE, BY STATES: 1909, 1904, AND 1899—Continued.

[See note at the head of this table. A minus sign (—) denotes decrease.]

Table 5—Contd. STATE AND 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—Contd.															
Cortland	1909	51	2,622	46	220	2,356	6,661	$5,460	$284	$1,302	$3,574	$6,395	$2,821	.....	.....
Dunkirk	1909	57	3,301	43	502	2,756	5,194	7,079	549	1,414	3,208	6,576	3,368	—18.8	—33.6
	1904	38	3,656	34	227	3,395	.....	5,771	260	2,003	4,749	9,909	5,160	34.0	89.6
	1899	41	.....	.....	116	2,533	.....	4,134	118	1,336	3,015	5,226	2,211	.....	.....
Elmira	1909	154	4,425	136	642	3,647	6,672	10,830	735	1,882	3,590	8,067	4,477	13.7	27.9
	1904	142	3,714	126	380	3,208	.....	6,237	366	1,465	3,001	6,308	3,307	—10.1	—4.4
	1899	144	.....	.....	271	3,570	.....	5,991	242	1,491	3,902	6,597	2,695	.....	.....
Fulton	1909	45	3,014	34	181	2,799	17,963	11,033	250	1,298	4,857	7,867	3,010	.....	.....
Geneva	1909	56	1,824	42	256	1,526	2,705	4,104	307	792	2,991	5,154	2,163	—3.4	4.1
	1904	54	1,812	44	188	1,580	.....	6,441	217	805	2,996	4,952	1,956	33.9	82.3
	1899	49	.....	.....	126	1,180	.....	2,280	150	505	1,650	2,716	1,066	.....	.....
Glens Falls	1909	68	3,048	69	205	2,774	6,772	6,226	289	1,223	2,309	4,877	2,568	35.2	72.6
	1904	49	2,235	57	126	2,052	.....	3,290	164	721	1,292	2,825	1,533	—33.8	—29.3
	1899	57	.....	.....	162	3,101	.....	4,055	156	950	1,859	3,994	2,135	.....	.....
Gloversville	1909	187	6,604	221	642	5,741	6,163	11,969	692	2,791	8,062	14,171	6,109	13.7	51.7
	1904	180	5,603	248	307	5,048	.....	8,027	290	2,031	5,252	9,341	4,089	—35.4	3.0
	1899	183	.....	.....	241	7,813	.....	5,567	239	2,395	5,254	9,070	3,816	.....	.....
Hornell	1909	45	2,459	40	236	2,183	3,349	2,866	239	1,048	1,878	3,648	1,770	—0.8	15.3
	1904	45	2,385	44	141	2,200	.....	2,116	136	974	1,464	3,163	1,699	42.0	30.1
	1899	48	.....	.....	110	1,549	.....	1,767	93	590	1,308	2,431	1,123	.....	.....
Hudson	1909	45	1,451	37	112	1,302	1,515	2,774	127	576	2,063	3,506	1,443	.....	.....
Ithaca	1909	81	1,105	72	160	873	3,045	2,978	144	439	840	1,920	1,080	.....	—7.7
	1904	67	1,120	70	177	873	.....	2,771	191	424	819	2,080	1,261	1.4	38.6
	1899	62	.....	.....	97	861	.....	2,523	78	426	656	1,501	845	.....	.....
Jamestown	1909	156	7,753	142	822	6,789	11,679	16,075	995	3,305	7,384	14,720	7,336	29.6	42.2
	1904	149	5,978	170	571	5,237	.....	10,200	693	2,235	4,251	10,350	6,099	15.7	33.9
	1899	108	.....	.....	378	4,528	.....	8,364	470	1,718	3,794	7,731	3,937	.....	.....
Johnstown	1909	138	3,009	198	222	2,589	3,410	5,204	176	1,175	3,925	6,574	2,649	6.7	44.7
	1904	100	2,745	151	168	2,426	.....	3,680	140	943	2,561	4,543	1,982	—34.3	—11.3
	1899	115	.....	.....	127	3,695	.....	3,589	118	1,153	2,985	5,123	2,138	.....	.....
Kingston	1909	99	3,845	93	471	3,281	4,648	5,924	411	1,366	2,582	5,986	3,404	24.5	24.4
	1904	96	2,981	94	251	2,636	.....	7,119	237	1,096	2,112	4,812	2,700	29.1	21.8
	1899	109	.....	.....	150	2,042	.....	3,211	148	925	1,903	3,952	2,049	.....	.....
Little Falls	1909	55	4,408	58	139	4,211	7,742	6,990	232	1,965	4,923	8,460	3,537	60.7	89.2
	1904	49	2,801	56	124	2,621	.....	4,514	144	1,034	2,535	4,471	1,936	—12.0	9.8
	1899	52	.....	.....	106	2,980	.....	3,953	120	1,049	2,233	4,071	1,838	.....	.....
Lockport	1909	109	2,574	90	346	2,138	14,335	10,227	425	1,130	5,350	8,168	2,818	—8.0	40.6
	1904	109	2,636	103	210	2,323	.....	6,123	255	1,110	3,316	5,808	2,492	—1.5	8.5
	1899	124	.....	.....	224	2,359	.....	5,972	231	1,078	3,097	5,353	2,256	.....	.....
Middletown	1909	59	1,970	62	175	1,733	2,548	3,695	181	902	2,905	4,658	1,753	8.6	38.8
	1904	50	1,762	58	108	1,596	.....	2,298	104	740	1,956	3,356	1,400	14.3	55.7
	1899	51	.....	.....	58	1,396	.....	1,931	59	574	1,325	2,155	830	.....	.....
Mount Vernon	1909	90	1,492	76	209	1,207	1,590	3,202	209	802	1,286	3,376	2,090	80.1	79.9
	1904	54	904	51	183	670	.....	7,284	150	426	785	1,877	1,092	53.0	106.3
	1899	37	.....	.....	93	438	.....	4,057	78	224	328	910	582	.....	.....
Newburgh	1909	104	4,966	96	526	4,344	4,902	8,920	667	2,180	4,843	9,928	5,085	8.2	41.1
	1904	79	4,620	80	527	4,013	.....	6,508	479	1,789	3,276	7,036	3,760	30.5	31.3
	1899	93	.....	.....	281	3,074	.....	4,519	264	1,316	2,648	5,358	2,710	.....	.....
New Rochelle	1909	42	882	39	108	735	620	1,377	113	482	814	1,669	855	42.2	51.3
	1904	28	595	23	55	517	.....	814	48	342	462	1,103	641	161.1	117.1
	1899	25	.....	.....	15	198	.....	392	12	110	278	508	230	.....	.....
New York City	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	.....	.....
Manhattan and Bronx.	1909	19,769	500,299	22,658	77,849	399,792	213,964	822,726	94,972	237,467	725,456	1,431,089	705,633	17.9	37.2
	1904	15,975	410,324	19,387	51,716	339,221	.....	620,526	56,759	182,080	507,030	1,043,252	536,222	18.9	28.7
	1899	14,362	.....	.....	35,661	285,265	.....	511,917	40,724	146,505	398,076	810,808	412,732	.....	.....
Brooklyn	1909	5,218	145,222	5,495	15,844	123,883	147,580	362,337	21,146	68,328	235,132	417,223	182,091	18.0	11.7
	1904	4,182	119,524	4,597	9,932	104,995	.....	313,452	13,521	54,535	230,809	373,463	142,654	20.1	19.1
	1899	4,301	.....	.....	6,826	87,445	.....	263,471	9,097	42,341	206,335	313,617	107,282	.....	.....
Queens	1909	771	27,495	745	2,859	23,891	47,721	145,307	4,407	14,169	113,200	151,680	38,480	60.3	63.2
	1904	513	16,669	507	1,257	14,905	.....	92,977	1,836	8,440	70,403	92,941	22,538	39.5	162.3
	1899	395	.....	.....	912	10,684	.....	67,420	1,264	5,533	23,354	35,428	12,074	.....	.....
Richmond	1909	180	7,494	157	901	6,436	19,738	33,983	1,549	3,734	18,367	29,701	11,334	15.0	75.1
	1904	169	6,435	159	681	5,595	.....	15,991	912	3,073	9,787	16,867	7,080	7.8	29.6
	1899	185	.....	.....	384	5,192	.....	10,430	571	2,277	6,445	13,017	6,572	.....	.....
Niagara Falls	1909	156	7,214	117	1,008	6,089	95,792	37,239	1,441	3,588	14,271	28,652	14,381	33.1	69.4
	1904	85	5,132	54	504	4,574	.....	27,116	591	2,348	9,192	16,916	7,724	61.1	98.1
	1899	93	.....	.....	326	2,840	.....	14,344	384	1,318	4,888	8,540	3,652	.....	.....

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								Expressed in thousands.							
New York—Contd.															
North Tonawanda	1909	81	3,146	56	266	2,824	15,888	$8,274	$300	$1,582	$6,389	$9,600	$3,211	.....	.....
Ogdensburg	1909	75	1,463	61	143	1,259	3,404	2,617	148	517	3,508	4,948	1,440	35.5	61.9
	1904	55	1,064	46	89	929	.....	2,722	89	341	2,263	3,057	794	14.8	35.2
	1899	74	.....	.....	86	809	.....	1,664	68	306	1,501	2,261	760	.....	.....
Olean	1909	54	2,671	42	370	2,259	5,202	8,952	358	1,339	7,728	10,005	2,277	.....	.....
Ossining	1909	34	477	24	97	356	986	2,063	125	243	466	1,329	863	.....	.....
Oswego	1909	81	4,247	58	372	3,817	9,753	11,249	453	1,813	6,103	10,413	4,310	1.9	27.2
	1904	77	4,076	50	280	3,746	.....	6,710	331	1,462	4,717	7,592	2,875	8.4	1.4
	1899	75	.....	.....	251	3,457	.....	7,002	339	1,378	4,312	7,487	3,175	.....	.....
Peekskill	1909	52	2,384	46	283	2,055	3,133	3,828	340	1,241	2,942	7,888	4,946	5.0	8.8
	1904	46	2,158	45	156	1,957	.....	3,895	218	1,025	2,282	7,252	4,970	52.8	306.7
	1899	37	.....	.....	86	1,281	.....	1,427	95	620	761	1,783	1,022	.....	.....
Plattsburg	1909	41	1,243	33	161	1,049	5,739	2,694	158	513	1,745	3,137	1,392	.....	.....
Port Chester	1909	34	2,334	30	182	2,122	3,175	5,417	237	1,040	4,554	6,243	1,689	.....	.....
Poughkeepsie	1909	111	4,037	102	636	3,299	3,326	10,281	847	1,659	3,867	9,151	5,284	—12.6	27.0
	1904	108	4,229	105	349	3,775	.....	6,657	357	1,641	3,533	7,207	3,674	34.3	29.2
	1899	118	.....	.....	185	2,810	.....	5,182	231	1,236	2,981	5,576	2,595	.....	.....
Rensselaer	1909	33	842	28	51	763	1,263	2,146	151	364	1,166	2,296	1,130	.....	.....
Rochester	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	28.9
	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	.....	.....
Rome	1909	119	3,995	112	250	3,633	8,844	8,903	355	1,851	10,204	14,423	4,219	12.2	67.1
	1904	89	3,479	83	187	3,209	.....	5,722	247	1,392	5,694	8,631	2,937	41.1	55.5
	1899	87	.....	.....	135	2,274	.....	3,509	147	869	3,462	5,549	2,087	.....	.....
Saratoga Springs	1909	39	1,065	30	202	833	1,718	4,350	251	464	883	2,337	1,454	41.2	36.7
	1904	35	668	28	50	590	.....	3,485	57	284	702	1,709	1,007	—2.0	28.1
	1899	44	.....	.....	157	602	.....	1,490	120	211	678	1,334	656	.....	.....
Schenectady	1909	134	17,728	120	2,677	14,931	49,181	51,816	3,086	10,002	21,952	38,165	16,213	4.3	15.4
	1904	103	15,216	129	771	14,316	.....	22,051	915	9,382	16,497	33,084	16,587	68.5	37.9
	1899	83	.....	.....	303	8,494	.....	13,606	297	4,966	9,925	17,605	7,680	.....	.....
Syracuse	1909	738	21,710	655	2,907	18,148	20,796	51,726	3,313	10,422	21,776	49,435	27,659	24.7	42.5
	1904	637	16,926	650	1,722	14,554	.....	38,653	1,954	7,116	16,082	34,687	18,605	23.2	30.7
	1899	630	.....	.....	1,264	11,809	.....	28,928	1,316	5,303	12,548	26,546	13,998	.....	.....
Troy	1909	363	22,149	352	1,777	20,020	18,887	39,309	2,196	9,407	15,626	37,980	22,354	4.7	19.2
	1904	311	20,833	310	1,409	19,114	.....	32,697	1,542	7,853	13,746	31,861	18,115	—16.7	13.9
	1899	327	.....	.....	972	22,933	.....	25,274	1,268	8,876	11,462	28,739	17,277	.....	.....
Utica	1909	317	14,634	276	1,205	13,153	21,874	27,796	1,550	5,964	16,646	31,199	14,553	20.9	36.4
	1904	333	12,154	335	937	10,882	.....	21,184	1,084	4,477	12,774	22,880	10,106	22.3	36.8
	1899	311	.....	.....	788	8,898	.....	17,898	736	3,276	8,194	16,479	8,285	.....	.....
Watertown	1909	107	3,834	87	456	3,291	13,543	18,662	592	1,798	3,821	8,527	4,706	9.0	17.6
	1904	85	3,365	74	271	3,020	.....	10,869	372	1,612	3,342	7,251	3,909	—6.3	5.3
	1899	91	.....	.....	206	3,223	.....	7,938	267	1,589	3,708	6,888	3,180	.....	.....
Watervliet	1909	36	880	33	94	753	904	1,423	127	302	816	1,669	853	—32.2	—4.0
	1904	36	1,227	33	83	1,111	.....	1,353	115	479	839	1,738	899	11.1	15.3
	1899	41	.....	.....	62	1,000	.....	1,693	78	374	733	1,507	774	.....	.....
White Plains	1909	33	333	28	56	249	404	2,095	54	180	372	816	444	.....	.....
Yonkers	1909	158	13,746	150	885	12,711	16,978	58,769	1,298	6,726	43,202	59,334	16,132	30.9	76.9
	1904	106	10,347	104	464	9,779	.....	33,731	721	4,519	28,330	38,549	10,219	29.4	93.9
	1899	107	.....	.....	308	7,555	.....	12,239	437	2,264	9,542	17,304	7,762	.....	.....
North Carolina:															
7 cities	1909	453	21,058	299	1,962	18,797	32,764	46,268	2,155	5,775	29,817	61,171	31,354	.....	.....
6 cities	1904	323	12,510	277	1,080	11,153	.....	19,773	1,017	3,056	11,164	23,856	12,692	.....	.....
6 cities	1899	256	.....	.....	718	9,264	.....	12,317	673	2,063	7,391	14,531	7,140	.....	.....
Asheville	1909	52	1,148	43	121	984	2,095	2,837	140	359	2,295	3,250	955	24.2	69.4
	1904	45	910	51	67	792	.....	1,522	66	229	1,247	1,918	671	—1.5	47.5
	1899	37	.....	.....	45	804	.....	1,174	35	225	821	1,300	479	.....	.....
Charlotte	1909	108	4,705	54	452	4,199	12,384	9,451	522	1,557	6,531	10,460	3,929	88.0	115.7
	1904	73	2,537	51	252	2,234	.....	4,850	239	693	2,869	4,850	1,981	—19.8	15.9
	1899	57	.....	.....	175	2,787	.....	3,803	167	621	2,604	4,187	1,583	.....	.....
Durham	1909	61	4,030	45	267	3,718	5,257	15,389	302	1,087	9,819	23,271	13,461	.....	.....
Greensboro	1909	61	1,132	45	135	952	1,545	1,696	131	338	1,196	2,031	835	—13.3	16.5
	1904	63	1,261	60	103	1,098	.....	1,548	71	317	978	1,744	766	62.2	98.3
	1899	43	.....	.....	64	677	.....	855	47	152	508	926	418	.....	.....
Raleigh	1909	55	1,249	43	183	1,023	2,970	2,027	174	384	1,276	2,376	1,100	74.9	113.5
	1904	42	719	30	104	585	.....	804	78	226	512	1,087	575	8.6	14.3
	1899	39	.....	.....	104	549	.....	728	65	220	433	947	514	.....	.....
Wilmington	1909	64	1,386	44	129	1,213	4,580	2,022	123	470	1,903	3,005	1,102	—23.9	3.5
	1904	53	1,794	44	156	1,594	.....	1,837	130	605	1,715	2,904	1,189	2.6	27.2
	1899	50	.....	.....	92	1,553	.....	1,758	74	476	1,392	2,283	891	.....	.....

COMPARATIVE SUMMARY FOR CITIES AND TOWNS HAVING 10,000 INHABITANTS OR MORE, BY STATES: 1909, 1904, AND 1899—Continued.

[See note at the head of this table. A minus sign (—) denotes decrease.]

Table 5—Contd. STATE AND 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.							
North Carolina—Con.															
Winston	1909	52	7,408	25	675	6,708	3,933	$12,856	$763	$1,580	$6,896	$16,778	$9,882	38.3	47.8
	1904	47	5,289	41	398	4,850	.....	9,212	433	986	3,843	11,353	7,510	67.6	132.3
	1899	30	.....	.....	238	2,894	.....	3,969	282	369	1,633	4,888	3,255	.....	.....
North Dakota:															
2 cities	1909	99	1,219	74	285	860	1,562	3,453	304	543	2,661	4,387	1,726	.....	.....
Fargo	1909	61	746	43	193	510	789	2,077	192	325	1,410	2,477	1,067	.....	.....
Grand Forks	1909	38	473	31	92	350	773	1,376	112	218	1,251	1,910	659	.....	.....
Ohio: [1]															
36 cities	1909	8,765	378,363	7,260	47,744	323,359	1,026,116	960,362	57,047	179,801	607,301	1,077,617	470,316	.....	.....
28 cities	1904	7,297	287,636	6,695	29,503	251,438	.....	597,436	32,999	128,250	368,734	677,497	308,763	.....	.....
28 cities	1899	6,990	.....	.....	21,830	220,141	.....	423,277	22,107	98,923	289,300	540,824	251,524	.....	.....
Akron	1909	246	19,023	159	3,033	15,831	36,263	58,216	3,004	8,936	43,071	73,158	30,087	64.5	118.0
	1904	186	10,706	128	952	9,626	.....	28,638	1,115	4,893	20,410	33,559	13,149	16.6	52.4
	1899	178	.....	.....	1,093	8,259	.....	23,725	992	3,615	12,720	22,016	9,296	.....	.....
Alliance	1909	44	3,026	35	467	2,524	3,453	7,212	447	1,462	2,853	6,135	3,282	.....	.....
Ashtabula	1909	44	1,601	31	99	1,471	2,379	2,076	138	814	2,084	3,459	1,375	73.9	82.5
	1904	36	934	32	56	846	.....	1,286	57	456	996	1,895	899	126.8	114.4
	1899	29	.....	.....	46	373	.....	707	34	165	527	884	357	.....	.....
Bellaire	1909	36	2,846	44	205	2,597	17,790	6,427	225	1,412	7,159	10,091	2,932	.....	.....
Cambridge	1909	32	1,406	30	146	1,230	5,055	2,379	105	919	2,885	4,291	1,406	.....	.....
Canton	1909	204	11,313	129	1,220	9,964	27,016	25,342	1,347	5,719	14,644	28,583	13,939	67.8	169.9
	1904	158	6,666	131	597	5,938	.....	12,850	636	2,964	4,594	10,591	5,997	15.3	10.6
	1899	164	.....	.....	504	5,149	.....	9,055	497	2,345	4,349	9,575	5,226	.....	.....
Chillicothe	1909	57	1,872	59	139	1,674	3,558	2,364	135	707	3,038	4,345	1,307	7.8	38.1
	1904	64	1,751	65	133	1,553	.....	1,694	114	570	1,928	3,147	1,219	39.7	94.7
	1899	46	.....	.....	73	1,112	.....	1,054	44	423	878	1,616	738	.....	.....
Cincinnati	1909	2,184	72,488	2,015	10,281	60,192	88,597	150,254	12,759	31,101	101,932	194,516	92,584	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	.....	.....
Cleveland	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	.....	.....
Columbus	1909	586	20,523	435	3,660	16,428	35,780	48,747	3,781	8,892	25,204	49,032	23,828	14.5	24.0
	1904	459	17,127	422	2,355	14,350	.....	29,225	2,337	7,287	19,244	39,530	20,286	4.1	13.8
	1899	408	.....	.....	1,573	13,787	.....	23,462	1,515	6,028	18,252	34,748	16,496	.....	.....
Dayton	1909	513	24,740	416	2,775	21,549	31,501	61,316	3,572	12,451	27,528	60,378	32,850	26.1	52.5
	1904	431	19,836	406	2,337	17,093	.....	32,901	2,707	8,693	18,505	39,597	21,092	18.6	27.7
	1899	425	.....	.....	1,378	14,408	.....	26,283	1,514	6,909	14,330	31,015	16,685	.....	.....
East Liverpool	1909	82	5,254	49	332	4,873	5,528	7,988	448	2,764	2,521	6,629	4,108	—6.8	3.0
	1904	81	5,586	56	302	5,228	.....	6,972	363	2,703	2,107	6,437	4,330	25.3	35.5
	1899	75	.....	.....	283	4,171	.....	4,960	288	1,976	1,463	4,749	3,286	.....	.....
Elyria	1909	58	3,117	30	414	2,673	9,058	7,324	464	1,573	4,495	8,065	3,570	.....	.....
Findlay	1909	74	1,623	67	180	1,376	2,574	2,955	186	574	2,094	3,487	1,393	2.5	19.2
	1904	71	1,522	78	101	1,343	.....	2,659	105	625	1,579	2,925	1,346	21.3	73.5
	1899	80	.....	.....	104	1,107	.....	1,693	85	453	751	1,686	935	.....	.....
Hamilton	1909	125	7,770	81	794	6,895	22,563	24,629	1,318	3,798	9,640	18,184	8,544	12.9	31.7
	1904	113	6,679	97	475	6,107	.....	18,874	774	3,321	6,384	13,811	7,427	18.7	29.6
	1899	97	.....	.....	273	5,147	.....	10,243	366	2,316	5,003	10,656	5,653	.....	.....
Ironton	1909	63	2,119	51	148	1,920	15,548	4,993	198	888	4,994	7,118	2,124	6.7	49.7
	1904	57	1,971	46	125	1,800	.....	3,356	144	824	3,423	4,755	1,332	14.1	—12.1
	1899	53	.....	.....	93	1,577	.....	3,212	106	699	3,145	5,411	2,266	.....	.....
Lancaster	1909	42	1,657	48	77	1,532	2,453	1,459	75	677	3,051	4,074	1,023	.....	.....
Lima	1909	85	3,899	79	213	3,607	3,264	5,488	363	2,024	3,869	7,754	3,885	32.0	60.6
	1904	77	3,005	73	199	2,733	.....	3,894	196	1,322	2,255	4,828	2,573	38.0	—22.4
	1899	76	.....	.....	183	1,980	.....	5,361	158	942	3,936	6,223	2,287	.....	.....
Lorain	1909	57	7,347	36	614	6,697	208,992	34,387	762	4,788	24,222	38,987	14,765	115.9	169.0
	1904	43	3,416	26	288	3,102	.....	10,599	255	2,832	9,708	14,491	4,783	38.9	52.8
	1899	26	.....	.....	134	2,233	.....	12,684	137	1,102	6,485	9,481	2,996	.....	.....
Mansfield	1909	121	3,901	120	577	3,204	5,077	8,539	585	1,472	4,356	8,173	3,817	6.1	11.1
	1904	109	3,509	112	466	3,021	.....	8,295	465	1,309	3,523	7,354	3,831	15.2	21.0
	1899	95	.....	.....	316	2,622	.....	5,457	296	973	2,705	6,076	3,371	.....	.....
Marietta	1909	66	1,549	59	202	1,288	2,742	3,275	190	594	1,787	3,214	1,427	—2.0	23.7
	1904	73	1,515	56	145	1,314	.....	2,557	139	610	1,366	2,599	1,233	—13.0	8.4
	1899	77	.....	.....	125	1,511	.....	1,935	112	590	1,150	2,398	1,248	.....	.....
Marion	1909	55	3,028	40	369	2,619	3,686	7,864	416	1,405	2,577	5,667	3,090	52.2	75.6
	1904	47	1,965	32	212	1,721	.....	3,395	230	865	1,352	3,228	1,876	47.0	33.1
	1899	34	.....	.....	121	1,171	.....	2,917	114	556	966	2,426	1,460	.....	.....

[1] Does not include statistics for Lakewood.

COMPARATIVE SUMMARY FOR CITIES AND TOWNS HAVING 10,000 INHABITANTS OR MORE, BY STATES: 1909, 1904, AND 1899—Continued.

[See note at the head of this table. A minus sign (−) denotes decrease.]

Table 5—Contd. STATE AND 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.							
Ohio—Continued.															
Massillon	1909	56	2,193	37	222	1,934	4,730	$7,788	$282	$1,127	$2,290	$4,788	$2,498	−3.1	29.2
	1904	52	2,177	46	136	1,995	.....	5,745	178	1,158	1,582	3,707	2,125	35.3	34.8
	1899	49	.....	.....	87	1,474	.....	3,975	81	745	1,263	2,749	1,486	.....	.....
Middletown	1909	41	2,992	22	394	2,576	9,304	10,564	473	1,389	7,950	16,517	8,567	.....	.....
Newark	1909	72	4,282	63	306	3,913	8,630	9,036	315	1,958	3,982	7,851	3,869	7.9	39.9
	1904	78	3,936	83	226	3,627	.....	3,834	216	2,130	2,433	5,613	3,180	74.8	95.9
	1899	69	.....	.....	147	2,075	.....	1,681	122	810	1,180	2,879	1,699	.....	.....
Norwood	1909	49	4,445	31	507	3,907	6,381	13,368	632	2,081	4,021	9,684	5,663	.....	.....
Piqua	1909	82	3,073	74	316	2,683	5,062	5,444	402	1,292	3,852	6,931	3,079	31.3	71.7
	1904	76	2,282	62	176	2,044	.....	3,196	210	947	1,908	4,036	2,128	4.6	−27.3
	1899	68	.....	.....	193	1,955	.....	3,516	201	914	3,610	5,552	1,942	.....	.....
Portsmouth	1909	75	4,319	54	537	3,728	4,028	6,385	680	1,459	3,894	7,277	3,383	−8.4	9.5
	1904	81	4,500	68	360	4,072	.....	4,670	318	1,479	3,520	6,645	3,125	−2.0	−0.2
	1899	100	.....	.....	365	4,153	.....	3,826	302	1,341	3,405	6,659	3,254	.....	.....
Sandusky	1909	91	2,518	59	341	2,118	4,856	6,495	353	1,006	*2,835	5,947	3,112	−8.8	21.9
	1904	93	2,666	78	265	2,323	.....	6,727	258	1,028	2,136	4,879	2,743	59.9	72.2
	1899	81	.....	.....	142	1,453	.....	4,453	135	571	1,207	2,834	1,627	.....	.....
Springfield	1909	195	8,634	161	1,068	7,405	10,179	22,485	1,262	3,985	8,919	19,246	10,327	18.3	43.8
	1904	157	7,215	103	854	6,258	.....	19,739	937	3,253	5,762	13,382	7,620	−0.7	10.4
	1899	164	.....	.....	1,282	6,299	.....	13,844	1,102	3,015	5,289	12,116	6,827	.....	.....
Steubenville	1909	55	4,638	55	316	4,267	37,748	18,424	403	3,203	14,443	21,187	6,744	2.0	71.3
	1904	72	4,517	78	255	4,184	.....	12,627	321	2,328	8,243	12,370	4,127	136.0	172.0
	1899	54	.....	.....	88	1,773	.....	2,303	74	734	2,406	4,547	2,141	.....	.....
Tiffin	1909	75	1,970	78	260	1,632	3,257	3,727	224	828	1,252	3,254	2,002	−0.8	33.7
	1904	87	1,874	94	135	1,645	.....	2,714	125	664	1,000	2,434	1,434	32.9	28.0
	1899	75	.....	.....	100	1,238	.....	2,252	75	524	808	1,902	1,094	.....	.....
Toledo	1909	760	22,900	665	3,357	18,878	43,946	58,319	3,632	9,911	34,084	61,230	27,146	20.3	37.6
	1904	597	18,504	521	2,286	15,697	.....	38,445	2,285	8,099	25,466	44,501	19,035	23.1	39.2
	1899	445	.....	.....	1,162	12,747	.....	23,788	1,143	5,576	19,397	31,976	12,579	.....	.....
Warren	1909	68	2,174	41	335	1,798	5,530	4,511	421	911	3,064	5,988	2,924	.....	.....
Youngstown	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	.....	.....
Zanesville	1909	109	3,586	95	341	3,150	8,783	6,025	351	1,793	5,504	9,145	3,641	1.7	44.1
	1904	99	3,468	91	279	3,098	.....	4,995	268	1,590	3,291	6,347	3,056	−9.0	11.2
	1899	115	.....	.....	323	3,405	.....	4,120	246	1,255	3,086	5,708	2,622	.....	.....
Oklahoma:															
8 cities	1909	486	5,918	445	1,089	4,384	14,416	12,061	1,004	2,841	12,895	20,005	7,110	.....	.....
2 cities	1904	123	1,346	99	194	1,053	.....	4,716	188	608	3,063	4,871	1,808	.....	.....
2 cities	1899	69	.....	.....	72	461	.....	844	56	200	854	1,494	640	.....	.....
Chickasha	1909	30	465	30	71	364	1,488	1,117	73	242	1,285	1,867	582	.....	.....
Enid	1909	65	455	55	97	303	1,722	1,097	76	191	1,807	2,453	646	.....	.....
Guthrie	1909	34	385	32	71	282	1,281	1,092	76	163	947	1,443	496	−15.3	20.2
	1904	34	410	28	49	333	.....	794	46	186	701	1,200	499	38.2	84.9
	1899	33	.....	.....	39	241	.....	371	32	99	337	649	312	.....	.....
McAlester	1909	29	240	28	32	180	895	619	29	101	195	451	256	.....	.....
Muskogee	1909	64	554	61	112	381	1,421	969	106	241	1,478	2,279	801	.....	.....
Oklahoma City	1909	171	2,087	148	541	1,398	4,132	4,482	483	973	5,146	7,868	2,722	94.2	114.3
	1904	89	936	71	145	720	.....	3,922	142	422	2,362	3,671	1,309	227.3	334.4
	1899	36	.....	.....	33	220	.....	473	24	101	517	845	328	.....	.....
Shawnee	1909	40	1,147	35	98	1,014	1,891	1,532	89	615	1,163	2,081	918	.....	.....
Tulsa	1909	53	585	56	67	462	1,586	1,153	72	315	874	1,563	689	.....	.....
Oregon:															
2 cities	1909	711	15,680	820	2,049	12,811	33,810	39,657	2,339	9,346	27,253	49,069	21,816	.....	.....
1 city	1904	437	9,594	398	1,025	8,171	.....	19,725	1,266	5,342	17,024	28,651	11,627	.....	.....
1 city	1899	408	.....	.....	663	5,380	.....	11,633	732	2,704	10,177	16,904	6,727	.....	.....
Portland	1909	649	14,891	763	1,914	12,214	32,122	37,996	2,241	8,979	26,076	46,861	20,785	49.5	63.6
	1904	437	9,594	398	1,025	8,171	.....	19,725	1,266	5,342	17,024	28,651	11,627	51.9	69.5
	1899	408	.....	.....	663	5,380	.....	11,633	732	2,704	10,177	16,904	6,727	.....	.....
Salem	1909	62	789	57	135	597	1,658	1,661	98	367	1,177	2,208	1,031	.....	.....
Pennsylvania:															
63 cities	1909	15,036	633,895	15,836	65,925	552,134	1,510,673	1,674,719	76,983	286,382	996,512	1,662,898	666,386	.....	.....
42 cities	1904	12,417	524,692	13,634	43,346	467,712	.....	1,166,367	48,186	224,511	670,511	1,171,819	501,308	.....	.....
42 cities	1899	12,388	.....	.....	31,483	431,181	.....	909,225	33,677	194,292	622,796	1,074,530	451,734	.....	.....
Allentown	1909	274	12,628	314	833	11,481	19,101	21,569	874	5,061	15,581	26,263	10,682	27.8	55.9
	1904	257	9,859	312	563	8,984	.....	13,455	524	3,312	9,873	16,841	6,968	22.1	12.3
	1899	216	.....	.....	356	7,355	.....	11,343	310	2,634	8,977	14,990	6,013	.....	.....

COMPARATIVE SUMMARY FOR CITIES AND TOWNS HAVING 10,000 INHABITANTS OR MORE, BY STATES: 1909, 1904, AND 1899—Continued.

[See note at the head of this table. A minus sign (—) denotes decrease.]

Table 5—Contd. STATE AND 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.							
Pennsylvania—Con.															
Altoona	1909	44	9,100	41	650	8,409	9,158	$16,094	$649	$5,750	$9,134	$16,763	$7,629	—11.9	16.8
	1904	73	10,069	81	448	9,540	.....	11,238	359	5,564	7,248	14,350	7,102	45.1	27.3
	1899	57	.....	.....	303	6,573	.....	6,380	210	3,717	6,883	11,273	4,390	.....	.....
Beaver Falls	1909	44	2,456	34	242	2,180	5,141	7,503	287	1,218	3,015	6,400	3,385	—2.3	30.4
	1904	42	2,492	26	234	2,232	.....	6,518	280	1,123	2,242	4,908	2,666	2.7	—21.2
	1899	47	.....	.....	142	2,174	.....	6,521	174	971	3,859	6,229	2,370	.....	.....
Bethlehem[1]	1909	49	1,727	54	90	1,583	3,086	3,300	105	593	2,330	3,712	1,382	.....	.....
Braddock	1909	41	1,218	36	142	1,040	7,332	5,369	160	785	3,347	5,094	1,747	—15.1	23.5
	1904	38	1,365	34	106	1,225	.....	3,283	118	756	2,738	4,125	1,387	50.3	0.8
	1899	30	.....	.....	64	815	.....	2,472	55	526	2,565	4,091	1,526	.....	.....
Bradford	1909	82	1,650	104	228	1,318	3,856	4,226	229	655	2,442	3,887	1,445	—11.5	21.8
	1904	80	1,734	91	153	1,490	.....	3,276	161	841	1,593	3,192	1,599	24.2	2.1
	1899	65	.....	.....	74	1,200	.....	2,122	80	697	1,635	3,125	1,490	.....	.....
Butler	1909	61	3,344	102	419	2,823	10,405	16,769	457	1,571	7,594	11,058	3,464	34.9	61.9
	1904	48	2,489	74	322	2,093	.....	9,910	374	1,114	4,660	6,832	2,172	164.3	387.0
	1899	41	.....	.....	33	792	.....	1,419	44	416	520	1,403	883	.....	.....
Carbondale	1909	34	1,636	29	104	1,503	1,407	2,307	123	636	1,253	2,523	1,270	1.9	8.9
	1904	32	1,631	22	134	1,475	.....	2,679	171	606	1,113	2,316	1,203	44.2	102.1
	1899	26	.....	.....	67	1,023	.....	1,452	68	340	470	1,146	676	.....	.....
Carlisle	1909	50	1,590	148	108	1,334	1,735	2,054	144	511	1,431	2,496	1,065	.....	.....
Carnegie	1909	19	509	17	70	422	1,245	2,371	94	275	2,441	3,099	658	.....	.....
Chambersburg	1909	57	1,631	56	211	1,364	3,126	3,484	177	599	1,170	2,456	1,286	.....	.....
Chester	1909	128	7,867	102	779	6,986	17,131	23,928	965	3,392	11,576	19,373	7,797	—1.1	16.4
	1904	131	7,612	120	431	7,061	.....	22,070	607	3,417	10,422	16,645	6,223	1.3	11.4
	1899	121	.....	.....	307	6,972	.....	17,672	486	3,131	8,571	14,940	6,369	.....	.....
Columbia	1909	47	2,944	45	126	2,773	6,589	3,590	130	1,107	2,671	4,807	2,136	—8.6	23.7
	1904	44	3,187	38	115	3,034	.....	2,994	105	943	2,453	3,887	1,434	20.4	—7.8
	1899	53	.....	.....	83	2,519	.....	2,256	61	881	2,572	4,214	1,642	.....	.....
Connellsville	1909	39	1,269	28	206	1,035	4,526	3,275	194	576	817	1,971	1,154	.....	.....
Dubois	1909	37	1,210	37	158	1,015	3,199	2,394	133	507	926	1,890	964	.....	.....
Dunmore	1909	18	1,423	16	99	1,308	1,266	938	133	603	670	1,851	1,181	15.4	26.8
	1904	15	1,219	9	77	1,133	.....	1,041	114	464	550	1,460	910	84.5	29.0
	1899	18	.....	.....	50	614	.....	1,021	47	276	490	1,132	642	.....	.....
Easton	1909	126	3,769	138	243	3,388	5,965	7,687	246	1,524	3,424	6,915	3,491	24.6	36.7
	1904	97	3,047	106	221	2,720	.....	4,336	190	1,180	2,684	5,059	2,375	—15.1	—6.7
	1899	106	.....	.....	147	3,202	.....	4,346	129	1,200	3,193	5,425	2,232	.....	.....
Erie	1909	391	11,142	364	982	9,796	22,038	30,620	1,289	5,101	12,064	24,226	12,162	16.4	30.0
	1904	261	9,337	233	689	8,415	.....	22,963	819	4,363	9,427	18,639	9,212	4.8	13.0
	1899	260	.....	.....	617	8,032	.....	19,063	655	3,925	8,208	16,493	8,285	.....	.....
Greensburg	1909	47	393	50	33	310	738	938	32	163	330	726	396	.....	.....
Harrisburg	1909	199	11,024	190	1,091	9,743	22,355	22,925	1,068	4,541	14,083	22,725	8,642	22.5	37.1
	1904	175	8,601	169	477	7,955	.....	15,921	500	3,673	10,327	16,571	6,244	23.5	10.5
	1899	175	.....	.....	377	6,439	.....	7,997	382	2,528	9,005	14,996	5,991	.....	.....
Hazleton	1909	77	2,998	84	232	2,682	3,112	5,209	250	940	2,702	4,707	2,005	90.8	115.3
	1904	62	1,575	65	104	1,406	.....	2,575	107	434	1,130	2,186	1,056	71.0	118.8
	1899	45	.....	.....	72	822	.....	1,320	50	234	293	999	706	.....	.....
Homestead	1909	26	248	17	60	171	890	1,273	49	111	322	659	337	—44.3	—7.6
	1904	27	369	27	35	307	.....	733	45	171	265	713	448	87.2	168.0
	1899	15	.....	.....	12	164	.....	173	10	93	101	266	165	.....	.....
Johnstown	1909	97	11,671	121	976	10,574	119,508	47,242	1,003	6,304	32,348	48,106	15,758	52.9	66.5
	1904	82	7,716	99	703	6,914	.....	59,589	729	3,865	19,755	28,892	9,137	23.5	35.2
	1899	66	.....	.....	367	5,600	.....	16,437	433	2,965	13,908	21,365	7,457	.....	.....
Lancaster	1909	306	8,981	317	707	7,957	10,037	17,443	813	3,236	8,841	15,979	7,138	—8.5	9.1
	1904	300	9,432	324	415	8,693	.....	12,395	415	3,089	7,598	14,648	7,050	15.8	14.9
	1899	284	.....	.....	362	7,504	.....	9,470	356	2,569	6,453	12,750	6,297	.....	.....
Lebanon	1909	109	6,077	105	381	5,591	21,717	12,276	409	2,441	6,778	11,429	4,651	27.4	63.8
	1904	103	4,841	111	343	4,387	.....	7,831	304	1,791	3,279	6,978	3,699	—2.0	—8.9
	1899	97	.....	.....	177	4,475	.....	5,675	175	1,779	4,745	7,658	2,913	.....	.....
McKeesport	1909	68	9,093	58	789	8,246	49,935	43,433	891	6,031	27,296	42,495	15,199	—6.8	84.3
	1904	75	9,618	74	696	8,848	.....	16,286	778	5,521	12,310	23,054	10,744	22.7	—36.1
	1899	67	.....	.....	473	7,213	.....	15,088	445	4,147	21,835	36,058	14,223	.....	.....
McKees Rocks	1909	31	3,903	21	291	3,591	8,872	10,328	335	2,309	5,407	9,787	4,380	.....	.....
Mahanoy City	1909	33	666	44	32	590	753	994	20	166	383	868	485	147.9	101.4
	1904	29	293	33	22	238	.....	467	41	93	133	431	298	—20.9	7.5
	1899	29	.....	.....	23	301	.....	511	15	74	113	401	288	.....	.....
Meadville	1909	62	2,506	54	404	2,048	2,539	2,725	337	974	1,716	3,559	1,843	57.5	71.5
	1904	52	1,520	63	157	1,300	.....	1,761	115	602	964	2 075	1,111	8.2	24.4
	1899	46	.....	.....	95	1,201	.....	1,168	74	535	889	1,668	779	.....	.....

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

COMPARATIVE SUMMARY FOR CITIES AND TOWNS HAVING 10,000 INHABITANTS OR MORE, BY STATES: 1909, 1904, AND 1899—Continued.

[See note at the head of this table. A minus sign (—) denotes decrease.]

Table 5—Contd. STATE AND 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.							
Pennsylvania—Con.															
Mount Carmel	1909	20	651	28	23	600	322	$435	$19	$144	$416	$785	$369	204.6	26.6
	1904	19	238	29	12	197	.....	317	11	79	427	620	193	80.7	57.8
	1899	9	.....	.....	11	109	.....	334	7	39	260	393	133	.....	.....
Nanticoke	1909	17	378	15	15	348	447	420	24	120	180	423	243	52.0	18.2
	1904	12	263	13	21	229	.....	314	16	65	160	358	198	63.6	15.5
	1899	17	.....	.....	29	140	.....	291	6	44	182	310	128	.....	.....
New Castle	1909	82	6,063	73	651	5,339	64,697	27,028	753	3,870	30,974	38,038	7,064	—1.7	31.5
	1904	71	6,050	69	548	5,433	.....	18,490	611	3,430	21,212	28,923	7,711	20.0	44.5
	1899	71	.....	.....	184	4,529	.....	12,953	239	2,988	13,146	20,016	6,870	.....	.....
Norristown	1909	111	4,223	104	301	3,818	5,713	6,984	378	1,553	3,274	7,413	4,139	8.6	25.1
	1904	84	3,781	66	198	3,517	.....	5,307	226	1,315	2,867	5,925	3,058	19.5	44.3
	1899	77	.....	.....	154	2,944	.....	3,674	126	977	2,159	4,107	1,948	.....	.....
Oil City	1909	34	1,593	44	211	1,338	2,467	3,847	227	903	2,300	4,122	1,822	—14.1	33.7
	1904	36	1,755	31	167	1,557	.....	4,387	171	928	1,334	3,082	1,748	—7.5	—40.3
	1899	42	.....	.....	105	1,683	.....	3,804	138	878	3,688	5,164	1,476	.....	.....
Philadelphia	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	.....	.....
Phoenixville	1909	31	2,822	37	186	2,599	15,152	8,765	235	1,180	3,717	5,876	2,159	.....	.....
Pittsburgh	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	.....	.....
Pittston	1909	40	942	39	111	792	2,133	2,337	92	316	1,067	1,969	902	—4.6	33.5
	1904	40	937	44	63	830	.....	1,614	72	307	728	1,475	747	132.5	47.8
	1899	27	.....	.....	41	357	.....	902	39	158	623	998	375	.....	.....
Plymouth	1909	23	986	21	57	908	1,412	2,544	49	281	704	1,179	475	9.8	37.1
	1904	23	906	23	56	827	.....	669	34	210	447	860	413	9.4	61.4
	1899	24	.....	.....	37	756	.....	470	20	139	241	533	292	.....	.....
Pottstown	1909	78	4,123	84	389	3,650	17,415	9,961	494	1,722	8,999	12,505	3,506	5.6	53.5
	1904	77	3,825	97	271	3,457	.....	6,420	295	1,516	5,438	8,145	2,707	28.9	10.7
	1899	65	.....	.....	159	2,681	.....	4,683	135	1,166	4,845	7,357	2,512	.....	.....
Pottsville	1909	91	3,342	100	370	2,872	15,262	13,982	341	1,326	5,927	9,138	3,211	50.8	57.4
	1904	79	2,127	87	136	1,904	.....	3,304	150	759	4,025	5,806	1,781	12.1	20.2
	1899	77	.....	.....	139	1,699	.....	3,107	105	561	3,430	4,830	1,400	.....	.....
Reading	1909	482	26,407	517	1,745	24,145	43,193	41,053	1,810	11,011	29,848	51,135	21,287	33.7	67.7
	1904	402	19,763	441	1,269	18,053	.....	27,123	1,098	7,265	16,709	30,491	13,782	6.9	—6.7
	1899	403	.....	.....	941	16,892	.....	25,934	855	6,583	16,996	32,682	15,686	.....	.....
Scranton	1909	293	14,242	270	1,121	12,851	20,564	22,494	1,337	5,146	14,302	26,385	12,083	17.8	29.0
	1904	258	11,901	243	746	10,912	.....	19,161	840	4,428	11,253	20,453	9,200	—2.0	—17.3
	1899	247	.....	.....	550	11,139	.....	18,984	710	4,388	17,220	24,742	7,522	.....	.....
Shamokin	1909	39	1,744	34	87	1,623	1,862	3,227	121	499	2,129	3,544	1,415	80.9	145.4
	1904	48	980	61	22	897	.....	1,115	27	260	1,026	1,444	418	17.7	25.9
	1899	46	.....	.....	34	762	.....	685	29	197	700	1,147	447	.....	.....
Sharon	1909	45	3,795	51	428	3,316	27,462	14,649	455	2,000	6,683	9,881	3,198	.....	.....
Shenandoah	1909	29	301	24	35	242	1,382	1,051	37	134	336	888	552	42.4	49.2
	1904	30	219	30	19	170	.....	740	18	100	181	595	414	58.9	97.0
	1899	22	.....	.....	9	107	.....	313	11	47	94	302	208	.....	.....
South Bethlehem	1909	49	8,469	65	419	7,985	31,562	41,121	604	4,973	15,967	26,417	10,450	38.8	72.9
	1904	46	6,104	45	305	5,754	.....	18,059	395	2,753	7,261	15,275	8,014	23.9	53.3
	1899	38	.....	.....	254	4,645	.....	8,047	321	2,113	4,862	9,964	5,102	.....	.....
Steelton [1]	1904	18	5,109	13	440	4,656	.....	18,643	594	3,041	10,750	15,746	4,996	—2.2	12.2
	1899	18	.....	.....	271	4,762	.....	6,266	274	2,084	9,936	14,034	4,098	.....	.....
Sunbury	1909	39	2,339	42	228	2,069	2,835	4,768	297	1,118	2,228	4,450	2,222	.....	.....
Uniontown	1909	41	492	38	119	335	1,620	1,686	163	225	379	1,347	968	.....	.....
Warren	1909	72	1,767	70	208	1,489	3,960	5,796	266	836	3,676	5,744	2,068	.....	.....
Washington	1909	75	2,387	68	193	2,126	4,216	3,983	264	1,119	2,447	4,837	2,390	.....	.....
West Chester	1909	35	1,113	35	162	916	934	2,489	182	478	667	2,146	1,479	.....	.....
Wilkes-Barre	1909	176	8,329	177	599	7,553	12,109	16,011	743	3,323	6,433	13,526	7,093	27.6	23.0
	1904	129	6,495	152	423	5,920	.....	11,716	481	2,496	5,265	11,000	5,735	24.7	27.7
	1899	138	.....	.....	302	4,749	.....	9,702	381	1,745	4,309	8,617	4,308	.....	.....
Wilkinsburg	1909	24	231	21	25	185	1,016	535	21	129	262	538	276	0.5	14.0
	1904	30	230	24	22	184	.....	427	23	127	235	472	237	84.0	91.9
	1899	16	.....	.....	8	100	.....	216	4	62	126	246	120	.....	.....
Williamsport	1909	159	6,534	139	754	5,641	11,713	14,070	768	2,527	7,060	13,348	6,288	6.5	17.4
	1904	115	5,880	133	451	5,296	.....	12,004	485	2,026	6,016	11,367	5,351	12.3	16.9
	1899	142	.....	.....	358	4,717	.....	8,661	320	1,767	5,601	9,726	4,125	.....	.....

[1] Included in "all other cities" for 1909.

COMPARATIVE SUMMARY FOR CITIES AND TOWNS HAVING 10,000 INHABITANTS OR MORE, BY STATES: 1909, 1904, AND 1899—Continued.

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								Expressed in thousands.							
Pennsylvania—Con.															
York	1909	218	11,530	221	817	10,492	15,344	$22,419	$1,133	$4,438	$8,866	$18,622	$9,756	31.9	39.7
	1904	228	8,838	266	620	7,952	.....	14,292	634	3,039	6,480	13,333	6,853	16.1	26.3
	1899	241	.....	.....	348	6,851	.....	8,794	416	2,346	5,460	10,560	5,100	.....	.....
All other cities [1]	1909	99	20,296	78	1,935	18,283	165,503	106,264	2,445	12,977	77,960	103,288	25,328	.....	.....
Rhode Island:															
9 cities	1909	1,656	99,121	1,463	6,516	91,142	163,335	233,477	9,146	45,082	124,982	226,192	101,210	.....	.....
8 cities	1904	1,320	77,807	1,278	4,586	71,943	.....	158,340	5,894	32,709	87,248	157,762	70,514	.....	.....
8 cities	1899	1,358	.....	.....	3,430	66,718	.....	131,794	4,410	27,849	70,418	131,530	61,112	.....	.....
Central Falls	1909	43	2,612	26	111	2,475	4,992	4,975	145	1,021	3,381	5,471	2,090	1.3	7.5
	1904	33	2,553	30	85	2,443	.....	4,950	123	965	3,330	5,091	1,761	3.0	12.9
	1899	36	.....	.....	76	2,372	.....	3,970	104	883	2,726	4,511	1,785	.....	.....
Cranston	1909	28	1,921	16	194	1,711	3,707	5,030	232	1,003	2,887	5,625	2,738	191.5	243.2
	1904	13	656	8	61	587	.....	1,902	86	332	596	1,639	1,043	19.1	16.8
	1899	13	.....	.....	45	493	.....	1,817	69	249	613	1,403	790	.....	.....
Cumberland	1909	29	5,498	19	120	5,359	15,112	16,351	280	2,231	4,618	9,827	5,209	.....	.....
East Providence	1909	26	2,237	14	182	2,041	7,123	6,479	262	932	5,060	7,146	2,086	47.8	28.9
	1904	21	1,492	15	96	1,381	.....	3,643	117	574	4,254	5,544	1,290	65.2	3.7
	1899	15	.....	.....	42	836	.....	2,191	49	332	4,288	5,347	1,059	.....	.....
Newport	1909	54	890	54	110	726	869	968	82	480	570	1,379	809	—14.5	2.4
	1904	46	975	46	80	849	.....	1,286	66	489	556	1,347	791	—3.6	—14.5
	1899	43	.....	.....	50	881	.....	1,407	48	443	653	1,575	922	.....	.....
Pawtucket	1909	217	16,261	166	820	15,275	29,510	40,094	1,405	7,255	21,540	37,696	16,156	26.7	45.8
	1904	186	12,950	159	737	12,054	.....	27,178	1,040	5,100	14,112	25,847	11,735	12.5	34.1
	1899	191	.....	.....	495	10,712	.....	20,451	715	4,331	9,977	19,272	9,295	.....	.....
Providence	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	.....	79,686	3,053	16,931	42,551	78,657	36,106	.....	.....
Warwick	1909	49	6,694	55	168	6,471	22,041	13,368	322	2,803	5,394	10,589	5,195	5.2	50.2
	1904	37	6,316	44	119	6,153	.....	8,253	187	2,144	3,848	7,052	3,204	12.6	17.1
	1899	27	.....	.....	67	5,465	.....	8,318	116	1,826	2,441	6,020	3,579	.....	.....
Woonsocket	1909	130	11,341	96	542	10,703	23,571	27,700	768	4,908	16,762	28,218	11,456	23.4	46.5
	1904	103	9,112	83	357	8,672	.....	15,462	456	3,550	10,579	19,261	8,682	14.2	30.6
	1899	104	.....	.....	162	7,591	.....	13,954	256	2,854	7,169	14,745	7,576	.....	.....
South Carolina:															
4 cities	1909	248	9,403	163	889	8,351	20,147	20,679	879	2,804	11,120	18,241	7,121	.....	.....
4 cities	1904	220	9,509	155	657	8,697	.....	15,480	646	2,457	9,035	14,488	5,453	.....	.....
4 cities	1899	195	.....	.....	365	7,409	.....	12,693	376	1,853	6,979	11,405	4,426	.....	.....
Charleston	1909	116	3,375	76	425	2,874	4,824	6,573	396	1,013	4,229	6,951	2,722	—16.7	15.7
	1904	108	3,888	78	360	3,450	.....	5,807	338	1,054	3,748	6,007	2,259	8.3	5.1
	1899	104	.....	.....	221	3,187	.....	5,398	206	919	3,507	5,713	2,206	.....	.....
Columbia	1909	55	2,788	33	233	2,522	7,784	7,705	259	927	3,578	5,872	2,294	5.4	25.6
	1904	41	2,573	25	155	2,393	.....	4,745	176	798	2,642	4,677	2,035	14.4	49.2
	1899	41	.....	.....	75	2,091	.....	3,879	93	519	1,848	3,134	1,286	.....	.....
Greenville	1909	41	1,324	29	113	1,182	2,574	1,930	98	365	1,228	2,142	914	—1.8	27.7
	1904	36	1,303	26	73	1,204	.....	2,059	60	257	1,101	1,677	576	56.4	73.4
	1899	22	.....	.....	36	770	.....	1,081	36	145	718	967	249	.....	.....
Spartanburg	1909	36	1,916	25	118	1,773	4,965	4,471	126	499	2,085	3,276	1,191	7.5	54.0
	1904	35	1,745	26	69	1,650	.....	2,869	72	348	1,544	2,127	583	21.2	33.7
	1899	28	.....	.....	33	1,361	.....	2,335	41	270	906	1,591	685	.....	.....
South Dakota:															
2 cities	1909	120	1,367	122	273	972	1,942	3,737	255	563	2,640	4,464	1,824	.....	.....
1 city	1904	61	633	67	101	465	.....	1,748	93	248	1,066	1,898	832	.....	.....
1 city	1899	48	.....	.....	57	311	.....	927	42	152	322	884	562	.....	.....
Aberdeen	1909	37	430	36	99	295	540	1,132	94	178	1,011	1,575	564	.....	.....
Sioux Falls	1909	83	937	86	174	677	1,402	2,605	161	385	1,629	2,889	1,260	45.6	52.2
	1904	61	633	67	101	465	.....	1,748	93	248	1,066	1,898	832	49.5	114.7
	1899	48	.....	.....	57	311	.....	927	42	152	322	884	562	.....	.....
Tennessee:															
5 cities	1909	1,099	34,404	1,259	4,909	28,236	67,157	78,542	5,514	13,191	50,057	86,787	36,730	.....	.....
5 cities	1904	903	29,911	817	3,001	26,093	.....	44,554	3,210	10,877	36,579	64,888	28,309	.....	.....
5 cities	1899	744	.....	.....	2,162	23,302	.....	35,116	2,075	8,372	27,572	47,831	20,259	.....	.....
Chattanooga	1909	185	7,507	125	972	6,410	17,509	16,125	1,180	2,816	8,434	16,036	7,602	—0.2	12.4
	1904	177	7,236	130	686	6,420	.....	10,394	719	2,564	7,474	14,261	6,787	35.8	35.6
	1899	149	.....	.....	458	4,729	.....	7,459	417	1,616	6,421	10,518	4,097	.....	.....
Jackson	1909	42	1,613	28	180	1,405	2,789	2,236	193	673	1,215	2,710	1,495	10.8	16.9
	1904	42	1,421	35	118	1,268	.....	1,519	112	498	1,183	2,318	1,135	24.6	47.0
	1899	33	.....	.....	101	1,018	.....	980	78	400	693	1,577	884	.....	.....
Knoxville	1909	159	3,464	141	550	2,773	6,001	5,333	552	1,078	5,101	8,149	3,048	—7.5	21.6
	1904	138	3,420	128	293	2,999	.....	3,744	275	1,048	4,101	6,699	2,598	—28.6	8.0
	1899	102	.....	.....	240	4,203	.....	5,036	242	1,288	3,552	6,202	2,650	.....	.....
Memphis	1909	329	9,937	597	1,413	7,927	21,320	26,968	1,727	4,288	17,851	30,242	12,391	7.5	50.9
	1904	289	8,448	269	805	7,374	.....	13,296	994	3,543	11,339	20,043	8,704	11.3	40.8
	1899	223	.....	.....	452	6,626	.....	9,767	552	2,792	7,879	14,233	6,354	.....	.....

[1] All other cities embrace: Coatsville, Duquesne, Monessen, North Braddock, Old Forge, South Sharon, and Steelton, to avoid disclosure of individual operations.

COMPARATIVE SUMMARY FOR CITIES AND TOWNS HAVING 10,000 INHABITANTS OR MORE, BY STATES: 1909, 1904, AND 1899—Continued.

[See note at the head of this table. A minus sign (—) denotes decrease.]

Table 5—Contd. STATE AND 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.							
Tennessee—Contd.															
Nashville	1909	384	11,883	368	1,794	9,721	19,538	$27,880	$1,862	$4,336	$17,456	$29,650	$12,194	21.0	37.5
	1904	257	9,386	255	1,099	8,032	.....	15,601	1,110	3,224	12,482	21,567	9,085	19.4	41.0
	1899	237	.....	.....	911	6,726	.....	11,874	786	2,276	9,027	15,301	6,274	.....	.....
Texas:															
20 cities	1909	1,614	32,809	1,434	5,072	26,303	74,440	79,347	5,950	15,603	66,714	109,559	42,845	.....	.....
11 cities	1904	1,040	20,837	956	2,446	17,435	.....	39,114	2,679	9,614	31,970	56,516	24,546	.....	.....
11 cities	1899	879	.....	.....	1,450	14,647	.....	28,074	1,598	7,417	20,626	37,036	16,410	.....	.....
Austin	1909	168	1,014	109	151	754	2,211	2,340	148	415	1,627	2,845	1,218	17.6	81.3
	1904	62	786	65	80	641	.....	1,257	78	349	771	1,569	798	29.5	105.1
	1899	84	.....	.....	50	495	.....	595	40	243	457	765	308	.....	.....
Beaumont	1909	56	1,094	49	182	863	4,596	4,007	214	645	3,444	4,831	1,387	.....	.....
Brownsville	1909	9	79	13	15	51	414	51	13	19	46	121	75	.....	.....
Cleburne	1909	24	952	25	102	825	1,499	773	112	533	859	1,577	718	.....	.....
Dallas	1909	305	6,621	249	1,490	4,882	13,808	17,688	1,831	2,604	16,966	26,959	9,993	41.7	72.5
	1904	247	4,486	211	830	3,445	.....	10,891	828	1,759	9,207	15,628	6,421	21.2	64.7
	1899	177	.....	.....	500	2,842	.....	6,462	515	1,323	5,398	9,488	4,090	.....	.....
Denison	1909	29	935	27	75	833	2,306	1,108	70	516	593	1,314	721	14.9	6.4
	1904	25	813	24	64	725	.....	1,052	64	455	591	1,235	644	8.5	47.0
	1899	29	.....	.....	52	668	.....	1,108	36	361	379	840	461	.....	.....
El Paso	1909	88	2,041	66	223	1,752	3,396	4,252	275	1,093	1,496	3,637	2,141	51.3	52.9
	1904	54	1,304	42	104	1,158	.....	1,673	128	710	1,131	2,378	1,247	61.7	96.0
	1899	38	.....	.....	39	716	.....	793	50	402	539	1,213	674	.....	.....
Fort Worth	1909	147	2,641	133	449	2,059	6,614	7,443	484	1,285	5,266	8,661	3,395	44.7	52.8
	1904	102	1,748	99	226	1,423	.....	3,170	213	843	3,189	5,668	2,479	50.9	62.5
	1899	68	.....	.....	108	943	.....	2,153	131	565	2,147	3,488	1,341	.....	.....
Galveston	1909	81	1,396	77	225	1,094	3,633	4,572	298	707	4,267	6,308	2,041	43.8	110.5
	1904	67	975	60	154	761	.....	2,986	194	470	1,599	2,997	1,398	—46.5	—18.4
	1899	100	.....	.....	116	1,422	.....	4,688	147	640	2,025	3,675	1,650	.....	.....
Houston	1909	249	6,289	226	725	5,338	14,866	16,594	994	3,260	14,321	23,015	8,694	5.6	69.7
	1904	209	5,672	201	415	5,056	.....	8,877	532	2,892	7,617	13,564	5,947	58.6	81.0
	1899	145	.....	.....	245	3,188	.....	5,627	292	1,656	4,195	7,492	3,297	.....	.....
Laredo	1909	23	252	28	11	213	353	213	11	87	74	221	147	—58.6	—51.3
	1904	18	569	20	34	515	.....	221	36	181	196	454	258	38.4	37.2
	1899	14	.....	.....	9	372	.....	203	8	162	139	331	192	.....	.....
Marshall	1909	22	1,108	18	113	977	1,326	1,690	126	653	803	1,787	984	.....	.....
Palestine	1909	20	855	26	84	745	1,209	1,524	86	481	622	1,313	691	.....	.....
Paris	1909	45	679	33	105	541	2,489	1,381	77	247	862	1,430	568	.....	.....
San Angelo	1909	26	189	28	46	115	608	306	28	71	133	318	185	.....	.....
San Antonio	1909	194	3,913	156	652	3,105	6,908	8,629	753	1,760	6,952	13,435	6,483	26.4	81.5
	1904	141	2,911	110	344	2,457	.....	5,259	406	1,362	3,741	7,402	3,661	—8.4	23.6
	1899	113	.....	.....	190	2,683	.....	3,929	230	1,557	2,951	5,989	3,038	.....	.....
Sherman	1909	36	395	27	95	273	2,150	1,638	98	136	4,047	4,676	629	—11.1	77.1
	1904	39	427	46	74	307	.....	1,586	59	153	2,149	2,641	492	—2.2	80.8
	1899	31	.....	.....	53	314	.....	748	55	136	1,070	1,461	391	.....	.....
Temple	1909	37	483	42	75	366	1,616	916	61	215	834	1,346	512	.....	.....
Tyler	1909	23	555	23	48	484	769	661	51	288	537	996	459	.....	.....
Waco	1909	92	1,318	79	206	1,033	3,669	3,561	220	588	2,965	4,769	1,804	9.1	60.0
	1904	76	1,146	78	121	947	.....	2,142	141	440	1,779	2,980	1,201	—5.7	29.9
	1899	80	.....	.....	88	1,004	.....	1,768	94	372	1,326	2,294	968	.....	.....
Utah:															
2 cities	1909	313	6,867	218	1,039	5,610	9,199	15,862	1,089	3,883	8,680	17,064	8,384	.....	.....
2 cities	1904	255	4,621	236	596	3,789	.....	6,858	624	2,415	4,913	10,051	5,138	.....	.....
2 cities	1899	205	.....	.....	322	2,832	.....	4,213	280	1,532	2,656	5,521	2,865	.....	.....
Ogden	1909	68	1,539	58	158	1,323	2,506	2,324	174	873	2,065	3,713	1,648	30.6	48.1
	1904	63	1,183	66	104	1,013	.....	1,521	102	711	1,398	2,507	1,109	49.4	101.9
	1899	51	.....	.....	56	678	.....	857	47	355	679	1,242	563	.....	.....
Salt Lake City	1909	245	5,328	160	881	4,287	6,693	13,538	915	3,010	6,615	13,351	6,736	54.4	77.0
	1904	192	3,438	170	492	2,776	.....	5,337	522	1,704	3,515	7,544	4,029	28.9	76.3
	1899	154	.....	.....	266	2,154	.....	3,356	233	1,177	1,977	4,279	2,302	.....	.....
Vermont:															
3 cities	1909	284	7,418	323	748	6,347	14,866	11,591	752	3,559	6,638	13,332	6,694	.....	.....
2 cities	1904	118	4,543	87	353	4,103	.....	7,304	390	1,693	4,966	8,879	3,913	.....	.....
2 cities	1899	139	.....	.....	336	3,728	.....	6,483	410	1,411	4,129	8,025	3,896	.....	.....
Barre	1909	139	2,780	219	221	2,340	4,645	2,481	236	1,814	1,108	3,852	2,744	.....	.....
Burlington	1909	82	2,777	53	353	2,371	8,359	6,460	355	982	4,323	6,800	2,477	3.1	7.0
	1904	67	2,580	42	238	2,300	.....	5,124	279	836	3,804	6,356	2,552	3.0	4.8
	1899	78	.....	.....	214	2,232	.....	4,502	312	767	3,294	6,066	2,772	.....	.....

COMPARATIVE SUMMARY FOR CITIES AND TOWNS HAVING 10,000 INHABITANTS OR MORE, BY STATES: 1909, 1904, AND 1899—Continued.

[See note at the head of this table. A minus sign (−) denotes decrease.]

Table 5—Contd. STATE AND 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.							
Vermont—Continued.															
Rutland	1909	63	1,861	51	174	1,636	1,862	$2,650	$161	$763	$1,207	$2,680	$1,473	−9.3	6.2
	1904	51	1,963	45	115	1,803	.....	2,180	111	857	1,162	2,523	1,361	20.5	28.8
	1899	61	.....	.....	122	1,496	.....	1,981	98	644	835	1,959	1,124	.....	.....
Virginia:[1]															
9 cities	1909	992	42,172	812	4,578	36,782	70,722	74,364	5,008	14,316	53,644	96,604	42,960	.....	.....
8 cities	1904	715	32,233	666	2,417	29,150	.....	54,804	2,389	10,073	31,118	57,792	26,674	.....	.....
8 cities	1899	717	.....	.....	2,047	28,142	.....	35,445	1,981	8,740	25,411	49,239	23,828	.....	.....
Alexandria	1909	54	1,713	52	191	1,470	3,250	4,687	222	697	2,731	4,420	1,689	13.9	102.1
	1904	51	1,446	63	92	1,291	.....	2,328	93	655	992	2,187	1,195	50.3	42.1
	1899	57	.....	.....	94	859	.....	1,606	73	374	670	1,539	869	.....	.....
Danville	1909	52	3,346	46	224	3,076	4,634	6,059	279	963	3,236	5,389	2,153	1.9	12.9
	1904	34	3,177	28	131	3,018	.....	5,119	126	811	2,766	4,775	2,009	2.9	29.3
	1899	46	.....	.....	134	2,933	.....	4,324	106	664	1,867	3,694	1,827	.....	.....
Lynchburg	1909	82	4,519	48	445	4,026	7,952	9,217	454	1,544	6,468	10,188	3,720	58.9	105.2
	1904	55	2,793	41	218	2,534	.....	4,258	217	789	2,883	4,965	2,082	70.4	65.8
	1899	61	.....	.....	87	1,487	.....	2,300	79	451	1,525	2,994	1,469	.....	.....
Norfolk	1909	215	5,590	194	647	4,749	20,408	10,744	636	2,041	5,482	10,341	4,859	61.8	80.2
	1904	121	3,292	125	232	2,935	.....	4,374	236	1,091	3,202	5,739	2,537	11.3	22.3
	1899	140	.....	.....	231	2,638	.....	4,419	187	904	2,542	4,692	2,150	.....	.....
Petersburg	1909	72	4,332	45	400	3,887	5,239	5,221	434	1,107	5,759	8,896	3,137	18.2	51.0
	1904	72	3,631	62	281	3,288	.....	4,562	240	866	3,794	5,891	2,097	−8.9	11.3
	1899	77	.....	.....	222	3,608	.....	3,175	208	792	3,115	5,293	2,178	.....	.....
Portsmouth	1909	31	936	26	68	842	1,777	1,233	65	307	776	1,528	752	52.8	61.7
	1904	28	636	26	59	551	.....	564	46	185	486	945	459	17.0	−1.6
	1899	22	.....	.....	53	471	.....	815	38	132	614	960	346	.....	.....
Richmond	1909	380	17,300	302	2,149	14,849	20,087	31,660	2,486	5,821	24,252	47,358	23,106	19.3	70.7
	1904	300	13,795	278	1,073	12,444	.....	30,942	1,125	4,150	13,763	27,745	13,982	−9.3	12.5
	1899	276	.....	.....	1,032	13,715	.....	16,890	1,128	4,316	11,485	24,669	13,184	.....	.....
Roanoke	1909	62	3,989	43	402	3,544	6,774	4,828	389	1,718	4,044	7,261	3,217	14.7	30.9
	1904	54	3,463	43	331	3,089	.....	2,657	306	1,526	3,232	5,545	2,313	27.1	2.7
	1899	38	.....	.....	194	2,431	.....	1,916	162	1,107	3,593	5,398	1,805	.....	.....
Staunton	1909	44	447	56	52	339	601	715	43	118	896	1,223	327	.....	.....
Washington:															
8 cities	1909	1,630	33,595	1,363	4,707	27,525	98,287	103,525	6,024	20,091	63,432	112,004	48,572	.....	.....
5 cities	1904	997	17,715	880	2,004	14,831	.....	43,564	2,139	9,932	29,795	53,281	23,486	.....	.....
5 cities	1899	691	.....	.....	1,184	10,767	.....	19,110	1,154	5,934	19,412	32,973	13,561	.....	.....
Aberdeen	1909	43	1,651	26	116	1,509	9,582	4,560	161	995	2,172	3,590	1,418	.....	.....
Bellingham	1909	96	1,795	89	140	1,566	5,176	3,288	158	1,027	2,422	4,600	2,178	19.2	39.6
	1904	73	1,466	55	97	1,314	.....	2,981	107	858	1,651	3,294	1,643	−12.5	25.3
	1899	47	.....	.....	51	1,502	.....	1,719	59	549	1,553	2,629	1,076	.....	.....
Everett	1909	94	2,723	77	271	2,375	11,481	6,605	359	1,720	3,859	7,423	3,564	.....	.....
North Yakima	1909	36	723	32	89	602	1,975	2,297	105	374	950	2,175	1,225	.....	.....
Seattle	1909	751	14,014	621	2,062	11,331	37,732	46,472	2,750	8,569	28,685	50,569	21,884	77.3	99.0
	1904	467	7,532	415	727	6,390	.....	22,344	853	4,318	14,358	25,406	11,048	43.9	65.8
	1899	352	.....	.....	623	4,440	.....	7,682	561	2,682	8,864	15,323	6,459	.....	.....
Spokane	1909	286	5,294	263	1,042	3,989	9,295	16,434	1,333	3,098	10,243	18,880	8,637	64.3	113.8
	1904	188	3,231	184	619	2,428	.....	5,407	551	1,669	4,700	8,831	4,131	129.1	135.1
	1899	84	.....	.....	207	1,060	.....	2,211	195	616	2,033	3,756	1,723	.....	.....
Tacoma	1909	276	6,866	216	885	5,765	21,546	21,533	1,031	3,985	13,716	22,450	8,734	29.3	57.4
	1904	236	5,158	195	506	4,457	.....	11,769	565	2,906	8,157	14,264	6,107	25.5	38.5
	1899	174	.....	.....	288	3,552	.....	6,790	322	1,955	6,341	10,301	3,960	.....	.....
Walla Walla	1909	48	529	39	102	388	1,500	2,336	127	323	1,385	2,317	932	60.3	55.9
	1904	33	328	31	55	242	.....	1,063	63	181	929	1,486	557	13.6	54.1
	1899	34	.....	.....	15	213	.....	708	17	132	621	964	343	.....	.....
West Virginia:															
6 cities	1909	435	17,451	293	1,657	15,501	49,729	34,511	1,901	8,241	27,270	46,303	19,033	.....	.....
4 cities	1904	361	12,900	269	944	11,687	.....	26,108	1,035	5,923	18,651	32,083	13,432	.....	.....
4 cities	1899	327	.....	.....	669	9,830	.....	17,885	647	4,256	13,449	23,079	9,630	.....	.....
Bluefield	1909	15	748	5	73	670	1,648	948	74	377	889	1,465	576	.....	.....
Charleston	1909	63	1,153	47	155	951	4,106	2,825	158	469	2,137	3,235	1,098	7.2	54.0
	1904	54	1,048	42	119	887	.....	2,228	116	403	998	2,101	1,103	29.3	66.5
	1899	48	.....	.....	73	686	.....	1,054	64	257	659	1,262	603	.....	.....
Huntington	1909	67	3,489	36	297	3,156	8,860	4,917	274	1,681	3,382	6,511	3,129	41.6	47.7
	1904	44	2,359	24	106	2,229	.....	2,762	95	1,033	2,676	4,407	1,731	29.8	21.0
	1899	29	.....	.....	82	1,717	.....	2,198	71	812	2,498	3,642	1,144	.....	.....
Martinsburg	1909	39	1,551	28	103	1,420	1,598	2,100	99	520	1,277	2,516	1,239	.....	.....
Parkersburg	1909	75	1,766	61	210	1,495	4,031	4,424	221	767	3,560	5,499	1,939	3.5	45.6
	1904	68	1,652	52	156	1,444	.....	3,310	164	694	2,488	3,778	1,290	16.7	21.8
	1899	72	.....	.....	107	1,237	.....	2,358	103	508	1 886	3,101	1,215	.....	.....

[1] Does not include statistics for Newport News.

COMPARATIVE SUMMARY FOR CITIES AND TOWNS HAVING 10,000 INHABITANTS OR MORE, BY STATES: 1909, 1904, AND 1899—Continued.

[See note at the head of this table. A minus sign (—) denotes decrease.]

Table 5—Contd. STATE AND 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.							
West Virginia—Con.															
Wheeling	1909	176	8,744	116	819	7,809	29,486	$19,297	$1,075	$4,427	$16,625	$27,077	$11,052	9.6	24.2
	1904	195	7,841	151	563	7,127	.....	17,808	660	3,793	12,489	21,797	9,308	15.1	44.6
	1899	178	.....	.....	407	6,190	.....	12,275	409	2,679	8,496	15,074	6,668	.....	.....
Wisconsin:															
18 cities	1909	3,330	131,612	2,730	15,220	113,662	226,202	385,091	17,827	58,706	206,473	364,737	158,264	.....	.....
18 cities	1904	2,950	101,990	2,604	9,717	89,669	.....	276,648	10,841	42,005	131,274	249,002	117,728	.....	.....
18 cities	1899	2,700	.....	.....	7,189	82,056	.....	189,583	7,610	33,402	105,994	194,672	88,678	.....	.....
Appleton	1909	97	2,387	76	186	2,125	14,295	7,215	223	1,088	4,257	6,734	2,477	—14.5	0.9
	1904	108	2,762	109	167	2,486	.....	6,833	197	1,217	4,026	6,673	2,647	59.3	72.8
	1899	88	.....	.....	108	1,561	.....	4,635	127	642	2,357	3,861	1,504	.....	.....
Ashland	1909	38	1,213	26	71	1,116	4,912	2,494	99	611	1,486	2,748	1,262	—18.0	—34.7
	1904	37	1,467	24	82	1,361	.....	2,730	93	738	2,192	4,210	2,018	—24.9	16.9
	1899	41	.....	.....	62	1,812	.....	3,850	83	848	1,516	3,600	2,084	.....	.....
Beloit	1909	51	3,377	41	350	2,986	4,992	7,747	317	1,840	2,439	5,886	3,447	20.8	31.2
	1904	44	2,683	39	173	2,471	.....	3,739	196	1,439	1,835	4,485	2,650	33.9	60.2
	1899	43	.....	.....	115	1,845	.....	2,511	130	871	1,338	2,800	1,462	.....	.....
Eau Claire	1909	75	2,830	45	261	2,524	13,695	7,551	286	1,198	2,974	5,855	2,881	27.2	62.5
	1904	73	2,216	51	180	1,985	.....	3,623	180	851	1,799	3,602	1,803	12.9	—7.1
	1899	64	.....	.....	116	1,758	.....	3,844	133	696	2,112	3,876	1,764	.....	.....
Fond du Lac	1909	97	3,064	76	281	2,707	4,393	6,803	361	1,297	5,074	8,227	3,153	5.5	46.9
	1904	85	2,890	82	242	2,566	.....	4,660	264	1,055	3,311	5,600	2,289	68.8	95.7
	1899	74	.....	.....	117	1,520	.....	2,384	117	542	1,635	2,861	1,226	.....	.....
Green Bay	1909	102	2,961	64	318	2,579	5,637	5,495	295	1,107	3,893	6,235	2,342	22.2	27.9
	1904	103	2,455	116	228	2,111	.....	3,749	208	879	2,696	4,873	2,177	47.9	79.9
	1899	79	.....	.....	103	1,427	.....	2,704	105	565	1,363	2,709	1,346	.....	.....
Janesville	1909	78	1,861	56	354	1,451	3,358	4,517	370	676	2,877	5,156	2,279	7.6	34.1
	1904	73	1,612	60	204	1,348	.....	3,445	220	600	2,056	3,846	1,790	—3.6	20.8
	1899	72	.....	.....	170	1,398	.....	2,444	126	571	1,769	3,184	1,415	.....	.....
Kenosha	1909	62	7,038	58	531	6,449	14,484	23,099	868	3,838	14,773	23,182	8,409	48.1	87.5
	1904	45	4,627	36	237	4,354	.....	9,691	315	2,244	7,392	12,363	4,971	40.9	68.6
	1899	38	.....	.....	100	3,090	.....	5,869	185	1,303	5,023	7,334	2,311	.....	.....
La Crosse	1909	151	4,180	114	737	3,329	6,956	12,459	792	1,539	7,797	14,103	6,306	25.9	73.3
	1904	150	3,175	140	391	2,644	.....	6,834	401	1,065	4,725	8,139	3,414	—4.3	6.0
	1899	131	.....	.....	299	2,763	.....	6,369	312	1,001	4,645	7,677	3,032	.....	.....
Madison	1909	116	2,468	189	487	1,792	2,551	5,460	533	1,059	2,337	5,467	3,130	21.4	66.1
	1904	84	1,892	74	342	1,476	.....	5,182	341	813	1,293	3,291	1,998	8.1	22.4
	1899	69	.....	.....	183	1,365	.....	3,475	159	598	1,138	2,689	1,551	.....	.....
Manitowoc	1909	80	1,824	72	227	1,525	4,371	6,764	240	767	3,963	5,939	1,976	15.4	34.1
	1904	76	1,508	63	124	1,321	.....	5,020	119	533	2,940	4,428	1,488	35.5	128.8
	1899	62	.....	.....	81	975	.....	2,421	78	359	836	1,935	1,099	.....	.....
Marinette	1909	43	1,618	34	93	1,491	6,470	3,284	126	701	1,703	3,309	1,606	—9.4	—8.9
	1904	37	1,753	30	78	1,645	.....	3,284	118	862	1,581	3,633	2,052	—33.8	—17.6
	1899	45	.....	.....	95	2,485	.....	4,367	136	1,014	1,714	4,411	2,697	.....	.....
Milwaukee	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	.....	.....
Oshkosh	1909	159	6,494	131	585	5,778	10,890	9,611	677	2,570	7,081	14,739	7,658	19.4	70.4
	1904	134	5,284	120	324	4,840	.....	8,058	359	2,097	4,432	8,652	4,220	14.5	7.1
	1899	129	.....	.....	270	4,226	.....	7,053	255	1,628	4,282	8,081	3,799	.....	.....
Racine	1909	142	10,354	81	1,892	8,381	12,905	36,326	2,117	4,562	11,512	24,673	13,161	28.9	49.9
	1904	148	7,837	94	1,239	6,504	.....	26,434	1,271	3,155	7,143	16,459	9,316	6.0	41.0
	1899	135	.....	.....	845	6,138	.....	16,206	838	2,712	5,926	11,676	5,750	.....	.....
Sheboygan	1909	109	6,564	65	511	5,988	8,717	15,053	669	2,339	6,089	11,299	5,210	1.4	15.9
	1904	96	6,265	70	292	5,903	.....	12,289	358	2,095	5,553	9,751	4,198	18.2	41.2
	1899	80	.....	.....	198	4,992	.....	7,482	248	1,552	3,712	6,907	3,195	.....	.....
Superior	1909	99	2,113	82	184	1,847	6,536	6,028	225	1,087	4,272	6,574	2,302	37.5	3.4
	1904	72	1,578	61	174	1,343	.....	5,768	182	746	4,648	6,357	1,709	—23.9	—7.0
	1899	75	.....	.....	148	1,765	.....	5,691	164	787	5,026	6,836	1,810	.....	.....
Wausau	1909	67	2,333	48	193	2,092	6,786	5,794	224	990	3,325	6,287	2,962	7.6	35.3
	1904	58	2,143	42	156	1,945	.....	3,815	182	807	2,549	4,645	2,096	13.3	37.4
	1899	56	.....	.....	102	1,716	.....	2,774	109	611	1,908	3,381	1,473	.....	.....
Wyoming:															
1 city	1909	22	956	12	91	853	1,253	1,670	111	618	607	1,577	970	.....	.....
1 city	1904	18	623	11	60	552	.....	740	66	412	308	925	617	.....	.....
1 city	1899	17	.....	.....	18	423	.....	580	17	341	289	722	433	.....	.....
Cheyenne	1909	22	956	12	91	853	1,253	1,670	111	618	607	1,577	970	54.5	70.5
	1904	18	623	11	60	552	.....	740	66	412	308	925	617	30.5	28.1
	1899	17	.....	.....	18	423	.....	580	17	341	289	722	433	.....	.....
All other cities: [1]															
5 cities	1909	142	18,263	170	1,762	16,331	316,446	137,485	2,044	11,391	60,319	82,537	22,218	.....	.....
2 cities	1904	54	8,740	39	300	8,401	.....	37,505	406	4,498	10,957	22,346	11,389	.....	.....
2 cities	1899	71	.....	.....	184	6,892	.....	19,323	288	3,622	8,606	15,272	6,666	.....	.....

[1] All other cities embrace: 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.

CHAPTER VI.

DISTRIBUTION OF MANUFACTURING INDUSTRIES AMONG COMMUNITIES CLASSIFIED ACCORDING TO SIZE.

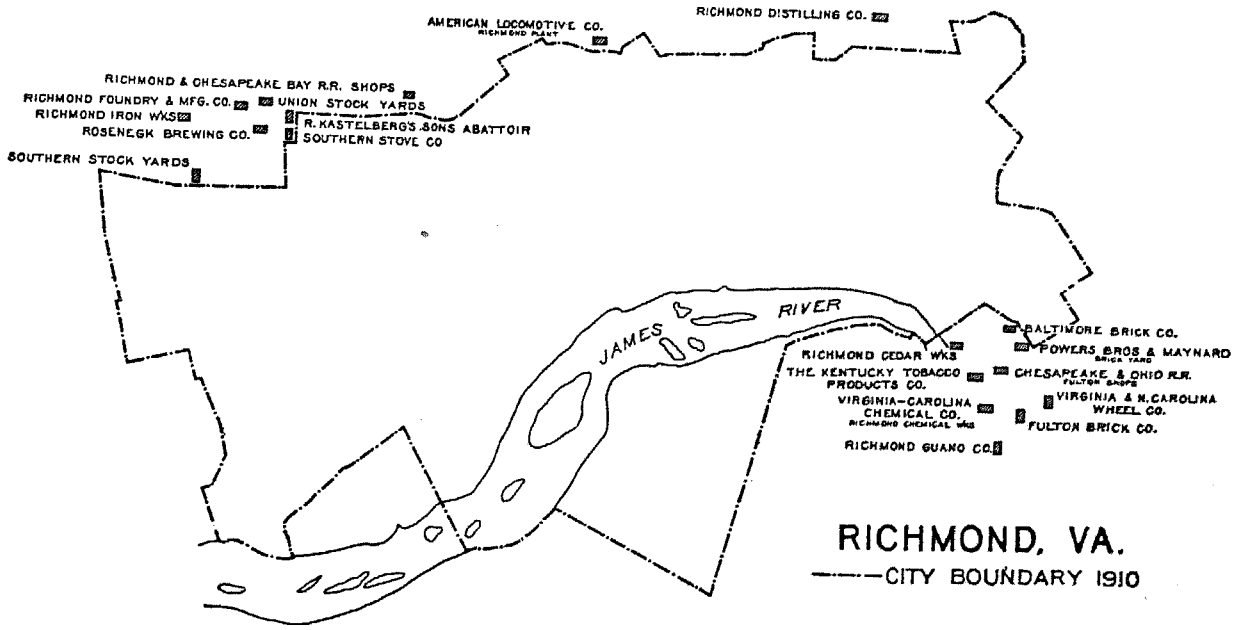
Method and significance of the classification.—Considerable interest attaches to the subject of the relative extent to which manufacturing is carried on in larger as compared with smaller communities, and the changes in this respect from one census to another. In the statistics of population the distinction is made between urban and rural communities, incorporated places (including New England towns) of 2,500 or more inhabitants being classed as urban and the rest of the country as rural. In the census of manufactures, which does not include hand or neighborhood industries, the distinction between urban and rural as thus defined is of little significance, because cities or villages having over 2,500 inhabitants almost invariably exist or spring up wherever manufacturing establishments of any importance are located; therefore the extent to which manufacturing industries are carried on in places of less than 2,500 inhabitants or in rural districts is of necessity comparatively small. Moreover, for the sake of convenience in tabulation it is preferable to adopt a different method of classifying communities. In the tables in this chapter, therefore, a distinction is made between manufacturing establishments located, respectively, in incorporated places of 10,000 or more inhabitants and in the remainder of the country, the latter including the smaller incorporated places and the rural districts. In two of the tables the further distinction is made between cities (the term "city" being used to include any incorporated place) of 100,000 or more inhabitants, cities of 25,000 to 100,000 inhabitants, and cities of 10,000 to 25,000 inhabitants.

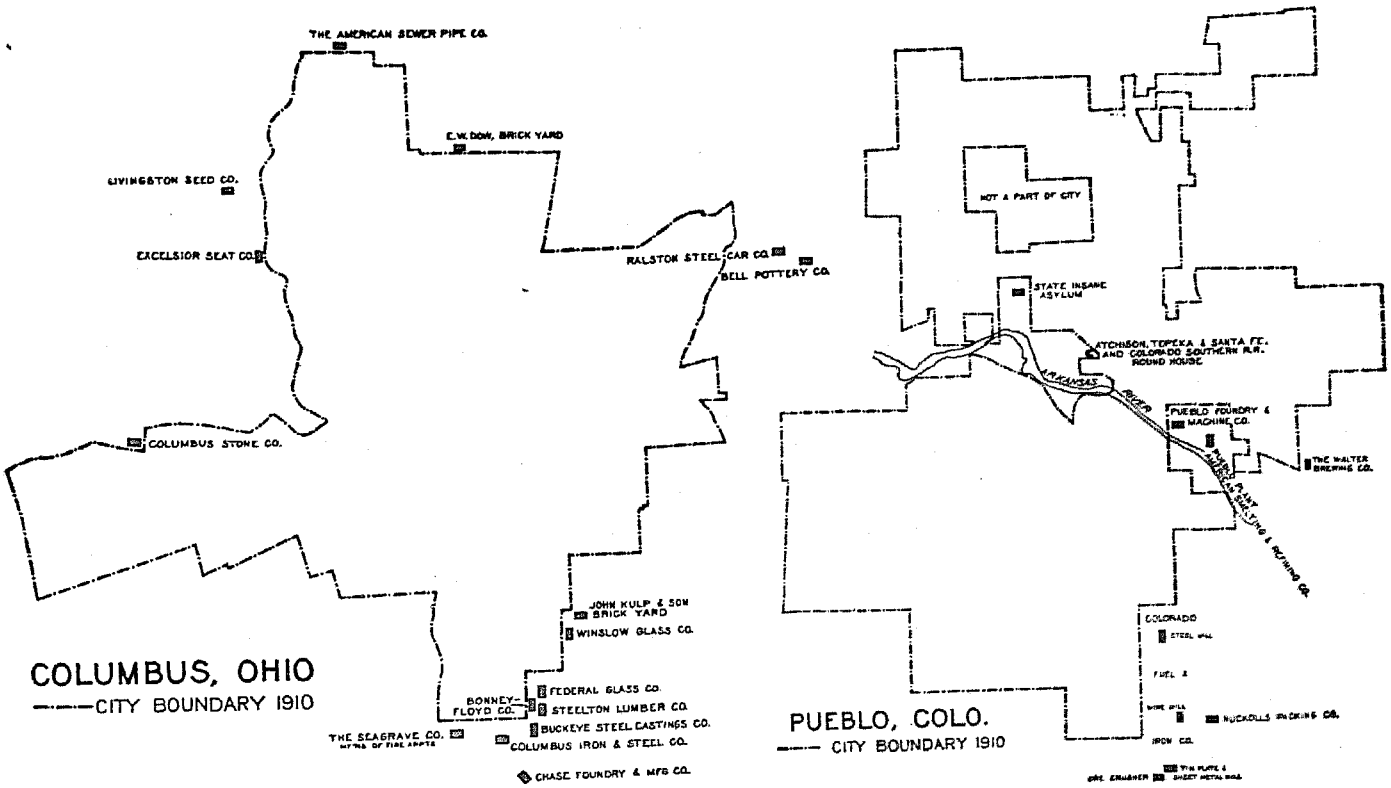
In considering the statistics presented in this chapter, it should be borne in mind that it is very common to find manufacturing establishments of considerable size located just outside of city boundaries. As a result, the proportion of the manufacturing business of the country as a whole which, in a sense, can be properly credited to places of 10,000 or more inhabitants, or to any of the separate classes of places above that size distinguished in the tables, is somewhat greater than is shown by the statistics here presented. Many manufacturers desirous of operating with all the advantages of an urban location, such as a plentiful supply of labor, good shipping facilities, and the like, while escaping as many of its expenses and restrictions as possible, purposely build their plants just outside the city limits. The corporate limits of some cities, moreover, have been extended so as to take in important manufacturing suburbs, while the boundaries of others have remained unchanged, although important manufacturing suburbs have developed. It often happens, also, that when city limits are established or extended the boundaries are run in such a way as to leave outside certain plants which would naturally be expected to come within the city limits. It is evident, therefore, that under these conditions the statistics do not always accurately represent the importance of individual cities or classes of cities from the industrial standpoint.

The conditions referred to above are brought out by the three maps on the following page, which show the manufacturing plants on the outskirts of Richmond, Va., Columbus, Ohio, and Pueblo, Colo., respectively. In the case of each of these cities certain factories, which constitute for all practical purposes an integral part of the city's industrial activities, are nevertheless, because of the arrangement of the city boundaries, classed with the establishments located in communities of less than 10,000 inhabitants.

The exact importance of a city as a manufacturing center can not be ascertained, except by combining with the establishments actually located in the city all the neighboring manufacturing establishments identified or closely associated with its industrial development. The difficulty of determining in each case just which establishments should be so combined renders it altogether impracticable to make such a compilation of the figures for all the 593 incorporated places of more than 10,000 inhabitants, but such a combination for the most important cities will be published in a subsequent report, dealing especially with metropolitan districts.

MANUFACTURING PLANTS ON THE OUTSKIRTS OF RICHMOND, VA., COLUMBUS, OHIO, AND PUEBLO, COLO.





Manufactures in communities classified according to size, for the United States as a whole.—The distribution of the manufacturing industries of the country as a whole among communities classified according to size is shown in the following table, which gives separately for each group the population in 1910 and 1900, and the number of manufacturing establishments, average number of wage earners, value of products, and value added by manufacture, as reported for 1909 and 1899. Statistics for 1904 are not given because there was no Federal census of population in 1905, so that it is impossible to determine precisely what cities belonged to each group.

In considering this table it should be noted that each place is classified at each census according to its population at that census, so that the same community may have been in one class in 1900 and in another class in 1910. Consequently, the difference between the totals for the two censuses can not be taken as measuring the increase in manufacturing in the same communities, and for this reason percentages of increase are not shown.

Table 1			INCORPORATED PLACES HAVING A POPULATION OF 10,000 OR OVER.								DISTRICTS OUTSIDE OF INCORPORATED PLACES HAVING A POPULATION OF 10,000 OR OVER.	
ITEM.	Year.	Aggregate.	Total.		10,000 to 25,000.		25,000 to 100,000.		100,000 and over.			
			Number or amount.	Per cent of aggregate.	Number or amount.	Per cent of aggregate.	Number or amount.	Per cent of aggregate.	Number or amount.	Per cent of aggregate.	Number or amount.	Per cent of aggregate.
Number of places	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	16.2	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

As would naturally be expected, the percentage which the population in the places of 10,000 inhabitants or over forms of the total population of the United States is considerably smaller than any of the percentages which indicate the share of those places in the total manufacturing activities of the country. In 1909 such places, although they comprised only 37 per cent of the total population of the country, contained a little over one-half of the total number of manufacturing establishments, employed nearly two-thirds (65.3 per cent) of the wage earners engaged in manufactures, and reported about seven-tenths of the total value of products and of the value added by manufacture (69 per cent and 70.4 per cent, respectively). Places of 100,000 or more inhabitants in 1909 contributed 42.3 per cent of the total value of manufactured products; places of 25,000 to 100,000 inhabitants, 17.3 per cent; places of 10,000 to 25,000 inhabitants, 9.4 per cent; and places of less than 10,000 inhabitants and rural districts, 31 per cent.

It is noteworthy, however, that whereas places of 10,000 or more inhabitants 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 proportions of the total number of manufacturing establishments, the wage earners in manufacturing industries, and 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, they have not gained in this respect commensurately with their gain in population. No very conspicuous change has taken place in the relative importance from the manufacturing standpoint of the three classes of cities of over 10,000 inhabitants distinguished in the table.

Another method of comparing the relative importance of manufacturing industries in the different classes of communities is by calculating the proportion which wage earners in manufacturing establishments form of the total population, and the average value of manufactured products per capita of the total population. Such figures, based on the returns of the manufactures census for 1909 and the population returns for 1910, are presented in the following tabular statement:

Table 2		
GROUP.	Per cent wage earners in manufacturing establishments represented of total population.	Value of products per capita of total population.
United States	7.2	$225
Incorporated places having—		
10,000 inhabitants or over	12.7	420
10,000 to 25,000 inhabitants	12.3	354
25,000 to 100,000 inhabitants	13.7	437
100,000 inhabitants or over	12.4	430
Remainder of country	4.0	111

Wage earners in manufacturing industries formed 12.7 per cent, or about one-eighth, of the total population of incorporated places of 10,000 inhabitants or over, as compared with 4 per cent, or one twenty-fifth, in the remainder of the country. The average value of manufactured products per capita of the total population in incorporated places of 10,000 inhabitants or over was $420, while outside of such places it was only $111, or little more than one-fourth as great.

The following table shows, for the United States as a whole, the average size of establishments in cities of 10,000 or more inhabitants and in the remainder of the country, respectively, as measured by number of wage earners, value of products, and value added by manufacture:

Table 3	Year.	Average per establishment.		
		Total.	Incorporated places having a population of 10,000 or over.	Remainder of country.
Average number of wage earners	1909	24.6	31.8	17.3
	1899	22.7	29.6	16.0
Value of products	1909	$76,993	$105,065	$48,276
	1899	54,969	76,416	33,867
Value added by manufacture	1909	31,767	44,214	19,035
	1899	23,281	32,817	13,897

The average establishment in cities of 10,000 inhabitants or over, speaking roughly, employs almost twice as many wage earners and has an output more than twice as great in value as the average establishment outside of such cities. This is but natural, since large units of production imply correspondingly large bodies of population from which to draw their labor force.

It may be noted that there are four very important industries in which most of the establishments either serve chiefly local markets or derive their materials from widely distributed local sources. These are the bakery, flour-mill and gristmill, lumber, and printing and publishing industries. These four industries (not counting custom sawmills and gristmills) comprised 107,733 establishments in 1909, or two-fifths of the total number of establishments canvassed by the census. Of these 107,733 establishments, 70,088, or nearly two-thirds, were located outside of places of 10,000 or more inhabitants.

Manufactures in communities classified according to size, by states and geographic divisions.—Comparative statistics of manufactures for 1909 and 1899 for communities of 10,000 inhabitants or over and for the remainder of the country are given, by states and geographic divisions, in Table 4.

The Middle Atlantic division has a larger proportion of its total population and also of its manufacturing activities in cities of 10,000 inhabitants or over than any other geographic division. In that division 62.4 per cent of the population in 1910, and 75.1 per cent of the wage earners in manufacturing establishments and 76.2 per cent of the value of manufactured products in 1909, were credited to such cities. In New England and the East North Central division the proportion for such cities is also high. The distinctively Southern states, which comprise the South Atlantic, East South Central, and West South Central divisions, considered collectively, have relatively more of their population and manufacturing industries in the smaller cities and rural districts than any other section of the country.

Considering the states individually, New York had a larger proportion of its total manufacturing activities in 1909, as measured by average number of wage earners, value of products, and value added by manufacture, in cities of 10,000 or more inhabitants than any other state. In Illinois, Massachusetts, Rhode Island, and several other states a very large proportion of the manufacturing business is also done in such cities. In striking contrast to these states are Arizona, Arkansas, Idaho, Mississippi, Montana, Nevada, New Mexico, North and South Carolina, North and South Dakota, Utah, Vermont, and Wyoming, which have comparatively few places of 10,000 or more.

The relative importance of the places of 10,000 inhabitants or over in population and manufactures was greater in 1909 than in 1899 in the New England, Middle Atlantic, East North Central, and West North Central divisions, except that in the Middle Atlantic division a slightly smaller proportion of the total value of products was reported from such places in 1909 than in 1899. In the remaining geographic divisions—the South Atlantic, East South Central, West South Central, Mountain, and Pacific—the smaller cities and rural districts in general gained relatively in industrial importance during the decade, although in each case they contained a smaller proportion of the total population in 1910 than in 1900.

LOCATION OF MANUFACTURING INDUSTRIES—STATISTICS OF ESTABLISHMENTS CLASSIFIED AS LOCATED IN DIVISIONS AND STATES:

	Table 4 — DIVISION AND STATE.	Census.	POPULATION.[1] Total.	POPULATION.[1] In cities of 10,000 or over.	POPULATION.[1] Elsewhere.	NUMBER OF ESTABLISHMENTS. Total.	NUMBER OF ESTABLISHMENTS. In cities of 10,000 or over.	NUMBER OF ESTABLISHMENTS. Elsewhere.	AVERAGE NUMBER OF WAGE EARNERS. Total.	AVERAGE NUMBER OF WAGE EARNERS. In cities of 10,000 or over.	AVERAGE NUMBER OF WAGE EARNERS. Elsewhere.
1	**UNITED STATES**[2]	1909	91,972,266	34,002,692	57,969,574	268,491	135,772	132,719	6,615,046	4,316,642	2,298,404
		1899	75,994,575	24,052,670	51,941,905	207,514	102,918	104,596	4,712,763	3,044,439	1,668,324
	GEOGRAPHIC DIVISIONS.										
2	New England	1909	6,552,681	4,060,032	2,492,649	25,351	14,796	10,555	1,101,290	783,674	317,616
		1899	5,592,017	3,128,392	2,463,625	22,576	12,450	10,126	851,903	556,287	295,616
3	Middle Atlantic	1909	19,315,892	12,045,917	7,269,975	81,315	55,411	25,904	2,207,747	1,657,774	549,973
		1899	15,454,678	8,810,060	6,644,618	65,834	43,108	22,726	1,604,844	1,197,381	407,463
4	East North Central	1909	18,250,621	7,679,935	10,570,686	60,013	32,095	27,918	1,513,764	1,086,745	427,019
		1899	15,985,581	5,575,775	10,409,806	50,521	24,611	25,910	1,073,322	744,421	328,901
5	West North Central	1909	11,637,921	2,833,028	8,804,893	27,171	10,515	16,656	374,337	262,971	111,366
		1899	10,347,423	2,094,604	8,252,819	20,732	7,772	12,960	266,051	183,382	82,669
6	South Atlantic	1909	12,194,895	2,302,670	9,892,225	28,088	6,999	21,089	663,015	224,284	438,731
		1899	10,443,480	1,721,999	8,721,481	19,144	5,396	13,748	458,344	176,042	282,302
7	East South Central	1909	8,409,901	1,100,583	7,309,318	15,381	3,442	11,939	261,772	91,995	169,777
		1899	7,547,757	754,057	6,793,700	10,058	2,533	7,525	177,208	65,489	111,719
8	West South Central	1909	8,784,534	1,315,026	7,469,508	12,339	3,467	8,872	204,520	58,356	146,164
		1899	6,532,290	695,217	5,837,073	7,174	1,860	5,314	113,388	35,422	77,966
9	Mountain	1909	2,633,517	575,021	2,058,496	5,254	1,683	3,571	75,435	24,577	50,858
		1899	1,674,657	330,874	1,343,783	3,146	1,051	2,095	44,497	15,023	29,474
10	Pacific	1909	4,192,304	2,009,795	2,182,509	13,579	7,222	6,357	213,166	109,935	103,231
		1899	2,416,692	907,127	1,509,565	8,329	4,066	4,263	123,206	64,100	59,106
	NEW ENGLAND.										
11	Maine	1909	742,371	166,433	575,938	3,546	675	2,871	79,955	25,453	54,502
		1899	694,466	147,012	547,454	2,878	631	2,247	69,914	23,190	46,724
12	New Hampshire	1909	430,572	174,112	256,460	1,961	604	1,357	78,658	44,467	34,191
		1899	411,588	124,361	287,227	1,771	402	1,369	67,646	30,191	37,455
13	Vermont	1909	355,956	44,748	311,208	1,958	284	1,674	33,788	6,347	27,441
		1899	343,641	30,139	313,502	1,938	139	1,799	28,179	3,728	24,451
14	Massachusetts	1909	3,366,416	2,606,380	760,036	11,684	9,210	2,474	584,559	477,766	106,793
		1899	2,805,346	2,050,862	754,484	10,929	8,210	2,719	438,234	341,251	96,983
15	Rhode Island	1909	542,610	437,627	104,983	1,951	1,656	295	113,538	91,142	22,396
		1899	428,556	330,437	98,119	1,678	1,358	320	88,197	66,718	21,479
16	Connecticut	1909	1,114,756	630,732	484,024	4,251	2,367	1,884	210,792	138,499	72,293
		1899	908,420	445,581	462,839	3,382	1,710	1,672	159,733	91,209	68,524
	MIDDLE ATLANTIC.										
17	New York	1909	9,113,614	6,756,593	2,357,021	44,935	34,436	10,499	1,003,981	856,875	147,106
		1899	7,268,894	4,917,781	2,351,113	35,957	26,467	9,490	726,909	605,358	121,551
18	New Jersey	1909	2,537,167	1,635,863	901,304	8,817	5,939	2,878	326,223	248,765	77,458
		1899	1,883,669	1,125,018	758,651	6,415	4,253	2,162	213,975	160,842	53,133
19	Pennsylvania	1909	7,665,111	3,653,461	4,011,650	27,563	15,036	12,527	877,543	552,134	325,409
		1899	6,302,115	2,767,261	3,534,854	23,462	12,388	11,074	663,960	431,181	232,779
	EAST NORTH CENTRAL.										
20	Ohio	1909	4,767,121	2,130,013	2,637,108	15,138	8,765	6,373	446,934	323,359	123,575
		1899	4,157,545	1,512,007	2,645,538	13,868	6,990	6,878	308,109	220,141	87,968
21	Indiana	1909	2,700,876	802,265	1,898,611	7,969	2,975	4,994	186,984	112,658	74,326
		1899	2,516,462	564,581	1,951,881	7,128	2,334	4,794	139,017	78,097	60,920
22	Illinois	1909	5,638,591	2,950,963	2,687,628	18,026	12,525	5,501	465,764	379,741	86,023
		1899	4,821,550	2,218,030	2,603,520	14,374	9,695	4,679	332,871	279,322	53,549
23	Michigan	1909	2,810,173	1,043,746	1,766,427	9,159	4,500	4,659	231,499	157,325	74,174
		1899	2,420,982	681,312	1,739,670	7,310	2,892	4,418	155,800	84,805	70,995
24	Wisconsin	1909	2,333,860	752,948	1,580,912	9,721	3,330	6,391	182,583	113,662	68,921
		1899	2,069,042	599,845	1,469,197	7,841	2,700	5,141	137,525	82,056	55,469
	WEST NORTH CENTRAL.										
25	Minnesota	1909	2,075,708	654,837	1,420,871	5,561	2,305	3,256	84,767	56,725	28,042
		1899	1,751,394	461,383	1,290,011	4,096	1,603	2,493	64,557	39,611	24,946
26	Iowa	1909	2,224,771	467,198	1,757,573	5,528	1,987	3,541	61,635	44,845	16,790
		1899	2,231,853	347,355	1,884,498	4,828	1,417	3,411	44,420	29,798	14,622
27	Missouri	1909	3,293,335	1,150,840	2,142,495	8,375	4,247	4,128	152,993	116,250	36,743
		1899	3,106,665	919,270	2,187,395	6,853	3,662	3,191	107,704	84,165	23,539
28	North Dakota	1909	577,056	26,809	550,247	752	99	653	2,789	860	1,929
		1899	319,146	.....	319,146	337	.....	337	1,358	.....	1,358
29	South Dakota	1909	583,888	24,847	559,041	1,020	120	900	3,602	972	2,630
		1899	401,570	10,266	391,304	624	48	576	2,224	311	1,913
30	Nebraska	1909	1,192,214	204,654	987,560	2,500	714	1,786	24,336	17,085	7,251
		1899	1,066,300	168,725	897,575	1,695	429	1,266	18,669	12,707	5,962
31	Kansas	1909	1,690,949	303,843	1,387,106	3,435	1,043	2,392	44,215	26,234	17,981
		1899	1,470,495	187,605	1,282,890	2,299	613	1,686	27,119	16,790	10,329

[1] The population in 1910 was used as the basis in making the classification for 1909 as was that in 1900 for 1899.

CITIES AND TOWNS OF 10,000 INHABITANTS OR MORE OR LOCATED OUTSIDE OF SUCH PLACES, BY GEOGRAPHIC 1909 AND 1899.

	Value of products.			Value added by manufacture (value of products less cost of materials).			Per cent of total.									
	Total.	In cities of 10,000 or over.	Elsewhere.	Total.	In cities of 10,000 or over.	Elsewhere.	Population.		Number of establishments.		Average number of wage earners.		Value of products.		Value added by manufacture.	
							In cities of 10,000 or over.	Elsewhere.	In cities of 10,000 or over.	Elsewhere.	In cities of 10,000 or over.	Elsewhere.	In cities of 10,000 or over.	Elsewhere.	In cities of 10,000 or over.	Elsewhere.
1	$20,672,051,870	$14,264,878,807	$6,407,173,063	$8,529,260,992	$6,003,005,285	$2,526,255,707	37.0	63.0	50.6	49.4	65.3	34.7	69.0	31.0	70.4	29.6
	11,406,926,701	7,864,564,177	3,542,362,524	4,831,075,210	3,377,477,927	1,453,597,283	31.7	68.3	49.6	50.4	64.6	35.4	68.9	31.1	69.9	30.1
2	2,670,065,114	1,954,650,498	715,414,616	1,193,768,236	875,435,065	318,333,171	62.0	38.0	58.4	41.6	71.2	28.8	73.2	26.8	73.3	26.7
	1,660,348,100	1,133,861,342	526,486,758	756,311,120	519,358,469	236,952,651	55.9	44.1	55.1	44.9	65.3	34.7	68.3	31.7	68.7	31.3
3	7,141,761,302	5,439,468,193	1,702,293,109	2,982,263,573	2,330,108,430	652,155,143	62.4	37.6	68.1	31.9	75.1	24.9	76.2	23.8	78.1	21.9
	4,074,718,936	3,108,121,937	966,596,999	1,763,314,384	1,361,325,293	401,989,091	57.0	43.0	65.5	34.5	74.6	25.4	76.3	23.7	77.2	22.8
4	5,211,702,164	3,855,851,964	1,355,850,200	2,177,230,169	1,644,055,475	533,174,694	42.1	57.9	53.5	46.5	71.8	28.2	74.0	26.0	75.5	24.5
	2,853,055,527	2,078,936,003	774,119,524	1,205,478,817	891,632,819	313,845,998	34.9	65.1	48.7	51.3	69.4	30.6	72.9	27.1	74.0	26.0
5	1,803,898,550	1,278,313,201	525,585,349	562,043,447	412,336,679	149,706,768	24.3	75.7	38.7	61.3	70.2	29.8	70.9	29.1	73.4	26.6
	972,968,665	682,123,164	290,845,501	325,404,099	236,768,517	88,635,582	20.2	79.8	37.5	62.5	68.9	31.1	70.1	29.9	72.8	27.2
6	1,381,186,210	588,934,177	792,252,033	591,181,848	265,241,896	325,939,952	18.9	81.1	24.9	75.1	33.8	66.2	42.6	57.4	44.9	55.1
	711,800,355	335,463,165	376,337,190	316,114,105	152,061,761	164,052,344	16.5	83.5	28.2	71.8	38.4	61.6	47.1	52.9	48.1	51.9
7	630,488,093	281,901,777	348,586,316	294,324,842	123,902,553	170,422,289	13.1	86.9	22.4	77.6	35.1	64.9	44.7	55.3	42.1	57.9
	325,086,235	150,041,889	175,044,346	148,579,732	70,138,922	78,440,810	10.0	90.0	25.2	74.8	37.0	63.0	46.2	53.8	47.2	52.8
8	625,443,045	236,138,404	389,304,641	243,311,949	92,598,246	150,713,703	15.0	85.0	28.1	71.9	28.5	71.5	37.8	62.2	38.1	61.9
	252,313,866	104,570,711	147,743,155	98,803,134	38,198,863	60,604,271	10.6	89.4	25.9	74.1	31.2	68.8	41.4	58.6	38.7	61.3
9	363,995,598	91,158,726	272,836,872	135,303,366	40,793,339	94,510,027	21.8	78.2	32.0	68.0	32.6	67.4	25.0	75.0	30.1	69.9
	191,825,437	55,050,897	136,774,540	76,220,285	20,467,933	55,752,352	19.8	80.2	33.4	66.6	33.8	66.2	28.7	71.3	26.9	73.1
10	843,511,794	455,924,179	387,587,615	349,833,562	196,317,328	153,516,234	47.9	52.1	53.2	46.8	51.6	48.4	54.1	45.9	56.1	43.9
	364,809,580	201,122,871	163,686,709	140,849,534	80,859,415	59,990,119	37.5	62.5	48.8	51.2	52.0	48.0	55.1	44.9	57.4	42.6
11	176,029,393	51,466,847	124,562,546	78,928,169	23,393,234	55,534,935	22.4	77.6	19.0	81.0	31.8	68.2	29.2	70.8	29.6	70.4
	112,959,098	36,896,611	76,062,487	51,748,771	17,567,395	34,181,376	21.2	78.8	21.9	78.1	33.2	66.8	32.7	67.3	33.9	66.1
12	164,581,019	93,054,154	71,526,865	66,424,003	36,531,230	29,892,773	40.4	59.6	30.8	69.2	56.5	43.5	56.5	43.5	55.0	45.0
	107,590,803	48,336,336	59,254,467	47,427,423	21,171,813	26,255,610	30.2	69.8	22.7	77.3	44.6	55.4	44.9	55.1	44.6	55.4
13	68,309,824	13,332,195	54,977,629	33,487,096	6,693,974	26,793,122	12.6	87.4	14.5	85.5	18.8	81.2	19.5	80.5	20.0	80.0
	51,515,228	8,025,240	43,489,988	25,130,416	3,895,818	21,234,598	8.8	91.2	7.2	92.8	13.2	86.8	15.6	84.4	15.5	84.5
14	1,490,529,386	1,236,269,442	254,259,944	659,764,443	548,852,996	110,911,447	77.4	22.6	78.8	21.2	81.7	18.3	82.9	17.1	83.2	16.8
	907,626,439	715,626,978	191,999,461	408,971,406	326,156,070	82,815,336	73.1	26.9	75.1	24.9	77.9	22.1	78.8	21.2	79.8	20.2
15	280,343,797	226,191,505	54,152,292	122,152,223	101,209,421	20,942,802	80.7	19.3	84.9	15.1	80.3	19.7	80.7	19.3	82.9	17.1
	165,550,382	131,529,623	34,020,759	77,598,602	61,111,305	16,487,297	77.1	22.9	80.9	19.1	75.6	24.4	79.4	20.6	78.8	21.2
16	490,271,695	334,336,355	155,935,340	233,012,302	158,754,210	74,258,092	56.6	43.4	55.7	44.3	65.7	34.3	68.2	31.8	68.1	31.9
	315,106,150	193,446,554	121,659,596	145,434,502	89,456,068	55,978,434	49.1	50.9	50.6	49.4	57.1	42.9	61.4	38.6	61.5	38.5
17	3,369,490,192	2,925,071,637	444,418,555	1,512,585,850	1,338,083,993	174,501,857	74.1	25.9	76.6	23.4	85.3	14.7	86.8	13.2	88.5	11.5
	1,871,830,872	1,613,789,902	258,040,970	853,453,686	743,566,680	109,887,006	67.7	32.3	73.6	26.4	83.3	16.7	86.2	13.8	87.1	12.9
18	1,145,529,076	851,498,583	294,030,493	425,495,677	325,638,307	99,857,370	64.5	35.5	67.4	32.6	76.3	23.7	74.3	25.7	76.5	23.5
	553,005,684	419,801,662	133,204,022	218,279,590	166,024,706	52,254,884	59.7	40.3	66.3	33.7	75.2	24.8	75.9	24.1	76.1	23.9
19	2,626,742,034	1,662,897,973	963,844,061	1,044,182,046	666,386,130	377,795,916	47.7	52.3	54.6	45.4	62.9	37.1	63.3	36.7	63.8	36.2
	1,649,882,380	1,074,530,373	575,352,007	691,581,108	451,733,907	239,847,201	43.9	56.1	52.8	47.2	64.9	35.1	65.1	34.9	65.3	34.7
20	1,437,935,817	1,077,616,658	360,319,159	613,733,870	470,315,914	143,417,956	44.7	55.3	57.9	42.1	72.4	27.6	74.9	25.1	76.6	23.4
	748,670,855	540,823,420	207,847,435	339,368,354	251,523,607	87,844,747	36.4	63.6	50.4	49.6	71.4	28.6	72.2	27.8	74.1	25.9
21	579,075,046	348,759,733	230,315,313	244,700,293	148,609,815	96,090,478	29.7	70.3	37.3	62.7	60.3	39.7	60.2	39.8	60.7	39.3
	337,071,630	208,226,871	128,844,759	141,909,064	88,116,611	53,792,453	22.4	77.6	32.7	67.3	56.2	43.8	61.8	38.2	62.1	37.9
22	1,919,276,594	1,595,135,686	324,140,908	758,349,904	639,383,749	118,966,155	52.3	47.7	69.5	30.5	81.5	18.5	83.1	16.9	84.3	15.7
	1,120,868,308	957,089,720	163,778,588	439,418,186	378,306,775	61,111,411	46.0	54.0	67.4	32.6	83.9	16.1	85.4	14.6	86.1	13.9
23	685,109,169	469,603,103	215,506,066	316,497,147	227,482,140	89,015,007	37.1	62.9	49.1	50.9	68.0	32.0	68.5	31.5	71.9	28.1
	319,691,856	178,124,393	141,567,463	143,725,728	85,008,397	58,717,331	28.1	71.9	39.6	60.4	54.4	45.6	55.7	44.3	59.1	40.9
24	590,305,538	364,736,784	225,568,754	243,948,955	158,263,857	85,685,098	32.3	67.7	34.3	65.7	62.3	37.7	61.8	38.2	64.9	35.1
	326,752,878	194,671,599	132,081,279	141,057,485	88,677,429	52,380,056	29.0	71.0	34.4	65.6	59.7	40.3	59.6	40.4	62.9	37.1
25	409,419,621	262,000,908	147,418,713	127,797,334	89,653,460	38,143,874	31.5	68.5	41.4	58.6	66.9	33.1	64.0	36.0	70.2	29.8
	223,692,922	141,976,434	81,716,488	73,393,645	47,089,324	26,304,321	26.3	73.7	39.1	60.9	61.4	38.6	63.5	36.5	64.2	35.8
26	259,237,637	189,270,682	69,966,955	88,530,589	63,114,904	25,415,685	21.0	79.0	35.9	64.1	72.8	27.2	73.0	27.0	71.3	28.7
	132,870,865	89,630,645	43,240,220	47,091,998	31,784,431	15,307,567	15.6	84.4	29.3	70.6	67.1	32.9	67.5	32.5	67.5	32.5
27	574,111,070	427,078,288	147,032,782	219,699,919	180,678,818	39,021,101	34.9	65.1	50.7	49.3	76.0	24.0	74.4	25.6	82.2	17.8
	316,304,095	238,424,508	77,879,587	132,115,065	111,156,471	20,958,594	29.6	70.4	53.4	46.6	78.1	21.9	75.4	24.6	84.1	15.9
28	19,137,506	4,386,907	14,750,599	5,463,916	1,726,061	3,737,855	4.6	95.4	13.2	86.8	30.8	69.2	22.9	77.1	31.6	68.4
	6,259,840	.....	6,259,840	2,108,980	.....	2,108,980	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
29	17,870,135	4,464,069	13,406,066	6,393,785	1,823,764	4,570,021	4.3	95.7	11.8	88.2	27.0	73.0	25.0	75.0	28.5	71.5
	9,529,946	883,624	8,646,322	3,046,269	562,096	2,484,173	2.6	97.4	7.7	92.3	14.0	86.0	9.3	90.7	18.5	81.5
30	199,018,579	162,137,395	36,881,184	47,937,608	36,174,579	11,763,029	17.2	82.8	28.6	71.4	70.2	29.8	81.5	18.5	75.5	24.5
	130,302,453	110,346,627	19,955,826	34,377,275	27,804,848	6,572,427	15.8	84.2	25.3	74.7	68.1	31.9	84.7	15.3	80.9	19.1
31	325,104,002	228,974,952	96,129,050	66,220,296	39,165,093	27,055,203	18.0	82.0	30.4	69.6	59.3	40.7	70.4	29.6	59.1	40.9
	154,008,544	100,861,326	53,147,218	33,270,867	18,371,347	14,899,520	12.8	87.2	26.7	73.3	61.9	38.1	65.5	34.5	55.2	44.8

[a] Includes for 1909 statistics for Gary, Ind.; Great Falls, Mont.; Lackawanna, N. Y.; Lakewood, Ohio; and Newport News, Va., and for 1899 statistics for Great Falls, Mont., and Newport News, Va., which are omitted from the city totals for the geographic division or state in which the cities in question are located in order not to disclose the operations of individual establishments.

LOCATION OF MANUFACTURING INDUSTRIES—STATISTICS OF ESTABLISHMENTS CLASSIFIED AS LOCATED IN DIVISIONS AND STATES:

	Table 4—Continued.		POPULATION.[1]			NUMBER OF ESTABLISHMENTS.			AVERAGE NUMBER OF WAGE EARNERS.		
	DIVISION AND STATE.	Census.	Total.	In cities of 10,000 or over.	Elsewhere.	Total.	In cities of 10,000 or over.	Elsewhere.	Total.	In cities of 10,000 or over.	Elsewhere.
	SOUTH ATLANTIC.										
1	Delaware	1909	202,322	87,411	114,911	726	261	465	21,238	14,663	6,575
		1899	184,735	76,508	108,227	633	262	371	20,562	14,498	6,064
2	Maryland	1909	1,295,346	607,242	688,104	4,837	2,704	2,133	107,921	76,124	31,797
		1899	1,188,044	539,676	648,368	3,886	2,410	1,476	94,170	69,729	24,441
3	District of Columbia	1909	331,069	331,069	.....	518	518	.....	7,707	7,707	.....
		1899	278,718	278,718	.....	491	491	.....	6,155	6,155	.....
4	Virginia	1909	2,061,612	361,718	1,699,894	5,685	992	4,693	105,676	36,782	68,894
		1899	1,854,184	252,060	1,602,124	3,186	717	2,469	66,223	28,142	38,081
5	West Virginia	1909	1,221,119	135,526	1,085,593	2,586	435	2,151	63,893	15,501	48,392
		1899	958,800	73,603	885,197	1,824	327	1,497	33,080	9,830	23,250
6	North Carolina	1909	2,206,287	149,045	2,057,242	4,931	453	4,478	121,473	18,797	102,676
		1899	1,893,810	87,447	1,806,363	3,465	256	3,209	72,322	9,264	63,058
7	South Carolina	1909	1,515,400	118,410	1,396,990	1,854	248	1,606	73,046	8,351	64,695
		1899	1,340,316	100,170	1,240,146	1,369	195	1,174	47,025	7,409	39,616
8	Georgia	1909	2,609,121	373,841	2,235,280	4,792	943	3,849	104,588	31,983	72,605
		1899	2,216,331	234,688	1,981,643	3,015	509	2,506	83,336	23,471	59,865
9	Florida	1909	752,619	138,408	614,211	2,159	445	1,714	57,473	14,376	43,097
		1899	528,542	79,129	449,413	1,275	229	1,046	35,471	7,544	27,927
	EAST SOUTH CENTRAL.										
10	Kentucky	1909	2,289,905	403,294	1,886,611	4,776	1,562	3,214	65,400	39,931	25,469
		1899	2,147,174	345,246	1,801,928	3,648	1,433	2,215	51,735	32,329	19,406
11	Tennessee	1909	2,184,789	338,198	1,846,591	4,609	1,099	3,510	73,840	28,236	45,604
		1899	2,020,616	260,487	1,760,129	3,116	744	2,372	45,963	23,302	22,661
12	Alabama	1909	2,138,093	270,206	1,867,887	3,398	579	2,819	72,148	19,227	52,921
		1899	1,828,697	107,230	1,721,467	2,000	274	1,726	52,711	7,389	45,322
13	Mississippi	1909	1,797,114	88,885	1,708,229	2,598	202	2,396	50,384	4,601	45,783
		1899	1,551,270	41,094	1,510,176	1,294	82	1,212	26,799	2,469	24,330
	WEST SOUTH CENTRAL.										
14	Arkansas	1909	1,574,449	110,590	1,463,859	2,925	339	2,586	44,982	7,082	37,900
		1899	1,311,564	61,390	1,250,174	1,746	165	1,581	31,525	3,064	28,461
15	Louisiana	1909	1,656,388	414,858	1,241,530	2,516	1,028	1,488	76,165	20,587	55,578
		1899	1,381,625	314,386	1,067,239	1,826	747	1,079	40,878	17,250	23,628
16	Oklahoma	1909	1,657,155	168,866	1,488,289	2,310	486	1,824	13,143	4,384	8,759
		1899	790,391	20,043	770,348	495	69	426	2,381	461	1,920
17	Texas	1909	3,896,542	620,712	3,275,830	4,588	1,614	2,974	70,230	26,303	43,927
		1899	3,048,710	299,398	2,749,312	3,107	879	2,228	38,604	14,647	23,957
	MOUNTAIN.										
18	Montana	1909	376,053	84,714	291,339	677	186	491	11,655	1,833	9,822
		1899	243,329	41,240	202,089	395	83	312	9,854	675	9,179
19	Idaho	1909	325,594	17,358	308,236	725	50	675	8,220	411	7,809
		1899	161,772	.....	161,772	287	.....	287	1,552	.....	1,552
20	Wyoming	1909	145,965	11,320	134,645	268	22	246	2,867	853	2,014
		1899	92,531	14,087	78,444	139	17	122	2,060	423	1,637
21	Colorado	1909	799,024	297,058	501,966	2,034	949	1,085	28,067	14,114	13,953
		1899	539,700	205,703	333,997	1,323	746	577	19,498	11,093	8,405
22	New Mexico	1909	327,301	11,020	316,281	313	31	282	4,143	587	3,556
		1899	195,310	.....	195,310	174	.....	174	2,490	.....	2,490
23	Arizona	1909	204,354	24,327	180,027	311	92	219	6,441	859	5,582
		1899	122,931	.....	122,931	154	.....	154	3,126	.....	3,126
24	Utah	1909	373,351	118,357	254,994	749	313	436	11,785	5,610	6,175
		1899	276,749	69,844	206,905	575	205	370	5,413	2,832	2,581
25	Nevada	1909	81,875	10,867	71,008	177	40	137	2,257	310	1,947
		1899	42,335	.....	42,335	99	.....	99	504	.....	504
	PACIFIC.										
26	Washington	1909	1,141,990	521,557	620,433	3,674	1,630	2,044	69,120	27,525	41,595
		1899	518,103	176,344	341,759	1,926	691	1,235	31,523	10,767	20,756
27	Oregon	1909	672,765	221,308	451,457	2,246	711	1,535	28,750	12,811	15,939
		1899	413,536	90,426	323,110	1,406	408	998	14,459	5,380	9,079
28	California	1909	2,377,549	1,266,930	1,110,619	7,659	4,881	2,778	115,296	69,599	45,697
		1899	1,485,053	640,357	844,696	4,997	2,967	2,030	77,224	47,953	29,271

[1] The population in 1910 was used as the basis in making the classification for 1909 as was that in 1900 for 1899.

CITIES AND TOWNS OF 10,000 INHABITANTS OR MORE OR LOCATED OUTSIDE OF SUCH PLACES, BY GEOGRAPHIC
1909 AND 1899—Continued.

	Value of products.			Value added by manufacture (value of products less cost of materials).			Per cent of total in cities and elsewhere.									
							Population.		Number of establishments.		Average number of wage earners.		Value of products.		Value added by manufacture.	
	Total.	In cities of 10,000 or over.	Elsewhere.	Total.	In cities of 10,000 or over.	Elsewhere.	In cities of 10,000 or over.	Elsewhere.	In cities of 10,000 or over.	Elsewhere.	In cities of 10,000 or over.	Elsewhere.	In cities of 10,000 or over.	Elsewhere.	In cities of 10,000 or over.	Elsewhere.
1	$52,839,619	$38,069,383	$14,770,236	$21,901,818	$16,093,083	$5,808,735	43.2	56.8	36.0	64.0	69.0	31.0	72.0	28.0	73.5	26.5
	41,321,061	30,586,810	10,734,251	16,595,744	12,710,975	3,884,769	41.4	58.6	41.4	58.6	70.5	29.5	74.0	26.0	76.6	23.4
2	315,669,150	197,619,972	118,049,178	116,620,245	84,047,316	32,572,929	46.9	53.1	55.9	44.1	70.5	29.5	62.6	37.4	72.1	27.9
	211,076,143	139,828,392	71,247,751	81,721,731	61,831,896	19,889,835	45.4	54.6	62.0	38.0	74.0	26.0	66.2	33.8	75.7	24.3
3	25,289,136	25,289,136	.....	15,042,602	15,042,602	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	16,426,408	16,426,408	.....	8,951,192	8,951,192	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
4	219,793,858	96,603,688	123,190,170	94,211,171	42,959,849	51,251,322	17.5	82.5	17.4	82.6	34.8	65.2	44.0	56.0	45.6	54.4
	108,644,150	49,239,397	59,404,753	49,284,666	23,827,644	25,457,022	13.6	86.4	22.5	77.5	42.5	57.5	45.3	54.7	48.3	51.7
5	161,949,526	46,302,723	115,646,803	69,071,538	19,032,710	50,038,828	11.1	88.9	16.8	83.2	24.3	75.7	28.6	71.4	27.6	72.4
	67,006,822	23,079,313	43,927,509	29,778,569	9,630,783	20,147,786	7.7	92.3	17.9	82.1	29.7	70.3	34.4	65.6	32.3	67.7
6	216,656,055	61,171,160	155,484,895	94,794,525	31,354,345	63,440,180	6.8	93.2	9.2	90.8	15.5	84.5	28.2	71.8	33.1	66.9
	85,274,083	14,530,673	70,743,410	40,419,859	7,139,230	33,280,629	4.6	95.4	7.4	92.6	12.8	87.2	17.0	83.0	17.7	82.3
7	113,235,945	18,240,484	94,995,461	46,885,071	7,120,347	39,764,724	7.8	92.2	13.4	86.6	11.4	88.6	16.1	83.9	15.2	84.8
	53,335,811	11,404,995	41,930,816	22,849,950	4,425,966	18,423,984	7.5	92.5	14.2	85.8	15.8	84.2	21.4	78.6	19.4	80.6
8	202,863,262	75,334,309	127,528,953	85,893,498	33,256,700	52,636,798	14.3	85.7	19.7	80.3	30.6	69.4	37.1	62.9	38.7	61.3
	94,532,368	37,344,230	57,188,138	45,176,072	16,425,644	28,750,428	10.6	89.4	16.9	83.1	28.2	71.8	39.5	60.5	36.4	63.6
9	72,889,659	30,303,322	42,586,337	46,761,380	16,334,944	30,426,436	18.4	81.6	20.6	79.4	25.0	75.0	41.6	58.4	34.9	65.1
	34,183,509	13,022,947	21,160,562	21,336,322	7,118,431	14,217,891	15.0	85.0	18.0	82.0	21.3	78.7	38.1	61.9	33.4	66.6
10	223,754,497	133,824,503	89,929,994	111,975,180	62,321,114	49,654,066	17.6	82.4	32.7	67.3	61.1	38.9	59.8	40.2	55.7	44.3
	126,508,660	82,774,847	43,733,813	59,102,458	40,091,739	19,010,719	16.1	83.9	39.3	60.7	62.5	37.5	65.4	34.6	67.8	32.2
11	180,216,548	86,786,821	93,429,727	76,200,714	36,729,504	39,471,210	15.5	84.5	23.8	76.2	38.2	61.8	48.2	51.8	48.2	51.8
	92,749,129	47,831,174	44,917,955	38,190,090	20,259,432	17,930,658	12.9	87.1	23.9	76.1	50.7	49.3	51.6	48.4	53.0	47.0
12	145,961,638	49,345,723	96,615,915	62,519,120	19,811,680	42,707,440	12.6	87.4	17.0	83.0	26.6	73.4	33.8	66.2	31.7	68.3
	72,109,929	15,028,755	57,081,174	34,111,696	7,792,138	26,319,558	5.9	94.1	13.7	86.3	14.0	86.0	20.8	79.2	22.8	77.2
13	80,555,410	11,944,730	68,610,680	43,629,828	5,040,255	38,589,573	4.9	95.1	7.8	92.2	9.1	90.9	14.8	85.2	11.6	88.4
	33,718,517	4,407,113	29,311,404	17,175,488	1,995,613	15,179,875	2.6	97.4	6.3	93.7	9.2	90.8	13.1	86.9	11.6	88.4
14	74,916,367	18,693,769	56,222,598	39,981,455	8,331,722	31,649,733	7.0	93.0	11.6	88.4	15.7	84.3	25.0	75.0	20.8	79.2
	39,887,578	6,320,887	33,566,691	21,599,533	3,102,228	18,497,305	4.7	95.3	9.5	90.5	9.7	90.3	15.8	84.2	14.4	85.6
15	223,948,638	87,880,248	136,068,390	89,083,863	34,311,474	54,772,389	25.0	75.0	40.9	59.1	27.0	73.0	39.2	60.8	38.5	61.5
	111,397,919	59,719,597	51,678,322	35,993,982	18,046,533	17,947,449	22.8	77.2	40.9	59.1	42.2	57.8	53.6	46.4	50.1	49.9
16	53,682,405	20,005,330	33,677,075	19,529,511	7,110,080	12,419,431	10.2	89.8	21.0	79.0	33.4	66.6	37.3	62.7	36.4	63.6
	8,133,936	1,493,998	6,639,938	2,703,489	639,860	2,063,629	2.5	97.5	13.9	86.1	19.4	80.6	18.4	81.6	23.7	76.3
17	272,895,635	109,559,057	163,336,578	94,717,120	42,844,970	51,872,150	15.9	84.1	35.2	64.8	37.5	62.5	40.1	59.9	45.2	54.8
	92,894,433	37,036,229	55,858,204	38,506,130	16,410,242	22,095,888	9.8	90.2	28.3	71.7	37.9	62.1	39.9	60.1	42.6	57.4
18	73,271,793	6,772,158	66,499,635	24,091,554	4,035,122	20,056,432	22.5	77.5	27.5	72.5	15.7	84.3	9.2	90.8	16.7	83.3
	52,744,997	2,292,687	50,452,310	22,676,896	1,178,987	21,497,909	16.9	83.1	21.0	79.0	6.9	93.1	4.3	95.7	5.2	94.8
19	22,399,860	1,660,497	20,739,363	12,479,843	765,909	11,713,934	5.3	94.7	6.9	93.1	5.0	95.0	7.4	92.6	6.1	93.9
	3,001,442	.....	3,001,442	1,562,574	.....	1,562,574	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
20	6,249,078	1,577,023	4,672,055	3,640,889	969,949	2,670,940	7.8	92.2	8.2	91.8	29.8	70.2	25.2	74.8	26.6	73.4
	3,268,555	722,457	2,546,098	1,898,825	433,909	1,464,916	15.2	84.8	12.2	87.8	20.5	79.5	22.1	77.9	22.9	77.1
21	130,044,312	57,430,448	72,613,864	49,553,408	23,872,383	25,681,025	37.2	62.8	46.7	53.3	50.3	49.7	44.2	55.8	48.2	51.8
	89,067,879	46,514,613	42,553,266	28,317,095	15,989,943	12,327,152	38.1	61.9	56.4	43.6	56.9	43.1	52.2	47.8	56.5	43.5
22	7,897,756	1,288,349	6,609,407	4,636,713	704,525	3,932,188	3.4	96.6	9.9	90.1	14.2	85.8	16.3	83.7	15.2	84.8
	4,060,924	.....	4,060,924	2,062,331	.....	2,062,331	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
23	50,256,694	3,503,762	46,752,932	16,656,454	1,370,224	15,286,230	11.9	88.1	29.6	70.4	13.3	86.7	7.0	93.0	8.2	91.8
	20,438,987	.....	20,438,987	12,562,445	.....	12,562,445	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
24	61,989,277	17,064,204	44,925,073	20,723,616	8,383,756	12,339,860	31.7	68.3	41.8	58.2	47.6	52.4	27.5	72.5	40.5	59.5
	17,981,648	5,521,140	12,460,508	6,541,398	2,865,094	3,676,304	25.2	74.8	35.7	64.3	52.3	47.7	30.7	69.3	43.8	56.2
25	11,886,828	1,862,285	10,024,543	3,520,889	691,471	2,829,418	13.3	86.7	22.6	77.4	13.7	86.3	15.7	84.3	19.6	80.4
	1,261,005	.....	1,261,005	598,721	.....	598,721	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
26	220,746,421	112,003,902	108,742,519	102,858,733	48,572,236	54,286,497	45.7	54.3	44.4	55.6	39.8	60.2	50.7	49.3	47.2	52.8
	70,831,345	32,973,483	37,857,862	32,554,401	13,561,487	18,992,914	34.0	66.0	35.9	64.1	34.2	65.8	46.6	53.4	41.7	58.3
27	93,004,845	49,068,798	43,936,047	42,452,375	21,815,981	20,636,394	32.9	67.1	31.7	68.3	44.6	55.4	52.8	47.2	51.4	48.6
	36,592,714	16,903,707	19,689,007	15,803,881	6,726,379	9,077,502	21.9	78.1	29.0	71.0	37.2	62.8	46.2	53.8	42.6	57.4
28	529,760,528	294,851,479	234,909,049	204,522,454	125,929,111	78,593,343	53.3	46.7	63.7	36.3	60.4	39.6	55.7	44.3	61.6	38.4
	257,385,521	151,245,681	106,139,840	92,491,252	60,571,549	31,919,703	43.1	56.9	59.4	40.6	62.1	37.9	58.8	41.2	65.5	34.5

CHAPTER VII.

LOCAL CONCENTRATION OF CERTAIN INDUSTRIES.

Statistics showing local concentration of selected industries.—The statistics already presented in Chapter IV (Table 7), showing the three leading states in each of the manufacturing industries distinguished by the Bureau of the Census, and those presented in Chapter V, showing the six leading cities in certain selected industries, bring out the fact that there is much more local concentration in some industries than in others. This condition, however, may be set forth more clearly by selecting from among the large number of industries those which are of importance and which also show a marked degree of concentration, and indicating what proportion of the total value of products of each industry was reported from the states and cities which lead in that industry. The following table presents statistics for 50 selected industries of this character. It may be noted that, in order to bring out fully the tendency toward concentration, data are shown in a few cases for separate subdivisions of the broader classifications used in most of the tables of this report. So far as figures can be shown without the disclosure of individual operations, the table names the states, and in most cases also the cities, in which each industry is markedly concentrated, and shows for each state or city the value of products reported for 1909 and 1904 and the proportion which that value represented of the United States total. In some cases important states and cities have been omitted because the figures could not be given. Cities are not named in connection with some industries because there is no significant concentration in cities.

The figures for individual states presented in this table are in some cases less significant than those for the cities, since the importance of a state as a whole in a given industry may be due merely to the prominence of one or two localities, and may not indicate any widespread development of the industry throughout the state.

SELECTED INDUSTRIES SHOWING A MARKED DEGREE OF LOCAL CONCENTRATION.

Table 1

INDUSTRY.	VALUE OF PRODUCTS FOR THE UNITED STATES.		STATE.	VALUE OF PRODUCTS FOR THE STATE NAMED.				CITY.	VALUE OF PRODUCTS FOR THE CITY NAMED.			
				Amount.		Per cent of United States total.			Amount.		Per cent of United States total.	
	1909	1904		1909	1904	1909	1904		1909	1904	1909	1904
Agricultural implements	$146,329,268	$112,007,344	Illinois	$57,268,325	$38,412,452	39.1	34.3	Moline, Ill.	$11,493,184	$8,347,014	7.9	7.5
			New York	14,970,980	13,045,891	10.2	11.6	Racine, Wis.	7,174,690	5,177,079	4.9	4.6
			Ohio	14,440,461	12,891,197	9.9	11.5	Springfield, Ohio	5,442,397	4,051,167	3.7	3.6
			Indiana	13,669,824	8,060,575	9.3	7.2					
			Wisconsin	11,411,303	10,076,760	7.8	9.0					
			Michigan	9,272,787	8,719,719	6.3	7.8					
Artificial flowers and feathers and plumes.	23,980,567	5,246,822	New York	21,162,385	3,996,903	88.2	76.2	New York, N. Y.	21,098,226	3,965,753	88.0	75.6
								Philadelphia, Pa.	1,313,901	721,940	5.5	13.8
Automobiles, including bodies and parts.	249,202,075	30,033,536	Michigan	96,651,451	7,996,534	38.8	26.6	Detroit, Mich.	59,536,154	6,240,051	23.9	20.8
			Ohio	38,838,754	6,358,164	15.6	21.2	Cleveland, Ohio	21,403,926	4,624,080	8.6	15.4
			New York	30,979,527	4,260,164	12.4	14.2	Flint, Mich.	16,841,688	(1)	6.8	.....
			Indiana	23,764,070	1,638,602	9.5	5.5	Buffalo, N. Y.	9,597,763	[2] 1,385,509	3.9	[2] 4.6
								Lansing, Mich.	8,503,316	(1)	3.4	.....
								New York, N. Y.	6,194,354	1,399,484	2.5	4.7
								Jackson, Mich.	5,403,134	(1)	2.2	.....
								Dayton, Ohio	4,618,839	.....	1.9	.....
								Pontiac, Mich.	4,418,506	(1)	1.8	.....
Boots and shoes, including cut stock and findings.	512,797,642	357,688,160	Massachusetts	236,342,915	173,679,628	46.1	48.6	Lynn, Mass.	46,659,709	35,430,532	9.1	9.9
			Missouri	48,751,235	[2] 23,540,943	9.5	[2] 6.7	Brockton, Mass.	39,293,118	33,853,128	7.7	9.5
			New York	48,185,914	37,521,068	9.4	10.5	St. Louis, Mo.	33,970,372	19,662,338	6.6	5.5
			New Hampshire	39,439,544	22,834,259	7.7	6.4	Haverhill, Mass.	29,149,609	20,508,825	5.7	5.7
			Ohio	31,550,957	25,735,005	6.2	7.2	Boston, Mass.	26,146,755	[2] 11,413,510	5.1	[2] 3.2
								New York, N. Y.	18,376,429	13,686,605	3.6	3.8
								Manchester, N. H.	17,646,652	[3] 6,567,903	3.4	[3] 1.8
								Cincinnati, Ohio	14,998,672	11,152,013	2.9	3.1
								Rochester, N. Y.	13,450,155	9,154,944	2.6	2.6
Boots and shoes, rubber	49,720,507	70,065,296	Massachusetts	18,722,363	39,034,549	37.7	55.7					
Brass and bronze products.	149,989,058	102,407,104	Connecticut	66,932,969	[2] 53,916,445	44.6	[2] 52.7	Waterbury, Conn.	31,461,875	[3] 19,986,964	21.0	[3] 19.5
								Ansonia, Conn.	16,499,613	16,297,911	11.0	15.9
								Bridgeport, Conn.	4,445,658	5,362,761	3.0	5.2
Butter, cheese, and condensed milk.	274,557,718	168,182,789	Wisconsin	53,843,249	29,994,791	19.6	17.8					
			New York	42,458,345	31,047,776	15.5	18.5					
			Iowa	25,849,866	[3] 15,028,326	9.4	[3] 9.0					
			Minnesota	25,287,462	12,871,129	9.2	7.7					

[1] Figures can not be shown without disclosing individual operations.
[2] Excluding statistics for two establishments, to avoid disclosure of individual operations.
[3] Excluding statistics for one establishment, to avoid disclosure of individual operations.

SELECTED INDUSTRIES SHOWING A MARKED DEGREE OF LOCAL CONCENTRATION—Continued.

Table 1—Continued.

INDUSTRY.	VALUE OF PRODUCTS FOR THE UNITED STATES.		STATE.	VALUE OF PRODUCTS FOR THE STATE NAMED.				CITY.	VALUE OF PRODUCTS FOR THE CITY NAMED.			
				Amount.		Per cent of United States total.			Amount.		Per cent of United States total.	
	1909	1904		1909	1904	1909	1904		1909	1904	1909	1904
Canning and preserving	$157,101,201	$130,465,976	California	$32,914,829	$26,083,226	21.0	20.0					
			New York	19,039,735	[1]16,821,221	12.1	[1]12.9					
			Maryland	13,709,449	[2]12,935,065	8.7	[2]9.9					
Carpets and rugs, other than rag.	71,188,152	61,586,433	New York	25,606,262	19,404,133	36.0	31.5	Philadelphia, Pa.	$22,628,537	$25,232,510	31.8	41.0
			Pennsylvania	24,879,232	27,120,311	34.9	44.0					
Clocks	12,235,631	8,868,000	Connecticut	6,809,746	6,158,034	55.7	69.4					
Clothing, men's, including shirts.	568,076,635	406,767,676	New York	266,075,427	187,409,206	46.8	46.1	New York, N. Y.	218,411,030	149,483,620	38.4	36.7
			Illinois	89,472,755	57,001,643	15.8	14.0	Chicago, Ill.	85,296,407	54,625,975	15.0	13.4
								Baltimore, Md.	36,289,212	25,276,257	6.4	6.2
								Philadelphia, Pa.	29,000,899	[2]23,642,280	5.1	[1]5.8
								Rochester, N. Y.	18,878,508	[2]14,945,709	3.3	[1]3.7
Clothing, women's	334,751,649	247,661,560	New York	272,517,792	173,548,385	70.8	70.1	New York, N. Y.	266,477,381	168,418,895	69.3	68.0
			Pennsylvania	32,837,424	15,085,790	8.5	6.1	Philadelphia, Pa.	30,132,842	12,871,357	7.8	5.2
								Chicago, Ill.	15,676,925	11,636,818	4.1	4.7
Coke	95,696,622	51,728,647	Pennsylvania	51,816,449	28,924,229	54.1	55.9					
			Alabama	8,842,512	6,175,126	9.2	11.9					
			West Virginia	7,563,419	4,174,186	7.9	8.1					
Collars and cuffs	17,230,452	12,587,277	New York	15,897,376	12,188,181	92.3	96.8	Troy, N. Y.	13,638,745	11,271,708	79.2	89.5
Corsets	33,257,187	14,862,081	Connecticut	12,814,736	5,590,637	38.5	37.6	Bridgeport, Conn.	6,898,875	2,954,418	20.7	19.9
Cotton goods, including cotton small wares.	628,391,813	450,467,704	Massachusetts	186,462,313	130,068,982	29.7	28.9	Fall River, Mass.	48,576,114	32,538,667	7.7	7.2
			North Carolina	72,680,385	47,254,054	11.6	10.5	New Bedford, Mass.	42,505,007	22,411,996	6.8	5.0
			South Carolina	65,929,585	49,437,644	10.5	11.0	Lowell, Mass.	24,744,240	19,383,878	3.9	4.3
			Rhode Island	50,312,597	34,573,450	8.0	7.7	Philadelphia, Pa.	22,537,998	17,462,724	3.6	3.9
			Georgia	48,036,817	[1]35,174,248	7.6	[1]7.8	Pawtucket, R. I.	14,337,874	10,099,361	2.3	2.2
								Cumberland, R. I.	8,166,455	5,266,632	1.3	1.2
								Warwick, R. I.	7,621,518	5,370,318	1.2	1.2
Cutlery and edge tools (not including tools not elsewhere specified).	22,884,914	18,614,929	Connecticut	6,720,700	6,167,852	29.4	33.1					
			Massachusetts	4,391,424	2,584,927	19.2	13.9					
Dyeing and finishing textiles.	83,556,432	50,849,545	Massachusetts	21,892,890	11,048,512	26.2	21.7	Philadelphia, Pa.	6,327,261	4,371,006	7.6	8.6
			New Jersey	15,795,788	11,979,947	18.9	23.6	Paterson, N. J.	6,206,830	5,699,295	7.4	11.2
			Rhode Island	13,955,700	9,981,457	16.7	19.6	Fall River, Mass.	4,742,271	3,134,604	5.7	6.2
			Pennsylvania	12,059,297	6,786,263	14.4	13.3	Lawrence, Mass.	3,972,149	1,428,174	4.8	2.8
								Providence, R. I.	2,521,315	2,254,674	3.0	4.4
								Pawtucket, R. I.	2,450,858	1,644,548	2.9	3.2
								Passaic, N. J.	2,156,837	1,621,131	2.6	3.2
								Warwick, R. I.	1,681,187	1,262,324	2.0	2.5
Firearms and ammunition.	34,111,564	28,206,381	Connecticut	19,948,235	17,761,675	58.5	63.0					
			Massachusetts	3,407,838	[2]4,011,316	10.0	[2]16.2					
Fur goods	55,937,549	37,123,129	New York	41,301,451	26,244,346	73.8	70.7	New York, N. Y.	39,874,386	25,278,617	71.3	68.1
Furnishing goods, men's (not including collars and cuffs and suspenders, garters, and elastic woven goods).	42,129,938	36,444,305	New York	19,763,785	17,148,982	46.9	47.1	New York, N. Y.	18,819,024	16,336,132	44.7	44.8
Glass	92,095,203	79,607,998	Pennsylvania	32,817,936	27,671,693	35.6	34.8					
			Ohio	14,358,274	9,026,208	15.6	11.3					
			Indiana	11,593,094	14,706,929	12.6	18.5					
Gloves and mittens, leather.	23,630,598	17,740,385	New York	14,336,365	9,946,443	60.7	56.1	Gloversville, N. Y.	8,869,766	5,302,196	37.5	29.9
								Johnstown, N. Y.	3,258,302	2,581,274	13.8	14.6
Grindstones	1,688,171	788,049	Ohio	1,498,256	517,069	88.8	65.6					
Hair work	11,216,175	1,782,491	New York	7,861,306	1,012,150	70.1	56.8	New York, N. Y.	7,817,490	997,750	69.7	56.0
Hats, fur-felt	47,864,630	36,629,353	Pennsylvania	13,022,617	7,350,311	27.2	20.1	Philadelphia, Pa.	10,401,794	5,847,771	21.7	16.0
			Connecticut	10,399,860	8,662,799	21.7	23.6	Danbury, Conn.	7,114,683	5,798,197	14.9	15.8
			New York	10,218,660	7,739,774	21.4	21.1	New York, N. Y.	4,765,029	3,899,435	10.0	10.6
			New Jersey	8,825,217	9,540,433	18.4	26.0	Newark, N. J.	4,433,132	4,586,040	9.2	12.5
								Orange, N. J.	1,904,860	2,311,614	4.0	6.3
Hosiery and knit goods (not including hand-knit goods).	198,571,588	136,558,139	New York	65,852,133	46,108,600	33.2	33.8	Philadelphia, Pa.	23,901,699	15,770,873	12.0	11.5
			Pennsylvania	49,583,463	30,753,140	25.0	22.5	New York, N. Y.	12,386,254	6,030,721	6.2	4.4
								Amsterdam, N. Y.	8,158,701	4,677,022	4.1	3.4
								Utica, N. Y.	8,053,844	5,261,166	4.1	3.9
								Cohoes, N. Y.	5,087,315	4,126,873	2.6	3.0
								Little Falls, N. Y.	4,654,552	2,547,676	2.3	1.9
								Reading, Pa.	4,551,087	2,540,105	2.3	1.9
Ink, printing	8,865,504	5,774,254	New York	4,058,557	2,320,135	45.8	40.2	New York, N. Y.	3,965,174	2,256,106	44.7	39.1
Iron and steel, blast furnaces	391,429,283	231,822,707	Pennsylvania	168,578,413	107,455,267	43.1	46.4	Pittsburgh, Pa.	20,668,023	[1]15,499,861	5.3	[1]6.7
			Ohio	83,699,238	40,862,451	21.4	17.6					
			Illinois	38,299,897	27,330,836	9.8	11.8					
			New York	26,620,948	8,634,737	6.8	3.7					
Iron and steel, steel works and rolling mills.	985,722,534	673,965,026	Pennsylvania	500,343,995	363,773,577	50.8	54.0	Pittsburgh, Pa.	82,306,627	77,439,999	8.3	11.5
			Ohio	197,780,043	111,996,673	20.1	16.6	Youngstown, Ohio	50,175,153	29,738,301	5.1	4.4
			Illinois	86,608,137	60,021,925	8.8	8.9	Chicago, Ill.	45,983,782	24,839,623	4.7	3.7
			New York	39,532,414	21,227,399	4.0	3.1	Cleveland, Ohio	38,463,319	32,279,437	3.9	4.8

[1] Excluding statistics for one establishment, to avoid disclosure of individual operations.
[2] Excluding statistics for two establishments, to avoid disclosure of individual operations.

SELECTED INDUSTRIES SHOWING A MARKED DEGREE OF LOCAL CONCENTRATION—Continued.

Table 1—Continued.

INDUSTRY.	VALUE OF PRODUCTS FOR THE UNITED STATES.		STATE.	VALUE OF PRODUCTS FOR THE STATE NAMED.				CITY.	VALUE OF PRODUCTS FOR THE CITY NAMED.			
				Amount.		Per cent of United States total.			Amount.		Per cent of United States total.	
	1909	1904		1909	1904	1909	1904		1909	1904	1909	1904
Jewelry	$80,349,874	$53,225,681	Rhode Island	$20,685,100	$14,431,756	25.7	27.1	Providence, R. I	$20,166,003	$14,317,050	25.1	26.9
			New York	20,362,620	12,356,865	25.3	23.2	New York, N. Y	19,236,368	11,347,531	23.9	21.3
			Massachusetts	15,210,738	10,073,595	18.9	18.9	Newark, N. J	13,152,340	9,258,095	16.4	17.4
			New Jersey	13,272,004	9,303,646	16.5	17.5	Attleboro, Mass	7,396,558	5,544,285	9.2	10.4
Leather, tanned, curried, and finished.	327,874,187	252,620,986	Pennsylvania	77,926,321	69,427,852	23.8	27.5	Milwaukee, Wis	27,483,829	14,074,397	8.4	5.6
			Wisconsin	44,667,676	25,845,123	13.6	10.2	Philadelphia, Pa	23,526,421	23,903,239	7.2	9.5
			Massachusetts	40,002,079	33,352,999	12.2	13.2	Newark, N. J	18,858,046	13,577,719	5.8	5.4
			New Jersey	28,430,955	21,495,329	8.7	8.5	Chicago, Ill	13,243,550	9,420,426	4.0	3.7
			New York	27,642,383	21,642,945	8.4	8.6	Peabody, Mass	12,893,653	7,919,370	3.9	3.1
			Michigan	15,331,104	9,340,349	4.7	3.7	Wilmington, Del	12,079,225	10,250,842	3.7	4.1
			Illinois	14,911,782	10,758,196	4.5	4.3	Camden, N. J	5,920,238	6,364,928	1.8	2.5
			Delaware	12,079,225	10,250,842	3.7	4.1					
Liquors, vinous	13,120,846	11,097,853	California	8,936,848	6,688,620	68.1	60.3					
Millinery and lace goods	85,893,632	50,777,768	New York	52,106,200	32,844,273	60.7	64.7	New York, N. Y	51,238,787	32,342,603	59.7	63.7
Needles, pins, and hooks and eyes.	6,694,095	4,750,589	Connecticut	4,236,036	3,062,193	63.3	64.5					
Oil, cottonseed, and cake	147,867,894	96,407,621	Texas	29,915,772	18,698,815	20.2	19.4					
			Georgia	23,640,779	13,539,899	16.0	14.0					
			Mississippi	15,965,543	12,587,147	10.8	13.1					
			Louisiana	13,084,586	13,187,608	8.8	13.7					
			South Carolina	10,902,935	5,462,818	7.4	5.7					
			Alabama	9,178,016	5,769,061	6.2	6.0					
			North Carolina	8,504,477	3,748,789	5.8	3.9					
			Arkansas	7,788,885	4,939,919	5.3	5.1					
Paper and wood pulp	267,656,964	188,715,189	New York	48,859,610	37,750,605	18.3	20.0					
			Massachusetts	40,096,713	32,012,247	15.0	17.0					
			Maine	33,950,230	22,951,124	12.7	12.2					
			Wisconsin	25,962,099	17,844,174	9.7	9.5					
			Pennsylvania	19,872,717	15,411,032	7.4	8.2					
			Ohio	16,965,260	10,961,527	6.3	5.8					
			New Hampshire	13,994,251	8,930,291	5.2	4.7					
			Michigan	13,922,124	7,340,631	5.2	3.9					
Peanuts, grading, roasting, cleaning, and shelling.	9,736,551	7,260,810	Virginia	7,933,440	7,055,036	81.5	97.2	Petersburg, Va	1,721,576	922,308	17.7	12.7
								Norfolk, Va	991,439	791,760	10.2	10.9
Pens, fountain, stylographic, and gold.	4,738,693	2,774,034	New York	3,218,760	1,945,282	67.9	70.1	New York, N. Y	3,218,760	1,945,282	67.9	70.1
Pipes, tobacco	5,311,900	2,834,496	New York	3,212,262	1,880,874	60.5	66.4	New York, N. Y	3,136,671	1,794,676	59.0	63.3
Plated ware (not including silversmithing and silverware).	18,526,193	12,138,886	Connecticut	14,333,213	8,125,881	77.4	66.9	Meriden, Conn	6,661,427	4,869,303	36.0	40.1
			New York	2,414,334	2,516,744	13.0	20.7	Wallingford, Conn	2,946,163	486,257	15.9	4.0
Pottery, terra-cotta, and fire-clay products.	76,118,861	64,200,792	Ohio	21,173,272	18,550,840	27.8	28.9	Trenton, N. J	6,995,793	5,882,701	9.2	9.2
			New Jersey	13,139,000	11,717,103	17.3	18.3	East Liverpool, Ohio	5,452,199	5,373,852	7.2	8.4
			Pennsylvania	13,072,106	10,759,272	17.2	16.8					
Rice, cleaning and polishing.	22,371,457	16,296,916	Louisiana	12,528,656	10,718,311	56.0	65.8	New Orleans, La	5,124,836	4,881,954	22.9	30.0
			Texas	8,142,438	4,640,269	36.4	28.5	Beaumont, Tex	1,627,868	1,203,123	7.3	7.4
Salt	11,327,834	9,437,662	Michigan	3,652,996	2,404,717	32.2	25.5					
			New York	2,896,826	3,167,279	25.6	33.6					
			Ohio	1,807,347	1,167,546	16.0	12.4					
			Kansas	1,105,920	1,123,114	9.8	11.9					
Silk and silk goods, including throwsters.	196,911,667	133,288,072	New Jersey	65,429,550	42,862,907	33.2	32.2	Paterson, N. J	40,358,271	25,433,245	20.5	19.1
			Pennsylvania	62,061,302	39,333,520	31.5	29.5	New York, N. Y	16,949,664	14,035,970	8.6	10.5
			New York	26,518,821	20,181,212	13.5	15.1	Allentown, Pa	7,455,528	3,901,249	3.8	2.9
			Connecticut	21,062,687	15,623,693	10.7	11.7	Scranton, Pa	6,630,848	4,426,635	3.4	3.3
								Philadelphia, Pa	6,502,044	5,079,193	3.3	3.8
Slaughtering and meat packing.	1,370,568,101	922,037,528	Illinois	389,594,906	318,201,253	28.4	34.5	Chicago, Ill	325,061,657	270,548,962	23.7	29.3
			Kansas	165,360,516	[1] 96,375,639	12.1	[1] 10.5	Kansas City, Kans	148,459,212	89,975,508	10.8	9.8
			New York	127,130,051	75,549,917	9.3	8.2	New York, N. Y	95,862,422	55,937,982	7.0	6.1
			Nebraska	92,305,484	69,328,920	6.7	7.5	South Omaha, Nebr	89,445,383	[2] 65,530,935	6.5	[2] 7.1
			Missouri	79,581,294	60,110,427	5.8	6.5	Indianapolis, Ind	39,133,737	24,487,416	2.9	2.7
								St. Louis, Mo	26,600,956	[1] 17,485,393	1.9	[1] 1.9
								Buffalo, N. Y	25,416,054	16,219,823	1.9	1.8
Smelting and refining, copper.	378,805,974	240,780,216	New Jersey	125,651,087	62,795,613	33.2	26.1					
			Arizona	41,059,240	22,761,981	10.8	9.5					
Smelting and refining, zinc.	34,205,894	24,791,299	Kansas	10,857,250	10,999,468	31.7	44.4					
			Illinois	9,003,624	5,425,636	26.3	21.9					
Turpentine and rosin	25,295,017	23,937,024	Florida	11,937,518	9,901,905	47.2	41.4					
			Georgia	6,938,957	7,705,643	27.4	32.2					
			Alabama	2,471,999	2,434,365	9.8	10.2					
			Mississippi	1,474,629	2,365,720	5.8	9.9					
			Louisiana	1,173,848	211,820	4.6	0.9					
			North Carolina	673,954	743,421	2.7	3.1					
			South Carolina	406,286	574,150	1.6	2.4					
Wood distillation, not including turpentine and rosin.	9,736,998	7,813,483	New York	3,401,722	3,357,087	34.9	43.0					
			Pennsylvania	2,960,162	3,092,687	30.4	39.6					
			Michigan	2,398,927	738,254	24.6	9.4					

[1] Excluding statistics for two establishments, to avoid disclosure of individual operations.
[2] Excluding statistics for one establishment, to avoid disclosure of individual operations.

The following table, derived from Table 1, brings out the most conspicuous instances of local concentration. In each industry named in this table a single state in 1909 contributed more than two-fifths of the total value of products:

Table 2

INDUSTRY.	State.	Per cent of total value of products for United States: 1909
Collars and cuffs	New York	92.3
Grindstones	Ohio	88.8
Artificial flowers and feathers and plumes	New York	88.2
Peanuts, grading, roasting, cleaning, and shelling	Virginia	81.5
Plated ware (not including silversmithing and silverware).	Connecticut	77.4
Fur goods	New York	73.8
Clothing, women's	New York	70.8
Hair work	New York	70.1
Liquors, vinous	California	68.1
Pens, fountain, stylographic, and gold	New York	67.9
Needles, pins, and hooks and eyes	Connecticut	63.3
Gloves and mittens, leather	New York	60.7
Millinery and lace goods	New York	60.7
Pipes, tobacco	New York	60.5
Firearms and ammunition	Connecticut	58.5
Rice, cleaning and polishing	Louisiana	56.0
Clocks	Connecticut	55.7
Coke	Pennsylvania	54.1
Iron and steel, steel works and rolling mills	Pennsylvania	50.8
Turpentine and rosin	Florida	47.2
Furnishing goods, men's (not including collars and cuffs nor suspenders, garters, and elastic woven goods).	New York	46.9
Clothing, men's, including shirts	New York	46.8
Boots and shoes, including cut stock and findings	Massachusetts	46.1
Ink, printing	New York	45.8
Brass and bronze products	Connecticut	44.6
Iron and steel, blast furnaces	Pennsylvania	43.1

Reasons for local concentration of industries.—It would require very extended discussion to attempt to determine for each industry covered by Table 1 the reasons for the concentration in the states or cities named. Moreover, such a discussion would involve a great deal of mere speculation, as the reasons for local concentration are often exceedingly obscure. It is necessary for the most part to confine the discussion to statements of a general character.

There are certain advantages which particular states or cities have with reference to manufacturing industries in general and which tend to give them prominence in manufactures as a whole. Among these advantages may be mentioned: (1) Water power, (2) convenient transportation facilities, (3) large amounts of capital available for investment in manufactures, and (4) a large supply of labor adapted to manufacturing enterprises in general. Besides these broad factors which affect the geographic distribution of manufactures in general, there are others which tend to bring about a local concentration of particular classes of manufacturing industries. Among the principal factors of this class may be mentioned: (1) Proximity to the source of the required materials, (2) proximity to the market for the specified products, (3) a supply of labor peculiarly adapted to the industry, (4) the momentum of an early start, which is usually closely related to the labor supply, and (5) the habit of industrial imitation. Moreover, some of the general factors above mentioned act more powerfully in the case of certain industries than in the case of others. For example, water power is obviously more important in the case of those industries which require large quantities of power than in the case of those which require little power, and transportation facilities are more important with reference to heavy products than with reference to those of little weight in proportion to their value.

In some cases two or more factors cooperate in rendering a particular locality peculiarly favorable to the development of a given industry. Again, one or two factors may be so strong as to prevail in spite of the lack of favorable conditions in other respects; and part of the establishments in an industry may be concentrated in one locality or group of localities by reason of one set of advantages and part concentrated elsewhere by reason of a quite different set of advantages. For example, proximity to the market and the momentum of an early start may result in the concentration of an industry in a locality by no means convenient to the source of raw materials. This is conspicuously illustrated by the manufacture of cotton goods. This industry was originally developed mainly in the northeastern section of the country, particularly in New England, far from the cotton fields. In recent years, however, the influence of proximity to materials, together with other causes, has led to great development of cotton manufactures in the cotton producing states themselves, particularly in the South Atlantic states. The industry at present, therefore, is chiefly concentrated in two widely separated sections of the country.

On the whole, however, proximity to the source of materials is probably the most important single factor in determining the location of the more important industries. This factor is particularly effective in those industries where the raw materials are bulky, so as to involve heavy transportation charges, and most of all where the bulk of the raw materials is relatively much greater than that of the finished product. Proximity to the source of materials is also very influential in industries whose materials spoil or deteriorate quickly.

In the case of those industries which are dependent upon materials produced largely throughout the country, the need of proximity to materials may result in a wide distribution rather than a local concentration of the industry. For example, the production of lumber is not locally concentrated in any marked degree. The lumber mills are in general situated in or near the forests, and the latter in turn are more or less generally scattered over the country. For similar reasons the flour-mill and grist-mill industry is widely distributed. It is only where the production of the required materials is confined to more

or less limited areas that the need of proximity to materials can bring about local concentration of a manufacturing industry.

Other causes as well as the location of the materials have affected the geographic distribution of some of the industries just named. In the case of the blast furnace industry, for example, the present predominance of Pennsylvania can not be attributed to the production of large quantities of iron ore in the state. Pennsylvania doubtless got its start in this industry by virtue of the local supply of iron ore, but since the opening of the Lake Superior mines most of the ore which is used in the Pennsylvania blast furnaces has been brought from a long distance, although by very convenient methods of transportation. On the other hand, Pennsylvania's abundant deposits of coal suitable for coking give that state a peculiar advantage with respect to the next most important material used in the industry; and that fact, together with the momentum of an early start and the accessibility of markets, has enabled the state to maintain its original lead.

In some industries in which proximity to materials is an important factor in determining the location of manufacturing establishments, and in which the local concentration in certain states is conspicuous, there is no marked concentration in any particular city. These are for the most part, however, industries which are not carried on to any great extent in large cities. In the butter, cheese, and condensed-milk industry, in canning and preserving, in the cottonseed-oil industry, and in the manufacture of paper and wood pulp, for example, a great part of the establishments are located in immediate proximity to the farms or forests, rather than in cities of any considerable magnitude.

CHAPTER VIII.

EXPENSES.

Summary of statistics: 1909, 1904, and 1899.—Table 1 shows, for all manufacturing industries combined in the United States as a whole, the total expenses reported at the censuses of 1909, 1904, and 1899, together with their distribution according to classes.

Table 1

CLASS OF EXPENSES.	AMOUNT OF EXPENSES REPORTED.			PER CENT OF TOTAL.		
	1909	1904	1899	1909	1904	1899
Total	**$18,454,089,599**	**$13,138,259,842**	**$9,870,426,102**	**100.0**	**100.0**	**100.0**
Cost of materials	12,142,790,878	8,500,207,810	6,575,851,491	65.8	64.7	66.6
Materials other than fuel	11,496,873,804	8,118,635,555	6,272,567,805	62.3	61.8	63.5
Fuel and rent of power[1]	570,067,824	324,867,826	207,139,547	3.1	2.5	2.1
Freight charges reported separately	75,849,250	56,704,429	96,144,139	0.4	0.4	1.0
Payments for services	4,365,612,851	3,184,884,275	2,389,132,440	23.7	24.2	24.2
Salaries	938,574,967	574,439,322	380,771,321	5.1	4.4	3.9
Officers of corporations	220,668,065	141,722,790	(2)	1.2	1.1	(2)
Superintendents and managers	219,908,801	432,716,532	(2)	1.2	3.3	(2)
Clerks and other subordinate salaried employees	497,998,101		(2)	2.7		(2)
Wages	3,427,037,884	2,610,444,953	2,008,361,119	18.6	19.9	20.3
Miscellaneous expenses	1,945,685,870	1,453,167,757	905,442,171	10.5	11.1	9.2
Rent of factory	106,573,661	73,264,719	(2)	0.6	0.6	(2)
Taxes	351,309,449	58,613,375	(2)	1.9	0.4	(2)
Internal revenue	263,012,010	(2)	(2)	1.4	(2)	(2)
Other	88,297,439	58,613,375	(2)	0.5	0.4	(2)
Contract work	178,645,635	144,316,854	(2)	1.0	1.1	(2)
All other (rent of offices and buildings, other than factory or works, rent of machinery, royalties, use of patents, insurance, ordinary repairs of buildings and machinery, advertising, traveling expenses, and all other sundry expenses)	1,309,157,125	1,176,972,809	(2)	7.1	9.0	(2)

[1] As to comparability of the figures for the different censuses, see discussion in text. [2] Figures not available. [3] Included under "all other."

The total amount of expenses reported in 1909 was, in round numbers, $18,454,000,000, of which the cost of materials represented 65.8 per cent, wages 18.6 per cent, salaries 5.1 per cent, and miscellaneous expenses 10.5 per cent.

It should be noted that the very large proportion of expenses represented by cost of materials is due partly to the fact that there is a great deal of duplication in this latter item. Many of the manufacturing establishments use strictly raw materials; that is, materials derived from nonmanufacturing industries, such as agriculture or mining. On the other hand, many manufacturing establishments use the products of other manufacturing establishments as their materials, and the cost of these partly manufactured materials covers not only the cost of the original raw materials but also the wages paid and other expenses incurred in connection with the manufacturing processes through which they have already passed, together with the manufacturer's profit. Were it possible to exclude all such duplication, the proportion of the total expenses represented by cost of materials would be very much less. It may be noted also that the comparability of the statistics as to the cost of materials for different censuses may be somewhat affected by changes in the relative amount of duplication in such cost.

As more fully explained later, the total expenses reported for 1904 and 1899 are not strictly comparable with those reported for 1909, and some of the individual items of expense are still more lacking in comparability. On the whole, however, the totals for all expenses combined are not far from comparable, and the same is true of two of the three main groups of expenditures, namely, cost of materials and wages and salaries. The total expenses reported show an increase of 87 per cent during the decade 1899–1909, as compared with an increase of 81.2 per cent in the value of products of manufacturing industries. The cost of materials increased 84.7 per cent, the salary payments 146.5 per cent, and the wage payments 70.6 per cent.

The amount paid for wages constituted a somewhat smaller proportion of the total expenses in 1909 than at either of the two preceding censuses, and the amount paid for salaries an appreciably larger proportion. On the other hand, the cost of materials formed a smaller proportion of the total in 1904 than in either 1909 or 1899, while the miscellaneous expenses formed a larger proportion in 1904 than at either of the other two censuses.

Explanation of items and significance of the statistics.—Certain explanations with regard to the significance of the statistics for expenses have already

been presented in Chapter I of this report, but on account of the importance of the subject the substance of these explanations is repeated here with additional comment regarding some of the minor classes of expenditure which were not discussed in detail in the Introduction.

Profits not shown by census returns.—As stated in Chapter I the census returns do not cover the entire cost of manufacture, and consequently can not be used for comparison with the value of products to determine the amount of profit. The chief item of expense which is omitted from the census returns is that of depreciation in the value of buildings, machinery, and other equipment. At the census of 1909 manufacturers were expressly instructed to omit any allowance for depreciation. This was done for the reason that it seemed better to exclude depreciation altogether than to secure it only in a limited number of cases and without any uniformity in the method of determining the depreciation allowance. While some manufacturing establishments make estimates of depreciation and charge it as a definite element of cost in their accounts, the great majority do not, and those who do follow the widest possible variety of methods in determining the rate of depreciation. At the censuses of 1904 and 1899 depreciation was not expressly excluded, but it was not listed among the elements of expense to be reported, and probably was seldom included in the expenses returned.

At the census of 1909 manufacturers were also expressly instructed to exclude interest paid on borrowed money from the expenditures reported. There are differences of opinion among manufacturers and accountants as to whether interest should be considered an element of cost or whether, on the other hand, borrowed money should be considered as part of the capital and interest paid thereon as part of the return on capital. Doubtless the latter method is the more correct from the broad economic standpoint. Certainly in the case of those manufacturing corporations which have issued large amounts of bonds representing a large part of the cost of their plants it would be highly improper to treat the interest on bonds as part of the current cost of production. In 1909 the schedule called for the amount of borrowed money as part of capital. In 1904 and 1899, however, interest was listed among the expenses to be included under the heading of "all other," so that the aggregate expenses reported for those years are not strictly comparable with the figures shown for 1909, and still less the total miscellaneous expenses.

Aside from the fact that the expenses as reported do not include depreciation, there is a certain degree of inaccuracy in the expenses actually reported and in the value of products reported, which renders it impossible to make any close calculation as to profits. Many of the establishments covered by the census do not keep their accounts very carefully. Again, not a few manufacturing establishments are owned by companies or individuals who are also engaged in nonmanufacturing enterprises, and who do not keep separate accounts for the manufacturing branch of the business. If in such cases the nonmanufacturing branch of the business was comparatively unimportant, data for the entire business were included in the census report on manufactures, but, on the other hand, if it was of considerable importance an estimated segregation of the items relating to manufactures was made.

Furthermore, although, as more fully explained elsewhere (see Chapter I), the Bureau of the Census sought to obtain the net value of products at the factory, it is probable that in some cases the values reported were subject to deductions for freight, selling expenses, or other items, which deductions in turn were not fully reported under "expenses." On the other hand, in some instances the cost of production rather than the selling value of the products at the factory may have been reported or the value of the products may otherwise have been understated. Nevertheless, were it not for the fact that the important item of depreciation is not included with expenses it would doubtless be possible to obtain for all industries combined and for some of the more important industries individually a rough approximation to the amount of return on capital by deducting the sum of the reported expenses from the reported value of products.

Cost of materials.—As stated above, the cost of materials includes much duplication due to the use of the manufactured products of one establishment as materials for other establishments. At the censuses of 1899 and 1904 an attempt was made to distinguish between strictly raw materials and materials partially manufactured, but it was found impossible in many cases to segregate the two classes accurately (see Chapter I).

The materials used in manufactures fall into two main classes: (1) Fuel, which for the most part does not become a constituent part of the product, but is used chiefly to generate power by means of which to subject other materials to manufacturing processes; and (2) all other materials. In some industries, the most important of which are the coke and gas industries, one kind of fuel is transformed into another, and in such cases the fuel used as material, strictly speaking, belongs to the materials of the second class just specified, but in Table 1 and in the other tables of this report the cost of all fuel for 1909 is included as one item. In 1904 and 1899, on the other hand, the cost of the fuel thus transformed was included with the cost of other materials, so that the figures for fuel shown in Table 1 are not comparable. The partial data available indicate, however, that the cost of all fuel (together with the rent of power and heat) for 1904 would amount to about $385,000,000 and for 1899 to about $245,000,000, as compared with $570,067,824 for 1909.

It would be desirable, if possible, to ascertain the cost of each of these two main classes of materials as delivered at the factory. The necessarily incomplete statistics as to freight charges on materials have no value in themselves. In many instances manufacturers buy materials at prices which include delivery at their works, and have no knowledge as to the freight charges. In other cases, however, manufacturers pay the freight charges and keep a freight account, but they are often under such conditions unable to report what part of the expenditure represents charges for the transportation of fuel and what part charges for the transportation of other materials. For this reason the cost of each class of materials at the factory can not be determined. The amount of freight charges reported separately by manufacturers, as shown by Table 1, was, in 1909, $75,849,250. It is obvious that much the greater part of these freight charges must have been paid upon materials other than fuel, since the cost of materials other than fuel was more than twenty times as great as that of fuel. In most tables of this report giving statistics of expenses, therefore, the entire amount of freight charges reported separately has been, for convenience, added to the cost of materials other than fuel. The amount of freight charges reported separately was much greater in 1899 than in 1904 or 1909, but this simply indicates that the statistics are incomparable.

The statistics given for the cost of fuel include also the amount paid by manufacturing establishments for the rent of power and heat generated by outside concerns, chiefly electric power. The use of rented power obviously, in most cases, reduces the direct expenditure for fuel.

Salaries and wages.—The items of expenditure for salaries and wages require no special comment. The lack of significance of an "average wage" computed from the aggregate wage payments has already been pointed out in Chapter I.

Miscellaneous expenses.—The group of miscellaneous expenses is divided into four subgroups—rent of factory, taxes, payments for contract work, and all other expenses. With reference to the item "rent of factory," which does not include rent of offices where this could be separated, it should be observed that, strictly speaking, the value of factory buildings and machinery owned by others and rented by manufacturers should be included with the capital investment of manufacturing industries. If this could be done the present item would of course be omitted from the expenses reported, the greater part of the amount of rental properly representing a return on capital used for manufacturing purposes. It is impossible, however, to ascertain with any degree of accuracy the value of factory plants which are rented by manufacturing concerns from others, and consequently it has been necessary to include the payments by manufacturers for rent of factories as a part of operating expenses. If it be assumed that the amount of rent paid is equivalent to 8 per cent on the investment of the owners of the rented factories, the investment in such factories in 1909 would have amounted to approximately $1,300,000,000, which, when added to the $18,428,269,706 reported as the capital investment of the manufacturers themselves, would give a grand total of almost twenty billions of dollars invested in manufacturing enterprises (see Chapter I). The item "rent of factory" for 1904 is substantially comparable with that for 1909.

The item of $351,309,449 reported as paid for taxes in 1909 includes $263,012,010 of internal revenue taxes, mostly paid upon liquors and tobacco. In 1904 the amount paid for internal revenue taxes was not shown separately nor included with other taxes, but was included with "all other" miscellaneous expenses. In 1909 the amount of internal revenue taxes was included with expenses, even in those cases where the manufacturers themselves had not paid the taxes but where they had been paid by the purchaser of the product or where the products subject to tax were held in bond with the intent that the tax should subsequently be paid either by the manufacturer or by the purchaser. At earlier censuses, on the other hand, only the internal revenue taxes actually paid by the manufacturers were included with the expenses of manufacturing industries. This change, however, does not materially affect the comparability of the total for miscellaneous expenses or for all expenses combined.

The expenses reported for contract work comprise the payments made by one manufacturer to another manufacturer who performed any kind of work upon materials furnished by the former. It is obvious that this item, like the cost of partly manufactured materials, gives rise to a certain amount of duplication in the expenses reported, since it has already been covered in large part by the payments of the contractor for labor, fuel, etc., and in so far represents simply the repayment of these expenditures by one establishment to another. In other words, if the establishment furnishing the materials and the establishment doing the contract work could be combined, the same output of finished product might be expected without the expenditure now reported for contract work. The practice of having work done by contract is particularly conspicuous in the clothing trades. The figures for 1904 are substantially comparable with those for 1909.

Under "all other" miscellaneous expenses are included all factory expenses not specifically covered by other items. The statements already made as to depreciation charges and interest payments concern this item particularly, and it is obvious from what has been said that the amount of "all other" miscellaneous expenses for 1904 is by no means comparable with that for 1909. The fact that royalties and other charges for the use of patents were specifically called for as a part of this item at the census of 1909, but were

not named in the inquiry at prior censuses, probably resulted in a fuller report for them at the later census. This is another, though minor, factor that should be considered in comparing the totals.

It may be noted at this point that, although in 1899 the schedule distinguished the subclasses of miscellaneous expenses, the Census Bureau has not undertaken to segregate in detail statistics for factories proper from those for establishments in the building, hand, and neighborhood industries, which were not canvassed at the censuses of 1904 and 1909. For the main classes of expenses, however, this segregation has been made, and the figures shown in Table 1 represent only the expenses of establishments operated under the factory system and are therefore in that respect comparable with those for the two later census years.

Distribution of expenses in individual industries.—General Table II shows for 1909, for the 259 industries distinguished by the Bureau of the Census for which separate figures can be given, the total amount of expenses reported; the amounts paid for salaries of officials, for salaries of clerks (including all subordinate salaried employees), and for wages, respectively; the cost of fuel and rent of power, and the cost of other materials, the total amount reported separately as paid for freight on all materials being included with this item; and the amount of miscellaneous expenses, divided into four subclasses.

General Table VI presents similar statistics of expenses for 1909 for each of the 259 industries, by states. It covers each state for which statistics for the given industry can be presented without disclosing individual operations.

Table 2 shows for 1909, in percentages, the distribution of the total expenses reported among the four chief classes, for each of the 86 leading industries. The absolute numbers on which these percentages are based appear in General Table II.

In most industries the cost of materials is the most important single element of expense, and in many it exceeds all other expenses combined. Differences among industries as to the ratio between cost of materials and total expenses naturally correspond roughly, in most cases, to the differences among them with respect to the ratio between cost of materials and value of products, a subject which has been discussed in some detail in Chapter III. Where manufacturing processes work but simple transformations in the materials, the cost of materials usually forms a relatively large proportion both of total expenses and of value of products; conversely, where the products are highly elaborated, the cost of materials usually forms a relatively small proportion of the total expenses and value of products.

Table 2

INDUSTRY.	PER CENT OF TOTAL EXPENSES REPORTED: 1909.			
	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
Artificial flowers and feathers and plumes	5.7	19.4	66.6	8.3
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
Boots and shoes, rubber	3.4	20.5	71.1	5.0
Boxes, fancy and paper	7.7	29.1	53.3	9.9
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
Brick and tile	7.2	49.0	31.3	12.5
Butter, cheese, and condensed milk	1.4	4.3	91.0	3.3
Buttons	6.8	35.4	49.7	8.2
Canning and preserving	5.6	13.5	72.0	9.0
Carpets and rugs, other than rag	3.5	24.9	63.5	8.0
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 and general shop construction and repairs by street-railroad companies	3.8	45.4	47.5	3.4
Cars, steam-railroad, not including operations of railroad companies	4.4	23.0	66.7	6.0
Cement	6.5	27.3	52.3	13.9
Chemicals	6.5	15.0	68.2	10.3
Clocks and watches, including cases and materials	7.3	43.3	37.2	12.1
Clothing, men's, including shirts	5.2	20.7	57.9	16.2
Clothing, women's	6.0	23.0	61.1	9.9
Coke	2.4	18.2	75.5	3.9
Confectionery	7.6	13.1	67.9	11.4
Cooperage and wooden goods, not elsewhere specified	3.8	21.6	68.1	6.6
Copper, tin, and sheet-iron products	5.8	22.4	63.7	8.1
Cordage and twine and jute and linen goods	3.3	16.3	73.0	7.4
Corsets	10.0	22.5	54.5	13.0
Cotton goods, including cotton small wares	2.6	24.0	66.9	6.5
Cutlery and tools, not elsewhere specified	9.2	38.6	40.1	12.1
Dyeing and finishing textiles	7.3	30.9	51.4	10.4
Electrical machinery, apparatus, and supplies	10.0	24.5	53.8	11.7
Fancy articles, not elsewhere specified	8.9	26.1	53.1	11.9
Fertilizers	4.9	8.3	77.2	9.7
Firearms and ammunition	6.4	28.0	56.6	9.1
Flour-mill and gristmill products	1.5	2.6	92.8	3.1
Food preparations	5.2	6.3	74.8	13.7
Foundry and machine-shop products	8.7	29.8	50.1	11.4
Fur goods	5.4	16.6	67.8	10.1
Furnishing goods, men's	6.7	19.5	63.4	10.3
Furniture and refrigerators	7.3	30.8	51.0	10.9
Gas and electric fixtures and lamps and reflectors	10.9	26.0	51.2	11.9
Gas, illuminating and heating	10.9	18.4	46.2	24.5
Glass	5.8	46.0	37.6	10.5
Gloves and mittens, leather	5.9	22.4	62.2	9.5
Hats, fur-felt	5.0	34.0	52.8	8.2
Hosiery and knit goods	4.4	25.5	62.7	7.4
Ice, manufactured	12.2	30.9	35.8	21.0
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
Iron and steel, bolts, nuts, washers, and rivets, not made in steel works or rolling mills	6.2	26.2	57.9	9.6
Jewelry	8.6	27.1	54.1	10.2
Leather goods	7.2	19.3	64.6	8.9
Leather, tanned, curried, and finished	2.2	10.5	81.2	6.1
Lime	7.2	40.1	45.2	7.5
Liquors, malt	7.6	13.7	32.2	46.5
Locomotives, not made by railroad companies	8.1	31.4	53.1	7.5
Lumber and timber products	4.8	32.0	51.0	12.2
Marble and stone work	6.7	44.8	39.4	9.1
Mattresses and spring beds	6.4	18.2	64.7	10.6
Millinery and lace goods	7.3	22.0	60.9	9.8
Mineral and soda waters	8.6	20.9	49.8	20.6
Musical instruments, pianos and organs and materials	6.9	28.2	54.2	10.7
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
Paper goods, not elsewhere specified	7.5	16.6	63.4	12.5
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
Pottery, terra-cotta, and fire-clay products	8.9	45.3	33.4	12.5
Printing and publishing	16.7	26.6	32.6	24.1
Rubber goods, not elsewhere specified	4.7	12.4	72.0	10.9
Sewing machines, cases, and attachments	5.3	41.7	43.0	9.9
Shipbuilding, including boat building	6.0	37.4	46.2	10.4
Silk and silk goods, including throwsters	4.2	21.8	60.8	13.2
Silverware and plated ware	7.6	28.4	50.6	13.4
Slaughtering and meat packing	1.5	3.9	91.3	3.3
Smelting and refining, copper	0.7	3.8	94.4	1.1
Soap	5.6	6.3	73.5	14.6
Stoves and furnaces, including gas and oil stoves	10.0	33.1	42.3	14.6
Tobacco manufactures	4.6	19.0	48.4	28.0
Turpentine and rosin	8.7	49.2	25.8	16.3
Wire	2.8	13.3	78.2	5.7
Wirework, including wire rope and cable	7.2	17.1	65.9	9.8
Wood, turned and carved	5.7	33.7	52.9	7.7
Woolen, worsted, and felt goods, and wool hats	2.6	18.7	72.9	5.8

In comparing the industries in Table 2 it should be borne in mind that in some industries there is considerable duplication in the cost of materials, due to the use of the products of one establishment as materials for others in the same industry. This is the case, for example, in the automobile, boot and shoe, cotton goods, and fertilizer industries, the steel works and rolling mills, the manufacture of paper and wood pulp, the smelting and refining of copper, and the manufacture of woolen, worsted, and felt goods, and wool hats. In many industries, however, there is practically no such duplication in cost of materials within the industry.

As would be expected, the proportions represented by the several classes of expenses vary greatly in the different industries. For example, salaries constituted a relatively large proportion of the total in the printing and publishing industry (16.7 per cent), the manufacture of patent medicines and compounds and druggists' preparations (14.9 per cent), the artificial ice industry (12.2 per cent), the gas industry (10.9 per cent), and the manufacture of gas and electric fixtures and lamps and reflectors (10.9 per cent). The majority of these industries require a large force of employees for accounting and collecting, and in the case of printing and publishing for other work scarcely to be considered manufacturing. The industries for which the highest percentages for wages are shown—in each case over 45 per cent—are the turpentine and rosin, brick and tile, and glass industries, the street-railroad repair shops ("cars and general shop construction and repairs by street-railroad companies"), and the manufacture of pottery, terra-cotta, and fire-clay products. The cost of materials constituted over 90 per cent of the expenses reported in the smelting and refining of copper and in the flour-mill and grist-mill, slaughtering and meat-packing, and butter, cheese, and condensed milk industries.

Of the industries included in the table, the brewery industry ("liquors, malt") shows the highest proportion for miscellaneous expenses (46.5 per cent), followed by the manufacture of patent medicines and compounds and druggists' preparations, in which the proportion was 32.4 per cent, and the tobacco industry, in which it was 28 per cent. Expenditures for advertising, and in the case of liquors and tobacco, internal revenue taxes, swell the totals for miscellaneous expenses in these industries. Miscellaneous expenses are also relatively large—exceeding 20 per cent of the total—in the gas, printing and publishing, artificial ice, and mineral and soda water industries. It should be noted, however, that because of the heavy internal revenue taxes, miscellaneous expenses formed a much larger proportion of the total (79 per cent) in the distillery industry ("liquors, distilled"), which is not among the 86 leading industries, than in any of the industries shown in the table.

Distribution of expenses in individual states.—General Table IV shows, for each geographic division and state, for all industries combined, the amount reported as paid in 1909 for the different classes of expenses.

The following table shows, for each geographic division and state, the per cent distribution of the total expenses reported in 1909 among the principal classes:

Table 3

Division and state.	Per cent of total expenses reported: 1909			
	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

The percentage of the total expenses which is represented by each class in the several divisions and states depends chiefly on the character of the predominating industries. Thus among the geographic divisions the West North Central showed in 1909 the highest percentage of expenses for materials and the lowest for wages, this condition being due to the predominating importance in this division of the flour-mill and gristmill and slaughtering and meat-packing industries, in which materials contribute the greater part of the value of products. The proportion of expenses incurred for materials was also high in the Mountain division, where the smelting and refining industries are important.

Wages represented the highest percentage of the total expenses (23.7) in the New England division, where the textile and other highly elaborative industries predominate. Differences among the divisions as to the relative amount of duplication in cost of materials also affect the distribution of the reported expenses.

Among the individual states the highest percentage for materials is shown for Kansas and the next highest for Nebraska, while the percentage was 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 was no great variation in the distribution of expenses among the four classes. Of the 10 most important manufacturing states, Massachusetts had the highest proportion for wages and one of the lowest for miscellaneous expenses.

The exceptionally high percentage for miscellaneous expenses in Kentucky (25.8) was 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.