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BUREAU OF THE CENSUS
WASHINGTON

THE
GROWTH OF MANUFACTURES
1899 TO 1923

A STUDY OF INDEXES OF INCREASE IN
THE VOLUME OF MANUFACTURED PRODUCTS

BY
EDMUND E. DAY
AND
WOODLIEF THOMAS



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NOTE BY THE DIRECTOR OF THE CENSUS

This monograph was originally prepared in 1923 by Professor Day, then of Harvard University, now dean of the school of business administration, University of Michigan, to cover the period from 1899 to 1919, but owing to delays incidental to compilation of tables and preparation of text, the records of one of the newly instituted biennial censuses of manufactures (1921) were completely published and those for the census of 1923 were ready for publication before the monograph was ready for the printer. It was therefore considered advisable to revise the monograph to include later figures before final publication. In making the necessary revisions Professor Day was assisted by Woodlief Thomas, of the division of research and statistics of the Federal Reserve Board, which consented to allow him to devote a part of his time to this work.

The organization of the monograph and the main ideas presented were conceived by Professor Day and incorporated in the original draft, and in the revised draft the early chapters were rewritten by him. Mr. Thomas inserted necessary revisions in the later chapters of the monograph dealing with specific industries and geographic divisions, and assisted in compiling the index of production of manufactures for the years from 1914 to 1925 and in preparing the description of the index published in Appendix A. He also prepared Appendix C giving information for 1925.

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FOREWORD

There can be no doubt respecting the importance of the topic which Professor Day and Mr. Thomas discuss in this compact monograph. To most people census statistics have interest primarily or only because they furnish a measure of our national progress. Change and growth have been dominant characteristics of the economic life of the country. It is natural that numerical measures of growth should attract general attention. Here, very likely, is the basis of that peculiar interest in statistical facts which Europeans sometimes say they find in Americans.

The quantitative measure of population increase presents no especial difficulties. Each individual counts for one. The population census gives a direct and unequivocal measure of growth. This is not true, however, of the census of manufactures. The contrast takes on a touch of paradox when it is remembered that while the Constitution requires population to be counted periodically for the purpose of reapportioning Representatives in Congress the census of manufactures was instituted primarily in order that there might be a record of our industrial growth. In short, the present monograph is concerned with what appears to be the most important single question to which the census of manufactures might be expected to supply an answer.

The difficulty is not that the census of manufactures affords no answer or no measure of growth. On the contrary, it furnishes an embarrassing variety of measures. Which among them shall be used: Number of establishments? Capital invested? Gross value of output? Net value of output? Raw materials consumed? Physical quantity (not value) of product? Wage earners employed? Horsepower installed?

That changes in the number of manufacturing establishments have little significance for the purpose in hand is shown by the fact that in a number of rapidly growing industries the number of establishments has sometimes decreased, rather than increased, between one census and another. The amount of capital invested, even if it were known accurately, would bear an uncertain and variable relation to the general progress of manufacturing industry; and, in fact, the census statistics of capital invested are notoriously unreliable¹. In the total money value of manufacturing output there is much double counting of the products of different manufacturing industries, and there are important elements which must be attributed

¹ The Bureau of the Census has collected no data on capital invested in manufacturing industries since the census for 1919.

to agriculture, mining, and transportation rather than to manufacturing. Moreover, the gross money value of manufacturing output, like the net money value added by manufacturing, is affected and, one might say, distorted by general changes of the purchasing power of money.

Of the other possible measures suggested above, none runs in terms of money values. All of them—physical product, materials consumed, wage earners, and horsepower—are utilized by Professor Day and Mr. Thomas in one way or another. But the measure they seek, the one with which they would be contented if the figures for it were at all complete, is the volume of the output of the country's manufacturing establishments, measured not in money values but in tons, bushels, yards, etc. The measure upon which they center their attention is, in other words, the *physical product* of manufacturing industry.

Three separate considerations justify the choice of this particular measure. In the first place, it gives probably a more satisfactory and unequivocal answer than any other single measure does to the particular question that would best express the widespread general interest in the growth of our industries. Second, indexes of physical production have proved to be indispensable instruments in the scientific analysis of the processes of economic change. Third, other measures of manufacturing growth, whatever their value, are, one might say, given ready-made in the reports of the successive censuses of manufactures. Number of establishments, value added in manufacture, wage earners, and horsepower are stated in full. There are few stumbling blocks which need trip even the inexperienced user of statistics. The figures for physical production, on the other hand, are incomplete, unsystematic, and, because they run in terms of heterogeneous units, are not additive. The inexperienced user of statistics can do little or nothing with them. They have to be studied and manipulated with the utmost care if they are to be made to tell their story. This third consideration, alone, is sufficient to justify the authors in occupying themselves primarily with the measuring of the variations of physical production.

Any general index of physical production must of necessity lack precision. This is a consequence in part of lack of completeness and of other defects in the available data. In part, however, it is a consequence of the fact that the notion of just what an increase of physical product means is not and can not be precise. In the first place, as Professor Day and Mr. Thomas are careful to warn the reader, production, in the sense of fabrication, even within a given industry, is a matter of kind and of degree, of quality as well as quantity. Standardization of products, after all, has not gone very far, and there are substantial changes from year to year. In the

second place, even without changes in the nature of particular products, the aggregate manufacturing output changes qualitatively as well as quantitatively through changes in the relative importance of different products. By no system of weighting can the effects of these qualitative changes be taken fully into account. Rigidly speaking, the physical product of one year and the physical product of another year are incommensurable. In carefully constructed indexes, however, the margin of uncertainty due to changes in the proportionate importance of different products is generally very much less than the margin of error attributable to deficiencies in the available data. For practical purposes, and over periods of time not unduly long, the effect of these qualitative variations is taken care of by precautions such as the authors observe in the weighting of their indexes.

The difficulties which make a production index, at its best, a somewhat imperfect instrument are likewise encountered in constructing indexes of the movements of groups or aggregates of other types of variables, such, for example, as prices. Indexes do not express precise scientific concepts. They are merely useful practical tools. Essentially averages, their chief advantage is that they compress and summarize a complex mass of facts in such a way that "general" or "net" movements are brought into clear relief.

The "Harvard" index, which the authors revise and use as an important factor in their estimates, rests on census statistics of the physical product of manufactures, eked out by census statistics of materials consumed in manufactures. Census statistics of value added in the process of manufacture also figure in the index, but only as affording a basis for weighting the different series according to what is taken to be their relative importance as representative of general classes of manufactured products. Using money values in this manner, merely to determine relative or proportional weighting, does not inject a "dollar element" into the index.

In making some of their estimates the authors also draw upon the census figures for wage earners and for primary horsepower. Wage earners have, in general, increased less rapidly than product, while horsepower has increased more rapidly. That is, product per wage earner has increased, while product per unit of power has decreased. This illustrates and confirms an elementary economic principle, and is in accord with what is known about the general trend of our changing industrial organization. It is to be hoped that the authors' findings along these lines will prompt others to undertake further studies of the general relations of the use of labor and of mechanical energy to the output of different industries. The problem has fundamental economic importance, but up to the present no trustworthy studies have been made of it.

Using all the available census data, the authors construct some interesting indexes of the growth of a number of carefully classified groups of manufacturing industries. These indexes offer food for reflection. For example, over the whole period from 1899 to 1923, the percentage increase for the combined groups in physical production was 161, in number of wage earners 88, and in primary horsepower 230. Of the different groups, the following had grown by more than the average for all industries: Vehicles for land transportation, miscellaneous products, chemicals, nonferrous metals and their products, and iron and steel and their products. The rate of growth of the following groups was less than the average: Liquors and beverages, lumber and its remanufactures, leather and leather products, textiles and textile products, food products, stone, clay, and glass products, and tobacco manufactures. The general character of the change is clearly apparent. Industry as a whole is depending relatively less upon our farms and forests for its raw materials, and more upon our mines. Food products constitute an exception. The demand for food products is relatively inelastic, and manufacturing plays an increasing part in preparing them. As the authors suggest, "the factory is displacing in part the work of the housewife." In respect of the marked increase of miscellaneous manufactures, the authors note that "the lines of manufacture which have shown the most rapid rates of growth have been lines concerned with the production of goods primarily devoted to recreation and diversion of one kind and another." We depend more and more upon organized industry not only for our food but also for the devices with which we while away our leisure.

The period which this study covers happens to be one of unusual interest. By 1899 industry had pretty completely shaken off the long-continued depression which followed the crisis of 1893. Its further progress up to and through the war was persistently upward, even though halted from time to time by major or minor periods of depression. For the period as a whole, the authors find, the average annual rate of increase of the output of the manufacturing establishments of the United States was just under 4 per cent.

During the 24 years covered by this study, in the authors' opinion, the growth of manufactures was more than three times as great, relatively, as the increase of population. The increasing output of producers' goods accounted for a substantial part of this extraordinary growth. "But upon the whole," the authors find, "the evidence seems to justify the conclusion that the increase in the production of consumers' goods from 1899 to 1923 was considerably in excess of the growth of population during the same period."

The authors conclude with suggestions respecting possible developments in census methods and practice that would give more complete

and more accurate knowledge of the character of our general industrial growth. Studies such as theirs, which focus upon a definite problem such information as the census now yields, have a critical as well as a constructive value. The more precise and definite the questions to which we seek answers in the information given by the census, the more of point and purpose we shall put into the census itself. The surest way to get better statistics is to make the best possible use of what we have.

ALYN A. YOUNG.

APPENDIX A

CONSTRUCTION OF THE INDEX OF PRODUCTION OF MANUFACTURES

In order to provide a composite measure of the physical quantity of manufactures produced, statistics representing the production of individual products as reported by the census have been summarized into a set of index numbers covering census years. Such index numbers for the years 1899, 1904, 1909, and 1914 were constructed in 1920 by Prof. Warren M. Persons, with the assistance of Miss Eunice S. Coyle, and published in the Review of Economic Statistics for November, 1920. Description of the construction of this index, which has been called the Harvard census index, is given in Chapter II of this monograph and need not be repeated here.

Since 1914 census investigations have been made for 1919, 1921, 1923, and 1925. For the purposes of this monograph and to provide the information for others who may wish to use it, a similar index has been computed for census years from 1914 to date and has been chained to the earlier index, thus providing a homogeneous measure of the physical volume of production by census years from 1899 to 1925. Index numbers for all industries combined, for the major industrial groups, and for certain selected industries, by census years, 1899 to 1923, are given in Table 38, Appendix B.

With some noteworthy variations the same methods of construction utilized in constructing the Harvard census index were adopted in making the new index. The index is a weighted geometric mean of relatives; the weights are based upon figures for value added by manufacture; and products and industries included are classified according to the grouping followed in the censuses of manufactures prior to that of 1923.¹

The year 1919, however, was used as the base, whereas 1909 was the base in the earlier index. Another very important variation is to be found in the method of computing weights. Weights for the Harvard index were derived from values added by manufacture for 1909, the base year, but in the later index the weights applied to the relatives for any given year were averages of those for 1919, the base year, and those for the given year.²

¹ Classification was changed in 1923. See Ch. IV of monograph.

² The Harvard census index was computed for 1919 and revised for earlier years according to this method by Professor Day in 1922, but no explanation of the revision was published.

Other changes in the new index were confined largely to the data used. Several new production series have been given in recent censuses, but, on the other hand, statistics of raw materials consumed, which were used extensively with satisfactory results in the Harvard index, have not been reported since 1919. The index therefore is based entirely upon products manufactured. Although the absence of information regarding materials consumed is to be regretted, it is not believed to have materially affected the final results, as the Harvard indexes obtained by the two sets of data were closely similar.

Fuller treatment of data and methods, with explanations of the variations from those employed in the earlier indexes, is given in later sections. A general statement of methods used in the Harvard index is given in Chapter II of the monograph. Briefly, it may be said that in computing the new index physical quantity figures for each product included for the census years 1914, 1921, and 1923 were reduced to relatives in terms of the 1919 figures as 100; these relatives for all products in a single industry were weighted in accordance with their proportionate importance to each other and then averaged; thus a set of industry indexes were secured. The industry indexes were in turn weighted and averaged to give group indexes, which were similarly combined into a composite index for all manufactures. The actual physical quantity figures used, their individual relatives, the weights, and the industry and group indexes by census years from 1914 to 1925 are all shown in Table 26, given at the end of this chapter. The results have been discussed in the various chapters of the monograph.

SELECTION OF DATA

In constructing the index the data utilized were, with some important additions and a few subtractions, those employed in the Harvard census index. The nature of this statistical material is indicated in Chapter II of the monograph by a quotation from the Review of Economic Statistics. The most important variation from the Harvard index, as was stated above, is that in the new index practically no statistics of materials consumed have been used, because such data have not been requested in the census investigations since 1919.³

Statistics of products, on the other hand, have been expanded somewhat by the census, and a number of series not available for earlier dates are included in the new index. In some cases these additions are merely new series, perhaps of little or no importance until recently, added to an industry already represented in the index. Examples of these are found in the cases of some of the chemicals and acids, of upper leather, and of face brick. Generally, however,

³ Specifically statistics of materials consumed were used in flour milling, wood pulp, coke, gas, and petroleum refining. In a number of instances the production of semifinished and finished products in the same industry were given—e. g., pig iron and steel ingots, crude petroleum and refinery products, leather and shoes, and wood pulp and paper.

the additions were of entire industries or groups of industries— notably shipbuilding, rubber products, locomotives, cement, and several others of less importance. The inclusion of shipbuilding is a distinctive feature of the new index. It was felt to be necessary in order to provide an accurate basis of comparison between 1919 and other years, because of the unusual magnitude of that industry in 1919. In other years it was not of great importance.

Data for some previously unrepresented industries were derived by still another method which involved the utilization of extracensal information. Estimates of paper consumption to represent the printing and publishing industries and of nonferrous metals consumption for industries using these materials were arrived at by the use of production, import, and export statistics, and were included in the index. For reasons given below the liquors and beverages industries have been omitted for years since 1919.⁴

Another difference between earlier census figures and those of recent years, which is of such small importance as to be hardly worthy of mention, is that the investigations of 1921 and 1923 did not include establishments with a total production for the year of less than \$5,000 in value, whereas in previous years \$500 had been the minimum. That the effect of this change is insignificant is seen by the fact that for 1919 the total value of products for all establishments was 62,193 millions of dollars, whereas for those with products of \$5,000 and over the total was 62,042 millions of dollars, a difference of only two-tenths of 1 per cent.

Data included in the index, however, are subject to certain important limitations. In the first place only a portion of all products of manufacture are measurable and therefore available for use, and, secondly, changes in degree of fabrication are not indicated by mere changes in quantity. Improvements in quality represent larger production as much as do increases in quantity, but there is no satisfactory way of measuring such changes.⁵

Data for some of the industries and individual series are peculiar in respect to source, method of compilation, units, weighting, or some other such characteristic. These peculiarities, where worthy of notice, are given in the section at the end of the chapter after the discussion of methods. Note is made especially of cases where the data are not exactly the same as those used in the Harvard census index. Certain more detailed information regarding some of the series may be found in the description of that index in *The Review of Economic Statistics*.⁶

⁴ See p. 111.

⁵ In the index for the automobile industry some allowance is made for such changes in the quality of automobiles produced by providing for the increase in proportion of closed cars produced as compared with open cars. This index indicates an increase of 132 per cent in production of automobiles from 1919 to 1923, as compared with 106 per cent shown by comparing the simple totals of number of cars produced.

⁶ Preliminary Vol. II, No. 11, November, 1920, pp. 311-315.

Representativeness of the index.—A rough measure of the comprehensiveness of the index may be obtained by comparing the value of those products included in the index with the total value of all products manufactured. Because of the large amount of duplication in the figures of total value reported by the census, however, a comparison of the value added by manufacture for those industries represented in the index with total value added for all industries is probably a more accurate measure of representativeness.

These comparisons and other measures of the comprehensiveness of the index are given in Table 21. In the first two columns the number of industries and series included in the index from each group is shown. It will be noted that indexes are available for 53 separate industries, comprising relatives for 137 individual products. It should be remembered, however, that for most of these products the series are totals of a large number of subdivisions. All kinds of cotton goods, for example, are shown by a single series, and the tonnage of all the various products of steel rolling mills has been added together.

TABLE 21.—MEASURES OF REPRESENTATIVENESS OF DATA USED IN INDEX

GROUP AND INDUSTRY	Number of industries	Number of products series	ADEQUACY OF DATA	
			For industries ¹	For groups ²
All groups covered.....	53	137		187
All industries covered.....				48
I.—Food and kindred products.....	10	26		48
Butter, cheese, and condensed and evaporated milk.....		3	88	
Slaughtering and meat packing.....		7	87	
Flour-mill and grain-mill products.....		4	98	
Sugar, beet.....		2	95	
Sugar refining, cane.....		1	99	
Canning, etc., fruits and vegetables.....		4	99	
Canning, etc., fish and oysters.....		1	79	
Corn sirup, corn oil, and starch.....		1	28	
Rice cleaning and polishing.....		1	95	
Ice, manufactured.....		1	99	
II.—Textiles and their products.....	8	20		52
Cotton goods.....		3	90	
Knit goods.....		5	81	
Silk manufactures.....		3	80	
Woolen and worsted goods.....		4	96	
Carpets and rugs, wool, other than rag.....		1	96	
Cordage and twine, etc.....		2	91	
Hats, fur-felt.....		1	83	
Oilcloth and floor coverings.....		1	98	
III.—Iron and steel and their products.....	2	9		40
Blast furnaces.....		1	98	
Steel works and rolling mills.....		1	74	
IV.—Lumber and its remanufactures.....	1	9		48
Lumber and timber products and planing-mill products.....		2	79	
V.—Leather and its finished products.....	2	6		80
Leather, tanned, curried, and finished.....		1	100	
Boots and shoes.....		1	100	

See footnotes at bottom of table on opposite page.

TABLE 21.—MEASURES OF REPRESENTATIVENESS OF DATA USED IN INDEX—Continued

GROUP AND INDUSTRY	Number of industries	Number of products series	ADEQUACY OF DATA	
			For industries	For groups
VI.—Paper and printing	3	11		* 15
Paper and wood pulp.....		8	90	
Printing and publishing.....		2	(7)	
Paper boxes.....		1	(7)	
VII.—Liquors and beverages	0	0	0	0
VIII.—Chemicals and allied products	35	35		77
Chemicals and acids.....		10	36	
Coke.....		2	72	
Gas.....		3	88	
Fertilizers.....		1	97	
Explosives.....		1	91	
Paint and varnish.....		5	95	
Petroleum refining.....		7	91	
Oil and cake, cottonseed.....		2	65	
Turpentine and rosin.....		2	100	
Salt.....		1	76	
Soap.....		1	66	
IX.—Stone, clay, and glass products	4	7		64
Brick, tile, etc.....		3	54	
Lime.....		1	84	
Cement.....		1	99	
Glass.....		2	35	
X.—Metals, nonferrous	2	11		* 35
Brass, bronze, etc.....		1	79	
Smelting and refining.....		5	62	
Other industries.....		5	(7)	
XI.—Tobacco products	3	3		* 100
Chewing, smoking, etc.....		1	100	
Cigars.....		1	100	
Cigarettes.....		1	100	
XII.—Vehicles for land transportation	4	8		97
Motor vehicles.....		3	60	
Carriages, wagons, etc.....		1	65	
Railway equipment ¹		2	74	
Cars, etc.....		2	70	
Locomotives.....		1	86	
XIII.—Railroad repair shops²	0	0	0	0
XIV.—Miscellaneous	8	9		18
Ship and boat building.....		2	19	
Rubber products—				
Rubber boots and shoes.....		4	100	
Rubber tires and inner tubes.....		3	87	

¹ Percentage that (1) value of products covered by index for each industry in 1923 bears to (2) total value reported for all products of that industry in 1923.

² Percentage that (1) value added by manufacture in 1923 for industries covered in each group bears to (2) total value added by manufacture reported for all industries in that group. The figures from which these percentages are computed are given in part in Table 23.

³ Percentage of value added by manufacture for the groups represented in the index to that of all groups reported by the census.

⁴ Percentage of (1) value added by manufacture for all industries directly represented in the index to (2) that of all industries reported by the census. Had certain paper and printing and nonferrous metals industries, which are indirectly represented in the index by consumption estimates, been included in (1) this ratio would have been 56.

⁵ Exact data are not available. The estimate given has been based on the best information at hand.

⁶ These percentages cover only those industries directly represented in the index. The inclusion of the industries indirectly represented by consumption figures would give the following: Paper and printing, 91; and metals, nonferrous, 87.

⁷ No adequate data for use as basis of estimates are available.

⁸ Indirectly some 22 industries in Group X are represented.

⁹ New products manufactured by railroad repair shops are included under railway equipment.

The number of the series, however, gives little indication of the extent to which the figures actually cover the industries, and in the last two columns of the table figures are given to show (1) the percentage of the value of the products represented from each industry included in the index to the total value of all products of that industry and (2) the percentage of value added for the industries included from each group to the value added for that group as a whole. Most of the individual industries included are fairly well represented by their products, the value percentage varying from 19 to 100 per cent, with nearly one-half above 90 per cent.

Direct representation of some of the groups, however, is not so large. The important iron and steel and allied industries, for example, are covered by but two industries, whose value added equals only about 40 per cent of the total for the group, and in nonferrous metals the direct representation is smaller, but in both of these groups the products used are of such a basic nature that they probably reflect rather closely conditions in the more advanced industries using these products as raw materials. The liquors and beverages group is not represented at all after 1919. The most completely covered groups are tobacco products and vehicles for land transportation.

Comparisons of totals of these groups, industries, and products included in the index to the grand total for all manufactures give the following results: Value added by manufacture for all groups directly and indirectly represented is 87 per cent of the total and the value added of only those industries directly represented equals nearly 50 per cent of the total. A comparison of the total value of products to total value of all products included can not be accurately determined because of (1) the lack of value figures in a number of cases and (2) the large amount of duplication in the combined value figures.

The conclusion drawn from such a comparison for the Harvard census index is applicable here. It is "Analysis of the data, therefore, leads to the conclusion, first, that our sample of manufacture is well distributed and, second, that the sample is large enough to constitute a reliable basis for the computation of indexes of physical production for manufacture."

Another test of the representativeness of the index is given in Table 22, which shows for intercensal periods the percentage of change in the number of wage earners and in primary horsepower for all industries, for the industries directly represented in the index, and for those not so represented.

TABLE 22.—COMPARISON OF GROWTH OF INDUSTRIES INCLUDED IN INDEX WITH GROWTH OF OTHER INDUSTRIES

	PER CENT OF INCREASE OR DECREASE (-)					
	24-year period, 1899-1923	Intercensal period.				
		1919-1923	1914-1919	1909-1914	1904-1909	1899-1904
NUMBER OF WAGE EARNERS						
All Industries.....	88.2	-2.5	29.3	6.4	21.0	16.0
Industries included in index.....	82.4	-3.5	33.0	5.2	20.7	11.4
Industries not included in index.....	95.2	-1.8	25.5	7.6	21.3	21.4
PRIMARY HORSEPOWER						
All Industries.....	229.6	12.8	31.5	20.1	38.5	33.6
Industries included in index.....	218.3	12.7	33.5	15.6	40.6	30.1
Industries not included in index.....	251.2	13.1	26.1	34.2	32.2	38.8

From this evidence it would seem that changes from one census year to another in the industries included in the index are in most cases typical of those for all industries, although in a few cases there are fairly wide discrepancies. These data show that for the period as a whole the industries included in the index have grown by a slightly smaller amount than those excluded, indicating that over a long period of time the index probably somewhat understates the growth of all manufactures. The industries included in the index employed over 50 per cent of the total number of wage earners employed in all industries and contributed nearly 75 per cent of the total primary horsepower.

METHODS OF CONSTRUCTION

Processes involved in the construction of this index previously briefly described will now be explained in greater detail. The figures for 1914, 1921, and 1923 in each set of physical quantity data were reduced to percentages of the corresponding figure for 1919, and a weighted geometric average of these percentages or relatives for any given year gave the composite index number for that year. The weights represented the importance of their respective products relative to all other products included in the index. They were derived from figures showing value added by manufacture in the base year (1919) and in the particular year for which they were used. In other words, there was a different set of weights for each year covered by the index, which were averages of two other sets, one applying to the common base year and the other to the given year.

The following formula expresses in mathematical symbols the methods employed in compiling the index:

$$I_0 = \sqrt[2]{\frac{p_0q_0 + p_1q_1}{2}} \times \sqrt[2]{\frac{p_0q_0 + p_1q_1}{2}} \times \left(\frac{q_1}{q_0}\right)^{\frac{p_0q_0 + p_1q_1}{2}} \times \left(\frac{q'_1}{q''_0}\right)^{\frac{p_0q_0 + p_1q_1}{2}} \text{ etc.,}$$

wherein q_1 is the quantity of a given product produced in any given year, q_0 the quantity of the same product produced in the base year; q'_1 and q''_0 , q''_1 and q'''_0 , quantities of other products produced in corresponding years; $\frac{q_1}{q_0}$ and $\frac{q'_1}{q'_0}$, etc., are the relatives; $p_0 q_0$ and $p_1 q_1$ represent value added by manufacture; $\frac{p_0 q_0 + p_1 q_1}{2}$ represents the average value added in the given year and base year, or the weights assigned; and the radical, $\sqrt{\frac{p_0 q_0 + p_1 q_1}{2}}$, is the sum of all the weights.

Type of average.—Several considerations governed the choice of the geometric mean as the type of average to be utilized in constructing this index. In the first place, it was desirable that the methods used be similar to those employed in computing the Harvard census index, in which the geometric type of average was adopted. Another reason is that the index was devised for use in a study of the relative growth of manufacture and the geometric average is especially suited for averaging percentages and securing composite measures of relative changes. The so-called aggregative type of index, wherein all figures are reduced to values and the aggregate values are compared to secure the index numbers, more closely measures absolute changes in volume. Another objection to the aggregative type is the difficulty of obtaining, in the case of manufactures, satisfactory weight factors which are needed to reduce the quantity figures to values. This difficulty is due to the fact that these factors not only must convert quantities into values but also at the same time must weight the products in accordance with the relative importance of the various industries which they represent.⁷

Advantages of the geometric mean over the arithmetic mean are technical in nature but are important in this index. In the first place, with the geometric type the index can be readily shifted to a new base without recalculation of the averages. This characteristic was advantageous in linking the new index with the Harvard census index. The geometric mean, in the second place, is not ordinarily as much affected by extremely large items as is the arithmetic average, and in computing this index there were some relatives of sufficient magnitude to make this feature important.

Base period.—The year 1919 was chosen as the base in computing this index primarily because it was the middle year, in point of time, of the period covered by the index, and therefore was more directly comparable with all the other years than any other single year would be. It is a link between the old and the new—between the pre-war industrial system and the somewhat different order now

⁷ Experimental computations of aggregative indexes gave practically the same results as the geometric averages adopted.

prevailing. Furthermore, it was central in point of magnitude, the index for 1919 (100) being practically halfway between that for 1914 (78) and that for 1923 (122). This was likewise true for a number of the individual industries, and therefore the relatives comprising the index tend to group themselves around the average more closely than they would if another year had been selected as a base. Another advantage of 1919 as a base over some earlier year is that it permits the use of a number of figures which were not available until 1919.

Weights.—In averaging the relatives for individual products to secure a composite measure of changes in the volume of production of all manufactures, it was necessary to weight each relative in accordance with the proportionate importance of the product represented. Because the output of many products manufactured can not be measured and therefore these products can not be included in the index, the weight for each major industrial group was divided among the industries of that group included in the index, and the industry weights were in turn divided among the products included. Thus steel production is weighted not only in accordance with the importance of the industry designated as "steel works and rolling mills" but also for all industries in the iron and steel group, except blast furnaces which are represented by pig iron.

The weights for industries and for major industrial groups were derived from figures measuring value added by the process of manufacture, and the weights for individual products within each industry were derived from data showing total value produced, data for value added not being available for the individual products. The value added figures provide the most satisfactory basis of weighting available because they represent the actual contribution of the manufacturing process to the production of a commodity—the application of machinery and labor.⁸ The weights were computed in terms of percentages of the whole and multiplied by 10, the total of weights for all products equaling 1,000. The percentages were first computed for the major groups, the group percentages were divided proportionately among their respective industries, and the industry totals in turn were distributed among their products.

In computing weights for groups, industries, and the individual-products series, some allowances were made for their adequacy, comprehensiveness, and representativeness. Iron and steel production, for example, because of the basic nature of these products, was assigned weight for a large number of industries in which iron and steel are used as raw materials. Full weight, as indicated by the value added by manufacture, on the other hand, was not assigned to a few products which could not be considered as repre-

⁸ See Ch. I, p. 20.

sentative of production in other lines. Outstanding examples of these are automobiles and shipbuilding, for which one-half of the value added by manufacture was assigned to iron and steel. The principal reason for this, in addition to that mentioned above that the products being results of the final stages of the production process do not represent output of other products in more advanced stages of manufacture, is that the materials used in their construction—chiefly iron and steel—are already represented once in the index, and their inclusion again gives them undue importance as contrasted with the amount of those same materials going into other manufactures not included, notably machinery. The use of steel in machinery output probably declined between 1919 and 1923, whereas that used in automobiles increased; the inclusion of one without the other presents a distorted picture. The reduction of the weight given to automobiles and the corresponding increase of that assigned to steel serves to remedy this defect. Another reason for reducing the weight for shipbuilding and automobile manufacturing is the unsatisfactory character of the physical-quantity figures, which do not adequately represent production in these industries because of important changes in nature of product. Adjustments of weights in individual instances are discussed in the subsequent section dealing with the individual series included in the index.

Percentages of the importance of the various groups, industries, and products were computed from the value-added data for each year covered by the index—1914, 1919, 1921, and 1923—and those for 1914, 1921, and 1923 were averaged separately with the corresponding percentages for 1919 in order to obtain a set of weights for use in computing the index for each year. That is, the 1914 weights are averages of the 1914 and 1919 percentages, those for 1921 are averages of the 1921 and 1919 percentages, and so on. Table 23 gives the computation of weights for the major industrial groups and for individual industries. In computing these percentages, figures were rounded off as much as possible in order to simplify the labor of computation. Percentages were used instead of actual value figures in order to remove the influence of price changes and of growth, thereby preventing one year from dominating the weights.

The practice of averaging the computed weights for a given year with those for 1919 in order to obtain the weights actually used for that year has the advantage of providing in the index for changes which occur in the relative importance of different industries. If 1919 weights alone had been used, for example, the shipbuilding industry would have exerted far too great an influence on the index—its relative importance during the period changed from 0.6 per cent of the total in 1914 to 4.2 per cent in 1919, and back to 0.6 per cent in 1923. The industrial structure is likely to change materially in a

decade and in two decades changes are too great to be ignored. The automobile industry was of only moderate importance in 1914; in 1923 it was the leading industry in total value of output. It is necessary that the weighting system provide for such changes.

Another reason for using these combined weights is a technical one relating to the characteristics of the type of average used. A geometric average of relatives weighted on the basis of data for a single year is likely to have a bias—i. e., "a foreseeable tendency to err in one direction"—and such a bias is particularly pronounced if the relatives cover a wide range. Since with base-year weights the bias is in one direction and with given-year weights it is in the other, a combination of these two sets of weights will give an average free from bias.⁹ Therefore because of the inherent nature of the average, because of the wide dispersion of relatives comprising the index, and because of the need for making allowances for fundamental changes in industrial arrangements, the weights used in this index were based upon two years rather than one.

⁹ For a discussion of bias, as well as of other characteristics of index-number formulae, see Irving Fisher, "The Making of Index Numbers"; U. S. Bureau of Labor Statistics, Bull. 284, "Index Numbers of Wholesale Prices in the United States and Foreign Countries," by Wesley C. Mitchell; or some recently published textbook on statistical methods.

TABLE 23.—COMPUTATION OF WEIGHTS FOR INDUSTRIES AND GROUPS, BY CENSUS YEARS: 1914 TO 1923

[Value figures expressed in thousands]

INDUSTRY	1914			1919			1921			1923		
	Value added by manufacture	Per cent of total	Weight †	Value added by manufacture	Per cent of total	Weight †	Value added by manufacture	Per cent of total	Weight †	Value added by manufacture	Per cent of total	Weight †
Total of all groups included in index.....	\$8,588,471	100.00	1,020	\$21,755,489	100.00	1,000	\$15,768,308	100.00	1,000	\$22,541,026	100.00	1,000
Food and kindred products:												
Group total.....	1,630,829	12.46	117	3,421,471	11.16	158	3,018,125	12.80	118	3,400,769	16.60	168
Total in index.....	647,498			1,313,688			944,787			1,168,387		
Butter, cheese, and condensed and evaporated milk.....	49,269	1.12	11	139,759	1.18	17	129,296	1.75	17	149,774	1.38	13
Slaughtering and meat packing.....	210,302	4.76	43	463,361	3.92	40	332,744	4.63	40	409,794	3.77	38
Flour-mill and grain-mill products.....	125,410	2.84	25	253,253	2.14	20	185,930	2.62	20	162,606	1.50	18
Sugar, beet.....	21,206	.48	5	62,127	.62	5	17,241	.23	5	47,494	.44	5
Sugar refining, cane.....	25,314	.67	5	68,843	.68	5	40,001	.64	5	44,361	.41	5
Canning and preserving, fruits and vegetables, etc.....	45,883	1.04	11	136,614	1.16	12	81,524	1.10	12	151,870	1.40	12
Canning and preserving, fish, oysters, etc.....	12,657	.29	3	26,266	.22	2	14,092	.19	2	19,636	.18	2
Corn sirup, corn oil, and starch.....	12,407	.28	4	55,927	.47	6	29,180	.39	6	42,079	.38	5
Rice cleaning and polishing.....	2,423	.06	1	13,405	.11	1	7,034	.09	1	6,855	.06	1
Ice, manufactured.....	42,631	.96	9	94,127	.80	10	107,715	1.46	10	117,998	1.08	9
Textiles and their products:												
Group total.....	1,433,495	17.30	175	3,334,624	17.60	190	3,156,921	20.00	190	4,070,589	18.10	180
Total in index.....	683,790			1,035,638			1,610,087			1,180,189		
Cotton goods.....	257,778	6.51	70	880,764	7.61	78	598,679	7.44	78	809,523	6.90	74
Knit goods.....	112,226	2.84	27	286,044	2.47	28	273,616	3.40	30	364,157	3.10	28
Silk manufactures.....	109,569	2.78	27	300,001	2.59	28	245,860	3.05	28	282,284	2.40	25
Woolen and worsted goods.....	132,987	3.36	34	399,838	3.46	40	355,538	4.41	40	439,827	3.75	36
Carpets and rugs, wool, other than rag.....	26,848	.68	6	56,136	.49	6	53,762	.67	6	102,008	.92	7
Cordage and twine.....	16,157	.41	4	43,661	.38	4	28,875	.36	4	34,641	.29	3
Hats, fur-felt.....	20,403	.62	4	42,887	.37	4	26,362	.33	3	40,805	.34	4
Oilcloth and floor coverings.....	7,822	.20	3	26,601	.23	3	27,395	.34	3	46,944	.40	3
Iron and steel and their products:												
Group total.....	1,669,617	20.40	234	5,717,215	26.29	231	3,160,078	20.00	231	5,539,931	24.60	234
Total in index.....	555,080			1,807,659			839,714			1,845,829		
Blast furnaces.....	53,074	1.55	24	173,181	2.62	21	55,721	1.40	21	179,983	2.40	24
Steel works and rolling mills.....	501,956	18.45	210	1,634,372	23.78	210	777,993	18.60	210	1,665,845	22.20	230
Lumber and its remanufactures—Group total.....	837,361	10.10	90	1,710,074	7.90	80	1,240,747	7.90	80	1,933,264	8.60	83
Lumber and timber products.....	433,368			916,510			524,574			921,398		

Leather and its finished products:											
Group total.....	851,458	4.80	48	896,484	4.10	609,788	8.99	48	796,748	8.80	88
Total in index.....	874,660			781,845		494,681			836,789		
Leather, tanned, curried, and finished.....	82,957	1.80	17	282,071	1.60	105,640	.88	15	167,148	.61	13
Boots and shoes.....	191,408	8.00	25	436,772	2.60	869,044	8.07	25	472,621	2.69	26
Paper and printing:											
Group total.....	675,880	10.60	98	1,708,667	7.90	1,817,428	11.80	98	3,226,926	9.90	90
Total in index.....	801,095			1,554,140		1,660,043			3,088,511		
Paper and wood pulp.....	118,966	1.68	25	820,577	1.62	221,444	1.60	25	836,680	1.68	25
Printing and publishing.....	645,696	8.51	62	1,282,279	8.65	1,862,619	9.40	65	1,674,562	7.69	60
Paper boxes.....	38,448	.51	5	105,284	.68	85,980	.60	5	120,129	.69	6
Chemicals and allied products:											
Group total.....	713,289	8.60	86	1,863,624	6.60	1,466,638	8.80	86	3,002,783	8.90	86
Total in index.....	588,469			1,448,840		1,131,687			1,641,808		
Chemicals and acids.....	77,084	1.24	10	309,456	1.84	211,959	1.74	18	326,679	1.89	18
Coke.....	80,187	.49	5	92,249	.65	62,822	.43	5	162,893	.94	5
Gas.....	148,469	2.31	17	171,728	1.02	208,943	1.71	14	268,977	1.80	13
Fertilizers.....	45,241	.73	7	96,103	.67	85,897	.29	4	55,190	.32	4
Explosives.....	15,806	.25	3	46,894	.28	28,831	.22	3	35,833	.20	3
Paint and varnish.....	67,169	.92	8	123,284	.73	102,912	.85	8	158,180	.90	8
Petroleum refining.....	71,098	1.15	17	384,625	2.28	845,270	2.86	25	868,647	2.18	22
Oil and cake, cottonseed.....	81,151	.60	5	86,063	.61	22,361	.18	4	28,878	.16	4
Turpentine and rosin.....	15,454	.25	2	39,121	.23	17,102	.14	2	26,194	.15	2
Salt.....	7,797	.13	1	21,490	.12	16,751	.13	1	20,360	.12	1
Soap.....	39,076	.63	5	78,221	.47	99,889	.74	6	102,867	.69	5
Stone, clay, and glass products:											
Group total.....	375,427	4.80	40	676,958	8.10	597,125	8.80	38	971,751	4.80	36
Total in index.....	430,869			487,488		371,556			617,187		
Brick and tile, terra-cotta, and fire-clay products.....	63,198	1.81	15	140,935	1.08	126,063	1.28	13	230,098	1.60	13
Lime.....	10,888	.21	2	19,674	.14	16,801	.17	1	27,544	.19	1
Cement.....	49,769	.97	9	95,755	.69	101,267	1.04	10	163,332	1.14	10
Glass.....	77,069	1.51	14	171,104	1.24	127,465	1.31	12	196,183	1.37	12
Metals and metal products, other than iron and steel:											
Group total.....	393,690	4.70	41	880,368	8.90	580,878	8.70	38	947,126	4.70	40
Total in index.....	801,767			680,897		801,095			667,680		
Brass, bronze, and other nonferrous alloys, and man- ufacture of these alloys and of copper.....	46,712	.72	10	177,489	1.11	84,277	1.04	10	179,714	1.15	10
Smelting and refining.....	105,045	1.64	10	132,908	.84	66,818	.82	8	148,216	.95	10
Other industries.....	160,000	2.34	21	310,000	1.95	150,000	1.84	20	330,000	2.10	20

¹ Computed as described in text from averages of corresponding percentages for 1919 and for given year.

² Liquors and beverages are included only in 1914, and in order to make the figures comparable with those for 1919 the percentages and weights for 1914 have been made to

³ Includes manufactured ice, which was not included in the published census figures for this group prior to 1923.

⁴ equal more than 100 and 1,000, respectively.

⁵ Includes data for the entire iron and steel group, as classified prior to 1923, less locomotives and plus one-half of the value added for vehicles and shipbuilding.

TABLE 23.—COMPUTATION OF WEIGHTS FOR INDUSTRIES AND GROUPS, BY CENSUS YEARS: 1914 TO 1923—Continued

[Value figures expressed in thousands]

INDUSTRY	1914			1919			1921			1923		
	Value added by manufacture	Per cent of total	Weight ¹	Value added by manufacture	Per cent of total	Weight ¹	Value added by manufacture	Per cent of total	Weight ¹	Value added by manufacture	Per cent of total	Weight ¹
Tobacco manufactures:												
Group total ²	\$293,000	2.46	20	\$322,363	1.50		\$184,600	1.20	12	\$219,311	1.00	12
Total in index.....	282,906			529,368			459,801			528,327		
Tobacco, chewing and smoking, and snuff.....	98,677	.84	6	109,001	.31		85,284	.23	3	76,692	.14	2
Tobacco, cigars.....	135,508	1.15	9	201,681	.57		177,937	.49	5	182,422	.35	4
Tobacco, cigarettes.....	48,720	.41	5	212,784	.62		176,600	.48	5	269,313	.51	6
Vehicles for land transportation:												
Group total ³	223,772	2.76	31	757,410	2.50		491,639	2.10	23	965,150	4.00	23
Total in index.....	417,690			1,454,911			949,169			1,763,868		
Motor vehicles.....	276,623	1.79	23	1,139,395	2.75		758,377	2.47	26	1,464,871	3.32	31
Carriages, wagons, and repairs.....	54,524	.35	2	43,101	.10		15,583	.05	1	17,305	.04	1
Railway equipment.....			6						6			6
Cars.....	66,721	.43		188,521	.45		128,698	.42		190,691	.43	
Locomotives.....	19,828	.12		83,894	.20		46,611	.16		91,181	.21	
Ship and boat building:												
Group total ⁴	25,043	.30	12	455,920	2.10		115,733	.70	14	64,337	.30	12
Total in index.....	63,085			911,839			231,469			128,674		
Rubber products—Group total.....	137,959	1.76	20	642,872	2.50		327,024	2.10	22	457,355	2.00	22
Rubber boots and shoes.....	29,866	.37	4	66,570	.31		61,900	.39	4	86,471	.37	4
Rubber tires and inner tubes.....	106,093	1.33	15	477,303	2.19		265,124	1.71	18	370,884	1.63	18
Liquors and beverages—Group total^{5, 6}.....	310,000	2.50	20	160,900	1.40							

¹ Computed as described in text from averages of corresponding percentages for 1919 and for given year.² Liquors and beverages are included only in 1914, and in order to make the figures comparable with those for 1919 the percentages and weights for 1914 have been made to equal more than 100 and 1,000, respectively.³ Amount of internal revenue tax deducted.⁴ One-half of value added for vehicles and shipbuilding assigned to iron and steel.⁵ Not included in the total except for comparison with 1914, in which case the 1919 total equals 100.40.

DESCRIPTION OF INDIVIDUAL SERIES

In most cases the designation of the products included in the index, as given in Table 26, is sufficient to explain their nature without further detailed description, and in general this section is limited to a discussion of small details and of special cases. Further information regarding the individual series may be obtained from the census reports and also from the description of the original Harvard census index in "The Review of Economic Statistics," Preliminary Vol. II, No. 11, November, 1920.

GROUP I.—FOOD AND KINDRED PRODUCTS

The weight for this group is based upon value added by manufacture according to the old classification and does not include nonalcoholic beverages, which under the 1923 classification were assigned to this group. It includes, on the other hand, manufactured ice, not assigned to this group under the old classification.

Butter, cheese, and condensed and evaporated milk.—The figures used cover only factory production made by establishments engaged primarily in their manufacture. A small amount made by factories classified in other industries is excluded, as well as that produced at home or in small establishments.

Slaughtering and meat packing.—For this industry the figures for materials—dressed weight of animals slaughtered—were published in 1921 and 1923, as in prior censuses, and were included in the index. Meat, fresh and cured, includes beef, veal, mutton and lamb, pork, edible offal, and other fresh meat, pickled and other cured beef, smoked pork, and pork, not smoked, all of which are reported separately by the census. Lard and lard compounds, reported separately, are totaled to make this series. The figures for cattle hides in 1921 and 1923 include the weight of hides received as payment for custom slaughtering. Sheep and lamb skins are not included because their weight in pounds was not reported, and the series is not comparable throughout the period covered. Relatively important products of this industry not included in the index are canned meats, sausage, scrapple, etc., and by-products such as fertilizers and glue. Weights for the individual series are based upon value of product.

Flour-mill and grain-mill products.—Censuses of this industry in 1914, 1921, and 1923 covered only merchant mills and, in order to preserve comparability, data for custom mills in 1919 have been excluded from the figures used. Some custom business of merchant mills, however, is included in all years. The figures for 1921 and 1923 are probably not directly comparable with those for earlier years because of the exclusion of establishments with value of product of less than \$5,000. For the same reason, and because of the exclusion of custom mills, the census figures for wheat-flour production are somewhat smaller than those reported from trade sources. The figures for grain milled, which are totals for all types of grain, make one of the few series of materials consumed given by the census since 1919.

The sugar industries.—For beet sugar, figures are available for materials—tons of beets treated—as well as for products—granulated and raw sugar produced. Output of refined cane sugar has been reported by the census only since 1914. In the Harvard index, for the lack of better data, quantities were estimated from statistics of production and imports of raw sugar.

Canning and preserving.—The data for these industries include products of establishments engaged primarily in other industries. The figures for fruits, vegetables, fish, and oysters are totals of several varieties expressed in terms

of standard cases, which contain 24 cans. Cases of canned soup contain 48 cans. The figures for dried fruits in 1923 are not strictly comparable with those for earlier years because of some enlargement in the scope of the canvass for prunes and apricots. Data for eanned soups and for fish and oysters were not included in the earlier Harvard index.

Corn sirup and starch, Rice cleaning and polishing, and Ice manufacturing were added to the new index by the use, respectively, of figures for the production of starch, of clean rice, and of manufactured ice. The industries are not very important but are worthy of inclusion under the standard adopted (value of product of over \$10,000,000) and in the case of the ice industry because of its increasing importance.

Important industries in this group for which quantitative statistics are not available over a period of years are bread and bakery products (collection of data was commenced in 1923), confectionery, ice cream (figures reported in 1923), and food preparations, not elsewhere classified. This last industry includes chiefly "breakfast-foods" or "cereal" preparations, and also lard compounds, macaroni, peanut butter, malted milk, and others. These industries are of such a nature that they are not adequately represented by the other industries in the group, and the lack of satisfactory quantity statistics for them is unfortunate.

GROUP II.—TEXTILES AND THEIR PRODUCTS

Weight was assigned to this group on the basis of value added by manufacture for all industries in the group and was distributed among those industries represented. Owing to the basic nature of the products included in the index, they are probably fairly representative of the more finished commodities not represented—mostly wearing apparel and dyeing and finishing textiles.

Cotton manufactures.—The weight for this industry includes cotton small wares and lace, as well as cotton goods. The principal products series, woven goods (over 12 inches in width), is a total of several types of cloth—sheetings, tire fabrics, print cloth, gingham, twills, sateens, etc., shirtings, cotton flannel, and a number of others.

Statistics of yarns include only those manufactured for sale, as total production or consumption data are not published. Because of the lack of data for materials used, it is now impossible to measure the extent to which other materials than cotton are included in the goods produced by cotton mills.

Hosiery and knit goods.—Products are totaled irrespective of materials used. The underwear figures have been divided into two series—union suits and shirts and drawers—because if they are added together the decrease in recent years in the total number of shirts and drawers produced appears to more than offset the increase in the production of union suits, whereas actually one union suit should be considered as replacing one of each of the separate garments. The treatment of these products as separate series with weight based on relative values of total output, avoids this possible error.

Silk.—Broad silks are the most important products of this industry. Velvets, plushes, upholstery, and tapestry were totaled to form a single series. Other silk goods are largely thrown silk, organzine, tram, and crêpe twist, with spun silk and machine twist important additions. The extent to which raw materials and yarns other than silk have been used in recent years is not indicated in the census reports.

Woolen and worsted goods.—The classification of goods as all-wool woven goods, union or cotton-mixed woven goods, and cotton-warp woven goods, as used in the index, has not been clear cut in recent census reports. It was therefore necessary to classify certain minor products such as shawls and carriage cloths,

for which fibers were not reported, as like products of the same establishments were classified in 1919. Figures for yarns and tops refer only to those made for sale, and are totals of many different kinds.

Oilcloth and floor coverings are represented by figures in square yards for the production of linoleum and asphalted-felt-base piece goods and rugs and of various kinds of oilcloth. The figures had to be totaled because changes in classification of the products from one census to the other prohibited comparable separation.

Data for the other industries included—Carpets and rugs, Fur-felt hats, and Cordage and twine, jute goods, and linen goods—need no explanation. The figures are totals of several different kinds of products, individually small in magnitude, but collectively worthy of consideration.

GROUP III.—IRON AND STEEL AND THEIR PRODUCTS

This group, with the largest weight of all the groups, is represented by only two series of figures, which, however, cover products that are basic for all the industries in the group. In computing the weights, in addition to value added by manufacture for the iron and steel group proper, which as classified in censuses prior to 1923 includes a number of machinery industries, one-half of the values added for vehicles for land transportation and for shipbuilding were assigned to iron and steel. This procedure, as explained in the discussion of weights, was followed in order to avoid giving undue weight to vehicles, which happen to be represented in the index, while the machinery industries, also large consumers of steel, remain unrepresented. With the readjustment of weights, iron and steel represents in the index steel works and rolling mills, industries making a number of miscellaneous iron and steel products, the machinery industries, and in part, the vehicles industries.

Blast furnaces are represented by figures including castings made direct from blast furnaces and ferro-alloys, as well as all types of pig iron. About three-fourths of the pig iron produced is consumed in works of the producing company; therefore this series can also be considered as a raw material for the steel industry.

Steel works and rolling mills.—Rolled, forged, and other classified iron and steel products include a variety of finished and semifinished products, made in rolling mills for sale or for consumption by the producing company. Some duplication undoubtedly results from such a grouping, as a portion of these products are used by the same company for further production, but the effect of this duplication upon comparisons between census years is slight. This series is assigned a weight for steel works and rolling mills and for industries manufacturing products largely made by steel works and rolling mills.

As in the case of textiles, quantitative statistics are not available for a number of important industries in the iron and steel groups—notably hardware, plumbers' supplies, heating apparatus, tools and cutlery, and also certain machinery industries, which prior to 1923 were classified by the census under iron and steel. These are foundry and machine shops—a heterogeneous collection of establishments, generally closely associated with companies producing a wide variety of products—engines and water wheels, machine tools, textile machinery, cash registers, pumps, and typewriters. In the 1923 census these industries were classified with agricultural implements, electrical apparatus, and others in a separate machinery group.

In recent censuses quantitative statistics have been published for engines and water wheels, machine tools, textile machinery, agricultural implements, and electrical apparatus. Certain characteristics of these data, however, disqualify them for use in the production index. In the first place, the units in which the figures are expressed are of questionable comparability between census years.

Important shifts may occur in the character of machines produced in 2, 4, or 5 years. In fact, within a year the demand for different types may change to such an extent that totals become noncomparable. In the second place, these industries have passed through some extreme variations of activity in the past decade, and it is impossible to determine whether any single industry or any group of industries may be considered as at all representative of the group as a whole. The figures, however, are worthy of investigation, are undoubtedly of value for certain purposes, and may in time become increasingly significant.

Experimental indexes were computed for these industries and are given for those who may be interested. The extent of their accuracy and representativeness can not be stated.¹

TABLE 24.—INDEXES OF PRODUCTION OF MACHINERY: 1914 TO 1923

	1914	1919	1921	1923
Engines and water wheels.....	27	100	43	80
Machine tools.....		100	33	45
Textile machinery and parts.....		100	118	132
Agricultural implements.....	89	100	67	74
Electrical machinery, apparatus, and supplies.....	48	100	96	157

GROUP IV.—LUMBER AND ALLIED PRODUCTS

Lumber and timber products.—The physical quantity of hardwoods and softwoods cut in each year since 1921 has been compiled by the Bureau of the Census in cooperation with the Forest Service, Department of Agriculture. The figures for 1919 include data from custom mills and from mills with an annual cut of less than 50,000 feet, whereas custom mills were not included in 1914, 1921, and 1923, and furthermore in 1923 figures for mills reporting less than 50,000 feet were omitted. The 1919 figures were adjusted for use in the index to make them comparable with those of other years. Statistics of quantity output of planing-mill products, such as flooring, sash, doors, interior woodwork, and moldings are needed. Of the other industries in this group, furniture is by far the most important, and for it physical quantity statistics are not only unavailable but would be difficult to obtain. Comparable statistics of wage earners and of horsepower indicate that the lumber and timber products industry alone is not representative of changes for the group as a whole. In view of this fact and of the possibility that the production statistics used are not entirely comparable from year to year, owing to differences in the types of canvass conducted, the index for lumber is not considered to be as satisfactory as those for the other groups. Weights for the two series used—softwoods and hardwoods—were computed on the basis of relative values of products.

GROUP V.—LEATHER AND ITS FINISHED PRODUCTS

Leather, tanned, curried, and finished.—Statistics of the physical production of upper leather made from hides and skins of various animals, other than cattle, were first published in 1914 and have been added to other series representing this industry in the Harvard index—sole leather, harness leather, and upper leather from cattle hides. The importance of these additional types of leather is attested by the fact that their total value in 1919 exceeded that of sole leather and was double that of upper leather from cattle hides. Quantity statistics of leather production are now collected monthly in great detail by the Bureau of the Census. *Boot and shoe* production has also been reported monthly since late 1921, and the 1923 figures in the census of manufactures reports are the totals of these monthly

¹ For actual quantity figures, see Table 37, pp. 185 and 190.

canvases. *Gloves and mittens*. These statistics were not reported in 1923, and for this reason and because their importance in the group was relatively slight the series was omitted for all the four years from 1914 to 1923.

As indicated by value added by manufacture, the industries from this group represented in the index make up a dominant proportion of the group total. The other industries not represented are of minor importance. The entire weight for the group, less that for boots and shoes, was assigned to the tanning industry.

GROUP VI.—PAPER AND PRINTING

Paper and wood pulp.—Pulp-wood consumption statistics have been compiled annually by the Bureau of the Census in cooperation with the Forest Service of the Department of Agriculture, and are published in the pamphlet "Pulp-Wood Consumption and Wood-Pulp Production." Wood-pulp production, given in the same pamphlet and also in the census of manufactures reports, represents total production, including that consumed in the producing mill. Paper production is shown in great detail by types according to use, and some of these are further divided into kinds according to process of manufacture. For use in index the totals for the most important types—newsprint, book paper (including cover paper), fine paper, wrapping paper, and paper board—have been separately included, while all others—chiefly building, tissue, bag, and hanging papers—have been grouped under the heading of "Miscellaneous."

Printing and publishing.—No adequate figures are available for measuring production in the important printing and publishing industries. Paper production may be considered as the closest indication of the output of newspapers and books and of activity in job printing and may be weighted accordingly, but paper consumption is more accurate, and, therefore, allowance has been made for imports and exports of paper, which in the case of newsprint have been of increasing importance. In 1914 imports of newsprint equaled less than 20 per cent of domestic production, whereas in 1923 the totals were 85 per cent of production. In other words, 46 per cent of estimated consumption of newsprint in the United States in 1923 was imported, as compared with 16 per cent in 1914. Obviously, figures showing only the production of newsprint in this country can not be said to indicate growth in newspaper printing. The production of book and fine paper, less net exports of printing paper other than newsprint, was used to represent periodical and book publishing and job printing. Unquestionably, such statistics are inexact, but they probably give more accurate results than could be obtained from the use of paper-production figures.

Paper boxes.—Paper-board production was considered as representative of the paper-box industry. Imports and exports of box board are negligible.

In assigning weights, wood pulp and paper was weighted in accordance with value added by manufacture for industries in the group not represented in the index, in addition to that for the wood-pulp and paper industry proper. Weights for the individual pulp and paper series were based upon value of output, while those for the two series representing printing were based upon the relative importance of the newspaper and the periodical and book and job printing industries.

GROUP VII.—LIQUORS AND BEVERAGES

Under prohibition laws these industries have become of decreasing importance, and in the 1923 census of manufactures this group was abolished and its industries were divided among the food and chemical groups. No figures for these industries were included in the new index for years subsequent to 1919 for several reasons, of which the first is their relative unimportance and the next is that physical production statistics of their products are not given in the census reports.

The data used in the Harvard index were secured from the Annual Reports of the Commissioner of Internal Revenue and represented output in fiscal years ending June 30. In earlier periods these data for every five years probably represented with reasonable accuracy trends in the industry, but since 1919, when production has been decreasing at an exceedingly rapid rate and when comparisons are made every two years instead of every five years, fiscal-year statistics are hardly indicative of trends in calendar-year production. Furthermore, the figures formerly used covered only alcoholic beverages, and since data are not available for nonalcoholic beverages, which have shown an increase in production during recent years, an index based only upon the figures available would not be representative of the group.

GROUP VIII.—CHEMICALS AND ALLIED PRODUCTS

Several series of considerable importance were added to the industries in this group, and a number of others were revised in the new computation of the index.

Chemicals and acids.—This industry is a combination of two industries—Sulphuric, nitric, and mixed acids and Chemicals, not elsewhere classified—and is weighted accordingly. The statistics for this industry have been enlarged somewhat in recent years, and whereas the Harvard index was made up only of data for sulphuric acid, soda ash, and glycerin, the revised index includes, in addition, statistics showing the production of ammonium sulphate, acetylene, oxygen, pyroxylin plastics, and others of less importance. A representative index for this industry should be particularly serviceable, as monthly and annual statistics indicating the production of chemicals and acids are scarce. The figures used include products made in establishments classified in other industries. The value of the products included in this index equals about one-third of the value of all chemical products reported in the 1923 census. Weights are based upon values of products.

The *Coke* industry is represented by figures for coal consumed and coke produced. *Gas, illuminating and heating* is also represented by data for materials consumed—coal and oil, benzol, and benzine—as well as by gas produced for sale.

Fertilizers and Explosives are shown only in the form of products, as data for materials are not available in later censuses. In *Cottonseed oil and cake* the figures for hulls and linters have been omitted as too insignificant to be assigned weights. Crude oil and cake and meal are considered sufficiently representative.

Paint and varnish.—The data for this industry, which are given by the census in detail, are grouped into totals for index purposes. All colors or pigments produced and sold are combined into a total. The paints in oil, in paste form, include white and red lead and zinc oxide and are shown in pounds, while those mixed for use are given in gallons. Varnishes, japans, and lacquers are almost equally divided into oleoresinous varnishes and all other.

Petroleum-refining products have been reclassified since the census of 1909 in order to separate gasoline from other products, and in this respect the figures used differ from those employed in the Harvard index. In addition to the output of the important refinery products, statistics are also included showing production and refinery consumption of crude petroleum. These figures were not collected by the census in 1921, but were procured from Geological Survey reports.

Salt and Soap industries were added to those included in the Harvard index for this group. The latter is a rather important industry, and the production of hard soap, which is the series used in the index, in 1923 accounted for nearly two-thirds of the value of all products of the industry.

The industries in this group are rather heterogeneous in nature, and although those represented in the index accounted in 1923 for over three-fourths of the value added by manufacture for the entire group, it is hardly correct to say that

they are representative of the others in respect to changes in production. Some of the more important industries for which no physical production data are available are Patent medicines, Perfumery and toilet preparations, and Drug-gists' preparations—all producing commodities which are destined for personal consumption rather than for use in further production.

GROUP IX.—STONE, CLAY, AND GLASS PRODUCTS

Brick and tile, terra-cotta, and fire-clay products include a large number of products, for many of which production statistics have been collected annually in recent years by the Geological Survey. The series selected for the index are, however, only the most important and include figures for face brick in addition to those for common brick and fire brick used in the Harvard index. *Glass*: Statistics showing the amount of bottles and jars and of pressed and blown glass produced have not been published in census reports since 1919, and therefore these series, which were used in the Harvard index, were necessarily omitted. Data for window and plate glass, however, have been continued. Production of *Cement*, including a number of minor by-products, and of *Lime* have been added to the series for this group of industries. The lime statistics are totals of the output of quicklime and hydrated lime. The tonnage of the latter equals about one-half that of quicklime. Marble, slate, and stone work, Artificial stone products, and Pottery are the important industries in this group not represented in the index. The value of the production of various articles of pottery are given, but no statistics expressed in physical units are available. In value added by manufacture, the industries included in the index comprised in 1923 over 60 per cent of the group total.

GROUP X.—METALS AND METAL PRODUCTS, OTHER THAN IRON AND STEEL

Brass, bronze, and other nonferrous alloys, and manufactures of these alloys and of copper is the name applied to an important industry, or group of establishments, manufacturing a wide variety of products, largely from copper or copper alloys. The production of semifinished products is reported in pounds with a cross classification according to (1) raw material—brass, bronze, copper, and other metals and alloys—and (2) form—ingots, bars, plates, sheets, rods, tubing, wire, and castings. Brass plates and sheets, as indicated by total weight, were the most important products, with copper wire, copper rods, brass castings, and brass rods next in order. The figure used in the index is the total production in pounds of all these semifinished products. These figures have been available only since 1914 and were therefore not included in the old index. The output of products more nearly finished is reported only in value terms.

In computing indexes for the other industries in this group the procedure followed in the Harvard index was somewhat changed. In the earlier index estimates of the consumption of important nonferrous metals were used as indicating the productivity of the entire group, whereas in the new index, the group is represented by the industry mentioned in the preceding paragraph, by the smelting and refining industries, and finally by certain consumption estimates. For *smelting and refining* the following statistics were used: The refinery production of new copper in the United States from both domestic and foreign ores, total production of refined primary lead from domestic ores and from foreign ores and base bullion, smelter production of primary zinc from foreign and domestic ores, refinery production of gold and silver from United States mines. The figures for copper, lead, and zinc were compiled by the Geological Survey and those for gold and silver by the Director of the Mint.

Consumption statistics for these minerals have been estimated by the same authorities. The copper figures represent the amount of both new and old copper withdrawn on domestic account from the total supply. No account was taken of consumers' stocks. The lead data indicate apparent consumption of refined primary lead, disregarding both refinery and consumers' stocks; i. e., taking into account only those stocks in bonded warehouses. In the case of zinc, stocks at smelters were considered in estimating annual consumption. The figures, however, cover only primary slab zinc. For gold and silver consumption figures show the amounts issued for use in the industrial arts as reported by the Director of the Mint.

The extent to which these figures actually represent production of this group of industries can not be determined. Variations of the actual production from that indicated by the computed figures may be caused by any of a number of factors, such as differences in the uncounted stocks of metals, changes in the use of these materials by industries in other groups, and likewise variations in the consumption of other materials by industries in this group. Important industries of this group not directly represented in the index are Copper, tin, and sheet-iron work; Jewelry; Stamped and enameled ware, not elsewhere classified; Aluminum manufactures; and Gas and electric fixtures.

The weight for this group was distributed among its components on the following basis: Weights for the two industries directly represented—brass, bronze, etc., and smelting and refining—were based upon value added by manufacture as, respectively, reported for these two industries; and the value added for the other industries in the group was distributed among the series measuring the consumption of the various metals in accordance with their relative values.

GROUP XI.—TOBACCO MANUFACTURES

On the basis of products for which production statistics are available, this is the most adequately represented of all groups of industries, as practically every product of the industry is covered. The figures are taken from "the annual abstract of tobacco manufacturers' accounts prepared by the collector of internal revenue at the close of each calendar year." Tobacco and snuff include plug, twist, fine cut, and smoking tobacco, and snuff. The statistics for cigarettes weighing more than 3 pounds per 1,000 and for cigars weighing less than 3 pounds per 1,000 were excluded from the index as being too small to be significant. In weighting this group the large portion of the value added by manufacture, which is made up of revenue taxes, was excluded. This amounted to about \$310,000,000 out of a total of nearly \$530,000,000 in 1923.

GROUP XII.—VEHICLES FOR LAND TRANSPORTATION

Assignment of weights to the various industries in this group was explained above under Iron and steel.

Motor vehicles.—Automobile production is now reported by the Bureau of the Census in detail by classes and types. The industry included, according to the 1923 census of manufactures, "all manufacturing establishments whose principal products are four-wheeled, motor-propelled (internal-combustion, electric, or steam) steerable vehicles." The production figures used include products made in establishments engaged in other industries. Owing to the rapid increase in the proportion of closed cars to the total number produced, and the essential difference between open and closed cars, the production figures for this industry have been divided into three series—(1) open passenger cars, (2) closed passenger cars, and (3) all others, including public conveyances, business vehicles, government vehicles, chassis, tractors, and trailers. The last series is a heterogeneous assortment, but it is relatively unimportant as compared with the other groups, and further separation would have no significant effect upon the industry

index. The three series were weighted in accordance with the relative values of their products. The index as thus computed was 25 in 1914 and 232 in 1923, whereas a comparison of unweighted totals for all types of vehicles gave relatives of 30 in 1914 and 206 in 1923. The weight for this industry as a whole was based upon the combined value added by manufacture for the Motor-vehicles and Motor-vehicle bodies and parts industries, reduced as explained above under Iron and steel.

Carriages, wagons, and repairs are represented by figures comprising completed carriages, wagons, buggies, public conveyances, sleighs, and sleds produced in establishments devoted primarily to the manufacture of such horse-drawn vehicles. The total does not include automobiles manufactured by the same establishments.

Railway equipment.—Products of several industries have been included in this category. Passenger-car production represents the total number of both steam and electric railroad cars produced by establishments engaged primarily in the manufacture of railroad cars, by railroad repair shops, and by other establishments. Freight cars are those made by all reporting industries for steam railroads. The number of electric freight cars produced is relatively negligible. *Locomotives* were not included in the Harvard index, as figures have been given in census reports only since 1919. The data include steam locomotives made by establishments engaged primarily in their production, by railroad repair shops, and by establishments in other industries. The figure used for 1914 represents locomotives built in American and Canadian plants and in railroad repair shops as reported by The Railway Age. A comparison of the corresponding figure for 1919 with the census figure indicates that the former is too small rather than too large, despite the inclusion of Canadian output. The figures are not exactly comparable, but the difference is not appreciable. This industry prior to 1923 was classified in the Iron and steel group, but for the purposes of the index it was considered better suited for this group.

From the standpoint of the proportion of its industries included in the index, this industrial group is exceptionally well represented. Motor cycles and bicycles, Aircraft and parts, and a few other relatively unimportant industries are omitted. Motor-vehicle bodies and parts are not directly included but are represented with a reasonable degree of adequacy by automobile production. The chief defect of the figures for the industries in this group is the noncomparability of units—both those which in a single year are combined into totals and those which from one census year to the next bear the same name but are really different. The automobiles of 1914 were different from those of 1923 to an extent not entirely indicated by the change from open to closed cars, and perhaps to a smaller degree the same is true of railroad cars and of locomotives. The index is, therefore, only an indication of what has taken place, but is probably a more nearly correct indication than can be obtained from any other series of available statistics.

GROUP XIII.—RAILROAD REPAIR SHOPS

New products manufactured by railroad repair shops have been included in the figures for Group XII, but the largest proportion of the output of this industry, consisting of repairs, is essentially unmeasurable on a physical basis and therefore is not included in the index.

GROUP XIV.—MISCELLANEOUS

No figures were used in the Harvard index from the industries in this group, in part because they were not then available, in part because the industries were not especially important, and perhaps to some extent because the statistics available were unsatisfactory. Within the past decade, however, the two industries shown in the new index—Shipbuilding and Rubber products—have become of great importance, and in some instances the reporting of serviceable quantitative statistics has been started. Most of these statistics are in certain

respects unsatisfactory for index-number purposes because of the difficulty of defining units, but, as was the case with the transportation industries, the indexes give an approximate indication of what has occurred and for that reason should be of value.

Ship and boat building.—As was stated earlier in this chapter (p. 95) any comparison of the volume of manufacturing which includes 1919 would not be accurate, unless consideration were given to shipbuilding, in view of its unusual activity in that year. The statistics employed in measuring production in the Shipbuilding industry show total gross tonnage of all vessels of 5 gross tons and over completed during the year. Two sets of figures are given—one for steel vessels and the other for wooden vessels. They cover only the production of private establishments engaged primarily in shipbuilding. Production by other private establishments engaged in other lines and by Government shipyards have not been given regularly in census reports. For those years in which reported, they were unimportant relative to the figures used. Distribution of the weights for the industry between the two series was based upon value of output. Assignment of the total weight to this industry was explained above under Iron and steel.

Rubber products, in the new classification of industries instituted by the Bureau of the Census in 1923, were given the dignity of a separate main group, made up of three industries—Rubber boots and shoes, Rubber tires and inner tubes, and Rubber goods, not elsewhere classified. Until 1921 the last two industries were combined in the census reports. Physical production statistics are available for two of these industries. In *Tires and tubes* the figures used represent production of pneumatic tires and inner tubes for use on automobiles. Motor-cycle and bicycle pneumatic tires and solid tires were omitted as of negligible importance. The figures for the *Rubber boots and shoes* industry since 1919 include, in addition to boots and shoes, data for rubber heels made for sale and for canvas shoes with rubber soles. These two products have been of increasing importance in the past decade. Value figures are given in the census reports for a number of other rubber products, but no other data of great importance are reported in terms of physical units. The products included in the index, however, comprised three-fourths of the total value of rubber products manufactured in 1923.

The only other industries of importance in this group are Agricultural implements, Textile machinery and parts, and Musical instruments. The first two were assigned in the 1923 census reports to the Machinery group of industries and are discussed above under Iron and steel. Musical instruments were given in the 1923 reports as a separate group. Quantitative production figures are reported for a number of instruments and other products and an index was computed for this group but because of the doubtful comparability of the figures over a period of years and the relatively slight importance of the group, it was not included in the index for all industries. The results, which are based upon products with a value equaling about 70 per cent of the aggregate value for all products in the group, are as follows:

TABLE 25.—INDEXES OF PRODUCTION OF MUSICAL INSTRUMENTS: 1914 TO 1923¹

	1914	1919	1921	1923
Total.....	48	100	52	73
Pianos.....	96	100	65	102
Phonographs and records.....	24	100	45	60

¹ Quantity figures are given in Table 37, p. 189.

TABLE 26.—DATA USED IN THE INDEX, WEIGHTS, RELATIVES, AND INDUSTRY AND GROUP INDEXES, BY CENSUS YEARS: 1914 TO 1925¹

GROUP AND INDUSTRY	Unit	QUANTITY OF PRODUCTS					WEIGHTS				INDEXES AND RELATIVES [1919=100]			
		1914	1919	1921	1923	1925	1914	1921	1923	1925	1914	1921	1923	1925
All industries.....							1,020	1,000	1,000	1,000	79.3	79.4	123.9	128.5
Food and kindred products.....							117	118	106	110	96.9	93.5	111.6	113.4
Butter, cheese, and condensed and evaporated milk.....							11	17	13	14	67.3	104.9	122.4	131.6
Butter.....	Mill. lbs.	769.8	920.6	1,118.2	1,303.5	1,443.9	6	10	8	9	83.6	121.5	141.6	156.5
Cheese.....	Mill. lbs.	370.3	473.6	423.4	563.0	554.3	2	3	2	2	78.2	89.4	119.0	117.0
Condensed and evaporated milk.....	Mill. lbs.	873.4	2,150.2	1,758.5	1,821.1	1,808.0	3	4	3	3	40.6	51.8	84.7	84.1
Slaughtering and meat packing.....							43	40	38	38	75.7	80.1	113.0	105.9
Materials—														
Beeves, dressed weight.....	Mill. lbs.	3,786.4	5,118.7	4,358.0	5,151.4	5,434.4	6	6	6	6	74.0	85.1	100.6	106.2
Calves, dressed weight.....	Mill. lbs.	206.3	457.5	438.0	535.7	623.6	1	1	1	1	45.1	95.7	117.1	136.3
Sheep and lambs, dressed weight.....	Mill. lbs.	629.7	499.7	568.0	515.0	531.8	1	1	1	1	126.0	113.7	103.1	106.4
Hogs, dressed weight.....	Mill. lbs.	5,476.2	7,368.9	6,873.3	9,439.1	7,864.7	10	10	10	10	74.4	93.4	128.3	108.9
Products—														
Meat, fresh and cured.....	Mill. lbs.	9,660.3	12,634.0	10,976.0	13,603.2	12,910.8	21	18	16	10	73.5	86.9	107.7	102.3
Lard and lard compounds.....	Mill. lbs.	1,515.6	1,894.0	1,952.4	2,419.7	2,123.2	8	8	8	3	80.0	103.1	127.8	112.1
Hides and skins, cattle and calf.....	Mill. lbs.	434.5	627.5	524.1	626.5	677.5	1	1	1	1	69.2	83.5	99.8	108.0
Flour-mill and grain-mill products.....							25	20	18	18	95.4	86.9	91.1	87.6
Material—														
Grain, ground or milled.....	Mill. bushels	818.9	830.0	713.6	743.2	708.0	7	6	4	4	98.7	88.0	99.5	85.3
Products—														
Wheat flour.....	Mill. bbls.	116.4	132.5	110.8	114.4	114.2	12	10	10	10	87.8	83.6	86.3	86.2
Corn meal and corn flour.....	Mill. bbls.	16.3	10.7	10.9	12.2	9.0	1	1	1	1	152.3	101.9	114.0	84.1
Bran, middlings, feed, and offal.....	Thous. tons.	9,419.8	9,327.1	8,936.9	9,663.4	9,058.0	5	5	5	9	101.0	95.8	103.6	97.1
Sugar, beet.....							5	5	5	5	101.7	141.4	103.7	148.3
Material—														
Beets.....	Thous. short tons.	5,639.1	5,648.6	7,872.8	5,786.1	7,422.8	2	2	2	2	99.8	139.4	102.4	131.4
Product—														
Beet sugar.....	Thous. short tons.	743.5	721.9	1,029.9	754.5	1,082.8	3	3	3	3	103.0	142.7	104.5	150.0
Sugar refining, cane:														
Refined sugar.....	Thous. short tons.	3,333.1	3,521.5	3,770.2	4,429.1	5,411.7	5	5	5	5	94.7	107.1	125.8	153.7

¹ For sources and other details of quantity figures given in this table, see section on "Description of Individual Series," Appendix A. For quantity figures for earlier years, see Table 37. Indexes for earlier years by groups and for certain important industries are given in Table 38.

TABLE 26.—DATA USED IN THE INDEX, WEIGHTS, RELATIVES, AND INDUSTRY AND GROUP INDEXES, BY CENSUS YEARS: 1914 TO 1925—
Continued

GROUP AND INDUSTRY	Unit	QUANTITY OF PRODUCTS					WEIGHTS				INDEXES AND RELATIVES [1919=100]			
		1914	1919	1921	1923	1925	1914	1921	1923	1925	1914	1921	1923	1925
Food and kindred products—Continued.														
Canning and preserving, fruits and vegetables, etc.							11	18	18	15	77.3	69.6	126.7	153.5
Canned vegetables	Mill. cases	50.3	58.1	38.2	75.8	94.7	6	6	6	7	86.6	65.7	130.5	163.3
Canned fruits	Mill. cases	9.4	21.4	12.5	20.3	25.4	2	3	3	3	43.9	58.4	94.9	118.7
Dried fruits	Mill. lbs.	568.6	615.4	504.9	791.8	1,054.1	2	2	2	2	92.4	82.0	128.7	171.3
Canned soups	Mill. cases	4.9	5.8	6.9	14.2	10.0	1	1	1	1	84.5	119.0	244.8	172.4
Canned fish, oysters, etc.	Mill. cases	8.8	10.3	4.9	7.4	9.8	3	2	2	2	85.4	47.6	71.8	95.1
Corn sirup, corn oil, and starch:														
Starch	Mill. lbs.	620.8	783.5	894.1	858.4	874.3	4	6	5	5	79.2	114.1	109.6	111.6
Rice cleaning and polishing:														
Clean rice	Mill. lbs.	674.9	1,062.8	1,154.2	1,171.6	947.8	1	1	1	1	63.5	108.6	110.2	89.2
Ios, manufactured	Mill. tons	21.04	27.95	31.38	35.84	40.16	9	10	9	9	75.3	112.3	128.2	143.7
Textiles and their products														
Cotton goods														
Woven goods (over 12 inches in width)	Mill. sq. yds.	6,813.5	6,317.4	6,703.8	8,264.2	7,775.7	70	76	74	70	101.6	88.6	122.8	117.3
Yarns manufactured for sale	Mill. lbs.	498.0	618.0	484.2	620.7	626.4	14	17	17	17	80.6	78.3	100.4	101.4
Thread	Mill. lbs.	26.5	26.4	23.3	31.6	37.6	2	2	2	2	100.2	88.0	119.7	142.4
Knit goods														
Hosiery	Thous. doz. prs.	75,165	84,646	80,241	97,433	103,707	27	30	28	28	92.9	94.0	115.2	115.5
Underwear							12	16	15	15	88.3	94.8	116.1	122.5
Shirts and drawers	Thous. doz.	21,759	17,180	11,712	12,747	11,262	6	4	4	4	126.6	68.2	74.2	65.6
Union suits	Thous. doz.	6,273	9,211	9,284	10,746	11,500	5	5	4	4	68.1	100.8	118.7	124.9
Gloves and mittens	Thous. doz. prs.	2,470	3,571	2,685	2,094	1,301	1	1	1	1	69.2	75.2	68.6	36.4
Sweaters, jerseys, hoods, scarfs, shawls, etc.	Thous. doz.	3,300	2,989	3,618	5,278	5,011	3	4	4	4	110.4	121.1	210.1	187.6
Silk manufactures														
Broad silks	Mill. linear yds.	216.03	310.13	273.59	357.03	472.52	27	23	25	25	73.2	92.6	116.9	137.0
Velvets, plushes, upholstery, and tapes-tries	Mill. linear yds.	25.91	22.53	18.03	26.38	9.68	3	2	2	2	115.0	80.0	117.1	43.0
Other silk goods	Thous. lbs.	7,240	10,853	13,056	13,671	15,976	4	5	4	4	66.7	120.3	126.0	147.2

TABLE 26.—DATA USED IN THE INDEX, WEIGHTS, RELATIVES, AND INDUSTRY AND GROUP INDEXES, BY CENSUS YEARS: 1914 TO 1925—
Continued

GROUP AND INDUSTRY	Unit	QUANTITY OF PRODUCTS					WEIGHTS				INDEXES AND RELATIVES [1919=100]			
		1914	1919	1921	1923	1925	1914	1921	1923	1925	1914	1921	1923	1925
Paper and printing.....							92	95	90	90	87.5	98.4	137.1	152.8
Paper and wood pulp.....							85	85	85	85	88.4	85.9	124.3	141.9
Material—														
Pulpwood.....	Thous. cords.....	4,470	5,478	4,557	5,872	6,094	2	2	2	2	81.6	83.2	107.2	111.2
Products—														
News paper, in rolls and sheets.....	Thous. short tons.....	1,313	1,324	1,237	1,521	1,563	3	3	3	3	99.2	93.4	114.9	118.1
Book paper.....	Thous. short tons.....	904	951	792	1,208	1,343	4	4	4	4	95.0	83.8	127.0	141.2
Fine paper.....	Thous. short tons.....	248	325	231	877	474	3	3	3	3	76.3	71.1	116.0	145.8
Wrapping paper.....	Thous. short tons.....	882	831	704	1,027	1,292	4	4	4	4	105.1	84.7	123.6	155.5
Boards.....	Thous. short tons.....	1,291	1,867	1,740	2,793	3,287	5	5	5	5	69.1	93.2	149.6	176.1
Miscellaneous papers.....	Thous. short tons.....	632	301	727	1,103	1,223	4	4	4	4	73.9	90.8	137.7	162.7
Wood pulp, total production.....	Thous. short tons.....	2,893	3,513	2,876	3,789	3,982	2	2	2	2	82.3	81.8	107.7	112.7
Printing and publishing.....							68	65	60	60	89.7	96.7	141.8	156.3
Newsprint consumed.....	Thous. short tons.....	1,567	1,842	2,018	2,814	2,984	32	35	30	30	85.0	109.6	162.8	182.0
Other printing paper consumed.....	Thous. short tons.....	1,140	1,201	1,004	1,680	1,817	30	30	30	30	94.9	83.6	131.6	151.0
Paper boxes:														
Box board produced.....	Thous. short tons.....	1,291	1,867	1,740	2,793	3,287	5	5	5	5	69.1	93.2	149.6	176.1
Liquors and beverages.....							80				83.9			
Liquors, distilled:														
Distilled spirits, plus alcohol produced industrially.....	Thous. gals.....	181.9	100.8				2				180.5			
Liquors, malt:														
Fermented liquors.....	Thous. bbls.....	66.2	27.7				18				238.8			
Chemicals and allied products.....							95	90	88	90	70.7	94.5	125.1	146.6
Chemicals and acids.....							16	18	18	19	68.6	84.1	119.6	136.1
Acetylene.....	Mill. cu. ft.....	121.7	811.4	290.8	522.3	525.7	1	1	1	1	39.1	93.4	167.7	168.8
Ammonium sulphate.....	Mill. lbs.....	179.6	590.4	536.0	894.4	1,017.0	1	2	2	2	80.4	90.8	151.5	172.3
Anhydrous ammonia.....	Mill. lbs.....	16.7	27.5	27.6	23.5	31.7	1	1	1	1	60.7	100.4	85.5	115.3
Carbonic acid.....	Mill. lbs.....	50.4	59.8	54.6	51.1	59.7	1	1	1	1	84.3	91.3	85.6	99.8
Cautic soda.....	Thous. short tons.....	291.5	312.7	238.0	436.6	497.3	2	1	1	2	93.2	76.1	139.6	159.0
Glycerin, refined.....	Mill. lbs.....	60.9	69.5	68.8	76.0	97.3	2	2	2	3	87.6	99.0	109.4	140.0
Oxygen.....	Mill. cu. ft.....	104.7	1,173.4	1,059.8	2,057.5	2,073.8	1	1	1	1	8.9	90.3	173.3	176.7
Pyroxylin plastics.....	Mill. lbs.....		40.1	24.1	27.7	17.9		2	2	2		60.1	69.1	44.8
Soda ash.....	Thous. short tons.....	935.8	1,038.5	959.6	1,708.0	1,907.8	2	2	2	2	90.5	92.8	165.3	184.6
Sulphuric acid (basis 500).....	Thous. short tons.....	4,071.6	5,552.6	4,369.9	6,555.5	7,012.3	5	5	5	5	73.3	78.7	118.1	126.3

Coke, not including gas-house coke						8	8	8	7	78.4	87.1	129.0	118.7	
Material—														
Coal	Mill. short tons	51.6	65.6	87.8	84.4	74.5	1	1	1	78.7	56.7	128.7	113.6	
Product—														
Coke	Mill. short tons	84.6	44.2	25.3	87.0	51.3	4	4	7	78.3	87.2	129.0	116.1	
Fertilizers:														
Fertilizers	Thous. short tons	8,432	8,237	5,994	7,549	8,091	7	4	4	102.4	72.8	91.6	98.2	
Gas, illuminating and heating							17	14	19	19	82.3	98.4	112.4	113.8
Materials—														
Coal	Thous. short tons	6,117	7,858	6,972	7,339	7,564	2	1	1	79.9	91.0	95.8	98.8	
Oil, benzol, and benzina	Mill. gals	716.8	881.8	841.9	874.3	891.6	1	1	1	81.3	95.5	99.1	101.1	
Product—														
Gas for sale	Bill. cu. ft.	203.6	308.4	306.1	356.6	359.4	14	12	11	11	66.0	99.3	116.6	116.5
Explosives:														
Explosives, total	Mill. lbs.	481.8	506.1	407.4	577.2	551.2	3	3	3	3	95.2	80.5	114.0	103.9
Paint and varnish														
Colors (pigments)	Mill. lbs.	459.1	1,039.7	743.5	1,309.5	1,555.3	8	8	8	8	73.7	88.4	136.0	139.8
Paints in oil—														
In paste form	Mill. lbs.	420.0	398.3	428.2	425.9	411.3	2	1	1	1	105.4	107.5	106.9	103.3
Mixed for use	Mill. gals	40.7	59.6	48.1	71.3	68.8	3	3	3	3	68.3	80.7	119.6	116.4
Varnishes, japans, and lacquers—														
Oleoresinous varnishes	Mill. gals	17.8	28.1	22.2	40.4	38.3	1	1	1	1	63.3	79.0	143.8	136.3
Other varnishes, japans, and lacquers	Mill. gals	18.6	21.2	22.9	39.9	45.0	1	2	2	2	87.7	108.0	188.2	212.3
Petroleum refining							17	25	28	24	49.4	120.9	168.7	208.4
Crude petroleum—														
Domestic production	Mill. bbls.	265.6	378.4	472.2	732.4	763.7	2	3	3	3	70.2	124.8	193.6	201.8
Refinery consumption	Mill. bbls.	191.3	365.3	443.4	601.7	739.5	3	4	4	4	52.4	121.4	164.7	202.4
Products—														
Gasoline	Mill. gals.	1,195	3,649	5,098	7,332	10,726	5	9	7	9	32.7	139.7	200.9	293.9
Other light products of distillation	Mill. gals.	205	557	275	518	684	1	1	1	1	47.6	49.4	93.0	104.8
Illuminating oils	Mill. gals.	1,935	2,306	1,939	2,239	2,365	2	2	2	2	83.9	84.1	97.1	102.6
Fuel oils	Mill. gals.	3,734	7,768	9,749	11,976	14,590	3	4	3	3	48.1	125.5	184.2	187.8
Lubricating oils	Mill. gals.	518	822	949	1,151	1,361	1	2	2	2	63.0	115.5	140.0	166.0
Oil and cake, cottonseed							5	4	4	4	127.0	87.5	67.9	104.5
Crude oil	Mill. gals.	229.3	190.7	170.3	129.8	201.6	2	3	3	3	129.8	89.3	68.1	105.7
Cake and meal	Thous. short tons	2,648	2,192	1,790	1,475	2,368	3	1	1	1	122.0	81.7	67.3	108.0
Turpentine and rosin							8	8	8	8	131.3	126.8	150.0	149.8
Turpentine	Mill. gals.	27.6	19.2	24.8	29.8	29.3	1	1	1	1	143.8	129.2	155.2	152.6
Rosin	Thous. bbls.	2,937	2,451	3,020	3,555	3,064	1	1	1	1	119.8	123.2	145.0	147.0
Salt														
Salt produced	Thous. short tons	4,873	6,883	4,981	7,131	7,397	1	1	1	1	70.8	72.4	103.6	107.5
Soap:														
Hard soaps	Mill. lbs.	1,697	1,836	1,752	2,000	2,019	5	6	5	5	92.4	95.4	108.9	110.0

TABLE 26.—DATA USED IN THE INDEX, WEIGHTS, RELATIVES, AND INDUSTRY AND GROUP INDEXES, BY CENSUS YEARS: 1914 TO 1925—
Continued

GROUP AND INDUSTRY	Unit	QUANTITY OF PRODUCTS					WEIGHTS				INDEXES AND RELATIVES [1919=100]			
		1914	1919	1921	1923	1925	1914	1921	1923	1925	1914	1921	1923	1925
Stone, clay, and glass products.....							40	86	86	88	113.5	93.3	155.8	179.1
Brick and tile, terra-cotta, and fire-clay products.....							15	19	19	14	122.6	88.1	154.8	167.8
Common brick.....	Mill. brick.....	7,146	4,752	4,448	7,282	7,562	9	8	8	8	150.4	93.6	153.2	150.1
Fire brick.....	Mill. brick.....	817	963	621	1,134	999	4	8	3	3	84.8	64.5	117.8	103.7
Face brick.....	Mill. brick.....	810	791	873	1,931	2,475	2	2	2	3	102.4	110.4	244.1	312.9
Glass.....							14	19	12	19	107.6	85.6	151.7	178.3
Window glass.....	Mill. sq. ft.....	401.0	368.9	260.0	510.2	567.2	7	6	6	6	108.7	70.5	138.3	153.8
Plate glass, polished.....	Mill. sq. ft.....	60.4	56.8	56.2	94.5	117.4	7	6	6	6	106.3	98.9	166.4	206.7
Cement.....	Mill. bbls.....	89.0	81.3	99.4	138.8	163.4	9	10	10	11	109.5	122.3	170.7	201.0
Lime:														
Quicklime and hydrated lime, total.....	Thous. tons.....	3,881	3,071	2,391	3,766	4,062	2	1	1	1	110.1	77.9	122.6	132.3
Metals and metal products, other than iron and steel.....							41	88	40	88	64.9	66.5	135.7	129.8
Brass, bronze, and other nonferrous alloys, and manufactures of these alloys and of copper:														
Semifinished products.....	Mill. lbs.....	449.4	1,434.3	782.9	1,937.6	1,772.9	10	10	10	10	31.3	54.6	135.1	123.6
Smelting and refining.....							10	8	10	10	98.0	61.6	115.3	124.4
Copper, primary.....	Thous. short tons.....	766.9	885.1	475.4	989.9	1,102.3	4	3	4	4	86.6	53.7	111.8	124.5
Lead, primary.....	Thous. short tons.....	542.1	482.2	448.6	618.3	767.0	2	1	2	2	112.4	93.0	128.2	159.1
Zinc, primary.....	Thous. short tons.....	353.0	466.7	200.5	510.4	572.9	2	2	2	2	75.8	43.1	109.6	123.0
Gold production in United States.....	Thous. fine ozs.....	4,573	2,919	2,422	2,503	2,412	1	1	1	1	156.7	85.9	85.7	82.6
Silver production in United States.....	Mill. fine ozs.....	72.46	56.68	53.05	73.34	66.16	1	1	1	1	127.8	93.6	126.4	116.7
Other industries.....							81	80	80	18	75.7	75.7	126.4	136.6
Consumption of—														
Copper (new and old).....	Thous. short tons.....	479.0	744.5	523.0	1,061.0	1,120.5	8	8	8	8	64.3	70.2	142.5	150.5
Lead.....	Thous. short tons.....	452.5	434.1	444.9	573.5	655.7	4	3	3	3	104.2	102.5	132.1	151.0
Zinc.....	Thous. short tons.....	300.0	324.0	203.6	446.5	500.1	3	3	3	3	92.6	62.8	137.8	154.4
Gold in industry.....	Thous. fine ozs.....	2,202	3,652	2,452	3,352	3,191	4	4	4	4	60.3	67.1	91.8	87.4
Silver in industry.....	Mill. fine ozs.....	29.31	22.70	25.87	36.82	39.83	2	2	2	1	89.6	109.7	112.6	121.8

						20	19	18	17	78.4	95.3	109.3	124.4	
Tobacco manufactures														
Tobacco, chewing and smoking, and snuff:														
Tobacco and snuff.....	Mill. lbs.	440.9	424.1	387.0	412.8	410.2	6	9	2	2	104.0	91.8	97.8	93.7
Tobacco, cigars:														
Cigars, weighing more than 8 lbs. per 1,000.....	Millions	7,174	7,072	6,728	4,950	6,601	9	5	4	4	101.4	95.1	98.8	91.0
Tobacco, cigarettes:														
Cigarettes, weighing more than 8 lbs. per 1,000.....	Billions	16.86	53.12	52.09	66.72	79.98	5	5	6	9	51.7	98.1	126.6	160.5
Vehicles for land transportation							81	83	83	48	85.0	78.6	199.5	233.3
Automobiles							83	89	81	87	84.9	91.7	238.4	303.9
Passenger cars—open.....	Thous. cars	536.0	1,399.6	1089.6	2,217.8	1,485.0	17	16	17	16	38.3	78.6	158.4	106.1
Passenger cars—closed.....	Thous. cars	10.0	156.5	304.2	1,201.6	2,060.0	2	6	8	14	6.4	194.4	767.8	1,329.1
Other.....	Thous. cars	27.0	336.9	199.3	471.4	592.8	4	5	6	7	8.0	59.2	139.9	176.0
Carriages, wagons, and repairs:														
Complete vehicles of all classes.....	Thousands	1,124.9	608.8	107.3	236.1	178.2	2	1	1	1	184.8	17.6	38.8	28.4
Railway equipment							6.0	6.0	6.0	5.0	84.6	15.5	119.0	69.3
Passenger service.....	Number	6,138	2,068	2,848	4,908	3,800	5	5	5	5	294.8	187.7	237.8	183.8
Freight service.....	Thous. cars	127.3	155.7	56.3	179.8	97.7	8.5	8.5	8.5	3.0	81.8	36.2	115.5	62.7
Locomotives, steam.....	Number	2,235	3,411	1,737	3,595	1,81	2.0	2.0	2.0	1.5	65.5	51.5	105.5	38.4
Ship and boat building							13	14	13	10	7.3	30.7	7.9	7.0
Vessels of 5 gross tons and over launched:														
Steel.....	Thous. gross tons	243.0	3,734.2	1,206.9	281.8	242.0	11	13	11	9	6.5	32.3	7.5	6.5
Wooden.....	Thous. gross tons	182.1	755.6	119.0	112.8	109.7	1	1	1	1	24.1	15.7	14.9	14.5
Rubber products							20	22	22	24	32.3	50.0	130.3	153.3
Rubber tires and inner tubes							16	18	18	20	24.3	79.3	185.9	175.3
Casing, pneumatic, automobile and truck.....	Millions	8.02	32.84	27.30	45.43	58.78	13	15	15	17	24.4	33.1	138.3	179.0
Inner tubes, pneumatic, automobile and truck.....	Millions	7.91	33.26	32.08	57.23	77.39	2	2	2	2	23.8	96.5	172.1	232.7
Solid tires, truck.....	Thousands		1,455	401	944	1,035	1	1	1	1		27.6	64.9	71.1
Rubber boots and shoes							5	4.0	4.0	4.0	75.3	88.7	110.3	66.4
Rubber boots.....	Thous. prs	4,024	9,208	6,532	9,098	4,739	1	7	7	6	43.7	70.9	98.3	51.5
Shoes and overshoes.....	Mill. prs	57.21	66.15	67.19	26.10	52.34	4	2.0	2.0	2.0	36.5	59.5	90.9	79.1
Canvas shoes with rubber soles.....	Mill. prs		21.03	15.24	25.11	25.06		7	7	7		72.3	124.2	118.1
Heels for sale.....	Mill. prs		138.5	137.5	289.2	342.2		6	6	7		99.3	203.9	247.1

APPENDIX B

GENERAL TABLES

Data.—Actual figures upon which this study was based are given in detail in the following general tables. The first two tables (27 and 28) show the number of wage earners employed and the amount of primary horsepower installed for certain major groups and important subgroups of industries. Tables 29, 30, and 31, respectively, give data for wage earners, horsepower, and value added by manufacture for a number of selected industries, arranged by industrial groups. Number of wage earners and primary horsepower from 1899 to 1923 and total value of products from 1869 to 1923 for all industries, arranged in alphabetical order, are given in Tables 32, 33, and 34. In Tables 35 and 36 the wage earners and horsepower data are shown for the various States and geographic divisions. Table 37 provides data on physical quantity of production of all products for which such information has been given in the census reports, and Table 38 gives the index of production for the more important industries and groups from 1899 to 1923.

Changes in data.—Comparability between figures has not been maintained throughout the entire period for all industries. There have been changes in definition, designation, and classification; new industries have grown up, old ones have become of negligible importance; and the grouping of industries has changed from time to time. These changes as they refer to individual industries are indicated in the tables by means of footnotes.

In computing the percentages attempts have been made, wherever these shifts were important, to compare only homogeneous sets of data in adjoining census years, and the percentages for the entire 24-year period in such cases are derived indirectly by linking together the percentages for the separate intercensal periods.

There have been several important changes of a general nature which affect all tables. These are as follows:

1. For the census years 1899 to 1919, inclusive, factories having products valued at \$500 or more were included, but the statistics for 1921 and for 1923 relate only to establishments having products valued at \$5,000 or more. In the tables, two sets of data are given for 1919, one comparable with the earlier years and the other with the later years.

2. The horsepower figures for the census years prior to 1919 include data for rented power other than electric, whereas the statistics for

1923 do not include such data. Data for primary horsepower were not collected in 1921.

3. The statistics for 1921 and 1923 do not include data for establishments engaged in automobile repairing, and although these data were collected in 1919 and were included in the figures as given in the right-hand column for that year, they were not included in those given in the left-hand column.

4. Owing to the lack of comparability between figures for the censuses since 1919 and those for earlier censuses, the percentages of change for the period 1899-1923 were not computed directly but are combinations of two sets of percentages computed from comparable data, one set covering the period from 1899 to 1919, the other the period from 1919 to 1923.

5. The grouping of industries is that followed in the census reports prior to 1923. The data for 1923 were regrouped, as nearly as possible, on the basis of the earlier classification. This was necessary in order to preserve comparability, as it was not feasible to regroup data for all the earlier years on the basis of the new classification. See Chapter IV.

TABLE 27.—AVERAGE NUMBER OF WAGE EARNERS EMPLOYED IN INDUSTRIAL GROUPS, BY CENSUS YEARS, AND PER CENT OF INCREASE, BY CENSUS PERIODS: 1899 TO 1923

[Because of the omission of certain minor industries and the transfer of a few others from one group to another, some of the group totals and some of the items given in this table differ somewhat from the corresponding totals and items as they appear in the census reports. As to the comparability of 1921 and 1923 figures with those of previous years, see general remarks preceding the tables, par. 4, p. 125]

GROUP	AVERAGE NUMBER OF WAGE EARNERS								PER CENT OF INCREASE OR DECREASE (-)							
	Excluding data for establishments with products valued at less than \$5,000			Including data for establishments with products valued at \$500 or more					24-year period, 1899-1923	Intercensal period						
	1923	1921	1919	1919	1914	1909	1904	1899		1919-1923	1921-1923	1919-1921	1914-1919	1909-1914	1904-1909	1899-1904
Food and kindred products.....	625,524	568,734	681,031	684,672	496,234	411,578	354,046	301,888	108.2	-8.2	10.0	-16.5	38.0	20.6	16.2	17.3
Animal products.....	183,410	164,622	217,039	217,268	137,894	119,385	100,768	96,392	90.5	-15.5	11.4	-24.2	57.6	15.5	18.5	4.5
Vegetable products.....	442,114	404,112	463,992	467,404	256,350	292,190	253,278	205,476	116.8	-4.7	9.4	-12.9	30.4	22.6	15.4	23.3
Textiles and their products.....	1,716,646	1,510,876	1,608,131	1,611,309	1,507,374	1,445,720	1,163,497	1,028,706	67.1	6.7	13.6	-6.0	6.9	4.3	24.3	13.1
Textile fabrics and materials.....	1,164,638	993,557	1,051,984	1,052,327	950,880	909,507	764,757	683,772	70.4	10.7	17.2	-5.6	10.7	4.6	18.9	11.8
Articles from textile fabrics for personal wear.....	499,413	473,574	505,293	507,700	510,595	508,138	373,337	318,587	56.7	-1.2	5.5	-6.3	-6	5	36.1	17.2
Other articles from textile fabrics.....	52,595	43,745	60,854	51,282	45,899	28,076	25,403	26,347	101.2	3.4	20.2	-14.0	11.7	63.5	10.5	-3.6
Iron and steel and their products.....	1,527,120	1,031,523	1,583,928	1,585,712	1,061,058	1,024,353	868,634	745,235	105.1	-3.6	48.0	-34.9	49.4	3.4	18.2	16.6
Crude iron and steel and rolled products, including products not made in rolling-mill establishments (though largely made therein), plus wire and wirework, not elsewhere specified.....	608,447	374,521	587,491	587,742	406,634	395,584	321,291	282,949	115.2	8.0	62.5	-36.3	44.5	2.8	23.1	13.6
Other iron and steel products.....	918,673	657,002	996,437	997,970	654,424	630,969	547,343	462,286	99.1	7.8	39.8	-34.1	52.5	3.7	15.3	18.4
Lumber and its remanufactures.....	896,236	675,069	825,884	839,008	833,529	911,593	734,136	671,696	85.5	-8.5	32.8	-18.3	.7	-8.6	24.2	9.3
Lumber and timber products, plus planing-mill products.....	598,940	442,280	555,679	567,901	576,000	659,570	502,237	486,767	25.8	7.8	35.4	-29.4	-1.4	-12.7	31.3	3.2
Other manufactures of lumber.....	297,296	232,789	270,205	271,107	257,529	252,023	231,899	184,929	61.3	10.0	27.7	-13.8	5.3	2.2	8.7	25.4

Leather and its finished products.....	844,545	280,071	348,715	349,362	307,060	300,766	264,450	248,626	88.8	-1.2	23.0	-19.7	18.8	-0.9	17.1	6.4
Leather, tanned, curried, and finished.....	50,708	48,955	72,465	72,476	55,936	62,202	57,239	52,109	14.6	-17.0	22.0	-32.4	28.0	-10.1	8.7	9.8
Finished products of leather.....	284,842	231,116	276,250	276,886	251,124	247,564	207,220	196,517	45.3	3.1	23.2	-16.3	10.3	1.4	19.5	6.4
Paper and printing.....	526,795	467,072	502,298	509,876	452,900	415,990	351,640	298,744	79.1	4.9	12.8	-7.0	12.6	8.9	18.3	17.7
Paper and wood pulp.....	120,677	105,294	113,752	113,750	88,457	75,978	65,964	49,646	143.1	6.1	14.6	-7.4	28.6	16.4	15.2	82.9
Manufactures of paper, plus wall paper.....	99,278	80,278	94,633	94,769	79,368	69,733	66,320	45,455	118.7	4.9	23.7	-15.2	19.4	13.8	23.8	23.9
Printing and publishing, plus industries relating to printing and publishing.....	306,840	281,500	293,913	301,367	285,075	270,279	229,356	203,643	54.5	4.4	9.0	-4.2	5.7	5.5	17.8	12.6
Liquors and beverages.....	81,338	85,374	54,463	55,442	66,152	77,827	68,338	55,120	-42.2	-42.5	-11.4	-35.1	-37.1	13.3	13.9	24.0
All except mineral and soda waters.....	13,278	20,723	37,961	38,002	72,646	64,680	57,459	46,332	-71.3	-65.0	-35.9	-45.4	-47.7	12.3	12.6	24.0
Mineral and soda waters.....	18,062	14,651	16,502	17,440	16,506	13,147	10,879	8,788	117.0	9.3	23.3	-11.4	12.5	17.9	20.8	23.8
Chemicals and allied products.....	404,786	329,472	425,990	427,008	299,569	267,261	227,326	196,538	106.4	-5.0	22.9	-22.7	42.5	12.1	17.6	15.7
Stone, clay, and glass products.....	345,370	250,812	296,229	298,659	334,612	342,827	285,346	231,716	50.3	16.6	37.7	-15.3	-10.7	-2.4	20.1	23.1
Industries using stone as a material.....	111,900	82,166	88,145	89,723	114,122	124,512	87,731	62,673	81.7	26.9	30.2	-8.8	-21.4	-8.3	41.9	40.0
Industries using clay as a material.....	151,514	106,849	121,888	122,337	134,736	137,048	122,618	108,756	40.2	24.6	41.8	-12.1	-9.2	-1.7	11.8	12.7
Glass and manufactures of glass.....	81,956	61,798	86,466	86,599	85,753	81,267	74,997	60,287	36.1	-5.2	32.6	-28.6	1.0	5.5	8.4	24.4
Metals and metal products, other than iron and steel.....	327,627	235,170	338,383	339,469	262,154	249,607	198,581	161,463	108.5	-8.2	39.3	-30.5	29.5	5.0	25.7	23.0
Metals, including smelting and refining.....	108,663	63,083	120,646	120,706	79,700	74,627	63,235	54,020	101.3	-9.9	72.3	-47.7	51.5	6.8	18.0	17.1
Metal products, plus "related industries".....	218,974	172,087	217,737	218,763	182,454	174,980	135,296	107,443	104.6	.5	27.2	-21.0	19.9	4.3	29.3	25.9
Tobacco manufactures.....	146,337	149,985	154,969	157,097	178,872	166,810	159,406	132,526	11.9	-5.6	-2.4	-3.2	-12.2	7.2	4.6	20.3
Vehicles for land transportation.....	510,468	281,350	440,008	440,878	250,514	202,719	136,625	133,663	382.6	-16.0	81.4	-36.1	76.0	23.6	48.4	2.2
Automobiles, plus "automobile bodies and parts".....	404,586	212,777	342,876	343,115	127,092	75,721	12,049	2,241	18,082.1	18.1	90.3	-37.9	170.6	67.8	528.4	437.7
Cars, steam and electric railroad, not including operations of railroad companies.....	80,590	48,033	55,218	55,218	58,128	46,699	38,768	37,038	117.5	45.9	67.8	-13.0	-5.0	24.6	20.3	4.7
Railroad repair shops.....	523,430	418,285	515,535	515,709	365,902	304,592	247,922	180,620	189.8	1.5	25.1	-13.9	40.9	20.1	22.9	37.3

1. See footnotes at end of Table 26, p. 120.

TABLE 28.—AMOUNT OF PRIMARY HORSEPOWER INSTALLED IN INDUSTRIAL GROUPS, BY CENSUS YEARS, AND PER CENT OF INCREASE, BY CENSUS PERIODS: 1899 TO 1923

[No data in regard to prime movers were collected for 1921. Because of the omission of certain minor industries and the transfer of a few others from one group to another, some of the group totals and some of the items given in this table differ somewhat from the corresponding totals and items as they appear in the census reports. As to the comparability of 1921 and 1923 figures with those of previous years, see general remarks preceding tables, pars. 2 and 4, pp. 124 and 125]

GROUP	PRIMARY HORSEPOWER							PER CENT OF INCREASE OR DECREASE (-)					
	Excluding data for rented power other than electric		Including data for rented power other than electric					24-year period, 1899-1923	Intercensal period				
	1923	1919	1919	1914	1909	1904	1899		1919-1923 ¹	1914-1919 ²	1909-1914	1904-1909	1899-1904
Food and kindred products.....	2,641,916	2,564,874	2,571,157	1,994,963	1,725,985	1,405,567	1,182,902	123.9	8.0	28.9	15.6	22.8	-18.8
Animal products.....	621,686	579,408	580,520	412,106	323,050	223,107	182,969	240.5	7.3	40.9	27.6	44.8	21.9
Vegetable products.....	2,020,230	1,985,466	1,990,637	1,582,877	1,402,935	1,182,460	999,933	102.7	1.8	25.8	12.8	18.6	18.3
Textiles and their products.....	3,794,443	3,258,788	3,274,090	2,752,054	1,288,031	1,745,309	1,395,967	173.0	16.4	19.0	20.3	31.1	25.0
Textile fabrics and materials.....	3,556,440	3,024,486	3,037,732	1,543,238	2,127,979	1,634,777	1,316,705	171.3	17.6	19.4	19.5	30.2	24.2
Articles from textile fabrics for personal wear.....	132,317	131,965	133,000	120,314	90,800	59,121	42,828	211.5	0.3	10.5	32.5	53.5	38.0
Other articles from textile fabrics.....	105,686	102,337	103,358	881502	69,252	51,411	36,436	193.1	3.3	16.8	27.8	34.7	41.1
Iron and steel and their products.....	8,934,585	8,071,629	8,082,692	5,537,842	4,561,284	3,326,702	2,188,594	308.8	10.7	46.0	41.4	37.1	52.0
Crude iron and steel and rolled products, including products not made in rolling-mill establishments (though largely made therein), plus wire and wire-work, not elsewhere specified.....	6,632,365	6,006,565	6,010,688	4,275,692	3,554,191	2,586,446	1,685,882	293.6	10.4	40.6	20.3	37.4	53.4
Other iron and steel products.....	2,302,220	2,065,064	2,072,004	1,262,150	1,007,094	740,256	502,712	359.6	11.5	64.2	26.3	36.0	47.3
Lumber and its remanufactures.....	3,323,262	3,397,178	3,417,941	3,185,861	3,250,298	2,218,266	2,113,856	58.1	-2.2	7.3	-2.0	46.5	4.9
Lumber and timber products, plus planing-mill products.....	2,425,515	2,772,415	2,778,608	2,607,209	2,727,584	1,800,673	1,003,870	51.6	-12.5	6.6	-4.4	51.5	12.3
Other manufactures of lumber.....	897,747	624,763	639,333	578,652	522,712	417,593	609,986	80.2	43.7	10.5	10.7	25.2	-18.1
Leather and its finished products.....	412,998	382,537	389,130	317,887	281,117	203,620	159,833	163.0	8.0	22.4	13.1	28.1	27.4
Leather, tanned, curried, and finished.....	230,187	217,761	218,239	172,712	148,140	117,450	88,890	159.6	5.7	26.4	16.6	26.1	32.2
Finished products of leather.....	182,811	164,776	170,892	145,175	132,977	86,170	70,973	167.0	10.9	17.7	9.2	54.3	21.4

Paper and printing.....	2,742,697	2,845,949	2,848,999	2,051,984	1,674,061	1,807,761	913,448	200.7	16.9	14.5	22.6	28.0	43.2
Paper and wood pulp.....	2,178,623	1,849,699	1,851,014	1,621,154	1,304,265	1,093,708	762,118	184.1	17.8	14.2	24.8	19.9	43.5
Manufactures of paper, plus wall paper.....	185,910	117,815	118,415	87,222	62,504	40,816	27,048	405.2	15.4	35.8	39.4	55.2	49.1
Printing and publishing, plus industries relating to printing and publishing.....	428,164	378,435	379,570	343,608	307,232	178,757	124,279	345.4	13.1	10.5	11.8	76.8	89.8
Liquors and beverages.....	247,161	412,463	415,861	525,769	446,450	347,723	254,615	-2.3	-40.1	-21.0	17.8	28.4	36.6
All except mineral and soda waters.....	182,380	371,296	373,597	500,605	427,058	335,509	246,578	-25.6	-50.9	-23.4	17.2	27.8	36.1
Mineral and soda waters.....	64,781	41,167	41,764	25,164	19,392	12,214	8,037	717.9	57.4	66.0	29.8	58.8	52.0
Chemicals and allied products.....	2,708,070	2,039,934	2,043,525	1,467,831	1,025,676	729,627	460,790	487.6	32.5	39.2	43.1	40.6	58.3
Stones, clay, and glass products.....	1,906,499	1,567,815	1,569,719	1,490,975	1,240,908	775,718	510,013	274.2	21.6	5.8	20.2	60.0	52.1
Industries using stone as a material.....	1,040,023	782,144	783,142	801,073	635,615	298,770	180,973	475.5	33.0	-2.2	26.0	112.7	65.1
Industries using clay as a material.....	615,494	569,058	569,709	516,551	473,402	378,704	271,650	123.9	8.2	10.3	9.1	25.0	39.4
Glass and manufactures of glass.....	250,982	216,613	216,868	173,351	131,891	98,244	57,374	333.1	15.6	25.1	31.4	34.2	71.2
Metals and metal products, other than iron and steel.....	1,210,529	982,720	988,688	575,025	468,136	290,932	214,687	467.5	23.2	71.9	24.2	59.2	85.5
Metals, including smelting and refining.....	874,595	744,574	747,928	401,919	330,569	211,893	148,778	490.7	17.5	86.1	21.6	56.0	42.4
Metal products, plus "related industries".....	335,934	238,146	240,762	173,106	132,567	79,039	65,859	415.9	41.1	39.1	30.6	67.7	20.0
Tobacco manufactures.....	43,515	43,390	43,397	84,337	28,514	24,604	22,296	95.2	3	24.2	22.5	15.9	10.4
Vehicles for land transportation ¹	1,210,099	791,517	797,805	438,541	327,239	189,961	148,286	722.8	52.9	81.9	34.0	72.3	28.1
Automobiles, plus "automobile bodies and parts".....	898,625	539,093	544,242	173,684	75,550	10,109	3,164	28,407.5	66.7	213.4	129.9	647.4	219.5
Cars, steam and electric railroad, not including operations of railroad companies.....	250,102	167,180	167,255	136,701	112,958	63,048	38,260	554.1	49.6	22.4	21.0	79.2	64.8
Railroad repair shops.....	806,435	644,875	648,345	478,953	329,155	171,127	101,530	698.9	25.1	35.4	45.5	92.3	68.5

¹ Based on figures shown in left-hand column for 1919.

² The figures shown in the right-hand column for 1919 were used in calculating the percentages in this column.

³ Includes sewing-machine cases.

⁴ Does not include sewing-machine cases; see "Other iron and steel products," footnote 2.

⁵ "Carriages and wagons"; "carriage and wagon materials"; "motor cycles and bicycles and parts"; "carriages and sleds, children's"; "wheelbarrows," included in total but not shown in detail.

TABLE 29.—AVERAGE NUMBER OF WAGE EARNERS EMPLOYED IN SELECTED INDUSTRIES, BY CENSUS YEARS, AND PER CENT OF INCREASE, BY CENSUS PERIODS: 1899 TO 1923

[Because of the omission of certain minor industries and the transfer of a few others from one group to another, some of the group totals and some of the items given in this table differ somewhat from the corresponding totals and items as they appear in the census reports. The italic figures indicate that establishments with products valued at less than \$5,000 are included to avoid disclosing operations of individual establishments. As to the comparability of 1921 and 1923 figures with those of previous years, see general remarks preceding tables, par. 4, p. 125.]

INDUSTRY	AVERAGE NUMBER OF WAGE EARNERS								24-year period, 1899-1923	PER CENT OF INCREASE OR DECREASE (-)						
	Excluding data for establishments with products valued at less than \$5,000			Including data for establishments with products valued at \$500 or more						Intercensal period						
	1923	1921	1919	1919	1914	1909	1904	1899		1919-1923 ¹	1921-1923	1919-1921 ¹	1914-1919 ²	1909-1914	1904-1909	1899-1904
All industries.....	8,778,166	6,946,670	9,000,059	9,096,372	7,036,247	6,615,046	5,468,388	4,712,763	88.2	-2.5	26.4	-22.8	29.3	6.4	21.0	16.0
Food and kindred products.....	625,524	568,734	681,831	684,672	496,234	411,575	354,046	301,868	108.2	-8.2	10.0	-16.5	38.0	20.6	16.9	17.3
Slaughtering and meat packing.....	132,792	117,042	160,980	160,996	98,832	87,813	74,134	68,366	94.2	-17.5	13.5	-27.8	62.9	12.5	18.5	8.4
Bread and other bakery products.....	162,613	148,500	140,477	141,592	124,052	100,216	81,278	60,192	172.4	15.8	9.5	5.7	14.1	23.8	23.3	35.0
Confectionery, chewing gum, and ice cream.....	88,609	83,207	98,239	98,838	64,084	44,638	36,229	26,866	232.2	-9.7	6.0	-15.3	54.4	43.5	23.2	34.9
Flour-mill and grain-mill products.....	35,194	35,378	45,295	45,481	39,718	39,453	39,110	32,226	9.6	-22.3	-5	-21.9	14.6	7	9	21.4
Canning and preserving, fruits and vegetables.....	57,178	38,668	59,771	60,865	50,325	40,492	39,988	37,189	56.7	-4.3	47.9	-35.3	20.9	24.3	1.3	7.5
Sugar, beet, and cane sugar and its refining.....	25,645	31,783	36,054	36,084	22,882	20,730	17,512	16,099	59.3	-23.9	-19.3	-11.8	57.7	10.4	18.4	8.8
Butter and cheese.....	25,165	22,004	21,594	21,638	17,057	14,267	12,182	12,799	97.3	16.7	14.4	2.0	26.9	19.6	17.1	-4.9
Coffee and spice, roasting and grinding.....	9,665	8,822	10,523	10,540	8,549	7,490	5,959	6,387	51.5	-8.2	8.8	-15.6	23.3	14.1	26.7	-6.7
Condensed milk.....	8,723	9,482	13,676	13,675	6,002	4,164	3,375	(¹)		-36.2	-7.8	-30.8	127.8	44.1	23.4	-21.3
Glucose and starch.....	6,573	6,131	7,794	7,795	4,509	4,773	4,070	5,943	10.1	-16.1	6.6	-21.3	72.9	-5.5	2.0	-33.0
Canning and preserving, fish and oysters.....	9,144	7,945	12,364	12,437	11,156	9,928	8,445	12,598	-37.0	-26.0	15.1	-35.7	11.5	12.4	17.5	-33.0
Pickles, preserves, and sauces.....	16,356	13,961	16,555	16,521	12,650	9,550	8,511	7,225	113.4	-7.2	17.6	-21.1	32.0	31.8	12.2	17.8
Breadstuff preparations, such as cereals and breakfast foods.....	6,410	5,749	7,634	7,624	5,177	(¹)	(¹)	(¹)		-16.0	11.5	-24.7	47.5			
Chocolate and cocoa products.....	6,876	6,652	9,083	9,083	4,160	2,826	2,090	1,314	423.2	-24.3	3.4	-26.8	118.3	47.2	35.2	59.1
Textiles and their products.....	1,716,646	1,510,876	1,608,131	1,611,309	1,507,374	1,445,720	1,163,497	1,028,706	67.1	6.7	13.6	-6.0	6.9	4.3	24.3	13.1
Cotton goods and cotton lace.....	478,810	418,454	437,436	437,456	386,806	371,182	310,458	297,929	60.7	9.5	14.4	-4.3	13.1	4.2	10.6	4.2
Clothing, men's.....	194,820	165,200	174,588	175,270	173,747	191,183	137,190	120,827	61.7	11.6	17.9	-5.4	9	-9.1	39.4	13.4
Clothing, women's.....	133,105	144,865	164,903	165,649	168,907	163,743	116,795	83,730	59.6	-19.3	-8.1	-12.2	-1.9	9.9	32.9	38.2
Woolen and worsted goods.....	194,552	162,364	166,757	166,787	158,692	163,192	141,988	125,901	54.6	16.7	19.8	-2.6	5.1	-2.8	14.9	12.8
Silk goods, including throwsters.....	125,234	121,378	126,715	126,782	108,170	99,637	79,601	65,416	91.5	-1.2	3.2	-4.2	17.2	9.2	24.4	31.7
Knit goods.....	194,244	161,880	172,459	172,572	150,520	129,275	104,092	83,691	132.2	12.6	20.0	-6.1	14.7	16.4	24.2	34.4
Dyeing and finishing textiles, exclusive of that done in textile mills.....	63,414	51,510	55,914	55,936	48,467	44,046	35,866	20,776	113.2	13.4	23.1	-7.9	15.5	10.0	23.8	19.4

Millinery and lace goods, not elsewhere specified.....	54,246	53,701	50,378	50,850	45,274	39,301	27,500	16,871	224.6	7.7	1.0	6.6	12.3	15.5	42.5	63.0
Carpets and rugs, other than rag.....	35,217	22,922	29,493	22,033	31,300	33,307	83,221	28,411	94.0	53.6	53.6	-28.8	-6.0	.8	16.9	
Cordage and twine.....	16,382	14,503	17,617	17,622	15,769	14,629	14,614	13,114	25.0	-7.0	12.3	-17.2	11.8	7.8	11.4	
Hats, fur-felt.....	16,722	13,880	18,497	18,510	21,318	25,064	22,047	18,880	-11.4	-9.6	20.6	-25.0	-19.2	-14.9	18.7	16.8
Bags, other than paper, not including bags made in textile mills.....	11,548	10,324	10,746	10,756	9,358	7,968	5,722	3,922	194.8	7.5	11.9	-3.9	14.9	17.4	89.3	45.9
Shirts.....	51,672	45,427	39,245	39,503	51,972	48,513	35,499	36,622	42.4	31.7	13.7	15.8	-23.8	7.1	32.9	1.3
Furnishing goods, men's, including cloth gloves and mittens, other than those made in textile mills.....	27,822	21,679	27,821	27,930	22,459	15,920	16,399	13,187	211.6	28.3	-22.1	24.4	41.1	-2.9	24.4	
Corsets.....	16,104	17,084	18,391	18,415	20,496	17,564	10,975	12,297	81.2	-12.4	-5.7	-7.1	-10.2	16.7	60.0	-10.8
Collars and cuffs, men's.....	10,449	9,285	11,098	11,103	10,100	12,421	10,786	17,135	-39.0	-5.8	12.5	-15.3	9.9	-18.7	15.2	-37.1
Iron and steel and their products.....	1,527,120	1,081,523	1,583,928	1,585,712	1,061,058	1,026,553	868,634	745,235	105.1	-8.6	48.6	-34.9	49.4	8.4	18.2	16.6
Crude iron and steel and rolled products, including products not made in rolling-mill establishments (though largely made therein), plus wire and wirework, not elsewhere specified.....	608,447	374,521	537,491	587,742	406,634	398,584	321,201	282,949	115.2	3.6	62.6	-36.3	44.5	2.9	23.1	13.5
Foundry and machine-shop products.....	448,777	321,363	481,701	572,858	302,471	388,911	345,378	350,103	99.8	-6.9	39.6	-32.3	58.0	2.4	15.1	15.1
Engines, steam, gas, and water.....	48,495	35,567	77,596	77,617	29,567	(*)	(*)	(*)	-37.6	-37.1	55.6	-54.2	161.7			
Machine tools.....	33,373	21,367	53,092	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Tools, not elsewhere specified.....	29,100	19,453	35,425	35,585	16,866	15,999	11,643	7,674	283.7	-17.9	49.6	-45.1	111.0	5.4	37.4	52.9
Hardware.....	49,884	33,803	42,449	42,505	41,213	38,513	31,713	26,463	88.7	17.6	47.6	-20.4	3.1	7.0	21.4	19.8
Stoves and hot-air furnaces.....	33,029	24,530	32,860	32,868	26,535	32,118	29,728	(*)	(*)	(*)	34.6	-25.3	11.3	-8.0	8.0	
Steam fittings and steam and hot-water heating apparatus.....	44,141	30,808	36,679	36,686	26,389	23,378	11,690	5,252	377.0	20.8	43.8	-16.0	39.0	12.9	100.0	26.4
Locomotives, not made by railroad companies.....	30,672	16,583	26,715	26,716	17,391	14,908	24,506	(*)	(*)	(*)	14.8	85.0	-37.9	53.6	16.6	-39.9
Textile machinery and parts.....	55,672	31,025	31,792	(*)	(*)	(*)	(*)	(*)	(*)	(*)	12.2	15.0	-2.4			
Cash registers and calculating machines.....	14,971	9,789	16,335	16,544	8,956	7,465	4,079	2,067	624.4	-9.5	53.0	-40.8	84.7	20.0	83.0	97.3
Cutlery and edge tools.....	16,671	14,345	19,822	19,859	16,561	16,997	14,545	12,028	38.8	-15.9	10.2	-27.6	19.9	-2.6	16.9	20.9
Ordnance and accessories.....	(*)	(*)	11,328	11,328	(*)	(*)	289	989	(*)	(*)	(*)	(*)	(*)	(*)	(*)	-70.8
Typewriters and supplies.....	14,963	13,381	15,447	15,699	11,079	9,578	6,232	4,340	245.1	-4.4	11.8	-14.5	41.3	15.8	53.7	43.6
Plumbers' supplies, not elsewhere specified.....	27,201	16,670	13,685	13,692	18,479	19,257	10,753	8,024	239.1	100.2	63.2	22.7	-26.4	-4.0	79.1	34.0
Stoves, gas and oil.....	16,783	7,921	10,556	10,565	7,790	5,012	3,676	2,471	579.9	59.0	111.9	-25.0	35.6	55.4	36.3	48.8
Pumps, steam and other power ¹⁰	14,550	12,186	16,054	16,072	8,322	(*)	(*)	(*)	(*)	(*)	-9.4	18.3	-24.1	93.1		
Sewing machines and attachments (including cases).....	13,436	12,569	19,228	19,230	15,007	10,299	17,121	13,355	5	-30.1	6.7	-34.6	6.8	-6.5	12.5	23.1
Screws, machine.....	9,126	5,911	10,255	10,262	3,643	1,667	1,955	486.6	(*)	-11.0	54.4	-42.4	181.7	118.5	-15.2	28.2
Lumber and its remanufactures.....	694,236	675,069	825,884	839,008	833,529	911,593	734,126	671,696	35.5	8.6	32.8	-18.3	.7	-8.6	84.2	9.3
Lumber and timber products.....	495,932	364,247	469,297	490,945	479,786	547,178	404,563	413,257	23.6	5.7	36.2	-22.4	.2	-12.3	35.3	-2.1
Furniture.....	168,089	124,311	139,950	138,331	127,681	123,426	110,133	87,262	90.4	20.1	35.2	-11.2	8.2	3.6	12.1	26.2
Lumber, planing-mill products, not including planing mills connected with sawmills.....	103,008	78,033	86,382	89,135	99,408	112,392	97,674	73,510	44.6	19.2	32.0	-9.8	-10.3	-11.6	15.1	32.9

¹⁰ See footnotes at end of Table 31, p. 146.

TABLE 29.—AVERAGE NUMBER OF WAGE EARNERS EMPLOYED IN SELECTED INDUSTRIES, BY CENSUS YEARS, AND PER CENT OF INCREASE, BY CENSUS PERIODS: 1899 TO 1923—Continued

[See note at head of this table, p. 130]

INDUSTRY	AVERAGE NUMBER OF WAGE EARNERS								PER CENT OF INCREASE OR DECREASE (—)								
	Excluding data for establishments with products valued at less than \$5,000			Including data for establishments with products valued at \$500 or more					24-year period, 1899-1923	Intercensal period							
	1923	1921	1919	1919	1914	1909	1904	1899		1919-1923 ¹	1921-1923	1919-1921 ¹	1914-1919 ¹	1909-1914	1904-1909	1899-1904	
Lumber and its remanufactures—Continued.																	
Boxes, wooden packing, except cigar boxes.	39,154	32,595	42,325	42,445	38,548	35,449	30,329	21,999	78.4	-7.5	20.1	-23.0	10.1	8.7	16.9	37.9	
Coffins, burial cases, and undertakers' goods.....	11,593	9,956	11,890	11,890	9,468	9,339	8,468	6,840	69.6	-2.4	16.4	-16.2	25.6	1.4	10.3	23.8	
Cooperage.....	12,028	9,876	13,071	13,219	17,128	16,489	21,149	22,117	-45.0	-8.0	21.8	-24.4	-22.8	-12.1	-7.8	-4.4	
Leather and its finished products.....	344,645	280,071	348,715	349,362	307,060	309,766	264,459	248,626	38.8	-1.2	23.0	-19.7	13.8	-0	17.1	6.4	
Boots and shoes, not including rubber boots and shoes.....	225,216	183,502	210,991	211,049	191,555	185,116	149,924	141,830	58.8	6.7	22.7	-13.0	10.2	8.5	23.5	5.7	
Leather, tanned, curried, and finished.....	59,703	48,955	72,465	72,478	55,936	62,202	57,239	52,109	14.6	-17.6	22.0	-32.4	29.6	-10.1	8.7	9.8	
Saddlery and harness.....	6,617	4,489	10,024	10,411	12,969	14,632	15,032	14,364	-52.1	-34.0	47.4	-55.2	-19.7	-11.4	-2.7	4.7	
Trunks and valises.....	11,441	8,712	11,404	11,470	9,911	11,122	9,091	6,964	65.2	.3	31.3	-23.6	15.7	-10.9	22.3	30.5	
Boot and shoe cut stock, exclusive of that produced in boot and shoe factories.....	7,133	7,049	9,703	9,716	7,819	6,693	5,938	6,155	16.0	-26.6	1.2	-27.4	24.2	16.8	12.8	-3.6	
Paper and printing.....	526,795	467,072	502,298	509,875	452,900	415,990	351,640	298,744	79.1	4.9	12.8	-7.0	12.6	8.9	18.3	17.7	
Printing and publishing, newspaper and periodical.....	115,646	107,534	115,102	120,381	114,375	108,672	96,857	94,604	27.8	.5	7.5	-6.6	5.3	5.2	12.2	2.4	
Printing and publishing, book and job.....	129,890	121,055	121,255	123,005	113,121	108,687	87,746	67,610	94.8	7.1	7.3	-2	8.7	4.1	23.9	28.8	
Paper and wood pulp.....	120,677	105,294	113,753	113,759	88,457	78,976	65,904	49,646	143.1	6.1	14.6	-7.4	28.6	16.4	15.2	32.9	
Boxes, paper and other, not elsewhere specified.....	56,855	46,242	55,778	55,862	45,311	39,514	32,082	27,653	105.8	1.9	23.0	-17.1	23.3	14.7	23.2	16.0	
Lithographing.....	16,317	13,971	15,611	15,618	15,171	15,073	12,614	12,994	25.6	4.5	16.8	-10.5	2.9	.7	19.5	-2.9	
Bookbinding and blank-book making.....	20,728	17,465	20,126	20,361	21,693	19,938	17,713	15,971	31.3	3.0	18.7	-13.2	-6.1	8.8	12.6	10.9	
Paper goods, not elsewhere specified.....	14,724	11,510	14,122	14,135	13,495	12,983	9,842	6,117	141.0	4.3	27.9	-18.6	4.7	3.9	31.9	60.9	

Liquors and beverages.....	81,338	85,974	84,403	85,442	88,152	77,827	68,338	55,120	-42.2	-42.5	-11.4	-35.1	-37.1	13.8	13.9	24.0
Liquors, malt, including cereal beverages.....	11,212	18,551	34,253	34,259	62,070	54,579	48,137	39,459	-71.6	-67.3	-39.6	-45.8	-44.9	13.7	13.4	22.0
Mineral and soda waters.....	15,062	14,651	16,682	17,440	15,506	13,147	10,879	8,788	117.0	9.3	23.3	-11.4	12.6	17.9	20.8	23.8
Chemicals and allied products.....	404,786	329,472	425,906	427,008	299,569	267,261	227,326	196,538	106.4	-5.0	22.9	-22.7	42.5	12.1	17.6	15.7
Petroleum refining.....	66,717	63,189	58,887	58,880	25,386	13,929	16,770	12,199	448.9	13.3	5.6	7.3	132.2	82.1	-16.9	37.5
Chemicals and acids ¹⁴	77,264	49,138	70,163	76,210	35,376	25,981	22,204	17,519	341.1	1.4	67.2	-35.5	115.4	36.2	16.5	27.3
Druggists' preparations, patent medicines and compounds, perfumery and cosmetics, and drug grinding.....	84,830	81,316	39,334	39,764	26,561	23,817	21,453	19,672	78.9	-11.5	11.2	-20.4	49.7	11.5	11.0	9.1
Gas, illuminating and heating.....	42,282	84,956	42,844	42,908	43,792	37,215	30,568	22,459	88.6	-1.3	21.0	-18.4	-2.0	17.7	21.8	36.1
Oils.....	19,817	42,071	85,151	85,190	25,596	20,582	18,369	14,008	41.7	-43.6	-10.2	-67.2	37.5	24.4	12.0	31.1
Paint and varnish.....	22,818	18,015	21,473	21,507	16,083	14,240	11,633	9,697	136.8	6.3	26.7	-16.1	33.7	12.9	22.4	20.0
Fertilizers.....	18,572	16,898	26,279	26,296	22,816	18,310	14,184	11,581	60.6	-29.3	9.9	-45.7	15.9	24.6	29.1	22.5
Coke, not including gas-house coke.....	28,364	16,070	29,314	29,319	21,107	23,273	19,981	16,999	67.0	-3.2	76.5	-45.2	33.9	-27.9	54.2	11.7
Soap.....	17,032	16,538	20,404	20,436	14,172	12,969	11,044	9,487	79.4	-16.7	2.7	-18.8	44.2	9.0	17.7	16.4
Explosives.....	6,388	4,478	9,249	9,249	-6,306	6,274	-5,800	4,502	41.9	-30.9	42.7	-51.6	46.7	5.5	8.2	28.8
Turpentine and rosin.....	34,328	27,422	27,902	28,067	34,817	39,511	33,382	41,864	-17.6	23.0	25.2	-1.7	-19.4	-11.9	18.4	-20.3
Stone, clay, and glass products.....	245,370	250,812	296,229	298,659	334,612	342,827	285,346	231,716	50.3	16.6	37.7	-15.3	-10.7	-2.4	20.1	23.1
Glass.....	73,335	54,748	77,520	77,520	74,502	68,911	63,969	52,818	38.9	-5.4	34.0	-29.4	4.1	8.1	7.7	21.1
Brick, tile, pottery, and other clay products ¹⁵	140,129	97,691	104,724	105,853	127,444	132,696	118,449	105,693	33.4	33.8	43.6	-6.8	-17.3	-4.0	12.0	12.1
Cement.....	35,091	26,231	35,624	35,524	27,916	26,775	17,478	(¹⁶)	201.2	37.5	33.8	2.8	-8.9	4.3	53.2	
Marble and stone work.....	40,056	30,260	32,309	32,768	54,891	66,603	51,110	41,686	(¹⁷)	-2.5	24.0	32.4	-6.3	-40.3	-16.3	28.4
Minerals and earths, ground or otherwise treated.....	8,707	6,887	14,357	14,426	4,707	1,990	2,157	2,094	317.5	-89.4	-26.4	-52.0	206.5	136.5	-7.7	3.0
Nonferrous metals and their products.....	327,637	235,170	338,383	339,469	262,154	249,607	198,631	161,463	103.5	-3.2	39.3	-30.5	29.5	5.0	25.7	23.0
Brass, bronze, and copper products.....	64,713	39,830	74,998	75,051	40,396	40,618	33,168	27,166	138.4	-13.7	62.5	-46.9	86.2	-9	22.5	22.1
Smelting and refining.....	40,691	20,214	41,787	41,787	37,318	31,554	28,565	25,495	59.6	-2.6	101.3	-51.6	12.0	17.2	11.5	12.0
Cement.....	26,354	23,482	30,704	30,871	28,289	30,347	22,080	20,468	29.4	-14.2	12.2	-22.5	9.1	-6.8	37.4	7.9
Copper, tin, and sheet-iron work.....	28,852	25,172	26,956	27,640	28,714	28,448	22,556	28,315	4.4	7.0	14.6	-6.6	-3.7	.9	26.1	-20.3
Stamped and enameled ware, not elsewhere specified.....	35,237	24,192	34,238	34,248	28,731	25,413	18,560	10,002	262.3	2.9	45.7	-29.3	19.2	13.1	67.4	35.6
Tinware, not elsewhere specified.....	30,511	22,711	34,372	34,386	22,564	19,754	16,919	(¹⁸)		-11.2	-54.3	-33.9	52.3	14.3	16.8	
Watches.....	11,571	12,174	15,838	15,838	12,390	10,664	10,724	9,880	68.1	-27.2	-5.0	-23.4	23.2	16.6	-4	55.9
Aluminum manufactures.....	16,288	9,584	11,402	11,402	4,614	(¹⁹)	(¹⁹)	(¹⁹)		42.9	69.9	-15.9	147.1			

See footnotes at end of Table 31, p. 146.

TABLE 29.—AVERAGE NUMBER OF WAGE EARNERS EMPLOYED IN SELECTED INDUSTRIES, BY CENSUS YEARS, AND PER CENT OF INCREASE, BY CENSUS PERIODS: 1899 TO 1923—Continued

[See note at head of this table, p. 130]

INDUSTRY	AVERAGE NUMBER OF WAGE EARNERS								PER CENT OF INCREASE OR DECREASE (-)							
	Excluding data for establishments with products valued at less than \$5,000			Including data for establishments with products valued at \$500 or more					24-year period, 1899-1923	Intercensal period						
	1923	1921	1919	1919	1914	1909	1904	1899		1919-1923	1921-1923	1919-1921	1914-1919	1909-1914	1904-1909	1899-1904
Tobacco manufactures.....	146,337	149,985	154,969	157,097	178,872	166,810	159,406	132,526	11.9	-5.6	-2.4	-3.2	-12.2	7.2	4.6	20.3
Tobacco, cigars and cigarettes.....	130,036	133,367	136,675	138,773	152,892	139,578	135,416	103,365	27.7	-4.9	-2.5	-2.4	-9.2	9.5	3.1	31.0
Tobacco, chewing and smoking, and snuff.....	16,301	16,628	18,294	18,324	25,980	27,232	23,990	29,161	-44.0	-10.9	-2.0	-9.1	-29.5	-4.6	13.5	-17.7
Vehicles for land transportation, including railroad repair shops.....	1,033,898	699,635	955,543	1,011,648	628,978	507,311	384,547	314,283	248.3	8.2	47.8	-26.8	60.8	24.0	31.9	22.4
Automobiles.....	241,356	143,658	210,553	210,559	79,307	51,294	10,239	2,241	10,687.6	-14.6	68.0	-31.8	165.5	54.6	401.0	359.9
Steam-railroad repair shops.....	488,505	385,006	484,380	484,437	339,518	282,174	236,870	173,595	181.6	9	26.9	-20.5	42.7	20.3	19.1	36.4
Automobile bodies and parts.....	163,530	69,119	132,323	132,556	47,785	24,427	1,810	(¹)		23.6	136.6	-47.8	177.4	95.6	1,249.6	
Cars, steam-railroad, not including operations of railroad companies.....	76,612	45,121	52,298	52,298	54,288	43,068	34,058	33,453	129.0	46.5	69.8	-13.7	-3.7	26.0	26.5	1.8
Automobile repairing.....	(²⁰)	(²⁰)	(²⁰)	(²⁰)	55,061	12,562	(¹)	(¹)					338.3			
Electric-railroad repair shops.....	84,925	33,279	31,155	31,272	26,384	22,418	11,052	7,025	399.1	12.1	4.9	6.8	18.5	17.7	102.8	57.3
Carriages and wagons, including repairs ¹	7,740	7,797	17,583	18,173	41,304	52,540	60,722	58,426	-86.3	-56.0	-0.7	-55.7	-56.0	-21.4	-13.5	3.9
Motor cycles, bicycles, and parts.....	6,576	4,308	10,882	10,886	6,680	4,437	3,319	17,525	-62.5	-39.6	52.6	-60.4	63.0	50.6	33.7	-81.1
Miscellaneous industries.....	852,024	713,777	1,224,496	1,227,111	558,755	482,206	408,477	326,242	154.5	-30.4	19.5	-41.8	109.5	21.5	18.0	25.2
Shipbuilding, steel.....	51,961	93,323	344,011	344,014	33,509	28,143	36,742	30,906	68.1	-84.9	-44.3	-72.9	926.7	19.1	-23.4	18.9
Electrical machinery, apparatus, and supplies.....	234,892	161,204	212,294	212,374	118,078	87,256	60,466	42,018	459.1	10.6	45.7	-24.1	79.9	35.3	44.3	43.9
Rubber tires, tubes, and rubber goods, not elsewhere specified, including belting and hose, rubber.....	108,433	79,385	125,662	125,674	55,335	31,852	24,882	22,175	389.1	-13.7	36.6	-36.8	127.1	74.8	27.2	12.2
Agricultural implements.....	30,962	30,359	54,294	54,368	48,459	50,551	47,394	46,582	-33.5	-43.0	2.0	-44.1	12.2	-4.1	6.7	0.7
Shipbuilding, wooden, including boat building.....	10,326	13,122	43,290	43,432	10,981	12,363	14,012	15,841	-34.5	-70.1	-21.3	-69.7	295.5	-11.2	-11.8	-11.5
Phonographs and graphophones.....	20,491	17,938	28,714	28,721	9,381	5,199	3,397	1,267	1,518.6	-28.6	14.2	-37.5	206.2	80.4	53.0	163.1
Ice, manufactured.....	26,852	24,066	29,895	30,247	23,011	16,114	10,101	6,890	294.8	-10.2	11.6	-19.5	31.4	42.8	59.5	46.8
Fur goods.....	14,439	12,052	13,544	13,639	9,030	11,927	9,870	7,768	87.4	6.6	-19.8	-11.0	51.0	-24.3	27.9	20.8

Boots and shoes, rubber.....	29,435	23,888	32,875	32,875	18,687	17,612	18,991	14,391	104.4	-10.5	23.2	-27.3	75.9	6.1	-7.3	32.0
Photographic materials #.....	16,313	16,949	17,094	17,111	8,674	5,195	8,812	3,444	373.9	-4.6	-3.8	-8	97.3	67.0	36.3	10.7
Musical instruments, pianos.....	22,298	16,836	22,956	22,957	23,877	25,497	21,002	21,300	4.2	-3.3	40.2	-31.0	-3.9	-6.4	21.4	-1.4
Ammunition.....	10,470	8,370	22,816	22,816	11,483	8,713	7,410	5,231	100.2	-54.1	25.1	-63.3	98.5	31.9	17.6	41.7
Instruments, professional and scientific.....	12,275	9,364	15,897	15,931	7,107	4,817	3,437	2,775	343.2	-22.8	30.8	-41.0	124.2	47.5	40.2	35.9
Optical goods.....	12,205	11,120	14,635	14,723	7,919	6,398	4,330	3,715	223.3	-16.9	9.8	+24.3	85.9	33.8	47.8	15.6
Mattresses and bed springs, not elsewhere specified.....	14,103	11,748	12,549	12,637	11,747	11,322	10,427	7,649	65.7	12.4	20.0	-6.4	7.6	3.8	8.6	36.3
Roofing materials.....	7,665	6,908	8,855	8,871	4,088	2,465	8,819	7,593	1.1	-13.4	11.0	-22.0	117.0	65.8	-72.0	16.1
Fancy articles, not elsewhere specified.....	13,522	11,534	13,874	13,961	7,399	5,729	6,624	5,718	138.1	-2.5	17.2	-16.9	88.7	10.0	1.6	15.8
Paving materials.....	19,442	15,387	15,742	16,072	19,540	1,419	1,919	2,436	714.9	23.5	26.4	-2.3	-17.7	277.0	-26.1	-21.2
Stationery goods, not elsewhere specified.....	13,314	11,285	11,247	11,261	7,728	6,206	4,296	3,032	339.7	18.4	18.0	3	45.7	24.5	44.5	41.7
Signs and advertising novelties.....	12,988	10,373	10,817	10,432	9,566	5,540	(?)	(?)	25.9	25.2	5	5	9.1	72.7		
Toys and games.....	14,484	9,448	14,086	14,201	7,897	5,305	4,330	3,816	340.3	2.8	53.3	-32.9	80.1	48.7	22.5	30.6
Buttons.....	11,890	9,686	15,439	15,577	14,511	16,427	10,567	8,635	37.8	-23.2	22.4	-37.3	7.8	-11.7	55.5	21.7

See footnotes at end of Table 31, p. 146.

TABLE 30.—AMOUNT OF PRIMARY HORSEPOWER INSTALLED IN SELECTED INDUSTRIES, BY CENSUS YEARS, AND PER CENT OF INCREASE, BY CENSUS PERIODS: 1899 TO 1923

[No data in regard to prime movers were collected for 1921. Because of the omission of certain minor industries and the transfer of a few others from one group to another, some of the group totals and some of the items given in this table differ somewhat from the corresponding totals and items, as they appear in the census reports. As to the comparability of 1921 and 1923 figures with those of previous years, see general remarks preceding tables, pars. 2 and 4, pp. 124 and 125]

INDUSTRY	PRIMARY HORSEPOWER							PER CENT OF INCREASE OR DECREASE (-)					
	Excluding data for rented power other than electric		Including data for rented power other than electric					24-year period, 1899-1923	Intercensal period				
	1923	1919	1919	1914	1909	1904	1899		1919-1923	1914-1919	1909-1914	1904-1909	1899-1904
All industries.....	33,094,228	29,327,669	29,504,792	22,437,072	18,675,376	13,487,707	10,097,893	229.6	12.8	31.5	20.1	38.5	33.6
Food and kindred products.....	2,641,916	2,564,874	2,571,157	1,994,983	1,725,985	1,405,567	1,182,902	123.9	3.0	28.9	15.6	22.8	18.8
Slaughtering and meat packing.....	382,127	358,522	359,212	253,066	202,432	115,956	85,008	350.5	6.6	41.9	25.0	74.6	36.4
Bread and other bakery products.....	193,186	165,711	165,950	107,771	65,298	37,241	22,472	761.1	16.6	54.0	65.0	75.3	65.7
Confectionery, chewing gum, and ice cream.....	268,090	185,854	186,069	101,423	35,870	24,292	19,410	1,282.3	44.2	83.5	182.9	47.7	25.2
Flour-mill and grain-mill products.....	709,856	875,464	876,405	822,384	853,584	775,318	670,719	6.0	-18.9	6.6	-3.7	10.1	15.6
Canning and preserving, fruits and vegetables.....	138,997	132,247	132,422	88,303	59,950	44,499	26,906	417.3	5.1	50.0	47.3	34.7	65.4
Sugar, beet, and cane sugar and its refining.....	288,667	281,794	281,796	239,617	217,805	176,140	167,029	72.7	2.4	17.6	10.0	23.7	5.5
Butter and cheese.....	148,666	119,373	119,690	110,847	89,761	57,889	48,062	69.2	24.5	8.0	23.5	2.1	—
Coffee and spice, roasting and grinding.....	37,858	29,708	29,750	26,634	22,594	15,703	16,270	130.1	25.8	11.7	19.3	42.2	-3.5
Condensed milk.....	48,300	49,178	49,181	20,015	11,588	5,956	(*)	-1.8	145.7	72.7	94.6	—	—
Glucose and starch.....	65,764	52,038	52,848	41,639	28,257	25,988	26,842	150.8	26.4	28.9	47.4	—	—
Canning and preserving, fish and oysters.....	17,648	25,830	25,890	12,861	8,392	6,109	5,146	243.6	-31.7	101.3	53.3	37.4	18.7
Pickles, preserves, and sauces.....	36,717	22,384	22,500	18,840	12,837	10,223	6,572	461.5	64.0	19.4	46.8	25.6	55.9
Breadstuff preparations, such as cereals and breakfast foods.....	61,312	46,992	47,372	25,820	(?)	(?)	(?)	—	30.5	83.5	—	—	—
Chocolate and cocoa products.....	47,197	33,414	33,440	19,736	10,693	5,217	2,756	1,618.3	41.2	69.4	84.3	103.0	89.3
Textiles and their products.....	3,794,443	3,258,788	3,274,090	2,752,054	2,288,031	1,745,809	1,395,967	173.0	16.4	19.0	20.3	31.1	25.0
Cotton goods and cotton lace.....	2,162,844	1,845,376	1,849,279	1,575,853	1,286,105	979,109	789,858	174.4	17.2	17.4	22.5	31.4	24.0
Clothing, men's.....	52,642	40,199	40,577	35,664	30,669	21,106	13,347	298.2	31.0	13.8	18.6	42.5	58.1
Clothing, women's.....	27,704	32,421	32,622	25,396	22,294	14,916	9,962	180.0	-14.5	14.9	27.4	49.5	49.7
Woolen and worsted goods.....	538,465	456,219	468,450	381,220	345,283	277,366	224,660	130.5	15.5	22.9	9.5	25.6	13.2
Silk goods, including throwsters.....	206,020	173,748	176,825	116,924	97,947	71,780	57,397	265.4	18.9	51.2	19.4	36.5	25.0
Knit goods.....	183,675	149,438	151,601	125,842	103,709	78,769	57,346	224.9	22.9	20.5	21.3	31.7	37.4
Dyeing and finishing textiles, exclusive of that done in textile mills.....	204,128	159,857	160,430	130,172	107,746	84,868	69,238	195.9	27.7	23.2	20.8	27.0	22.6
Millinery and lace goods, not elsewhere specified.....	15,661	12,410	12,482	12,786	7,915	4,737	1,852	756.6	26.2	-2.0	60.8	67.2	155.8

Carpets and rugs, other than rag.....	53,852	37,593	38,170	43,063	38,553	33,945	26,740	104.5	43.3	-13.9	14.0	13.6	26.9
Cordage and twine.....	72,371	66,556	66,643	55,377	47,269	41,041	33,657	115.2	8.7	39.3	17.3	15.2	21.9
Hats, fur-felt.....	18,483	20,377	20,389	20,851	19,245	16,630	11,843	56.2	-9.3	-2.3	8.3	16.7	40.4
Bags, other than paper, not including bags made in textile mills.....	13,852	9,070	9,082	10,392	6,855	4,522	1,755	689.7	52.0	-12.6	51.0	51.6	137.7
Shirts.....	14,050	14,996	14,944	17,617	12,055	8,723	7,110	98.4	-5.0	-15.2	39.2	45.1	22.7
Furnishing goods, men's, including cloth gloves and mittens, other than those made in textile mills.....	8,613	9,023	9,029	5,890	3,983	3,061	1,250	589.8	-4.5	53.6	47.6	30.1	144.9
Corsets.....	5,901	6,956	7,156	7,057	4,581	3,284	3,638	66.8	-15.2	1.4	54.0	39.5	-9.7
Collars and cuffs, men's.....	5,050	5,376	5,258	3,890	3,234	2,360	2,302	119.7	-4.3	35.7	20.5	37.0	2.8
Iron and steel and their products.....	8,934,585	8,071,629	8,082,692	5,537,842	4,561,285	3,526,702	2,188,594	808.8	10.7	46.0	21.4	37.1	52.0
Crude iron and steel and rolled products, including products not made in rolling-mill establishments (though largely made therein) plus wire and wire- work, not elsewhere specified.....	6,632,365	6,006,565	6,010,688	4,275,692	3,554,191	2,596,446	1,685,882	293.6	10.4	40.6	20.3	37.4	63.4
Foundry and machine-shop products.....	1,234,326	1,040,265	1,216,628	770,454	659,601	487,148	379,900	387.1	18.7	57.9	18.9	52.2	43.6
Engines, steam, gas, and water.....	195,137	190,005	190,021	63,047	(?)	(?)	(?)	(?)	-33.1	201.4			
Machine tools.....	109,196	100,294	(?)	(?)	(?)	(?)	(?)	(?)	8.9				
Tools, not elsewhere specified.....	75,248	67,730	68,381	38,474	36,066	21,965	11,809	543.4	11.1	77.7	6.7	64.2	38.0
Hardware.....	78,608	67,094	67,589	53,411	41,221	33,417	22,668	249.5	17.2	26.5	27.7	25.1	47.4
Stoves and hot-air furnaces.....	65,366	49,408	49,479	41,196	40,248	28,414	(?)	(?)	32.3	20.1	2.4	46.1	
Steam fittings and steam and hot-water heating ap- paratus.....	91,086	67,494	67,504	38,830	33,008	10,696	6,510	1,299.8	35.0	74.7	17.0	208.6	64.3
Locomotives, not made by railroad companies.....	91,214	96,504	97,157	50,373	35,102	29,806	(?)	(?)	-5.6	92.9	45.5	17.8	
Textile machinery and parts.....	56,235	41,744	(?)	(?)	(?)	(?)	(?)	(?)	34.9				
Cash registers and calculating machines.....	29,872	14,645	14,650	10,619	6,944	4,139	1,340	2,130.3	104.0	38.0	52.9	67.8	208.9
Cutlery and edge tools.....	43,171	38,555	38,958	34,781	32,228	32,432	26,475	64.9	-12.0	-12.0	7.9	-6.6	22.5
Ordnance and accessories.....	(?)	40,652	40,652	(?)	(?)	735	2,731	(?)					-73.1
Typewriters and supplies.....	11,451	13,054	13,066	10,887	6,845	4,455	2,272	404.4	-12.3	20.0	59.1	53.6	96.1
Plumbers' supplies, not elsewhere specified.....	59,973	29,695	29,762	28,253	26,078	12,601	7,574	693.7	102.0	5.3	8.3	107.0	65.4
Stoves, gas and oil.....	22,298	11,290	11,295	7,964	5,276	(?)	1,723	1,194.6	97.5	42.0	50.8	46.4	109.1
Pumps, steam and other power.....	38,268	32,441	32,501	17,211	(?)	(?)	(?)	(?)	18.0	88.8			70.4
Sewing machines and attachments (including cases).....	22,511	32,017	32,035	24,229	19,426	17,162	10,069	123.7	-29.7	32.2	24.7	13.2	47.4
Screws, machine.....	28,964	23,517	23,540	7,988	3,201	1,407	(?)	1,959.6	23.1	194.7	140.7	8.7	137.5
Lumber and its remanufactures.....	3,323,262	3,397,178	3,417,941	3,185,861	3,250,296	2,218,266	2,113,856	58.1	-2.2	7.3	-2.0	46.5	4.0
Lumber and timber products.....	1,932,091	2,355,345	2,358,937	2,192,392	2,316,634	1,490,816	1,375,139	40.6	-18.0	7.6	-5.4	55.4	8.4
Furniture.....	1,486,347	1,265,094	1,262,703	240,665	211,438	163,614	114,568	319.8	83.1	9.2	13.8	29.2	42.8
Lumber, planing-mill products, not including planing mills connected with sawmills.....	493,424	417,070	417,201	423,005	410,950	309,887	228,731	121.2	18.9	1.0	2.9	32.6	35.5
Boxes, wooden packing, except cigar boxes.....	149,410	143,583	144,048	126,805	112,498	85,951	54,724	174.0	4.1	13.6	12.7	30.9	57.1
Coffins, burial cases, and undertakers' goods.....	27,340	22,345	22,345	19,008	16,490	8,927	8,927	208.4	23.2	17.6	15.3	25.1	47.6
Coopersage.....	33,519	30,688	30,698	38,290	42,638	39,110	30,760	9.0	9.2	-19.8	-10.2	9.0	27.1

See footnotes at end of Table 31, p. 146.

TABLE 30.—AMOUNT OF PRIMARY HORSEPOWER INSTALLED IN SELECTED INDUSTRIES, IN CENSUS YEARS, AND PER CENT OF INCREASE, BY CENSUS PERIODS: 1899 TO 1923—Continued

[See note at head of this table, p. 136]

INDUSTRY	PRIMARY HORSEPOWER							PER CENT OF INCREASE OR DECREASE (-)					
	Excluding data for rented power other than electric		Including data for rented power other than electric					24-year period, 1899-1923	Intercensal period				
	1923	1919	1919	1914	1909	1904	1899		1919-1923 ¹	1914-1919 ²	1909-1914	1904-1909	1899-1904
Leather and its finished products.....	412,968	382,537	389,130	317,887	281,117	203,620	159,833	168.0	8.0	22.4	13.1	38.1	27.4
Boots and shoes, not including rubber boots and shoes.....	128,550	115,886	120,632	100,232	85,896	56,220	49,444	170.6	-10.9	20.4	16.7	52.8	18.7
Leather, tanned, curried, and finished.....	230,187	217,761	218,238	173,712	148,140	117,450	88,860	159.6	5.7	26.4	16.6	26.1	32.2
Saddlery and harness.....	7,781	8,205	8,212	10,397	17,234	7,370	6,018	29.1	-5.4	-21.9	-39.7	133.8	22.5
Trunks and valises.....	7,269	7,696	7,703	7,569	6,865	5,016	3,314	119.6	-5.5	1.8	9.9	37.3	51.4
Boot and shoe cut stock, exclusive of that produced in boot and shoe factories.....	6,963	8,448	9,003	6,829	4,769	4,519	3,202	131.7	-17.6	31.8	43.2	5.5	41.1
Paper and printing.....	2,742,697	2,345,949	2,348,999	2,051,984	1,674,061	1,307,781	913,445	200.7	16.9	14.5	22.6	28.0	43.2
Printing and publishing, newspaper and periodical.....	203,454	194,074	194,361	183,269	173,889	94,832	70,089	190.6	4.8	6.0	4.8	83.4	35.3
Printing and publishing, book and job.....	152,363	131,476	131,961	114,233	97,546	56,188	36,973	313.6	15.9	15.5	17.1	73.6	52.0
Paper and wood pulp.....	2,178,623	1,849,699	1,851,014	1,621,154	1,304,265	1,093,708	762,118	186.1	17.8	14.2	24.3	19.3	43.5
Boxes, paper and other, not elsewhere specified.....	61,687	54,675	54,955	38,179	23,323	15,117	9,286	567.6	12.8	43.9	63.7	54.3	62.8
Lithographing.....	26,869	18,560	18,624	15,178	13,132	8,195	7,063	281.8	44.8	22.7	15.6	60.2	16.0
Bookbinding and blank-book making.....	15,539	11,037	11,123	11,266	10,069	5,671	4,089	234.0	40.8	-1.3	11.6	78.1	20.9
Paper goods, not elsewhere specified.....	37,840	35,399	35,538	27,366	22,436	13,071	7,855	384.1	7.0	29.9	22.0	71.6	66.4
Liquors and beverages.....	247,161	412,463	415,361	525,769	446,450	347,723	254,615	-2.3	-40.1	-21.0	17.8	28.4	86.6
Liquors, malt, including cereal beverages.....	¹¹ 156,511	322,130	324,431	405,884	347,726	266,159	197,901	-20.3	-51.4	-20.1	16.7	80.6	34.5
Mineral and soda waters.....	64,781	41,167	41,794	25,164	19,392	12,214	8,037	717.9	57.4	66.0	29.8	58.8	52.0
Chemicals and allied products.....	2,703,070	2,069,934	2,043,525	1,467,831	1,025,676	729,627	460,790	487.6	32.5	39.2	43.1	40.6	58.3
Petroleum refining.....	391,154	238,906	238,906	128,468	90,268	46,019	36,127	982.5	63.7	86.0	42.3	99.2	27.4
Chemicals and acids ¹⁴	688,468	475,840	475,919	307,312	215,151	137,810	90,429	861.6	44.7	54.9	42.8	56.1	52.4
Druggists' preparations, patent medicines and compounds, perfumery and cosmetics, and drug grinding.....	52,713	46,998	47,296	38,844	28,981	19,874	17,404	205.0	12.2	39.7	16.8	45.8	14.2

Gas, illuminating and heating.....	858,605	238,454	288,487	213,370	128,850	73,101	31,797	1,028.0	50.4	11.8	66.2	75.6	129.0
Oils.....	265,236	830,502	340,165	278,585	212,028	166,275	86,302	207.9	-21.9	22.1	80.8	28.1	92.7
Paint and varnish.....	114,281	84,827	85,199	70,611	56,162	41,288	30,443	277.0	34.7	20.7	26.7	36.0	35.6
Fertilizers.....	161,774	126,989	126,939	114,281	64,711	47,989	38,680	318.4	28.5	10.2	76.6	34.8	24.1
Coke, not including gas-house coke.....	332,560	224,879	224,879	117,127	62,602	66,669	34,787	856.6	47.9	02.0	67.1	-6.1	91.8
Soap.....	74,830	33,700	33,710	85,737	28,860	20,228	17,514	327.4	122.0	-5.7	28.0	40.2	15.5
Explosives.....	85,231	81,635	61,635	45,778	23,601	29,665	19,195	83.5	-31.8	12.9	60.1	-3.6	84.5
Turpentine and rosin.....	1,932	2,276	2,303	2,478	4,129	1,176	866	125.7	-16.1	-7.1	-40.0	251.4	35.7
Stones, clay, and glass products.....	1,906,499	1,567,815	1,569,719	1,490,975	1,240,908	775,718	510,013	274.3	21.6	5.3	20.2	60.0	52.4
Glass.....	240,528	207,338	207,430	163,139	123,132	91,476	52,943	854.5	16.0	27.1	82.5	34.6	72.8
Brick, tile, pottery, and other clay products ¹⁹	529,440	438,555	439,194	470,758	451,186	360,280	252,502	109.9	20.7	-6.7	4.3	25.2	42.7
Cement.....	642,840	488,808	488,808	490,402	371,799	149,604	(*)	670.0	31.5	-8	81.9	148.6	-----
Marble and stone work.....	213,133	169,177	170,132	207,461	187,686	102,887	83,119	157.9	23.0	-18.0	10.5	82.4	23.8
Minerals and earths, ground or otherwise treated.....	53,471	127,064	127,074	44,069	20,920	17,325	18,404	853.7	-34.3	153.4	110.7	20.8	-5.9
Nonferrous metals and their products.....	1,210,529	982,720	988,688	575,025	463,136	290,932	214,637	467.5	28.2	71.9	24.2	59.2	35.5
Brass, bronze, and copper products.....	305,839	285,373	285,688	122,700	106,120	69,494	47,257	547.7	15.2	116.5	15.6	62.7	47.1
Smelting and refining.....	555,644	464,803	467,400	271,494	217,242	137,706	97,760	471.9	19.6	72.2	25.0	67.8	40.9
Jewelry.....	16,851	15,096	16,389	15,666	11,204	7,872	6,656	174.8	11.6	4.6	89.8	42.3	18.3
Copper, tin, and sheet-iron work.....	34,243	24,130	24,144	21,357	18,847	11,195	12,232	180.1	41.9	13.0	13.3	63.4	-8.6
Stamped and enameled ware, not elsewhere specified.....	98,326	51,283	51,441	34,797	27,839	-10,098	16,597	312.6	33.2	-48.0	24.9	175.9	-39.2
Tinware, not elsewhere specified.....	41,232	30,234	30,490	19,139	15,690	8,946	(*)	22.0	38.4	69.4	22.0	75.4	-----
Watches.....	7,396	7,202	7,202	6,624	5,649	3,172	1,762	319.7	2.7	8.7	17.3	78.1	80.0
Aluminum manufactures.....	68,273	30,280	30,280	12,338	(*)	(*)	(*)	-----	92.4	145.4	-----	-----	-----
Tobacco manufactures.....	43,515	43,390	43,397	34,937	28,514	24,604	22,296	95.2	.3	24.2	22.5	15.9	10.4
Tobacco, cigars and cigarettes.....	24,894	24,497	24,504	13,664	9,261	6,069	4,563	445.6	1.6	79.8	47.5	82.6	33.0
Tobacco, chewing and smoking, and snuff.....	18,621	18,893	18,893	21,273	19,253	18,535	17,733	5.0	-1.4	-11.2	10.5	6.9	4.5
Vehicles for land transportation, including rail- road repair shops.....	2,016,534	1,436,392	1,528,841	933,004	656,394	361,088	249,796	759.2	40.4	63.7	42.3	81.8	44.6
Automobiles.....	435,545	282,323	287,323	104,933	50,641	7,624	3,164	13,912.0	54.3	173.7	107.3	564.2	141.0
Steam-railroad repair shops.....	744,055	591,070	594,515	433,994	293,361	167,973	95,087	687.1	25.9	37.0	47.9	74.6	76.7
Automobile bodies and parts.....	463,080	266,770	266,919	93,701	24,909	2,485	(*)	-----	80.3	274.0	176.8	902.4	-----
Cars, steam-railroad, not including operations of rail- road companies.....	240,074	157,790	157,865	126,687	97,797	55,994	33,395	619.0	52.1	24.6	29.5	74.7	67.7
Automobile repairing.....	(*)	82,691	16,380	(*)	(*)	(*)	(*)	-----	-----	404.8	-----	-----	-----
Electric-railroad repair shops.....	62,370	53,805	53,830	44,989	35,794	3,154	6,443	868.3	15.9	19.7	25.7	1,034.9	-51.0
Carriages and wagons, including repairs ²¹	25,064	40,316	40,966	74,324	78,785	68,024	51,755	-50.8	-37.9	-44.9	-5.6	25.0	21.8
Motor cycles, bicycles, and parts.....	14,840	14,420	14,506	8,753	5,932	5,720	19,847	-23.2	2.9	69.2	47.6	3.5	-71.1

See footnotes at end of Table 31, p. 146.

TABLE 30.—AMOUNT OF PRIMARY HORSEPOWER INSTALLED IN SELECTED INDUSTRIES, IN CENSUS YEARS, AND PER CENT OF INCREASE, BY CENSUS PERIODS: 1899 TO 1923—Continued

[See note at head of this table, p. 136]

INDUSTRY	PRIMARY HORSEPOWER							PER CENT OF INCREASE OR DECREASE (-)					
	Excluding data for rented power other than electric		Including data for rented power other than electric					24-year period, 1899-1923	Intercensal period				
	1923	1919	1919	1914	1909	1904	1899		1919-1923 ¹	1914-1919 ²	1909-1914	1904-1909	1899-1904
Miscellaneous industries.....	3, 115, 689	2, 823, 846	2, 831, 252	1, 568, 020	1, 032, 238	739, 042	424, 023	636.5	10.3	80.6	51.9	39.7	74.3
Shipbuilding, steel.....	280, 373	475, 567	475, 567	83, 706	57, 697	51, 029	38, 862	622.0	-41.0	468.1	45.1	13.1	31.3
Electrical machinery, apparatus, and supplies.....	480, 268	438, 082	438, 839	227, 731	158, 768	105, 376	43, 674	1, 001.3	9.6	92.7	43.4	50.7	141.3
Rubber tires, tubes, and rubber goods, not elsewhere specified, including belting and hose, rubber.....	549, 450	379, 873	380, 487	174, 022	96, 633	60, 724	46, 152	1, 092.1	44.6	117.5	81.2	59.0	31.6
Agricultural implements.....	121, 975	128, 249	128, 249	121, 428	100, 601	89, 738	70, 646	72.6	-4.9	5.6	20.7	12.1	37.0
Shipbuilding, wooden, including boat building.....	37, 339	77, 704	78, 144	31, 627	30, 366	27, 998	22, 935	63.9	-51.9	147.1	4.2	12.1	18.2
Phonographs and graphophones.....	41, 160	40, 163	40, 168	11, 688	6, 371	2, 522	1, 082	3, 705.2	2.5	243.7	83.5	152.6	133.1
Ice, manufactured.....	845, 012	569, 925	572, 970	461, 988	317, 789	191, 660	100, 421	746.2	48.3	24.0	45.4	65.8	90.9
Fur goods.....	4, 299	5, 327	5, 327	3, 233	2, 120	1, 994	907	374.0	-19.3	64.8	52.5	6.3	119.8
Boots and shoes, rubber.....	56, 184	49, 400	49, 400	24, 621	25, 903	26, 084	25, 017	124.6	13.7	100.6	-4.9	-7	4.3
Photographic materials ³	50, 267	28, 779	28, 779	16, 482	8, 637	5, 061	3, 412	1, 373.6	74.7	74.6	90.8	70.7	48.3
Musical instruments, pianos.....	26, 859	28, 697	28, 732	25, 981	23, 246	17, 467	20, 789	29.4	-6.4	10.6	11.8	33.1	-16.0
Ammunition.....	23, 172	39, 128	39, 128	11, 354	10, 317	5, 056	2, 980	677.3	-40.8	244.6	10.1	104.1	69.7
Instruments, professional and scientific.....	16, 203	12, 981	13, 020	6, 799	4, 856	2, 110	2, 471	557.6	24.8	91.5	40.0	130.1	-14.6
Optical goods.....	13, 397	15, 649	15, 710	7, 792	5, 725	3, 410	2, 544	428.6	-14.4	101.6	36.1	67.9	34.0
Mattresses and bed springs, not elsewhere specified.....	30, 324	23, 357	23, 469	20, 767	17, 689	13, 220	7, 980	281.4	29.7	13.0	17.4	38.8	65.7
Roofing materials.....	39, 598	39, 247	39, 327	11, 702	9, 431	23, 022	15, 217	117.8	-9	235.1	24.1	-58.0	26.4
Fancy articles, not elsewhere specified.....	8, 098	8, 657	8, 982	4, 586	3, 219	3, 376	2, 596	222.8	-6.5	95.9	42.5	-4.7	30.0
Paving materials.....	197, 290	191, 471	191, 543	138, 026	5, 767	5, 158	34, 397	473.6	9.0	38.8	2, 297.5	11.7	-85.0
Stationery goods, not elsewhere specified.....	11, 539	8, 342	8, 342	5, 703	6, 942	1, 706	1, 706	576.3	38.3	46.3	-16.6	101.5	99.1
Signs and advertising novelties.....	11, 781	7, 714	7, 730	7, 370	3, 790	(?)	(?)	-----	52.7	4.9	94.5	-----	-----
Toys and games.....	16, 111	14, 423	14, 449	6, 789	5, 323	4, 757	3, 155	411.6	11.7	112.8	27.5	11.9	50.8
Buttons.....	15, 384	15, 706	16, 201	14, 998	12, 831	6, 982	4, 165	280.8	-2.1	12.5	12.2	83.8	67.6

See footnotes at end of Table 31, p. 146.

TABLE 31.—VALUE ADDED BY MANUFACTURE IN SELECTED INDUSTRIES, BY CENSUS YEARS, AND PER CENT OF INCREASE, BY CENSUS PERIODS: 1899 TO 1923

[Because of the omission of certain minor industries and the transfer of a few others from one group to another, some of the group totals and some of the items given in this table differ somewhat from the corresponding totals and items as they appear in the census reports. The italic figures include establishments with products valued at less than \$5,000 to avoid disclosing operations of individual establishments. As to the comparability of 1921 and 1923 figures with those of previous years, see general remarks preceding tables, par. 4, p. 125.]

INDUSTRY	VALUE ADDED BY MANUFACTURE (IN THOUSANDS OF DOLLARS)									PER CENT OF INCREASE OR DECREASE (—)							
	Excluding data for establishments with products valued at less than \$5,000			Including data for establishments with products valued at \$500 or more						24-year period, 1899-1923	Interdecennial period						
	1923	1921	1919	1919	1914	1909	1904	1899	1919-1923		1921-1923	1919-1921	1914-1919	1909-1914	1904-1909	1899-1904	
All industries.....	25,850,300	18,332,227	24,809,093	25,041,698	9,878,346	5,529,261	6,293,695	4,831,075	440.1	4.2	41.0	-26.1	153.5	15.8	85.5	30.3	
Food and kindred products.....	2,282,771	1,911,410	2,319,174	2,327,344	988,198	749,815	539,435	416,341	450.1	-1.6	19.4	-17.6	135.5	81.8	89.0	29.6	
Slaughtering and meat packing.....	409,794	332,744	463,338	493,361	210,302	164,106	108,058	101,682	302.8	-11.6	23.2	-22.2	120.3	28.2	51.9	6.3	
Bread and other bakery products.....	548,386	491,358	435,231	438,667	217,636	158,831	113,594	80,317	588.2	26.0	11.6	12.9	101.6	37.0	89.8	41.4	
Confectionery, chewing gum, and ice cream	303,581	250,975	292,621	294,438	93,041	53,645	38,277	25,290	1,107.3	3.7	21.0	-14.3	216.5	73.4	40.1	51.4	
Flour-mill and grain-mill products.....	162,606	185,930	252,447	253,253	125,410	116,008	93,062	73,279	122.6	-85.6	-12.5	-26.3	101.9	8.1	24.7	27.0	
Canning and preserving, fruits and vegetables.....	151,870	81,524	135,967	136,614	45,883	28,895	26,560	19,044	701.3	11.7	86.3	-40.0	197.7	58.8	8.8	39.5	
Sugar, beet, and cane sugar and its refining.....	98,073	63,262	144,535	144,598	52,197	52,524	42,439	30,846	370.9	-32.1	55.0	-56.2	177.0	-	23.5	103.6	
Butter and cheese.....	114,409	84,984	85,719	82,847	35,818	30,594	21,111	14,942	422.2	38.9	24.6	2.7	131.9	17.1	44.9	8.9	
Coffee and spice, roasting and grinding.....	72,684	59,810	60,846	60,893	34,226	27,328	18,941	14,414	404.9	19.5	21.5	-1.7	77.9	25.3	49.0	27.5	
Condensed milk.....	35,365	44,311	56,911	56,912	13,441	8,417	4,151	(¹)	(¹)	-37.9	-20.2	-22.1	323.4	59.7	102.8	-----	
Glucose and starch.....	42,079	29,180	55,925	55,927	12,407	11,900	7,131	9,347	349.9	-24.8	44.2	-47.8	360.8	4.3	66.9	-23.7	
Canning and preserving, fish and oysters.....	19,536	14,092	26,194	26,266	12,657	10,846	7,098	7,021	179.1	-25.4	38.6	-46.2	107.5	16.7	40.9	9.6	
Pickles, preserves, and sauces.....	64,478	40,511	52,568	52,748	25,242	15,537	13,061	9,802	574.0	22.7	38.6	-11.5	109.0	62.5	19.0	38.0	
Breadstuff preparations, such as cereals and breakfast foods.....	48,287	43,482	41,885	41,885	23,218	(¹)	(¹)	(¹)	-----	16.7	11.1	5.1	78.2	-----	-----	-----	
Chocolate and cocoa products.....	34,689	32,516	37,604	37,504	11,230	6,867	4,667	3,789	1,143.8	-7.5	6.7	-13.3	234.0	63.5	47.1	67.3	
Textiles and their products.....	4,070,582	3,156,921	3,828,934	3,834,024	1,432,495	1,323,677	908,487	739,891	450.8	6.3	28.9	-17.6	167.6	8.2	45.7	22.8	
Cotton goods and cotton lace.....	774,915	585,439	863,789	863,807	252,496	251,204	160,403	159,365	386.2	-10.3	32.4	-32.2	242.1	.5	56.6	.7	
Clothing, men's.....	593,911	487,231	556,156	557,234	228,179	223,154	170,004	131,498	352.6	6.8	21.9	-12.4	144.2	-2.1	37.1	26.3	
Clothing, women's.....	597,123	454,933	527,184	528,138	221,543	175,964	116,942	74,635	701.7	13.3	31.3	-13.7	138.4	25.9	50.5	58.7	
Woolen and worsted goods.....	439,527	355,638	399,791	399,839	132,987	148,305	110,453	90,658	385.1	10.0	23.7	-11.1	200.7	-9.1	32.6	21.8	
Silk goods, including throwsters.....	282,284	245,860	299,890	300,001	109,569	89,145	57,427	44,849	529.4	-5.9	14.9	-18.0	173.9	-22.9	55.2	23.0	

See footnotes at end of table, p. 146.

TABLE 31.—VALUE ADDED BY MANUFACTURE IN SELECTED INDUSTRIES, IN CENSUS YEARS, AND PER CENT OF INCREASE, BY CENSUS PERIODS: 1899 TO 1923—Continued

[See note at head of this table, p. 141]

INDUSTRY	VALUE ADDED BY MANUFACTURE (IN THOUSANDS OF DOLLARS)								PER CENT OF INCREASE OR DECREASE (—)							
	Excluding data for establishments with products valued at less than \$5,000			Including data for establishments with products valued at \$500 or more					24-year period, 1899-1923	Intercensal period						
	1923	1921	1919	1919	1914	1909	1904	1899		1919-1923 ¹	1921-1923	1919-1921 ¹	1914-1919 ²	1909-1914	1904-1909	1899-1904
Textiles and their products—Contd.																
Knit goods.....	384, 157	273, 618	285, 823	286, 044	112, 226	89, 902	60, 287	44, 639	716.4	27.4	33.1	-4.3	154.9	24.8	49.1	35.1
Dyeing and finishing textiles, exclusive of that done in textile mills.....	178, 660	135, 552	149, 158	149, 225	52, 587	48, 295	31, 229	27, 005	562.0	19.2	31.8	-9.1	183.8	8.9	54.6	16.6
Millinery and lace goods, not elsewhere specified.....	147, 597	137, 507	121, 855	122, 796	56, 494	40, 854	24, 519	13, 915	976.6	21.1	7.3	12.8	117.4	38.3	66.6	77.5
Carpets and rugs, other than rag.....	102, 008	53, 762	56, 196	55, 130	26, 848	31, 625	23, 639	20, 993	386.6	81.7	59.7	-4.2	109.1	-15.1	33.8	12.8
Cordage and twine.....	34, 641	28, 875	43, 638	43, 681	16, 156	12, 627	11, 921	11, 218	369.8	-29.7	20.0	-33.9	179.2	27.9	5.9	6.3
Hats, fur-felt.....	40, 805	29, 362	42, 551	42, 587	20, 403	25, 756	20, 654	14, 297	185.7	-4.1	54.8	-38.0	108.7	-20.8	24.7	44.5
Bags, other than paper, not including bags made in textile mills.....	23, 454	16, 014	38, 022	38, 041	12, 028	8, 518	6, 641	3, 213	630.5	-38.3	46.5	-57.9	216.3	41.2	28.3	106.7
Shirts.....	101, 977	80, 685	78, 045	78, 239	45, 150	37, 406	25, 332	24, 171	323.1	30.7	26.4	3.4	73.3	20.7	47.7	4.8
Furnishing goods, men's, including suspenders, garters, and elastic woven goods, and cloth gloves and mittens, other than those made in textile mills.....	65, 912	53, 058	79, 471	79, 625	30, 102	27, 344	14, 519	10, 919	604.5	-17.1	24.2	-33.2	164.5	10.1	88.3	33.0
Corsets.....	39, 632	36, 743	36, 687	36, 726	20, 964	17, 617	8, 727	8, 094	390.0	8.0	7.9	2	75.2	19.0	101.9	7.8
Collars and cuffs, men's.....	24, 296	17, 197	28, 124	28, 131	11, 965	11, 241	7, 947	9, 757	149.1	-13.6	41.3	-38.9	135.1	6.4	-41.4	-18.6
Iron and steel and their products.....	4, 661, 576	2, 598, 011	4, 582, 809	4, 587, 749	1, 460, 830	1, 364, 529	1, 008, 983	818, 528	470.0	1.7	79.4	-43.3	214.1	7.1	35.2	23.3
Crude iron and steel and rolled products, including products not made in rolling-mill establishments (though largely made therein) plus wire and wirework, not elsewhere specified.....	1, 845, 828	836, 716	1, 806, 709	1, 807, 553	555, 030	547, 911	378, 715	348, 149	430.6	2.2	120.6	-53.7	225.7	1.3	44.7	8.8
Foundry and machine-shop products ³	1, 400, 842	912, 163	1, 338, 095	1, 338, 095	508, 423	516, 000	407, 820	358, 326	515.8	4.7	53.6	-31.8	214.4	-9.3	29.0	32.7
Engines, steam, gas, and water.....	142, 455	87, 801	247, 188	247, 224	40, 661	(⁰)	(⁰)	(⁰)	-----	-42.4	62.2	-64.5	508.0	-----	-----	-----
Machine tools.....	95, 229	43, 751	153, 335	(⁰)	(⁰)	(⁰)	(⁰)	(⁰)	-----	-37.2	119.9	-71.5	-----	-----	-----	-----
Tools, not elsewhere specified.....	79, 952	44, 974	97, 998	98, 405	21, 658	19, 332	13, 157	8, 701	822.9	-18.4	77.8	-54.1	354.4	12.0	46.9	51.2
Hardware.....	129, 767	76, 944	95, 899	95, 991	44, 249	39, 397	29, 139	21, 242	511.4	35.3	68.7	-19.8	116.9	12.3	35.2	37.2
Stoves and hot-air furnaces.....	102, 404	60, 573	90, 893	90, 916	44, 139	42, 469	35, 925	(⁰)	-----	12.7	69.1	-33.4	106.0	3.9	18.2	-----
Steam fittings and steam and hot-water heating apparatus.....	138, 657	77, 154	88, 253	88, 269	37, 001	31, 550	14, 486	11, 865	1, 068.7	57.1	79.7	-12.6	138.6	17.3	117.8	22.1

Locomotives, not made by railroad companies.....	91,182	46,611	68,894	88,894	19,828	16,522	81,849	(7)	.....	8.0	95.5	-44.4	323.1	20.0	-46.1	.....
Textile machinery and parts.....	90,956	84,031	76,882	(7)	(7)	(7)	(7)	(7)	.....	19.1	8.2	10.0	.....	.....	.....	.....
Cash registers and calculating machines.....	82,623	44,080	72,641	72,649	26,528	20,156	8,859	4,754	1,637.6	18.7	87.4	-39.3	173.9	31.6	141.1	75.8
Cutlery and edge tools.....	55,817	34,367	47,079	47,153	17,355	15,654	12,587	9,699	471.4	17.5	61.0	-27.0	171.7	10.9	24.4	29.8
Ordnance and accessories.....	(7)	(7)	42,903	42,903	(7)	(7)	426	1,437	.....	.....	.....	.....	.....	.....	.....	70.4
Typewriters and supplies.....	38,521	31,020	36,573	36,594	18,999	15,642	9,770	5,530	696.8	5.3	24.2	-15.2	92.6	21.5	78.4	58.6
Plumbers' supplies, not elsewhere specified.....	81,186	45,659	82,241	82,258	24,716	22,776	11,618	7,481	685.8	161.8	87.8	84.5	80.6	6.5	96.0	35.3
Stoves, gas and oil.....	63,290	31,456	31,237	31,320	11,296	7,947	3,937	2,078	2,949.1	102.8	194.4	-31.3	177.3	90.8	70.0	59.5
Pumps, steam and other power.....	58,465	43,168	49,314	49,332	14,756	(7)	(7)	(7)	.....	98.9	85.6	.....	234.3	.....	.....	.....
Sewing machines and attachments (including cases).....	28,204	20,671	33,520	33,536	17,038	16,808	15,443	11,666	141.8	-15.9	36.4	-38.3	96.8	1.4	8.8	32.4
Screws, machine.....	23,443	10,788	25,021	25,031	4,190	1,854	1,781	1,262	1,758.4	-6.8	117.3	-56.9	497.4	126.0	6.3	39.5
Lumber and its remanufactures.....	1,888,264	1,240,747	1,688,789	1,710,074	837,361	870,441	702,246	526,602	372.8	34.8	36.2	-26.5	104.2	-3.8	24.0	38.4
Lumber and timber products.....	921,398	524,574	698,628	916,511	433,858	487,828	396,069	312,425	200.7	2.6	75.6	-41.6	111.6	-11.2	23.2	26.8
Furniture.....	11,434,259	11,296,818	11,313,456	11,309,833	444,220	425,334	366,827	270,856	509.7	38.6	46.4	-5.4	114.8	15.1	29.4	37.6
Lumber, planing-mill products, not including planing mills connected with sawmills.....	291,610	190,667	199,978	207,209	128,351	131,318	104,304	68,217	342.8	45.8	33.0	-4.7	61.4	-2.3	25.9	52.9
Boxes, wooden packing, except cigar boxes.....	68,778	49,318	74,664	74,872	23,727	26,894	23,669	15,368	348.7	-7.9	39.6	-3.9	122.0	16.8	22.5	63.4
Coffins, burial cases, and undertakers' goods.....	84,017	27,779	32,741	32,782	13,668	12,662	10,765	7,007	368.0	3.9	22.5	-15.2	150.9	4.0	16.7	53.6
Cooperage.....	24,278	16,047	26,433	29,715	17,073	17,460	13,831	16,289	58.6	-15.6	54.4	-45.5	74.0	-2.2	-4.5	12.5
Leather and its finished products.....	796,746	609,788	894,622	896,424	351,459	322,889	244,170	185,415	830.8	-10.9	60.7	-61.8	155.1	8.9	32.2	51.7
Boots and shoes, not including rubber boots and shoes.....	472,621	389,044	439,689	439,772	191,403	165,163	122,744	90,837	423.3	7.5	21.5	-11.6	129.8	15.9	34.6	35.9
Leather, tanned, curried, and finished.....	167,148	105,640	232,025	232,070	82,957	79,595	61,442	49,038	241.1	-40.7	59.2	-62.5	240.0	4.2	29.5	25.3
Saddlery and harness.....	17,653	12,499	30,061	31,270	20,473	21,047	18,281	13,932	31.7	-41.3	41.2	-58.4	52.7	-2.7	15.1	31.2
Trunks and valises.....	30,186	22,666	30,546	30,710	12,847	13,369	9,536	6,474	368.7	-1.2	33.2	-25.5	139.0	4.1	40.5	47.3
Boot and shoe cut stock, exclusive of that produced in boot and shoe factories.....	20,728	15,769	27,294	27,316	8,515	7,741	6,069	5,443	260.9	-24.1	31.4	-42.2	220.8	10.0	27.1	11.9
Paper and printing.....	2,226,926	1,817,423	1,681,498	1,705,866	875,330	728,047	560,809	393,342	474.2	32.4	22.5	2.1	94.9	20.2	32.2	40.0
Printing and publishing, newspaper and periodical.....	905,022	752,586	698,281	623,768	366,824	308,730	238,947	173,769	437.2	-46.6	-20.8	-23.7	70.0	-18.8	29.2	38.8
Printing and publishing, book and job.....	518,024	473,636	379,661	386,596	210,878	173,376	130,037	85,006	316.0	39.4	9.3	24.5	83.3	21.7	33.3	51.9
Paper and wood pulp.....	333,620	221,444	320,574	320,577	118,666	103,214	77,468	56,796	487.5	4.1	50.7	-30.9	169.5	16.4	32.0	34.4
Boxes, paper and other, not elsewhere specified.....	120,129	85,980	105,200	105,284	38,443	23,734	20,181	15,551	673.1	14.2	39.7	-18.3	173.9	33.6	42.4	29.8
Lithographing.....	60,662	48,950	45,347	45,433	25,119	22,178	16,895	14,355	323.5	33.8	23.9	7.9	80.9	13.3	31.3	17.7
Bookbinding and blank-book making.....	53,886	43,968	42,249	42,738	24,770	20,112	16,064	13,098	316.8	27.5	22.6	4.1	72.7	23.2	25.0	22.9
Paper goods, not elsewhere specified.....	49,204	34,267	41,965	41,990	20,751	16,924	9,415	6,965	607.2	17.3	43.6	-18.4	102.4	22.6	79.6	35.2

See footnotes at end of table, p. 145.

TABLE 31.—VALUE ADDED BY MANUFACTURE IN SELECTED INDUSTRIES, IN CENSUS YEARS, AND PER CENT OF INCREASE, BY CENSUS PERIODS: 1899 TO 1923—Continued

[See note at head of this table, p. 141]

INDUSTRY	VALUE ADDED BY MANUFACTURE (IN THOUSANDS OF DOLLARS)								PER CENT OF INCREASE OR DECREASE (-)							
	Excluding data for establishments with products valued at less than \$5,000			Including data for establishments with products valued at \$500 or more					24-year period, 1899-1923	Intercensal period						
	1923	1921	1919	1919	1914	1909	1904	1899		1919-1923	1921-1923	1919-1921	1914-1919	1909-1914	1904-1909	1899-1904
Liquors and beverages.....	150,537	134,657	378,539	381,119	525,891	488,183	361,405	289,083	-47.5	-60.2	11.8	64.4	-27.5	7.7	35.1	25.0
Liquors, malt, including cereal beverages.....	149,238	67,034	285,098	285,112	312,425	278,134	223,436	185,317	-73.4	-82.7	-26.5	-76.6	-9.7	12.3	24.5	20.6
Mineral and soda waters.....	79,919	54,492	64,382	66,743	31,622	27,042	20,249	14,704	463.3	24.1	46.7	-15.4	111.1	16.9	33.5	37.7
Chemicals and allied products.....	2,002,782	1,466,633	1,860,007	1,862,624	712,289	593,555	441,601	310,235	546.6	7.7	35.6	-21.1	161.5	19.6	94.9	42.3
Petroleum refining.....	368,647	345,270	384,623	384,625	71,096	37,725	35,618	21,070	1,648.8	-4.2	6.8	-10.2	441.0	88.5	5.9	69.0
Chemicals and acids ¹⁴	326,679	211,959	309,416	309,456	77,084	58,093	37,339	25,629	1,175.0	5.6	54.1	-31.5	301.5	32.7	55.6	45.7
Druggists' preparations, patent medicines and compounds, perfumery and cosmetics, and drug grinding.....	261,063	201,260	220,095	221,646	103,897	94,118	80,063	57,835	354.5	18.6	29.7	-8.6	113.3	10.4	17.6	38.4
Gas, illuminating and heating.....	162,893	52,622	92,243	92,249	30,137	31,672	21,844	15,919	369.9	50.8	23.9	21.7	19.7	25.4	30.0	59.6
Oils.....	74,289	54,539	145,050	145,117	48,848	43,923	29,797	24,312	205.6	-48.8	36.2	-62.4	197.1	11.2	47.4	22.6
Paint and varnish.....	155,180	102,912	123,168	123,234	57,159	45,874	31,014	24,824	525.5	26.0	50.8	-16.4	115.6	24.6	47.9	24.9
Fertilizers.....	55,109	35,397	96,082	96,103	45,241	34,438	17,253	15,699	251.4	-42.6	55.7	-63.2	112.4	31.4	99.6	9.9
Coke, not including gas-house coke.....	162,893	52,622	92,243	92,249	30,137	31,672	21,844	15,919	923.4	76.6	210.1	-43.1	206.1	-4.8	45.0	37.2
Soap.....	102,857	89,839	78,159	78,221	39,075	39,179	24,649	20,088	412.5	31.6	14.5	14.9	100.2	-3.3	58.9	22.7
Explosives.....	35,533	28,531	46,594	46,594	15,806	17,323	12,399	6,790	423.3	-23.7	24.5	-32.7	194.6	-6.8	39.8	62.6
Turpentine and rosin.....	26,194	17,102	38,937	39,121	15,454	20,384	20,162	14,159	85.9	-82.7	53.2	-56.1	153.1	-24.2	1.1	42.4
Stone, clay, and glass products.....	971,751	597,125	672,206	676,958	375,427	347,945	268,061	185,513	427.6	44.6	62.7	-11.2	80.3	7.9	29.8	44.5
Glass.....	196,183	127,435	171,104	171,104	77,068	59,976	53,462	39,809	398.0	14.7	53.9	-25.5	122.0	28.5	12.2	34.3
Brick, tile, pottery, and other clay products ¹⁵	312,352	185,762	195,421	196,148	118,753	123,248	102,445	72,613	331.6	59.8	68.1	-4.9	65.2	-3.6	20.3	41.1
Cement.....	163,332	101,267	96,756	95,755	49,769	33,861	17,658	(17)	-----	70.6	61.3	5.8	92.4	47.0	91.8	-----
Marble and stone work.....	124,655	84,174	78,155	79,941	69,253	75,696	58,275	42,121	201.6	59.5	48.1	7.7	15.0	-8.5	29.9	38.4
Minerals and earths, ground or otherwise treated.....	24,008	14,652	29,726	29,797	5,746	2,639	2,570	2,071	964.7	-26.0	50.2	-50.7	418.6	117.7	2.7	24.1

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Nonferrous metals and their products																
Brass, bronze, and copper products	179,714	84,277	177,318	177,489	46,712	50,761	36,764	27,465	555.2	1.4	113.2	-52.5	280.0	-8.0	38.1	33.8
Smelting and refining	148,218	66,818	158,009	132,908	105,045	74,603	72,318	81,016	83.0	11.5	121.8	-49.7	26.5	40.8	3.2	-10.7
Jewelry	90,051	69,172	92,687	93,498	41,890	43,675	29,049	23,894	280.3	-2.8	30.2	-25.4	123.2	-4.1	50.3	21.6
Copper, tin, and sheet-iron work	95,401	72,880	77,268	79,416	44,717	42,455	28,934	28,544	243.6	23.5	80.9	-5.7	77.6	5.3	46.7	1.4
Stamped and enameled ware, not elsewhere specified	86,405	52,352	78,178	78,197	32,649	25,246	11,439	7,213	1,097.9	10.5	65.0	-33.0	189.5	29.3	20.8	58.5
Tinware, not elsewhere specified	79,991	56,557	68,749	68,793	28,000	19,541	15,645	(?)	(?)	16.4	34.3	-13.4	144.9	43.7	24.9	
Watches	21,794	19,239	25,651	25,651	11,608	9,585	9,607	532	294.1	-15.0	13.3	-25.0	121.0	21.1	-	73.9
Aluminum manufactures	40,371	19,869	28,001	28,008	5,176	(?)	(?)	(?)	(?)	54.9	102.7	-23.6	402.4			
Tobacco manufactures																
Tobacco, cigars and cigarettes	528,327	439,801	522,453	529,365	283,031	239,509	205,026	170,847	213.2	1.1	20.1	-15.8	87.0	13.2	16.8	20.0
Tobacco, chewing and smoking, and snuff	451,735	354,537	413,635	420,365	184,354	157,398	133,212	102,131	349.6	9.2	27.4	-14.3	128.0	17.1	18.1	80.4
	70,592	85,294	108,817	109,000	98,677	82,141	71,814	68,716	11.7	-29.6	-10.2	-21.6	10.5	20.1	14.4	4.5
Vehicles for land transportation, including railroad repair shops																
Automobiles	2,598,786	1,693,602	2,227,589	2,367,303	739,007	478,209	309,627	237,907	1,061.3	16.7	53.4	-24.0	220.3	54.5	54.4	30.1
Steam-railroad repair shops	1,015,865	564,325	809,243	809,252	210,632	86,092	14,987	2,944	34,397.7	25.5	80.0	-30.3	284.2	144.7	474.4	409.1
Automobile bodies and parts	834,303	707,019	763,353	763,432	270,212	206,188	158,670	108,642	668.1	9.3	18.0	-7.4	182.5	81.1	29.9	46.0
Cars, steam-railroad, not including operations of railroad companies	449,006	194,052	329,459	330,143	65,991	31,465	1,895	(?)	(?)	36.3	131.4	-41.1	400.3	109.7	1,560.4	
Automobile repairing	178,929	121,622	182,138	182,138	62,876	44,977	35,518	28,767	521.7	-1.8	47.1	-33.2	101.1	39.1	26.6	23.5
Electric-railroad repair shops	(?)	(?)	(?)	(?)	(?)	(?)	(?)	(?)	(?)				559.7			
Carriages and wagons, including repairs	54,431	53,782	43,059	43,186	20,967	16,795	7,974	5,034	984.4	28.4	1.3	24.8	106.0	24.3	110.8	58.4
Motor cycles, bicycles, and parts	17,305	15,583	41,401	43,101	54,524	61,477	64,118	59,511	-69.7	-68.2	11.1	-62.4	-21.6	-11.3	-4.1	7.7
	14,250	12,775	27,111	27,120	11,806	5,816	2,525	15,124	-5.7	-47.4	11.6	-52.0	139.9	101.3	122.4	-88.3
Miscellaneous industries																
Shipbuilding, steel	2,674,125	2,070,269	3,306,037	3,312,589	903,339	672,169	400,990	338,914	690.7	-19.1	29.2	-37.4	268.7	84.4	36.9	44.9
Electrical machinery, apparatus, and supplies	105,798	202,397	812,734	812,737	36,947	27,901	30,831	26,782	294.5	-87.0	-47.7	-75.1	2,099.7	32.4	9.5	15.1
Rubber tires, tubes, and rubber goods, not elsewhere specified, including belting and hose, rubber	744,375	489,915	572,719	572,870	180,442	112,743	78,972	42,976	1,632.9	30.0	51.9	-14.5	217.5	60.0	52.4	72.1
Agricultural implements	370,884	285,124	477,285	477,302	108,093	54,506	29,949	21,233	1,675.9	-21.0	39.9	-44.5	341.6	98.3	82.0	41.0
Shipbuilding, wooden, including boat building	-87,794	76,550	160,263	160,389	90,578	86,022	63,726	57,262	53.5	-45.2	14.7	-52.2	77.1	5.3	35.0	11.3
Photographs and graphophones	22,876	29,069	98,669	99,102	13,138	14,245	14,475	14,276	61.1	-76.8	-21.3	-70.6	654.3	-7.8	-1.6	1.4
Ice, manufactured	52,061	37,156	98,300	98,508	20,063	3,627	6,076	1,418	4,276.0	-87.2	8.6	-42.2	332.4	125.6	42.0	328.5
Fur goods	117,968	107,715	89,470	94,127	42,831	31,636	10,469	1,034.7	26.2	9.6	15.2	120.8	34.8	77.9	69.8	
Boots and shoes, rubber	71,881	64,829	67,106	67,541	19,786	24,161	15,917	11,618	622.6	7.1	31.1	-18.3	241.4	-18.1	51.8	37.0
Photographic materials	36,471	61,900	66,570	66,570	29,866	20,144	38,065	18,407	369.8	29.9	39.7	-7.0	122.9	48.3	-47.1	104.8
Musical instruments, pianos	108,336	93,997	71,659	71,712	27,602	15,859	8,861	4,421	2,352.6	51.2	15.3	31.1	160.8	73.4	79.0	100.4
	65,981	84,988	52,719	52,723	33,684	33,750	37,334	23,654	141.0	8.1	62.0	-33.6	66.5	-	23.6	15.6

See footnotes at end of table, p. 146.

APPENDIX B—GENERAL TABLES
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TABLE 31.—VALUE ADDED BY MANUFACTURE IN SELECTED INDUSTRIES, IN CENSUS YEARS, AND PER CENT OF INCREASE, BY CENSUS PERIODS: 1899 TO 1923—Continued.

[See note at head of this table, p. 141]

INDUSTRY	VALUE ADDED BY MANUFACTURE (IN THOUSANDS OF DOLLARS)								PER CENT OF INCREASE OR DECREASE (—)								
	Excluding data for establishments with products valued at less than \$5,000			Including data for establishments with products valued at \$500 or more					24-year period, 1899-1923	Inter-censal period							
	1923	1921	1919	1919	1914	1909	1904	1899		1919-1923 ¹	1921-1923	1919-1921 ¹	1914-1919 ²	1909-1914	1904-1909	1899-1904	
Miscellaneous industries—Contd.																	
Ammunition.....	23,768	16,344	49,936	49,936	14,563	10,601	9,330	5,591	-325.1	-52.4	45.4	-67.3	242.9	87.4	13.6	66.9	
Instruments, professional and scientific.....	45,034	28,806	38,532	38,642	11,913	7,586	4,028	3,490	1,194.3	-16.9	56.3	-25.2	224.4	87.0	88.3	15.4	
Optical goods.....	35,350	27,772	35,828	36,933	11,582	7,548	3,797	3,110	1,040.4	-1.3	27.3	-22.5	210.2	63.9	98.8	22.1	
Mattresses and bed springs, not elsewhere specified.....	46,085	32,568	34,489	34,744	16,318	15,300	12,429	7,729	500.5	33.6	41.5	-5.6	112.9	6.7	28.1	60.8	
Roofing materials.....	28,822	31,180	33,276	33,307	10,373	6,746	9,029	6,805	323.8	-13.4	-7.6	-6.3	221.1	63.8	-25.3	32.7	
Fancy articles, not elsewhere specified.....	34,677	27,022	31,276	31,463	9,230	6,967	7,135	4,985	600.0	-10.9	28.3	-13.6	240.9	32.5	-2.4	43.1	
Paving materials.....	46,614	36,655	29,371	29,721	21,515	2,751	2,367	2,354	1,903.7	58.7	27.2	-24.8	38.1	652.1	16.2	6	
Stationery goods, not elsewhere specified.....	42,975	34,991	30,150	30,203	11,140	8,903	4,947	2,938	1,364.9	-42.5	22.8	16.1	171.1	25.1	80.0	68.4	
Signs and advertising novelties.....	44,533	34,537	26,813	27,271	15,733	8,837	(?)	(?)		66.3	29.1	28.8	73.3	78.0			
Toys and games.....	32,237	20,922	25,647	25,816	7,978	4,710	3,289	2,345	1,283.8	25.7	54.1	-18.4	223.6	69.4	43.2	40.3	
Buttons.....	19,550	16,128	24,850	25,095	12,010	13,167	6,990	4,893	303.7	-21.3	21.2	-35.1	109.0	-8.8	88.4	42.9	

¹ Based on figures shown in left-hand column for 1919.

² The figures shown in the right-hand column for 1919 were used in calculating the percentages in this column.

³ Prior to 1914, the manufacture of ice cream was not included except in cases where it was made a subsidiary product in the manufacture of confectionery or some other class of product for which statistics were collected.

⁴ "Condensed milk" included in "Butter and cheese."

⁵ "Roasting and grinding of peanuts," included in "Coffee and spice, roasting and grinding."

⁶ Title changed to "Corn sirup, corn oil, and starch."

⁷ Not shown separately.

⁸ The following industries, formerly a part of "Foundry and machine-shop products," are now treated as separate industries: "Machine tools," "Steel barrels, drums, and tanks," "Textile machinery and parts," and the tempering and welding of iron and steel prior to 1919; "Engine—steam, gas, and water," and "Pumps, steam and power," prior to 1914; "Automobile repairing" in 1909 and 1904; "Iron and steel—cast-iron pipe," prior to 1909; "Locomotives," and "Stoves and furnaces," prior to 1904. The percentages have been computed from comparable figures. (See p. 124.)

⁹ Included in "Foundry and machine-shop products."

¹⁰ "Pumps, not including power pumps" included in "Pumps, steam and other power."

¹¹ Includes "Show cases."

¹² Includes "Window and door screens and weather strips."

¹³ "Cereal beverages" only.

¹⁴ "Coal-tar products" included 1899-1923, and "Ferro-alloys (electric-furnace)" for 1923, 1921, and 1914.

¹⁵ Includes "Candles."

¹⁶ Includes "Sand-lime brick."

¹⁷ "Cement" included with "Lime."

¹⁸ Includes "Artificial stone products."

¹⁹ Because of a change in classification, statistics not comparable.

²⁰ Not called for on schedule.

²¹ Repairing included prior to 1923.

²² Includes "Airplanes, seaplanes, airships, and parts."

²³ Includes "Photographic apparatus," and "Motion pictures."

²⁴ Includes "Pianos," "Organs," and "Organ materials."

TABLE 32.—AVERAGE NUMBER OF WAGE EARNERS EMPLOYED IN INDIVIDUAL INDUSTRIES, BY CENSUS YEARS, AND PER CENT OF INCREASE, BY CENSUS PERIODS: 1899 TO 1923

[The italic figures include establishments with products valued at less than \$5,000 to avoid disclosing operations of individual establishments. As to the comparability of 1921 and 1923 figures with those of previous years, see general remarks preceding tables, par. 4, p. 125.]

INDUSTRY	AVERAGE NUMBER OF WAGE EARNERS									PER CENT OF INCREASE OR DECREASE (-)							
	Excluding data for establishments with products valued at less than \$5,000			Including data for establishments with products valued at \$500 or more						24-year period, 1899-1923	Intercensal period						
	1923	1921	1919	1919	1914	1909	1904	1899	1919-1923		1921-1923	1919-1921	1914-1919	1909-1914	1904-1909	1899-1904	
All industries.....	8,778,168	8,046,870	9,000,059	9,096,872	7,036,247	6,615,046	5,468,883	4,712,763	88.2	-2.5	26.4	-22.8	26.3	6.4	21.0	16.0	
Agricultural implements.....	30,862	30,869	54,294	54,866	48,460	50,551	47,894	46,882	-38.5	-43.0	2.0	-44.1	12.2	-4.1	6.7	1.7	
Airplanes, seaplanes, airships, and parts.....	2,901	1,895	5,525	3,543	1,168	(¹)	(¹)	(¹)	-	-18.1	108.0	-70.3	2,068.9	-	-	-	
Aluminum manufactures.....	16,228	9,584	11,402	11,402	4,614	(¹)	(¹)	(¹)	-	42.9	69.9	-15.9	147.9	-	-	-	
Ammunition.....	10,470	8,370	22,810	22,810	11,493	8,713	7,410	6,231	100.2	-54.1	25.1	-63.3	99.5	31.9	17.6	41.7	
Artificial flowers.....	4,696	8,888	4,126	4,138	4,808	4,835	4,843	5,331	-	-11.7	13.8	20.9	-5.9	-6	11.8	-18.5	
Artificial limbs.....	493	600	652	671	488	432	342	249	108.7	-24.4	-1.4	-28.3	37.5	13.0	26.3	37.8	
Artificial stone products.....	10,769	6,984	7,413	8,378	10,255	9,957	3,506	(¹)	-	45.2	54.2	-5.8	-18.3	3.0	297.3	-	
Artists' materials.....	1,411	1,008	915	926	604	358	274	200	613.9	54.2	40.0	10.2	33.8	-8.2	140.1	87.0	
Asbestos products, not including steam packing.....	5,078	2,026	3,650	3,654	922	(¹)	(¹)	(¹)	-	86.8	200.0	-44.5	279.8	-	-	-	
Automobile bodies and parts.....	163,530	69,119	132,323	132,556	47,765	24,427	1,810	(¹)	-	23.0	136.6	-47.8	177.4	95.0	1,249.6	-	
Automobile repairing.....	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	-	-	-	-	-	-	-	-	
Automobiles.....	241,356	143,658	210,558	210,558	79,307	51,294	10,239	2,241	10,667.8	14.6	68.0	-81.5	165.5	54.6	401.0	856.9	
Awnings, tents, and sails.....	5,958	5,070	5,898	6,028	5,078	4,242	3,432	3,335	82.5	1.0	17.5	-14.0	18.8	19.6	23.6	2.9	
Babbitt metal and solder.....	1,497	1,372	2,369	2,372	1,065	897	669	535	180.2	-36.8	9.1	-42.1	129.2	15.4	57.6	6.4	
Bags, other than paper, not including bags made in textile mills.....	11,548	10,324	10,746	10,756	9,358	7,968	5,722	3,922	194.8	7.5	11.9	-3.9	14.9	17.4	39.3	45.9	
Bags, paper, exclusive of those made in paper mills.....	4,686	8,707	4,161	4,168	3,505	3,212	2,473	1,989	186.0	12.6	26.4	-10.9	18.9	9.1	29.9	24.8	
Baking powders and yeast.....	5,507	3,537	3,318	3,331	2,270	2,153	2,449	1,938	31.7	5.7	-1.4	7.2	45.7	5.3	-13.0	23.4	
Baskets, and rattan and willow ware.....	6,338	4,795	4,456	4,533	4,574	4,664	5,108	4,217	40.8	31.0	21.8	-7.8	-	-1.9	-8.7	21.1	
Bells.....	218	203	237	237	445	414	5,530	663	-67.2	-8.0	7.4	-14.8	-46.7	7.5	-21.9	-20.1	
Belting and hose, rubber.....	(¹)	(¹)	(¹)	5,236	5,115	5,131	8,698	1,771	-	-	-	-	-	-3	88.8	108.8	
Belting and hose, woven, other than rubber.....	336	1,119	2,479	2,479	952	1,198	692	254	31.8	-36.8	-70.1	-54.9	160.4	-16.9	71.7	172.4	
Belting, leather.....	3,160	2,268	2,761	2,765	2,951	3,006	2,092	1,667	90.0	14.5	39.3	-17.9	-6.8	-1.8	43.7	25.5	
Billiard tables, bowling alleys, and accessories.....	876	925	2,101	2,101	1,433	1,495	796	453	93.4	-58.3	-5.8	-58.0	44.6	-2.8	87.8	75.7	
Blacking, stains, and dressings.....	2,160	1,666	2,439	2,455	1,766	1,438	1,218	1,250	74.4	-11.2	80.0	-31.7	39.0	22.8	15.1	2.6	

See footnotes at end of Table 34, p. 177.

TABLE 32.—AVERAGE NUMBER OF WAGE EARNERS EMPLOYED IN INDIVIDUAL INDUSTRIES, BY CENSUS YEARS, AND PER CENT OF INCREASE, BY CENSUS PERIODS: 1899 TO 1923—Continued

[See note at head of this table, p. 147]

INDUSTRY	AVERAGE NUMBER OF WAGE EARNERS								PER CENT OF INCREASE OR DECREASE (—)							
	Excluding data for establishments with products valued at less than \$5,000			Including data for establishments with products valued at \$500 or more					24-year period, 1899-1923	Intercensal period						
	1923	1921	1919	1919	1914	1909	1904	1899		1919-1923	1921-1923	1919-1921	1914-1919	1909-1914	1904-1909	1899-1904
Bluing.....	188	228	355	360	254	313	206	220	-13.3	-47.0	-16.8	-36.3	41.7	-18.8	51.9	-6.4
Bone, carbon, and lamp black.....	1,303	826	676	675	339	228	200	85	1,432.6	93.0	57.7	22.4	99.1	48.7	14.0	135.3
Bookbinding and blank-book making.....	20,728	17,465	20,126	20,361	21,693	19,938	17,713	15,971	31.3	3.0	18.7	-13.2	-6.1	8.8	12.6	10.9
Boot and shoe cut stock, exclusive of those produced in boot and shoe factories.....	7,133	7,049	9,703	9,715	7,819	6,693	5,936	6,155	16.0	-26.5	1.2	-27.4	24.2	16.8	12.8	-3.6
Boot and shoe findings, exclusive of that produced in boot and shoe factories.....	7,865	5,917	8,906	8,941	6,714	6,488	4,434	3,246	143.2	-11.7	32.9	-33.6	33.2	3.5	46.3	36.6
Boots and shoes, not including rubber boots and shoes.....	225,216	183,502	210,991	211,049	191,555	185,116	149,924	141,830	58.8	6.7	22.7	-13.0	10.2	3.6	23.5	8.7
Boots and shoes, rubber.....	29,435	23,888	32,875	32,875	18,687	17,612	18,991	14,391	104.4	-10.5	23.2	-27.3	75.0	6.1	-7.3	32.0
Boxes, cigar.....	5,101	4,657	5,189	5,218	5,835	6,115	6,282	4,609	11.3	-1.7	9.5	-10.3	-10.6	-4.6	-2.7	36.3
Boxes, paper and other, not elsewhere specified.....	56,855	46,242	55,778	55,862	45,311	39,514	32,082	27,653	105.8	1.9	23.0	-17.1	23.3	14.7	23.2	16.0
Boxes, wooden packing, except cigar boxes.....	39,154	32,595	42,325	42,445	38,548	35,449	30,329	21,999	78.4	-7.5	20.1	-23.0	10.1	8.7	16.9	37.9
Brass, bronze, and copper products.....	64,713	39,830	74,998	75,051	40,306	40,618	33,168	27,166	138.4	-13.7	62.5	-46.9	86.2	-1.8	22.5	22.1
Bread and other bakery products.....	162,613	148,500	140,477	141,692	124,052	100,216	81,278	60,192	172.4	15.8	9.5	6.7	14.1	23.8	23.3	35.0
Brick and tile, terra-cotta, and fire-clay products.....	102,723	68,579	76,347	76,915	100,182	117,528	116,021	116,979	21.0	34.5	49.4	-9.9	-23.2	-----	15.9	6.5
Brooms.....	4,730	4,302	6,206	6,313	5,642	5,199	11,425	10,346	-----	-23.8	9.9	-30.7	11.9	-----	8.5	-----
Brushes.....	5,719	6,460	7,925	7,868	7,213	6,954	-----	-----	-----	10.0	35.0	-18.5	10.5	3.7	-----	-----
Butter.....	20,782	18,506	17,603	17,641	14,149	11,563	9,530	112,799	-----	18.1	12.8	6.1	24.7	22.4	21.3	-----
Butter, reworking.....	(0)	47	47	304	255	404	148	-----	-----	-----	-----	-----	-----	-----	-----	-----
Buttons.....	11,980	9,686	15,430	15,877	14,511	16,427	10,567	8,685	37.8	-23.2	22.4	-37.3	7.3	-11.7	55.5	21.7
Candles.....	746	609	537	541	387	439	816	-----	-----	38.9	22.5	13.4	39.8	-28.2	-33.9	-----
Canning and preserving, fish.....	8,030	6,916	11,188	11,248	9,069	7,260	5,154	11,263	-28.3	-28.2	16.1	-38.2	24.0	24.9	40.9	-54.2
Canning and preserving, fruits and vegetables.....	57,178	38,668	59,771	60,865	50,325	40,492	39,968	37,189	56.7	-4.3	47.9	-35.3	20.9	24.3	1.3	7.5
Canning and preserving, oysters.....	1,114	1,030	1,176	1,189	2,087	2,666	3,291	1,335	5.0	-5.3	8.2	-12.4	-43.0	-21.7	-19.0	146.5
Card cutting and designing.....	1,207	762	1,140	1,148	517	525	696	325	274.0	5.9	58.4	-33.2	122.1	-1.5	-24.6	114.2
Cardboard, not made in paper mills.....	1,176	1,157	1,425	1,425	1,519	1,569	686	626	87.8	-17.5	1.6	-18.8	23.0	25.3	57.8	-6.4
Carpets and rugs, other than rag.....	35,217	22,922	22,933	22,933	31,309	33,307	33,221	28,411	24.0	53.6	53.6	0.0	-26.8	-6.0	3.3	16.9
Carpets, rag.....	2,041	1,576	1,868	2,016	2,130	1,982	1,736	1,318	67.2	9.3	29.5	-16.6	-5.4	7.5	14.2	31.7
Carriage and wagon materials.....	1,983	2,747	6,480	6,509	11,087	17,388	17,160	15,357	-87.1	-69.4	-27.8	-57.6	-41.3	-36.2	1.3	11.6
Carriages and sleds, children's.....	8,324	5,460	6,678	6,686	5,900	4,300	4,003	2,726	205.6	24.6	52.5	-18.2	13.3	11.3	32.4	46.8
Carriages and wagons, including repairs.....	7,740	7,797	17,583	18,173	41,304	52,540	60,722	58,425	-86.8	-56.0	-7.1	-55.7	-56.0	-21.4	-13.5	3.9

Cars and general shop construction and repairs by electric-railroad companies.....	34,925	33,279	31,155	31,272	26,384	22,418	11,052	7,025	399.1	12.1	4.9	6.8	18.5	17.7	102.5	57.8
Cars and general shop construction and repairs by steam-railroad companies.....	488,505	385,006	484,380	484,437	339,518	282,174	236,870	173,595	181.6	.9	26.9	-20.5	42.7	20.3	19.1	36.4
Cars, electric-railroad, not including operations of railroad companies.....	3,978	2,912	2,920	2,920	3,840	3,583	4,730	3,585	11.0	38.2	36.6	-.3	-24.0	7.2	-24.2	31.9
Cars, steam-railroad, not including operations of railroad companies.....	76,612	45,121	52,296	52,296	54,288	43,086	34,058	33,453	120.0	46.5	69.8	-13.7	-3.7	26.0	24.5	1.8
Cash registers and calculating machines.....	14,971	9,786	16,638	16,544	8,958	7,465	4,079	2,067	424.4	53.0	-40.8	84.7	20.0	83.0	97.3	
Cement.....	35,091	28,231	25,624	25,624	27,916	26,775	17,478	(17)	201.2	37.5	33.8	2.8	-8.6	4.9	53.2	
Charcoal, not including production in the lumber and wood distillation industries.....	101	269	194	209	228	631	923	1,786	-93.9	-47.9	-62.5	38.7	-8.3	-63.9	-31.6	-48.8
Cheese.....	4,383	3,498	3,961	3,967	2,908	2,704	2,652	(14)	10.7	25.3	-11.7	37.4	7.5	2.0		
Chemicals ¹²	84,398	39,474	55,556	71,249	32,311	23,729	10,847	15,163	444.6	15.9	63.1	-28.9	120.5	36.2	18.6	30.9
Chewing gum.....	2,052	1,994	3,181	3,190	2,048	(20)	(20)	(20)		-35.5	2.9	-37.3	55.8			
China decorating, not including that done in potteries.....	355	325	231	244	295	328	225	298	25.9	53.7	9.2	40.7	-17.9	-10.1	45.8	-24.5
Chocolate and cocoa products.....	6,876	6,652	9,083	9,083	4,180	2,826	2,090	1,314	423.2	-24.3	3.4	-26.3	119.3	47.2	35.2	59.1
Cleansing and polishing preparations.....	2,376	1,687	1,900	1,955	1,239	979	564	508	381.0	25.0	40.8	-11.2	87.8	26.6	73.6	11.0
Clocks.....	9,359	6,638	8,248	8,252	6,764	7,961	7,249	6,037	55.2	13.5	43.2	-20.8	22.2	-15.2	9.8	20.1
Cloth, sponging and refinishing.....	1,225	1,123	1,203	1,206	901	975	795	634	129.9	1.8	9.1	-6.7	33.9	-7.6	22.6	48.9
Clothing, horse.....	841	705	758	768	1,669	1,648	1,063	675	47.7	10.9	19.3	-7.0	54.1	1.3	55.0	84.9
Clothing, men's.....	194,820	165,206	174,588	175,270	173,747	191,183	137,190	120,927	91.7	11.6	17.9	-5.4	9.9	-9.1	39.4	13.4
Clothing, men's, buttonholes.....	334	329	448	448	454	672	830	903	944	-81.7	1.6	-25.6	-28.0	-19.0	-8.1	-4.3
Clothing, women's.....	133,195	144,856	164,993	165,494	168,907	183,743	115,705	83,739	59.6	-19.3	-8.1	-12.2	-1.9	9.9	32.9	38.2
Coal-tar products.....	10,499	6,832	15,646	(15)	(15)	(15)	(15)	(15)		-52.9	53.7	-55.3				
Coffee and spice, roasting and grinding.....	9,665	8,882	10,523	10,540	8,549	7,490	5,959	6,387		-8.2	8.8	-15.9	23.3	14.1	25.7	
Coffins, burial cases, and undertakers' goods.....	11,593	9,958	11,880	11,890	9,468	9,339	8,468	6,840	69.6	-2.4	16.4	-16.2	25.6	1.4	10.3	23.8
Coke, not including gas-works coke.....	28,364	16,070	29,314	29,319	21,107	23,273	18,981	16,999	67.0	-3.2	76.5	-45.2	38.9	-27.9	54.2	11.7
Collars and cuffs, men's.....	10,449	9,285	11,096	11,103	10,100	12,421	10,786	17,135	-39.0	12.5	-16.3	9.9	-18.7	15.2	-37.1	
Combs and hairpins, not made from metal or rubber.....	2,144	1,821	2,229	2,229	2,773	4,555	1,806	1,399	53.2	-3.8	62.3	-40.7	-19.6	-39.1	152.2	29.1
Condensed milk.....	8,723	9,462	13,676	13,676	6,062	4,164	3,375	(14)		-39.2	-7.8	-30.8	127.9	44.1	23.4	
Confectionery and ice cream.....	96,617	81,213	95,058	95,048	61,938	44,638	36,896	29,806	224.3	-8.9	6.9	-14.6	54.3		33.2	34.9
Cooperage.....	12,028	9,578	13,071	13,219	17,128	19,489	21,149	22,117	-45.0	-8.0	21.8	-24.4	-22.8	-12.1	-7.8	-4.4
Copper, tin, and sheet-iron work.....	28,852	25,172	26,956	27,640	28,714	28,448	22,556	28,315	4.4	7.0	14.6	-6.6	-3.7	9.9	26.1	-20.3
Cordage and twine.....	16,382	14,593	17,617	17,622	15,769	14,629	14,614	13,114	25.0	-7.0	12.3	-17.2	11.8	7.8	11.1	11.4
Cordials and flavoring sirups.....	1,970	1,408	1,891	1,898	929	1,095	680	862	446.9	41.6	39.9	1.2	50.6	-15.2	65.9	82.3
Cork, cutting.....	3,478	2,774	3,541	3,545	3,454	3,142	2,895	2,340	48.8	-1.8	25.4	-21.7	2.6	9.9	8.5	23.7
Corsets.....	16,104	17,084	18,391	18,415	20,496	17,564	10,975	12,267	31.2	-12.4	-5.7	-7.1	-10.2	16.7	60.0	-10.8
Cotton goods.....	471,503	412,058	430,949	430,968	379,396	371,182	310,458	297,929		9.4	14.4	-4.4	13.6	4.2	19.6	4.2
Cotton lace.....	7,307	6,396	6,490	6,490	7,440	7,068	5,416	4,932		12.6	14.2	-1.4	-12.3			
Cotton small wares.....	16,387	7,883	9,396	9,396	6,596	6,596	6,771	6,771		74.4	152.6	-21.6	42.4	-14.3	42.1	9.8
Crucibles.....	516	412	396	392	336	302	280	280		-23.1	-39.2	51.4	180.8	-9.9	10.6	53.3
Cutlery and edge tools.....	16,671	14,345	19,822	19,859	16,561	16,997	14,545	12,028	38.8	-15.9	16.2	-27.6	19.9	-2.6	16.9	20.9
Dairymen's, poultrymen's, and apiarists' supplies.....	5,783	3,941	6,400	6,437	5,551	4,871	2,608	(9)		-9.6	50.6	-40.0	16.0	14.0	66.8	
Dental goods.....	4,608	4,137	5,195	5,195	3,080	1,573	1,922	1,017	355.7	-11.3	11.4	-20.0	69.6	95.8	-18.2	89.0
Drug grinding.....	750	840	1,347	1,347	1,059	922	981	644	16.5	-44.3	-10.7	-37.6	27.2	14.9	-6.0	53.3
Druggists' preparations.....	8,996	10,838	15,630	15,636	9,277	9,490	7,410	6,658		-42.8	-17.8	-30.2	67.8	-2.2	28.1	31.0

See footnotes at end of Table 24, p. 177.

TABLE 32.—AVERAGE NUMBER OF WAGE EARNERS EMPLOYED IN INDIVIDUAL INDUSTRIES, BY CENSUS YEARS, AND PER CENT OF INCREASE, BY CENSUS PERIODS: 1899 TO 1923—Continued

[See note at head of this table, p. 147]

INDUSTRY	AVERAGE NUMBER OF WAGE EARNERS								PER CENT OF INCREASE OR DECREASE (-)							
	Excluding data for establishments with products valued at less than \$5,000			Including data for establishments with products valued at \$500 or more					24-year period, 1899-1923	Intercensal period						
	1923	1921	1919	1919	1914	1909	1904	1899		1919-1923 ¹	1921-1923 ¹	1919-1921 ¹	1914-1919 ¹	1909-1914 ¹	1904-1909 ¹	1899-1904 ¹
Dyeing and finishing textiles, exclusive of that done in textile mills	63,414	51,510	55,914	55,985	48,487	44,046	35,565	29,776	113.2	13.4	23.1	-7.9	15.5	10.0	23.8	19.4
Dyestuffs and extracts, natural	3,243	2,993	4,341	4,342	2,839	2,397	2,707	1,647	96.9	-25.3	8.4	-31.1	52.9	18.4	-11.5	64.4
Electrical machinery, apparatus, and supplies	234,892	161,204	212,294	212,374	118,078	87,258	60,466	42,013	459.1	10.6	45.7	-24.1	79.9	35.3	44.3	43.9
Electroplating	3,374	2,460	2,934	3,024	2,584	2,717	1,943	2,036	66.8	15.0	37.2	-16.2	17.0	-4.9	39.8	-6.9
Emery and other abrasive wheels	3,595	2,649	5,597	5,501	2,387	1,943	801	546	553.6	-35.8	26.2	-49.1	134.6	22.9	142.6	46.7
Enameling	1,009	456	678	684	1,314	1,945	937	7,675	(10)	49.3	121.3	-32.5	-47.2	-32.4	-79.6	24.3
Engines, steam, gas, and water	48,495	35,567	77,598	77,617	29,657	(10)	(10)	(10)	(10)	-37.5	36.3	-54.2	161.7	-	-	-
Engravers' materials	224	184	171	174	106	129	49	76	199.9	31.0	21.7	7.6	64.2	-17.8	163.3	-35.5
Engraving and diesinking	1,887	1,276	1,792	1,878	1,536	1,308	1,573	964	105.1	5.3	47.9	-28.8	22.3	17.4	-16.8	63.2
Engraving, steel and copperplate, including plate printing	7,529	7,156	6,978	7,014	6,859	5,326	3,580	3,303	129.2	7.9	5.2	2.6	2.3	28.8	48.8	8.4
Engraving, wood	141	131	225	235	302	318	338	336	-56.2	-37.3	7.6	-41.8	22.2	-5.0	-5.9	6.6
Envelopes	9,241	7,944	8,169	8,129	6,970	5,303	4,298	2,984	209.7	13.7	16.3	-2.3	16.6	31.4	23.4	44.0
Explosives	6,388	4,478	9,249	9,249	6,306	6,274	5,800	4,502	41.9	-30.9	42.7	-51.6	46.7	5.6	8.2	28.8
Fancy articles, not elsewhere specified	13,522	11,534	13,874	13,961	7,399	6,729	6,624	5,718	138.1	-2.5	17.2	-16.9	88.7	10.0	1.6	15.8
Feathers and plumes	1,712	2,064	3,494	3,504	4,483	5,181	(9)	(9)	(9)	-51.0	-17.1	-40.9	-21.8	-13.5	-	-
Felt goods	5,735	4,180	6,256	6,236	4,035	3,544	3,254	2,688	113.3	9.5	37.2	-20.2	29.8	13.9	8.9	21.1
Ferro-alloys	(10)	(10)	2,344	2,344	(10)	(10)	(10)	(10)	(10)	-	-	-	-	-	-	-
Fertilizers	18,572	16,898	26,278	26,296	22,815	18,310	14,184	11,581	60.4	-29.3	9.9	-35.7	15.3	24.6	29.1	22.5
Filcs	4,590	3,595	5,764	5,767	4,349	4,158	3,276	3,160	45.3	-20.4	27.7	-37.6	32.6	4.6	26.9	3.7
Firearms	6,204	4,726	11,279	11,287	7,064	6,002	6,224	4,482	38.5	-45.0	31.3	-58.1	59.8	17.7	-3.6	39.9
Fire extinguishers, chemical	782	580	777	777	256	195	178	64	1,091.0	-1.9	31.4	-25.4	203.5	31.3	9.6	178.1
Fireworks	1,224	1,229	1,212	1,222	1,324	1,403	1,480	1,638	-24.7	1.0	-4.4	1.4	-7.7	-5.6	-5.2	9.6
Flags and banners	878	991	1,050	1,065	1,495	934	374	509	74.9	-16.4	-11.4	-5.6	-28.8	60.1	149.7	-26.5
Flavoring extracts	1,626	2,054	2,160	2,188	1,461	1,229	1,543	1,261	31.7	-24.7	-20.8	-4.9	49.8	18.9	-20.3	23.3
Flax and hemp, dressed	62	112	460	420	116	104	214	211	-70.5	-85.2	-44.6	-73.3	202.1	-29.3	-23.4	1.4
Flour-mill and grain-mill products	35,194	35,378	45,295	45,481	39,718	39,453	39,110	32,226	9.6	-22.3	-5	-21.9	14.5	7	9	21.4
Food preparations, not elsewhere specified	26,212	22,868	30,199	30,365	20,306	14,968	11,333	8,214	220.9	-13.2	14.6	-24.3	49.5	35.7	32.1	38.0
Foundry and machine-shop products ²	448,777	321,363	481,701	472,858	362,471	388,911	348,378	350,103	99.8	-6.8	39.6	-33.3	68.0	2.4	15.1	15.1
Fur goods	968	667	894	894	555	464	315	252.3	252.3	8.1	70.4	-36.6	63.2	19.6	47.3	13.3
Fuel, manufactured	364	371	171	171	141	89	(9)	(9)	(9)	112.9	19.9	117.0	21.3	60.2	-	-
Fur goods	14,439	12,052	13,544	13,639	9,030	11,927	9,870	7,758	87.4	6.6	19.8	-11.0	51.0	-24.3	27.3	20.8
Furnishing goods, men's ³	18,958	15,921	18,894	27,930	22,459	15,920	16,399	13,187	110.7	6	19.1	-15.6	24.4	41.1	-2.9	24.4

Furniture.....	168,089	124,311	189,950	138,331	127,881	123,426	110,133	87,262	90.4	20.1	35.2	-11.2	8.9	8.6	12.1	26.5
Furs, dressed.....	5,203	4,429	5,068	5,076	1,525	1,241	1,105	835	491.4	2.7	17.5	-12.6	232.8	22.9	12.3	82.3
Galvanizing and other coating processes.....	877	685	1,662	1,665	1,580	1,447	1,256	635	64.3	-47.2	28.0	-58.8	5.4	9.2	15.2	134.8
Gas and electric fixtures.....	12,315	9,419	9,779	9,765	10,913	11,751	8,141	6,513	89.4	25.9	30.7	-3.7	-10.2	-7.1	44.3	25.0
Gas, illuminating and heating.....	42,282	34,956	42,844	42,909	43,792	47,215	40,596	22,450	88.6	-1.3	21.0	-18.4	-2.0	17.7	21.8	86.1
Gas machines and gas and water meters.....	6,127	4,280	5,383	5,389	4,972	4,707	2,674	2,166	183.0	9.7	43.3	-23.3	12.4	4.3	78.8	28.5
Glass, cutting, staining, and ornamenting.....	73,335	54,748	77,530	77,520	74,502	68,911	65,969	52,818	88.9	-5.4	34.0	-29.4	4.1	8.1	7.7	21.1
Gloves and mittens, cloth, not including gloves made in textile mills.....	5,157	4,682	5,398	5,480	5,067	5,362	3,378	4,914	6.8	-19.4	10.1	-26.8	-19.7	-18.8	11.7	70.5
Gloves made in textile mills.....	8,864	5,758	8,957	8,957	10,685	10,685	11,354	14,345	30.1	-1.0	53.9	-35.7	2	-8.0	6.7	35.8
Gloves and mittens, leather.....	10,010	7,907	10,689	10,685	10,685	10,685	10,645	14,345	30.1	-1.0	53.9	-35.7	2	-8.0	6.7	35.8
Glucose and starch.....	6,537	6,131	7,794	7,795	4,509	4,773	4,679	5,943	10.1	-16.1	6.6	-21.3	72.9	-5.5	2.0	-21.9
Glue, not elsewhere specified.....	3,651	2,915	4,264	4,264	3,129	3,265	2,864	1,618	125.6	-14.4	25.2	-31.6	36.3	-4.2	14.0	77.0
Gold and silver, leaf and foil.....	918	1,104	942	950	1,135	1,383	1,402	1,163	20.3	-2.6	-16.8	17.2	-16.3	-17.9	-1.4	20.6
Gold and silver, reducing and refining, not from the ore.....	901	785	640	644	456	456	287	219	314.1	40.8	14.8	-22.7	41.2	58.9	31.1	58.1
Graphite, ground and refined.....	244	152	490	497	280	192	218	137	444.9	-50.2	60.5	-69.0	98.6	54.3	-25.7	59.1
Grease and tallow, not including lubricating greases.....	5,248	4,428	6,594	6,647	5,106	4,357	3,628	3,040	159.3	-20.4	18.5	-32.8	30.2	17.2	20.1	77.9
Grindstones.....	647	503	708	674	686	1,394	706	1,167	47.2	-8.6	28.6	-29.0	-1.7	-50.8	97.5	-39.5
Haircloth.....	499	301	425	425	595	538	529	820	68.7	17.4	65.8	-29.2	-28.6	10.6	4.4	5.2
Hair work.....	1,317	1,222	1,032	1,193	1,193	3,534	863	820	68.7	27.6	7.8	18.4	-9.1	-66.2	309.5	6.2
Hammocks.....	68	51	64	64	285	272	271	339	79.9	6.3	33.3	-20.3	-77.5	4.8	4	-20.1
Hand stamps.....	2,312	2,098	2,079	1,719	1,321	1,272	976	1,052	81.7	11.2	11.8	-5.5	30.1	3.9	30.3	-7.2
Hardware.....	49,884	33,893	42,449	42,500	41,213	38,513	31,718	26,468	68.7	17.5	47.6	-20.4	8.1	7.0	21.4	18.9
Hardware, saddlery.....	2,321	1,425	3,970	3,675	2,511	3,309	2,940	2,940	21.0	-36.8	62.9	-61.2	46.4	-24.1	-2.5	15.5
Hat and cap materials.....	2,304	1,722	2,968	3,009	1,775	2,367	2,414	1,371	68.8	-23.1	33.8	-49.6	69.5	-25.0	-1.9	70.1
Hats and caps, other than felt, straw, and wool.....	7,313	6,505	7,497	7,539	7,322	6,201	6,594	12,544	-41.4	-2.6	12.4	-18.2	3.0	18.1	-6.0	-47.4
Hats, fur-felt.....	16,722	13,880	18,497	18,510	21,318	25,084	22,047	18,880	-11.4	-9.6	20.5	-25.0	-13.2	-14.9	18.7	16.3
Hats, straw.....	6,812	5,924	7,299	7,302	9,483	8,814	5,587	6,587	6.7	-6.7	15.0	-18.8	-23.0	7.6	52.1	7.7
Hats, wool-felt.....	1,950	1,428	1,442	1,448	1,249	1,986	1,803	2,108	-7.1	35.2	36.6	-1.0	15.9	-37.1	-28.7	16.4
Hones and whetstones.....	100	95	212	212	1,270	152	220	189	-12.1	-21.7	74.7	-56.2	24.7	11.8	-30.9	16.4
Horseshoes, not made in steel works or rolling mills.....	255	207	738	744	588	293	232	231	11.4	-65.4	23.2	-72.0	26.5	100.7	26.3	4
House-furnishing goods, not elsewhere specified.....	8,708	7,504	7,790	7,858	6,935	4,907	4,778	5,212	68.5	11.8	16.0	-3.7	13.2	41.3	2.7	-8.3
Ice, manufactured.....	25,852	24,066	29,895	30,247	23,011	16,114	10,101	6,880	294.8	-10.2	11.6	-18.5	31.4	42.8	59.5	46.8
Ink, printing.....	1,975	1,676	1,987	1,988	1,391	1,121	711	603	292.8	-6	17.8	-15.7	42.4	24.1	57.7	41.4
Ink, writing.....	578	504	691	692	512	505	430	285	105.9	-16.4	14.7	-21.7	87.1	1.4	17.4	60.9
Instruments, professional and scientific.....	12,276	9,384	15,897	15,931	7,107	4,817	3,437	2,775	843.2	-22.8	30.8	-41.0	124.2	47.5	50.2	23.9
Iron and steel, blast furnaces.....	36,712	19,998	41,660	41,660	29,399	38,429	35,078	39,241	-6.4	-11.9	95.3	-55.1	41.9	-23.6	9.6	-10.6
Iron and steel, steel works and rolling mills.....	388,201	235,315	375,098	375,098	248,710	240,076	207,502	183,249	111.9	3.5	64.8	-87.2	50.5	3.6	16.7	13.3
Iron and steel, bolts, nuts, washers, and rivets, not made in rolling mills.....	15,962	10,148	17,958	17,958	10,658	11,345	8,090	7,660	108.6	-11.1	57.3	-43.5	68.6	-6.1	40.2	-5.6
Iron and steel, cast-iron pipe.....	21,576	12,496	12,625	12,625	12,557	12,228	12,228	11,978	70.9	70.9	72.7	-1.0	5	2.7	16.7	13.3
Iron and steel, doors and shutters.....	2,429	1,782	2,075	2,075	1,985	1,601	699	117	1,978.8	17.1	36.3	-14.1	4.6	24.0	128.0	497.4
Iron and steel, forgings, not made in steel works or rolling mills.....	27,468	16,740	28,387	28,391	10,689	8,168	5,665	4,688	486.2	-3.2	64.1	-41.0	165.6	30.9	44.2	20.8

See footnotes at end of Table 34, p. 177.

TABLE 32.—AVERAGE NUMBER OF WAGE EARNERS EMPLOYED IN INDIVIDUAL INDUSTRIES, BY CENSUS YEARS, AND PER CENT OF INCREASE, BY CENSUS PERIODS: 1899 TO 1923—Continued

[See note at head of this table, p. 147]

INDUSTRY	AVERAGE NUMBER OF WAGE EARNERS								PER CENT OF INCREASE OR DECREASE (-)								
	Excluding data for establishments with products valued at less than \$5,000			Including data for establishments with products valued at \$500 or more					24-year period, 1899-1923	Intercensal period							
	1923	1921	1919	1919	1914	1909	1904	1899		1919-1923 ¹	1921-1923 ¹	1910-1921 ¹	1914-1919 ²	1909-1914	1904-1909	1899-1904	
Iron and steel, nails and spikes, cut and wrought, including wire nails, not made in steel works or rolling mills	2,840	2,412	3,355	3,355	2,644	2,765	3,681	4,477	-36.4	-15.1	18.1	-28.1	26.9	-4.4	-24.9	-17.8	
Iron and steel, tempering and welding	1,376	1,210	1,762	(10)	(10)	(10)	(10)	(10)	-21.9	13.7	-31.3						
Iron and steel, wrought pipe	10,633	8,728	10,426	10,426	8,845	6,617	5,416	5,536	92.1	2.0	21.8	-16.3	17.9	29.7	25.9	-2.2	
Ivory, shell, and bone work, not including combs and hairpins	603	674	833	842	795	907	1,769	1,334	-54.3	-27.6	-10.5	-19.1	5.0	-12.3	-48.7	32.6	
Japanning	306	159	284	295	228	180	426	160	98.6	7.7	92.5	-44.0	29.4	26.7	-57.7	166.3	
Jewelry	26,354	23,492	30,704	30,871	28,289	30,347	22,080	20,468	29.4	-14.2	12.2	-23.5	9.1	-6.8	37.4	7.9	
Jewelry and instrument cases	2,977	2,241	2,728	2,734	2,393	2,070	1,676	819	264.2	9.1	62.8	-17.9	14.2	15.6	23.5	104.6	
Jute goods	6,042	5,064	7,158	7,138	7,987	6,664	6,083	4,506	82.8	15.4	3.7	-20.7	-10.6	19.9	9.6	36.0	
Knit goods	194,244	161,880	172,469	172,672	160,520	129,275	104,092	83,691	132.2	12.6	20.0	-6.1	14.7	16.4	24.2	24.4	
Labels and tags	5,048	4,152	5,217	5,227	2,600	2,313	1,348	754	571.0	-3.2	21.6	-20.4	101.0	12.4	71.6	73.8	
Lamps and reflectors	10,604	6,447	8,351	8,360	7,134	7,110	4,429	4,725	124.7	27.0	64.5	-22.8	17.2	3	60.5	-6.3	
Lapidary work	644	399	1,145	1,155	584	627	507	498	30.3	-43.8	61.4	-65.2	97.8	-6.9	23.7	1.8	
Lard, not made in slaughtering and meat-packing establishments	(9)	(9)	13	13	10	(9)	(9)	(9)					-31.6				
Lasts	2,258	2,618	2,904	2,910	2,094	1,728	1,208	1,131	100.2	-22.2	-13.6	-9.8	39.0	21.2	43.0	6.8	
Lead, bar, pipe, and sheet	861	882	852	852	585	802	646	605	42.3	1.1	-2.4	3.5	45.6	-27.1	24.1	6.8	
Leather goods, not elsewhere specified	7,882	8,557	8,904	8,945	7,071	7,681	7,785	6,293	25.8	-11.5	-7.9	-3.9	26.5	-7.9	-1.3	23.7	
Leather, tanned, curried, and finished	59,703	48,955	73,465	72,476	55,936	62,202	57,239	52,109	14.6	-17.6	22.0	-32.4	29.6	-10.1	8.7	9.8	
Lime	12,290	10,345	11,264	11,405	12,429	13,597	11,152	19,085	65.3	9.1	18.8	-8.2	-8.2	-10.6	24.6		
Linen goods	2,880	2,519	1,890	1,890	3,567	3,473	3,811	3,283	-12.2	52.4	14.3	33.3	-47.0	-2	6.2	16.1	
Liquors, distilled	1,062	1,141	1,360	1,380	6,295	6,430	5,355	3,720	-71.4	-71.4	-28.0	-6.9	-17.3	-78.1	-2.1	20.1	44.0
Liquors, malt, including cereal beverages	33 11,212	18,551	24,253	24,259	62,070	54,579	48,137	39,459	-71.6	-67.3	-39.6	-45.8	-44.8	13.7	13.4	22.0	
Liquors, vinous	515	415	976	1,011	2,292	1,911	1,913	1,163	-54.1	-47.2	24.1	-57.5	-55.9	19.9	-1	64.5	
Lithography	16,317	13,971	15,611	15,618	15,171	15,073	12,614	12,994	25.6	4.5	16.8	-10.5	2.9	7	19.5	-2.9	
Locomotives, not made by railroad companies	30,672	16,593	20,715	20,715	17,391	14,909	24,806	10 19,039	-24.6	14.8	85.0	-37.9	53.6	16.6	-39.9		
Looking-glass and picture frames	4,496	3,846	4,600	4,708	4,787	6,021	6,625	6,026		-3.5	16.9	-17.5	-1.7	-20.3	-9.1	9.9	
Lubricating greases	603	420	470	472	478	173	119	127	376.9	28.3	43.6	-10.6		-8	170.5	47.9	
Lumber and timber products	493,932	364,247	469,297	480,945	479,786	547,178	404,563	413,257	23.0	5.7	36.2	-22.4	2	-12.3	35.8	-2.1	
Lumber, planing-mill products, not including planing mills connected with sawmills	103,008	78,033	86,382	86,956	96,214	112,592	97,674	73,510	41.0	19.2	82.0	-9.7	-9.6	-14.4	15.1	32.9	

TABLE 32.—AVERAGE NUMBER OF WAGE EARNERS EMPLOYED IN INDIVIDUAL INDUSTRIES, BY CENSUS YEARS, AND PER CENT OF INCREASE, BY CENSUS PERIODS: 1899 TO 1923—Continued

[See note at head of this table, p. 147]

INDUSTRY	AVERAGE NUMBER OF WAGE EARNERS								PER CENT OF INCREASE OR DECREASE (-)								
	Excluding data for establishments with products valued at less than \$5,000			Including data for establishments with products valued at \$500 or more					24-year period, 1899-1923	Intercensal period							
	1923	1921	1919	1919	1914	1909	1904	1899		1919-1923 ¹	1921-1923	1919-1921 ¹	1914-1919 ¹	1909-1914	1904-1909	1899-1904	
Pens, steel.....	476	872	807	807	573	699	663	473	5	-41.1	27.7	-53.9	40.8	-18.0	5.4	40.2	
Perfumery and cosmetics.....	7,761	6,838	5,343	5,405	2,897	2,376	2,082	1,764	345.2	45.3	32.9	9.3	86.6	22.0	14.1	18.0	
Petroleum refining.....	66,717	63,189	58,887	58,589	25,366	13,929	16,770	12,199	46.9	13.3	5.6	7.3	132.2	82.1	-16.9	37.5	
Phonographs and graphophones.....	20,491	17,938	28,714	28,721	9,381	5,199	3,397	1,267	1,518.6	-28.6	14.2	-37.5	206.2	-80.4	53.0	168.1	
Photo-engraving, not done in printing establishments.....	8,521	6,971	6,746	6,769	6,211	5,343	3,876	2,691	217.6	26.3	22.2	3.3	9.0	16.2	37.8	44.0	
Photographic apparatus.....	(*)	(*)	(*)	2,556	2,018	664	1,761	1,961	1,961	836.4	-4.6	-3.8	-5	118.6	26.7	203.6	-62.1
Photographic materials.....	16,313	16,949	17,094	14,556	6,658	4,531	2,061	1,483	836.4	-4.6	-3.8	-5	118.6	26.7	203.6	-62.1	
Pickles, preserves, and sauces.....	16,356	13,061	16,555	16,521	12,590	9,550	8,511	7,235	113.4	-7.2	17.0	-21.1	32.0	31.8	12.2	17.8	
Pipes, tobacco.....	2,402	1,765	2,522	2,539	2,354	2,775	1,947	1,585	52.5	-4.8	36.1	-30.0	7.9	-15.2	42.5	22.8	
Plated ware.....	12,118	9,635	9,496	9,492	8,717	7,937	6,281	6,392	89.6	-27.7	27.1	5	8.9	9.4	26.8	-1.7	
Plumbers' supplies, not elsewhere specified.....	27,201	16,670	13,585	13,592	18,479	19,257	10,753	8,024	239.1	100.2	63.2	22.7	-26.4	-4.0	-79.1	34.0	
Pocketbooks.....	5,518	2,715	2,888	2,905	1,466	1,472	2,281	1,653	235.8	91.1	103.2	-6.0	98.2	-1.4	-35.5	38.0	
Pottery.....	36,824	28,458	27,873	27,934	26,705	16,168	52,428	43,714	71.0	32.1	29.4	2.1	4.6	-4.0	7.1	19.9	
Poultry, killing and dressing, not done in slaughtering and meat-packing establishments.....	1,510	2,255	1,100	2,140	1,353	(*)	(*)	(*)	29.4	33.0	5.4	58.2					
Printing and publishing, book and job.....	129,890	121,055	121,255	123,005	113,121	108,687	87,746	67,810	94.8	-7.1	7.3	-2	8.7	4.1	23.9	29.8	
Printing and publishing, music.....	919	900	897	899	873	738	577	778	18.5	2.5	2.1	3	3.0	1.3	27.9	-25.8	
Printing and publishing, newspaper and periodical.....	115,646	107,534	115,102	120,381	114,375	108,672	96,857	94,604	27.8	5	7.5	-6.6	5.3	5.2	12.2	2.4	
Printing materials.....	660	816	716	723	423	535	857	560	1.0	-21.8	-31.4	-14.0	-70.9	-20.9	49.9	-36.2	
Pulp, from fiber other than wood.....	(*)	(*)	64	64	(*)	(*)	(*)	(*)	121				83.9	111.2	12.5	7	
Pulp goods.....	3,648	4,718	3,033	3,941	1,654	793	696	691	429.4	20.3	-22.7	55.6	152.3	-1	52.1	122.2	
Pumps, not including power pumps.....	(*)	(*)	(*)	2,134	2,134	2,136	1,404	632									
Pumps, steam and other power.....	14,556	12,186	16,054	10,688	6,188	(*)	(*)	(*)									
Refrigerators.....	8,485	5,804	5,783	5,786	5,617	5,026	4,032	3,329	155.0	46.7	46.2	4	3.0	11.8	24.7	21.1	
Regalia, and society badges and emblems.....	2,146	2,204	2,213	2,223	2,010	2,638	2,498	1,569	37.4	-3.0	-2.6	4	10.6	-23.8	5.6	69.2	
Rice, cleaning and polishing.....	1,764	1,940	2,112	2,113	1,253	1,239	1,492	651	171.0	-16.5	-9.1	-8.1	68.6	-1.1	-17.0	129.2	
Roofing materials.....	7,665	6,908	8,856	8,871	4,068	2,465	8,619	7,593	1.1	-13.4	11.0	-32.0	117.0	65.9	-72.0	-16.1	
Rubber tires, tubes, and rubber goods, not elsewhere specified.....	108,433	79,385	125,662	119,848	50,220	26,521	21,184	20,404	406.6	-13.7	36.6	-36.8	138.6	89.4	25.2	3.8	
Rules, ivory and wood.....	219	188	164	168	408	109	149	213	5.3	33.5	16.5	14.6	-58.8	274.3	-26.8	-30.0	
Saddlery and harness.....	6,617	4,489	10,024	10,411	12,909	14,632	15,032	14,364	-52.1	-34.0	47.4	-65.2	-19.7	-1.4	-2.7	4.7	
Safes and vaults.....	3,476	3,647	2,945	2,949	2,972	3,343	3,488	2,033	71.2	18.0	-2.0	20.4	-1.8	-11.1	-4.2	-71.6	

Salt.....	6,809	5,993	6,487	6,495	5,089	4,936	4,666	4,774	42.8	5.0	13.6	-7.6	27.6	8.1	5.8	-2.3
Sand and emery paper and cloth.....	1,176	680	771	771	681	611	806	329.1	329.1	52.5	72.9	-11.8	13.2	11.6	100.3	11.3
Sand-lime brick.....	582	374	504	504	557	(17)	(17)	(17)	15.5	55.6	-25.8	-9.5				
Sausage, not made in slaughtering and meat-packing establishments.....	4,592	3,872	3,449	3,471	2,244	1,915	1,265	878	427.3	32.4	18.6	-12.5	54.7	17.2	51.4	44.1
Saws.....	5,420	3,788	5,601	5,610	4,580	4,832	4,650	3,215	68.8	-1.5	43.1	-12.0	20.8	-5.6	3.9	44.6
Scales and balances.....	4,245	3,720	5,421	5,432	4,497	5,559	3,133	2,775	63.2	-21.7	14.1	-31.4	21.6	25.5	13.6	12.9
Screws, machine.....	6,126	5,611	10,255	10,252	1,067	1,365	1,365	1,577	486.6	-11.0	54.4	-42.4	181.7	118.5	-15.2	26.2
Screws, wood.....	4,108	4,282	4,889	4,889	4,446	4,464	4,488	1,970	108.5	-16.0	49.8	-48.9	10.0	28.3	102.8	20.5
Sewing-machine cases.....	(4)	(4)	(4)	(4)	4,171	3,699	4,079	4,450	2,653							
Sewing machines and attachments.....	13,435	12,509	19,228	15,059	14,308	15,217	12,671	10,712	-1.5	30.1	6.9	-34.8	5.2	-9.8	-8.3	67.7
Shipbuilding, steel.....	51,961	93,323	344,011	344,014	83,508	28,143	30,742	30,906	68.1	-84.9	-44.3	-72.9	626.7	19.1	-23.4	18.9
Shipbuilding, wooden, including boat building.....	10,326	13,122	43,290	43,432	10,981	12,368	14,012	15,841	-34.5	-75.1	-21.3	-69.7	295.5	-11.2	-11.8	-11.5
Shirts.....	51,672	45,427	39,245	39,603	61,972	48,513	36,499	36,622	42.4	31.7	13.7	15.8	-23.8	7.1	32.9	—
Show cases.....	(5)	(5)	(5)	1,857	2,257	3,390	3,082	(5)	1,363				-17.7	-33.4	10.0	126.1
Signs and advertising novelties.....	12,988	10,373	10,317	10,432	9,566	5,540	(5)	65,410	91.5	-1.2	3.2	-4.2	9.1	72.7	24.4	21.7
Silk goods, including throwsters.....	125,234	121,379	126,715	126,782	108,170	99,037	79,601	65,410	91.5	-23.0	-6.0	-19.1	-8.7	-18.2	7.7	47.6
Silversmithing and silverware.....	4,972	5,287	6,453	6,453	7,070	8,643	8,580	5,813	-14.5							
Slaughtering and meat packing.....	132,792	117,042	160,989	160,996	98,832	87,813	74,134	68,386	94.2	-17.5	13.5	-27.3	62.9	12.6	18.5	8.4
Smelting and refining, copper.....	20,735	3,293	17,345	17,345	17,731	16,628	12,752	11,324	83.1	19.5	150.0	-52.2	-2.2	13.5	22.6	12.8
Smelting and refining, lead.....	6,194	4,509	6,438	6,438	7,385	7,424	7,673	8,319	-25.5	-3.8	37.4	-30.0	-12.8	-5	-2.0	-9.0
Smelting and refining, metals, not elsewhere specified.....	257	434	2,041	2,041	(5)	(5)	(5)	(5)		-87.4	-40.8	-78.7				
Smelting and refining, not from the ore.....	1,587	1,200	2,167	2,167	2,585	2,147	1,712	983	61.3	-25.8	32.3	-44.6	-16.2	20.4	25.4	74.2
Smelting and refining, zinc.....	11,918	5,778	13,796	13,796	9,617	6,655	6,528	4,869	144.8	-13.6	105.3	-58.1	43.5	44.5	1.9	34.1
Soap.....	17,002	10,558	20,404	20,430	14,172	12,999	11,044	9,487	70.4	-16.7	2.7	-18.8	44.2	9.0	17.7	16.4
Soda-water apparatus.....	2,650	2,144	2,597	2,597	2,222	1,797	1,469	968	175.4	2.4	24.0	-17.4	16.6	24.0	22.3	52.5
Sporting and athletic goods.....	9,983	7,063	6,364	6,412	5,602	5,321	4,260	2,225	338.6	52.2	37.1	11.0	14.5	5.3	24.9	91.5
Springs, steel, car and carriage, not made in steel works or rolling mills.....	8,634	5,358	8,977	8,981	3,703	3,196	2,476	2,102	311.1	-3.8	61.1	-40.3	142.5	-15.9	29.1	17.6
Stamped and enameled ware, not elsewhere specified.....	35,237	24,192	34,238	34,249	28,731	25,412	13,580	10,002	262.8	2.9	45.7	-29.3	19.2	13.1	87.4	85.6
Stationery goods, not elsewhere specified.....	13,314	11,285	11,247	11,261	7,728	6,206	4,295	3,032	339.7	48.4	18.0	3	45.7	24.5	44.5	41.7
Statuary and art goods.....	1,807	1,634	1,428	1,428	1,988	1,699	1,507	(5)		26.5	10.6	14.4	-28.3	17.0	12.7	
Steam fittings and steam and hot-water heating apparatus.....	44,141	30,808	36,879	36,898	26,388	23,378	11,600	9,252	377.0	20.3	43.3	-16.0	39.0	12.9	100.0	28.4
Steam packing.....	5,084	4,877	6,141	6,147	4,213	3,648	2,734	3,421	-17.5	-8.8	-20.6	45.9	15.6	33.4	138.4	
Steel barrels, drums, and tanks, portable.....	2,668	2,013	3,322	(10)	(10)	(10)	(10)	(10)		-19.7	32.5	-39.4				
Stencils and brands.....	(20)	(20)	(20)	417	446	379	530	418					-6.5	17.7	-28.5	26.8
Stereotyping and electrotyping.....	4,096	3,617	3,602	3,664	3,457	2,850	2,679	2,408	70.8	11.9	13.2	-1.2	6.0	21.3	6.4	11.3
Stoves and hot-air furnaces.....	33,029	24,530	32,860	32,868	29,535	32,118	29,728	(10)		5	34.6	-25.3	11.3	-8.0	8.0	
Stoves, gas and oil.....	16,783	7,921	10,555	10,565	7,790	6,012	3,676	3,471	579.9	59.0	111.9	-25.0	35.6	55.4	36.3	48.8
Structural ironwork, not made in steel works or rolling mills.....	51,591	32,897	43,895	43,962	47,167	40,234	34,276	24,908	107.4	67.5	56.8	-25.1	-6.8	17.2	17.4	37.6
Sugar, beet.....	7,871	13,802	11,781	11,781	7,997	7,204	3,963	1,970	284.5	-35.7	-44.3	15.5	47.3	11.6	61.8	101.2
Sugar, cane.....	2,820	2,724	6,071	6,101	3,632	4,127			-69.4	-53.5	3.5	-55.1	68.0	-12.0		
Sugar, refining, not including beet sugar.....	15,254	15,457	18,202	18,202	11,253	9,399	13,549	14,120	130.2	-16.2	-1.3	-15.1	61.8	19.7	-2	4.1
Sulphuric, nitric, and mixed acids.....	2,357	2,832	4,961	4,961	3,064	2,262	2,447	2,358	4	-52.5	-16.8	-42.9	61.9	36.1	-8.0	3.9
Surgical appliances.....	5,375	4,310	6,341	6,390	4,282	3,809	2,811	1,689	262.1	-15.2	24.7	-32.0	49.2	12.4	35.5	82.7

See footnotes at end of Table 34, p. 177.

TABLE 32.—AVERAGE NUMBER OF WAGE EARNERS EMPLOYED BY INDIVIDUAL INDUSTRIES, BY CENSUS YEARS, AND PER CENT OF INCREASE, BY CENSUS PERIODS: 1899 TO 1923—Continued

[See note at head of this table, p. 147]

INDUSTRY	AVERAGE NUMBER OF WAGE EARNERS								PER CENT OF INCREASE OR DECREASE (—)						
	Excluding data for establishments with products valued at less than \$5,000			Including data for establishments with products valued at \$500 or more					24-year period, 1899-1923	Intercensal period					
	1923	1921	1919	1919	1914	1909	1904	1899		1919-1923 ¹	1921-1923	1919-1921 ²	1914-1919 ³	1909-1914	1904-1909	1899-1904
Suspenders, garters, and elastic woven goods.....	13,458	9,493	10,836	10,857	9,646	10,141	(*)	(*)	.3	-68.1	-63.6	-12.4	12.6	-4.9	
Textile machinery and parts.....	35,672	31,025	31,792	(10)	(10)	(10)	(10)	(10)		12.2	15.0	-2.4			
Theatrical scenery.....	210	2,169	149		88		(*)	(*)		40.9	24.3	13.4	69.3		
Tin and other foils, not elsewhere specified.....	3,323	2,178	1,903	1,908	1,081	883	766	582	472.3	74.6	52.6	14.4	85.1	51.0	-10.9
Tin plate and terneplate.....	(5)	(7)	3,122	3,122	5,238	5,352	4,847	3,671					-40.4	-2.1	10.4
Tinware, not elsewhere specified.....	30,511	22,711	34,372	34,386	22,584	19,754	16,910	(7)		-11.2	34.3	-33.9	52.3	14.3	16.8
Tobacco, chewing and smoking, and snuff.....	16,301	16,628	18,294	18,324	25,980	27,232	23,990	29,161	-44.0	-10.9	-2.0	-9.1	-29.5	-4.6	13.6
Tobacco, cigars and cigarettes.....	130,036	133,357	136,675	138,773	152,892	130,578	135,416	103,365	27.7	-4.9	-2.5	-2.4	-9.2	9.5	3.1
Tools, not elsewhere specified.....	29,100	19,453	35,425	35,585	16,866	15,999	11,643	7,614	283.7	-17.9	49.6	-45.1	111.0	5.4	37.4
Toys and games.....	14,484	9,448	14,086	14,201	7,887	5,305	4,330	3,316	340.3	2.8	53.3	-32.9	80.1	48.7	22.3
Trunks and valises.....	11,441	8,712	11,404	11,470	9,911	11,122	9,091	6,964	65.2	.3	31.3	-23.6	15.7	-10.9	22.3
Turpentine and rosin.....	34,328	27,422	27,902	28,067	34,817	39,511	33,382	41,864	-17.6	23.0	25.2	-1.7	-19.4	-11.9	18.4
Type founding.....	606	608	803	810	1,054	1,491	1,446	1,424	-67.0	-24.5	-.3	-24.3	-23.1	-29.3	3.1
Typewriters and supplies.....	14,963	13,381	15,647	15,669	11,091	9,578	6,232	4,340	245.1	-4.4	11.8	-14.5	41.3	15.8	53.7
Umbrellas and canes.....	3,776	3,149	3,348	3,368	4,792	5,472	5,386	5,640	-32.7	12.8	19.9	-5.9	-29.7	-12.4	1.6
Upholstering materials, not elsewhere specified.....	41,495	3,271	4,782	4,810	4,426	4,067	4,712	5,098	-1.4	4.5	52.7	-31.6	8.7	8.8	-13.7
Varnishes.....	5,636	4,138	4,016	4,022	2,734	2,376	1,852	1,540	265.1	40.3	36.2	3.0	47.1	15.1	28.3
Vault lights and ventilators.....	296	246	311	316	601	527	222	158	118.0	-4.8	20.8	-21.2	-47.4	33.8	47.3
Vinegar and cider.....	1,317	1,481	1,836	1,861	1,229	1,542	1,528	1,557	-11.2	-30.2	-11.1	-21.5	61.2	-20.3	9
Wall paper, not made in paper mills.....	5,412	3,988	4,263	4,262	4,738	4,037	3,913	4,172	29.8	27.0	35.7	-4.4	-10.0	17.4	3.2
Wall plaster and composition flooring.....	10,928	4,898	5,118	5,123	5,389	4,791	3,758	(7)		81.5	89.6	-4.3	-4.9	12.5	27.5
Washing machines and clothes wringers.....	6,144	4,147	5,944	5,956	2,302	1,835	1,622	1,509	308.1	3.4	48.2	-30.2	158.7	25.4	13.1
Waste.....	2,745	1,863	2,681	2,686	2,966	1,897	1,559	1,081	152.1	2.4	47.3	-30.6	-9.4	56.4	21.7
Watch and clock materials, except watch-cases.....	396	390	578	582	670	643	385	331	20.4	-31.5	1.5	-32.5	-13.1	4.2	67.0
Watchcases.....	4,325	3,698	3,900	3,900	3,514	4,569	4,221	3,907	10.7	10.9	17.0	-5.2	11.0	-23.1	8.2
Watches.....	11,571	12,174	15,888	15,888	12,390	10,684	10,724	6,880	68.1	-27.2	-5.0	-23.4	28.2	16.0	-4
Wheelbarrows.....	369	228	291	291	323	664	584	321	15.0	26.8	61.8	-21.6	-9.9	-51.4	13.7
Whips.....	200	292	713	717	1,163	1,546	1,554	1,287	-84.4	-72.0	-31.5	-58.0	-38.3	-24.8	-5
Windmills.....	1,101	1,383	1,930	1,932	1,955	2,337	1,929	2,045	-48.1	-43.0	-20.4	-28.3	-1.2	-16.3	21.2
Window and door screens and weather strips.....	3,687	2,129	2,149	2,179	3,194	(*)	(*)	(*)		71.6	73.2	-9	-31.8		-5.7

Window shades and fixtures.....	4,957	3,781	4,380	4,411	4,077	3,930	2,624	1,801	233.1	36.0	57.0	-13.7	8.2	8.7	49.8	45.7
Wire.....	31,310	14,832	19,741	19,741	17,600	18,084	4,737	1,603	-----	7.9	43.7	-24.9	12.2	-2.7	281.8	195.5
Wirework, not elsewhere specified.....	16,783	11,485	15,138	15,224	12,126	12,348	13,379	9,142	84.6	10.9	46.1	-24.1	25.5	-1.8	-7.7	46.3
Wood distillation.....	4,022	1,891	4,940	4,946	2,782	2,721	2,272	1,656	153.8	-18.6	116.1	-62.3	77.8	2.2	19.8	46.0
Wood preserving.....	6,520	4,153	3,978	3,978	2,830	2,403	737	478	1,204.0	68.9	57.0	4.4	40.6	17.6	238.1	54.2
Wood, turned and carved.....	11,236	9,144	10,528	10,649	11,615	14,139	14,637	11,558	-1.3	7.2	23.4	-13.1	-3.3	-17.9	-3.7	27.1
Wooden goods, not elsewhere specified.....	5,727	5,492	6,402	6,443	6,418	6,780	6,594	3,206	79.9	-10.5	4.3	-14.2	-----	-5.3	2.8	105.7
Wool pulling.....	696	552	705	705	708	631	681	475	46.5	-1.3	26.1	-21.7	-----	12.2	-7.3	43.4
Wool scouring.....	1,473	1,536	1,177	2,177	1,059	1,142	779	720	104.7	-32.8	-4.1	-29.4	105.6	-7.3	46.6	8.2
Wool shoddy.....	2,128	1,170	2,551	2,566	2,145	2,041	2,089	1,926	11.1	-16.6	81.9	-54.1	19.6	5.1	-2.3	8.5
Woolen and worsted goods.....	194,562	162,364	166,757	166,737	158,692	163,192	141,998	125,901	64.6	16.7	19.8	-2.6	6.1	-2.8	14.9	12.8

See footnotes at end of Table 34, p. 177.

TABLE 33.—AMOUNT OF PRIMARY HORSEPOWER INSTALLED IN INDIVIDUAL INDUSTRIES, BY CENSUS YEARS, AND PER CENT OF INCREASE, BY CENSUS PERIODS: 1899 TO 1923

[No data in regard to prime movers were collected for 1921. As to the comparability of 1921 and 1923 figures with those of previous years, see general remarks preceding tables, pars. 2 and 4, pp. 124 and 125]

INDUSTRY	PRIMARY HORSEPOWER							PER CENT OF INCREASE OR DECREASE (-)					
	Excluding data for rented power other than electric		Including data for rented power other than electric					24-year period, 1899-1923	Intercensal period				
	1923	1919	1919	1914	1909	1904	1899		1919-1923 ¹	1914-1919 ²	1909-1914	1904-1909	1899-1904
All industries.....	33,064,228	29,327,669	29,504,792	22,437,072	18,675,376	13,487,707	10,097,893	229.6	12.8	31.5	20.1	38.5	33.6
Agricultural implements.....	121,975	128,249	128,249	121,428	100,601	89,738	70,646	72.6	-4.9	5.6	20.7	12.1	27.0
Airplanes, seaplanes, airships, and parts.....	¹ 5,443	¹ 12,512	¹ 12,512	195	(²)	(²)	(²)	-56.6	6,316.4				
Aluminum manufactures.....	58,272	30,280	30,280	12,339	(²)	(²)	(²)	92.4	145.4				
Ammunition.....	23,172	39,128	39,128	11,354	10,317	5,058	2,980	677.3	-40.8	244.6	10.1	104.1	69.7
Artificial flowers.....	847	468	468	237	167	184	113	949.7	81.0	97.6	41.9	-9.2	62.8
Artificial limbs.....	692	857	857	589	582	188	95	628.0	-19.3	45.5	1.2	209.6	97.9
Artificial stone products.....	30,748	22,178	22,221	20,326	12,185	2,776	(²)		38.6	9.3	66.8	338.6	
Artists' materials.....	4,902	3,206	3,206	1,977	1,628	568	289	1,696.1	52.9	62.2	21.4	180.6	96.5
Asbestos products, not including steam packing.....	¹ 26,855	¹ 9,657	¹ 9,657	2,877	(²)	(²)	(²)		178.1	235.7			
Automobile bodies and parts.....	463,080	256,770	256,919	68,701	24,909	2,455	(²)	80.3	274.0	175.8	902.4		
Automobile repairing.....	(³)	82,691	10,880	(¹⁰)	(¹⁰)	(¹⁰)	(¹⁰)		404.8				
Automobiles.....	435,545	282,323	287,323	104,983	50,641	7,024	3,104	19,912.0	54.3	173.7	107.3	564.2	141.0
Awnings, tents, and sails.....	4,728	4,371	4,589	2,610	2,022	1,105	921	411.2	3.4	75.8	29.1	63.0	20.0
Babbit metal and solder.....	4,004	6,020	6,022	2,881	2,293	1,138	999	300.9	-33.5	109.0	25.6	101.6	13.9
Bags, other than paper, not including bags made in textile mills.....	13,852	9,076	9,082	10,392	6,855	4,822	1,755	689.7	52.6	-12.6	51.6	51.6	157.7
Bags, paper, exclusive of those made in paper mills.....	6,108	4,429	4,429	3,682	3,886	2,927	2,148	184.3	37.9	20.3	-5.2	32.7	36.3
Baking powders and yeast.....	35,845	20,071	20,071	7,662	3,335	2,446	1,365.6	78.6	155.3	135.7	12.5	21.2	
Baskets, and rattan and willow ware.....	11,474	6,319	6,319	7,203	7,196	5,252	5,997	91.4	81.6	-13.4	1.3	15.1	4.3
Bells.....	426	783	783	787	675	516	1,077	-60.5	-	36.9	11.4	-52.1	
Belting and hose, rubber.....	(¹¹)	(¹¹)	26,299	22,995	17,471	12,343	5,317		14.4	31.6	41.5	132.1	
Belted and hose, woven, other than rubber.....	936	5,301	5,338	2,750	3,078	2,995	216.7	-82.5	93.7	-10.4	167.9	289.2	
Belted, leather.....	9,076	7,012	7,039	7,411	6,638	3,220	2,162	321.3	29.4	-6.0	31.4	75.1	48.9
Billiard tables, bowling alleys, and accessories.....	2,897	5,261	5,322	3,213	2,642	631	277	958.6	-44.9	65.6	21.6	318.7	127.8
Blacking, stains, and dressings.....	2,792	2,446	2,480	2,636	2,234	1,905	1,230	180.9	14.1	-5.6	18.0	17.3	54.3
Bluing.....	296	423	423	220	294	116	155.3	-80.0	92.3	-9.1	-14.8	144.3	
Bone, carbon, and lamp black.....	5,567	1,867	1,867	1,816	1,023	1,053	366	1,425.4	198.8	2.8	77.5	-5.7	197.8
Bookbinding and blank-book making.....	15,539	11,097	11,123	11,266	10,069	5,671	4,689	234.0	40.8	-1.2	11.6	78.1	20.9
Boot and shoe cut stock, exclusive of that produced in boot and shoe factories.....	6,963	8,448	9,003	6,829	4,769	4,519	3,202	131.7	-17.6	31.8	43.2	5.8	41.1

Boat and shoe findings, exclusive of those produced in boot and shoe factories	12,825	9,970	10,682	5,869	5,637	2,229	2,849	383.2	28.6	82.0	4.1	74.6	13.6
Boots and shoes, not including rubber boots and shoes	128,550	115,886	120,832	100,232	85,896	58,220	49,444	170.6	10.9	20.4	16.7	52.9	12.7
Boots and shoes, rubber	56,184	49,400	49,400	24,621	25,903	26,084	25,017	124.6	13.7	100.6	-4.9	-7.7	-4.3
Boxes, cigar	6,054	5,009	5,069	6,550	6,049	6,548	4,274	43.1	20.9	-5.4	-11.6	9.0	28.8
Boxes, paper and other, not elsewhere specified	61,687	54,675	54,955	38,179	23,323	16,117	9,286	567.6	12.8	43.9	63.7	54.3	62.8
Boxes, wooden packing, except cigar boxes	149,410	143,583	144,048	126,805	112,498	85,951	54,724	174.0	-4.1	13.6	12.7	30.9	57.1
Brass, bronze, and copper products	305,839	265,373	265,688	122,700	106,120	69,494	47,257	547.7	16.6	116.8	15.6	52.7	47.1
Bread and other bakery products	193,186	185,711	165,990	107,771	65,288	37,241	22,472	761.1	16.6	54.0	65.0	75.3	65.7
Brick and tile, terra-cotta, and fire-clay products	480,576	408,157	405,746	442,813	241,169	256,362	176,700	101.7	18.6	-8.4		33.6	44.5
Brooms	4,960	6,037	6,062	4,504	3,833				-17.8	84.6	17.6		
Brushes	10,276	7,307	7,384	6,388	4,967	6,441	4,482		40.6	15.8		36.6	43.7
Butter	128,351	94,962	95,190	91,628	78,128	77,623	88,062	43.9	33.1	3.9	17.3		-12.0
Butter, reworking	(1)	343	343	1,349	1,471	1,684	681			-74.6	-8.2	-12.6	164.9
Buttons	15,384	15,706	16,201	14,398	12,831	6,982	4,166	280.8	-2.1	12.8	12.2	88.8	67.6
Candles	912	597	597	439	799	931	(1)		62.8	36.0	-45.1	-14.2	
Canning and preserving, fish	16,061	24,805	24,865	10,966	6,969	4,877	4,224	280.9	-85.3	126.7	67.4	42.9	16.5
Canning and preserving, fruits and vegetables	138,997	132,247	132,422	88,303	69,900	44,499	26,906	417.3	8.1	60.0	47.8	34.7	65.4
Canning and preserving, oysters	1,687	1,025	1,025	1,895	1,423	1,232	922	72.1	64.8	-45.9	33.2	15.6	34.6
Card cutting and designing	1,262	743	743	449	269	222	219	476.5	69.9	65.5	68.9	21.2	1.4
Cardboard, not made in paper mills	2,354	3,251	3,276	2,735	1,540	1,033	825	187.8	-27.8	19.8	77.6	49.1	25.2
Carpets and rugs, other than rag	53,852	37,593	38,170	43,963	38,553	33,945	29,740	104.5	43.3	-13.2	14.0	13.6	28.9
Carpets, rag	2,687	2,659	2,674	2,722	2,651	1,667	1,599	384.3	-2.7	-1.8	2.7	59.0	178.3
Carriage and wagon materials	10,647	23,672	23,700	38,215	47,247	43,185	32,016	-66.7	-55.0	-98.0	-19.1	9.6	34.7
Carrriages and sleds, children's	9,378	6,071	6,071	5,652	5,281	3,633	2,462	280.8	54.4	7.4	7.0	45.4	47.6
Carrriages and wagons, including repairs ¹⁶	25,064	40,316	40,966	74,334	78,785	63,024	51,755	-50.8	-87.9	-44.9	-5.6	25.0	21.8
Cars and general shop construction and repairs by electric-railroad companies	62,370	53,805	53,830	44,989	35,794	3,154	6,443	868.3	15.9	19.7	25.7	1,034.9	-51.0
Cars and general shop construction and repairs by steam-railroad companies	744,065	591,070	594,515	433,994	298,361	167,973	95,087	687.1	28.9	37.0	47.9	74.6	76.7
Cars, electric-railroad, not including operations of railroad companies	10,028	9,390	9,390	10,014	15,161	7,054	4,865	106.1	6.8	-6.2	-38.9	114.9	45.0
Cars, steam-railroad, not including operations of railroad companies	240,074	167,790	157,865	126,687	97,797	55,994	33,395	619.0	52.1	24.6	29.5	74.7	67.7
Cash registers and calculating machines	29,872	14,045	14,660	10,619	6,944	4,139	1,340	2,130.2	104.0	38.0	52.9	67.8	208.9
Cement	642,840	488,808	488,808	490,402	371,799	149,604	(1)	670.0	31.5	3	31.9	148.6	
Charcoal, not including production in the lumber and wood distillation industries	134	132	132	134	165	355	164	-18.3	1.5	-1.5		-53.5	116.5
Cheese	22,315	24,411	24,500	19,219	11,638	10,366	(1)		-8.9	27.8	65.1	12.3	
Chemicals ¹⁵	594,228	378,884	445,282	282,385	208,657	132,394	90,428	676.8	57.7	57.7	35.3	57.6	46.4
Chewing gum	6,905	6,172	6,178	3,030	(2)	(2)	(2)		11.9	103.9			
China decorating, not including that done in potteries	40	43	43	23	18	6	(1)			87.0	27.8	200.0	
Chocolate and cocoa products	37,197	33,414	33,440	19,736	10,593	5,217	2,756	1,613.3	41.2	69.4	86.3	103.0	89.3
Cleansing and polishing preparations	6,698	4,510	4,520	2,556	1,743	803	643	944.0	48.5	64.8	46.6	-117.1	24.9
Clocks	8,285	6,952	6,952	6,011	5,608	4,532	3,496	137.7	19.2	15.7	7.2	23.7	30.0
Cloth, sponging and refinishing	911	927	927	769	769	322	109	758.6	-3.7	-24.0	8.5	118.6	195.4
Clothing, horse	2,900	1,577	1,577	1,903	1,454	656	371	970.1	82.9	-17.1	30.9	121.6	142.1
Clothing, men's	52,642	40,198	40,577	35,684	30,069	21,106	13,347	298.2	31.0	13.8	18.6	42.6	58.1
Clothing, men's, buttonholes	105	176	189	205	176	137	113		-1	-40.3	-7.8	16.5	28.6
Clothing, women's	27,704	32,421	32,622	28,396	22,294	14,916	9,962	180.0	-14.6	14.9	27.4	49.6	49.7

See footnotes at end of Table 34, p. 177.

TABLE 33.—AMOUNT OF PRIMARY HORSEPOWER INSTALLED IN INDIVIDUAL INDUSTRIES, BY CENSUS YEARS, AND PER CENT OF INCREASE, BY CENSUS PERIODS: 1899 TO 1923—Continued

[See note at head of this table, p. 158]

INDUSTRY	PRIMARY HORSEPOWER						PER CENT OF INCREASE OR DECREASE (-)						
	Excluding data for rented power other than electric		Including data for rented power other than electric				24-year period, 1899-1923	Intercensal period					
	1923	1919	1919	1914	1909	1904		1899	1919-1923	1914-1919	1909-1914	1904-1909	1899-1904
Coal-tar products	75,099	68,839	(1)	(1)	(1)	(1)	(1)	9.9	25.8	11.7	19.3	42.2	-3.5
Coffee and spice, roasting and grinding	37,358	29,706	29,750	26,634	22,334	15,703	16,270	130.1	208.4	17.6	15.3	25.1	47.6
Coffins, burial cases, and undertakers' goods	27,340	22,190	22,345	19,006	16,490	13,178	8,927	208.4	47.9	92.0	87.1	-6.1	91.8
Coke, not including gas-house coke	332,560	224,879	224,879	117,127	62,502	66,669	84,767	856.6	119.7	35.7	20.5	37.0	2.5
Collars and cuffs, men's	5,050	6,276	5,286	8,896	3,234	2,360	2,302	119.7	138.5	20.8	-35.1	230.6	54.6
Combs and hairpins, not made from metal or rubber	1,919	1,588	1,600	2,711	4,175	1,293	817	138.5	-1.8	145.7	72.7	94.6	25.2
Condensed milk	49,300	49,178	49,181	20,015	11,688	5,956	(1)	1,247.6	45.4	82.8	174.3	47.7	27.1
Confectionery and ice cream	261,185	179,682	179,891	98,393	35,870	24,292	19,410	1,247.6	9.2	-19.8	-10.2	9.0	-8.5
Cooperage	33,519	30,688	30,688	38,290	42,636	39,110	30,760	0.0	41.9	13.0	13.3	68.4	21.9
Copper, tin, and sheet-iron work	24,243	24,130	24,144	21,357	18,847	11,195	12,232	180.1	8.7	20.3	17.2	15.2	36.5
Cordage and twine	72,371	66,556	66,643	55,377	47,269	41,041	33,657	115.2	329.7	53.5	79.4	44.7	65.6
Cordials and flavoring sirups	13,651	3,177	3,177	2,070	1,164	782	573	2,282.7	17.5	49.3	55.2	44.7	85.6
Cork, cutting	10,052	8,566	8,683	5,814	3,746	2,889	1,563	652.7	-15.2	1.4	54.0	39.5	-9.7
Corsets	5,901	6,956	7,166	7,057	4,681	3,284	3,638	66.8	17.3	17.6	22.5	31.4	24.0
Cotton goods	2,153,299	1,836,298	1,840,201	1,566,757	1,286,105	979,109	789,858	175.5	5.1	-2.2	2.5	38.9	25.4
Cotton lace	9,545	9,078	9,080	9,080	10,412	7,495	5,076	441.1	-39.3	210.2	7.2	80.1	-17.5
Cotton small wares	31,926	14,085	14,085	10,102	827	816	760	116.8	12.0	12.0	7.9	-8	22.5
Crucibles	1,647	2,714	2,714	34,781	32,228	32,432	26,475	64.9	21.7	1.0	68.7	72.7	196.8
Cutlery and edge tools	43,171	38,555	38,958	11,639	6,898	3,944	(0)	898.1	87.8	44.9	116.6	-22.3	159.8
Dairymen's, poultrymen's, and apiarists' supplies	14,308	11,756	11,756	11,639	6,898	3,944	(0)	26.3	35.3	49.7	15.9	-39.0	60.0
Dental goods	3,731	2,708	2,716	1,874	895	1,113	375	898.1	-26.3	35.3	49.7	15.9	-39.0
Drug grinding	4,958	6,723	6,725	4,972	3,322	2,666	4,697	5.5	-11.2	-50.9	-12.1	57.0	60.0
Druggists' preparations	11,255	12,670	12,698	8,417	9,580	6,102	3,813	195.7	27.7	23.2	20.8	27.0	22.6
Dyeing and finishing textiles, exclusive of that done in textile mills	204,128	159,857	160,430	130,172	107,746	84,868	69,238	195.9	-4.3	47.4	4.8	25.7	54.9
Dye-stuffs and extracts, natural	32,833	34,295	34,320	23,290	22,213	17,671	11,409	187.9	9.6	92.7	43.4	50.7	141.3
Electrical machinery, apparatus, and supplies	480,208	438,082	438,839	227,731	168,768	105,376	43,674	1,001.3	40.0	21.1	31.0	72.4	-11.8
Electroplating	9,505	6,788	7,078	5,845	4,461	2,588	2,933	237.8	-11.1	216.2	2.4	103.8	88.2
Emery and other abrasive wheels	11,530	12,963	12,963	4,100	4,005	1,965	1,044	1,003.9	114.4	-27.6	1.0	-78.7	151.5
Enameling	2,526	1,178	1,183	1,626	1,619	7,604	3,024	-16.2	-13.1	201.4	1.0	-78.7	151.5
Engines, steam, gas, and water	166,137	190,005	190,021	63,047	(1)	(1)	(1)	720.5	13.5	38.8	-4	306.7	28.6
Engravers' materials	832	733	769	547	549	136	105	720.5	13.5	38.8	-4	306.7	28.6

Engraving and diesinking	2,845	1,750	1,760	1,092	768	1,032	616	282.8	34.0	61.2	42.2	-26.6	67.5
Engraving, steel and copperplate, including plate printing	5,788	5,358	5,420	5,670	2,732	1,291	649	795.2	7.2	-4.4	107.6	111.6	98.9
Engraving, wood	26	67	67	68	89	45	47			-1.5	74.4	-13.3	-4.8
Envelopes	9,004	7,124	7,187	5,206	3,091	2,122	1,741	473.8	36.0	38.1	68.4	45.7	21.9
Explosives	35,231	51,635	51,635	45,778	28,601	29,065	19,195	83.5	-31.8	12.8	60.1	-2.0	54.5
Fancy articles, not elsewhere specified	8,099	8,657	8,982	4,869	3,219	3,378	2,596	223.5	-6.5	95.9	42.5	-4.7	30.0
Feathers and plumes	410	602	594	686	11,167		(*)			-18.3	61.0	121.0	
Felt goods	20,522	16,411	16,411	14,056	11,405	9,756	(*)	161.8	25.1	16.8	23.2	16.9	24.4
Ferro-alloys	37,087	37,087		(*)	(*)	(*)	(*)						
Fertilizers	161,774	125,939	125,939	114,281	64,711	47,989	38,680	318.4	28.5	10.2	76.5	84.8	24.1
Files	11,155	11,897	11,905	8,821	7,383	5,697	4,835	130.9	-6.2	35.0	19.5	29.6	17.8
Firearms	15,689	26,167	26,167	7,474	7,522	16,352	4,490	248.5	-40.2	250.1	-7	-54.0	264.2
Fire extinguishers, chemical	1,285	855	855	391	215	140	26	4,648.6	44.4	118.7	81.9	53.6	438.5
Fireworks	941	1,005	1,005	707	517	347	219	329.5	-6.4	42.1	36.8	49.0	58.4
Flags and banners	748	778	778	637	889	269	230	225.1	-3.9	22.1	63.8	44.6	17.0
Flavoring extracts	4,278	3,378	3,378	1,470	1,000	873	704	607.5	24.7	129.7	38.7	21.4	24.0
Flax and hemp, dressed	877	1,920	1,920	832	1,147	900	187	268.2	-54.3	180.8	-27.5	91.2	220.9
Flour-mill and grain-mill products	709,856	876,464	876,405	522,384	353,584	775,318	670,719	6.0	-15.9	6.6	-3.7	10.1	15.6
Food preparations, not elsewhere specified	178,132	149,669	150,230	80,023	55,168	28,162	15,485	1,054.5	19.0	87.7	45.1	95.9	81.9
Foundry and machine-shop products	1,234,328	1,040,265	1,216,028	770,454	659,601	497,148	379,900	387.1	18.7	57.9	18.9	52.2	43.6
Foundry supplies	7,738	6,327	6,328	4,694	4,995	3,543	3,505	120.8	22.8	34.8	-8.0	41.0	1.1
Fuel, manufactured	7,623	5,180	5,180	3,444	1,290	(*)	(*)			47.2	60.4	167.0	
Fur goods	4,269	5,327	5,327	3,233	2,120	1,994	907	874.0	-19.3	54.8	52.5	6.3	116.8
Furnishing goods, men's	5,470	5,659	9,029	5,880	3,933	3,061	1,250	598.5	-3.3	53.6	47.6	30.1	144.9
Furniture	485,347	265,064	262,703	240,665	211,438	163,614	114,568	319.5	83.1	9.2	13.8	29.2	42.8
Furs, dressed	7,776	5,421	5,621	2,276	2,103	1,260	1,958	658.5	43.4	147.1	5.2	66.9	18.8
Galvanizing and other coating processes	1,586	1,571	1,531	2,335	1,397	1,603	409	371.0	13.1	-31.6	74.5	-14.7	291.6
Gas and electric fixtures	13,818	9,656	9,910	10,028	9,655	5,192	4,831	204.2	43.1	-1.2	3.9	66.0	13.1
Gas, illuminating and heating	858,805	238,454	238,467	213,370	128,350	73,101	31,797	1,028.0	50.4	11.8	66.2	75.6	129.9
Gas machines and gas and water meters	7,364	8,586	8,601	5,711	4,328	1,602	974	657.7	-14.2	50.6	62.0	170.2	64.5
Glass	240,528	207,338	207,430	163,189	123,132	91,476	52,943	354.5	16.0	27.1	32.5	84.6	72.8
Glass, cutting, staining, and ornamenting	4,732	5,042	5,110	5,589	4,897	3,973	2,098	128.7	-6.1	-7.7	13.1	23.3	86.4
Gloves and mittens, cloth, not including gloves made in textile mills	3,143	3,364	(*)	(*)	(*)	(*)	(*)			-8.6			
Gloves and mittens, leather	4,372	3,288	3,288	3,357	3,389	2,725	2,165	102.0	38.0	-2.1	15.2	6.0	25.9
Glycerine	65,764	52,036	52,846	41,639	28,237	35,983	26,842	150.8	26.4	23.9	47.4	-21.5	35.1
Glue, not elsewhere specified	24,709	16,979	16,979	13,304	15,596	14,280	6,806	283.0	45.5	-27.6	-14.7	9.2	109.8
Gold and silver, leaf and foil	281	408	408	360	259	278	149	88.6	-21.1	13.3	39.0	-6.8	86.6
Gold and silver, reducing and refining, not from the ore	4,620	3,141	3,279	2,285	1,735	1,069	785	530.5	47.1	46.7	28.8	62.5	39.6
Graphite, ground and refined	7,445	7,445	7,445	2,262	1,472	922	805	235.7	-63.7	186.1	76.9	59.7	14.5
Grease and tallow, not including lubricating greases	25,275	25,544	26,584	17,947	14,613	11,738	3,031	215.1	-1.1	42.6	22.9	24.5	46.2
Grindstones	3,898	3,763	3,631	2,160	5,700	2,602	2,577	40.3	3.5	68.1	-52.1	119.1	-2.8
Haircloth	1,333	972	1,153	1,723	995	(*)	(*)			87.1	-33.1	73.2	
Hair work	17	119	119	83	69					-36.7	75.0	-63.8	251.6
Hammocks	103	92	92	218	157	62	28			-28.0			169.6
Hand stamps	2,571	1,848	1,474	973	644	329	306	570.0	39.1	51.5	51.1	95.7	7.5
Hardware	78,608	67,604	67,589	53,411	41,821	33,417	22,688	249.5	17.2	26.5	27.7	25.1	47.4
Hardware, saddlery	5,398	7,146	7,161	4,134	4,879	3,469	2,988	81.0	-24.5	73.2	-15.3	40.8	16.1
Hat and cap materials	4,749	4,927	4,927	2,954	2,922	2,239	1,770	168.4	-3.6	66.8	1.1	80.5	26.5

See footnotes at end of Table 34, p. 177.

TABLE 33.—AMOUNT OF PRIMARY HORSEPOWER INSTALLED IN INDIVIDUAL INDUSTRIES, BY CENSUS YEARS, AND PER CENT OF INCREASE, BY CENSUS PERIODS: 1899 TO 1923—Continued

[See note at head of this table, p. 158]

INDUSTRY	PRIMARY HORSEPOWER							PER CENT OF INCREASE OR DECREASE (—)					
	Excluding data for rented power other than electric		Including data for rented power other than electric					24-year period, 1899-1923	Intercensal period				
	1923	1919	1919	1914	1909	1904	1899		1919-1923	1914-1919	1909-1914	1904-1909	1899-1904
Hats and caps, other than felt, straw, and wool.....	1,782	1,687	1,687	1,339	990	797	3,252	-45.2	5.6	26.0	35.3	24.2	-75.5
Hats, fur-felt.....	18,488	20,377	20,389	20,851	19,245	16,630	11,643	56.2	-9.3	-2.2	8.3	15.7	40.4
Hats, straw.....	3,673	3,382	3,392	5,248	3,482	2,366	(1)		8.6	-35.4	50.7	47.2	
Hats, wool-felt.....	2,762	2,694	2,696	3,091	2,521	1,847	2,324	18.9	2.5	-12.8	22.6	36.5	-20.5
Hones and whetstones.....	1,151	1,164	1,164	864	677	684	593	94.1	-1.1	34.7	27.6	-1.0	15.3
Horseshoes, not made in steel works or rolling mills.....	1,341	3,374	3,374	1,984	1,045	1,014	545	145.9	-65.4	95.3	89.9	3.1	86.1
House-furnishing goods, not elsewhere specified.....	9,969	11,857	12,249	11,731	9,329	8,749	8,521	20.8	-15.9	4.4	25.8	6.6	2.9
Ice, manufactured.....	845,012	569,925	572,970	461,988	317,789	191,660	100,421	748.2	48.3	24.0	45.4	65.8	90.9
Ink, printing.....	14,703	10,229	10,353	7,821	5,857	3,384	1,895	685.0	43.7	32.4	33.5	73.1	78.6
Ink, writing.....	695	610	610	612	169	224	359	93.6	13.9	-3	262.1	-24.6	-37.6
Instruments, professional and scientific.....	16,203	12,981	13,029	6,799	4,856	2,110	2,471	557.6	24.8	91.5	40.0	130.1	-14.6
Iron and steel, blast furnaces.....	191,832,919	1,681,407	1,681,432	1,222,273	1,173,422	773,278	497,272	268.6	15.9	29.4	4.2	51.7	55.5
Iron and steel, steel works and rolling mills.....	4,110,173	3,818,167	3,820,917	2,706,553	2,100,978	1,649,299	1,100,801	273.8	7.6	41.2	28.8	27.4	49.8
Iron and steel, bolts, nuts, washers, and rivets, not made in rolling mills.....	48,036	49,959	49,959	28,897	22,113	13,825	9,165	424.4	-3.8	72.9	30.7	59.9	50.8
Iron and steel, cast-iron pipe.....	47,239	28,741	28,741	25,864	18,737	(2)	(2)		64.4	11.1	38.0		
Iron and steel, doors and shutters.....	3,981	4,013	4,013	3,170	1,997	969	223	1,685.2	-8	26.6	58.7	106.1	334.6
Iron and steel, forgings, not made in steel works or rolling mills.....	136,922	100,996	101,951	38,215	27,803	16,069	7,697	1,696.2	35.6	166.8	37.4	73.0	108.8
Iron and steel, nails and spikes, cut and wrought, including wire nails, not made in steel works or rolling mills.....	10,275	8,971	8,974	8,235	7,723	10,533	12,853	-20.1	14.5	9.0	6.6	-26.7	-18.1
Iron and steel, tempering and welding.....	6,209	8,785	(3)	(3)	(3)	(3)	(3)		-29.4				
Iron and steel, wrought pipe.....	40,912	23,925	23,925	17,542	20,650	15,094	11,717	249.2	71.0	36.4	-15.1	35.8	23.8
Ivory, shell, and bone work, not including combs and hairpins.....	880	879	954	798	916	1,247	973	-1.0	.1	34.7	-22.7	-26.5	28.3
Japanning.....	201	306	311	110	78	252	28	629.7	-34.3	182.7	44.7	-69.8	800.0
Jewelry.....	16,851	15,096	16,389	15,680	11,204	7,872	6,658	174.8	11.6	4.6	39.8	42.3	18.3
Jewelry and instrument cases.....	1,662	1,075	1,091	1,059	527	359	208	710.0	54.6	3.0	100.9	46.8	72.6
Knife goods.....	24,174	32,135	32,135	26,628	20,993	18,810	8,191	195.0	-24.8	12.3	36.4	11.6	129.6
Knit goods.....	183,675	149,438	151,601	125,842	103,709	78,769	57,346	224.9	22.9	20.5	21.3	31.7	37.4
Labels and tags.....	4,538	4,033	4,061	2,233	1,589	919	392	1,065.5	12.5	81.9	40.5	72.9	134.4
Lamps and reflectors.....	16,716	12,622	12,708	8,640	6,207	3,252	2,360	613.0	32.4	47.1	39.2	90.9	37.8
Lapidary work.....	566	680	680	546	679	554	212	166.9	-16.8	24.5	19.6	22.6	161.3

TABLE 33.—AMOUNT OF PRIMARY HORSEPOWER INSTALLED IN INDIVIDUAL INDUSTRIES, BY CENSUS YEARS, AND PER CENT OF INCREASE, BY CENSUS PERIODS: 1899 TO 1923—Continued

[See note at head of this table, p. 158]

INDUSTRY	PRIMARY HORSEPOWER							PER CENT OF INCREASE OR DECREASE (—)					
	Excluding data for rented power other than electric		Including data for rented power other than electric					24-year period, 1899-1923	Intercensal period				
	1923	1919	1919	1914	1909	1904	1899		1919-1923	1914-1919	1909-1914	1904-1909	1899-1904
Paper and wood pulp.....	2,178,623	1,849,699	1,851,014	1,621,154	1,204,265	1,093,708	762,118	186.1	17.8	14.2	24.3	19.3	43.5
Paper goods, not elsewhere specified.....	37,840	35,389	35,538	27,366	22,436	13,071	7,855	384.1	7.0	20.9	22.0	71.6	66.4
Paper patterns.....	971	68	68	862	751	35	9	10,689.2	1,327.9	-81.2	-51.8	1,676.3	322.2
Patent medicines and compounds.....	29,998	25,409	25,677	18,542	14,704	10,092	8,223	268.8	18.1	38.5	26.1	45.7	22.7
Paving materials.....	197,290	191,471	191,543	138,026	5,757	5,156	34,397	473.6	3.0	38.8	2,297.5	11.7	-85.0
Peanuts, grading, roasting, cleaning, and shelling.....	7,703	7,351	7,351	4,235	2,827	1,602	(*)	4.8	73.6	49.8	76.5		
Pencils, lead.....	7,288	8,099	8,099	3,739	3,449	2,625	1,360	436.0	-10.0	116.7	8.4	31.4	93.0
Pens, fountain and stylographic.....	2,710	1,492	1,517	1,157	477	272	406	578.5	81.6	31.1	142.6	75.4	-33.0
Pens, gold.....	191	145	160	138	92	77	121	74.1	31.7	15.9	50.0	19.5	-36.4
Pens, steel.....	266	305	305	244	244	294	138	92.7	-12.8	25.0		-17.0	113.0
Perfumery and cosmetics.....	6,502	2,196	2,196	1,913	1,375	814	671	869.1	196.1	14.8	39.1	68.9	21.3
Petroleum refining.....	391,154	238,906	238,906	128,468	90,268	46,019	36,127	982.5	63.7	86.0	42.3	96.2	27.4
Phonographs and graphophones.....	41,160	40,163	40,163	11,688	6,871	2,522	1,082	3,705.2	2.5	243.7	88.5	152.6	133.1
Photo-engraving, not done in printing establishments.....	5,786	3,800	3,800	3,927	2,636	1,925	1,040	456.5	52.3	-8.2	48.9	37.0	85.1
Photographic apparatus.....	(*)	2,321	1,522	1,522	1,233	1,371	1,529		52.5		191.0		-10.3
Photographic materials.....	17 50,287	17 28,779	26,458	14,960	8,114	3,890	1,883	2,354.7	74.7	76.9	84.4	119.9	96.0
Pickles, preserves, and sauces.....	36,717	22,384	22,500	18,840	12,837	10,223	6,572	461.5	64.0	19.4	46.8	25.6	55.6
Pipes, tobacco.....	2,354	2,001	2,001	1,718	1,503	1,058	855	175.2	17.6	16.6	13.9	43.2	23.7
Plated ware.....	22,890	14,212	14,252	10,499	7,431	6,295	5,451	311.9	57.5	35.7	41.3	18.0	15.5
Plumbers' supplies, not elsewhere specified.....	59,973	29,695	29,762	28,253	26,078	12,601	7,574	693.7	102.0	5.3	8.3	107.0	66.4
Pocketbooks.....	1,064	481	431	243	178	317	181	504.3	153.8	77.4	86.5	43.8	75.1
Pottery.....	44,532	29,040	29,090	22,330	110,017	104,918	75,802	201.2	53.3	30.2		4.9	38.4
Poultry, killing and dressing, not done in slaughtering and meat-packing establishments.....	2,006	4,016	4,016	2,230	(*)	(*)	(*)		-50.0	80.1			62.0
Printing and publishing, book and job.....	152,363	131,476	131,961	114,233	97,546	56,188	36,973	313.6	15.9	15.5	17.1	73.6	-34.9
Printing and publishing, music.....	1,231	634	634	594	365	203	312	294.6	94.2	6.7	62.7	79.8	
Printing and publishing, newspaper and periodical.....	203,454	194,074	194,361	182,269	173,889	94,832	70,089	190.6	4.8	6.6	4.8	83.4	55.3
Printing materials.....	1,062	1,351	1,357	671	663	524	632	68.8	-21.4	102.2	1.2	26.5	-17.1
Pulp, from fiber other than wood.....	(*)	833	(*)	(*)	(*)	(*)	219						
Pulp goods.....	13 13,605	12 273	12 273	6 826	3 125	2 368	1 314	935.8	10.9	39.1	182.4	32.0	80.2
Pumps, not including power pumps.....	(*)	10,346	8,488	4,124	3,215	2,569	1,245			198.0	-17.2	64.0	106.3
Pumps, steam and other power.....	10 38,268	10 32,441	22,155	13,723	(*)	(*)	(*)		18.0	61.4			
Refrigerators.....	17,136	13,029	13,232	11,332	10,013	6,160	5,040	245.2	31.5	16.8	13.2	62.5	22.2

Regalia, and society badges and emblems.....	1,160	1,321	1,338	665	784	680	205	470.9	-12.2	100.5	-15.2	15.3	231.7
Rice, cleaning and polishing.....	22,220	25,340	27,382	15,571	19,519	18,866	7,646	318.3	-12.3	75.9	-20.2	23.0	116.8
Roofing materials.....	39,598	39,247	39,327	11,702	9,421	22,022	18,217	117.8	9	236.1	24.1	-59.0	26.4
Rubber tires, tubes, and rubber goods, not elsewhere specified.....	11 549,450	11 379,873	354,188	161,927	79,062	48,381	40,835	1,154.1	44.0	133.1	92.2	68.4	18.5
Rules, ivory and wood.....	714	390	299	441	167	316	302	135.7	138.8	-32.2	164.1	-47.5	5.0
Saddlery and harness.....	7,761	8,305	8,212	10,397	17,234	7,370	6,018	29.1	-5.4	-21.0	-39.7	132.8	22.5
Safes and vaults.....	7,690	5,242	5,342	8,406	5,646	4,060	2,209	248.2	44.0	-36.5	61.0	85.0	84.2
Salt.....	58,101	42,051	43,187	29,007	27,263	19,434	22,865	160.1	38.2	48.9	6.4	40.8	-18.6
Sand and emery paper and cloth.....	3,694	3,977	3,977	3,153	3,351	1,133	898	811.5	-7.1	26.1	-5.0	195.8	26.2
Sand-lime brick.....	4,332	4,358	4,358	5,000	(1)	(1)	(1)	-	-0	22.3	-	-	-
Sausage, not made in slaughtering and meat-packing establishments.....	17,017	12,871	12,713	7,930	6,275	8,355	2,052	732.0	34.3	60.3	26.4	87.0	63.5
Saws.....	13,298	15,046	15,098	11,795	11,852	7,491	5,498	145.0	-11.6	80.3	-5	58.2	30.4
Scales and balances.....	9,815	7,441	7,451	6,201	6,183	5,251	2,466	290.3	28.2	20.2	9	90.2	31.5
Screws, machine.....	28,954	23,517	23,540	7,988	3,319	3,201	1,407	1,959.0	28.1	104.7	140.7	3.7	127.5
Screws, wood.....	8,550	7,764	7,764	8,044	5,618	8,715	3,490	145.0	10.1	-3.5	43.2	51.2	6.4
Sewing-machine cases.....	(4)	10,666	6,031	5,026	6,900	2,055	-	-	-	76.7	20.0	-28.1	240.1
Sewing machines and attachments.....	40 22,511	40 32,017	21,379	18,198	14,400	10,172	8,014	87.6	-29.7	17.5	26.4	41.6	26.9
Shipbuilding, steel.....	280,373	475,567	475,567	83,706	57,697	51,029	38,862	622.0	-41.0	468.1	45.1	13.1	81.3
Shipbuilding, wooden, including boat building.....	37,339	77,704	78,144	31,627	30,368	27,098	22,935	63.9	-51.9	147.1	4.2	12.1	18.2
Shirts.....	14,080	14,890	14,944	17,617	12,656	8,723	7,110	98.4	-5.6	-16.2	39.2	45.1	22.7
Show cases.....	(4)	4,423	4,145	4,145	4,746	4,087	1,232	-	-	6.7	-12.7	16.1	231.7
Signs and advertising novelties.....	11,781	7,714	7,730	7,370	3,790	(5)	(5)	52.7	52.7	4.9	94.5	-	-
Silk goods, including throwsters.....	206,020	178,748	176,825	116,924	97,947	71,780	67,397	265.4	18.0	51.2	18.4	36.5	25.0
Silversmithing and silverware.....	7,284	6,843	6,940	8,239	7,752	6,578	3,035	143.3	6.4	-15.8	6.3	17.8	110.7
Slaughtering and meat packing.....	382,127	358,522	359,212	253,066	202,432	115,956	85,008	350.5	6.6	41.9	25.0	74.0	36.4
Smelting and refining, copper.....	432,886	321,610	321,610	194,980	168,126	76,524	61,630	602.3	34.0	64.9	23.3	106.0	24.2
Smelting and refining, lead.....	42,377	49,668	52,565	29,734	26,954	26,607	16,342	174.4	-14.7	76.8	10.3	5.0	57.1
Smelting and refining, metals, not elsewhere specified.....	1,144	11,700	(6)	(6)	(6)	(6)	(6)	-	-0.2	-	-	-	-
Smelting and refining, not from the ore.....	6,654	7,921	7,921	10,076	10,705	17,111	8,633	11.9	21.9	-21.4	-5.9	-37.4	98.2
Smelting and refining, zinc.....	69,583	73,404	73,604	39,705	21,457	18,404	11,146	824.1	-5.6	100.5	71.1	16.6	65.1
Soap.....	74,820	83,700	83,710	35,737	28,300	20,228	327.4	122.0	-8.7	26.0	40.2	15.5	16.5
Soda-water apparatus.....	4,236	4,131	4,146	3,726	2,594	1,533	1,183	259.6	2.6	11.3	28.7	83.6	29.4
Sporting and athletic goods.....	11,091	6,876	4,356	3,243	2,995	1,133	892.7	63.6	67.8	57.8	34.3	8.3	164.3
Springs, steel, car and carriage, not made in steel works or rolling mills.....	25,393	16,560	16,585	8,098	7,849	5,510	3,185	698.2	53.3	104.8	10.2	33.4	73.0
Stamped and enameled ware, not elsewhere specified.....	68,326	51,283	51,441	24,767	27,829	10,088	16,597	312.8	33.2	48.0	24.9	175.9	-30.2
Stationery goods, not elsewhere specified.....	11,539	8,242	8,342	5,703	6,842	3,396	1,706	876.3	38.3	46.3	-16.0	101.5	99.1
Statuary and art goods.....	887	682	684	826	462	466	(7)	-	30.1	-17.2	78.8	-9	-
Steam fittings and steam and hot-water heating apparatus.....	91,085	67,494	67,504	38,630	33,008	10,696	6,510	1,299.8	35.0	74.7	17.0	208.6	64.3
Steam packing.....	17,371	26,755	26,763	17,254	11,123	8,846	4,486	293.6	-34.0	55.1	55.0	25.8	97.1
Steel barrels, drums, and tanks, portable.....	7,907	10,554	10,554	(8)	(8)	(8)	(8)	-	-25.1	-	-	-	-
Stencils and brands.....	(4)	(9)	874	411	259	392	156	-	-	-0	58.7	-33.9	151.3
Stereotyping and electrotyping.....	12,313	9,498	9,613	6,983	4,076	2,878	1,470	747.5	29.6	87.7	71.3	41.6	96.8
Stoves and hot-air furnaces.....	65,366	49,408	49,479	41,196	40,248	28,414	(10)	32.3	32.3	20.1	2.4	41.6	-
Stoves, gas and oil.....	22,268	11,290	11,295	7,954	5,276	3,603	1,723	1,194.6	97.5	42.0	50.8	46.4	109.1
Structural ironwork, not made in steel works or rolling mills.....	205,518	165,179	165,347	109,374	80,278	56,719	19,673	945.6	24.4	51.2	36.2	41.5	188.3
Sugar, beet.....	127,771	127,894	127,994	76,705	57,202	35,490	14,400	783.0	3	66.1	34.1	61.2	145.4

See footnotes at end of Table 34, p. 177.

TABLE 33.—AMOUNT OF PRIMARY HORSEPOWER INSTALLED IN INDIVIDUAL INDUSTRIES, BY CENSUS YEARS, AND PER CENT OF INCREASE, BY CENSUS PERIODS: 1899 TO 1923—Continued

[See note at head of this table, p. 158]

INDUSTRY	PRIMARY HORSEPOWER						PER CENT OF INCREASE OR DECREASE (-)						
	Excluding data for rented power other than electric		Including data for rented power other than electric				24-year period, 1899-1923	Intercensal period					
	1923	1919	1919	1914	1909	1904		1899	1919-1923	1914-1919	1909-1914	1904-1909	1899-1904
Sugar, cane.....	88,214	101,859	101,861	113,246	122,189	140,650	152,569	(-24.1 99.3)	-13.4	-10.1	-7.3	14.2	-7.8
Sugar, refining, not including beet sugar.....	72,682	62,541	62,541	49,666	38,414			-38.3	5.8	29.3			
Sulphuric, nitric, and mixed acids.....	19,131	30,637	30,637	24,927	6,494	5,416		-37.6	22.9	283.8	19.9		
Surgical appliances.....	9,290	12,382	12,382	6,361	5,170		1,159	-25.0	94.7	23.0	70.9	161.1	
Suspenders, garters, and elastic woven goods.....	809	8,928	9,028	7,524	4,899	(2)	(10)	-90.9	20.0	53.6			
Textile machinery and parts.....	56,295	41,744	(10)	(10)	(10)	(10)		34.9					
Theatrical scenery.....	162	104	104	65		(1)	(1)	55.8	60.0				
Tin and other foils, not elsewhere specified.....	12,595	6,991	6,991	2,458	1,699	1,388	854	1,275.1	80.2	184.4	44.7	22.4	62.5
Tin plate and terneplate.....	(9)	18,697	18,697	9,355	8,154	8,990	8,515		99.9	14.7	-9.3	155.8	
Tinware, not elsewhere specified.....	41,252	30,234	30,499	19,139	15,690	8,946	(9)	26.4	59.4	22.0	75.4		
Tobacco, chewing and smoking, and snuff.....	18,621	18,893	18,893	21,273	19,253	18,535	17,733	5.0	-1.4	-11.2	10.5	3.9	4.5
Tobacco, cigars and cigarettes.....	24,894	24,497	24,504	13,664	9,261	6,069	4,563	445.6	1.6	79.3	47.5	52.6	33.0
Tools, not elsewhere specified.....	75,243	67,730	68,381	38,474	86,066	21,955	11,808	543.4	11.1	77.7	6.7	64.2	86.0
Toys and games.....	16,111	14,423	14,449	6,789	5,323	4,757	3,155	411.6	11.7	112.8	27.5	11.9	50.5
Trunks and valises.....	7,269	7,696	7,703	7,566	6,585	5,019	3,514	119.6	-5.5	1.9	6.9	87.3	51.4
Turpentine and rosin.....	1,632	2,276	2,308	2,478	4,129	1,175	886	125.7	-15.1	-7.1	-40.0	251.4	35.7
Type founding.....	1,438	845	850	1,557	3,285	973	699	107.0	70.2	-48.7	28.9	32.1	39.2
Typewriters and supplies.....	11,451	13,054	13,066	10,887	6,845	4,455	2,272	404.4	-12.3	20.0	59.1	53.6	96.1
Umbrellas and canes.....	2,409	3,357	3,383	2,879	2,413	2,122	1,457	66.7	-28.2	31.2	6.9	13.7	45.6
Upholstering materials, not elsewhere specified.....	41,274	19,622	19,826	18,753	17,456	15,604	11,351	93.0	10.8	5.7	7.4	11.9	37.5
Varnishes.....	21,154	11,497	11,497	7,656	5,596	3,833	4,099	416.1	84.0	50.2	36.8	46.0	-6.5
Vault lights and ventilators.....	254	269	279	491	234	174	103	155.7	-5.6	-43.2	109.8	34.5	68.9
Vinegar and cider.....	8,414	17,943	17,943	13,162	16,681	10,556	16,849	-50.1	-53.1	36.3	-21.1	58.0	-37.3
Wall paper, not made in paper mills.....	11,246	8,123	8,168	7,010	5,680	4,867	4,673	146.9	38.4	16.4	23.4	16.7	6.4
Wall plaster and composition flooring.....	62,520	32,356	32,356	36,626	25,892	20,064	(17)	93.2	-11.7	41.5	29.1		
Washing machines and clothes wringers.....	11,415	8,816	8,836	4,903	3,351	3,564	2,732	318.5	29.5	80.2	46.3	-6.0	80.5
Waste.....	12,347	11,304	11,391	8,513	4,286	3,803	2,193	467.2	9.2	33.8	98.0	11.0	76.2
Watch and clock materials, except watchcases.....	170	252	252	628	334	168	205	-17.0	-32.5	-59.7	87.4	98.3	-18.0
Watchcases.....	5,710	4,275	4,275	2,380	3,396	2,559	1,798	217.7	53.6	79.2	-29.1	17.7	58.0
Watches.....	7,396	7,202	7,202	6,624	5,649	3,172	1,762	319.7	2.7	-8.7	17.3	73.1	80.0
Wheelbarrows.....	1,455	765	765	1,193	1,480	1,282	762	91.0	90.2	-36.1	-19.4	15.9	69.2
Whips.....	334	853	853	1,076	1,321	1,068	818	-59.1	-60.8	-20.7	-18.5	23.7	80.6
Windmills.....	2,732	4,686	4,761	3,997	3,301	3,604	2,214	-25.3	-41.7	19.1	21.1	-10.6	66.2

Window and door screens and weather strips.....	9,518	7,515	7,530	8,188	(*)	(*)	(*)	26.6	-8.0				
Window shades and fixtures.....	11,450	8,946	8,949	8,607	5,737	2,705	1,927	494.8	28.9	35.4	15.2	112.1	46.4
Wire.....	123,923	119,301	119,451	83,940	71,959	25,856	9,979	1,145.7	8.9	42.8	16.6	178.6	188.1
Wirework, not elsewhere specified.....	81,617	29,036	29,074	21,547	20,131	18,280	12,772	147.9	8.9	34.9	7.0	10.1	43.1
Wood distillation.....	14,770	15,188	15,938	10,045	9,654	4,620			-2.7	68.7	1.9	113.8	
Wood preserving.....	37,998	16,104	16,269	11,801	10,647	8,439	1,007	3,712.8	136.0	37.9	10.8	209.6	241.5
Wood, turned and carved.....	43,868	39,722	39,958	43,334	48,447	47,590	31,133	40.1	9.2	-7.8	-10.6	1.8	52.9
Wooden goods, not elsewhere specified.....	22,438	25,874	25,906	20,711	22,472	17,878	7,702	191.7	-18.8	25.1	-7.8	25.7	132.1
Wool pulling.....	2,837	2,162	2,162	2,249	1,366	1,324	820	246.0	81.2	-3.8	64.6	3.2	61.5
Wool scouring.....	6,973	8,710	9,790	7,579	6,782	3,478	2,900	142.4	-23.2	29.2	11.8	95.0	19.9
Wool shoddy.....	12,486	16,587	16,094	12,440	12,535	12,244	11,455	9.9	-24.6	34.2	-1.8	2.4	6.9
Woolen and worsted goods.....	538,465	466,219	468,480	381,220	348,283	277,366	234,660	130.6	15.5	22.9	9.5	25.0	18.2

See footnotes at end of Table 34, p. 177.

TABLE 34.—GROWTH OF MANUFACTURE IN THE UNITED STATES AS MEASURED BY THE VALUE OF PRODUCTS OF INDIVIDUAL INDUSTRIES, BY CENSUS YEARS: 1869 TO 1923

[The italic figures include establishments with products valued at less than \$5,000 to avoid disclosing individual industries. As to the comparability of 1921 and 1923 figures with those of previous years, see general remarks preceding tables, p. 124]

INDUSTRY	VALUE OF PRODUCTS (EXPRESSED IN THOUSANDS OF DOLLARS)										
	Excluding data for establishments with products valued at less than \$5,000			Including data for establishments with products valued at \$500 or more							
	1923	1921	1919	1919	1914	1909	1904	1899	1889	1879	1869
All industries.....	60,555,998	43,653,283	62,041,795	62,418,079	24,246,435	20,672,052	14,793,903	11,406,027	9,372,379	5,369,579	3,385,860
Agricultural implements.....	151,286	163,817	304,720	304,961	164,087	146,329	112,007	101,207	81,272	68,640	52,067
Airplanes, seaplanes, airships, and parts.....	¹ 12,945	¹ 6,642	¹ 14,373	¹ 14,373	¹ 790	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
Aluminum manufactures.....	106,930	45,822	75,271	75,278	19,597	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
Ammunition.....	51,509	32,550	88,038	88,038	30,840	26,053	19,931	13,028	6,539	1,905	2,485
Artificial flowers.....	19,659	14,188	16,087	16,143	7,614	9,041	⁶ 5,247	⁶ 6,293	⁶ 9,079	⁶ 4,879	(⁶)
Artificial limbs.....	2,635	2,451	3,121	3,271	1,498	1,324	884	750	476	137	166
Artificial stone products.....	53,602	31,768	30,456	33,664	21,934	18,596	4,123	(¹)	(¹)	(¹)	(¹)
Artists' materials.....	8,639	6,960	5,456	5,508	3,238	2,340	1,139	497	532	(¹)	94
Asbestos products, not including steam packing.....	¹ 39,820	19,030	23,969	23,978	2,814	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
Automobile bodies and parts.....	1,013,113	403,017	691,069	692,171	129,601	55,379	3,388	(¹)	(¹)	(¹)	(¹)
Automobile repairing.....	(¹)	(¹)	(¹)	224,652	29,920	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
Automobiles.....	3,163,328	1,671,387	2,387,876	2,387,903	503,230	193,823	26,645	4,748	(¹)	(¹)	(¹)
Awnings, tents, and sails.....	45,276	37,012	45,059	45,600	18,138	14,499	11,269	9,144	7,829	1,968	2,881
Babbitt metal and solder.....	41,487	26,255	58,998	59,017	19,180	19,768	13,100	9,191	2,905	263	310
Bags, other than paper, not including bags made in textile mills.....	151,676	115,452	214,028	214,059	79,049	54,882	37,399	19,652	20,208	13,238	12,700
Bags, paper, exclusive of those made in paper mills.....	42,272	41,190	47,249	47,264	17,603	15,698	10,087	6,799	5,024	4,113	1,484
Baking powders and yeast.....	51,691	52,886	46,163	46,230	22,339	20,775	19,043	14,568	7,407	4,761	895
Baskets, and rattan and willow ware.....	14,713	11,241	11,460	11,821	6,578	5,695	5,187	3,636	3,634	1,993	1,106
Bells.....	792	645	951	951	970	961	1,000	1,248	823	1,066	1,023
Belting and hose, rubber.....	(¹¹)	(¹¹)	(¹¹)	24,211	23,561	19,238	14,954	6,169	5,513	1,085	(¹¹)
Belting and hose, woven, other than rubber.....	¹ 3,312	6,390	19,176	19,176	4,441	5,491	2,837	717	778	23	(¹)
Belting, leather.....	37,723	19,168	40,457	40,491	23,036	23,692	14,220	10,623	8,534	6,526	4,558
Billiard tables, bowling alleys, and accessories.....	6,236	7,368	15,733	15,733	4,894	5,978	2,223	1,648	2,328	2,290	1,693
Blacking, stains, and dressings.....	25,822	15,453	25,192	25,284	9,882	8,419	6,941	4,505	3,900	1,491	818
Bluing.....	1,643	1,883	2,704	2,731	1,184	1,074	670	478	457	345	92
Bone, carbon, and lamp black.....	14,800	8,181	8,186	8,186	1,464	1,093	648	360	1,031	661	194
Bookbinding and blank-book making.....	76,959	63,854	65,338	66,021	38,104	31,742	25,224	20,791	17,068	11,977	14,077
Boot and shoe cut stock, exclusive of that produced in boot and shoe factories.....	89,291	72,692	161,169	161,203	59,965	44,661	27,676	23,243	17,904	7,532	(¹)

Boot and shoe findings, exclusive of those produced in boot and shoe factories	48, 012	39, 117	62, 680	62, 825	23, 308	25, 505	9, 905	7, 835	6, 805	2, 936	3, 654
Boots and shoes, not including rubber boots and shoes	1, 000, 078	867, 476	1, 154, 891	1, 155, 041	501, 780	442, 631	320, 107	258, 970	220, 649	66, 050	-----
Boots and shoes, rubber	181, 740	94, 033	116, 917	116, 917	53, 822	49, 721	70, 065	41, 090	18, 632	9, 706	-----
Boxes, cigar	14, 796	14, 317	13, 045	13, 110	8, 337	8, 491	7, 786	6, 867	7, 092	2, 903	980
Boxes, paper and other, not elsewhere specified	264, 209	174, 248	203, 281	206, 419	74, 711	54, 450	36, 867	27, 816	18, 905	7, 066	4, 630
Boxes, wooden packing, except cigar boxes	162, 858	122, 588	177, 428	177, 818	65, 507	75, 242	57, 948	38, 184	25, 518	12, 687	5, 968
Brass, bronze, and copper products	511, 470	214, 904	482, 036	483, 313	162, 199	149, 989	102, 407	68, 654	50, 056	27, 322	13, 131
Bread and other bakery products	1, 122, 906	1, 089, 972	1, 142, 677	1, 151, 896	491, 893	396, 865	269, 583	176, 369	128, 422	65, 825	36, 908
Brick and tile, terra-cotta, and fire-clay products	333, 416	194, 329	207, 565	208, 423	135, 921	122, 777	121, 152	121, 270	127, 771	12, 834	29, 023
Brooms	26, 262	18, 188	29, 387	30, 205	14, 085	14, 432	21, 104	18, 484	14, 156	10, 561	6, 622
Brushes	50, 512	35, 545	38, 823	39, 006	17, 894	14, 694	-----	-----	-----	-----	2, 695
Butter	654, 474	479, 724	582, 909	583, 163	243, 379	194, 999	118, 521	130, 783	100, 636	25, 743	(¹)
Butter, reworking	(¹)	(¹)	2, 229	2, 229	5, 869	5, 201	7, 271	2, 115	-----	-----	(¹)
Buttons	32, 750	26, 534	41, 513	41, 840	20, 712	22, 708	11, 134	7, 696	4, 217	4, 450	1, 779
Candles	5, 080	3, 777	3, 359	3, 351	1, 731	5, 130	9, 889	(¹)	(¹)	(¹)	(¹)
Canning and preserving, fish	47, 628	33, 957	77, 177	77, 264	31, 111	25, 514	18, 641	18, 178	6, 979	(¹)	(¹)
Canning and preserving, fruits and vegetables	370, 338	248, 106	400, 517	402, 243	149, 176	91, 439	78, 142	56, 427	29, 862	17, 600	5, 426
Canning and preserving, oysters	2, 964	2, 158	2, 950	2, 976	2, 328	2, 314	3, 986	1, 253	3, 261	(¹)	(¹)
Card cutting and designing	6, 109	4, 558	5, 296	5, 323	1, 055	1, 031	1, 083	618	243	52	764
Cardboard, not made in paper mills	9, 340	7, 642	9, 138	9, 138	4, 350	3, 779	1, 664	1, 270	1, 071	959	-----
Carpets and rugs, other than rag	199, 481	103, 880	183, 264	123, 264	69, 128	71, 188	61, 668	48, 192	47, 770	31, 793	21, 762
Carpets, rag	6, 097	4, 860	5, 205	5, 597	2, 793	2, 668	1, 918	1, 755	1, 714	862	1, 006
Carriage and wagon materials	7, 313	10, 787	26, 643	26, 765	24, 850	34, 526	30, 530	25, 027	16, 262	10, 114	691
Carriages and sleds, children's	34, 173	21, 717	24, 468	24, 507	11, 752	8, 805	6, 371	4, 290	4, 064	1, 078	1, 433
Carriages and wagons, including repairs	34, 681	31, 659	33, 914	31, 463	108, 697	125, 367	125, 333	113, 235	102, 680	64, 952	65, 363
Cars and general shop construction and repairs by electric-railroad companies	86, 413	87, 312	74, 990	75, 211	38, 577	31, 963	13, 437	9, 371	2, 966	(¹)	(¹)
Cars and general shop construction and repairs by steam-railroad companies	1, 433, 680	1, 180, 030	1, 279, 122	1, 279, 285	514, 041	405, 601	309, 775	218, 114	129, 462	-----	-----
Cars, electric-railroad, not including operations of railroad companies	29, 074	14, 856	18, 442	18, 442	10, 495	7, 810	10, 844	7, 305	3, 302	27, 998	-----
Cars, steam-railroad, not including operations of railroad companies	675, 277	325, 680	638, 223	638, 223	194, 776	123, 730	111, 178	90, 510	70, 084	-----	-----
Cash registers and calculating machines	95, 106	83, 653	83, 527	83, 539	30, 520	23, 708	9, 875	5, 675	1, 423	(¹)	(¹)
Cement	264, 059	203, 627	176, 265	175, 265	101, 756	63, 205	29, 973	(¹)	(¹)	(¹)	2, 034
Charcoal, not including production in the lumber and wood-distillation industry	999	419	550	589	402	872	1, 292	1, 134	(¹)	976	(¹)
Cheese	130, 765	81, 880	143, 093	143, 456	51, 745	44, 263	29, 138	(¹)	(¹)	(¹)	(¹)
Chemicals	500, 282	314, 871	438, 661	674, 141	158, 054	117, 741	75, 357	48, 159	59, 353	38, 640	(¹)
Chewing gum	40, 871	38, 865	51, 221	51, 240	17, 160	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
China decorating, not including that done in potteries	1, 493	1, 242	828	867	727	786	827	485	848	(¹)	(¹)
Chocolate and cocoa products	95, 632	81, 049	139, 258	139, 258	35, 713	22, 390	14, 390	9, 669	4, 222	1, 302	946
Cleaning and polishing preparations	35, 443	25, 178	26, 265	26, 703	9, 152	6, 260	2, 710	2, 193	866	500	323
Clocks	23, 553	17, 750	23, 858	23, 380	11, 632	12, 236	8, 868	7, 158	4, 229	4, 110	2, 510
Cloth, sponging and refinishing	4, 652	4, 101	3, 680	3, 691	1, 531	1, 544	1, 053	666	400	223	-----
Clothing, horse	5, 137	3, 835	6, 090	6, 021	5, 150	4, 135	2, 139	1, 805	1, 572	695	-----
Clothing, men's	1, 178, 715	934, 776	1, 161, 714	1, 162, 968	458, 211	485, 677	355, 797	276, 717	261, 020	209, 548	148, 660

See footnotes at end of table, p. 177.

TABLE 34.—GROWTH OF MANUFACTURE IN THE UNITED STATES AS MEASURED BY THE VALUE OF PRODUCTS OF INDIVIDUAL INDUSTRIES, BY CENSUS YEARS: 1869 TO 1923—Continued

[See note at head of this table, p. 168]

INDUSTRY	VALUE OF PRODUCTS (EXPRESSED IN THOUSANDS OF DOLLARS)										
	Excluding data for establishments with products valued at less than \$5,000			Including data for establishments with products valued at \$500 or more							
	1923	1921	1919	1919	1914	1909	1904	1899	1889	1879	1869
Clothing, men's, buttonholes.....	804	646	964	1,090	638	781	700	681	784	(⁹)	(⁹)
Clothing, women's.....	1,406,684	1,022,743	1,207,249	1,208,543	473,888	384,752	247,662	189,340	68,164	32,008	12,901
Coal-tar products.....	130,688	75,897	135,448	(¹⁰)	(¹⁰)	(¹⁰)	(¹⁰)	(¹⁰)	(¹⁰)	(¹⁰)	(¹⁰)
Coffee and spice, roasting and grinding.....	287,528	226,059	304,670	304,792	150,749	110,533	84,188	59,527	75,042	22,925	11,266
Coffins, burial cases, and undertakers' goods.....	65,568	64,796	64,308	64,377	26,325	24,526	20,266	13,952	12,231	8,158	4,027
Coke, not including gas-house coke.....	516,923	221,313	316,497	316,516	99,275	95,697	51,729	35,585	16,498	5,859	1,132
Collars and cuffs, men's.....	42,636	29,571	47,556	47,565	18,531	17,230	12,587	15,769	(⁹)	(⁹)	(⁹)
Combs and hairpins, not made from metal or rubber.....	8,770	4,850	6,569	6,568	5,478	5,376	2,789	1,976	1,021	951	689
Condensed milk.....	200,111	176,837	359,607	339,507	69,161	85,205	20,524	(¹⁰)	(¹⁰)	(¹⁰)	(¹⁰)
Confectionery and ice cream.....	626,223	527,260	633,701	637,209	209,668	134,706	87,087	60,644	55,997	25,637	15,923
Cooperage.....	73,134	56,633	67,547	68,236	50,017	49,622	49,424	38,440	38,618	33,715	26,894
Copper, tin, and sheet-iron work.....	198,908	149,776	156,817	160,314	94,891	89,388	56,082	63,813	66,654	50,184	42,357
Cordage and twine.....	88,283	75,356	133,357	133,866	59,761	41,942	48,017	37,850	33,313	12,492	8,979
Cordials and flavoring sirups.....	50,017	44,066	46,741	46,807	15,316	9,662	8,610	2,107	1,903	331	955
Cork, cutting.....	15,566	12,968	16,283	16,282	7,875	5,940	4,491	4,392	2,840	1,567	755
Corsets.....	78,048	75,600	75,480	75,542	40,551	33,267	14,862	14,451	12,402	6,495	.....
Cotton goods.....	1,901,126	1,278,221	2,125,246	2,125,272	676,569	615,218	442,451	332,806	267,982	210,950	177,490
Cotton lace.....	35,792	25,981	29,897	29,897	13,207	.....	.....	.....	.....	.....	.....
Cotton small wares.....	73,223	28,061	40,897	40,897	11,525	13,174	8,016	6,394	5,446	11,117	11,117
Crucibles.....	3,468	1,970	5,294	5,294	1,849	1,849	1,343	2,607	727	3,446	.....
Cutlery and edge tools.....	72,477	49,341	66,524	66,630	25,541	22,845	18,618	14,787	11,111	11,861	11,105
Dairymen's, poultrymen's, and apiarists' supplies.....	39,463	37,644	37,370	37,397	19,950	15,468	6,546	(⁹)	(⁹)	(⁹)	(⁹)
Dental goods.....	32,423	25,812	29,260	29,402	16,160	10,836	7,810	3,721	2,695	861	579
Drug grinding.....	10,562	10,886	16,939	16,938	8,080	8,007	5,148	4,308	4,337	.....	.....
Druggists' preparations.....	79,143	81,698	114,358	114,594	48,010	43,958	31,782	22,715	6,660	.....	.....
Dyeing and finishing textiles, exclusive of that done in textile mills.....	342,230	276,751	323,974	323,968	109,292	83,556	50,850	44,663	28,901	32,297	(⁹)
Dyestuffs and extracts, natural.....	35,972	28,311	53,733	53,744	20,620	15,955	10,893	7,351	9,293	5,253	2,879
Electrical machinery, apparatus, and supplies.....	1,293,002	833,985	997,716	997,968	335,170	221,309	140,809	92,434	19,115	2,555	(⁹)
Electroplating.....	12,297	8,041	10,015	10,390	4,773	4,510	2,965	2,720	3,122	1,976	(⁹)
Emery and other abrasive wheels.....	25,307	12,559	30,935	30,949	7,130	6,711	2,062	1,382	726	322	156
Enameling.....	4,427	2,023	2,692	2,645	2,166	2,085	15,709	9,979	182	183	1,071
Engines, steam, gas, and water.....	266,998	199,409	464,716	464,775	72,121	(¹⁰)	(¹⁰)	(¹⁰)	(¹⁰)	(¹⁰)	(¹⁰)
Engravers' materials.....	2,303	1,817	2,239	2,248	768	921	171	282	204	86	(⁹)
Engraving and dieinking.....	9,121	4,850	6,667	7,351	3,134	2,250	2,422	1,463	2,187	1,180	2,093

TABLE 34.—GROWTH OF MANUFACTURE IN THE UNITED STATES AS MEASURED BY THE VALUE OF PRODUCTS OF INDIVIDUAL INDUSTRIES, BY CENSUS YEARS: 1869 TO 1923—Continued

[See note at head of this table, p. 168]

INDUSTRY	VALUE OF PRODUCTS (EXPRESSED IN THOUSANDS OF DOLLARS)										
	Excluding data for establishments with products valued at less than \$5,000			Including data for establishments with products valued at \$500 or more							
	1923	1921	1919	1919	1914	1909	1904	1899	1889	1879	1869
Hats and caps, other than felt, straw, and wool	42,812	36,987	44,231	44,540	18,593	13,689	12,956	21,394	37,312	21,303	-----
Hats, fur-felt	75,253	52,614	82,685	82,745	37,350	47,865	36,629	27,811	-----	-----	-----
Hats, straw	82,569	28,617	82,171	82,187	25,444	21,424	10,357	(1)	(1)	(1)	-----
Hats, wool-felt	8,043	4,964	6,727	6,740	1,944	4,382	2,457	8,592	5,330	8,517	-----
Hones and whetstones	546	300	794	784	260	258	308	196	54	224	259
Horseshoes, not made in steel works or rolling mills	1,814	1,932	8,343	8,367	1,786	1,015	799	498	1,110	-----	(1)
House-furnishing goods, not elsewhere specified	69,333	54,551	60,004	60,212	26,453	18,509	15,011	14,278	8,347	1,332	-----
Ice, manufactured	164,662	158,889	135,985	137,005	60,386	42,953	23,790	13,781	4,901	545	258
Ink, printing	29,412	20,869	26,231	26,244	13,830	8,865	5,774	3,080	2,377	(1)	600
Ink, writing	6,107	4,980	6,888	6,434	2,784	2,505	1,881	1,293	1,128	(1)	366
Instruments, professional and scientific	63,074	42,132	57,987	58,137	17,495	10,504	6,378	4,853	8,272	1,639	1,724
Iron and steel, blast furnaces	10 1,007,613	10 419,771	794,467	794,467	317,654	391,429	231,823	206,757	145,643	89,316	69,640
Iron and steel, steel works and rolling mills	3,154,325	1,481,659	2,868,202	2,828,902	918,665	985,723	673,955	597,212	333,044	207,242	137,568
Iron and steel, bolts, nuts, washers, and rivets, not made in rolling mills	84,431	35,774	89,731	89,744	23,403	24,485	14,687	13,978	12,373	10,073	7,191
Iron and steel, cast-iron pipe	92,674	44,322	50,235	50,235	26,659	29,154	(10)	(10)	(10)	(10)	(10)
Iron and steel, doors and shutters	15,367	12,467	10,869	10,877	5,184	3,006	1,477	820	89	495	-----
Iron and steel, forgings, not made in steel works or rolling mills	179,011	83,151	173,729	173,752	28,961	20,293	12,110	10,438	9,043	6,492	-----
Iron and steel, nails and spikes, cut and wrought, including wire nails, not made in steel works or rolling mills	13,300	10,976	17,688	17,683	7,199	8,192	8,923	14,777	34,228	5,629	24,824
Iron and steel, nail tempering and welding	9,112	6,202	10,505	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)
Iron and steel, wrought pipe	90,823	56,662	81,889	81,869	37,655	30,886	17,401	21,292	37,907	13,292	7,369
Ivory, shell, and bone work, not including combs and hairpins	2,441	2,395	2,787	2,817	1,896	1,865	2,864	1,873	1,919	1,455	1,080
Japanning	1,021	497	739	771	381	331	607	216	351	190	216
Jewelry	174,034	127,231	202,911	203,939	81,006	80,350	53,226	46,129	34,781	22,202	22,104
Jewelry and instrument cases	10,506	7,036	6,080	6,128	3,621	3,117	2,292	1,157	1,454	132	217
Jute goods	25,421	17,506	34,445	34,443	16,514	10,795	9,066	5,884	1,120	697	-----
Knit goods	848,177	634,074	712,749	713,140	258,913	200,143	137,076	95,534	67,447	29,614	18,412
Labels and tags	26,023	19,538	24,208	24,244	6,584	4,670	2,462	1,105	1,058	866	-----
Lamps and reflectors	67,229	29,164	38,040	38,039	16,638	15,213	9,000	8,341	4,039	3,358	995
Lapidary work	9,130	4,345	29,982	30,051	6,360	9,173	7,647	5,786	316	544	107

Lard, not made in slaughtering and meat-packing establishments.....	(9)																			
Leads.....	9,900	12,377	12,462	12,471	4,589	4,159	2,520	1,890	1,239	765										686
Lead, bar, pipe, and sheet.....	18,295	10,474	17,174	17,174	7,431	9,145	9,277	7,478	6,352	5,601										18,510
Leather goods, not elsewhere specified.....	40,134	47,715	52,790	52,953	19,334	18,838	17,655	11,788	6,292	2,737										
Leather, tanned, curried, and finished.....	488,898	383,365	928,518	928,592	307,202	327,874	252,621	204,038	172,136	200,265										157,238
Lime.....	47,244	31,015	33,678	33,970	18,391	17,952	14,761	28,674	17,142	17,772										6,917
Linen goods.....	11,390	8,210	6,998	6,998	6,980	6,385	5,856	4,368	2,880	1,802										2,179
Liquors, distilled.....	83,000	28,789	31,854	31,854	206,779	204,699	131,270	96,794	104,198	41,004										36,191
Liquors, malt, including cereal beverages.....	75,535	122,050	378,883	379,905	442,149	374,790	293,346	236,915	182,732	101,058										55,707
Liquors, vinous.....	5,831	4,757	17,116	17,454	16,618	13,121	11,098	6,547	2,846	2,169										2,225
Lithographing.....	91,371	79,472	73,059	73,151	36,136	34,109	25,245	22,241	17,988	6,912										2,516
Locomotives, not made by railroad companies.....	215,393	102,023	156,270	156,270	43,374	31,582	59,552	(9)	(10)	(11)										
Looking-glass and picture frames.....	18,642	15,448	18,043	18,385	11,014	13,475	12,270	10,847	16,376	9,696										5,062
Lubricating greases.....	12,584	8,912	8,856	8,869	4,919	1,481	879	718	846	365										
Lumber and timber products.....	1,494,462	902,501	1,363,112	1,387,471	715,310	753,388	579,777	555,048	437,899	233,609										210,401
Lumber, planing-mill products, not including planing mills connected with sawmills.....	692,784	462,649	498,278	500,438	307,672	327,898	247,442	167,786	183,682	73,425										80,278
Machine tools.....	137,296	67,729	212,351	(10)	38,262	(10)	(10)	(10)	(10)	(10)										
Malt.....	16,431	21,005	39,340	39,340	48,123	30,289	30,289	19,374	23,443	18,273										12,017
Marble and stone work.....	191,538	137,241	126,564	129,165	107,055	113,093	84,844	163,687	65,723	32,446										30,234
Matches.....	23,940	30,274	18,496	18,496	12,556	11,353	5,647	6,006	2,194	4,668										3,540
Mats and matting, from cocoa fiber, grass, and corl.....	3,890	2,322	4,861	4,861	2,236	2,432	1,243	1,165	609	439										
Mattresses and bed springs, not elsewhere specified.....	107,562	74,624	83,496	83,953	38,717	35,783	27,756	17,956	15,684	5,288										
Millinery and lace goods, not elsewhere specified.....	297,505	269,714	254,532	265,725	114,160	85,894	50,778	29,489	18,047	9,578										6,513
Millstones.....	(28)	(28)	(28)	67	(21)	(21)	(21)	76	47	356										819
Mineral and soda waters.....	153,195	115,577	131,153	135,341	58,401	43,608	30,251	29,269	14,854	4,742										4,222
Minerals and earths, ground or otherwise treated.....	35,309	26,174	45,969	46,067	10,307	4,681	4,439	3,722	2,847	1,456										388
Mirrors, framed and unframed, not elsewhere specified.....	33,468	16,740	20,771	20,831	10,189	9,571	7,695	8,004	6,001	304										489
Models and patterns, not including paper patterns.....	30,165	16,742	24,742	25,300	8,605	8,868	4,545	3,834	2,734	1,021										1,211
Motor cycles, bicycles, and parts.....	32,259	23,098	53,090	53,106	22,224	10,699	5,153	31,916	2,568											
Mucilage, paste, and other adhesives, not elsewhere specified.....	10,621	9,930	11,162	11,230	5,695	4,918	3,556	2,556	1,277	17										126
Musical instruments and materials, not elsewhere specified.....	15,619	12,354	12,255	12,506	3,625	3,228	3,482	3,395	1,889	854										2,019
Musical instruments, organs.....	9,693	10,185	5,949	5,973	6,297	6,042	6,042	6,042	3,989											
Musical instruments, pianos.....	111,160	73,640	107,080	107,085	62,775	66,569	46,922	41,016	34,980	18,401										
Musical instruments, piano and organ materials.....	33,839	18,597	36,774	36,790	19,376	15,473	13,126	3,238	2,100	1,748										1,225
Needles, pins, and hooks and eyes.....	22,147	18,896	20,289	20,305	7,891	6,694	4,751	3,238	2,100	1,748										
Nets and seines.....	4,628	3,018	5,714	5,114	3,088	1,898	1,725	1,476	1,002	392										167
Oakum.....	(28)	(9)	983	359	338	361	440	363	(9)	(9)										
Oil and cake, cottonseed.....	226,388	217,225	581,245	581,245	212,127	147,868	96,408	58,727	19,336	7,691										2,206
Oil, essential.....	3,184	3,421	5,698	5,698	2,314	1,737	1,465	813	256	249										631
Oil, linseed.....	113,221	71,032	120,638	120,638	44,833	36,739	27,577	27,184	23,534	15,394										8,882
Oil, not elsewhere specified.....	118,158	93,275	156,440	156,480	38,040	31,770	23,596	19,607	11,750	9,208										15,340
Oilcloth and linoleum, floor.....	77,697	48,622	52,673	52,673	17,392	15,813	10,368	7,937	4,753	4,212										
Oilcloth, enameled.....	17,719	13,692	15,437	15,437	7,996	7,526	4,404	3,596	1,693	1,062										
Oleomargarine and other butter substitutes.....	35,953	39,177	79,815	79,816	15,080	8,148	6,574	12,500	2,989	6,983										
Optical goods.....	54,462	44,262	53,559	53,718	18,188	11,735	6,117	5,211	3,606	1,182										433

See footnotes at end of table, p. 177.

TABLE 34.—GROWTH OF MANUFACTURE IN THE UNITED STATES AS MEASURED BY THE VALUE OF PRODUCTS OF INDIVIDUAL INDUSTRIES, BY CENSUS YEARS: 1869 TO 1923—Continued

[See note at head of this table, p. 168]

INDUSTRY	VALUE OF PRODUCTS (EXPRESSED IN THOUSANDS OF DOLLARS)										
	Excluding data for establishments with products valued at less than \$5,000			Including data for establishments with products valued at \$500 or more							
	1923	1921	1919	1919	1914	1909	1904	1899	1889	1879	1869
Ordnance and accessories.....	(^o)	(^o)	69,496	69,496	(^o)	(^o)	558	2,240	2,425	(^o)	
Paints.....	291,124	203,071	258,601	258,714	112,409	94,572	67,278	50,875	40,438	23,391	16,932
Paper and wood pulp.....	907,347	667,436	788,049	788,059	332,147	267,667	188,715	127,328	78,937	57,367	48,849
Paper goods, not elsewhere specified.....	116,162	84,129	107,239	107,285	48,871	37,938	22,159	16,785	4,179	(^o)	(^o)
Paper patterns.....	9,259	10,531	1,516	1,528	3,026	2,611	2,265	562		513	(^o)
Patent medicines and compounds.....	237,494	175,868	210,184	212,162	102,463	83,771	74,521	58,988	32,620	14,682	16,258
Paving materials.....	71,456	61,129	45,299	45,741	35,678	6,229	5,033	3,986	(^o)	1,024	447
Peanuts, grading, roasting, cleaning, and shelling.....	18,189	19,669	33,327	33,354	14,996	9,737	7,261	(^o)	(^o)	(^o)	(^o)
Pencils, lead.....	24,568	21,382	24,134	24,134	8,328	7,379	4,426	2,222	1,688	270	181
Pens, fountain and stylographic.....	20,239	12,795	15,979	15,997	6,865	3,542	2,082	906	352	(^o)	(^o)
Pens, gold.....	2,320	1,335	1,801	1,801	642	1,197	692	799	718	533	467
Pens, steel.....	1,171	846	1,679	1,680	513	577	474	294	268	164	180
Perfumery and cosmetics.....	100,241	72,541	59,231	59,613	16,899	14,212	11,133	7,088	4,630	2,203	2,030
Petroleum refining.....	1,793,700	1,727,440	1,632,622	1,632,633	396,361	236,998	175,005	123,929	85,001	43,705	26,942
Phonographs and graphophones.....	107,311	98,213	158,623	158,648	27,116	11,726	10,237	2,246	(^o)		
Photo-engraving, not done in printing establishments.....	43,660	36,215	29,276	29,389	15,359	11,624	7,268	4,190	2,072		
Photographic apparatus.....	(^o)	(^o)	(^o)	9,384	4,273	1,184	3,479	2,126	624		104
Photographic materials.....	^o 158,246	^o 147,992	^o 125,014	115,714	34,708	21,378	9,644	5,773	2,121		
Pickles, preserves, and sauces.....	144,918	117,611	145,426	145,785	60,915	37,334	29,639	23,477	9,791	2,407	
Pipes, tobacco.....	9,705	7,124	11,514	11,514	4,220	5,312	2,834	2,472	1,881	829	
Plated ware.....	63,899	33,944	47,657	41,835	18,484	18,526	12,139	12,609	11,503	8,596	8,142
Plumbers' supplies, not elsewhere specified.....	132,665	69,119	60,028	60,055	43,386	43,687	21,642	11,771	11,960		
Pocketbooks.....	82,732	13,085	14,494	14,550	3,351	3,628	3,767	2,495	2,165	1,769	1,108
Pottery.....	114,392	84,217	74,759	74,919	36,943	^o 76,119	^o 64,201	^o 44,263	^o 22,057	^o 8,977	(^o)
Poultry, killing and dressing, not done in slaughtering and meat-packing establishments.....	26,424	34,717	41,705	41,705	12,917	(^o)	(^o)	(^o)	(^o)	(^o)	(^o)
Printing and publishing, book and job.....	738,227	690,075	587,304	597,663	307,331	250,926	182,612	121,798	98,909	90,970	41,076
Printing and publishing, music.....	14,627	14,025	14,482	14,692	7,271	5,576	4,148	2,272	1,683		
Printing and publishing, newspaper and periodical.....	1,268,502	1,123,710	904,129	924,163	495,906	406,090	309,302	222,984	179,860	(^o)	26,393
Printing materials.....	4,806	5,319	4,883	4,919	2,111	1,982	1,207	1,088	1,459	421	
Pulp, from fiber other than wood.....	(^o)	(^o)	624	624	(^o)	(^o)	(^o)	103	624	(^o)	(^o)
Pulp goods.....	^o 20,436	31,213	23,602	23,908	4,483	1,770	1,467	1,267	353	(^o)	(^o)
Pumps, not including power pumps.....	(^o)	(^o)	(^o)	31,656	6,360	5,583	2,853	1,342	4,103	3,645	2,818

Pumps, steam and other power.....	82,930	65,982	85,390	53,748	17,864	(10)	(10)	(10)	(10)	(10)	(10)
Refrigerators.....	60,078	33,019	26,038	26,049	15,052	10,689	7,348	5,818	4,514	1,740	666
Regalia, and society badges and emblems.....	10,688	10,359	9,348	9,395	6,025	6,130	7,753	8,049	3,204	816	636
Rice, cleaning and polishing.....	47,068	41,213	90,031	90,038	23,039	22,371	16,297	8,724	6,693	8,133	2,725
Roofing materials.....	84,342	76,138	85,887	85,895	27,078	19,204	19,871	13,691	(1)	6,227	3,257
Rubber tires, tubes, and rubber goods, not elsewhere specified.....	826,778	610,870	1,021,260	987,083	223,611	128,436	62,996	52,622	18,709	14,519	14,566
Rules, ivory and wood.....	769	534	469	481	634	144	249	208	154	66	66
Saddlery and harness.....	42,113	30,164	81,480	83,718	63,559	54,225	42,055	33,703	52,971	38,052	32,710
Sales and vaults.....	19,101	19,726	16,268	15,294	7,267	6,491	7,861	8,928	6,042	3,852	2,725
Salt.....	36,837	33,158	37,487	37,514	14,070	11,328	9,438	7,967	6,485	4,330	4,801
Sand and emery paper and cloth.....	13,753	6,463	9,204	4,328	4,328	4,358	1,477	1,176	1,260	282	840
Sand-lime brick.....	2,408	1,220	1,663	1,663	994	(1)	(1)	(1)	(1)	(1)	(1)
Sausage, not made in slaughtering and meat-packing establishments.....	69,510	63,087	56,396	56,510	22,014	15,024	8,123	4,588	3,055	(1)	(1)
Saws.....	30,787	18,185	31,416	31,461	12,517	11,536	9,820	6,444	5,573	3,943	3,175
Scales and balances.....	24,157	15,885	20,611	20,641	9,734	8,786	6,008	5,240	2,323	3,252	2,824
Screws, machine.....	39,239	18,365	39,997	40,018	7,248	3,014	2,712	2,059	1,183	2,185	(1)
Screws, wood.....	13,707	7,419	15,460	15,460	6,217	6,199	2,134	2,600	2,327	2,065	(1)
Sewing-machine cases.....	(1)	(1)	(1)	14,243	6,846	5,752	2,811	2,250	(1)	(1)	(1)
Sewing machines and attachments.....	35,067	35,608	67,018	43,695	21,392	22,611	20,870	18,310	12,823	13,863	15,847
Shipbuilding, steel.....	177,703	356,216	1,456,483	1,456,490	66,217	49,617	58,483	60,368	38,065	36,600	21,484
Shipbuilding, wooden, including boat building.....	85,629	44,619	165,248	165,872	22,465	23,743	24,336	24,165	(1)	(1)	(1)
Shirts.....	241,331	203,944	205,084	205,327	95,815	82,390	50,971	47,122	33,639	20,130	(1)
Show cases.....	(1)	(1)	(1)	8,294	6,232	7,167	5,722	2,468	2,570	3,670	830
Signs and advertising novelties.....	67,224	68,271	42,722	43,343	24,722	18,546	(1)	(1)	(1)	(1)	(1)
Silk goods, including throwsters.....	761,522	633,419	688,639	688,470	254,011	190,912	133,288	107,256	87,298	41,033	12,211
Silversmithing and silverware.....	27,207	24,411	29,118	29,126	19,786	23,702	20,701	15,506	6,435	3,618	2,944
Slaughtering and meat packing.....	2,585,504	2,200,942	4,246,228	4,246,201	1,651,985	1,355,544	913,915	753,779	561,912	303,552	75,826
Smelting and refining, copper.....	688,868	234,895	651,102	651,102	444,022	378,806	240,780	165,132	(1)	(1)	(1)
Smelting and refining, lead.....	227,735	150,594	196,795	196,795	171,579	167,406	185,827	175,466	(1)	(1)	(1)
Smelting and refining, metals, not elsewhere specified.....	5,382	7,060	20,074	20,075	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Smelting and refining, not from the ore.....	35,785	15,150	60,846	50,246	39,902	28,072	17,403	7,735	28,189	8,411	(1)
Smelting and refining, zinc.....	94,184	37,483	104,123	104,123	53,538	34,206	24,791	18,185	(1)	(1)	(1)
Soap.....	276,408	240,195	316,010	316,740	127,942	111,858	68,275	53,231	43,000	26,553	22,625
Soda-water apparatus.....	18,169	15,407	15,171	15,185	8,781	6,556	4,634	3,015	2,712	1,076	813
Sporting and athletic goods.....	41,797	31,711	39,711	39,840	13,335	11,452	7,032	3,709	1,556	(1)	(1)
Springs, steel, car and carriage, not made in steel works or rolling mills.....	59,392	31,750	51,462	51,480	11,595	9,005	5,741	4,332	3,655	2,920	(1)
Stamped and enameled ware, not elsewhere specified.....	170,923	100,585	143,520	143,654	65,121	51,622	21,958	14,546	11,722	4,319	(1)
Stationary goods, not elsewhere specified.....	77,689	64,597	58,288	58,283	21,903	16,647	8,867	5,066	9,456	5,968	(1)
Statuary and art goods.....	7,550	6,667	4,855	5,020	3,910	3,442	2,417	(1)	(1)	(1)	(1)
Steam fittings and steam and hot-water heating apparatus.....	221,954	127,367	160,259	160,285	63,922	54,084	24,911	22,085	23,147	5,128	3,425
Steel packing.....	32,931	29,112	40,805	40,525	14,218	13,952	10,952	3,494	1,033	(1)	(1)
Steel barrels, drums, and tanks, portable.....	23,249	14,525	24,945	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Stencils and brands.....	(1)	(1)	(1)	1,598	1,103	760	793	674	733	473	(1)
Stereotyping and electrotyping.....	20,596	17,359	15,905	15,919	8,154	6,384	5,005	3,772	2,184	725	1,075
Stoves and hot-air furnaces.....	155,801	101,573	145,685	145,718	67,941	65,998	54,409	(1)	(1)	(1)	(1)
Stoves, gas and oil.....	112,461	42,718	55,741	55,792	21,449	12,856	7,724	4,580	2,138	(1)	(1)

See footnotes at end of table, p. 177.

TABLE 34.—GROWTH OF MANUFACTURE IN THE UNITED STATES AS MEASURED BY THE VALUE OF PRODUCTS OF INDIVIDUAL INDUSTRIES, BY CENSUS YEARS: 1869 TO 1923—Continued.

[See note at head of this table, p. 168]

INDUSTRY	VALUE OF PRODUCTS (EXPRESSED IN THOUSANDS OF DOLLARS)										
	Excluding data for establishments with products valued at less than \$5,000			Including data for establishments with products valued at \$500 or more							
	1923	1921	1919	1919	1914	1909	1904	1899	1889	1879	1869
Structural ironwork, not made in steel works or rolling mills.....	406, 117	250, 086	294, 633	294, 962	159, 378	133, 241	90, 945	66, 927	37, 745	3, 410	(¹)
Sugar, beet.....	118, 314	139, 110	149, 156	149, 156	62, 605	48, 122	24, 394	7, 324	283	(¹)	(¹)
Sugar, cane.....	27, 181	22, 961	57, 667	57, 741	21, 635	30, 621	277, 285	239, 711	123, 118	155, 485	108, 942
Sugar, refining, not including beet sugar.....	726, 241	466, 602	730, 967	730, 967	289, 399	248, 629					
Sulphuric, nitric, and mixed acids.....	24, 405	21, 463	31, 470	31, 470	15, 215	9, 884	9, 053	8, 596	(¹)	(¹)	(¹)
Surgical appliances.....	44, 968	32, 495	43, 320	43, 534	14, 920	11, 075	5, 386	3, 932	1, 650	906	(¹)
Suspenders, garters, and elastic woven goods.....	* 24, 297	44, 696	60, 718	60, 775	24, 453	28, 350	(¹)	(¹)	(¹)	(¹)	(¹)
Textile machinery and parts.....	140, 661	128, 935	121, 985	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
Theatrical scenery.....	1, 626	1, 214	1, 067	1, 067	327	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
Tin and other foils, not elsewhere specified.....	23, 465	14, 037	17, 912	17, 921	5, 068	3, 419	2, 795	1, 593	(¹)	417	(¹)
Tin plate and terneplate.....	(¹)	* 6, 418	97, 405	97, 405	68, 343	47, 970	35, 283	31, 892	(¹)	(¹)	(¹)
Tinware, not elsewhere specified.....	215, 971	168, 305	233, 890	233, 964	81, 931	68, 814	41, 893	(¹)	(¹)	(¹)	(¹)
Tobacco, chewing and smoking, and snuff.....	222, 966	241, 741	238, 944	239, 271	175, 281	156, 607	110, 768	103, 754	65, 844	52, 798	35, 388
Tobacco, cigars and cigarettes.....	821, 226	806, 749	761, 790	773, 662	314, 884	260, 088	214, 244	159, 959	129, 693	63, 980	33, 374
Tools, not elsewhere specified.....	123, 158	70, 524	143, 660	144, 202	33, 893	30, 381	20, 407	13, 358	10, 528	4, 237	(¹)
Toys and games.....	56, 066	35, 487	45, 387	45, 657	13, 757	8, 264	5, 678	4, 010	3, 750	1, 663	580
Trunks and valises.....	63, 023	46, 649	63, 635	63, 932	26, 472	28, 028	18, 644	12, 429	10, 822	7, 252	7, 725
Turpentine and rosin.....	35, 167	23, 501	52, 772	53, 051	20, 990	25, 295	23, 937	20, 345	8, 077	5, 877	3, 585
Type founding.....	2, 512	2, 130	2, 066	2, 090	2, 320	2, 721	2, 728	2, 842	3, 917	2, 330	2, 180
Typewriters and supplies.....	52, 498	41, 790	52, 704	52, 738	24, 500	19, 719	10, 640	6, 932	3, 630	(¹)	(¹)
Umbrellas and canes.....	28, 395	20, 808	25, 195	25, 309	13, 813	15, 864	13, 296	13, 669	13, 772	6, 917	4, 822
Upholstering materials, not elsewhere specified.....	41 40, 561	23, 910	39, 830	39, 830	16, 492	13, 054	* 12, 678	* 10, 045	* 5, 733	* 1, 338	* 1, 545
Varnishes.....	113, 011	71, 239	83, 612	83, 692	33, 215	30, 317	23, 569	18, 637	13, 796	5, 721	4, 991
Vault lights and ventilators.....	2, 991	2, 150	2, 138	2, 156	2, 051	957	484	336	455	273	(¹)
Vinegar and cider.....	12, 535	18, 249	24, 032	24, 723	7, 811	8, 448	7, 265	5, 932	6, 640	3, 418	3, 472
Wall paper, not made in paper mills.....	34, 756	29, 148	23, 048	23, 048	15, 887	14, 449	12, 637	10, 663	7, 432	6, 267	2, 166
Wall plaster and composition flooring.....	* 73, 801	32, 354	26, 856	26, 875	16, 544	12, 804	10, 164	(¹)	(¹)	(¹)	2, 692
Washing machines and clothes wringers.....	50, 373	30, 199	40, 740	40, 771	7, 600	5, 825	3, 839	3, 735	2, 489	1, 183	1, 380
Waste.....	* 33, 701	16, 791	29, 692	29, 700	17, 600	11, 398	8, 343	4, 880	1, 907		
Watch and clock materials, except watchcases.....	1, 269	1, 086	1, 330	1, 342	1, 015	675	429	345	831	351	574
Watchcases.....	17, 817	13, 806	19, 619	19, 619	7, 831	10, 515	8, 627	7, 784	8, 618	4, 689	2, 333
Watches.....	30, 630	24, 397	32, 044	32, 044	14, 275	11, 771	11, 806	6, 823	6, 061	3, 271	2, 819
Wheelbarrows.....	2, 692	1, 455	1, 680	1, 680	942	1, 636	1, 178	454	1, 186	227	473
Whips.....	742	1, 022	2, 975	2, 986	3, 162	3, 949	3, 147	2, 734	2, 154	1, 699	1, 243

Windmills.....	6,311	6,530	9,925	9,933	5,497	6,677	4,795	4,364	2,475	1,011	
Window and door screens and weather strips.....	21,236	12,038	10,773	10,933	9,107	(*)	(*)	(*)	(*)	(*)	(*)
Window shades and fixtures.....	47,940	29,648	29,018	29,191	17,444	13,871	9,931	9,072	9,240	2,827	5,058
Wire.....	195,354	99,946	169,161	162,151	81,841	84,487	37,914	37,914	22,013	10,837	2,959
Wirework, not elsewhere specified.....	100,248	66,385	90,225	90,549	41,789	41,938	33,038	19,840	15,553	9,128	
Wood distillation.....	49,297	9,258	32,539	32,545	9,883	9,737	7,813	6,001			
Wood preserving.....	71,083	47,422	55,859	33,239	21,055	14,069	3,368	2,396	143	101	
Wood, turned and carved.....	38,077	31,322	34,396	34,847	19,047	22,199	20,169	14,318	10,940	8,427	4,959
Wooden goods, not elsewhere specified.....	21,734	20,231	21,646	21,793	10,162	10,627	8,531	3,598	3,598	5,235	4,142
Wool pulling.....	15,176	6,767	17,361	17,361	8,273	8,181	882	531	(*)	(*)	(*)
Wool scouring.....	8,190	6,820	19,680	13,690	4,565	3,269	1,053	890	(*)	(*)	(*)
Wool shoddy.....	16,697	6,803	22,524	23,254	7,707	7,446	8,406	6,731	7,887	4,990	1,769
Woolen and worsted goods.....	1,062,659	755,584	1,065,357	1,065,434	376,484	419,744	307,942	238,745	212,773	194,157	177,496

¹ Based on figures shown in left-hand column for 1919.

² The figures shown in the right-hand column for 1919 were used in calculating the percentages in this column.

³ Because of a change in classification, statistics not comparable.

⁴ "Airplanes, seaplanes, airships, and parts," included in "Motor cycles, bicycles, and parts."

⁵ Not shown separately.

⁶ "Feathers and plumes" included in "Artificial flowers."

⁷ "Artificial stone products" included in "Marble and stone work."

⁸ Includes "Asbestos textiles."

⁹ Not called for on schedule.

¹⁰ Included in "Foundry and machine-shop products."

¹¹ "Belting and hose, rubber" included in "Rubber tires, tubes, and rubber goods, not elsewhere specified."

¹² Prior to 1914 "Sand-lime brick" was included in "Brick and tile"; "Terra-cotta, and fire-clay products," included in "Pottery."

¹³ "Cheese" and "Condensed milk" included in "Butter."

¹⁴ None reported.

¹⁵ "Candles" included with "Soap."

¹⁶ "Repairing" included prior to 1923.

¹⁷ "Cement and wall plaster" included with "Lime."

¹⁸ "Coal-tar products" included in "Chemicals" prior to 1919. Comparable figures shown for 1919.

¹⁹ "Ferro-alloys (electric-furnace)" included with "Iron and steel, blast furnaces" and "Chemicals."

²⁰ "Chewing gum" included in "Confectionery and ice cream." Prior to 1914 the manufacture of ice cream was not included except in cases where it was made a subsidiary product in the manufacture of confectionery or some other class of product for which statistics were collected.

²¹ No data.

²² "Roasting and grinding of peanuts" included in "Coffee and spice, roasting and grinding."

²³ The following industries, formerly a part of "Foundry and machine-shop products," are now treated as separate industries: "Machine tools," "Steel barrels, drums, and

tanks," "Textile machinery and parts," and the tempering and welding of iron and steel prior to 1919; "Engines, steam, gas, and water," and "Pumps, steam and power," prior to 1914; "Automobile repairing" in 1909 and 1904; "Iron and steel—cast-iron pipe," prior to 1909; "Locomotives" and "Stoves and furnaces" prior to 1904. Percentages are computed from comparable figures.

²⁴ "Gloves and mittens, cloth, not including gloves made in textile mills;" "Suspenders, garters, and elastic woven goods" included prior to 1919.

²⁵ "Show cases" included in "Furniture."

²⁶ Included in "Furnishing goods, men's."

²⁷ Title changed to "Corn sirup, corn oil, and starch."

²⁸ "Millstones and pulpstones," included in "Grindstones."

²⁹ "Haircloth" included in "Upholstery."

³⁰ "Stencils and brands," included with "Hand stamps."

³¹ "Straw hats" included in "Hats and caps, other than felt, straw, and wool."

³² "Lard, not made in slaughtering and meat-packing establishments" included with "Food preparations, not elsewhere classified," for 1923. For 1921 such data are included with those for "Sausage, not made in slaughtering and meat-packing establishments."

³³ "Cereal beverages," only.

³⁴ "Window and door screens and weather strips," included under "Lumber, planing-mill products."

³⁵ "Oakum" included in "Waste" for 1923.

³⁶ Includes "Linoleum" and "Asphalted-felt-base floor covering."

³⁷ "Photographic apparatus," and "Motion pictures" included in "Photographic materials." Comparable figures shown for 1919.

³⁸ Statistics for 1923 are not comparable with prior years, because "Wall board, other than gypsum wall board," formerly treated as a product of the "Pulp-goods" industry, for 1923 was classified as a product of the "Wall plaster, wall board, and floor-composition" industry.

³⁹ "Pumps, not including power pumps" included in "Pumps, steam and other power."

⁴⁰ "Sewing machines, cases, and attachments," combined. Comparable figures shown for 1919.

⁴¹ Includes "Artificial leather" and "Excelsior."

⁴² "Charcoal," included in census publications for 1923, not included here.

TABLE 35.—AVERAGE NUMBER OF WAGE EARNERS IN GEOGRAPHIC DIVISIONS AND STATES, BY CENSUS YEARS, AND PER CENT OF INCREASE, BY CENSUS PERIODS: 1899 TO 1923

DIVISION AND STATE	AVERAGE NUMBER OF WAGE EARNERS								PER CENT OF INCREASE OR DECREASE (-)							
	Excluding data for establishments with products valued at less than \$5,000			Including data for establishments with products valued at \$500 or more					24-year period, 1899-1923 ¹	Intercensal period						
	1923	1921	1919	1919	1914	1909	1904	1899		1919-1923 ²	1921-1923 ³	1919-1921 ⁴	1914-1919 ⁵	1909-1914 ⁶	1904-1909 ⁷	1899-1904 ⁸
UNITED STATES.....	6,778,166	6,946,570	9,000,059	9,096,872	7,036,247	6,615,046	5,468,383	4,712,763	88.2	-2.5	26.4	-22.8	29.3	6.4	21.0	16.0
GEOGRAPHIC DIVISIONS:																
New England.....	1,254,496	1,071,699	1,348,190	1,351,389	1,140,233	1,101,290	940,752	851,903	47.7	-6.9	17.1	-20.5	18.5	3.5	17.1	10.4
Middle Atlantic.....	2,694,027	2,246,104	2,862,484	2,872,653	2,355,940	2,207,747	1,886,565	1,604,844	68.4	-5.9	19.9	-21.5	21.9	6.7	17.0	17.6
East North Central.....	2,387,049	1,710,939	2,388,970	2,396,618	1,680,281	1,513,764	1,224,528	1,073,322	123.1	-1	39.5	-23.4	42.6	11.0	23.6	14.1
West North Central.....	499,725	384,797	494,255	499,635	381,595	374,337	312,361	266,051	78.4	-5.0	22.1	-22.1	30.9	1.9	19.8	17.4
South Atlantic.....	832,016	646,207	808,894	817,212	685,252	663,015	522,611	456,344	83.5	2.9	28.8	-20.1	19.3	3.4	26.9	14.0
East South Central.....	847,200	259,256	324,762	329,226	204,378	201,772	221,229	177,208	98.6	6.9	33.9	-20.2	24.5	1.0	18.3	24.8
West South Central.....	267,111	229,549	282,212	285,244	211,940	204,520	143,470	113,368	188.0	-4	16.4	-18.7	34.6	3.6	42.6	26.5
Mountain.....	106,080	82,000	107,759	109,216	81,113	75,435	52,700	44,497	141.5	-1.6	23.3	-23.9	34.6	7.5	42.9	18.6
Pacific.....	420,472	316,019	432,968	435,179	235,515	213,166	164,077	123,206	243.0	-2.7	33.1	-27.0	34.8	10.5	29.9	33.2
NEW ENGLAND:																
Maine.....	83,328	75,710	88,606	88,651	82,149	79,955	74,958	69,914	.1	-5.3	10.1	-14.0	7.9	2.7	6.7	7.2
New Hampshire.....	75,314	67,416	82,838	83,074	78,993	78,668	65,366	67,646	20.6	-9.1	11.7	-18.6	5.2	.4	20.8	-3.4
Vermont.....	50,783	25,767	33,178	33,491	32,704	33,798	33,106	28,179	111.3	-7.2	19.5	-22.3	2.4	-3.2	2.1	17.5
Massachusetts.....	607,172	579,071	712,846	713,836	606,698	584,559	468,809	438,234	520.5	-6.4	15.2	-18.8	17.7	3.8	19.7	11.4
Rhode Island.....	124,667	112,745	139,309	139,685	113,425	113,538	97,318	86,197	83.2	-3.8	19.4	-19.1	23.1	-1	16.7	10.3
Connecticut.....	283,232	210,990	292,013	292,672	226,264	210,792	181,605	159,738	65.1	-6.9	24.8	-27.7	29.3	7.3	16.1	13.7
MIDDLE ATLANTIC:																
New York.....	1,150,901	1,000,414	1,223,333	1,228,130	1,057,857	1,003,981	856,947	726,909	59.0	-5.9	15.0	-18.2	16.1	5.4	17.2	17.9
New Jersey.....	448,069	381,773	507,334	503,686	373,605	326,223	266,336	213,975	109.9	-11.7	17.4	-24.7	36.2	24.5	22.5	24.5
Pennsylvania.....	1,095,067	863,917	1,131,617	1,135,837	924,478	877,543	793,282	668,960	65.6	-3.2	26.8	-23.7	22.9	5.3	15.0	15.0
EAST NORTH CENTRAL:																
Ohio.....	699,132	494,288	728,631	730,733	510,435	446,924	364,298	308,109	127.7	-4.0	41.4	-32.2	43.2	14.2	22.7	18.2
Indiana.....	291,131	206,534	276,060	277,680	197,503	186,934	154,174	139,017	110.7	5.5	41.0	-25.2	40.5	5.6	21.8	10.9
Illinois.....	645,627	513,876	651,146	653,114	508,943	465,764	379,436	332,871	94.6	-8	25.6	-21.1	28.8	8.8	22.8	14.0
Michigan.....	503,808	304,471	470,326	471,242	271,090	231,499	175,229	155,800	223.7	7.0	65.3	-35.3	73.9	17.1	32.1	12.5
Wisconsin.....	247,861	191,770	262,807	263,949	194,310	182,583	151,391	137,526	81.0	-5.7	29.2	-27.0	35.8	6.4	20.6	10.1
WEST NORTH CENTRAL:																
Minnesota.....	103,964	85,804	114,614	115,623	92,834	84,767	69,636	64,557	62.4	-9.3	21.2	-25.1	24.5	9.5	21.7	7.9
Iowa.....	77,847	62,274	79,621	80,551	63,113	61,635	49,481	44,420	77.8	-2.2	25.0	-21.8	27.6	2.4	24.6	11.4
Missouri.....	196,694	156,384	193,254	195,037	152,182	152,993	133,167	107,704	84.4	1.8	25.8	-19.1	28.2	-1.5	14.9	23.6
North Dakota.....	3,562	3,107	4,270	4,472	3,275	2,789	1,755	1,358	174.0	-16.8	14.3	-27.2	36.5	17.4	58.9	29.2
South Dakota.....	5,146	4,635	6,102	6,382	3,788	3,602	2,492	2,224	141.9	-15.7	11.0	-24.0	68.5	5.2	44.5	12.1
Nebraska.....	31,267	27,655	35,985	36,521	25,144	24,336	20,280	18,969	70.0	-13.1	18.1	-23.1	45.2	3.3	20.1	8.5
Kansas.....	51,255	44,938	60,409	61,049	41,269	44,215	35,570	27,119	90.9	-15.2	14.1	-25.6	48.0	-6.7	24.3	31.2

SOUTH ATLANTIC:																
Delaware.....	23, 116	17, 754	28, 010	29, 035	22, 155	31, 238	18, 478	20, 562	18.0	-20.0	80.2	-38.6	81.1	4.8	15.0	-10.1
Maryland.....	128, 826	107, 085	189, 401	140, 842	111, 585	107, 921	94, 174	94, 170	37.7	-7.6	20.3	-23.2	25.8	8.4	14.6	.1
District of Columbia.....	9, 823	8, 640	10, 440	10, 482	8, 877	7, 707	6, 299	6, 155	00.8	-5.9	13.7	-17.2	18.1	15.2	22.4	2.8
Virginia.....	111, 678	86, 556	117, 376	119, 852	102, 820	105, 676	80, 285	86, 228	71.4	-4.9	26.0	-24.6	16.1	-2.7	31.6	21.2
West Virginia.....	65, 661	60, 586	82, 467	83, 036	71, 078	68, 898	43, 758	33, 080	160.8	3.9	41.5	-26.0	16.8	11.2	46.0	32.3
North Carolina.....	173, 887	126, 833	155, 635	157, 659	136, 844	121, 473	85, 339	72, 322	143.8	11.6	27.9	-12.7	15.2	12.7	42.8	18.0
South Carolina.....	96, 802	76, 261	78, 829	78, 450	71, 824	78, 046	59, 441	47, 026	107.5	22.8	27.0	-8.3	10.6	-1.7	22.9	26.4
Georgia.....	137, 476	96, 264	121, 949	123, 441	104, 461	104, 588	92, 749	83, 386	96.9	12.7	39.9	-19.4	18.2	-1.1	12.8	11.2
Florida.....	65, 047	53, 289	73, 857	74, 415	56, 608	57, 473	42, 091	36, 471	84.8	-11.9	22.1	-27.8	33.8	-3.2	33.5	18.1
EAST SOUTH CENTRAL:																
Kentucky.....	76, 724	58, 840	68, 191	69, 340	64, 586	65, 400	59, 794	51, 735	50.8	12.5	30.4	-13.7	7.4	-1.2	9.4	15.6
Tennessee.....	106, 504	76, 446	93, 866	95, 167	74, 373	73, 840	60, 572	45, 963	135.1	13.5	41.2	-19.6	28.0	.7	21.9	31.8
Alabama.....	109, 820	82, 748	106, 014	107, 159	78, 717	72, 148	62, 173	52, 711	96.4	3.4	32.5	-21.9	86.1	9.1	16.0	18.0
Mississippi.....	54, 352	42, 222	56, 691	57, 560	46, 702	50, 384	38, 690	26, 799	106.0	-4.1	28.7	-25.5	23.2	-7.3	80.0	44.4
WEST SOUTH CENTRAL:																
Arkansas.....	44, 545	33, 431	49, 032	49, 954	41, 979	44, 982	33, 989	31, 525	43.9	-9.2	33.2	-31.8	19.0	-6.7	35.9	5.9
Louisiana.....	94, 719	85, 170	97, 743	98, 265	77, 665	76, 165	55, 359	40, 878	132.9	-3.1	11.2	-12.9	23.5	2.0	30.4	36.6
Oklahoma.....	25, 489	22, 241	29, 106	29, 503	17, 443	18, 143	5, 456	2, 381	985.5	-12.4	14.6	-23.8	69.1	82.7	140.9	129.1
Texas.....	102, 358	88, 707	106, 431	107, 522	74, 853	70, 230	49, 068	38, 604	187.9	-3.8	15.4	-16.7	43.6	6.6	43.1	27.1
MOUNTAIN:																
Montana.....	15, 943	11, 394	16, 871	17, 160	13, 704	11, 655	8, 957	9, 854	64.5	-5.5	40.0	-32.5	25.2	17.6	30.1	-9.1
Idaho.....	16, 347	10, 783	13, 733	13, 917	8, 919	8, 220	3, 061	1, 552	967.1	19.0	51.6	-21.5	56.0	8.5	168.5	97.2
Wyoming.....	7, 510	7, 294	6, 531	6, 634	2, 989	2, 867	1, 834	2, 060	270.3	15.0	3.5	11.1	121.9	4.3	56.3	-11.0
Colorado.....	81, 228	27, 625	34, 815	35, 254	27, 278	28, 067	19, 496	14, 496	62.2	-10.3	18.0	-20.7	29.2	-2.8	28.7	11.9
New Mexico.....	5, 459	4, 477	5, 624	5, 728	3, 776	4, 148	3, 473	2, 490	123.7	-2.9	21.9	-20.4	51.9	-5.9	39.1	89.7
Arizona.....	9, 008	4, 774	8, 443	8, 523	6, 598	6, 441	4, 738	3, 126	180.8	6.6	88.7	-43.5	22.6	7.1	34.4	63.9
Utah.....	15, 901	13, 310	18, 637	18, 869	13, 894	11, 785	8, 052	5, 413	197.4	-14.7	19.5	-28.6	35.9	17.0	46.4	43.8
Nevada.....	4, 666	2, 393	3, 100	3, 119	3, 655	2, 267	802	504	821.3	60.5	95.0	-22.8	-14.7	61.9	131.4	89.1
PACIFIC:																
Washington.....	111, 683	77, 513	132, 398	132, 928	67, 205	69, 120	45, 199	31, 528	255.5	-15.7	44.0	-41.5	97.8	-2.8	52.9	48.4
Oregon.....	62, 655	40, 187	58, 186	58, 559	28, 829	28, 750	13, 623	14, 459	336.2	7.7	56.0	-61.0	103.1	.8	55.2	28.1
California.....	246, 154	198, 334	242, 379	243, 692	139, 481	115, 296	100, 855	77, 224	220.6	1.6	24.1	-18.2	74.7	21.0	14.9	30.0

¹ For explanation of method of computing percentages in this column, see general remarks preceding these tables, par. 4, p. 125.

² Based on figures shown in left-hand column for 1919.

³ The figures shown in the right-hand column for 1919 were used in calculating the percentages in this column.

TABLE 36.—AMOUNT OF PRIMARY HORSEPOWER INSTALLED IN GEOGRAPHIC DIVISIONS AND STATES, BY CENSUS YEARS, AND PER CENT OF INCREASE, BY CENSUS PERIODS: 1899 TO 1923

[No data in regard to prime movers were collected for 1921]

DIVISION AND STATE	PRIMARY HORSEPOWER							24-year period, 1899-1923	PER CENT OF INCREASE OR DECREASE (-)				
	Excluding data for rented power other than electric		Including data for rented power other than electric						Intercensal period				
	1923	1919	1919	1914	1909	1904	1899		1919-1923	1914-1919	1909-1914	1904-1909	1899-1904
UNITED STATES	33,094,228	29,327,669	29,504,792	22,437,072	18,675,376	13,487,707	10,097,893	229.6	12.8	31.5	20.1	38.5	33.6
GEOGRAPHIC DIVISIONS:													
New England.....	4,151,136	3,775,510	3,796,846	3,124,329	2,715,121	2,125,815	1,792,342	132.8	9.9	21.5	15.1	27.7	18.6
Middle Atlantic.....	9,627,898	8,497,533	8,537,660	6,699,576	5,531,502	4,255,264	3,139,128	208.2	13.3	37.4	21.1	30.0	35.6
East North Central.....	9,061,680	7,688,365	7,735,137	5,421,435	4,382,070	3,120,369	2,401,808	279.8	17.9	42.7	23.7	40.4	29.9
West North Central.....	1,714,030	1,577,007	1,594,112	1,238,989	1,101,990	763,709	605,098	186.3	8.7	28.7	12.4	46.2	24.6
South Atlantic.....	3,143,936	2,789,953	2,795,094	2,274,785	1,832,001	1,221,940	851,050	270.8	12.9	22.9	24.2	50.0	48.5
East South Central.....	1,461,604	1,410,445	1,415,577	1,157,367	1,036,560	753,928	613,425	185.6	3.6	22.3	11.7	37.5	46.8
West South Central.....	1,269,347	1,175,743	1,185,939	956,500	873,350	555,717	397,471	222.3	8.0	22.8	10.6	57.2	39.8
Mountain.....	777,745	678,981	686,579	460,278	400,766	241,825	123,012	539.0	14.5	49.2	14.8	65.7	96.6
Pacific.....	1,886,942	1,740,152	1,757,798	1,094,814	802,016	460,049	274,559	594.0	8.4	60.6	36.5	74.3	67.6
NEW ENGLAND:													
Maine.....	570,532	544,840	547,028	487,211	459,599	343,627	259,232	120.9	4.7	12.3	6.0	33.7	32.6
New Hampshire.....	352,656	248,672	349,136	344,093	293,991	218,344	200,975	75.6	1.1	1.5	17.0	34.6	8.6
Vermont.....	177,212	185,871	185,095	172,637	159,445	140,616	126,124	41.5	-3.6	7.2	8.3	13.4	11.5
Massachusetts.....	1,931,787	1,716,558	1,729,878	1,396,722	1,175,071	938,007	796,061	144.7	12.6	23.9	18.9	25.3	17.8
Rhode Island.....	391,928	319,346	321,016	269,854	226,740	181,017	156.4	156.4	22.7	19.0	19.0	25.3	17.8
Connecticut.....	727,021	663,223	664,691	453,812	400,275	304,204	256,331	184.2	9.6	46.5	13.4	31.6	18.7
MIDDLE ATLANTIC:													
New York.....	3,263,325	2,921,066	2,936,530	2,356,655	1,997,662	1,516,592	1,099,931	198.2	11.7	24.6	18.0	31.7	37.9
New Jersey.....	1,256,930	1,138,471	1,146,744	793,093	612,293	436,274	322,503	282.6	10.4	44.6	29.5	46.3	35.3
Pennsylvania.....	5,107,593	4,437,936	4,454,366	3,549,858	2,921,547	2,302,998	1,716,994	198.7	15.1	25.5	21.5	26.9	34.1
EAST NORTH CENTRAL:													
Ohio.....	3,307,726	2,981,340	2,897,497	1,993,090	1,583,155	1,116,932	783,665	324.4	14.8	45.4	25.9	41.7	42.5
Indiana.....	1,372,007	1,092,876	1,095,912	709,703	633,377	380,758	325,919	322.1	25.5	54.4	12.1	66.3	16.8
Illinois.....	1,960,508	1,650,983	1,660,918	1,305,930	1,013,071	741,555	559,347	256.3	20.0	27.2	28.9	36.6	32.6
Michigan.....	1,471,550	1,192,349	1,202,128	730,333	598,288	440,890	368,497	302.5	23.4	64.6	22.1	35.7	19.6
Wisconsin.....	929,889	871,117	878,682	682,339	554,179	440,234	364,390	157.3	6.7	28.8	23.1	25.9	20.9

WEST NORTH CENTRAL:													
Minnesota.....	460,128	470,830	478,957	358,737	297,670	220,934	180,124	157.0	-2.8	82.1	20.5	84.7	22.7
Iowa.....	282,333	299,592	242,046	190,049	150,384	113,035	100,944	168.9	17.6	27.5	22.3	81.6	10.7
Missouri.....	553,897	474,772	477,308	391,385	340,447	247,981	199,117	194.3	16.6	22.0	15.0	87.4	81.1
North Dakota.....	16,730	17,024	17,791	14,062	13,196	9,873	7,351	137.9	-1.7	26.5	6.8	33.7	34.3
South Dakota.....	16,458	20,107	22,191	16,324	17,066	11,154	11,775	64.4	-18.1	35.9	-7.6	58.4	-5.3
Nebraska.....	129,429	122,957	125,814	89,285	60,466	46,372	41,825	216.7	5.3	40.9	38.5	39.0	10.9
Kansas.....	255,555	231,825	234,110	179,146	213,141	96,441	68,242	278.1	10.2	80.7	-15.9	114.0	45.7
SOUTH ATLANTIC:													
Delaware.....	112,495	85,095	85,150	64,408	52,779	49,490	40,134	180.5	32.2	32.2	22.0	6.6	22.3
Maryland.....	497,945	405,545	406,708	263,753	218,244	168,449	132,052	278.2	22.8	54.2	20.9	31.9	25.3
District of Columbia.....	31,846	32,911	33,079	24,775	16,583	12,502	10,255	212.3	-3.2	33.5	49.6	31.5	22.8
Virginia.....	431,237	419,329	419,946	337,567	283,928	176,998	136,096	215.8	2.8	24.4	18.9	60.4	29.5
West Virginia.....	371,699	327,389	328,653	278,504	217,496	138,578	91,894	305.9	13.5	18.0	28.1	56.9	50.8
North Carolina.....	702,832	549,090	549,878	508,085	378,556	216,022	154,467	356.4	28.2	8.2	34.2	74.8	40.2
South Carolina.....	407,735	394,615	395,556	340,224	276,378	197,479	112,697	262.6	3.8	16.3	23.1	40.0	75.2
Georgia.....	449,888	432,538	436,608	357,403	298,241	220,419	136,499	232.7	4.0	22.2	19.8	35.3	61.5
Florida.....	128,269	188,501	139,456	100,071	89,616	43,413	36,356	282.8	-7.2	39.4	11.4	106.9	19.4
EAST SOUTH CENTRAL:													
Kentucky.....	251,554	245,138	247,573	238,314	230,224	174,625	144,161	76.2	2.6	3.9	3.5	31.8	21.1
Tennessee.....	891,465	337,707	338,814	286,857	242,277	175,780	130,318	201.3	15.9	18.1	18.4	37.8	34.9
Alabama.....	640,892	627,300	628,376	445,762	357,837	293,185	173,208	270.8	2.2	41.0	24.6	32.1	69.3
Mississippi.....	177,693	206,300	200,814	186,434	206,222	110,338	65,738	171.0	-11.3	7.7	-9.6	88.9	67.8
WEST SOUTH CENTRAL:													
Arkansas.....	185,154	211,614	214,194	177,208	173,088	109,509	79,550	110.0	-22.0	20.9	2.4	58.1	37.6
Louisiana.....	402,938	386,399	388,605	355,193	346,652	251,963	190,182	113.1	4.3	6.4	2.5	37.6	82.5
Oklahoma.....	152,956	138,509	139,983	97,308	71,139	29,608	11,572	1,235.5	10.4	43.9	60.8	140.3	155.9
Texas.....	648,299	439,221	443,207	335,791	282,471	164,637	116,157	376.2	24.8	32.0	18.9	71.6	41.7
MOUNTAIN:													
Montana.....	190,516	152,304	153,491	91,671	90,402	46,736	43,679	339.6	25.1	67.4	1.4	93.4	7.0
Idaho.....	72,146	73,355	73,876	50,326	42,804	16,987	5,649	1,188.9	-1.6	46.3	17.6	152.0	200.7
Wyoming.....	23,959	17,027	17,869	10,004	7,628	3,604	3,320	558.2	40.7	78.0	31.1	111.7	-5.7
Colorado.....	176,076	203,881	205,309	162,328	154,615	124,907	43,434	310.4	-13.6	28.7	5.3	23.8	187.6
New Mexico.....	16,863	16,901	17,290	12,468	15,465	5,948	3,658	370.9	-7.2	38.4	-19.4	160.0	62.6
Arizona.....	128,531	103,536	103,958	54,697	39,140	21,412	8,537	1,411.2	24.1	90.1	39.7	82.6	150.3
Utah.....	141,671	92,201	93,942	59,836	42,947	19,397	12,674	1,039.2	53.7	57.8	38.6	121.4	53.0
Nevada.....	27,983	19,756	19,874	18,748	7,765	2,834	1,661	1,702.9	41.6	6.0	141.4	174.0	81.6
PACIFIC:													
Washington.....	593,330	680,764	687,436	389,567	297,897	168,342	87,601	384.3	-12.8	76.5	80.8	77.0	92.2
Oregon.....	322,297	302,617	304,346	214,222	175,019	81,348	60,005	440.2	6.5	42.1	22.4	115.1	36.6
California.....	971,315	756,771	766,016	491,025	329,100	210,359	126,953	674.2	28.3	56.0	49.2	56.4	66.7

¹ For explanation of method of computing percentages in this column, see general remarks preceding these tables, par. 4, p. 125.

² Based on figures shown in left-hand column for 1919.

³ The figures shown in the right-hand column for 1919 were used in calculating the percentages in this column.

TABLE 37.—QUANTITY OF MATERIALS CONSUMED AND PRODUCTS MANUFACTURED IN SELECTED INDUSTRIES, BY CENSUS YEARS, AND PER CENT OF INCREASE, BY CENSUS PERIODS: 1899 TO 1923

MATERIAL AND PRODUCT	ACTUAL QUANTITY REPORTED							PER CENT OF INCREASE OR DECREASE (-)							
	1923	1921	1919	1914	1909	1904	1899	24-year period, 1899- 1923	Intercensal period						
									1919- 1923	1921- 1923	1919- 1921	1914- 1919	1909- 1914	1904- 1909	1899- 1904
FOOD AND KINDRED PRODUCTS															
Butter, cheese, and condensed and evaporated milk:															
Materials—															
Milk..... mill. lbs.	(1)	(1)	10,244.9	8,431.4	9,888.7	12,147.3	11,678.1					21.5	-14.7	-18.6	4.0
Cream..... mill. lbs.	(1)	(1)	2,551.7	2,384.0	1,406.1	688.2	203.7					7.0	69.5	139.1	188.8
Products—															
Butter..... mill. lbs.	1,303.5	1,118.2	920.6	769.8	624.8	531.5	420.1	210.3	41.6	16.6	21.5	19.6	23.2	17.6	26.5
Cheese..... mill. lbs.	553.6	423.4	473.6	370.3	311.1	317.1	282.0	99.9	19.0	33.1	-10.6	27.9	19.0	-1.9	12.4
Condensed and evaporated milk..... mill. lbs.	1,821.1	1,758.5	2,150.2	873.4	494.8	308.5	186.9	874.4	-15.3	3.6	-18.2	146.2	76.5	60.4	65.1
Slaughtering and meat packing:															
Materials—															
Beeves, dressed weight..... mill. lbs.	5,151.4	4,358.0	5,118.7	3,786.3	4,409.7	4,066.2	3,222.7	59.8	.6	18.2	-14.9	35.2	-14.1	8.4	26.2
Calves, dressed weight..... mill. lbs.	535.7	438.0	457.5	206.3	262.3	161.0	79.5	573.8	17.1	22.3	-4.3	121.8	-21.3	62.9	102.5
Sheep and lambs, dressed weight..... mill. lbs.	515.0	508.0	499.7	629.7	496.6	464.9	389.1	32.4	3.1	-9.3	13.7	-20.6	26.8	6.8	19.5
Hogs, dressed weight..... mill. lbs.	9,439.1	6,873.3	7,358.9	5,476.2	5,201.9	5,048.8	5,203.3	81.4	28.3	37.3	-6.6	34.4	5.3	3.0	-3.0
Products—															
Meat, fresh and cured..... mill. lbs.	13,603.2	10,976.0	12,634.0	9,660.3	9,719.1	8,772.1	9,981.6	70.4	7.7	23.9	-13.1	30.8	-6	10.9	9.9
Lard and lard compounds..... mill. lbs.	2,419.7	1,952.4	1,894.0	1,515.6	1,243.6	1,169.1	1,019.8	137.3	27.8	23.9	3.1	25.0	21.9	8.4	14.6
Hides and skins, cattle and calf..... mill. lbs.	626.5	524.1	627.5	434.5	604.9	456.4	336.0	86.5	-2	19.5	-16.5	44.4	-13.9	10.6	35.8
Flour-mill and grain-mill products:															
Material—															
Grain, ground or milled..... mill. bush.	743.2	713.6	830.0	818.9	806.2	754.9	729.1	1.9	-10.5	4.1	-14.0	1.4	1.6	6.8	3.5
Products—															
Wheat flour..... mill. bbls.	114.4	110.8	132.5	116.4	105.8	104.0	99.8	14.6	-13.7	3.2	-16.4	13.8	10.0	1.7	4.2
Corn meal and corn flour..... mill. bbls.	12.2	10.9	10.7	16.3	21.6	23.6	27.8	14.0	14.0	11.9	1.9	-34.4	-24.5	-8.5	-15.1
Bran, middlings, feed, and offal..... mill. tons	9.7	8.9	9.3	9.4	9.2	7.9	7.2	34.7	4.3	9.0	-4.3	-1.1	2.2	16.5	-9.7
Sugar, beet:															
Material—															
Beets..... thous. short tons	5,786.1	7,872.8	5,648.6	5,639.1	3,965.3	2,175.4	794.6	628.2	2.4	-26.5	39.4	.2	42.2	82.3	173.8
Product—															
Beet sugar..... thous. short tons	754.5	1,029.9	721.9	743.5	501.7	253.9	81.7	823.5	4.5	-26.7	42.7	-2.9	48.2	97.6	210.8
Sugar refining, cane:															
Product—															
Refined sugar..... thous. short tons	4,429.1	3,770.2	3,521.5	3,333.1	(1)	(1)	(1)		25.8	17.5	7.1	5.7			

Canning and preserving, fruits and vegetables, etc.:																	
Canned vegetables.....	mill. cases..	75.8	88.2	58.1	50.3	83.8	29.7	19.8	292.7	80.5	98.4	-34.8	15.5	48.8	18.8	58.9	
Canned fruits.....	mill. cases..	20.3	12.5	21.4	9.4	5.5	4.6	4.5	351.1	-5.1	62.4	-41.6	127.7	70.9	19.6	2.2	
Dried fruits.....	mill. lbs.	6791.8	6504.9	615.4	568.6	485.8	843.6	85.4	827.2	28.7	56.8	-18.0	8.2	17.2	41.2	802.3	
Canned soups.....	mill. cases..	14.2	6.9	5.8	4.9	.9	(¹)	(¹)	-----	144.8	105.8	19.0	18.4	444.4	-----	-----	
Canning and preserving, fish and oysters:																	
Canned fish, oysters.....	mill. cases..	7.4	4.9	10.3	8.8	7.6	7.1	(¹)	-----	-28.2	51.0	-52.4	17.0	89.7	680.0	-----	
Corn sirup, corn oil, and starch:																	
Starch.....	mill. lbs.	858.4	894.1	783.5	620.8	677.5	356.7	(¹)	-----	9.6	-4.0	14.1	26.2	-8.4	69.9	-----	
Rice cleaning and polishing:																	
Clean rice.....	mill. lbs.	1,171.6	1,154.2	1,062.8	674.9	626.1	623.9	243.0	382.1	10.2	1.5	8.6	57.5	7.8	.4	156.7	
Ice, manufactured:																	
Ice.....	mill. tons..	85.84	81.38	27.95	21.04	14.23	8.01	4.29	735.4	28.2	14.2	12.8	32.8	47.9	77.7	88.7	
TEXTILES AND THEIR PRODUCTS																	
Cotton goods:																	
Materials—																	
Cotton, raw.....	mill. lbs.	(¹)	(¹)	2,731.4	2,523.5	2,335.3	1,876.4	1,817.6	-----	-----	-----	-----	-----	8.2	8.1	24.8	8.2
Cotton yarns.....	mill. lbs.	(¹)	(¹)	230.1	139.5	126.7	105.4	94.7	-----	-----	-----	-----	-----	64.9	10.1	20.2	11.3
Products—																	
Woven goods (over 12 inches in width).....	mill. sq. yds.	8,264.2	6,768.8	6,317.4	6,813.5	6,267.6	5,056.8	4,485.6	84.2	30.8	23.3	6.1	-7.3	8.7	23.9	12.7	
Yarns, manufactured for sale.....	mill. lbs.	620.7	494.2	618.0	498.0	470.4	864.6	332.3	86.8	.4	28.2	-21.7	24.1	5.9	29.0	9.7	
Thread.....	mill. lbs.	31.6	23.3	26.4	26.5	23.7	17.2	15.9	98.7	19.7	35.6	-11.7	-4	11.8	37.5	8.2	
Knit goods:																	
Materials—																	
Cotton.....	mill. lbs.	(¹)	(¹)	118.7	114.0	75.4	50.6	49.5	-----	-----	-----	-----	-----	8.6	52.0	49.0	2.2
Cotton yarns.....	mill. lbs.	(¹)	(¹)	217.4	205.5	217.0	161.3	131.8	-----	-----	-----	-----	-----	5.9	-5.3	84.4	22.5
Worsted yarns.....	mill. lbs.	(¹)	(¹)	12.6	14.3	10.4	8.8	5.8	-----	-----	-----	-----	-----	-11.9	37.5	18.2	51.7
Products—																	
Hosiery.....	mill. doz. pairs..	97.4	80.2	84.6	75.2	62.9	44.2	29.9	225.8	15.0	21.4	-5.3	12.0	19.7	42.1	47.6	
Underwear—																	
Shirts and drawers.....	mill. doz.	12.7	11.7	17.2	21.8	25.3	19.7	15.9	-20.1	-26.2	8.5	-32.0	-21.1	-13.8	28.4	28.9	
Union suits.....	mill. doz.	10.7	9.3	9.2	6.3	2.5	1.4	1.0	970.0	16.3	15.1	1.1	46.0	162.0	78.6	40.0	
Gloves and mittens.....	mill. doz. pairs..	2.1	2.7	3.6	2.5	2.5	2.3	1.9	10.5	-41.7	-22.2	-25.0	44.0	-----	6.7	21.1	
Sweaters, jerseys, hoods, scarfs, shawls, etc.....	mill. doz.	6.3	3.6	8.0	3.3	3.3	1.8	1.1	472.7	110.0	75.0	20.0	-9.1	-----	83.3	68.6	
Silk manufactures:																	
Materials—																	
Raw silk.....	mill. lbs.	(¹)	(¹)	25.9	22.4	17.5	11.6	9.8	-----	-----	-----	-----	-----	15.8	28.0	50.9	18.4
Organzine and tram.....	mill. lbs.	(¹)	(¹)	6.1	3.9	3.4	3.2	2.3	-----	-----	-----	-----	-----	56.4	14.7	6.2	39.1
Yarns, other than silk.....	mill. lbs.	(¹)	(¹)	19.6	23.2	15.8	9.7	7.1	-----	-----	-----	-----	-----	-15.5	46.8	63.9	86.6
Products—																	
Broad silks.....	mill. linear yds.	357.0	273.6	310.1	216.0	185.7	124.9	87.6	307.5	15.1	30.5	-11.8	43.6	16.3	48.7	42.6	
Velvets, plushes, upholstery, and tapestries.....	mill. linear yds.	28.4	18.0	22.5	25.9	18.1	11.6	10.3	156.3	17.3	46.7	-18.0	-13.1	97.7	12.9	12.8	
Other silk goods.....	mill. lbs.	13.7	13.1	10.9	7.2	5.4	4.3	4.6	187.8	25.7	4.2	20.2	51.4	33.3	25.6	-3.5	

See footnotes at end of table, p. 191.

TABLE 87.—QUANTITY OF MATERIALS CONSUMED AND PRODUCTS MANUFACTURED IN SELECTED INDUSTRIES, BY CENSUS YEARS, AND PER CENT OF INCREASE, BY CENSUS PERIODS: 1899 TO 1923—Continued

MATERIAL AND PRODUCT	ACTUAL QUANTITY REPORTED							PER CENT OF INCREASE OR DECREASE (-)							
	1923	1921	1919	1914	1909	1904	1899	24-year period, 1899-1923	Intercensal period						
									1919-1923	1921-1923	1919-1921	1914-1919	1909-1914	1904-1909	1899-1904
TEXTILES AND THEIR PRODUCTS—Continued															
Woolen and worsted goods:															
Materials—															
Woolen in condition purchased.....mill. lbs.	(¹)	(¹)	443.5	434.7	474.8	418.7	330.2	-----	-----	-----	2.0	-8.4	13.4	26.8	
Tops.....mill. lbs.	(¹)	(¹)	26.3	29.1	20.8	9.2	5.6	-----	-----	-----	-9.6	39.9	128.1	64.3	
Worsted yarns.....mill. lbs.	(¹)	(¹)	43.0	53.6	59.1	31.0	25.1	-----	-----	-----	-19.8	-9.3	90.6	23.5	
Products—															
All-wool woven goods ¹⁰.....mill. sq. yds.	399.1	326.7	326.7	323.0	322.9	260.6	216.4	84.4	22.2	22.2	-----	1.1	.03	23.9	20.4
Union or cotton-mixed woven goods ¹¹.....mill. sq. yds.	47.4	24.9	47.8	46.2	37.5	63.2	57.3	-17.3	-8	90.4	-47.0	3.5	23.2	-40.7	10.3
Cotton-warp, woven goods ¹².....mill. sq. yds.	181.5	142.2	161.4	196.2	210.3	182.1	152.9	18.7	12.5	27.6	-11.9	-17.7	-6.7	15.5	19.1
Yarns and tops.....mill. lbs.	200.6	136.0	128.2	141.5	145.4	118.1	96.2	108.5	56.5	47.5	6.1	-9.4	-2.7	23.1	22.8
Carpets and rugs, wool, other than rag:															
Materials—															
Wool in condition purchased.....mill. lbs.	(¹)	(¹)	36.3	52.6	64.1	51.3	51.9	-----	-----	-----	-31.0	-17.9	25.0	-1.2	
Yarns.....mill. lbs.	(¹)	(¹)	87.2	122.6	128.3	129.7	109.3	-----	-----	-----	-28.9	-4.4	-1.1	18.7	
Products—															
Carpets and rugs.....mill. sq. yds.	83.2	52.9	52.2	66.3	81.2	82.7	76.4	8.9	59.4	57.3	1.3	-21.3	-18.3	-1.8	8.2
Cordage and twine, jute goods and linen goods:															
Materials—															
Hard fibers.....mill. lbs.	(¹)	(¹)	427.9	437.3	352.7	(¹)	275.9	-----	-----	-----	-2.1	24.0	-----	-----	
Soft fibers.....mill. lbs.	(¹)	(¹)	206.0	338.3	307.0	(¹)	248.8	-----	-----	-----	-39.1	10.2	-----	-----	
Products—															
Rope and binder twine, exclusive of cotton rope.....mill. lbs.	432.9	358.3	443.2	487.4	411.4	(¹)	305.8	41.6	-2.3	20.8	-19.2	-9.1	18.5	-----	
Twine, other than binder.....mill. lbs.	120.1	80.4	92.4	105.2	75.8	(¹)	36.2	231.8	80.0	49.9	-13.3	-12.2	88.8	-----	
Hats, fur-felt:															
Hats, fur-felt.....thous. doz.	1,989.6	1,756.0	2,100.0	2,118.6	2,989.3	2,611.9	1,882.4	4.6	-6.2	12.2	-16.4	-9	-29.1	14.4	38.8
Oilcloth and floor coverings:															
Piece goods, rugs, etc.....mill. sq. yds.	205.2	135.8	109.9	119.5	109.2	66.5	(¹)	-----	51.1	86.7	23.6	-8.0	9.4	64.2	-----
IRON AND STEEL AND THEIR PRODUCTS															
Blast furnaces:															
Materials—															
Iron ore.....mill. long tons	(¹)	(¹)	55.9	43.3	48.4	30.0	25.4	-----	-----	-----	29.1	-10.5	61.3	18.1	
Fluxes.....mill. short tons	(¹)	(¹)	15.6	11.5	13.0	8.3	7.3	-----	-----	-----	35.7	-15.4	63.9	13.7	
Coke.....mill. short tons	(¹)	(¹)	34.6	26.9	31.4	19.7	15.5	-----	-----	-----	28.0	-14.3	59.4	18.4	
Products—															
Pig iron, including ferro-alloys.....mill. long tons.	40.2	16.6	¹³ 30.5	23.3	25.7	16.6	14.4	179.2	81.8	142.2	-45.0	30.9	-9.3	54.8	15.8

Steel works and rolling mills:															
Materials—															
Fig iron, including ferro-alloys.....mill. long tons..	(1)	(1)	24.4	17.4	19.1	12.2	10.4	-----	-----	-----	-----	40.2	-8.9	56.6	17.8
Scrap, from outside sources.....mill. long tons..	(1)	(1)	7.0	5.1	4.8	5.1	4.1	-----	-----	-----	-----	37.3	6.2	-5.9	24.4
Ingots, blooms, billets, etc.....mill. long tons..	(1)	(1)	8.9	6.5	6.5	4.9	8.9	-----	-----	-----	-----	36.0	-----	32.7	25.6
Products—															
Rolled, forged, and other classified iron and steel products.....mill. long tons..	47.8	20.6	36.2	25.5	28.7	18.2	18.1	214.6	31.2	130.6	-43.1	42.0	-4.5	46.7	20.5
Engines and water wheels:															
Steam engines (not including traction engines).....thousands..	13.7	8.6	19.4	14.7	(1)	(1)	(1)	-----	-20.4	59.3	-55.7	32.0	-----	-----	-----
Internal-combustion engines (not including tractors).....thousands..	607.7	313.9	589.3	369.5	(1)	(1)	(1)	-----	8.1	98.6	-46.7	59.5	-----	-----	-----
Tractors and traction engines.....thousands..	140.8	74.4	215.0	15.2	(1)	(1)	(1)	-----	-34.5	89.2	-65.4	1,314.5	-----	-----	-----
Machine tools:															
Boring machines.....thousands..	8.9	9	1.4	(1)	(1)	(1)	(1)	-----	-42.9	-11.1	-35.7	-----	-----	-----	-----
Drilling machines (except portable).....thousands..	8.1	4.5	16.6	(1)	(1)	(1)	(1)	-----	-51.2	60.0	-72.9	-----	-----	-----	-----
Grinding machines.....thousands..	16.8	3.7	12.9	(1)	(1)	(1)	(1)	-----	30.2	354.0	-71.3	-----	-----	-----	-----
Lathes.....thousands..	12.0	7.6	29.0	(1)	(1)	(1)	(1)	-----	-58.6	57.9	-73.8	-----	-----	-----	-----
Milling machines.....thousands..	2.9	2.3	11.5	(1)	(1)	(1)	(1)	-----	-74.8	26.1	-80.0	-----	-----	-----	-----
Presses.....thousands..	12.7	23.8	35.8	(1)	(1)	(1)	(1)	-----	-64.5	-46.6	-33.5	-----	-----	-----	-----
Screw machines (automatic).....thousands..	2.1	2.7	6.2	(1)	(1)	(1)	(1)	-----	-66.1	-22.2	-56.5	-----	-----	-----	-----
Textile machinery and parts:															
Fiber-to-fabric machinery.....thousands..	48.1	37.9	40.6	(1)	(1)	(1)	(1)	-----	18.5	26.9	-6.7	-----	-----	-----	-----
Fabric machinery.....thousands..	83.0	89.7	53.5	(1)	(1)	(1)	(1)	-----	55.1	-7.5	67.7	-----	-----	-----	-----
LUMBER AND ITS REMANUFACTURES															
Lumber:															
Softwoods.....mill. M ft. b. m..	30.9	22.2	27.4	29.4	33.9	27.4	26.2	17.9	12.8	39.2	-19.0	-6.8	-13.3	23.7	4.6
Hardwoods.....mill. M ft. b. m..	6.3	4.6	7.1	7.9	10.6	6.8	8.6	-26.7	-11.8	31.3	-32.4	-10.1	-25.5	55.9	-20.9
LEATHER AND ITS FINISHED PRODUCTS															
Leather, tanned, curried, and finished:															
Materials—															
Cattle hides.....mill. hides..	(1)	(1)	22.2	17.5	18.4	17.6	15.8	-----	-----	-----	-----	26.9	-4.9	4.5	11.4
Calf and kip skins.....mill. skins..	(1)	(1)	12.0	16.1	19.7	12.5	8.9	-----	-----	-----	-----	-19.9	-18.3	57.8	40.4
Goat and kid skins.....mill. skins..	(1)	(1)	55.4	37.8	43.1	47.7	48.0	-----	-----	-----	-----	46.6	-21.4	8	-8
Sheep and lamb skins.....mill. skins..	(1)	(1)	22.8	40.1	26.1	27.5	24.5	-----	-----	-----	-----	-43.1	53.6	-5.1	12.2
Products—															
Sole leather.....mill. sides..	18.9	13.1	19.7	18.1	17.8	17.9	18.5	21.9	-4.1	4.4	-8.1	8.8	1.7	6	15.5
Harness leather.....mill. sides..	1.5	9	1.7	2.8	3.9	4.4	3.4	-55.9	-11.8	37.5	-52.9	-39.3	-28.2	-11.4	29.4
Upper leather (other than patent).....	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Skins, total.....mill. skins..	88.2	67.0	78.4	66.8	(1)	(1)	(1)	-----	12.5	31.6	-14.5	18.3	-----	-----	-----
Cattle sides.....mill. sides..	18.6	12.0	16.7	8.3	7.9	6.9	8.1	129.6	11.4	47.6	-24.6	103.7	8.8	14.5	-14.8
Boots and shoes, leather:															
Boots, shoes, and slippers.....mill. pairs..	351.1	286.8	331.2	292.7	285.0	242.1	218.0	61.1	6.0	22.4	-13.4	13.2	2.7	17.7	11.1
Gloves, mittens, leather:															
Gloves, mittens, and gauntlets.....thous. doz. pairs..	(1)	2,582.4	3,615.7	3,082.4	3,368.7	3,870.1	2,895.7	-----	-----	-----	-----	-28.5	17.3	-8.5	16.4

See footnotes at end of table, p. 191.

TABLE 37.—QUANTITY OF MATERIALS CONSUMED AND PRODUCTS MANUFACTURED IN SELECTED INDUSTRIES, BY CENSUS YEARS, AND PER CENT OF INCREASE, BY CENSUS PERIODS: 1899 TO 1923—Continued

MATERIAL AND PRODUCT	ACTUAL QUANTITY REPORTED							PER CENT OF INCREASE OR DECREASE (-)								
	1923	1921	1919	1914	1909	1904	1899	24-year period, 1899-1923	Inter-censal period							
									1919-1923	1921-1923	1919-1921	1914-1919	1909-1914	1904-1909	1899-1904	
PAPER AND PRINTING																
Paper and wood pulp:																
Materials—																
Pulpwood.....thous. cords.....	46,872.9	4,557.2	5,477.8	4,470.8	4,001.8	3,050.7	1,986.8	195.7	7.2	28.9	-16.8	22.6	11.7	31.2	53.6	
Wood pulp purchased.....thous. short tons.....	(1)	(1)	1,596.0	1,522.0	1,241.9	877.7	644.0					4.9	22.6	41.5	36.3	
Rags, including cotton and flax waste and sweepings.....thous. short tons.....	(1)	(1)	277.8	361.7	257.5	294.6	234.5						-23.2	1.2	21.4	25.6
Old or waste paper.....thous. short tons.....	(1)	(1)	1,854.4	1,510.0	983.9	588.5	356.2						22.8	53.5	67.2	65.2
Products—																
News paper, in rolls and sheets.....thous. short tons.....	1,521.1	1,237.4	1,323.9	1,813.3	1,168.1	912.8	569.2	167.2	14.9	22.9	-6.5	.8	12.4	28.0	60.4	
Book paper.....thous. short tons.....	1,207.9	792.3	951.3	904.0	670.1	434.5	282.1	328.2	27.0	52.5	-16.7	5.2	34.9	54.2	54.0	
Fine paper.....thous. short tons.....	377.0	230.9	325.2	247.8	198.2	146.8	112.7	234.5	15.9	63.3	-29.0	31.2	25.0	35.0	30.3	
Wrapping paper.....thous. short tons.....	1,027.0	703.8	831.4	881.8	763.1	644.3	535.2	91.9	23.5	45.9	-15.3	-5.7	15.6	18.4	20.4	
Boards.....thous. short tons.....	2,792.8	1,739.8	1,867.1	1,291.8	883.1	559.7	394.1	608.7	49.6	60.5	-6.8	44.5	46.3	57.8	42.0	
Miscellaneous papers.....thous. short tons.....	1,103.6	727.1	799.8	631.5	530.4	408.5	274.2	302.5	38.0	51.8	-9.1	26.7	19.1	29.8	49.0	
Wood pulp, total production.....thous. short tons.....	3,789.2	2,876.3	3,518.0	2,893.2	2,405.5	1,921.8	1,179.5	221.3	7.7	31.7	18.2	21.6	15.9	29.9	62.9	
CHEMICALS AND ALLIED PRODUCTS																
Coke not including gas-house coke:																
Material—																
Coal.....mill. short tons.....	84.4	37.3	65.6	161.6	59.4	87.4	80.2	179.5	28.7	126.3	-43.1	27.1	-13.1	58.8	23.8	
Product—																
Coke.....mill. short tons.....	57.0	25.3	44.2	34.6	89.3	25.1	19.6	189.3	29.0	125.3	-42.8	27.7	-12.0	56.6	28.1	
Fertilizers:																
Material—																
Phosphate rock.....thous. short tons.....	(1)	(1)	2,247.3	2,081.0	1,549.5	888.6	787.9					8.0	84.3	74.4	12.8	
Product—																
Fertilizers.....thous. short tons.....	7,549.3	5,994.2	5,237.0	5,432.2	5,618.2	3,591.8	2,887.0	161.5	-8.3	25.9	-27.2	-2.3	50.1	56.4	24.4	
Gas, illuminating and heating:																
Materials—																
Coal.....thous. short tons.....	7,338.3	6,972.0	7,657.8	6,116.7	4,940.6	4,431.8	2,487.8	195.0	-4.2	5.3	-9.0	25.2	23.8	11.5	78.2	
Oil, benzol, and benzine.....mill. gals.....	874.3	841.9	881.8	716.8	579.7	411.0	194.9	348.6	- .9	3.8	-4.5	23.0	23.7	41.0	110.9	
Product—																
Gas for sale.....bill. cu. ft.....	356.6	806.1	808.4	203.6	150.8	112.5	67.1	431.4	15.6	16.5	- .8	51.5	35.0	34.0	67.7	

Paint and varnish:																
Materials—																
Pig lead.....	thous. short tons.	(1)	(1)	192.6	150.9	150.2	129.6	99.1					27.7	.4	15.9	80.8
Linseed oil.....	mill. gals.	(1)	(1)	27.0	24.5	(1)	20.6	16.2					10.2			27.2
Products—																
White lead pigment.....	mill. lbs.	301.1	334.9	293.0	279.3	248.0	240.1	254.7	18.2	14.5	-10.1	27.3	-5.8	12.6	3.3	-5.7
White lead paint.....	mill. lbs.	272.5	329.7	237.4	231.4	246.6	229.6	119.0	129.0	14.8	-17.8	38.9	-15.8	14.1	7.4	92.9
Zinc and other paints in paste form.....	mill. lbs.	153.4	98.5	160.9	138.6	165.0	134.0	191.4	-19.9	-4.7	55.7	-38.8	16.1	-16.0	23.1	-30.0
Paints in oil.....	mill. gals.	71.3	48.1	59.6	40.9	34.3	22.8	17.4	309.8	19.4	48.2	-19.3	46.1	19.0	50.4	31.0
Oleo-resinous varnishes.....	mill. gals.	40.4	22.2	28.1	17.8	18.7	17.3	14.8	173.0	43.8	82.0	-21.0	57.9	-4.8	8.1	16.9
Other varnishes, japans, and lacquers.....	mill. gals.	39.9	22.9	21.2	18.6	16.3	6.4	7.3	446.6	88.2	74.2	8.0	14.0	14.1	154.7	-12.6
Petroleum refining:																
Material—																
Crude petroleum.....	mill. bbls.	601.7	10 443.4	365.3	191.3	120.8	67.0	52.0	1,057.1	64.7	35.7	21.4	91.0	58.4	80.3	28.8
Products—																
Naphthas.....	mill. bbls.	8.0	4.0	7.9	(1)					-1.3	100.0	-49.4				
Gasoline.....	mill. bbls.	146.6	102.0	73.0	23.9	10.8	5.8	5.6	180.4	100.8	43.7	39.7	205.4	170.4	86.2	8.6
Other light products of distillation.....	mill. bbls.	2.4	1.5	3.2	5.3					-25.0	60.0	53.1	-39.6			
Illuminating oils.....	mill. bbls.	44.8	38.2	46.1	38.7	33.5	27.1	25.2	77.8	-2.8	15.5	15.8	19.1	15.5	23.6	7.5
Fuel oils.....	mill. bbls.	239.5	195.0	155.4	74.7	34.0	7.2	6.1	3,823.2	54.1	22.8	25.5	108.0	119.7	372.2	18.0
Lubricating oils.....	mill. bbls.	23.0	19.0	16.4	10.4	10.7	6.3	3.4	576.5	40.2	21.1	15.9	57.7	-2.8	69.8	85.3
Chemicals and acids:																
Products—																
Sulphuric acid.....	thous. short tons.	6,555.5	4,369.9	5,552.6	4,071.6	2,764.5	1,869.4	1,549.1	823.5	18.1	50.0	-21.8	36.4	47.3	47.9	20.8
Soda ash.....	thous. short tons.	1,708.0	959.6	1,507.4	935.3	646.1	619.0	390.7	337.2	13.3	78.0	-36.3	61.2	44.8	24.5	32.8
Glycerin.....	mill. lbs.	103.5	90.7	129.2	77.5	79.7	47.0	26.5	290.2	-19.9	14.1	-29.8	66.7	-2.8	69.6	77.4
Explosives:																
Explosives, total.....	mill. lbs.	577.2	407.4	506.1	481.8	487.5	361.0	212.8	171.2	14.0	41.7	-19.5	5.0	-1.2	35.0	69.6
Oil and cake, cottonseed:																
Crude oil.....	mill. gals.	129.8	170.3	190.7	191.2	157.1	132.1	93.8	39.1	-31.9	-23.8	-10.7	-.3	21.7	18.9	41.6
Cake and meal.....	thous. short tons.	1,475.8	1,790.1	2,191.8	2,191.6	1,661.7	1,344.0	884.4	66.9	-32.7	-17.6	-18.3	.01	31.9	23.6	52.0
Hulls.....	thous. short tons.	918.4	1,248.7	1,313.1	1,386.0	1,258.6	1,201.1	1,169.3	-21.5	-30.1	-26.5	-4.9	-5.3	10.1	4.8	2.7
Linters.....	mill. lbs.	332.5	229.5	359.7	330.6	174.6	116.7	57.8	184.9	-7.6	44.9	-36.2	8.8	89.3	40.6	103.7
Turpentine and rosin: #																
Turpentine.....	mill. gals.	29.8	24.8	19.2	27.6	29.7	31.1	37.7	-21.0	55.2	20.2	29.2	+30.4	-7.1	-4.5	-17.5
Rosin.....	thous. bbls.	3,555.1	3,018.6	2,451.2	2,936.9	3,263.9	3,508.3	43,451.1	-18.2	45.0	-17.7	-23.2	-18.5	-10.0	-7.0	-19.3
Salt.....																
Salt.....	thous. short tons.	7,130.7	4,981.2	6,882.9	4,872.7	4,195.6	2,401.5	2,130.0	234.8	8.6	43.2	-27.6	41.3	16.1	74.7	12.7
Soap:																
Hard soaps.....	mill. lbs.	2,000.8	1,752.1	1,836.0	1,696.5	1,493.1	1,386.6	(9)		8.9	14.2	-4.6	8.2	13.6	7.7	

See footnotes at end of table, p. 191.

TABLE 37.—QUANTITY OF MATERIALS CONSUMED AND PRODUCTS MANUFACTURED IN SELECTED INDUSTRIES, BY CENSUS YEARS, AND PER CENT OF INCREASE, BY CENSUS PERIODS: 1899 TO 1923—Continued

MATERIAL AND PRODUCT	ACTUAL QUANTITY REPORTED							PER CENT OF INCREASE OR DECREASE (-)							
	1923	1921	1919	1914	1909	1904	1899	24-year period, 1899-1923	Intercensal period						
									1919-1923	1921-1923	1919-1921	1914-1919	1909-1914	1904-1909	1899-1904
STONE, CLAY, AND GLASS PRODUCTS															
Brick and tile, terra-cotta, and fire-clay products:															
Common brick.....mill. brick	7,282.2	4,448.0	4,751.9	7,145.8	9,787.7	8,683.9	7,654.5	-4.9	53.2	63.7	-6.4	-33.5	-27.0	12.7	13.4
Fire brick.....mill. brick	1,134.2	621.0	963.4	816.8	838.2	678.4	800.9	41.6	17.7	82.6	-35.5	17.9	-2.6	23.6	-15.3
Glass:															
Window glass.....mill. sq. ft.	510.2	280.0	368.9	401.0	246.1	242.6	217.1	135.0	38.3	96.2	-29.5	-8.0	15.9	42.7	11.7
Plate glass, polished.....mill. sq. ft.	94.5	56.2	56.8	60.4	47.4	27.3	16.9	459.2	66.4	68.1	-1.1	-6.0	27.4	73.6	61.5
Bottles and jars.....mill. gross	(1)	(1)	22.3	19.3	12.3	11.9	7.8					15.5	56.9	3.4	52.6
Pressed and blown glass.....mill. doz. pieces	(1)	(1)	100.0	59.4	44.4	35.7	35.4					68.4	33.8	24.4	4.8
Cement.....mill. bbbls	138.8	99.4	81.3	89.0	66.7	81.7	15.9	773.0	70.7	39.6	22.3	-8.7	33.4	110.4	99.4
Lime:															
Quicklime and hydrated lime, total.....thous. tons	3,766.0	2,391.4	3,071.4	3,380.9	3,473.0	2,707.8	(1)		22.6	57.5	-22.1	-9.2	-2.7	28.3	
METALS AND METAL PRODUCTS, OTHER THAN IRON AND STEEL															
Brass, bronze, and other nonferrous alloys, and manufactures of these alloys and of copper:															
Semifinished products.....mill. lbs.	1,937.6	783.0	1,434.3	448.5	(1)	(1)	(1)		35.1	147.5	-45.4	219.1			
Smelting and refining:															
Copper, primary ¹¹.....thous. short tons	989.9	475.4	885.1	766.9	695.5	425.7	296.2	234.2	11.8	108.2	-46.3	15.4	10.3	63.4	43.7
Lead, primary ¹¹.....thous. short tons	618.3	448.6	482.2	542.1	446.9	393.4	298.0	107.5	28.2	37.8	-7.0	-11.0	21.3	13.6	32.0
Zinc, primary ¹¹.....thous. short tons	510.4	200.5	465.7	353.0	255.8	186.7	129.1	295.4	9.6	154.6	-56.9	31.9	38.0	37.0	44.6
Gold ¹².....thous. fine ozs.	2,593.0	2,422.0	2,919.0	4,573.0	4,822.0	3,892.0	3,437.0	-27.2	-14.3	3.3	-17.0	-36.2	-5.2	23.9	13.2
Silver ¹².....mill. fine ozs.	73.34	53.05	56.68	72.46	54.72	57.68	54.76	33.9	29.4	38.2	-6.4	-21.8	32.4	-5.1	5.3
TOBACCO MANUFACTURES															
Tobacco, chewing and smoking, and snuff: ¹³															
Tobacco and snuff.....mill. lbs.	412.8	387.0	424.1	440.9	431.4	353.7	294.6	40.1	-2.7	6.7	-8.7	-3.8	2.2	22.0	20.1
Tobacco, cigars:															
Cigars, weighing more than 8 lbs. per 1,000.....millions	6,950	6,726	7,072	7,174	6,668	6,640	4,910	41.6	-1.7	3.3	-4.9	-1.4	7.6	.4	35.3
Tobacco, cigarettes:															
Cigarettes, weighing more than 8 lbs. per 1,000.....millions	66,716	52,085	63,120	16,856	6,819	3,427	3,742	1,682.7	25.6	28.1	-1.9	215.1	147.2	98.0	-8.4

VEHICLES FOR LAND TRANSPORTATION																
Automobiles ¹	thous. cars	3,902.4	1,603.1	1,893.2	573.0	127.3	22.8	25.0	77,048.0	108.1	143.4	-15.3	230.4	350.1	458.3	356.0
Motor cycles and bicycles:																
Motor cycles.....	thousands	41.9	27.0	59.1	62.2	18.6	2.3	2	20,950.0	-29.1	55.2	-54.3	-5.0	234.4	708.7	1,160.0
Bicycles.....	thousands	496.2	216.5	470.7	299.0	168.8	225.3	1,112.9	-56.3	3.3	124.6	-54.0	57.4	77.1	-25.1	-79.8
Trucks, wagons, and repairs:																
Complete vehicles of all classes.....	thous. vehicles	236.1	107.3	608.8	1,124.9	1,619.2	1,711.3	1,594.3	-85.2	-61.2	120.0	-82.4	-45.9	-26.0	-11.2	7.3
Tram-railroad cars:																
Passenger service.....	number	1,642	1,383	254	3,568	1,819	2,444	1,869	34.6	625.2	35.1	436.6	-92.9	96.2	-25.6	78.5
Freight service.....	thous. cars	179.3	56.3	155.7	127.3	87.7	117.5	143.1	25.6	15.5	219.4	-53.9	22.3	-45.2	-25.4	-17.9
Locomotives (steam).....	number	3,598	1,757	3,411	2,235	(1)	(1)	(1)		3.5	104.8	-43.5	52.6			
SHIP AND BOAT BUILDING																
Vessels of 5 gross tons and over launched:																
Steel.....	thous. gross tons	281.3	1,206.9	3,734.2	243.0	255.0	328.4	262.5	7.2	-92.5	-76.7	-67.7	1,436.7	-4.7	-22.4	25.1
Wooden.....	thous. gross tons	112.8	119.0	755.6	182.1	212.2	350.1	424.6	-73.4	-85.1	-5.2	-84.3	314.9	-14.2	-39.4	-17.5
RUBBER PRODUCTS																
Rubber tires and inner tubes:																
Casing, pneumatic, automobile, and truck.....	millions	45.43	27.30	33.84	8.02	(1)	(1)	(1)		38.3	66.4	-16.9	309.5			
Inner tubes, pneumatic, automobile, and truck.....	millions	57.23	32.08	33.26	7.91	(1)	(1)	(1)		72.1	78.4	-3.5	320.5			
Solid tires, truck.....	thousands	944.3	401.4	1,455.0	(1)	(1)	(1)	(1)		35.1	135.3	-72.4				
Rubber boots and shoes:																
Rubber boots.....	thous. prs.	9,098.0	6,532.0	9,207.7	4,024.5	(1)	(1)	(1)		-1.2	39.2	-29.1	128.8			
Shoes and overshoes.....	mill. prs.	60.10	57.19	66.15	57.21	(1)	(1)	(1)		-9.1	5.1	-13.5	15.6			
Canvas shoes with rubber soles.....	mill. prs.	26.11	15.24	21.03	(1)	(1)	(1)	(1)		24.2	71.3	-27.5				
Heels for sale.....	mill. prs.	289.2	137.5	138.5	(1)	(1)	(1)	(1)		108.8	110.2	-0.7				
MUSICAL INSTRUMENTS																
Pianos.....	thousands	347.6	221.2	341.7	326.3	364.5	261.2	(1)		1.7	57.1	-35.3	4.7	10.5	39.5	
Gramophones.....	thousands	997.5	596.0	2,226.4	514.2	344.7	(1)	151.4	558.9	-55.2	67.4	-73.2	333.0	49.2		
Records and blanks.....	millions	98.10	105.19	107.00	27.22	27.18	(1)	2.78	3,454.3	-8.3	-6.7	-1.7	293.1	.1		

See footnotes at end of table, p. 191.

TABLE 37.—QUANTITY OF MATERIALS CONSUMED AND PRODUCTS MANUFACTURED IN SELECTED INDUSTRIES, BY CENSUS YEARS, AND PER CENT OF INCREASE, BY CENSUS PERIODS: 1899 TO 1923—Continued

MATERIAL AND PRODUCT	ACTUAL QUANTITY REPORTED							PER CENT OF INCREASE OR DECREASE (-)								
								24-year period, 1899-1923	Inter-censal period							
	1923	1921	1919	1914	1909	1904	1899		1919-1923	1921-1923	1919-1921	1914-1919	1909-1914	1904-1909	1899-1904	
MACHINERY, NOT INCLUDING TRANSPORTATION EQUIPMENT																
Agricultural implements:																
Plows—																
Moldboard—																
Walking.....	thousands	538.8	832.9	720.2	870.4	1,110.0	956.9	819.0	-34.2	-25.2	61.9	-53.8	-17.3	-21.6	18.0	16.8
Sulky.....	thousands	64.2	64.8	103.1	184.1	226.6	138.9	136.1	-62.8	-37.7	17.2	-46.8	-44.0	-18.8	63.1	2.1
Tractor.....	thousands	65.1	23.9	98.8	(1)	(1)	(1)	(1)	-34.1	172.4	-75.8					
Disk.....	thousands	19.8	16.3	15.4	15.7	22.1	39.1	17.8	11.6	25.8	18.4	5.8	-1.9	-29.0	-43.5	128.0
Listers.....	thousands	43.0	53.0	31.7	38.0	44.8	23.0	27.0	59.8	35.6	37.0	-27.4	-14.6	-15.2	94.9	-14.8
Harrows, spike-tooth and spring-tooth.....	thousands	350.6	302.1	802.3	555.6	507.8	348.9	380.3	-7.9	18.0	16.1	-1	-45.6	9.4	45.5	-8.3
Harrows, disk.....	thousands	126.6	118.5	175.7	209.1	193.0	104.3	97.3	30.1	-27.9	6.8	-32.6	-16.0	8.3	85.0	7.2
Corn and cotton planters.....	thousands	127.6	101.7	181.4	215.9	202.1	218.0	123.9	3.0	-20.7	25.5	-43.9	-16.0	6.8	-7.3	75.9
Grain drills.....	thousands	30.6	42.6	63.3	89.4	89.9	78.9	(1)	(1)	-51.7	-28.2	-32.7	-29.2	-6	16.9	
Cultivators, wheeled, 1-row.....	thousands	191.9	137.9	144.3	347.3		313.1	295.8	-35.1	33.0	39.2	-4.4	-58.5			
Cultivators, wheeled, 2-row.....	thousands	29.4	25.0	44.8	31.6	435.4				-34.4	17.6	-44.2	41.8			
Grain binders.....	thousands	62.8	72.3	155.5	215.4	129.3	108.8	233.5	-73.1	-50.6	-13.1	-53.5	-27.8	66.6	18.8	-53.4
Corn binders.....	thousands	15.7	5.8	22.9	52.1	19.7	6.9	20.7	-24.2	-31.4	170.7	-74.7	-56.0	164.5	185.5	-66.7
Combination harvesters and threshers.....	thousands	4.0	5.0	2.4	.3	.6	(1)	(1)	66.7	-20.0	108.3	700.0	-40.0			
Potato diggers.....	thousands	12.6	11.7	12.5	25.8	25.6	11.7	(1)		.8	7.7	-6.4	-51.6	5	120.5	
Mowers.....	thousands	130.4	103.8	151.1	274.5	359.3	273.4	398.6	-67.3	-13.7	25.6	-31.3	-45.0	-23.6	31.4	-31.4
Hay rakes.....	thousands	80.6	83.3	93.9	183.1	266.3	236.3	216.3	-62.7	-14.2	-3.2	-11.3	-48.7	-31.2	12.7	9.2
Hay loaders.....	thousands	23.3	21.5	20.6	25.9	34.7	27.2	7.3	219.2	13.1	8.4	4.4	-20.5	-25.4	27.6	272.6
Grain threshers.....	thousands	13.3	14.5	19.9	13.5	13.8	10.2	5.0	166.0	-33.2	-8.3	-27.1	47.4	-2.2	35.3	104.0
Ensilage and fodder cutters.....	thousands	12.8	12.3	18.0	(1)	(1)	(1)	(1)		-28.9	4.1	-31.7				
Corn huskers and shredders.....	thousands	3.2	4.7	2.9	4.3	1.3	(1)	(1)		10.3	-31.9	62.1	32.6	230.8		
Corn shellers, power.....	thousands	6.2	4.3	8.5	11.1	9.0	6.1	8.2	-24.4	-27.1	44.2	-48.4	-23.4	23.3	47.6	-25.6
Hay presses.....	thousands	5.5	6.1	7.2	(1)	(1)	(1)	(1)		-23.6		-9.8	-15.3			
Electrical machinery, apparatus, and supplies:																
Generators, steam-turbine driven (not including turbine)—																
Alternating current.....	thous. kw.	2,267.0	1,693.5	1,902.8	600.2	(1)	(1)	(1)		19.1	33.9	-11.0	217.0			
Stationary motors, not including fan motors—																
Fractional horsepower.....	thousands	1,994.9	992.6	198.3	64.1	(1)	(1)	(1)		906.0	101.0	400.6	209.4			

Motors, 1 horsepower and over, plus railway motors.....thous. horsepower..	5,167.9	8,998.8	4,094.8	2,882.8	2,410.4	1,892.1	1,182.4	337.1	28.2	29.3	-2.4	42.0	19.6	73.1	17.7
Electric fans.....thousands.....	683.1	425.1	709.4	398.3	(¹)	(¹)	(¹)	-----	-8.0	61.9	-40.1	78.1	-----	-----	-----
Storage batteries (weight of plates).....mill. lbs.	230.11	115.41	135.44	41.05	23.12	15.11	(¹)	-----	63.9	95.9	-16.6	237.0	77.7	43.5	-----
Dry batteries.....millions.....	221.86	115.82	173.78	71.09	33.99	4.89	1.95	11,277.4	27.7	91.6	-33.4	144.9	109.1	595.1	150.8
Incandescent lamps.....millions.....	389.37	248.56	224.71	83.83	66.78	112.71	25.22	1,437.8	73.9	57.9	9.7	153.8	32.6	-40.8	245.1
Telephone instruments.....thousands.....	2,602.8	1,251.6	1,096.4	920.2	(¹)	(¹)	(¹)	-----	137.4	108.0	14.2	19.1	-----	-----	-----

¹ Figures not available.

² Goats and kids not included.

³ Includes poultry dressed.

⁴ Includes data for hides received as payment for custom slaughtering.

⁵ Not shown separately.

⁶ Figures for 1923 not strictly comparable with earlier years because of enlargement of scope of canvass for prunes and apricots.

⁷ Figures not comparable.

⁸ Includes ice manufactured as a subsidiary product.

⁹ Includes organzine, tram, and crêpe twist, spun silk, machine twist, and sewing, embroidery, and other floss silks.

¹⁰ Figures for 1923, include 574,731 square yards of woven shawls, and 786,830 square yards of carriage cloth; and 1921 includes 389,135 square yards of carriage cloth for which fibers were not reported on the 1923 and 1921 schedules but which were reported under "All-wool woven goods" in earlier years.

¹¹ Figures for 1923 include 535,631 square yards of carriage robe, for which fibers were not reported on the 1923 schedules. Data for upholstery not included prior to 1923.

¹² Figures for 1923 include 29,407,740 square yards of linings and Italian cloth and 20,765,015 square yards of woven goods, for which fibers were not specified; for 1921, 85,082,019 square yards of woven goods for which fibers were not specified.

¹³ Data for "Ferro-alloys" not included, but includes 265,876 tons of other pig iron.

¹⁴ Source, Census Bull., Forest Products, entitled "Pulpwood consumption and wood-pulp production."

¹⁵ Source, United States Geological Survey. These figures differ from those published in the 1923 census report because of the inclusion of a larger number of establishments in the Geological Survey canvass.

¹⁶ Estimated from Geological Survey figures.

¹⁷ Since 1919 figures have been reported in barrels of 500 pounds, and reduced to equivalent 280-pound barrels in order to preserve comparability.

¹⁸ Rosin distilled from wood not included in 1899, 1904, and 1909.

¹⁹ Includes powdered soaps.

²⁰ Includes data reported as agricultural lime, 24,113 tons for 1923, and 67,764 tons for 1921.

²¹ Compiled by United States Geological Survey.

²² These figures were transcribed from the annual report of the Director of the Mint.

²³ "Statistics of production" of tobacco products were transcribed from the annual report of the Commissioner of Internal Revenue.

²⁴ Includes also data reported by the establishments engaged primarily in other industries.

²⁵ The number of "motor vehicles" (including both passenger cars and auto trucks) manufactured in 1899 was reported by the Twelfth Census (Vol. X, p. 265) as 4,192. The figure was raised slightly owing to the broadened scope of later canvasses.

TABLE 38.—INDEX OF PRODUCTION OF MANUFACTURES IN LEADING INDUSTRIES, BY CENSUS YEARS, AND PER CENT OF INCREASE, BY CENSUS PERIODS: 1899 TO 1923¹

INDUSTRY	INDEX NUMBERS, 1910=100							PER CENT OF INCREASE OR DECREASE (-)							
	1923	1921	1919	1914	1909	1904	1899	24-year period, 1899-1923	Intercensal period						
									1919-1923	1921-1923	1919-1921	1914-1919	1909-1914	1904-1909	1899-1904
Total.....	122.0	79.4	100.0	79.3	74.5	57.9	48.8	160.7	22.0	53.7	-20.6	28.1	6.4	30.5	22.2
Food and kindred products.....	111.6	93.5	100.0	80.8	74.8	65.1	53.0	110.6	11.6	19.4	-6.5	23.8	8.0	14.9	22.8
Butter, cheese, and condensed milk.....	122.4	104.9	100.0	67.8	52.6	44.0	34.0	280.0	22.4	16.7	4.9	47.5	29.0	19.5	29.4
Slaughtering and meat packing.....	113.0	90.1	100.0	75.7	74.8	67.9	60.6	86.5	13.0	25.4	-9.9	32.1	1.2	10.2	12.0
Flour-mill and grain-mill products.....	91.1	86.9	100.0	95.4	91.2	87.5	84.1	8.3	-8.9	4.8	-13.1	4.8	4.6	4.2	4.0
Canning and preserving, fruits and vegetables.....	126.7	69.6	100.0	77.3	54.5	45.2	24.6	415.0	26.7	82.0	-30.4	29.4	41.8	20.6	83.7
Textiles and their products.....	123.9	96.8	100.0	96.8	91.9	71.9	60.7	162.5	22.9	27.0	-2.9	2.8	5.3	27.9	13.5
Cotton goods.....	122.8	98.6	100.0	101.6	93.8	74.8	66.9	83.6	22.8	24.5	-1.4	-1.6	8.3	25.4	11.8
Knit goods.....	115.2	94.0	100.0	92.9	86.8	61.5	44.3	160.0	15.2	22.6	-6.0	7.6	7.0	41.1	38.8
Silk manufactures.....	116.9	92.6	100.0	73.2	59.5	42.1	32.5	259.7	16.9	26.2	-7.4	36.0	23.1	41.3	26.5
Woolen and worsted goods.....	128.2	98.6	100.0	104.3	105.2	96.8	70.8	91.1	23.2	30.0	-1.4	-4.1	9	21.2	22.6
Iron and steel and their products.....	131.2	56.6	100.0	71.1	75.3	51.8	43.2	263.7	31.2	131.8	-42.4	40.6	-5.6	45.4	19.9
Lumber and its remanufactures.....	110.1	79.9	100.0	110.6	137.3	104.0	106.4	2.5	10.1	37.8	-20.1	19.6	-19.4	32.0	-2.3
Leather and its finished products.....	105.6	85.2	100.0	87.4	87.7	81.5	69.2	51.2	5.6	28.9	-14.3	14.4	-3	7.6	16.8
Leather, tanned, curried, and finished.....	104.7	83.0	100.0	86.0	89.8	80.8	80.3	30.4	4.7	28.1	-17.0	16.3	-4.2	2	11.6
Boots and shoes, leather.....	106.0	88.6	100.0	88.4	86.1	78.4	65.9	60.8	6.0	22.4	-13.4	13.1	2.7	9.8	19.0
Paper and printing.....	137.1	93.4	100.0	87.5	69.8	51.9	36.6	274.6	37.1	46.8	-6.6	14.3	25.4	84.5	41.8
Paper and wood pulp.....	124.3	85.2	100.0	85.4	69.8	51.9	36.6	239.6	24.3	45.9	-14.3	15.7	23.7	84.5	41.8
Printing and publishing.....	141.8	96.7	100.0	89.7					41.8	46.6	-	11.5			
Liquors and beverages.....	(?)	(?)	100.0	232.9	196.9	170.1	123.4					-56.9	13.3	15.3	32.5
Chemicals and allied products.....	125.1	94.5	100.0	70.7	58.8	42.9	30.2	314.2	25.1	32.4	-5.5	41.4	29.2	37.1	42.1
Chemicals and acids.....	119.5	84.1	100.0	62.6	47.5	32.4	23.8	402.1	19.5	42.1	-15.9	59.7	31.8	46.6	36.1
Gas, illuminating and heating.....	112.4	98.4	100.0	68.3	50.6	37.7	22.5	399.6	12.4	14.2	-1.6	46.4	35.0	34.2	67.6
Paint and varnish.....	136.0	88.4	100.0	73.7	68.7	55.0	45.1	201.6	36.0	53.8	-11.6	35.7	7.3	24.9	22.0
Petroleum refining.....	162.7	120.2	100.0	49.4	34.9	20.0	14.8	868.5	62.7	35.4	20.2	102.4	41.5	74.5	19.0

Stone, clay, and glass products.....	155.9	93.3	100.0	112.5	104.3	78.9	67.3	121.2	55.6	68.9	-2.7	-11.9	8.8	32.3	17.3
Brick and tile, terra-cotta, and fire-clay products	154.3	88.1	100.0	122.6	153.6	138.1	129.1	19.9	54.8	76.7	-11.9	-18.4	-22.7	14.3	7.0
Cement.....	170.7	122.3	100.0	109.5	82.0	39.0	19.5	775.4	70.7	39.6	22.3	-8.7	33.5	110.3	100.0
Glass.....	151.7	83.5	100.0	107.5	77.2	62.9	47.9	216.7	51.7	81.7	-18.5	-7.0	39.3	22.7	31.3
Metals and metal products, other than iron and steel.....	125.7	66.5	100.0	64.9	60.6	44.5	31.4	306.3	25.7	69.0	-32.5	54.1	7.1	36.3	41.7
Tobacco manufactures.....	109.8	93.3	100.0	76.4	66.6	57.8	46.3	137.1	9.8	15.2	-4.7	30.9	14.7	15.3	24.3
Vehicles for land transportation.....	199.5	76.3	100.0	36.0	15.6	8.2	4.4	4,434.0	99.5	159.8	32.3	177.6	130.8	90.0	86.4
Automobiles.....	232.4	91.7	100.0	24.9	5.5	1.0	.2	118,100.0	132.4	153.4	-3.3	301.6	352.7	450.0	400.0
Railway equipment.....	119.0	45.5	100.0	84.6	62.3	77.0	82.4	44.4	19.0	161.5	-54.5	18.2	35.8	-19.1	-6.6
Ship and boat building.....	7.9	30.7	100.0	7.3	7.2	10.0	9.9	-12.2	-92.1	-74.3	-69.3	1,269.9	1.4	-28.0	11.1
Rubber products.....	130.8	66.0	100.0	32.3	21.0				30.8	68.5	-20.0	209.6	53.8		

¹ For data from which these indexes are computed, weights and relatives for individual products, and indexes for other industries, not given in this table, for census years, 1914 to 1925, see Table 28.

² Index not computed.

APPENDIX C

GROWTH OF MANUFACTURES TO 1925

After the preceding tables were prepared and text written, but before they were published, the results of an additional biennial census of manufactures, that for 1925, were compiled and available for use. In order to provide the latest possible information some of the figures from this census are given in the tables at the end of this chapter. The general conclusions, presented in the monograph, regarding the growth of manufactures since 1899 remain practically unchanged by the additional evidence provided by later figures. Table 39 gives data concerning the principal measures of the growth of manufactures from 1899, 1919, and 1923 to 1925.

TABLE 39.—PER CENT OF INCREASE IN PHYSICAL PRODUCTION, AVERAGE NUMBER OF WAGE EARNERS EMPLOYED, AND PRIMARY HORSEPOWER INSTALLED, FROM SELECTED CENSUS YEARS TO 1925

	PER CENT OF INCREASE OR DECREASE (—)		
	1899-1925	1919-1925	1923-1925
Physical production index.....	174.6	28.5	5.3
Average number of wage earners.....	79.9	-4.3	-4.4
Primary horsepower.....	256.5	22.0	8.2

The year 1925, like 1923, was a year of business prosperity and of activity in nearly all lines of manufacture. The index of production showed an increase of 5 per cent over 1923 in the quantity of goods manufactured, value added by manufacture increased 4 per cent, and amount of primary horsepower installed was 8 per cent larger. The average number of wage earners employed, however, decreased by over 4 per cent. The increases in quantity of goods produced and in horsepower, in contrast to the further decrease in number of wage earners, indicate a continuation of the tendency, noted in earlier periods, particularly between 1919 and 1923, toward greater use of machinery in production and illustrate the limitations of employment statistics as a measure of industrial growth.

For the 26-year period as a whole, production increased by 175 per cent, while the population of the country increased by 54 per cent, giving a per capita output in 1925 nearly 80 per cent larger than in 1899. The amount of primary horsepower installed increased

by over 250 per cent from 1899 to 1925, and the average number of wage earners employed by 80 per cent.

By industries and major industrial groups, the most rapid expansion between 1923 and 1925 occurred in the production of motor vehicles and allied products—rubber tires and gasoline. The large building activity of 1925 was reflected in the increased output of building materials, especially cement. The printing industry continued to expand, and growth was also shown in the canning and preserving, ice-cream, and cigarette industries. Two comparatively new industries which increased considerably in the two years were those manufacturing radio apparatus and rayon. The manufacture of engines and of machine tools also showed some increase. There were decreases, however, during the period in most of the textile industries (silk being the most notable exception) in meat packing and flour milling, in the manufacture of leather and its products, in the railway-equipment industries, and in the production of musical instruments.

By geographic divisions and States, the East South Central and the South Atlantic States appeared to have had the largest expansion between 1923 and 1925, with development of the Pacific Coast and East North Central States continuing at a more rapid rate than that for the country as a whole. Growth was smallest in the New England and Middle Atlantic States, and the Mountain States showed relatively less expansion than in any previous period.

TABLES OF 1925 FIGURES

NOTE.—The following tables give data from the 1925 census of manufactures corresponding to those provided for previous censuses in certain of the general tables in Appendix B. Tables 40, 41, and 42 give data for the census years 1914–1925, by major industrial groups, as classified in census reports for 1923 and 1925. Because of differences in grouping these tables do not correspond to any of the tables in Appendix B. Table 43 provides 1925 data corresponding to those given for earlier years in Tables 29, 30, and 31, and Table 44 corresponds to Tables 35 and 36.

The figures in the first three tables conform in manner of presentation more closely to recent, and probably future, census reports, whereas those given in the last two tables provide more exact comparisons with earlier census figures. Figures in Tables 40, 41, and 42 differ from those published in other tables of the monograph in the following respects: (1) The grouping of industries first adopted in the 1923 census has been followed, whereas in the previous tables the earlier classification was observed. (See Ch. IV.) (2) No adjustment has been made in the percentages, as in previous tables (and also in Tables 43 and 44), for the fact that the 1914 and 1919 figures include

data for establishments with products valued at less than \$5,000.

(3) The all-industries totals differ from those previously published because data for coffee grinding and roasting, which were not compiled in the census of 1925, have been omitted for all years. Figures for automobile repairing have also been omitted from the 1914 and 1919 totals.

In Tables 43 and 44, the percentages have been computed as in previous tables: Those for the period from 1919 to 1925 by comparison of data only for establishments with products valued at over \$5,000, and those for the 1899-1925 period by chaining each 1923-1925 percentage to the corresponding percentage for 1899-1923 given in previous tables.

TABLE 40.—AVERAGE NUMBER OF WAGE EARNERS EMPLOYED IN INDUSTRIAL GROUPS, BY CENSUS YEARS, AND PER CENT OF INCREASE, BY CENSUS PERIODS: 1914 TO 1925¹

Group No.	INDUSTRY	WAGE EARNERS (AVERAGE NUMBER)					PER CENT OF INCREASE OR DECREASE (-)					
		1925	1923	1921	1919	1914	1914-1925 ¹	1918-1925 ¹	1923-1925	1921-1925	1919-1921 ¹	1914-1919
	All industries.....	8,384,261	8,768,491	6,937,688	9,030,771	7,015,186	19.5	-7.2	-4.4	26.4	-23.2	23.7
1	Food and kindred products.....	664,760	672,472	617,736	723,124	527,687	25.9	-8.1	-1.1	8.9	-14.6	37.0
2	Textiles and their products.....	1,627,141	1,715,361	1,509,789	1,610,067	1,506,197	8.0	1.1	-5.1	13.6	-6.2	6.9
3	Iron and steel and their products, not including machinery.....	851,270	802,660	571,798	838,571	618,349	37.7	-9	-4.6	55.1	-33.4	38.8
4	Lumber and allied products.....	921,145	931,748	703,309	803,937	865,009	6.5	6.6	-1.1	32.5	-18.6	-1
5	Leather and its manufactures.....	315,288	344,545	280,071	349,892	307,960	2.7	-9.8	-8.5	23.0	-19.8	13.8
6	Rubber products.....	141,121	157,806	103,278	158,549	74,022	90.3	-11.0	2.4	35.5	-34.9	114.2
7	Paper, printing, and related industries.....	535,763	527,019	407,256	510,049	453,036	13.5	5.2	1.3	12.3	-3.4	12.6
8	Chemicals and allied products.....	351,075	354,493	314,231	450,641	349,154	9.1	-17.3	-9	22.4	-31.8	31.9
9	Stone, clay, and glass products.....	353,036	351,692	252,990	302,810	335,824	4.1	16.6	.4	39.0	-16.5	-9.9
10	Metals and metal products, other than iron and steel.....	275,292	296,911	212,354	304,195	238,246	15.3	-9.5	-7.8	39.8	-30.2	27.7
11	Tobacco manufactures.....	132,132	146,337	149,955	157,097	178,872	-26.1	-15.9	-9.7	-2.4	-4.5	-12.2
12	Machinery, not including transportation equipment.....	858,843	907,707	662,277	936,494	618,737	38.8	-14.0	-5.4	37.1	-33.7	61.4
13	Musical instruments and phonographs.....	43,980	38,329	45,113	63,741	43,768	-3.7	-31.7	-19.5	29.3	-34.4	41.0
14	Transportation equipment, air, land, and water.....	559,378	606,328	405,773	538,532	312,592	75.0	-34.8	-7.7	49.4	-32.7	174.7
15	Railroad repair shops.....	457,755	523,430	418,285	515,709	365,902	25.1	-11.2	-12.5	25.1	-18.9	40.9
16	Miscellaneous industries.....	262,079	271,591	223,448	290,853	215,541	21.6	-9.9	-8.5	21.5	-22.2	34.9

¹ Differences between figures given in this table and those given in other tables explained in preatory note, p. 195.

data for establishments with products valued at less than \$5,000.

(3) The all-industries totals differ from those previously published because data for coffee grinding and roasting, which were not compiled in the census of 1925, have been omitted for all years. Figures for automobile repairing have also been omitted from the 1914 and 1919 totals.

In Tables 43 and 44, the percentages have been computed as in previous tables: Those for the period from 1919 to 1925 by comparison of data only for establishments with products valued at over \$5,000, and those for the 1899-1925 period by chaining each 1923-1925 percentage to the corresponding percentage for 1899-1923 given in previous tables.

TABLE 40.—AVERAGE NUMBER OF WAGE EARNERS EMPLOYED IN INDUSTRIAL GROUPS, BY CENSUS YEARS, AND PER CENT OF INCREASE, BY CENSUS PERIODS: 1914 TO 1925¹

Group No.	INDUSTRY	WAGE EARNERS (AVERAGE NUMBER)					PER CENT OF INCREASE OR DECREASE (-)					
		1925	1923	1921	1919	1914	1914-1925 ¹	1919-1925 ¹	1923-1925	1921-1923	1919-1921 ¹	1914-1919
	All industries.....	8,384,261	8,768,491	6,937,688	9,030,771	7,015,136	19.5	-7.2	-4.4	26.4	-23.2	28.7
1	Food and kindred products.....	664,760	672,472	617,736	723,124	527,887	25.9	-8.1	-1.1	8.9	-14.6	37.0
2	Textiles and their products.....	1,627,141	1,715,361	1,609,789	1,610,067	1,506,197	8.0	1.1	-5.1	13.6	-8.2	6.9
3	Iron and steel and their products, not including machinery.....	851,270	692,660	571,798	858,571	618,349	37.7	-9	-4.6	56.1	-33.4	38.8
4	Lumber and allied products.....	921,145	931,748	703,309	893,937	865,009	6.5	6.6	-1.1	32.5	-18.6	-1
5	Leather and its manufactures.....	315,288	344,545	280,071	349,362	307,060	2.7	-9.8	-8.5	23.0	-19.8	13.8
6	Rubber products.....	141,121	137,868	103,273	155,549	74,622	90.6	-11.0	2.4	35.5	-34.9	114.2
7	Paper, printing, and related industries.....	536,766	527,019	467,256	510,049	453,006	18.5	5.2	1.8	12.8	-8.4	12.6
8	Chemicals and allied products.....	381,076	384,483	314,231	460,641	349,154	6.1	-17.3	-9	22.4	-31.6	31.8
9	Stone, clay, and glass products.....	353,036	351,692	252,990	302,810	335,824	5.1	16.6	.4	39.0	-16.5	-9.8
10	Metals and metal products, other than iron and steel.....	275,292	296,911	212,354	304,195	238,246	15.5	-9.5	-7.8	39.8	-30.2	27.7
11	Tobacco manufactures.....	132,132	146,337	149,985	167,097	178,872	-26.1	-15.9	-9.7	-2.4	-4.5	-12.2
12	Machinery, not including transportation equipment.....	858,843	907,707	662,277	968,484	618,737	38.8	-14.0	-5.4	37.1	-33.7	61.4
13	Musical instruments and phonographs.....	48,980	58,329	45,113	68,741	48,768	-3.7	-31.7	-19.5	29.3	-34.4	41.0
14	Transportation equipment, air, land, and water.....	559,578	608,328	405,773	898,582	312,562	73.0	-34.8	-7.7	49.4	-62.7	174.7
15	Railroad repair shops.....	457,755	523,430	418,285	515,709	365,902	25.1	-11.2	-12.5	25.1	-18.9	40.9
16	Miscellaneous industries.....	262,079	271,691	223,448	290,853	215,541	21.6	-9.9	-8.5	21.5	-23.2	34.9

¹ Differences between figures given in this table and those given in other tables explained in prefatory note, p. 195.

TABLE 41.—AMOUNT OF PRIMARY HORSEPOWER INSTALLED IN INDUSTRIAL GROUPS, BY CENSUS YEARS, AND PER CENT OF INCREASE, BY CENSUS PERIODS: 1914 TO 1925¹

Group No.	INDUSTRY	PRIMARY HORSEPOWER ²				PER CENT OF INCREASE OR DECREASE (-)			
		1925	1923	1919	1914	1914-1925 ¹	1919-1925 ¹	1923-1925	1914-1919
	All industries.....	35, 772, 628	33, 056, 870	29, 297, 963	22, 264, 343	60. 7	22. 1	8. 2	31. 6
1	Food and kindred products.....	3, 881, 952	3, 685, 667	3, 173, 400	2, 477, 376	56. 7	22. 3	5. 3	28. 1
2	Textiles and their products.....	3, 989, 136	3, 783, 504	3, 248, 456	2, 717, 369	46. 7	22. 7	3. 4	19. 5
3	Iron and steel and their products, not including machinery.....	7, 518, 999	7, 202, 426	6, 430, 002	4, 587, 816	63. 9	16. 9	4. 4	40. 2
4	Lumber and allied products.....	3, 472, 770	3, 336, 133	3, 409, 654	3, 176, 145	9. 3	1. 9	4. 1	7. 4
5	Leather and its manufactures.....	413, 759	412, 998	382, 537	311, 194	33. 0	8. 2	. 2	22. 9
6	Rubber products.....	656, 857	605, 634	429, 273	199, 242	229. 7	53. 0	8. 5	115. 5
7	Paper, printing, and related industries.....	3, 060, 794	2, 743, 529	2, 346, 682	2, 039, 073	50. 1	30. 4	11. 6	15. 1
8	Chemicals and allied products.....	2, 984, 913	2, 739, 519	2, 424, 938	1, 920, 277	55. 4	23. 1	9. 0	26. 3
9	Stone, clay, and glass products.....	2, 848, 157	1, 936, 054	1, 584, 917	1, 493, 976	57. 2	48. 2	21. 2	6. 1
10	Metals and metal products, other than iron and steel.....	1, 158, 486	1, 168, 656	951, 770	549, 328	110. 9	21. 7	- 9	73. 3
11	Tobacco manufactures.....	42, 075	43, 515	43, 390	34, 759	21. 1	- 3. 0	- 3. 3	24. 8
12	Machinery, not including transportation equipment.....	2, 714, 377	2, 300, 443	2, 080, 325	1, 256, 908	116. 0	31. 7	18. 0	63. 9
13	Musical instruments and phonographs.....	97, 318	90, 229	91, 040	57, 528	99. 2	6. 9	7. 9	58. 3
14	Transportation equipment, air, land, and water.....	1, 888, 961	1, 624, 468	1, 453, 804	602, 459	213. 5	29. 9	16. 3	141. 3
15	Railroad repair shops.....	942, 248	806, 435	644, 876	478, 893	96. 8	46. 1	16. 8	34. 7
16	Miscellaneous industries.....	604, 826	577, 660	622, 900	362, 007	67. 1	- 2. 9	4. 7	72. 1

¹ Differences between figures given in this table and those given in other tables explained in prefatory note, p. 185.

² No data for horsepower were given in 1921.

TABLE 42.—VALUE ADDED BY MANUFACTURE IN INDUSTRIAL GROUPS, BY CENSUS YEARS, AND PER CENT OF INCREASE, BY CENSUS PERIODS: 1914 TO 1925¹

Group No.	INDUSTRY	VALUE ADDED BY MANUFACTURE (EXPRESSED IN THOUSANDS OF DOLLARS)					PER CENT OF INCREASE OR DECREASE (-)					
		1925	1923	1921	1919	1914	1914-1925 ¹	1919-1925 ¹	1923-1925	1921-1923	1919-1921 ¹	1914-1919
	All industries.....	\$26,778,066	\$25,777,615	\$18,272,417	\$24,843,803	\$9,823,351	172.6	7.8	3.9	41.1	-26.5	152.0
1	Food and kindred products.....	2,660,858	2,460,520	2,084,889	2,434,822	1,086,845	157.6	9.7	6.5	18.0	-14.4	134.9
2	Textiles and their products.....	3,774,808	4,067,986	3,155,463	3,831,638	1,431,382	163.7	-1.5	-7.2	28.9	-17.6	167.7
3	Iron and steel and their products, not including machinery.....	2,727,318	2,675,923	1,816,046	2,465,845	821,618	231.9	-10.6	1.9	108.3	-46.6	200.0
4	Lumber and allied products.....	1,963,669	1,966,846	1,269,143	1,745,031	860,207	131.0	12.5	-2	56.2	-27.8	108.2
5	Leather and its manufactures.....	752,458	796,740	609,788	896,425	351,460	114.1	-16.1	-5.6	30.7	-32.0	153.1
6	Rubber products.....	536,574	457,355	327,024	543,873	157,959	282.9	-1.3	17.3	89.9	-38.9	294.2
7	Paper, printing, and related industries.....	2,529,450	2,227,870	1,818,193	1,706,631	875,648	188.9	48.2	13.5	22.5	6.5	94.9
8	Chemicals and allied products.....	2,253,116	2,026,409	1,483,352	2,187,076	1,200,349	87.7	3.0	11.2	36.6	-32.2	82.2
9	Stone, clay, and glass products.....	1,037,225	989,648	604,832	689,135	377,883	174.5	30.5	4.8	63.6	-12.2	82.4
10	Metals and metal products, other than iron and steel.....	886,998	866,959	521,033	780,398	364,138	143.6	13.7	2.8	64.4	-33.2	114.3
11	Tobacco manufactures.....	665,232	528,327	439,801	529,366	283,031	135.0	25.7	25.9	20.1	-16.9	87.0
12	Machinery, not including transportation equip- ment.....	3,034,914	2,836,294	1,873,912	2,795,216	919,442	230.1	8.6	7.0	51.4	-33.6	204.0
13	Musical instruments and phonographs.....	132,926	158,931	118,001	183,445	70,365	88.9	-27.5	-16.4	34.7	-35.7	160.7
14	Transportation equipment, air, land, and water.....	2,062,652	1,938,975	1,215,144	2,426,662	497,630	314.5	-15.0	6.4	59.6	-49.9	387.6
15	Railroad repair shops.....	769,093	888,734	700,771	806,617	291,180	164.1	-4.7	-13.5	16.8	-5.7	177.0
16	Miscellaneous industries.....	981,940	890,048	635,525	821,638	314,616	212.1	19.5	10.8	29.8	-16.6	161.2

¹ Differences between figures given in this table and those given in other tables explained in prefatory note, p. 195.

TABLE 43.—AVERAGE NUMBER OF WAGE EARNERS EMPLOYED, AMOUNT OF PRIMARY HORSEPOWER INSTALLED, AND VALUE ADDED BY MANUFACTURE, IN SELECTED INDUSTRIES IN 1925, AND PER CENT OF INCREASE FROM 1899, 1919, AND 1923 TO 1925

INDUSTRY	NUMBER OF WAGE EARNERS				PRIMARY HORSEPOWER				VALUE ADDED BY MANUFACTURE			
	Average number, 1925	Per cent of increase or decrease (-) ¹			Amount installed, 1925	Per cent of increase or decrease (-) ¹			Value, 1925	Per cent of increase or decrease (-) ¹		
		1899-1925	1919-1925	1923-1925		1899-1925	1919-1925	1923-1925		1899-1925	1919-1925	1923-1925
All industries.....	8,384,261	79.9	-6.8	-4.4	85,772,628	256.5	22.0	8.2	\$26,778,066,026	461.2	-7.9	3.9
Food and kindred products:												
Slaughtering and meat packing.....	120,422	76.1	-25.2	-9.3	441,516	420.2	23.1	15.5	425,093,856	317.9	-9.3	3.7
Bread and other bakery products.....	160,411	168.6	14.2	-1.4	227,286	913.2	37.2	17.7	600,178,007	653.2	37.9	9.4
Confectionery, chewing gum, and ice cream.....	88,823	232.6	-9.6	.2	297,495	1,434.7	60.1	11.0	848,830,815	1,286.6	19.1	14.9
Flour-mill and grain-mill products.....	31,988	-4	-29.4	-2.1	669,910	0.0	-23.5	-5.6	172,635,947	136.4	-31.6	6.2
Canning and preserving, fruits and vegetables.....	70,009	91.7	17.1	22.4	151,341	463.1	14.4	8.9	163,254,911	761.6	20.1	7.5
Sugar, beet, and cane sugar and its refining.....	25,440	58.2	-29.4	-.8	308,879	84.9	9.6	7.0	103,886,078	398.6	-28.1	5.9
Butter and cheese.....	21,156	65.9	-1.9	-15.9	147,702	68.1	23.7	-6	95,305,527	335.0	15.2	-16.7
Condensed milk.....	7,118	-	-47.9	-18.4	53,937	-	9.7	11.7	31,206,369	-	-45.2	-11.8
Glucose and starch ²	6,492	53.1	16.7	-7	72,617	177.0	39.6	10.4	39,834,399	326.0	-28.8	-5.3
Canning and preserving, fish and oysters.....	10,530	-15.9	-14.8	15.2	19,527	280.3	-24.4	10.6	21,869,570	22.4	-16.5	11.9
Pickles, preserves, and sauces.....	15,857	120.3	-4.2	3.3	36,149	453.0	61.5	-1.5	67,242,362	602.6	27.9	4.3
Breadstuff preparations, such as cereals and breakfast foods.....	6,168	-	-19.2	-3.8	52,626	-	12.0	-14.2	57,501,586	-	38.9	19.1
Chocolate and cocoa products.....	7,128	442.6	-21.6	3.7	58,266	2,016.2	74.4	23.5	33,120,370	1,087.4	-11.7	-4.5
Textiles and their products:												
Cotton goods and cotton lace.....	452,190	51.8	3.4	-5.6	2,245,870	184.0	21.7	3.8	654,697,257	310.8	-24.2	-15.5
Clothing, men's.....	174,332	44.8	-1	-10.5	44,749	238.4	11.3	-15.0	529,767,222	303.9	-4.7	-10.8
Clothing, women's.....	128,466	51.5	-23.4	-5.1	24,316	145.6	-25.0	-12.2	569,406,317	664.2	8.0	-4.6
Woolen and worsted goods.....	165,224	31.3	-	-15.1	570,295	144.1	22.3	5.9	337,388,395	272.2	-15.6	-23.3
Silk goods, including throwsters.....	132,509	102.7	4.6	5.8	212,609	277.1	22.4	3.2	324,856,872	624.4	8.3	15.1
Knit goods.....	186,668	123.1	8.2	-3.9	176,630	212.5	18.2	-3.8	366,034,433	698.4	24.6	-2.2
Dyeing and finishing textiles, exclusive of that done in textile mills.....	70,749	137.3	26.5	11.6	252,701	266.3	58.1	23.8	187,837,303	595.7	25.9	5.1
Millinery and lace goods, not elsewhere specified.....	53,603	220.7	6.4	-1.2	11,986	551.1	-3.4	-23.5	156,470,752	1,041.3	28.4	6.0
Carpets and rugs, other than rag.....	33,886	19.3	47.8	-3.8	63,008	139.2	67.6	17.0	84,707,266	304.1	50.9	-17.0
Cordage and twine.....	15,490	17.5	-12.6	-6.0	77,593	130.7	16.5	7.2	33,600,060	199.7	-23.0	-3.0
Hats, fur-felt.....	15,156	-19.7	-18.1	-9.4	17,948	51.7	-11.9	-2.9	39,942,206	179.7	-6.1	-2.1

Bags, other than paper, not including bags made in textile mills.....	11,404	190.9	6.1	-1.2	15,265	772.0	68.5	10.4	24,979,634	1,490.1	84.8	8.5
Shirts.....	49,864	87.4	27.1	-2.5	13,884	98.9	-0.8	-1.2	96,209,170	299.1	28.8	-5.7
Furnishing goods, men's, including cloth gloves and mittens, other than those made in textile mills.....	28,892	119.8	8.6	8.8	8,493	579.7	-5.9	-1.4	60,931,559	459.3	-28.8	-7.6
Corsets.....	14,525	18.3	-21.0	-9.2	5,394	137.4	20.7	42.2	39,306,693	385.9	7.1	-8.8
Collars and cuffs, men's.....	7,187	-68.0	-35.2	-31.2	4,497	98.6	-14.8	-11.0	15,795,226	62.0	-42.8	-36.0
Iron and steel and their products:												
Crude iron and steel and rolled products, including products not made in rolling-mill establishments (though largely made therein) plus wire and wirework, not elsewhere specified.....	871,608	102.1	-2.7	-6.1	6,858,568	307.1	14.2	8.4	1,834,851,954	427.5	1.6	-1.6
Foundry and machine-shop products.....	397,838	77.0	-17.4	-11.4	1,424,269	462.1	30.9	15.4	1,349,277,739	492.4	.8	-3.7
Engines, steam, gas, and water.....	51,099		-34.1	8.4	224,194		18.0	85.8	167,804,164		32.1	17.8
Machine tools.....	36,825		-30.6	10.3	147,418		47.0	36.0	121,068,126		21.0	25.8
Tools, not elsewhere specified.....	25,840	234.2	-23.5	-12.9	78,686	572.9	16.2	4.6	82,239,720	1,213.1	16.2	2.9
Hardware.....	52,849	98.0	23.8	4.9	98,278	336.9	46.5	25.0	147,849,805	598.5	53.9	13.7
Stoves and hot-air furnaces.....	29,376		-10.6	-11.1	63,545		28.0	-2.8	93,555,874		2.9	-3.6
Steam fittings and steam and hot-water heating apparatus.....	43,260	367.5	17.9	-2.0	109,313	1,579.3	62.0	20.0	151,573,080	1,177.3	71.7	9.3
Locomotives, not made by railroad companies.....	12,809		-52.1	-58.2	114,209		18.3	25.2	23,671,992		-71.8	-74.0
Textile machinery and parts.....	27,869		-12.3	-21.0	61,738		47.9	9.7	82,616,455		8.2	-9.2
Cash registers and calculating machines.....	13,296	543.5	-19.6	-11.2	14,016	946.3	-4.3	-53.1	87,218,262	1,735.4	20.1	6.6
Cutlery and edge tools.....	16,407	36.7	-17.2	-1.6	31,673	97.2	34.0	19.7	59,701,243	516.8	26.8	7.9
Typewriters and supplies.....	14,969	242.3	-4.3	0.0	15,968	686.1	19.3	30.0	47,922,610	768.8	31.0	24.4
Plumbers' supplies, not elsewhere specified.....	83,280	315.0	145.0	22.3	84,634	1,018.6	184.7	41.0	104,268,161	1,294.5	223.4	28.4
Stoves, gas and oil.....	17,138	594.4	62.4	2.1	30,681	1,675.7	170.9	87.1	74,874,299	3,508.7	139.3	18.3
Pumps, steam and other power.....	17,985		11.7	23.2	56,470		74.1	47.6	69,819,722		41.6	19.4
Sewing machines and attachments (including cases).....	12,121	-9.3	-37.0	-9.8	27,439	172.7	-14.3	21.9	27,688,612	137.5	-17.4	-1.8
Screws, machine.....	8,987	477.4	-12.4	-1.5	30,514	2,071.7	26.8	5.4	24,991,009	93.1	-1.1	6.6
Lumber and its manufactures:												
Lumber and timber products.....	473,968	17.6	1.0	-4.4	2,049,500	49.2	-13.0	6.1	841,687,154	174.9	-6.3	-8.7
Furniture.....	180,895	104.9	29.3	7.6	402,619	245.3	61.9	-17.1	483,638,265	579.2	54.3	11.4
Lumber, planing-mill products, not including planing mills connected with sawmills.....	111,320	56.3	28.9	8.1	597,103	167.7	43.2	21.0	307,634,500	367.2	58.8	5.5
Boxes, wooden packing, except cigar boxes.....	34,834	68.8	-17.7	-11.0	143,519	162.9	0.0	-8.9	65,908,408	330.2	-11.7	-4.2
Coffins, burial cases, and undertakers' goods.....	11,479	69.9	-8.4	-1.0	29,104	228.9	31.4	6.7	37,641,451	438.0	15.0	10.7
Cooperage.....	11,483	-47.4	-12.1	-4.5	30,768	0.0	.2	-8.2	28,558,976	46.9	-20.0	-1.5
Leather and its finished products:												
Boots and shoes, not including rubber boots and shoes.....	206,992	46.0	-1.9	-8.1	139,569	193.8	20.4	8.6	443,751,453	391.2	.9	-6.1
Leather, tanned, curried, and finished.....	53,043	1.8	-26.8	-11.2	222,678	151.2	2.3	-3.3	155,379,595	216.9	-44.9	-7.0
Saddlery and harness.....	4,870	-66.9	-54.4	-30.9	5,021	-16.5	-38.8	-35.3	11,307,664	-15.6	-62.4	-35.9

See footnotes at end of table, p. 204.

TABLE 43.—AVERAGE NUMBER OF WAGE EARNERS EMPLOYED, AMOUNT OF PRIMARY HORSEPOWER INSTALLED, AND VALUE ADDED BY MANUFACTURE, IN SELECTED INDUSTRIES IN 1925, AND PER CENT OF INCREASE FROM 1899, 1919, AND 1923 TO 1925—Continued

INDUSTRY	NUMBER OF WAGE EARNERS				PRIMARY HORSEPOWER				VALUE ADDED BY MANUFACTURE			
	Average number, 1925	Per cent of increase or decrease (—)			Amount installed, 1925	Per cent of increase or decrease (—)			Value, 1925	Per cent of increase or decrease (—)		
		1899-1925	1919-1925	1923-1925		1899-1925	1919-1925	1923-1925		1899-1925	1919-1925	1923-1925
Leather and its finished products—Con.												
Trunks and valises.....	10,348	49.4	-9.3	-9.6	7,393	138.4	2.6	8.6	\$29,842,016	363.5	-2.3	-1.1
Boot and shoe cut stock, exclusive of that produced in boot and shoe factories.....	7,197	17.1	-25.8	9	7,859	161.5	-7.0	12.9	18,574,394	241.8	-31.9	-10.4
Paper and printing:												
Printing and publishing, newspaper and periodical.....	117,001	29.2	1.6	1.2	237,662	239.7	22.5	16.8	1,068,120,575	533.9	75.6	18.0
Printing and publishing, book and job.....	133,316	98.9	9.9	2.6	169,283	359.7	23.3	11.1	578,197,553	897.8	52.3	11.6
Paper and wood pulp.....	123,842	149.5	8.9	2.6	2,427,010	218.7	31.2	11.4	366,022,034	644.5	14.2	9.7
Boxes, paper and other, not elsewhere specified.....	57,148	107.1	2.5	5	76,185	724.4	39.3	23.5	130,232,270	739.1	23.5	8.4
Lithographing.....	16,957	30.5	3.6	3.9	28,623	306.9	54.3	6.5	66,550,116	364.6	46.8	9.7
Bookbinding and blank-book making.....	20,836	32.0	3.5	5	16,147	247.0	46.3	3.9	57,473,290	344.6	36.0	6.7
Paper goods, not elsewhere specified.....	13,386	143.1	-5.2	-9.1	35,324	351.9	-1	-6.6	53,517,592	668.7	27.5	8.8
Liquors and beverages:												
Liquors, malt, including cereal beverages.....	8,749	-77.9	-74.5	-22.0	106,839	-45.6	-66.8	-31.7	42,651,549	-76.9	-85.0	-13.4
Mineral and soda waters.....	18,635	123.7	12.7	3.2	62,026	683.0	50.7	-4.3	96,643,138	581.3	50.1	20.9
Chemicals and allied products:												
Petroleum refining.....	65,324	435.3	10.9	-2.1	393,753	989.9	64.8	7	486,978,537	2,211.1	26.6	32.1
Chemicals and acids.....	57,890	230.6	-24.0	-25.1	679,987	652.1	42.9	1.2	287,597,638	1,021.7	-7.1	-12.0
Druggists' preparations, patent medicines and compounds, perfumery and cosmetics, and drug grinding.....	33,823	73.8	-14.0	-2.9	58,163	236.5	23.8	10.3	308,233,501	436.5	40.0	18.1
Gas, illuminating and heating.....	46,998	109.6	9.7	11.2	428,132	1,246.3	79.5	19.4	277,036,908	402.9	61.4	7.0
Oils.....	22,700	62.3	-35.4	14.5	284,027	229.9	-16.3	7.1	104,213,882	328.6	-28.2	40.3
Paint and varnish.....	25,490	163.3	18.7	11.7	143,111	372.2	68.7	25.2	176,793,224	612.3	43.5	13.9
Fertilizers.....	19,044	69.9	-25.2	5.8	152,193	293.3	20.8	-5.9	68,964,719	330.6	-28.2	25.1
Coke, not including gas-house coke.....	23,191	36.4	-20.9	-18.2	409,552	1,077.8	82.1	23.2	100,852,852	534.0	9.4	-38.1
S soap.....	15,406	62.6	-24.5	-9.4	59,697	223.8	68.2	-24.2	93,399,570	365.3	19.5	-9.2
Explosives.....	5,697	26.5	-38.4	-10.8	37,808	96.9	-26.8	7.3	31,791,419	368.4	-31.7	-10.5
Turpentine and rosin.....	29,413	-29.4	5.4	-14.3	3,138	266.7	37.9	62.4	30,477,018	116.3	-21.7	16.4

TABLE 43.—AVERAGE NUMBER OF WAGE EARNERS EMPLOYED, AMOUNT OF PRIMARY HORSEPOWER INSTALLED, AND VALUE ADDED BY MANUFACTURE, IN SELECTED INDUSTRIES IN 1925, AND PER CENT OF INCREASE FROM 1899, 1919, AND 1923 TO 1925—Continued

INDUSTRY	NUMBER OF WAGE EARNERS				PRIMARY HORSEPOWER				VALUE ADDED BY MANUFACTURE			
	Average number, 1925	Per cent of increase or decrease (-)			Amount installed, 1925	Per cent of increase or decrease (-)			Value, 1925	Per cent of increase or decrease (-)		
		1899-1925	1919-1925	1923-1925		1899-1925	1919-1925	1923-1925		1899-1925	1919-1925	1923-1925
Miscellaneous industries—Continued.												
Musical instruments, pianos.....	20,079	-5.7	-12.5	-9.6	26,912	29.6	-6.2	0.2	\$51,885,134	119.3	-1.6	-8.9
Ammunition.....	7,777	48.7	-65.9	-25.7	23,316	1,743.5	40.4	6.6	18,887,409	237.6	-62.2	-20.5
Instruments, professional and scientific.	12,129	338.0	-23.7	-1.2	17,595	613.9	35.5	8.6	55,910,651	1,506.6	43.1	24.2
Optical goods.....	8,642	133.0	-41.2	-28.2	11,017	434.7	-29.6	-17.8	23,657,002	662.6	-34.0	-33.1
Mattresses and bedsprings, not elsewhere specified.....	14,403	89.6	14.8	2.1	32,840	312.9	40.4	8.3	48,227,610	528.4	39.8	4.7
Roofing materials.....	8,310	9.6	-6.2	8.4	34,161	87.8	-13.0	-13.7	44,994,184	561.7	35.2	56.1
Fancy articles, not elsewhere specified..	14,552	156.2	4.9	7.6	9,071	262.7	4.8	12.0	40,614,464	719.9	29.9	17.1
Paving materials.....	17,941	652.2	14.0	-7.7	207,469	503.7	8.4	5.2	57,195,396	2,358.3	94.7	22.7
Stationery goods, not elsewhere specified.	11,399	278.6	1.4	-14.4	10,970	543.0	31.5	-4.9	36,700,891	1,151.1	21.7	-14.6
Signs and advertising novelties.....	15,128		46.6	16.5	12,550		62.7	6.5	63,811,194		138.0	43.1
Toys and games.....	14,162	330.4	.5	-2.2	20,744	558.6	43.8	28.8	34,919,566	1,399.4	36.2	8.3
Buttons.....	11,513	33.8	-25.4	-2.9	15,840	292.5	.9	3.0	20,085,789	314.4	-19.2	2.7

¹ Figures for earlier years from which these percentages were computed are given in Tables 29, 30, and 31, Appendix B. Methods of computing the percentages are explained in prefatory note, p. 196. See also prefatory note, Appendix B, p. 124.

² Title changed to "Corn sirup, corn oil, and starch."

³ Includes data for metal-working machinery.

⁴ Includes "Window and door screens and weather strips for 1899 and 1919."

⁵ Cereal beverages only.

⁶ Includes "Sand-lime brick."

⁷ Includes "Photographic apparatus," and "Motion pictures."

TABLE 44.—AVERAGE NUMBER OF WAGE EARNERS EMPLOYED,* AND AMOUNT OF PRIMARY HORSEPOWER INSTALLED IN GEOGRAPHIC DIVISIONS AND STATES IN 1925, AND PER CENT OF INCREASE FROM 1899, 1919, AND 1923 TO 1925

DIVISION AND STATE	WAGE EARNERS (AVERAGE NUMBER)				PRIMARY HORSEPOWER			
	1925	Per cent of increase or decrease (-) ¹			1925	Per cent of increase or decrease (-) ¹		
		1899-1925	1919-1925	1923-1925		1899-1925	1919-1925	1923-1925
UNITED STATES.....	8,384,261	79.9	-6.8	-4.5	35,772,628	256.5	22.0	8.1
GEOGRAPHIC DIVISIONS:								
New England.....	1,122,216	32.0	-16.8	-10.5	4,349,191	144.0	15.2	4.8
Middle Atlantic.....	2,491,039	55.7	-13.0	-7.5	10,106,390	223.4	18.9	5.0
East North Central.....	2,342,799	119.1	-1.9	-1.9	10,047,780	321.0	30.7	10.9
West North Central.....	452,520	72.0	-8.4	-3.6	1,855,278	209.8	17.6	8.2
South Atlantic.....	538,534	84.9	3.7	-.8	3,454,150	307.5	24.1	6.9
East South Central.....	355,995	103.6	9.6	2.5	1,615,183	215.7	14.5	10.5
West South Central.....	265,160	136.3	-6.1	-7.7	1,316,933	234.2	12.0	3.7
Mountain.....	100,374	128.5	-6.9	-5.4	757,974	522.8	11.6	-2.5
Pacific.....	415,024	238.7	-4.1	-1.3	2,269,749	734.8	30.4	20.3
NEW ENGLAND:								
Maine.....	73,849	6.4	-16.1	-11.4	600,787	132.7	10.3	5.3
New Hampshire.....	66,658	-1.1	-19.5	-11.5	370,740	84.6	6.3	5.1
Vermont.....	27,563	-1.2	-16.9	-10.5	178,806	42.7	-2.8	.9
Massachusetts.....	591,438	35.2	-17.0	-11.4	2,013,017	154.9	17.3	4.2
Rhode Island.....	120,346	38.9	-13.6	-10.6	395,754	159.0	23.9	1.0
Connecticut.....	242,362	52.1	-17.0	-7.9	700,087	208.8	19.1	8.7
MIDDLE ATLANTIC:								
New York.....	1,066,202	47.4	-12.8	-7.4	3,348,184	306.0	14.6	2.6
New Jersey.....	425,377	99.2	-16.2	-5.1	1,384,234	332.4	21.6	10.1
Pennsylvania.....	999,460	51.1	-11.7	-8.7	5,373,972	214.3	21.1	5.2
EAST NORTH CENTRAL:								
Ohio.....	676,742	120.4	-7.1	-3.2	3,482,618	347.0	20.9	5.3
Indiana.....	280,854	103.1	1.7	-3.5	1,420,989	337.2	30.0	3.6
Illinois.....	622,368	87.6	-4.4	-3.6	2,247,408	304.4	36.2	13.5
Michigan.....	615,494	231.5	9.6	2.4	1,887,790	416.4	68.3	28.3
Wisconsin.....	247,341	80.6	-5.9	-2.2	1,009,015	178.2	15.8	8.5
WEST NORTH CENTRAL:								
Minnesota.....	100,614	57.2	-12.2	-3.2	508,021	183.9	7.9	10.4
Iowa.....	74,976	70.8	-5.8	-3.7	308,016	193.0	28.6	9.1
Missouri.....	194,959	82.7	.9	-9.9	590,485	214.0	24.4	6.7
North Dakota.....	3,261	151.6	-23.6	-8.2	16,711	137.6	-1.8	-1.1
South Dakota.....	5,151	142.2	-15.6	.1	21,463	101.1	6.7	30.4
Nebraska.....	27,200	47.9	-24.4	-13.0	133,708	227.0	8.7	3.3
Kansas.....	46,659	73.8	-22.8	-9.0	276,874	306.7	19.4	8.3
SOUTH ATLANTIC:								
Delaware.....	20,704	1.1	-28.4	-10.4	107,391	167.8	26.2	-4.5
Maryland.....	125,787	34.4	-9.8	-2.4	544,558	313.6	34.3	9.4
District of Columbia.....	9,753	59.1	-6.6	-7.7	37,508	267.8	14.0	17.8
Virginia.....	112,135	72.1	-4.5	.5	441,807	223.8	5.4	2.5
West Virginia.....	80,700	145.7	-2.1	-5.8	431,981	371.7	31.9	16.2
North Carolina.....	182,234	155.3	17.1	4.9	800,051	419.8	46.0	13.8
South Carolina.....	100,144	114.6	27.0	3.5	423,359	276.6	7.3	3.8
Georgia.....	141,173	71.5	15.8	2.7	523,334	287.1	21.0	16.3
Florida.....	66,204	88.0	-10.4	1.8	144,161	298.3	4.1	4.3
EAST SOUTH CENTRAL:								
Kentucky.....	76,580	50.5	12.3	-2.2	257,965	80.6	5.2	2.5
Tennessee.....	107,645	137.5	14.7	1.1	447,529	244.5	32.5	14.3
Alabama.....	116,599	123.6	10.0	6.4	697,998	303.8	11.3	8.9
Mississippi.....	55,171	109.0	-2.7	1.5	211,691	222.9	5.7	19.1
WEST SOUTH CENTRAL:								
Arkansas.....	43,977	42.2	-10.3	-1.3	177,011	125.1	-16.4	7.2
Louisiana.....	88,058	116.6	-9.9	-7.0	410,298	117.0	6.2	1.8
Oklahoma.....	26,333	1,021.4	-9.5	3.3	156,826	1,269.4	13.2	2.5
Texas.....	106,782	179.3	.3	4.3	572,798	397.6	30.4	4.5
MOUNTAIN:								
Montana.....	14,777	52.5	-12.4	-7.3	166,528	284.1	9.3	-12.6
Idaho.....	15,794	931.2	15.0	-3.4	82,552	1,371.3	12.5	14.4
Wyoming.....	6,333	212.3	-3.0	-15.7	28,721	689.2	68.7	19.9
Colorado.....	31,967	66.0	-8.2	2.4	219,865	412.1	7.8	24.9
New Mexico.....	4,629	89.6	-17.7	-15.2	18,842	426.1	11.5	11.7
Arizona.....	9,127	194.6	8.0	1.8	102,127	1,100.7	-1.4	-20.5
Utah.....	15,077	182.0	-19.1	-5.2	124,735	802.8	35.3	-12.0
Nevada.....	2,670	432.8	-13.9	-42.8	14,604	840.9	-26.1	-47.8
PACIFIC:								
Washington.....	105,893	237.4	-20.0	-5.2	748,110	762.4	9.9	26.1
Oregon.....	59,579	314.7	2.4	-4.9	387,749	549.7	28.1	20.3
California.....	249,552	225.1	3.0	1.4	1,133,890	803.9	49.8	16.7

¹ Figures for earlier years from which these percentages were computed are given in Tables 35 and 36, Appendix B. Methods of computing the percentages are explained in prefatory note, p. 196. See also prefatory note, Appendix B, p. 124.